

RESOLUTION NO. 2004-287

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ELK GROVE
AUTHORIZING A REIMBURSEMENT AGREEMENT WITH THE FLORIN RESOURCE
CONSERVATION DISTRICT TO CONSTRUCT A WATER MAIN ON BOND ROAD
BETWEEN ELK GROVE-FLORIN ROAD AND WHITTEMORE DRIVE**

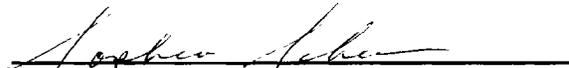
WHEREAS, the Florin Resource Conservation District desires to construct a water main on Bond Road to improve water service along and adjacent to Bond Road; and

WHEREAS, it is important to properly coordinate the construction of the water main and the City of Elk Grove Bond Road Widening Segment 1 Project; and

WHEREAS, all costs associated with construction of the water main will be the responsibility of Florin Resource Conservation District Water Facilities.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Elk Grove hereby authorizes the City Manager or his designee to execute a reimbursement agreement with the Florin Resource Conservation District to construct a water main on Bond Road.

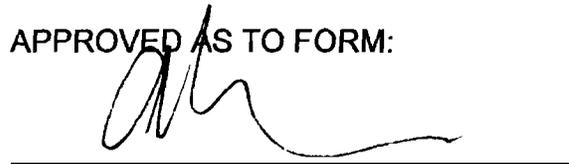
PASSED AND ADOPTED by the City Council of the City of Elk Grove this 1st day of December 2004.


SOPHIA SCHERMAN, MAYOR of the
CITY OF ELK GROVE

ATTEST:


PEGGY E. JACKSON, CITY CLERK

APPROVED AS TO FORM:


ANTHONY B. MANZANETTI,
CITY ATTORNEY

**REIMBURSEMENT AGREEMENT BETWEEN
THE FLORIN RESOURCE CONSERVATION DISTRICT WATER FACILITIES
AND THE CITY OF ELK GROVE**

This ("Agreement") is made and entered into this ___ day of ___ 2004 ("Effective Date") by and between the Florin Resource Conservation District, a California public agency ("the District") and the City of Elk Grove, California, a municipal corporation ("the City"). The District and the City are individually referred to as "Party" and collectively referred to as "Parties" herein.

WITNESSETH

A. The City is in the process of widening a length of Bond Road located between Elk Grove - Florin Road and Whittemore Drive ("Project Area");

B. The parties desire to contract for the City to provide for the construction of a new water main ("Water Main"), to be owned by the District for the District's sole use, within the Project Area and to construct these improvements for the benefit of the District, and for the District to reimburse the City for the costs of such construction, pursuant to the terms and conditions set forth in this Agreement. Several maps depicting the location of the Project Area and Water Main are set forth in Exhibit A;

NOW THEREFORE, the District and the City, for and in consideration of the mutual promises and agreements herein contained do agree as follows:

1. Purpose. The purpose of this Agreement is to provide for the construction of the Water Main in the Project Area for the District and to establish a mechanism for reimbursement of specified future costs incurred by the City in furtherance of the construction of such Water Main.

2. Term of Agreement. This Agreement shall be in full force and effect for a period beginning as of the date first above written and continuing until all repayment and reimbursement obligations of the District to the City are satisfied in full in accordance with the terms of this Agreement.

3. Reimbursement to the City for Water Main.

3.1. The bid proposal for the construction contract for the Project Area ("Construction Contract") shall bid the Water Main separately (as "Alternate Bid Item #1"), based preliminarily on the District's Engineer's ("Engineer's") estimated cost for the Water Main work, which is attached to this Agreement (for informational and planning purposes only) as Exhibit B. The actual cost of the Water Main shall be entirely dependent upon the bids received for Alternate Bid Item #1 and accepted by the City, and any Approved Change Orders, each as provided for in this Agreement. The accepted bid documents for Alternate Bid Item #1 (the "Water Main Construction Item") are as shown on Exhibit C, which shall be attached to this Agreement and made a part hereof as if fully set forth herein. Subject to the terms and conditions of this Agreement, the City is authorized by the District to incur costs for the

construction of the Water Main in the Project Area on behalf of the District, and these costs shall become a debt of the District.

3.2. Subject to the satisfaction of the conditions precedent set forth in Paragraph 4, the District agrees to reimburse the City for the costs of the Water Main in three payments, according to the following schedule: the District shall pay the first payment (the "First Payment") one (1) business day after the District receives written notice that the City has issued the notice to proceed to the general contractor of the Water Main (the "First Payment"). The District shall pay the second payment (the "Second Payment"), excepting any disputed amounts, within thirty (30) calendar days after the District's initial receipt and approval of an invoice from the City, or forty-two (42) days after its initial receipt of such invoice. The District shall pay the Third Payment in full (the "Third Payment") within one (1) business day after the District's written acceptance of the Water Main, which acceptance shall be given within thirty (30) calendar days after the filing of a Notice of Completion for the Water Main, provided, however, that the City shall first provide proof that the time for filing any stop notices, bond claims, and/or mechanic's and materialmen's liens has run without any such notices, claims or liens having been filed (or the City having obtained satisfactory releases of same); and provided further, that the District shall have verified construction of the Water Main in substantial accordance with the plans and specifications, by such reasonable inspection and investigation as the District may require. In the event that any portion(s) of the Second Payment or Third Payment are disputed, the District shall pay the City all undisputed portions of the Payment, subject to the exceptions herein, within thirty (30) days after receiving written notice of completion of the Water Main Construction Item. If the District elects to disapprove all or a portion of the City's invoice(s), the District must, within a 12 calendar day period, furnish the City with a written statement describing those items that are disapproved.

3.3 The amount of the First Payment shall be fifty percent (50%) of the total amount set forth in the Construction Contract for construction of the Water Main. The amount of the Second Payment shall be twenty-five percent (25%) of the total amount set forth in the Construction Contract for construction of the Water Main. The amount of the Third Payment shall be equal the remaining balance of the amount for construction of the Water Main plus any Approved Change Orders.

4. Conditions Precedent to the District's Obligations. The District's obligations and agreements hereunder are expressly conditioned upon satisfaction of each of the conditions precedent set forth below (sometimes referred to in the singular as a "Condition Precedent" and collectively as the "Conditions Precedent"). Notwithstanding the foregoing, the District shall notify the City in writing within fifteen (15) business days after the District's discovery of the City's alleged failure to satisfy, either in whole or in part, any of the Conditions Precedent listed in this Paragraph 4. The City shall thereafter have fifteen (15) business days to cure such deficiency to the reasonable satisfaction of the District. If no written notice is received by the City regarding an alleged deficiency within the prescribed time, the Condition Precedent will be waived and deemed satisfactory to the District.

4.1. The District shall have received this Agreement, and any documents required hereby, all in form and content satisfactory to the District, and all duly executed by the appropriate party or parties;

4.2. The District having given its prior written approval to: (i) the bid proposed to be accepted for Alternate Bid Item #1 if the proposed bid exceeds the Engineer's estimate; and (ii) the provisions of the Construction Contract relating to construction of the Water Main; and

4.3. The satisfactory completion of the construction of the Water Main.

5. Approval of Plans and Specifications; Inspection. The District will review the design process and approve the construction plans, specifications, and contract documents as they relate to the Water Main, prior to the City soliciting or receiving bids or entering into contracts for the construction of the Water Main. Any amendments to such plans and specifications shall be subject to approval by the District.

6. Approval of Bid. Upon the District's approval of the Engineer's estimate for Alternate Bid Item #1, Alternate Bid Item #1 shall be included in the total construction cost for the Construction Contract for purposes of determining the lowest responsible bidder. Upon receipt of bids for the Construction Contract, the City shall determine the lowest responsive bid and award a contract; provided, however, that if the bid for Alternate Bid Item #1 exceeds the Engineer's estimate, then the City shall have the District review and approve the bid for Alternate Bid Item #1 before the City accepts the bid and awards the contract. If the District determines, in its sole and absolute discretion, that the bid for Alternate Bid Item #1 is too costly, the District may give notice to the City, within five (5) business days after District's receipt of the bid, not to include Alternate Bid Item #1 in the awarded contract, and Alternate Bid Item #1 shall be excluded from the awarded contract.

7. Inspection and Approval of Construction. The District shall be responsible for managing, inspecting and approving construction and installation of the Water Main (including, without limitation, requests for instructions or clarification and contractor coordination), and the City agrees to cooperate with the District in its performance of same. The District shall not be responsible for managing, inspecting or approving any portion of the road construction project other than construction and installation of the Water Main.

8. Notice to Proceed; Notice of Completion; Acceptance of Water Main. As soon as possible upon satisfaction by the contractor of all Conditions Precedent to the issuance of a notice to proceed, the City shall issue a notice to proceed to contractor. Upon completion of the Water Main, and the City's determination that construction of the Water Main and the road project have been completed in accordance with the plans and specifications therefore, the City shall file with the County Recorder of the County of Sacramento a Notice of Completion pursuant to Section 3093 of the Civil Code. Provided that all stop notices and claims which may have been filed with respect to amounts which are claimed to be owing with respect to construction of the Water Main are paid or settled and withdrawn, and provided that the District has verified in writing to the City that the Water Main has been constructed in substantial accordance with the plans and specifications, the District shall accept the completed Water Main within thirty (30) days after the filing of the Notice of Completion.

9. Change Orders. The District may approve any change order to the provisions of the Construction Contract relating to construction of the Water Main which the District negotiates with the contractor for such work and which the District determines (in its sole discretion) is

necessary to the satisfactory completion of the construction of the Water Main and/or to ensure that the Water Main, when constructed, will operate as intended without unreasonable costs. The amount of any change orders so approved by the District shall be deemed "Approved Change Orders" and shall be added to the total Water Main costs to be reimbursed by the District. Contractor shall make any changes in the construction of the Water Main as requested by the District. The District agrees to provide reimbursement to the City for any and all changes made to the plans and specifications that are requested and approved in writing by the District. If actual expenditures exceed the amount listed in Exhibit C, the City may request in writing that the District provide reimbursement for additional quantities of work. The District shall not provide reimbursement for costs that result from changes to the plans and/or specifications that are not approved in writing by the District prior to construction.

10. Payment of Claims. The City shall promptly pay or cause to be paid when due all undisputed costs and expenses incurred in connection with the Water Main and the road project; shall keep the property free and clear of any liens, encumbrances, charges or claims other than those approved in writing in advance by the District; and shall pay and promptly discharge, at the City's sole expense, all liens, encumbrances, charges and claims upon all or any part of the property, other than those permitted in writing by the District.

11. Insurance. The City shall cause the Contractor that constructs the Water Main, or a portion thereof, to furnish to the District and to require all of its subcontractors to furnish to the District a certificate or certificates substantiating the fact that it and its subcontractors have taken out the insurance hereinafter set forth for the period covered by this Agreement with an insurance carrier acceptable to the District in a form satisfactory to the District. Each certificate shall bear an endorsement precluding the cancellation, suspension, or reduction in coverage of any policy covered by such certificate before the expiration of thirty (30) days after the District shall have received written notification of such cancellation, suspension, or reduction by registered mail. At a minimum, the Contractor, and its subcontractors, shall obtain public liability and property damage insurance that includes, but is not limited to:

(A) Public liability and property damage insurance that includes, but is not limited to, protection against claims arising from personal injury; property damage; losses related to independent contractors, products and equipment; and explosion, collapse and underground hazards. The amount of the insurance coverage shall be not less than \$1,000,000.00 (combined single limit) for one or more persons injured and property damaged in each occurrence. The public liability and property damage insurance shall also name as an insured, on a primary basis, the District and its officers, officials, employees, agents, and volunteers. This insurance shall directly protect the District as well as the City and their respective agents.

(B) Workers' Compensation Insurance, as required by the State of California, and Employer's Liability Insurance with a limit of not less than \$1,000,000 per accident for bodily injury and disease.

Each policy of insurance shall specify that (1) the inclusion of more than one insured shall not operate to impair the rights of one insured against another insured, and the coverages afforded shall apply as though separate policies had been issued to each insured, and that (2) it acts as primary insurance and that no insurance held or owned by the District shall be called

upon to cover either in full or part any loss covered under the policy acquired by the City or its contractor(s).

12. Indemnity. (a) The City, by execution of this Agreement, and each Contractor and subcontractor, by acceptance of payment for work done on the Water Main, or portion thereof, specifically agrees to assume the defense of, indemnify and hold harmless the District and its elected officials, officers, employees, consultants, and agents from and against all liabilities, actions, damages, claims, losses or expenses of every type and description, including attorneys' and consultants' fees and expenses (collectively "Liabilities"), to which they may be subjected or put, by reason of or resulting from the construction, or the installation of the Water Main, except Liabilities arising from the active negligence, the sole negligence, or the willful misconduct of the District. This indemnification shall extend to Liabilities occurring after this Agreement is terminated as well as while it is in force. With respect to Liabilities resulting from any patent deficiency, this indemnification shall terminate four years after District's acceptance of the Project; and, with respect to Liabilities resulting from any latent deficiency, this indemnification shall terminate ten years after District's acceptance of the Project. The term "patent deficiency" shall have the meaning ascribed to such term in Code of Civil Procedure section 337.1. The term "latent deficiency" shall have the meaning ascribed to such term in Code of Civil Procedure section 337.15.

(b) To qualify for payment of the costs of the Water Main hereunder, the contract pursuant to which the Water Main was constructed shall contain the following provision:

Contractor specifically agrees to assume the defense of, indemnify and hold harmless the Florin Resource Conservation District (District) and District's elected officials, officers, employees, consultants, and agents from and against all liabilities, actions, damages, claims, losses or expenses of every type or description, including attorneys' and consultants' fees and expenses (collectively "Liabilities"), to which District may be subjected or put, by reason of or resulting from the construction or the installation of the facilities and improvements that are the subject of this Contract, except Liabilities arising from the sole negligence, the active negligence, or the willful misconduct of the District. This indemnification shall extend to Liabilities occurring after this Contract is terminated as well as while it is in force. Contractor acknowledges that District is the third party beneficiary of this provision and that Owner intends to assign any interest it has in this indemnification to District.

The City, by execution of this Agreement, and each Contractor, by acceptance of payment for work done on the Water Main, or portion thereof, assigns to the District any interest it has in the indemnification so provided to the City in the construction contract or contracts for the Water Main.

(c) The District agrees to and does hereby indemnify, hold harmless and defend the City and its elected officials, officers, agents and employees from every claim or demand made and

every liability, loss, damage or expense, of any nature whatsoever, which may be incurred by reason of any injury to or death of any persons, including the City or its elected officials, officers, agents and employees, or damage to or loss of any property caused by the negligence of the District, or any person, firm or corporation employed by the District, either directly or by independent contract, arising out of, or in any way connected with this Agreement, except liabilities arising from the active negligence, the sole negligence, or the willful misconduct of the City.

