



CITY OF EAST PALO ALTO, CALIFORNIA

**INVITATION FOR BIDS FOR
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN
PROJECT**

PUBLIC WORKS PROJECT NO. WD-04

DATE OF AD PUBLICATION

FRIDAY, AUGUST 11, 2023

BIDS DUE:

SEPTEMBER 12, 2023 at 2:00 PM

At the Office of the City Clerk
City of East Palo Alto
2415 University Avenue
East Palo Alto, CA 94303

Contact Person During Bidding Period:
Ambrose Wong, PE, Special Projects Manager
(650) 853-3189
cwong@cityofepa.org

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CITY OF EAST PALO ALTO
I. NOTICE INVITING BIDS

**UNIVERSITY AVENUE AND WEEKS STREET 12-INCH
WATERMAIN PROJECT**
City Project No. WD-04

SEALED BIDS will be received by the City of East Palo Alto City Hall, 2415 University Avenue , East Palo Alto, California 94303, by 9/12/2023 at 2:00PM at which time they will be publicly opened and read via Zoom,(Meeting ID: 820 3417 0401 Passcode: 567157) , for performing work as follows:

Furnishing all labor, materials, and equipment and performing all work necessary and incidental to the completion of the project known as UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT (the "Project") consisting of abandoning 8-inch cast iron pipe (CIP) water main, installing 12-inch polyvinyl chloride (PVC) pipe water main, installing water services, site preparation, concrete work, pavement resurfacing, thermoplastic pavement marking, traffic control and so on according to plans and specifications prepared by the City of East Palo Alto.

Project is to be completed within a total maximum of two hundred (200) working days.

Bid documents can be obtained by downloading the set from the City website at www.cityofepa.org under Bids – RFP's. Questions should be directed to Ambrose Wong, PE, Special Projects Manager, (650) 853-3189, cwong@cityofepa.org.

Bid Security in an amount not less than ten percent (10%) of the total bid dollar amount and conforming to the prescribed bidding procedures is required to be submitted with each bid.

Pursuant to the provisions of the California Labor Code Section 6707, if applicable to this job, each bid submitted in response to this Notice Inviting Bids shall contain, as a bid item, adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation, which shall conform to applicable safety orders.

Pursuant to Public Contract Code Section 22300, for monies earned by the Contractor and withheld by the City of East Palo Alto to ensure the performance of the contract, the Contractor may, at his or her option, choose to substitute securities meeting the requirements of Section 22300.

To be considered, all bidders shall:

- Be licensed under the provisions of Chapter 9, Division 3 of the Business and Professions Code of the State of California to do the type of work contemplated in the project. The general class or type of work called for under the Contract requires a class a Class "A" license.
- Perform with their own organizations work amounting to at least (25)% of the contract price, except specialty items.
- Have completed a minimum of three (3) projects involving work of similar type and complexity, each project valued at not less than \$100,000 in the last five (5) years.
- Meet other mandatory bid requirements set forth in the bid documents.