13. Further Assurances. The City shall promptly provide to the District all contracts, invoices, and other documents and information which the District may request for purposes of completing any determination of the reimbursement amount. In addition, each of the Parties shall execute and deliver any and all additional papers, documents and other assurances, and shall do any and all acts and things reasonably necessary in connection with the performance of their obligations hereunder and to carry out the intent and agreements of the Parties hereto.

14. Public Work. The construction of the Water Main shall be accomplished as a public works project of the City in accordance with all provisions of the Labor Code, Civil Code and Public Contract Code which are applicable thereto.

15. Ownership of the Water Main. The City and the District agree that, once the District accepts the Water Main pursuant to Sections 3.2 and 8 herein, the City shall release and relinquish all rights and interests, if any, it has in the Water Main and the District shall be the sole owner of the Water Main which shall exist for the District's exclusive use.

16. Time is of Essence. Time is of the essence for this Agreement.

17. Notice. Notices under this Agreement shall be deemed given when delivered by First Class Mail, Postage Prepaid, as follows:

City:

City of Elk Grove
Public Works
8400 Laguna Palms Way
Elk Grove, CA 95758
Attn: City Engineer

With a copy to: City of Elk Grove
8400 Laguna Palms Way
Elk Grove, CA 95758
Attn: John Danielson, City Manager

with a copy to:

Kronick, Moskovitz, Tiedemann & Girard
400 Capitol Mall, 27th Floor
Sacramento, CA 95814
Attn: Patrick Enright

District:

Elk Grove Water Service
Department of Florin Resource Conservation District
9257 Elk Grove Boulevard
Elk Grove, CA 95624

Attn: Michael B. Kenny

with a copy to:

Best, Best, Kreiger LLP
400 Capitol Mall, Suite 1650
Sacramento, CA 95814
Attn: Ann M. Siprelle

18. Binding Agreement. Each and every provision of this Agreement shall be binding and inure to the benefit of the successors in interest of the parties hereto.

19. Amendments. This Agreement shall not be modified in any manner except by an instrument in writing executed by the Parties or their respective successors in interest.

20. Waivers. A waiver or breach of covenant or provision in this Agreement shall not be deemed a waiver of any other covenant or provision in this Agreement, and no waiver shall be valid unless in writing and executed by the waiving Party. An extension of time for performance of any obligation or act shall not be deemed an extension of the time for performance of any other obligation or act. Failure to insist on any one occasion upon strict compliance with any of the terms, covenants, or conditions hereof shall not be deemed a waiver of such term, covenant, or condition, nor shall any waiver or relinquishment of any rights or powers hereunder at any one or more times be deemed a waiver or relinquishment of such other right or power at any other time or times.

21. No Third-Party Beneficiaries. The performance of the respective obligations under this Agreement are not intended to benefit any party other than the Parties, except as expressly provided otherwise herein. No person or entity not a signatory to this Agreement shall have any rights or causes of action against any Party to this Agreement as a result of that Party's performance or non-performance under this Agreement, except as expressly provided otherwise herein.

22. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which, when taken together, shall constitute one and the same agreement.

23. Exhibits. All Exhibits hereto are incorporated herein.

24. Integration. This is an integrated Agreement containing all of the considerations, understandings, promises and covenants exchanged between the Parties.

25. Attorneys' Fees. In any action to enforce the provisions of this Agreement, the prevailing Party shall be entitled to its reasonable attorneys' fees.

26. Severability. If any portion of this Agreement is declared by a court of competent jurisdiction to be invalid or unenforceable, such portion shall be deemed severed from this Agreement and the remaining parts shall remain in full effect as though such invalid or unenforceable provision had not been a part of this Agreement.

27. Governing Law; Venue. This Agreement is made under, and shall in all respects be interpreted, enforced, and governed by, the laws of the State of California. In the event of a dispute concerning the terms of this Agreement, the venue for any legal action shall be with the appropriate court in the County of Sacramento, State of California.

IN WITNESS WHEREOF, this Agreement is executed the day and year first above written, by the parties, as follows:

CITY OF ELK GROVE

FLORIN RESOURCE CONSERVATION
DISTRICT

By: _____

By: _____

John Danielson, City Manager

Michael B. Kenny, General Manager

ATTEST:

By: _____

Peggy E. Jackson, City Clerk

EXHIBIT "A"
"Project Map"

Sheldon Road

EXHIBIT "A"

Water Transmission Main
for City of Elk Grove's
Bond Road Widening, Segment 1

Bond Road

Highway 99

Elk Grove

Butteyard

Railroad
WTP

Waterman Road

Highway 99

Elk Grove - Flonn Road

Hampton
WTP

DATE MAY 2003



ELK GROVE WATER SERVICE
FACILITY MAP - TARIFF AREA 1
FOR INFORMATION USE ONLY - NOT TO BE USED FOR DESIGN



GRAPHIC SCALE
0 100 200
1 inch = 2000 ft



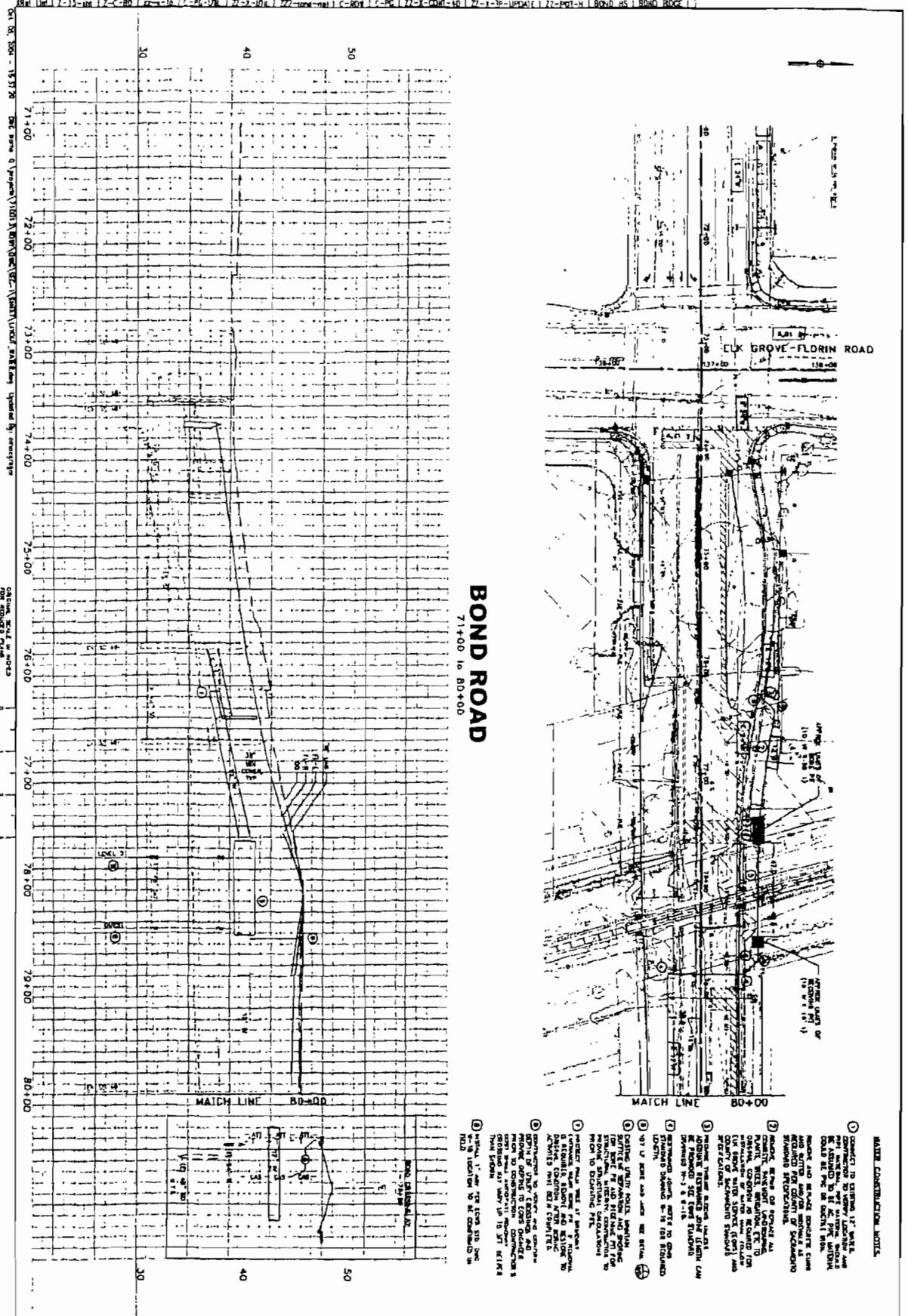
EXHIBIT "B"
"Estimated Water Main Costs"

EXHIBIT "B"
"Estimated Water Main Costs"

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
1	8 Inch Pipe	110	Linear Foot	\$40.00	\$4,400.00
2	12 Inch Pipe	2,310	Linear Foot	\$45.00	\$103,950.00
3	8 Inch Gate Valve	3	Each	\$1,000.00	\$3,000.00
4	12 Inch Butterfly Valve	5	Each	\$1,500.00	\$7,500.00
5	2 Inch Temporary Blow Off	3	Each	\$2,500.00	\$7,500.00
6	4 Inch Blow Off	1	Each	\$3,500.00	\$3,500.00
7	1 Inch Air Relief Valve	1	Each	\$1,500.00	\$1,500.00
8	Tie-In	2	Each	\$7,500.00	\$15,000.00
9	Bore and Jack at UPRR	107	Linear Foot	\$750.00	\$80,250.00
10	A.C. Removal and Replacement	200	Square Foot	\$7.50	\$1,500.00
11	Concrete Removal and Replacement	200	Square Foot	\$12.00	\$2,400.00
12	Landscape Restoration	100%	Lump Sum	\$5,000.00	\$5,000.00
TOTAL ALTERNATE BID ITEM #1					\$235,500.00

EXHIBIT "C"
"Bid Documents"

EXHIBIT A

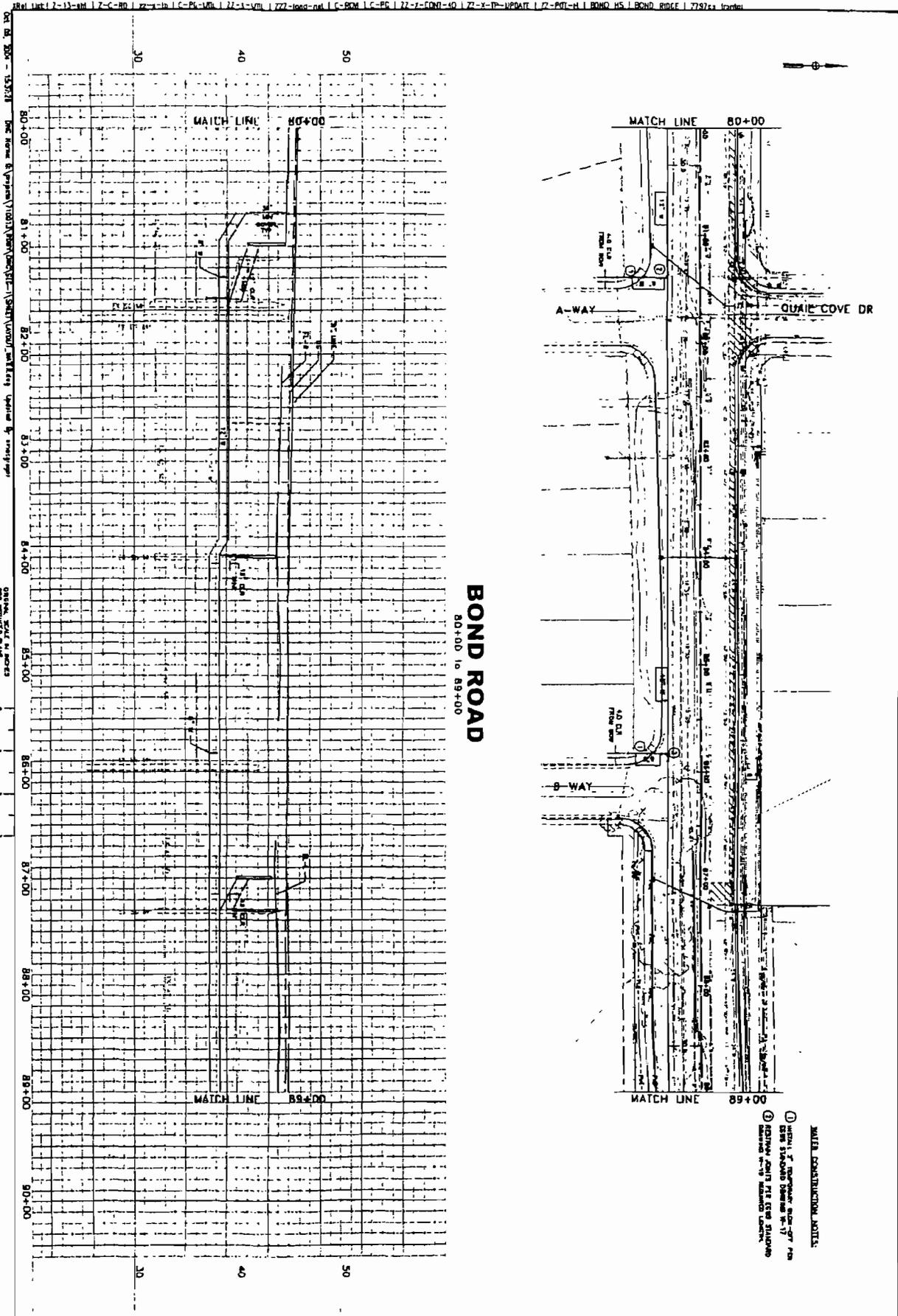


BOND ROAD
71+00 to 80+00

- MAJOR CONSTRUCTION NOTES:**
1. CONDUCT TO EXISTING 12" WATER LINE AND EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 2. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 3. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 4. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 5. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 6. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 7. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 8. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 9. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.
 10. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE. EXISTING 12" WATER LINE TO BE REMOVED AND REPLACED WITH 12" WATER LINE.

PROJECT NO. 710013	CITY OF ELK GROVE BOND ROAD WIDENING, SEGMENT 1 12" WATER LINE	DATE September 04	NO.	DESCRIPTION	ENGINEER	AGENCY APPROVAL
DRAWING W/1	TYLIN INTERNATIONAL	SCALE H 1"=40' , V 1"=4'			INT	DATE
SHEET 20 OF 44		DRAWN BY A. L. MCGREGOR			BY	DATE
		DESIGNED BY S. MYERS				
		CHECKED BY S. MYERS				

EXHIBIT A

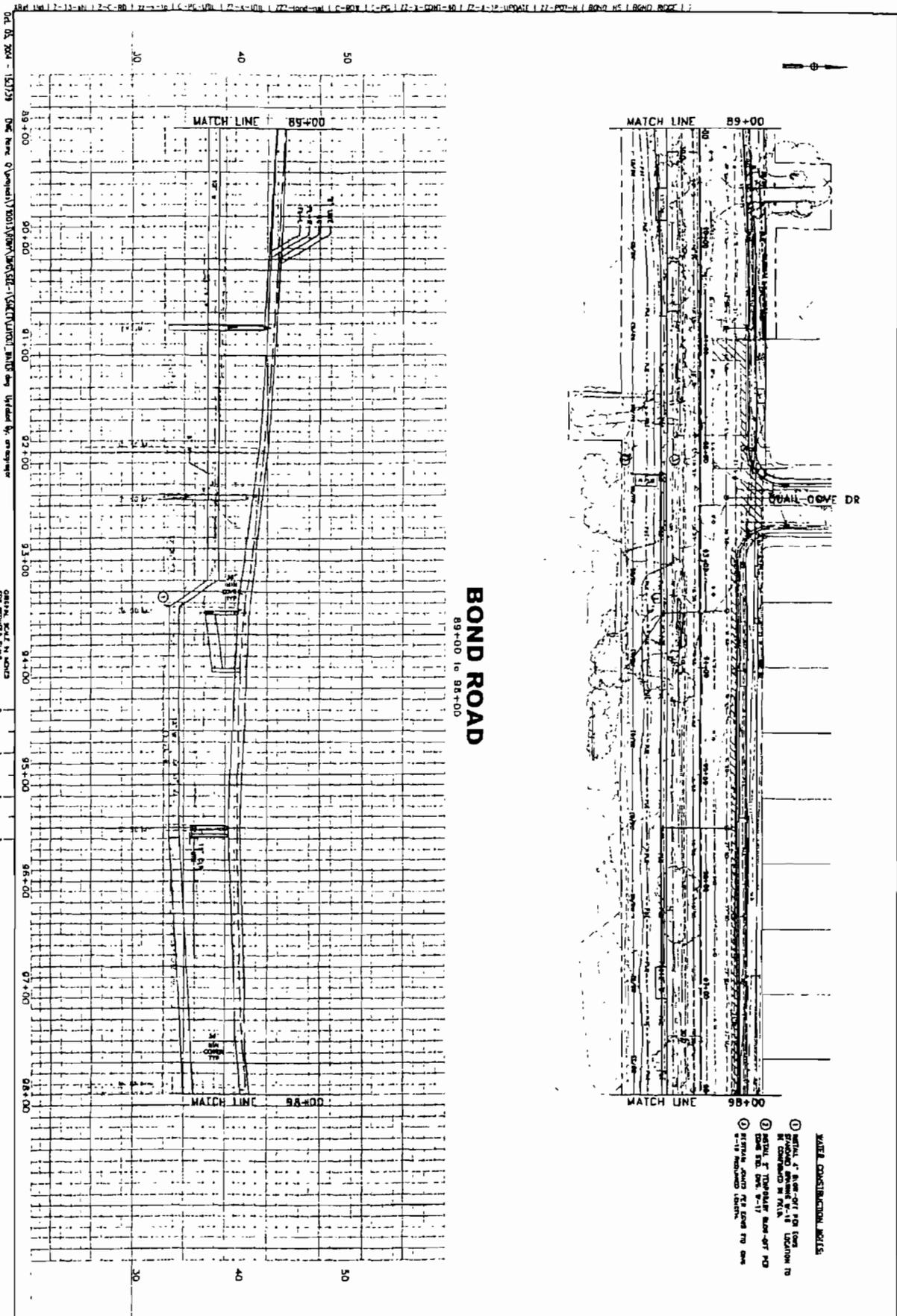


BOND ROAD
80+00 to 89+00

FIELD CONSTRUCTION NOTES:
 ① VERIFY ALL DIMENSIONS AND LOCATIONS FOR ALL UTILITIES PRIOR TO CONSTRUCTION.
 ② VERIFY ALL DIMENSIONS AND LOCATIONS FOR ALL UTILITIES PRIOR TO CONSTRUCTION.

PROJECT No 710013	CITY OF ELK GROVE BOND ROAD WIDENING, SEGMENT 1 12" WATER LINE		DATE: September 04	No	DESCRIPTION	ENGINEER AGENCY APPROVAL	INT DATE	BY	DATE
			SCALE: H 1"=60' . V 1"=4'						
DRAWING W2									
SHEET 21 OF 44									

EXHIBIT A



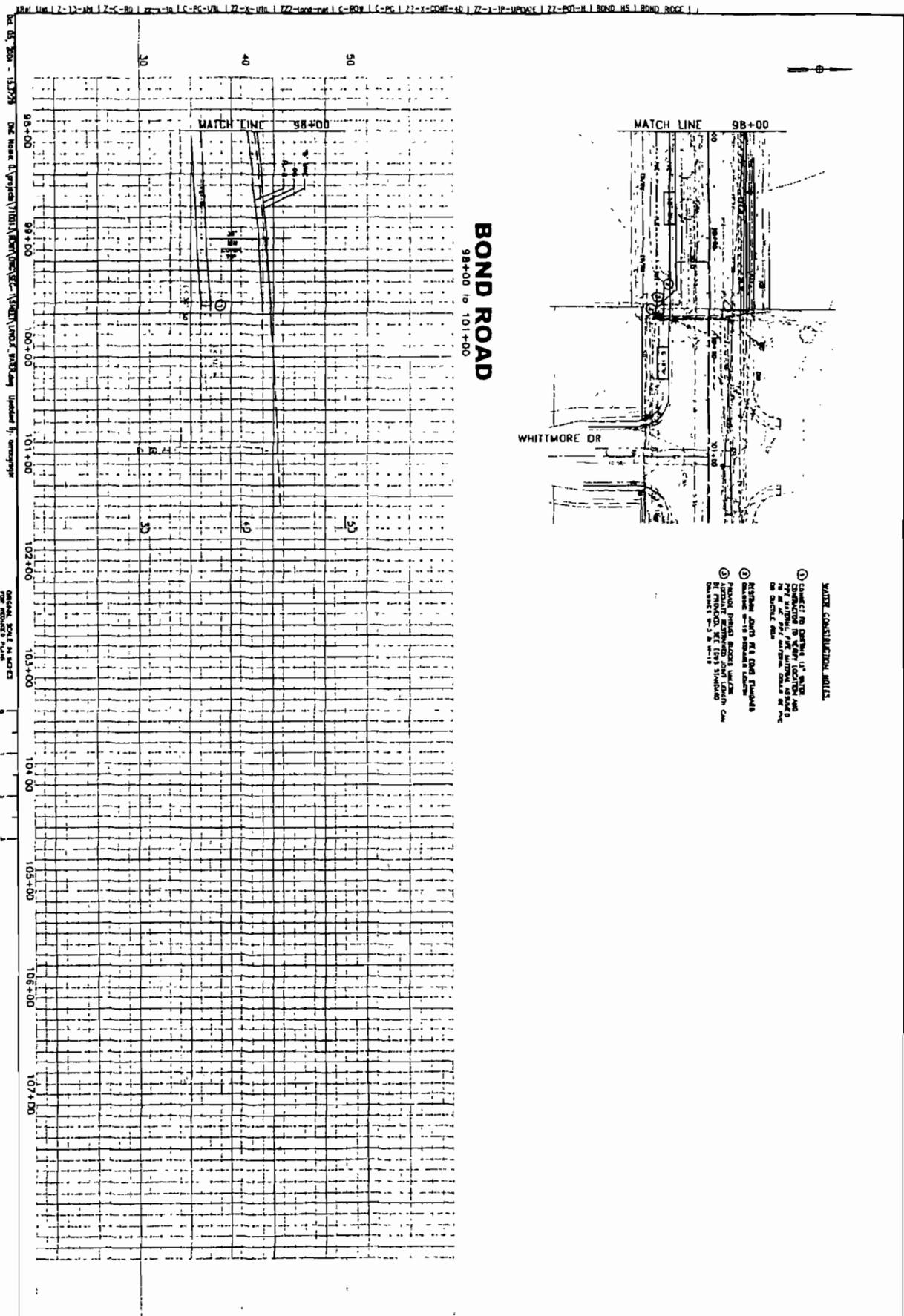
BOND ROAD
89+00 to 98+00

- NOTE CONSTRUCTION NOTES
- ① INSTALL 12" WATER LINE FOR 1000' TO BE CONSTRUCTED IN PLACE.
 - ② INSTALL 12" TYPICAL WATER LINE FOR 1000' TO BE CONSTRUCTED IN PLACE.
 - ③ VERIFY EXISTING UTILITIES BEFORE CONSTRUCTION.

PROJECT No 710013	CITY OF ELK GROVE BOND ROAD WIDENING, SEGMENT 1 12" WATER LINE	DATE September 04	No	DESCRIPTION	ENGINEER	AGENCY APPROVAL
DRAWING No W-3	TYL INTERNATIONAL	SCALE H: 1"=40', V: 1"=4'			INT	DATE
SHEET 22 OF 44		DESIGNED BY S. MYERS			BY	DATE
		CHECKED BY S. MYERS				



EXHIBIT A



BOND ROAD
98+00 to 101+00

WHITTMORE DR

- WATER CONSTRUCTION NOTES:**
1. CONDUIT TO BE 12" WATER CONDUIT IN 12" WATER CONDUIT. ALL JOINTS TO BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
 2. ALL JOINTS TO BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
 3. ALL JOINTS TO BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

PROJECT No. 710013	CITY OF ELK GROVE BOND ROAD WIDENING, SEGMENT 1 12" WATER LINE	DATE: September 04	No	DESCRIPTION	ENGINEER	AGENCY	APPROVAL
DRAWING W4	TYLIN INTERNATIONAL	SCALE: H 1"=40', V 1"=4'					
SHEET 23 OF 64		DRAWN: A. I. MacGREGOR					
		DESIGNED: S. MYERS					
		CHECKED: S. MYERS					

**SECTION F.
WATER TRANSMISSION MAIN**

SECTION 01010 - SUMMARY OF WORK

PART 1 -- GENERAL

1.1 THE REQUIREMENT

- A. The WORK to be performed under this Contract shall consist of the installation of various diameter potable water pipelines and appurtenances in select areas of Elk Grove Boulevard, and performing all work or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The WORK shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents but inferred in the plans, specifications, or other associated drawings or submittals, which may be necessary for the complete and proper construction of the WORK in good faith shall be provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the OWNER. The CONTRACTOR has planned for and included in the contract price all costs associated with said WORK, and shall not request additional compensation for items of work that are not succinctly identified or detailed but expected as part of a typical pipeline project.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The WORK shall include the installation of various diameter potable water transmission mains, fittings, valves, restraint devices or measures, potholing, trenching, backfill and compaction, importing and exporting select fill and spoil, installation of locating wire and tape, testing, disinfecting, clean-up, traffic control, erosion control, cutting and replacing paving and concrete, etc.
- B. The WORK shall also include preparing material submittals, lay sheets, schedules, attending progress meetings, traffic control coordination, obtaining permits, etc.

1.3 CONTRACT METHOD

- A. The WORK hereunder will be constructed under a unit-price contract.

1.4 WORK BY OTHERS

- A. Where 2 or more contracts are being performed at one time on the same Site or adjacent land in such manner that work under one contract may interfere with work under another, the OWNER will determine the sequence and order of the Work in either or both contracts. When the Site of one contract is the necessary or convenient means of access for performance of work under another, the OWNER may grant privilege of access or other reasonable privilege to the contractor so

desiring, to the extent, amount, and in manner and at time that the OWNER may determine. No OWNER determination of method or time or sequence or order of the work or access privilege shall be the basis for a claim for delay or damage except under provisions of the General Conditions for temporary suspensions of the work. The CONTRACTOR shall conduct its operations so as to cause a minimum of interference with the work of such other contractors, and shall cooperate fully with such contractors to allow continued safe access to their respective portions of the Site, as required to perform work under their respective contracts.

- B. **Interference With Work On Utilities:** The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize interference with said relocation, altering, or other rearranging of facilities.
- C. **Interference with Private Property Owners:** The CONTRACTOR shall cooperate fully with all private property owners to minimize interference with their normal business operations. As such, CONTRACTOR shall provide accurate schedules to the ENGINEER and minimum 14 calendar day notice that work is to be conducted on private property. CONTRACTOR shall attend meetings with property owners and the ENGINEER, if necessary, to discuss coordination issues, staging, spoil management, work hours, clean up plans, etc. The ENGINEER shall resolve any disputes between the property owner and CONTRACTOR, should they arise.

1.5 WORK SEQUENCE

CONTRACTOR shall minimize disruption to traffic in public R/W's. As such, no cutting of pavement, trenching, or pipe installation shall occur unless the CONTRACTOR has all materials on-site, and others conditions are favorable to start and finish installations within the roadway, minimizing traffic disruption, as approved by the ENGINEER.

1.6 Not Used

1.7 OUTAGE PLAN AND REQUESTS

- A. Unless the Contract Documents indicate otherwise, the CONTRACTOR shall not remove from service existing and operating pipelines or valves, road, or any other facility without permission from the ENGINEER.
- B. Where the WORK requires modifications to existing facilities or construction of new facilities and connection of new facilities to existing facilities, the CONTRACTOR shall submit a detailed outage plan and schedule for the ENGINEER'S approval a minimum of 2 weeks in advance of the time that such outage is planned. All costs for preparing and implementing the outage plans shall be at no increase in cost to

the OWNER.

- C. The ENGINEER shall be notified in writing at least one week in advance of the required outage if the schedule for performing the work has changed or if revisions to the outage plan are required.
- D. The CONTRACTOR shall provide written confirmation of the shutdown date and time two working days prior to the actual shutdown.

1.8 NOT USED

1.9 PROJECT MEETINGS

A. **Preconstruction Conference:**

- 1. Prior to the commencement of WORK at the Site, a preconstruction conference will be held at a mutually agreed time and place. The conference shall be attended by the CONTRACTOR'S Project Manager, its superintendent, and its Subcontractors as the CONTRACTOR deems appropriate. Other attendees will be:
 - a. ENGINEER and the Resident Project Representative.
 - b. Representatives of OWNER.
 - c. Others as requested by CONTRACTOR, OWNER, or ENGINEER.
- 2. The CONTRACTOR shall bring the preconstruction conference submittals in accordance with Section 01300 - Contractor Submittals.
- 3. 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. An agenda may be furnished to the CONTRACTOR prior to the meeting date. However, the CONTRACTOR should be prepared to discuss all of the items listed below.
 - a. Status of CONTRACTOR's insurance and bonds.
 - b. CONTRACTOR's tentative schedules.
 - c. Transmittal, review, and distribution of CONTRACTOR's submittals.
 - d. Processing applications for payment.
 - e. Maintaining record documents.
 - f. Critical work sequencing.