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II. INSTRUCTIONS TO BIDDER

1. Preparation of Bid – Bid shall be made on Bid Forms inserted in the cover of this Invitation for Bids. The Bid Forms include the documents entitled Bid, Bid Schedule, Subcontractor List, Bidder's Information, Statement of Qualifications, and Non-Collusion Affidavit. Bidder shall enter all requested information in the appropriate spaces on the Bid Forms. No oral, telephone, facsimile or electronic bids will be accepted. All costs of bid preparation shall be borne by the bidder.
2. Mandatory Qualifications – In order for a bid to be considered responsive to this invitation for bids, the minimum experience of the bidder shall be the completion of three (3) projects of similar type and complexity, and value not less than \$40,000.00. Documentation of mandatory qualifications shall be made on the document entitled "Bidder's Information" included in the Bid forms.
3. Pre-Bid Conference –N/A
4. Examination of Bid Documents – The Bid Documents consist of this Invitation for Bids, each and every document listed in the Table of Contents of the invitation, any documents referenced in the specifications, and any addenda which may have been issued. Bidder shall thoroughly examine and be familiar with all Bid Documents, including legal and procedural aspects. Submission of a bid shall constitute bidder's acknowledgment upon which the City may rely that bidder has thoroughly examined and is familiar with the Bid Documents. Failure or neglect of bidder to receive or examine all or part of the Bid Documents shall in no way relieve the bidder from any obligations with respect to this bid invitation or any resultant contract. No claim for additional compensation will be allowed which is based upon a lack of knowledge of any part of the Bid Documents.
5. Inspection of Site – Bidder must examine and judge for itself the location of the proposed work and the nature and extent of the work to be done. The technical specifications, including drawings, plans, maps, diagrams and/or other graphic representations of the project, show conditions as they are supposed or believed by City to exist at the site, but the conditions shown do not constitute a representation by City that they actually exist. Utilities (underground or above-ground), buildings, structures and other improvements may be within or adjacent to the project site. These may or may not be included in the project's technical specifications. Bidder is required to inspect the project location to satisfy itself, by examination or other appropriate means, of the actual conditions at the site.

Submission of a bid shall constitute a representation by bidder that it has visited and examined the project site and is relying on its own examination and knowledge of the site in making its bid, and not on any representation by City. No claim for additional compensation shall be allowed that is based upon a failure to examine, or lack of knowledge of, the work site.
6. Interpretation of Bid Documents and Addenda – Should a bidder discover conflicts or ambiguity in the bid documents that require a decision or explanation, bidder may request an interpretation. Such a request shall be made in writing and delivered to the person identified on the cover page of this bid invitation no later than five (5) working days before the deadline for receipt of bids. Every interpretation made to bidders will be in the form of an Addendum issued by the City. Addenda, if issued, will be sent as promptly as possible to all parties that have been issued bid documents. All such Addenda will become part of the bid documents and shall be binding in the same way as if originally written in the bid documents. Only properly issued addenda shall be binding upon City, any oral and/or other form of interpretation or clarification will have no legal or contractual effect. Bidders shall acknowledge the receipt of Addenda on the Bid Forms.
7. Bid Security – Bidder shall submit bid security with the bid in an amount equal to at least ten percent (10%) of the total bid amount (Base Bid plus Alternates, if any) and in the form of a certified check, cashier's check or surety bond issued by an admitted surety insurer authorized to conduct business in the State of California. *The total amount of the successful bidder's bid security shall be forfeited*

to the City if the bidder fails to execute the contract and furnish bonds and insurance as required by the bid documents within ten (10) calendar days after being notified in writing by City that the contract award has been made.

8. Bonds and Insurance – The successful bidder shall furnish performance and payment (labor and materials) bonds, each in an amount equal to one hundred percent (100%) of the total contract price (Base Bid plus Alternates, if any) and issued by an admitted surety insurer authorized to operate in the State of California. The only bonds acceptable to the City shall be those included with the bid documents. The successful bidder shall also maintain throughout performance of the work the insurance coverage specified in the bid documents.
9. Employment of Apprentices – The provisions of Sections 1777.5, 1777.6 and 1777.7 of the California Labor Code concerning the employment of apprentices are applicable during the performance of the work described in the bid documents.
10. Wage Rates – Pursuant to Sections 1770, 1771 and 1774 of the California Labor Code, the successful bidder shall pay not less than the prevailing rate of per diem wages as determined by the Director of the State of California Department of Industrial Relations. Copies of such prevailing wage rates are available for review at the City. Wage rates can also be obtained through the California Department of Industrial Relations website at:
<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>.

Bidders shall promptly notify the person identified on the cover page of this bid invitation, in writing, about all labor classifications not listed in the prevailing wage determinations but necessary for the performance of the work described in the bid documents.