- g. Field decisions and Change Orders.
 - h. Use of Site, office and storage areas, security, housekeeping, and OWNER's needs.
 - i. Major equipment deliveries and priorities.
 - j. CONTRACTOR's assignments for safety and first aid.
4. The ENGINEER will preside at the preconstruction conference and will arrange for keeping and distributing the minutes to all persons in attendance.

B. Progress Meetings:

1. The CONTRACTOR shall schedule and hold regular on-site progress meetings as necessary and as requested by the ENGINEER. Progress meetings are expected to be required no more frequent than every other week, however may occur at select times as requested by ENGINEER, or as required by progress of the WORK. The CONTRACTOR shall call for a progress meeting should any issues arise that may cause delays or claims to proactively address the issues. The CONTRACTOR, ENGINEER, and all Subcontractors active on the Site shall attend each meeting. CONTRACTOR may at its discretion request attendance by representatives of its Suppliers, manufacturers, and other Subcontractors.
2. The ENGINEER will preside at the progress meetings and will arrange for keeping and distributing the minutes. The purpose of the meetings is to review the progress of the WORK, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop. During each meeting, the CONTRACTOR shall present any issues which may impact its progress with a view to resolve these issues expeditiously.

- END OF SECTION -

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 -- GENERAL

1.1 SCOPE

- A. Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefor shall be included in the prices named in the Bid Schedule for the various appurtenant items of work. Certain items of work are considered incidental to the project, including but not limited to, traffic control, maintaining work areas, coordination meetings, working around existing utilities, etc., and these items of work shall not be paid for separately from those shown below.

1.2 BID ITEMS MEASUREMENT AND PAYMENT

- A. 8 INCH PIPE (Water Transmission Main Bid Item No. 1)

Payment for 8" PVC C900 water pipe shall be based on a lineal foot price (L.F.), and shall include all materials, equipment, and labor necessary for the installation of said pipe, including but not limited to trenching, spoil management, pipe, installation, restraint devices, fittings, backfill, compaction, locating wire and tape, etc.

- B. 12 INCH PIPE (Water Transmission Main Bid Item No. 2)

Payment for 12" PVC C900 water pipe shall be based on a lineal foot price (L.F.), and shall include all materials, equipment, and labor necessary for the installation of said pipe, including but not limited to trenching, spoil management, pipe, installation, restraint devices, fittings, backfill, compaction, locating wire and tape, etc. This item does not include the 12" pipe used as the carrier pipe for the bore and jack crossing of the UPRR.

- C. 8 INCH GATE VALVE (Water Transmission Main Bid Item No. 3)

Payment for 8" gate valves shall be based on a unit cost price (ea.), and shall include all materials, equipment, and labor necessary for the installation of gate valves, including but not limited to, valve, riser, box, extension, hardware, corrosion protection, etc.

- D. 12 INCH BUTTERFLY VALVES (Water Transmission Main Bid Item No. 4)

Payment for 12" butterfly valves shall be based on a unit cost price (ea.), and shall include all materials, equipment, and labor necessary for the installation of butterfly valves, including but not limited to, valve, riser, box, extension, hardware, corrosion protection, etc.

E. 2 INCH TEMPORARY BLOW-OFF (Water Transmission Main Bid Item No. 5)

Payment for a 2 inch temporary blow-off installation based on a unit cost price (ea.) installed per Elk Grove Water Service Standard Detail W-17, and shall include all materials, equipment, and labor necessary for the installation, including but not limited to trenching, pipe, installation, valve box, fittings, backfill, compaction, locating wire and tape, etc.

F. 4 INCH BLOW-OFF (Water Transmission Main Bid Item No. 6)

Payment for a 4 inch blow-off installation based on a unit cost price (ea.) installed per Elk Grove Water Service Standard Detail W-16, and shall include all materials, equipment, and labor necessary for the installation, including but not limited to trenching, pipe, installation, valve box, fittings, backfill, compaction, locating wire and tape, etc.

G. 1 INCH AIR RELIEF VALVE (Water Transmission Main Bid Item No. 7)

Payment for a 1 inch combination air/vacuum relief valve installation based on a unit cost price (ea.) installed per Elk Grove Water Service Standard Detail W-18, and shall include all materials, equipment, and labor necessary for the installation, including but not limited to trenching, pipe, installation, enclosure, fittings, backfill, compaction, locating wire and tape, etc.

H. TIE-IN (Water Transmission Main Bid Item No. 8)

Payment for connecting new water main to existing water main shall be based on a unit cost price (ea.), and shall include all materials, equipment, and labor necessary for the making connection, including but not limited to, adapters, fittings, trenching, installation, backfill, compaction, locating wire and tape, etc.

I. BORE AND JACK AT UPRR (Water Transmission Main Bid Item No. 9)

Payment for bore and jack casing and carrier pipe crossing at UPRR shall be based on a lineal foot price (L.F.) of the casing pipe, and shall include all materials, equipment, and labor necessary for the installation of said pipe, including but not limited to steel casing pipe, 12 inch DIP carrier pipe, excavation, trenching, boring and jacking, vertical control, spoil management, sand, grout, installation, restraint devices, fittings, backfill, compaction, locating wire and tape, permitting, coordination with UPRR, etc.

J. A.C. REMOVAL AND REPLACEMENT (Water Transmission Main Bid Item No. 10)

Payment for removal and replacement of a.c. surfaces shall be based on a square foot

price (S.F.), and shall include all materials, equipment, and labor necessary to remove and replace a.c. concrete surfaces within the areas not already proposed for resurfacing within this project, including but not limited to, clean cutting surface, removal and disposal of removed a.c. surface, replacement and compaction of subbase, base, and a.c. surfaces (in accordance with the plans, specifications, and/or City of Elk Grove requirements), sealers, etc.

K. CONCRETE REMOVE AND REPLACE (Water Transmission Main Bid Item No. 11)

Payment for removal and replacement of concrete sidewalks and drives shall be based on a square foot price (S.F.), and shall include all materials, equipment, and labor necessary to remove and replace concrete sidewalks and drives associated with the installation of the water transmission main, including but not limited to, clean cutting surface, removal and disposal of removed concrete, replacement and compaction of subbase, base, and placement of concrete (in accordance with the plans, specifications, and/or City of Elk Grove requirements), etc.

L. LANDSCAPE RESTORATION (Water Transmission Main Bid Item No. 12)

Payment for removal and restoration of any and all landscaping and irrigation shall be based on a lump-sum price (L.S.), and shall include all materials, equipment, and labor necessary for the removal and restoration to original condition of landscape material, including but not limited to, coordination of affected irrigation system with property owner(s), irrigation piping, fittings, sprinklers, drip systems, valves, controllers, signal wiring, plants, bushes, trees, soil, bark, mulch, etc.

M. SHEETING, SHORING, AND BRACING (Water Transmission Main Bid Item No. 13)

Payment for temporary sheeting, shoring, and bracing or equivalent method shall be based on a lump-sum price (L.S.), and shall include all planning, design, engineering fees, furnishing and constructing, and removal and disposal of such temporary sheeting, shoring, and bracing, as required under the provisions of any permits, and in accordance with the requirements of OSHA and the Construction Safety Orders of the State of California, pursuant to the provisions of Section 6707 of the California Labor Code.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01070 - ABBREVIATIONS OF INSTITUTIONS

PART 1 -- GENERAL

1.1 GENERAL

- A. Wherever in these Specifications references are made to the standards, specifications, or other published data of the various international, national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these Specifications, the following acronyms or abbreviations which may appear in these Specifications shall have the meanings indicated herein.

1.2 ABBREVIATIONS

AA	Aluminum Association
AAMA	Architectural Aluminum Manufacturer's Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AFPA	American Forest Products Association
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
AHA	American Hardboard Association
AHAM	Association of Home Appliance Manufacturers
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANS	American Nuclear Society
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association or American Parquet Association, Inc.
API	American Petroleum Institute
APWA	American Public Works Association
ARI	Air-Conditioning and Refrigeration Institute
ASA	Acoustical Society of America
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society of Nondestructive Testing
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWCI	American Wire Cloth Institute
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute

AWS	American Welding Society
AWWA	American Water Works Association
BBC	Basic Building Code, Building Officials and Code Administrators International
BHMA	Builders Hardware Manufacturer's Association
CABO	Council of American Building Officials
CBM	Certified Ballast Manufacturers
CDA	Copper Development Association
CEMA	Conveyors Equipment Manufacturer's Association
CGA	Compressed Gas Association
CLPCA	California Lathing and Plastering Contractors Association
CLFMI	Chain Link Fence Manufacturer's Institute
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DCDMA	Diamond Core Drill Manufacturer's Association
DHI	Door and Hardware Institute
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
EPA	Environmental Protection Agency
FCC	Federal Communications Commission
FCI	Fluid Controls Institute
FM	Factory Mutual System
FPL	Forest Products Laboratory
HI	Hydronics Institute
HPMA	Hardwood Plywood Manufacturers Association
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IME	Institute of Makers of Explosives
IP	Institute of Petroleum (London)
IPC	Institute of Printed Circuits
IPCEA	Insulated Power Cable Engineers Association
ISDSI	Insulated Steel Door Systems Institute
ISA	Instrument Society of America
ISEA	Industrial Safety Equipment Association
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
MBMA	Metal Building Manufacturer's Association
MIL	Military Standards (DoD)
MPTA	Mechanical Power Transmission Association
MSS	Manufacturers Standardization Society
MTI	Marine Testing Institute
NAAMM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NAGDM	National Association of Garage Door Manufacturers
NB	National Board of Boiler and Pressure Vessel Inspectors (alternate NBBPVI)
NBS	National Bureau of Standards (Now NIST)
NCCLS	National Committee for Clinical Laboratory Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association

NETA	International Electrical Testing Association
NFPA	National Fire Protection Association or National Fluid Power Association or National Forest Products Association
NISO	National Information Standards Organization
NLGI	National Lubricating Grease Institute
NMA	National Microfilm Association
NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NWMA	National Woodwork Manufacturers Association
NWWDA	National Wood Window and Door Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PPI	Plastics Pipe Institute
RCRA	Resource Conservation and Recovery Act
RIS	Redwood Inspection Service
RMA	Rubber Manufacturers Association
RVIA	Recreational Vehicle Industry Association
RWMA	Resistance Welder Manufacturer's Association
SAE	Society of Automotive Engineers
SAMA	Scientific Apparatus Makers Association
SDI	Steel Door Institute
SMA	Screen Manufacturers Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPI	Society of the Plastics Industry, Inc.
SPIB	Southern Pine Inspection Bureau
SPR	Simplified Practice Recommendation
SSA	Swedish Standards Association
SSBC	Southern Standard Building Code, Southern Building Code Congress
SSPC	Society for Protective Coating
SSPWC	Standard Specifications for Public Works Construction
TAPPI	Technical Association of the Pulp and Paper Industry
TFI	The Fertilizer Institute
TIA	Telecommunications Industries Association
TPI	Truss Plate Institute
UBC	Uniform Building Code
UL	Underwriters Laboratories, Inc.
WCLIB	West Coast Lumber Inspection Bureau
WCRSI	Western Concrete Reinforcing Steel Institute
WEF	Water Environment Federation
WIC	Woodwork Institute of California
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01090 - REFERENCE STANDARDS

PART 1 -- GENERAL

1.1 GENERAL

- A. **Titles of Sections and Paragraphs:** Titles and subtitles accompanying specification sections and paragraphs are for convenience and reference only, and do not form a part of the Specifications.
- B. **Applicable Publications:** Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the Contract is advertised for bids shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth in the Specifications or shown on the Drawings will be waived because of any provision of, or omission from, said standards or requirements.
- C. **Specialists, Assignments:** In certain instances, specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the WORK; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. The CONTRACTOR shall construct the WORK in accordance with the Contract Documents and the referenced portions of those referenced codes, standards, and specifications.
- B. References herein to "Building Code" or "Uniform Building Code" shall mean Uniform Building Code of the International Conference of Building Officials (ICBO). Similarly, references to "Mechanical Code" or "Uniform Mechanical Code," "Plumbing Code" or "Uniform Plumbing Code," "Fire Code" or "Uniform Fire Code," shall mean Uniform Mechanical Code, Uniform Plumbing Code and Uniform Fire Code of the International Conference of the Building Officials (ICBO). "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the WORK is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the WORK herein, including all addenda, modifications, amendments, or other lawful changes thereto.
- C. In case of conflict between codes, reference standards, drawings, and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing

any materials or furnishing labor. The CONTRACTOR shall bid for the most stringent requirements.

- D. References herein to "OSHA Regulations for Construction" shall mean **Title 29, Part 1926, Construction Safety and Health Regulations**, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- E. References herein to "OSHA Standards" shall mean **Title 29, Part 1910, Occupational Safety and Health Standards**, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- F. **Applicable Standard Specifications:** References in the Contract Documents to "Standard Specifications" shall mean the Elk Grove Water Service Standard Construction Specifications. Improvements for non-water related work shall reference the City of Elk Grove Standard Construction Specifications.
- G. **Applicable Safety Standards:** References herein to "Cal-OSHA" shall mean **State of California, Department of Industrial Relations, Construction Safety Orders**, as amended to date, and all changes and amendments thereto.

1.3 REGULATIONS RELATED TO HAZARDOUS MATERIALS

- A. The CONTRACTOR shall be responsible that all work included in the Contract Documents, regardless if shown or not, shall comply with all EPA, OSHA, RCRA, NFPA, and any other Federal, State, and Local Regulations governing the storage and conveyance of hazardous materials, including petroleum products.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01300 - CONTRACTOR SUBMITTALS

PART 1 -- GENERAL

1.1 GENERAL

- A. Wherever submittals are required in the Contract Documents, submit them to the ENGINEER.
- B. Within 3 calendar days after the date of commencement as stated in the Notice to Proceed, the CONTRACTOR shall submit the following items to the ENGINEER for review:
 - 1. A preliminary schedule of Shop Drawings, Samples, and proposed Substitutes ("Or-Equal") submittals listed in the Bid.
 - 2. A list of all permits and licenses the CONTRACTOR shall obtain indicating the agency required to grant the permit and the expected date of submittal for the permit and required date for receipt of the permit.

1.2 PRECONSTRUCTION CONFERENCE SUBMITTALS

- A. At the preconstruction conference referred to in Section 01010 - Summary of Work, the CONTRACTOR shall submit the following items to the ENGINEER for review:
 - 1. A preliminary schedule of Shop Drawings, Samples, and proposed Substitute ("Or-Equal") submittals listed in the Bid.
 - 2. A list of all permits and licenses the CONTRACTOR shall obtain indicating the agency required to grant the permit, the expected date of submittal for the permit, and required date for receipt of the permit.
 - 3. A CPM project schedule indicating all critical work items and proposed construction dates.

1.3 SHOP DRAWINGS

- A. Wherever called for in the Contract Documents, or where required by the ENGINEER, the CONTRACTOR shall furnish to the ENGINEER for review, three copies plus the number required for return, of each Shop Drawing submittal. The term "Shop Drawings" as used herein shall be understood to include detail design calculations, shop-prepared drawings, fabrication, and installation drawings, erection drawings, lists, graphs, catalog sheets, data sheets, and similar items. Whenever the CONTRACTOR is required to submit design calculations as part of a submittal, such calculations shall bear the signature and seal of an engineer registered in the appropriate branch and in the state wherein the project is to be built, unless otherwise indicated.
- B. Shop Drawing submittals shall be accompanied by a transmittal form that indicates the date of submittal, company name, address, phone, fax, and email, product and reference

to plans and/or specifications, requested date of return, and any other information critical for the reviewer's benefit. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal.

C. Organization

1. A single submittal transmittal form shall be used for each technical specification section or item or class of material or equipment for which a submittal is required. A single submittal covering multiple sections will not be acceptable, unless the primary specification references other sections for components. Example: if a pump section references other section for the motor, protective coating, anchor bolts, local control panel, and variable frequency drive, a single submittal would be accepted; a single submittal covering vertical turbine pumps and horizontal split case pumps would not be acceptable.
2. On the transmittal form, index the components of the submittal and insert tabs in the submittal to match the components. Relate the submittal components to Specification paragraph and subparagraph, Drawing number, detail number, schedule title, or room number, or building name, as applicable.
3. Unless indicated otherwise, terminology and equipment names and numbers used in submittals shall match the Contract Documents.

D. Format

1. Minimum sheet size shall be 8.5 inches by 11 inches. Maximum sheet size shall be 24 inches by 36 inches. Every page in a submittal shall be numbered in sequence. Each copy of a submittal shall be collated a stapled or bound, as appropriate. The ENGINEER will not collate copies.
2. Where product data from a manufacturer is submitted, clearly mark which model is proposed, with all pertinent data capacities, dimensions, clearances, diagrams, controls, connections, anchorage, and supports. Sufficient level of detail shall be presented for assessment of compliance with the Contract Documents.
3. Each submittal shall be assigned a unique number. Submittals shall be numbered sequentially. The submittal numbers shall be clearly noted on the transmittal. Original submittals shall be assigned a numeric submittal number. Resubmittals shall bear an alpha-numeric system which consists of the number assigned to the original submittal for that item followed by a letter of the alphabet to represent that it is a subsequent submittal of the original.

E. Disorganized submittals which do not meet the requirements above will be returned without review.

F. Except as may otherwise be indicated herein, the ENGINEER will return prints of each submittal to the CONTRACTOR with its comments noted thereon, within 30 calendar days following receipt by the ENGINEER. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the ENGINEER by the second submission of a submittal item. The OWNER reserves the right to withhold monies due to the CONTRACTOR to cover additional costs of the ENGINEER's review beyond the second submittal. The ENGINEER'S maximum review period for each submittal, including all resubmittals, will be 30 days per submittal. Thus, for a submittal that requires two

resubmittals before it is complete, the maximum review period for that submittal could be 90 days.

- G. If a submittal is returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision and resubmission of said submittal will not be required.
- H. If a submittal is returned marked "MAKE CORRECTIONS NOTED," CONTRACTOR shall make the corrections on the submittal, but formal revision and resubmission of said submittal will not be required.
- I. If a submittal is returned marked "AMEND-RESUBMIT," the CONTRACTOR shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the ENGINEER for review.
- J. If a submittal is returned marked "REJECTED-RESUBMIT," it shall mean that the submitted material or product does not satisfy the specification, the submittal is so incomplete that it cannot be reviewed, or is a substitution request that has not been previously approved.
- K. Fabrication of an item shall be commenced only after the ENGINEER has reviewed the pertinent submittals and returned copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN" or MAKE CORRECTIONS NOTED." Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as changes to the contract requirements.
- L. All submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR, prior to submission to the ENGINEER. Each submittal shall be dated, signed, and certified by the CONTRACTOR, as being correct and in strict conformance with the Contract Documents. In the case of Shop Drawings, each sheet shall be so dated, signed, and certified. The ENGINEER will only review submittals which have been so certified by the CONTRACTOR. All non-certified submittals will be returned to the CONTRACTOR without action taken by the ENGINEER, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.
- M. The ENGINEER's review of submittals shall not relieve the CONTRACTOR of the responsibility for the correctness of details and dimensions. The ENGINEER shall review submittals for accuracy with stated or implied requirements of the project, but failure on the ENGINEER'S part to identify mistakes or omitted items in the submittal is does not relieve the CONTRACTOR of the responsibility to provide said work. The CONTRACTOR shall assume all responsibility and risk for any misfits due to any errors in submittals. The CONTRACTOR shall be responsible for the dimensions and the design of adequate connections and details, as required to provide a complete project.

1.4 CONTRACTOR'S SCHEDULE

- A. The CONTRACTOR's construction schedules and reports shall be prepared and submitted to the ENGINEER in accordance with of Section 01311.

1.5 SAMPLES

- A. Whenever in the Specifications samples are required, the CONTRACTOR shall submit not less than [3] samples of each item or material to the ENGINEER for acceptance.

- B. Unless otherwise indicated, samples, shall be submitted a minimum of [21] days prior to ordering such material.
- C. Samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and Manufacturer's name. Upon receiving acceptance of the ENGINEER, one set of the samples will be stamped and dated by the ENGINEER and returned to the CONTRACTOR, and one set of samples will be retained by the ENGINEER, and one set of samples shall remain at the Site until completion of the WORK.

1.6 TECHNICAL MANUAL

- A. The CONTRACTOR shall submit technical operation and maintenance information for each item of mechanical, electrical and instrumentation equipment in an organized manner in the Technical Manual. It shall be written so that it can be used and understood by the OWNER'S operation and maintenance staff.
- B. The Technical Manual shall be subdivided first by specification section number; second, by equipment item; and last, by "Category." "Categories" shall conform to the following (as applicable):
 - 1. Category 1 - Equipment Summary:
 - a. Summary: A summary table shall indicate the equipment name, equipment number, and process area in which the equipment is installed.
 - b. Form: The ENGINEER will supply an Equipment Summary Form for each item of mechanical, electrical and instrumentation equipment in the WORK. The CONTRACTOR shall fill in the relevant information on the form and include it in Part 1.
 - 2. Category 2 - Operational Procedures:
 - a. Procedures: Manufacturer-recommended procedures on the following shall be included in Part 2:
 - Installation
 - Adjustment
 - Startup
 - Location of controls, special tools, equipment required, or related instrumentation needed for operation
 - Troubleshooting
 - Disassembly
 - Reassembly
 - Realignment
 - 3. Category 3 - Preventive Maintenance Procedures:
 - a. Procedures: Preventive maintenance procedures shall include all manufacturer-recommended procedures to be performed on a periodic basis, both by removing and replacing the equipment or component, and by leaving the equipment in place.

- b. Schedules: Recommended frequency of preventive maintenance procedures shall be included. Lubrication schedules, including lubricant SAE grade, type, and temperature ranges, shall be covered.
 - 4. Category 4 - Parts List:
 - a. Parts List: A complete parts list shall be furnished, including a generic description and manufacturer's identification number for each part. Addresses and telephone numbers of the nearest supplier and parts warehouse shall be included.
 - b. Drawings: Cross-sectional or exploded view drawings shall accompany the parts list.
 - 5. Category 5 - Wiring Diagrams (Not Used)
 - 6. Category 6 - Shop Drawings:
 - a. Drawings: This part shall include approved shop or fabrication drawings, complete with dimensions.
 - 7. Category 7 - Safety:
 - a. Procedures: This part describes the safety precautions to be taken when operating and maintaining the equipment or working near it.
 - 8. Category 8 - Documentation:
 - a. All equipment warranties, affidavits, and certifications required by the Technical Specifications shall be placed in this part.
 - C. The CONTRACTOR shall furnish to the ENGINEER 2 identical Technical Manuals. Each set shall consist of one or more volumes, each of which shall be bound in a standard size, 3-ring, looseleaf, vinyl plastic hard cover binder suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches. A table of contents indicating all equipment in the manuals shall be prepared.
 - D. Manuals shall be submitted in final form to the ENGINEER not later than the 75 percent of construction completion date. All discrepancies found by the ENGINEER shall be corrected within 30 days from the date of written notification by the ENGINEER.
 - E. Incomplete or unacceptable manuals at the 75 percent construction completion point shall constitute sufficient justification to retain the amount in paragraph "Technical Manual Submittals" of Section 01700 - Project Closeout, from any monies due the CONTRACTOR.
- 1.7 SPARE PARTS LIST
- A. The CONTRACTOR shall furnish to the ENGINEER 2 identical sets of spare parts information for all mechanical, electrical, and instrumentation equipment. The spare parts list shall include the current list price of each spare part. The spare parts list shall include

those spare parts which each manufacturer recommends be maintained by the OWNER in inventory at the plant site. Each manufacturer or supplier shall indicate the name, address, and telephone number of its nearest outlet of spare parts to assist the OWNER in ordering. The CONTRACTOR shall cross-reference all spare parts lists to the equipment numbers designated in the Contract Documents. The spare parts lists shall be bound in standard size, 3-ring, looseleaf, vinyl plastic hard cover binders suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches.

1.8 RECORD DRAWINGS

- A. The CONTRACTOR shall maintain one record set of Drawings at the Site. On these, it shall mark all project conditions, locations, configurations, and any other changes or deviations which may vary from the information represented on the original Contract Drawings, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Drawings. The elevation of the top of pipe installed shall be surveyed and recorded by the CONTRACTOR at all grade breaks. Provide triangulation dimensions to all valves. Said record drawings shall be supplemented by any detailed sketches as necessary or directed to fully indicate the WORK as actually constructed. These master record drawings of the CONTRACTOR's representation of as-built conditions, including all revisions made necessary by addenda and change orders shall be maintained up-to-date during the progress of the WORK. Red ink shall be used for alterations and notes. Notes shall identify relevant Change Orders by number and date.
- B. Copies of the record drawings shall be submitted on the 20th working day of every third month after the month in which the Notice to Proceed is given as well as on completion of WORK. Failure to submit complete record drawings on or before the 20th working day will enact the liquidated damages clause for interim record drawings submittals described in Article 3 of the Agreement.
- C. In the case of those drawings which depict the detail requirement for equipment to be assembled and wired in the factory, such as motor control centers and the like, the record drawings shall be updated by indicating those portions which are superseded by change order drawings or final Shop Drawings, and by including appropriate reference information describing the change orders by number and the Shop Drawings by manufacturer, drawing, and revision numbers.
- D. Record drawings shall be accessible to the ENGINEER at all times during the construction period.
- E. Final payment will not be acted upon until the record drawings have been prepared and delivered to the ENGINEER. Said up-to-date record drawings shall be in the form of a set of prints with carefully plotted information overlaid.
- F. Upon Substantial Completion of the WORK and prior to final acceptance, the CONTRACTOR shall finalize and deliver a complete set of record drawings to the ENGINEER for transmittal to the OWNER, conforming to the construction records of the CONTRACTOR. This set of drawings shall consist of corrected Drawings showing the reported location of the WORK. The information submitted by the CONTRACTOR and incorporated by the ENGINEER into the record drawings will be assumed to be correct, and the CONTRACTOR shall be responsible for the accuracy of such information, and for

any errors or omissions which may appear on the record drawings as a result.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01311 - CPM CONSTRUCTION SCHEDULE

PART 1 -- GENERAL

1.1 GENERAL

- A. Scheduling of the WORK shall be performed by the CONTRACTOR in accordance with the requirements of this Section.
- B. Development of the schedule, the cost loading of the schedule, monthly payment requisitions and project status reporting requirements of the Contract shall employ computerized Critical Path Method (CPM) scheduling. The CPM Schedule shall be cost loaded based on a schedule of values as approved by the ENGINEER. The CPM schedule and all reports should be prepared with the current version of Primavera Project Planner (P3) software, or approved equal. Where submittals are required hereunder, the CONTRACTOR shall submit four copies of each submittal item.

1.2 QUALIFICATIONS

- A. The CONTRACTOR shall attach a statement of computerized CPM capability to the Bid Forms and shall verify that either the CONTRACTOR has in-house capability qualified to use CPM technique and the Primavera P3 software or that the CONTRACTOR will arrange for the services of a CPM consultant so qualified. In either event the statement shall identify the individual who will perform the CPM scheduling. Capability shall be verified by description of construction projects on which the individual has successfully applied computerized CPM and shall include at least two projects of similar nature, scope and value not less than one-half the Total Bid Price of this project. The statement shall also identify the contact persons for the referenced projects with current telephone and address information.

1.3 INITIAL SCHEDULE SUBMITTALS

- A. The CONTRACTOR shall submit two short term schedule documents at the Preconstruction Conference which shall serve as the CONTRACTOR'S Plan of Operation for the initial 60 day period of the Contract Time and to identify the manner in which the CONTRACTOR intends to complete all WORK within the Contract Time.
 - 1. 60 Day Plan of Operation: During the initial 60 days of the Contract Time, the CONTRACTOR shall conduct operations in accordance with a 60 day bar chart type of plan of operation. The bar chart so prepared shall show the accomplishment of the CONTRACTOR'S early activities (mobilization, permits, submittals necessary for early material and equipment procurement, submittals necessary for long lead equipment procurement, CPM submittals, initial Site work and other submittals and activities required in the first 60 days).
 - 2. Project Overview Bar Chart: The overview bar chart shall indicate the major components of the WORK and the sequence relations between major components and subdivisions of major components. The overview bar chart shall indicate the relationships and time frames in which the various components of the WORK will be made substantially complete and placed into service in order to meet the project milestones. Sufficient detail shall be included for the identification of subdivisions of

major work components. Planned durations and start dates shall be indicated for each work item subdivision. Each major component and subdivision component shall be accurately plotted on time scale sheets not to exceed 36-inch by 60-inch in size. Not more than four sheets shall be employed to represent this overview information.

- B. The ENGINEER and the CONTRACTOR shall meet to review and discuss the 60-day plan of operation and project overview bar chart within 5 days after submittal to the ENGINEER. The ENGINEER'S review and comment on the schedules will be limited to conformance with the sequencing and milestone requirements in the Contract Documents. The CONTRACTOR shall make corrections to the schedules necessary to comply with the requirements and shall adjust the schedules to incorporate any missing information requested by the ENGINEER.