The successful bidder/contractor, and each subcontractor shall keep accurate payroll records, and comply in all respects with Labor Code section 1776, including the timely response to written notices requiring copies of such records, as provided for in such section. In the event the contractor or subcontractor fails to comply within the ten day period, that contractor or subcontractor shall forfeit one hundred dollars (\$100.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated, as provided by Labor Code section 1776(h).

11. Contractor Registration with the State of California – In order to be considered for contract award, Contractor and any Subcontractors must be registered with the State of California, Department of Industrial Relations (DIR) through the Public Works Contractor Registration Program. Contractors shall list all applicable DIR registration numbers on the Bid Form.
12. Utilization of Local Workforce in Construction Projects – When possible, it is encouraged that the contractor shall utilize local workforces, including State-certified apprentices, as a means of supporting economic opportunities for all members of the community.
13. Sheeting, Shoring and Bracing (As Applicable) – In accordance with the provisions of Section 6707 of the California Labor Code, when bidding on a project that calls for trenches or open excavations, bidder shall specify on the Bid Forms that the item price for such work includes adequate sheeting, shoring and bracing, or equivalent method, to protect its employees and others from injury to life or limb, in conformance with applicable California Construction Safety Orders. This section shall not be construed to impose tort liability on the City or any of its employees or agents.
14. Subcontractors – Bidder shall complete the “List of Subcontractors” included in the Bid Forms. Bidder shall include all requested information for each subcontractor who will perform work or render service to the bidder during the performance of the work described in the bid documents and any subcontractor licensed by the State who, under subcontract to the bidder, specially fabricates and installs a portion of the work or improvements described in the bid documents. Bidder shall complete the List in each instance where the amount of the subcontractor’s work is in excess of one-half of one percent (.5%) of the bidder’s total bid, or, in the case of bids or offers for

the construction of streets or highways, including bridges, in excess of one-half of one percent (.5%) of the total bid or ten thousand dollars (\$10,000), whichever is greater.

The apparent successful bidder will be required to establish, to the City's satisfaction, the responsibility and reliability of the subcontractors it has listed. Prior to the award of the contract, the Purchasing Officer will notify the apparent successful bidder, in writing, if City, after due investigation, has a reasonable objection to any proposed subcontractor. If, after notification of such objection, bidder is unable to address City's concern with the subcontractor, City shall give bidder the opportunity to submit an acceptable substitute. In the event bidder is unable to provide such a substitute, its bid will be deemed non-responsive.

A bidder whose bid is accepted may not substitute a different subcontractor in place of the subcontractor listed in the original bid, except with the prior written consent of the City and in accordance with the procedures set forth in Section 4107 of the Public Contract Code.

15. Bidders Interested in More Than One Bid – A bidder submitting a bid as a prime contractor may submit only one bid as a prime contractor and may not also submit one or more bids as a subcontractor to competing prime contractors. Failure to comply with this requirement will result in the rejection of all bids from the non-complying bidder. A bidder who is not submitting a bid as a prime contractor may submit any number of bids as a subcontractor to competing prime contractors.
16. Bid Price – Bid price shall include all costs for:
- a. Furnishing all tools, equipment, materials, apparatus, facilities, labor, transportation, supervision and management necessary to perform the work described in the bid documents;
 - b. Providing the necessary safety precautions for the protection of the public, such as barricades and warning signs;
 - c. Cleanup activities to restore the work site to a satisfactory condition;
 - d. Federal, state and local taxes; and
 - e. All permits and licenses required to perform the work described in the bid documents.

Any items shown in the specifications, contract drawings, or any part of the contract documents, and not specifically listed in the bid price are to be considered included; and no additional or special compensation will be allowed.