1.4 CPM SCHEDULE SUBMITTALS

- A. **Original CPM Schedule Submittal:** With 20 days after the commencement date stated in the Notice to Proceed, the CONTRACTOR shall submit for review by the ENGINEER a hard copy of the CPM Schedule and the Computerized Schedule Report tabulations. The CONTRACTOR shall also submit a CD that contains all of the schedule submittal information. The disk shall contain data compatible with Primavera P3 to generate network diagrams and schedule reports identical to the hard copies submitted. This submittal shall have already been reviewed and approved by the CONTRACTOR'S Project Manager, Project Superintendent, and the Project Estimator prior to submission. The CPM Schedule shall be a time-scaled network diagram of the "i-j" activity-on-arrow or precedence type. The Network Diagram shall describe the activities to be accomplished and their logical relationships and show the critical path. The CONTRACTOR'S attention is directed to the requirement that the schedule shall contain sufficient detail and information to cost load the CPM schedule in accordance with the schedule of values. Each installation and Site work activity shall be cost loaded as indicated.
- B. All float in the schedule shall belong to the project.
- C. **Revisions to the Original CPM Schedule:** Within 40 days after the commencement date stated in the Notice to Proceed, the CONTRACTOR shall have revised the original CPM schedule submittal to address all review comments from the original CPM schedule, as necessary, and resubmit for the ENGINEER'S review. The ENGINEER, within 14 days from the date that the CONTRACTOR submitted the revised schedule will either (1) accept the schedule and cost loaded activities as submitted, or (2) advise the CONTRACTOR in writing to review any part or parts of the schedule which either do not meet the Contract requirements or are unsatisfactory for the ENGINEER to monitor the project's progress and status or evaluate monthly payment requests by the CONTRACTOR. The ENGINEER may accept the schedule with conditions that the first monthly CPM schedule update be revised to correct deficiencies identified. When the schedule is accepted, it shall be considered as the "Original CPM Construction Schedule" until an updated schedule has been submitted. The OWNER reserves the right to require that the CONTRACTOR adjust, add to, or clarify any portion of the schedule which may later be discovered to be insufficient for the monitoring of the WORK or approval of partial payment requests. No additional compensation will be provided for such adjustments, additions, or clarifications.
- D. Acceptance

1. Acceptance of the CONTRACTOR'S schedule by the ENGINEER and OWNER will be based solely upon compliance with the requirements. By way of the CONTRACTOR assigning activity durations and proposing the sequence of the WORK, the CONTRACTOR agrees to utilize sufficient and necessary management and other resources to perform the work in accordance with the schedule. Upon submittal of a schedule update, the updated schedule shall be considered the "current" project schedule.
2. Submission of the CONTRACTOR'S progress schedule to the OWNER or ENGINEER shall not relieve the CONTRACTOR of total responsibility for scheduling, sequencing, and pursuing the WORK to comply with the requirements of the Contract Documents, including adverse effects such as delays resulting from ill-timed WORK.

E. Monthly Updates and Periodic CPM Schedule Submittals

1. Following the acceptance of the CONTRACTOR'S original CPM Schedule, the CONTRACTOR shall monitor the progress of the WORK and adjust the schedule each month to reflect actual progress and any changes in planned future activities. Each schedule update submitted shall be complete including all information requested in the original schedule submittal and be in the schedule report format indicated below. Each update shall continue to show all work activities including those already completed. Completed activities shall accurately reflect "as built" information by indicating when the work was actually started and completed.
2. Neither the submission nor the updating of the CONTRACTOR'S original schedule submittal nor the submission, updating, change, or revision of any other report, curve, schedule, or narrative submitted to the ENGINEER by the CONTRACTOR under this Contract, nor the ENGINEER'S review or acceptance of any such report, curve, schedule, or narrative shall have the effect of amending or modifying, in any way, the Contract Times or milestone dates or of modifying or limiting, in any way, the CONTRACTOR'S obligations under this Contract. Only a signed, fully executed Change Order can modify contractual obligations.

- F. **Schedule Revisions:** The CONTRACTOR shall highlight or otherwise identify all changes to the schedule logic or activity durations made from the previous schedule. The CONTRACTOR shall modify any portions of the CPM schedule which become infeasible because of activities behind schedule or for any other valid reason.

1.5 CHANGE ORDERS

- A. Upon approval of a Change Order, or upon receipt by the CONTRACTOR of authorization to proceed with additional work, the change shall be reflected in the next submittal of the CPM Schedule. The CONTRACTOR shall utilize a sub-network in the schedule depicting the changed work and its effect on other activities. This sub-network shall be tied to the main network with appropriate logic so that a true analysis of the critical path can be made.

1.6 INCLEMENT WEATHER PROVISIONS OF THE SCHEDULE

- A. The CONTRACTOR'S construction schedule shall include at least the number of days of delay due to unusually severe weather as listed in the Supplementary General Conditions.

1.7 LIQUIDATED DAMAGES

- A. If any submittal required by this Section is determined by the ENGINEER to be incomplete or is submitted later than required, the OWNER will suffer financial loss, and accordingly, liquidated damages will be assessed against the CONTRACTOR in accordance with Article 3 of the Agreement.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01313 - CONSTRUCTION AND SCHEDULE CONSTRAINTS

PART 1 -- GENERAL

1.1 GENERAL

- A. WORK shall be scheduled, sequenced, and performed in a manner which minimizes disruption to the public and to the operation and maintenance of existing facilities along the pipeline alignment.
- B. The CONTRACTOR shall incorporate the construction and schedule constraints of this Section in preparing the construction schedules required under Section 01311 - Scheduling and Reporting. The schedules shall include the CONTRACTOR's activities necessary to satisfy all constraints of the Contract Documents.

1.2 PERMITS

- A. The CONTRACTOR shall abide by the conditions of all permits and shall obtain proof of satisfaction of conditions from issuers of permits prior to acceptance of the WORK by the OWNER. Permits include, but are not limited to, encroachment permits and air quality permits for equipment operations.

1.3 SCHEDULE CONSTRAINTS

- A. **General:** It is the CONTRACTOR'S responsibility to coordinate and plan the construction activities to integrate each schedule constraint into performance of the overall work.
- B. The listing of schedule constraints below does not mean that all constraints or special conditions have been identified. The list does not substitute for the CONTRACTOR's coordination and planning for completion of the WORK within the Contract Times.
- C. The following constraints affect the construction schedule.
 - 1. Minimize disruption to traffic in public rights-of-way through proper scheduling and project coordination, including but not limited to, potholing, obtaining all materials prior to construction start (in rights-of-way sections),etc. Work shall proceed during normal construction hours as identified by the Contract Documents and further identified by the encroachment permit. This may include the completion of sensitive portions of the water main during off-peak traffic periods and may include night time hours. Connection to the existing water system will be limited to Mondays between the hours of 9:00 a.m. to 3:00 p.m. or for areas that would affect commercial businesses would be limited to Sundays between the hours of 10:00 p.m. to 6:00 a.m.
 - 2. Coordinate with ENGINEER and City of Elk Grove to minimize disruption to the public.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01400 - QUALITY CONTROL

PART 1 -- GENERAL

1.1 DEFINITION

- A. Specific quality control requirements for the WORK are indicated throughout the Contract Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

1.2 Not Used

1.3 SAMPLING AND TESTING

- A. Unless otherwise indicated, all sampling and testing will be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered; however, the OWNER reserves the right to use any generally-accepted system of sampling and testing which, in the opinion of the ENGINEER will assure the OWNER that the quality of the workmanship is in full accord with the Contract Documents.
- B. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the testing or other quality assurance requirements originally indicated, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial WORK, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the ENGINEER reserves the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such WORK in accordance with the General Conditions.

1.4 INSPECTION AND TESTING SERVICE

- A. Inspection and testing laboratory service shall comply with the following:
 - 1. Unless indicated otherwise by the Technical Specifications, the OWNER will appoint, employ, and pay for services of an independent firm to perform inspection and testing or will perform inspection and testing itself.
 - 2. The OWNER or independent firm will perform inspections, testings, and other services as required by the ENGINEER under Paragraph 1.3C above.
 - 3. Reports of testing, regardless of whether the testing was the OWNER' or the CONTRACTOR' responsibility, will be submitted to the ENGINEER indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
 - 4. The CONTRACTOR shall cooperate with the OWNER or independent firm and

furnish samples of materials, design mix, equipment, tools, storage, and assistance as requested.

5. The CONTRACTOR shall notify ENGINEER 72 hours prior to the expected time for operations requiring inspection and laboratory testing services.
6. Retesting required because of non-conformance to requirements shall be performed by the same independent firm on instructions by the ENGINEER. The CONTRACTOR shall bear all costs from such retesting.
7. For samples and tests required for CONTRACTOR'S use, the CONTRACTOR shall make arrangements with an independent firm for payment and scheduling of testing. The cost of sampling and testing for the CONTRACTOR'S use shall be the CONTRACTOR'S responsibility.

1.5 SURVEYS AND CONTROL

- A. The OWNER shall provide select horizontal and vertical control for the project. However, it is the CONTRACTOR'S responsibility to use said control points to establish, check, and maintain straight alignments of the pipe, and provide accurate instrumentation (+/- 0.05' within 500') for vertical placement of the pipe as shown on the plans. Control points that are disturbed by the CONTRACTOR'S activities shall be replaced at the CONTRACTOR'S expense.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 INSTALLATION

- A. **Inspection:** The CONTRACTOR shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation, and reject damaged and defective items.
- B. **Measurements:** The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. **Manufacturer's Instructions:** Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

- END OF SECTION -

SECTION 01505 - MOBILIZATION

PART 1 -- GENERAL

1.1 GENERAL

- A. Mobilization shall include the obtaining of all permits; moving onto the site of all materials and equipment; and implementing security requirements; all as required for the proper performance and completion of the WORK. Mobilization shall include the following principal items:
1. Moving on to the site of all CONTRACTOR's materials and equipment required for first month operations.
 2. Developing construction water supply location and access.
 3. Providing on-site sanitary facilities and potable water facilities.
 4. Arranging for and organizing CONTRACTOR's staging and storage yard.
 5. Constructing and implementing security features and requirements complying with Section 01520.
 6. Obtaining all required permits.
 7. Having all OSHA required notices and establishment of safety programs.
 8. Having the CONTRACTOR's superintendent at the job site full time.
 9. Submitting initial submittals, schedules, pre-construction meetings, etc.

1.2 PAYMENT FOR MOBILIZATION

The CONTRACTOR's attention is directed to the condition that 2 percent of the total Contract Price will be deducted from any money due the CONTRACTOR as progress payments until all mobilization items listed above have been completed as specified. The aforementioned amount will be retained by the OWNER as the agreed, estimated value of completing all of the mobilization items listed. Any such retention of money for failure to complete all such mobilization items as a lump-sum item shall be in addition to the retention of any payments due to the CONTRACTOR as specified in Article 14 of the General Conditions of the Contract.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01520 - SECURITY

PART 1 -- GENERAL

1.1 SECURITY PROGRAM

- A. It is the CONTRACTOR's responsibility to secure project work and staging areas from access by unauthorized personnel to protect the WORK, the public, and the OWNER's facilities. The CONTRACTOR shall:
1. Protect WORK and OWNER'S facilities from theft, vandalism, and unauthorized entry.
 2. Initiate program as necessary during the WORK.
 3. Maintain program throughout construction period.

1.2 ENTRY CONTROL

- A. The CONTRACTOR shall:
1. Restrict entry of persons and vehicles into work areas, staging areas, and OWNER's facilities. Method of restriction shall be approved by the ENGINEER.
 2. Allow entry only to authorized persons with proper identification.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01530 - PROTECTION OF EXISTING FACILITIES

PART 1 -- GENERAL

1.1 GENERAL

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than prior to such damage or temporary relocation, all in accordance with the Contract Documents.

1.2 RIGHTS-OF-WAY

- A. The CONTRACTOR shall not do any WORK that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the CONTRACTOR enter upon the rights-of-way involved until having secured authority therefor from the proper party.
- B. After authority has been obtained, the CONTRACTOR shall give said party due notice of its intention to begin work, if required by said party, and shall remove, shore, support, or otherwise protect such pipeline, transmission line, ditch, fence, or structure, or replace the same.

1.3 PROTECTION OF STREET OR ROADWAY MARKERS

- A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. Survey markers or points disturbed by the CONTRACTOR shall be accurately restored after street or roadway resurfacing has been completed.

1.4 RESTORATION OF PAVEMENT

- A. **General:** All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents or as required by the City of Elk Grove. The pavement restoration requirement to match existing sections shall apply to all components of existing sections, including sub-base, base, and pavement. Temporary and permanent pavement shall conform to the requirements of the affected pavement owner. Pavements which are subject to partial removal shall be neatly saw cut in straight lines. Nothing in these specifications shall supercede the standards and requirements of the City of Elk Grove, and all work shall conform to the City of Elk Grove requirements as stated in the encroachment permit, construction standards, or as directed by City representatives.
- B. **Temporary Resurfacing:** Wherever required by the public authorities having jurisdiction, the CONTRACTOR shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.
- C. **Permanent Resurfacing:** In order to obtain a satisfactory junction with adjacent surfaces,

the CONTRACTOR shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.

- D. **Restoration of Sidewalks or Private Driveways:** Wherever sidewalks or private roads have been removed for purposes of construction, the CONTRACTOR shall place suitable temporary sidewalks or roadways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions. If no such period of time is so fixed, the CONTRACTOR shall maintain said temporary sidewalks or roadways until the final restoration thereof has been made.

1.5 EXISTING UTILITIES AND IMPROVEMENTS

- A. **General:** The CONTRACTOR shall protect underground Utilities and other improvements which may be impaired during construction operations, regardless of whether or not the Utilities are indicated on the Drawings. The CONTRACTOR shall take all possible precautions for the protection of unforeseen Utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Except where the Drawings indicate Utilities have been field located during design or certain Utility locations shall be exposed as part of the WORK, the CONTRACTOR shall be responsible for exploratory excavations as it deems necessary to determine the exact locations and depths of Utilities which may interfere with its work. All such exploratory excavations shall be performed as soon as practicable after Notice to Proceed and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's progress. When such exploratory excavations show the Utility location as shown on the Drawings to be in error, the CONTRACTOR shall so notify the ENGINEER.
- C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the Utility.
- D. **Utilities to be Moved:** In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the OWNER to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ENGINEER a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- E. **Utilities to be Removed:** Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing Utility or other improvement which is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such Utility or improvement in a manner satisfactory to the ENGINEER and the owner of the facility. In all cases of such temporary removal or relocation, restoration to the former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the Utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

- F. **OWNER's Right of Access:** The right is reserved to the OWNER and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.
- G. **Underground Utilities Indicated:** Existing Utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all Utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the CONTRACTOR, unless otherwise repaired by the owner of the damaged Utility. If the owner of the damaged facility performs its own repairs, the CONTRACTOR shall reimburse said owner for the costs of repair.
- H. **Underground Utilities Not Indicated:** In the event that the CONTRACTOR damages existing Utility lines that are not indicated or the locations of which are not made known to the CONTRACTOR prior to excavation, a verbal report of such damage shall be made immediately to the ENGINEER and a written report thereof shall be made promptly thereafter. The ENGINEER will immediately notify the owner of the damaged Utility. If the ENGINEER is not immediately available, the CONTRACTOR shall notify the Utility owner of the damage. If directed by the ENGINEER, repairs shall be made by the CONTRACTOR under the provisions for changes and extra work contained in Articles 10, 11, and 12 of the General Conditions.
- I. Costs of locating and repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such Utility facilities not indicated in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the WORK which was interrupted or idled by removal or relocation of such Utility facilities, and which was necessarily idled during such work will be paid for as extra work in accordance with the provisions of Articles 10, 11, and 12 of the General Conditions.
- J. **Approval of Repairs:** All repairs to a damaged Utility or improvement are subject to inspection and approval by an authorized representative of the Utility or improvement owner before being concealed by backfill or other work.
- K. **Maintaining in Service:** Unless indicated otherwise, oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ENGINEER are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.
- 1.6 TREES OR SHRUBS WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS
- A. **General:** Except where trees or shrubs are indicated to be removed, the CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the

jurisdictional agency or OWNER. Existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the CONTRACTOR or a certified tree company under permit from the jurisdictional agency and/or the OWNER. Tree trimming and replacement shall be accomplished in accordance with the following paragraphs.

- B. **Trimming:** Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to the trunk or large branch. Spikes shall not be used for climbing live trees. Cuts over 1-1/2 inches in diameter shall be coated with a tree paint product that is waterproof, adhesive, and elastic, and free from kerosenes, coal tar, creosote, or other material injurious to the life of the tree.
- C. **Replacement:** The CONTRACTOR shall immediately notify the jurisdictional agency and/or the OWNER if any tree or shrub is damaged by the CONTRACTOR's operations. If, in the opinion of said agency or the OWNER, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree or shrub at its own expense. The tree or shrub shall be of a like size and variety as the one damaged, or, if of a smaller size, the CONTRACTOR shall pay to the owner of said tree a compensatory payment acceptable to the tree or shrub owner, subject to the approval of the jurisdictional agency or OWNER. The size of the tree or shrub shall be not less than 1-inch diameter nor less than 6 feet in height. Planting of replacement trees and shrubs shall be in accordance with the recommendations of the nursery furnishing the plants.

1.7 LAWN AREAS

- A. Lawn or landscaped areas damaged during construction shall be repaired to match the pre-construction condition to the satisfaction of the land owner and the OWNER.

1.8 NOTIFICATION BY THE CONTRACTOR

- A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way, the CONTRACTOR shall notify the respective authorities representing the owners or agencies responsible for such facilities not less than 3 days nor more than 7 days prior to excavation so that a representative of said owners or agencies can be present during such work if they so desire.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

PART 1 – GENERAL

1.1 HIGHWAY LIMITATIONS

- A. The CONTRACTOR shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the WORK. It shall be the CONTRACTOR's responsibility to construct and maintain any haul roads required for its construction operations.

1.2 TEMPORARY CROSSINGS

- A. **General:** Continuous, unobstructed, safe, and adequate pedestrian and vehicular access shall be provided to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, service stations, motels, fire and police stations, and hospitals. Safe and adequate public transportation stops and pedestrian crossings at intervals not exceeding 300 feet shall be provided. The CONTRACTOR shall cooperate with parties involved in the delivery of mail and removal of trash and garbage so as to maintain existing schedules for such services. Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access for reasonable periods of time.
- B. **Temporary Bridges:** Wherever necessary, the CONTRACTOR shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the CONTRACTOR shall secure the written consent of the responsible individuals or authorities to omit such temporary bridges or steel plates, which written consent shall be delivered to the ENGINEER prior to excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges or steel plates for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the CONTRACTOR shall adopt designs furnished by said authority for such bridges or steel plates, or shall submit designs to said authority for approval, as may be required.
- C. **Street Use:** Nothing herein shall be construed to entitle the CONTRACTOR to the exclusive use of any public street, alleyway, or parking area during the performance of the WORK hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleyways, or parking areas. No street shall be closed to the public without first obtaining permission of the ENGINEER and proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise indicated. Toe boards shall be provided to retain excavated material if required by the ENGINEER or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the WORK shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the CONTRACTOR to assure the use of sidewalks and the proper functioning of all gutters, storm drain inlets, and other drainage facilities.
- D. **Traffic Control:** For the protection of traffic in public or private streets and ways, the CONTRACTOR shall provide, place, and maintain all necessary barricades, traffic cones,

warning signs, lights, and other safety devices in accordance with the requirements of the traffic control plan developed by the OWNER and conditions of the encroachment permit.

1. The CONTRACTOR shall take all necessary precautions for the protection of the WORK and the safety of the public. Barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The CONTRACTOR shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. Signs, signals, and barricades shall conform to the requirements of Cal-OSHA and Subpart G, Part 1926, of the OSHA Safety and Health Standards for Construction.
 2. The OWNER shall prepare and provide a traffic control plan to the CONTRACTOR. The CONTRACTOR shall follow the directions of the approved traffic control plan and City of Elk Grove requirements.
 3. The CONTRACTOR shall remove traffic control devices when no longer needed, repair all damage caused by installation of the devices, and shall remove post settings and backfill the resulting holes to match grade.
- E. **Temporary Street Closure:** If closure of any street is required during construction, the CONTRACTOR shall apply in writing to the City of Elk Grove at least 14 days in advance of the required closure. A Detour and Traffic Control Plan shall accompany the application.
- F. **Temporary Driveway Closure:** The CONTRACTOR shall notify the ENGINEER and private property owners of the closure of the driveways to be closed more than one eight-hour work day at least 3 working days prior to the closure. The CONTRACTOR shall minimize the inconvenience and minimize the time period that the driveways will be closed. The CONTRACTOR shall fully explain to the owner/occupant how long the work will take and when closure is to start.
- 1.3 **CONTRACTOR'S WORK AND STORAGE AREA**
- A. The CONTRACTOR shall make its own arrangements for any necessary off-Site storage or shop areas necessary for the proper storage of materials and execution of the WORK.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01560 - TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 -- GENERAL

1.1 EXPLOSIVES AND BLASTING

- A. The use of explosives on the WORK will not be permitted.

1.2 DUST ABATEMENT

- A. The CONTRACTOR shall prevent its operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in or occupying buildings in the vicinity. The CONTRACTOR shall be responsible for any damage resulting from dust originating from its operations. The dust abatement measures shall be continued until the CONTRACTOR is relieved of further responsibility by the ENGINEER.

1.3 RUBBISH CONTROL

- A. During the progress of the WORK, the CONTRACTOR shall keep the Site and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The CONTRACTOR shall dispose of all rubbish and waste materials of any nature occurring at the Site, and shall establish regular intervals of collection and disposal of such materials and waste. The CONTRACTOR shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the Site in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction.

1.4 SANITATION

- A. **Toilet Facilities:** Fixed or portable chemical toilets shall be provided wherever needed for the use of employees. Toilets at construction job sites shall conform to the requirements of Part 1926 of the OSHA Standards for Construction.
- B. **Sanitary and Other Organic Wastes:** The CONTRACTOR shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wastes from any other source related to the CONTRACTOR's operations shall be disposed of away from the Site in a manner satisfactory to the ENGINEER and in accordance with all laws and regulations pertaining thereto.

1.5 CHEMICALS

- A. All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer. In addition, see the requirements set forth in paragraph 6.11 of the General Conditions.

1.6 CULTURAL RESOURCES

- A. The CONTRACTOR's attention is directed to the National Historic Preservation Act of 1966 (16 U.S.C. 470) and 36 CFR 800 which provides for the preservation of potential historical architectural, archaeological, or cultural resources (hereinafter called "cultural resources").
- B. The CONTRACTOR shall conform to the applicable requirements of the National Historic Preservation Act of 1966 as it relates to the preservation of cultural resources.
- C. In the event potential cultural resources are discovered during subsurface excavations at the site of construction, the following procedures shall be instituted:
 - 1. The ENGINEER will issue a Field Order directing the CONTRACTOR to cease all construction operations at the location of such potential cultural resources find.
 - 2. Such Field Order shall be effective until such time as a qualified archaeologist can be called to assess the value of these potential cultural resources and make recommendations to the State Historic Preservation Office.
- D. If the archaeologist determines that the potential find is a bona fide cultural resource, at the direction of the State Historic Preservation Office, the CONTRACTOR shall suspend work at the location of the find under the provisions for changes contained in Articles 10, 11, and 12 of the General Conditions.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01600 - PRODUCTS, MATERIALS, EQUIPMENT AND SUBSTITUTIONS

PART 1 -- GENERAL

1.1 DEFINITIONS

- A. The word "Products," as used in the Contract Documents, is defined to include purchased items for incorporation into the WORK, regardless of whether specifically purchased for the project or taken from CONTRACTOR's stock of previously purchased products. The word "Materials," is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form WORK. The word "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, and other like items). Definitions in this paragraph are not intended to negate the meaning of other terms used in the Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," "special construction," and similar terms, which are self-explanatory and have recognized meanings in the construction industry.
- B. Neither "Products" nor "Materials" nor "Equipment" includes machinery and equipment used for preparation, fabrication, conveying, and erection of the WORK.

1.2 QUALITY ASSURANCE

- A. **Source Limitations:** To the greatest extent possible for each unit of WORK, the CONTRACTOR shall provide products, materials, and equipment of a singular generic kind from a single source.
- B. **Compatibility of Options:** Where more than one choice is available as options for CONTRACTOR's selection of a product, material, or equipment, the CONTRACTOR shall select an option which is compatible with other products, materials, or equipment. Compatibility is a basic general requirement of product, material and equipment selections.

1.3 PRODUCT DELIVERY AND STORAGE

- A. The CONTRACTOR shall deliver and store the WORK in accordance with manufacturer's written recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Delivery schedules shall be controlled to minimize long-term storage of products at the Site and overcrowding of construction spaces. In particular, the CONTRACTOR shall ensure coordination to ensure minimum holding or storage times for flammable, hazardous, easily damaged, or sensitive materials to deterioration, theft, and other sources of loss.

1.4 TRANSPORTATION AND HANDLING

- A. Products shall be transported by methods to avoid damage and shall be delivered in undamaged condition in manufacturer's unopened containers and packaging.
- B. The CONTRACTOR shall provide equipment and personnel to handle products, materials, and equipment by methods to prevent soiling and damage.

- C. The CONTRACTOR shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.

1.5 STORAGE AND PROTECTION

- A. Products shall be stored in accordance with manufacturer's written instructions and with seals and labels intact and legible. Sensitive products shall be stored in weather-tight climate controlled enclosures and temperature and humidity ranges shall be maintained within tolerances required by manufacturer's recommendations.
- B. For exterior storage of fabricated products, products shall be placed on sloped supports above ground. Products subject to deterioration shall be covered with impervious sheet covering and ventilation shall be provided to avoid condensation.
- C. Loose granular materials shall be stored on solid flat surfaces in a well-drained area and shall be prevented from mixing with foreign matter.
- D. Storage shall be arranged to provide access for inspection. The CONTRACTOR shall periodically inspect to assure products are undamaged and are maintained under required conditions.
- E. Storage shall be arranged in a manner to provide access for maintenance of stored items and for inspection.

1.6 MAINTENANCE OF PRODUCTS IN STORAGE

- A. Stored products shall be periodically inspected on a scheduled basis. The CONTRACTOR shall maintain a log of inspections and shall make the log available on request.
- B. The CONTRACTOR shall comply with manufacturer's product storage requirements and recommendations.
- C. The CONTRACTOR shall maintain manufacturer-required environmental conditions continuously.
- D. The CONTRACTOR shall ensure that surfaces of products exposed to the elements are not adversely affected and that weathering of finishes does not occur.
- E. For mechanical and electrical equipment, the CONTRACTOR shall provide a copy of the manufacturer's service instructions with each item and the exterior of the package shall contain notice that instructions are included.
- F. Products shall be serviced on a regularly scheduled basis, and a log of services shall be maintained and submitted as a record document prior to final acceptance by the OWNER in accordance with the Contract Documents.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 01700 - PROJECT CLOSEOUT

PART 1 -- GENERAL

1.1 FINAL CLEANUP

- A. The CONTRACTOR shall promptly remove from the vicinity of the completed WORK, all rubbish, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the WORK by the OWNER will be withheld until the CONTRACTOR has satisfactorily performed the final cleanup of the Site.

1.2 CLOSEOUT TIMETABLE

- A. The CONTRACTOR shall establish dates for equipment testing, acceptance periods, and on-site instructional periods (as required under the Contract). Such dates shall be established not less than one week prior to beginning any of the foregoing items, to allow the OWNER, the ENGINEER, and their authorized representatives sufficient time to schedule attendance at such activities.

1.3 TECHNICAL MANUAL SUBMITTAL

- A. The CONTRACTOR's attention is directed to the condition that five (5) percent of the Contract Price will be retained from any monies due the CONTRACTOR as progress payments, if at the 75 percent construction completion point, the approved Technical Manual complying with Section 01300 has not been submitted. The aforementioned amount will be retained by the OWNER as the agreed, estimated value of the approved Technical Manual. Any such retention of money for failure to submit the approved Technical Manual on or before the 75 percent construction completion point shall be in addition to the retention of any payments due to the CONTRACTOR under Article 14 of the General Conditions.

1.4 FINAL SUBMITTALS

- A. The CONTRACTOR, prior to requesting final payment, shall obtain and submit the following items to the ENGINEER for transmittal to the OWNER:
 - 1. Written guarantees, where required.
 - 2. Technical Manuals and instructions.
 - 3. Maintenance stock items; spare parts; special tools.
 - 4. Completed record drawings.
 - 5. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.

1.5 MAINTENANCE AND GUARANTEE

- A. The CONTRACTOR shall comply with the maintenance and guarantee requirements contained in Article 13 of the General Conditions.
- B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair or resurfacing constructed by the CONTRACTOR which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless the CONTRACTOR shall have obtained a statement in writing from the affected private owner or public agency releasing the OWNER from further responsibility in connection with such repair or resurfacing.
- C. The CONTRACTOR shall make all repairs and replacements promptly upon receipt of written order from the OWNER. If the CONTRACTOR fails to make such repairs or replacements promptly, the OWNER reserves the right to do the WORK and the CONTRACTOR and its surety shall be liable to the OWNER for the cost thereof.

1.6 BOND

- A. The CONTRACTOR shall provide a bond to guarantee performance of the provisions contained in Paragraph "Maintenance and Guarantee" above, and Article 13 of the General Conditions.

PART 2 -- PRODUCTS (Not Used)

PART 3 -- EXECUTION (Not Used)

- END OF SECTION -

SECTION 02100 - SITE PREPARATION

PART 1 -- GENERAL

1.1 THE REQUIREMENT

- A. The WORK of this Section includes measures required during the CONTRACTOR's initial move onto the Site to protect existing fences, houses and associated improvements, streets, and utilities during the construction process, including clearing, grubbing and stripping.

1.2 SITE INSPECTION

- A. Prior to moving onto the Site, the CONTRACTOR shall inspect the Site conditions and review maps of the existing pipeline routes, private facilities, and rights-of-way.

PART 2 -- PRODUCTS - NOT USED

PART 3 -- EXECUTION

3.1 INITIAL WORK

- A. The CONTRACTOR shall develop any necessary access to the Site, including access barriers to prohibit entry of unauthorized persons.
- B. **Utility Interference:** Where existing utilities interfere with the WORK, notify the utility owner and the ENGINEER before proceeding in accordance with the General Conditions.
- C. The CONTRACTOR shall pothole locations where utility crossings or conflicts are known or suspected to exist. The plans show approximate locations of known or suspected utilities in or near the proposed excavation. However, the plans illustrate the location of utilities based on field investigations and information obtained from existing records, thus may not be located exactly as shown. It is the responsibility of the CONTRACTOR to conduct reconnaissance surveys well in advance of pipe installation to avoid damage to existing utilities and allow adjustments in pipe alignment without fittings or other special construction changes.
- D. Coordinate with ENGINEER and private property owner for removal and replacement of fencing, concrete drives, irrigation piping, landscaping, etc. Provide temporary materials (fencing, irrigation water, etc.) as necessary to minimize disruption to the property owner's operations and maintain property security.

3.2 CLEARING, GRUBBING, AND STRIPPING

- A. Construction areas (where pipe is installed outside of paved surfaces) shall be cleared of vegetation (to at least a depth of six inches) structures, pavement, sidewalks, concrete or masonry debris, trees, logs, upturned stumps, loose boulders, and any other objectionable material of any kind which would interfere with the performance or completion of the WORK, create a hazard to safety, or impair the subsequent usefulness of the WORK, or obstruct its operation. Trees and other natural vegetation outside the actual lines of construction shall be protected from damage during construction, as directed by the ENGINEER.
- B. All objectionable material from the clearing and grubbing process shall be separated from native soils intended for use as backfill, and removed from the Site. Areas where native soil is stockpiled for use as backfill shall be cleared as defined above.
- C. Unless otherwise indicated, native trees larger than three inches in diameter at the base shall not be removed without the ENGINEER's approval. The removal of any trees, shrubs, fences, or other improvements outside of rights-of-way, if necessary for the CONTRACTOR's choice of means and methods, shall be arranged with the owner of the property, and shall be removed and replaced, at no additional cost to the OWNER.
- D. In locations with existing gravel surfaces, materials may be stockpiled for replacement after backfill operations. CONTRACTOR shall take care to avoid mixing gravel surface material and underlying soils. Gravel surface materials may be rejected by the ENGINEER for reuse if mixed with native soils. Supplement gravel surface materials as necessary to meet minimum surface thickness.
- E. Surface debris and materials removed from paved areas, and excess spoil resulting from excavation, shall be disposed of off-site by the CONTRACTOR.

3.3 REGRADING AND RESURFACING

- A. After pipe installation and backfill, unpaved areas shall be graded flat to match the elevation of adjacent elevations. Unused material shall be exported and disposed of off-site by the CONTRACTOR.

- END OF SECTION -

SECTION 02340 - BORING AND JACKING

PART 1 -- GENERAL

1.1 THE REQUIREMENT

- A. The CONTRACTOR shall provide bored or jacked steel casing, complete and in place, all in accordance with the Contract Documents. Carrier pipe installation within the steel casing shall be in accordance with the requirements contained within this Section.
- B. In the performance of the work, the CONTRACTOR shall comply with the lawful requirements of the affected railway companies, public agencies, and owners of public utilities or other facilities respecting the safeguarding of traffic and improvements which might be endangered by the boring and jacking operations. The approach trenches in public streets will not be permitted to remain open for extended periods of time.
- C. If the CONTRACTOR is not ready to place the pipe in the casing at the time of completion of boring and jacking operations, the ends shall be bulkheaded, and the approach trenches in public streets shall be backfilled, temporary surfacing placed thereon, and the affected portion of the street reopened to traffic.
- D. The CONTRACTOR shall be responsible for maintaining the specified line and grade, and for preventing settlement of overlying structures, or other damage due to the boring and jacking operations.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Commercial Standards:

ASTM A 283	Specification for Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes, and Bars.
ANSI/AWS D1.1	Structural Welding Code.
ANSI/AWWA C200	Steel Water Pipe 6 Inches and Larger.

1.3 CONTRACTOR SUBMITTALS

- A. **Shop Drawings:** The CONTRACTOR shall submit shop drawings of pipe casing in accordance with the requirements in Section 01300 - Contractor Submittals and the following supplemental requirements as applicable:
 - 1. The CONTRACTOR, prior to beginning any trench or structure excavation 5 feet deep or over, shall submit to the OWNER and shall be in receipt of the OWNER'S written acceptance of the CONTRACTOR'S detailed plan showing design of all shoring, bracing, sloping of the sides of excavation, or other provisions for worker protection against the hazard of caving ground during the excavation of such trenches or structure excavation. The CONTRACTOR'S attention is directed to the provisions for "Shoring and Bracing Drawings" in Section 6705 of the California Labor Code. If such plan varies from the shoring system standards established in the Construction Safety Orders of the State of California, such alternative systems plans shall be prepared by a civil or structural engineer licensed in the State of California.

2. Casing installation schedules which include schedules of excavation, pipeline installation, and backfill operations.
3. Material list including diameter, thickness, and class of steel casing.
4. Detailed locations and sizes of all boring or jacking and receiving pits.
5. Permits associated with the boring or jacking operations.

B. **Certifications:** The CONTRACTOR shall furnish a certified affidavit of compliance for all pipe and other products or materials furnished under this Section of the Specifications and the following supplemental requirements:

1. Physical and chemical properties of all steel.

C. All expenses incurred in making samples for certification of tests shall be borne by the CONTRACTOR.

1.4 QUALITY ASSURANCE

A. All boring or jacking operations shall be done by a qualified CONTRACTOR with at least 5 years experience involving work of a similar nature.

B. The CONTRACTOR shall give the ENGINEER a minimum of 3 days advance notice of the start of an excavation or boring operations.

C. All work shall be performed in the presence of the ENGINEER, unless the ENGINEER has granted prior approval to perform such work in its absence.

D. **Welding Requirements:** All welding procedures used to fabricate steel casings shall be prequalified under the provisions of ANSI/AWS D1.1. Welding procedures shall be required for, but not necessarily limited to, longitudinal and girth or special welds for pipe cylinders, casing joint welds, reinforcing plates and grout coupling connections.

E. All welding shall be done by skilled welders, welding operators, and tackers who have had adequate experience in the type of materials to be used. Welders shall be qualified under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to commencing work on the casing or pipeline. Machines and electrodes similar to those used in the WORK shall be used in qualification tests. The CONTRACTOR shall furnish all material and bear the expense of qualifying welders.

F. No exterior or interior joints of the carrier pipe shall have mortar grout applied over a seam until the seam has cooled. Exterior and interior joints of the carrier pipe shall be mortar coated and lined in the field, in accordance with the requirements of the specification Sections for the type of pipe material installed.

1.5 SAFETY

A. It shall be the CONTRACTOR's responsibility to see that the WORK is done in conformance with all applicable federal, state, and local safety requirements.

PART 2 -- PRODUCTS

2.1 GENERAL

- A. Steel casings shall be welded steel pipe of the diameters and plate thicknesses shown. The steel pipe casings shall conform to ANSI/AWWA C200, subject to the following supplemental requirements. The casing shall be of the diameter and thickness shown and shall be furnished complete with welded joint ends and pressure grout couplings as shown. The CONTRACTOR may select a greater diameter or thickness for the method of work and loadings involved, site conditions, and possible interferences as part of the WORK.
- B. Annular spaces between the carrier pipe and the casing shall be filled with sand.

2.2 MATERIALS

- A. **Steel Casing:** The steel casing pipe shall be in accordance with ASTM A283, Grade C, unless shown otherwise. The minimum diameter and wall thickness shall be as shown. The CONTRACTOR shall provide 2-inch grout connections regularly spaced at 5 feet on center alternating at 30 degrees from plumb each side of the vertical centerline. Casing section joints shall be butt welded, lap welded, or welded using butt straps in the field. Each end of the casing for butt welding shall be prepared by providing 1/4-inch by 45-degree chamfer on the outside edges.
- B. **Grout:** Grout shall consist of one part portland cement, three parts sand and the minimum amount of water necessary to obtain the desired consistency; and, all grout mixtures shall contain 2 percent of bentonite by weight of the cement. Portland cement, water and sand shall conform to the applicable requirements of the Standard Specifications, except that sand to be used shall be of such fineness that 100 percent will pass a Standard No. 8 sieve and at least 45 percent, by weight, will pass a Standard No. 40 sieve. Bentonite shall be a commercial-processed powdered bentonite, Wyoming type, such as **Imacco-gel, Black Hills, or equal.**
- C. **Grout Connections:** The CONTRACTOR shall provide grout connections on the interior of the steel casing pipe as specified. Longitudinal spacing between the grout connections may be decreased to provide more frequent grouting, but in no case shall the spacings shown or specified, be exceeded.
- D. **Annular Sand:** Sand for the annular space between the carrier pipe and the steel casing shall be clean with 100 percent passing a Standard No. 30 sieve.
- E. **Carrier Pipe:** Pipe materials shall be Ductile Iron Pipe per Standard Specifications and conforming to the requirements of ANSI/AWWA C151. Ductile iron pipe and fittings shall be furnished with mechanical joints, push-on joints, flanged joints, and restrained joints as required.
 - 1. Mechanical and push-on joints shall conform to ANSI/AWWA C111/A21.11.
 - 2. Flanged joints shall conform to ANSI/AWWA C115/A21.15.
 - 3. Restrained joints shall be "Lok-Ring" Restrained Joint by American Ductile Iron Pipe, "TR FLEX" Restrained Joint by U.S. Pipe, or equal.

PART 3 -- EXECUTION

3.1 INSTALLATION OF STEEL CASING

- A. **Jacking Head:** A steel jacking head shall be fitted to the lead section of the casing in such a manner that it extends around the entire outer surface of the steel casing and projects at least 18 inches beyond the driving end of the casing. The jacking head shall not protrude more than 1/2-inch outside of the outer casing surface. The head shall be securely anchored to prevent any wobble or alignment variation during the boring or jacking operations. To minimize voids outside the casing, excavation shall be carried out entirely within the jacking head and not in advance of the head. Excavated materials shall be removed from the casing as the boring or jacking operation progresses and no accumulation of excavated materials within the casing shall be permitted.
- B. **Jacking Pit:** The excavations for the boring or jacking operations shall be adequately shored to safeguard existing substructures and surface improvements and to ensure against ground movement in the vicinity of the jack supports. Heavy guide timber, structural steel, or concrete cradles of sufficient length shall be provided to assure accurate control of boring or jacking alignment. The CONTRACTOR shall provide adequate space within the excavation to permit the insertion of the lengths of casing to be bored or jacked. Timbers and structural steel sections shall be anchored to ensure action of the jacks in line with the axis of the casing. A bearing block, consisting of a timber or structural steel framework, shall be constructed between the jacks and the end of the casing to provide uniform end bearing over the perimeter of the casing and distribute the jacking pressure evenly.
- C. **Control of Alignment and Grade:** The CONTRACTOR shall control the application of the jacking pressure and excavation of materials ahead of the casing as it advances to prevent the casing from becoming earthbound or deviating from the required line and grade. The CONTRACTOR shall restrict the excavation of the materials to the least clearance necessary to prevent binding in order to avoid loss of ground and consequent settlement or possible damage to overlying structures. Allowable grade deviations in horizontal and vertical alignments shall be no greater than 0.2 feet per 100 feet in any direction over the length of the jacking or boring to a maximum deviation of 0.5 feet.
- D. **Grouting:** Immediately after completion of the boring or jacking operations, the CONTRACTOR shall inject grout through the grout connections in such a manner as to completely fill all voids outside the casing pipe resulting from the boring or jacking operations. Grout pressure shall be controlled so as to avoid deformation of the steel casing and avoid movement of the surrounding ground. After completion of the grouting operations, the CONTRACTOR shall close the grout connections with cast-iron threaded plugs.
- E. **Installation:** The installation of the casing shall be in accordance with the Contract Documents and subject to the approval of the agency having jurisdiction over the area containing the boring or jacking operations.

3.2 INSTALLATION OF CARRIER PIPE

- A. **Joints:** All joints of the carrier pipe within the casing shall be restrained in accordance with the specification Sections for the type of pipe material installed.
- B. **Application of Mortar Lining and Coating to Joints:** Application of mortar to the interior

and exterior joints shall be performed in accordance with the requirements of the specification Sections for the type of pipe materials installed and as provided for in these Specifications.

- C. **Testing of the Carrier Pipe:** Hydrostatic testing of the carrier pipe shall be completed prior to the filling of the annular space between the casing and carrier pipe with sand. Hydrostatic testing shall be performed in accordance with the Standard Specifications.
- D. **Sand Backfill for Annular Space in Jacked Casing:** The CONTRACTOR shall furnish the necessary sand, equipment, hoses, valves, and fittings for the operation. Sand shall be conveyed by air through a hose and deposited by air pressure in its final position. The sand shall be free of lumps to flow unimpeded and to completely fill all voids. In general, sand backfill will be considered completed when no more sand can be forced into the annular space. The CONTRACTOR shall protect and preserve the interior surfaces of the steel casing from damage.
- E. **Closing of Pits:** After jacking equipment and excavated materials from the boring or jacking operations have been removed from the jacking pit, the CONTRACTOR shall prepare the bottom of the jacking pit as a pipe foundation. The CONTRACTOR shall remove all loose and disturbed materials below pipe grade to undisturbed earth and recompact the material in accordance with the Standard Specifications.

- END OF SECTION -

**CERTIFICATION
ELK GROVE CITY COUNCIL RESOLUTION NO. 2004-287**

STATE OF CALIFORNIA)
COUNTY OF SACRAMENTO) **ss**
CITY OF ELK GROVE)

I, Peggy E. Jackson, City Clerk of the City of Elk Grove, California, do hereby certify that the foregoing resolution was duly introduced, approved, and adopted by the City Council of the City of Elk Grove at a regular meeting of said Council held on the 1st day of December 2004 by the following vote:

AYES 5: COUNCILMEMBERS: Scherman, Soares, Briggs, Cooper, Leary

NOES 0: COUNCILMEMBERS:

ABSTAIN 0: COUNCILMEMBERS:

ABSENT 0: COUNCILMEMBERS:



A handwritten signature in cursive script, appearing to read "Peggy E. Jackson", is written over a horizontal line.

**Peggy E. Jackson, City Clerk
City of Elk Grove, California**