17. Submission of Bid – Bidder shall submit the completed Bid Forms and the required bid security no later than the time and date set for receiving bids as stated in the Notice Inviting Bids or any modifying Addenda. Bid shall be delivered in a sealed envelope *clearly marked with the applicable bid number* addressed to:
- City of East Palo Alto
Office of the City Clerk
2415 University Avenue
East Palo Alto, CA 94303

18. Modification or Withdrawal of Bids
- a. Before Date and Time for Receipt of Bids - Bids that contain mistakes discovered by a bidder before the date and time for receipt of bids may be modified or withdrawn by written notice to City's Purchasing Officer received prior to the deadline. Any modification shall be clearly identified as such and shall be made in writing, executed and submitted in the same form and manner as the original bid.
 - b. After Date and Time for Receipt of Bids - A bidder may not change its bid after the date and time set for receipt of bids except that the bidder may seek the City's consent to the substitution of a subcontractor where the bidder can demonstrate, under the provisions of state law, that the name of the substituted subcontractor was listed as the result of an inadvertent clerical error. A bidder alleging a mistake in a bid may be permitted to withdraw

its bid in conformance with state law (see Public Contract Code Sections 5101, 5103 and 5105).

19. Postponement of Opening; Extensions – The City reserves the right to postpone the date and time for receipt of bids at any time prior to the date and time announced in the Notice Inviting Bids. The date and time shall be extended by at least 72 hours in the event the City issues any material changes, additions or deletions to the bid documents within 72 hours prior to the bid closing.
20. Late Bids – Bidder shall be responsible for the timely delivery of bid. Bids received after the deadline for receipt of bids shall not be accepted and shall be returned to bidder unopened unless necessary for identification purposes.
21. Public Opening of Bids – Each bid, irrespective of any defects or irregularities, that has been received by the deadline for receipt of bids, except those that have been properly withdrawn, will be publicly opened by a representative of the Purchasing Division at the date and time announced for such opening. If one or more members of the public are present, the name and address of each bidder, the total amount of each bid, and the nature and amount of the bid security furnished with each bid will be read aloud at or shortly following the deadline for receipt of bids.
22. Bid to Remain Open – The bidder shall guarantee its bid for a period of ninety (90) calendar days from the date of bid opening.
23. Bid Evaluation – City's Purchasing Officer will evaluate all bids received to determine if the bidder is responsive and responsible. A Bidder will be deemed to be responsive if it has submitted a bid that conforms in all material respects to the requirements of the bid documents and demonstrates compliance with the mandatory experience as described in Section 2. A Bidder will be deemed to be responsible if the Bidder:
 - a. Has the ability, capacity, experience and skill to perform the work in accordance with the bid specifications;
 - b. Has the ability to perform the work promptly or within the time specified, without delay;
 - c. Has equipment, facilities and resources of such capacity and location to enable it to perform the work;
 - d. Has a record of satisfactory or better performance under prior contracts with the City or others; and
 - e. Has complied with laws, regulations, guidelines and orders governing prior or existing contracts.
24. Mandatory Post Bid-opening Information – In order to assist in the bid evaluation, the apparent low bidder will be required to complete and submit the form entitled "Statement of Qualifications" included in the Bid forms within two working days of notification by City that it is the apparent low bidder. Notice may be given orally, by telephone, or by facsimile sent to the number supplied by bidder. Failure to submit the Statement of Qualifications by 5:00 p.m. of the second day may result in the bid being deemed non-responsive, and the City will then determine the next apparent low bidder.
25. Discrepancies in Bid Forms – The City may waive minor defects of irregularities in any bid, provided that the discrepancy does not materially affect the bid amount or give the bidder an advantage over others. For instance, if there are unit price bid items in a bid schedule, and the amount indicated for a unit price bid item does not equal the product of the unit price and quantity listed, the unit price shall govern. Likewise, if there is more than one bid item in a bid schedule, and the total of the schedule does not equal the sum of the bid items, the individual amounts of the bid items shall govern. If there is a difference between the bid price entered in words and the bid price entered in figures for the same quotation, the price in words shall prevail.

The City may make any investigations deemed necessary to determine if a bidder is responsive and responsible.

26. Rejection of Bids – The City reserves the right to reject any and all bids; and further reserves the right to reject any bids that are found to be non-responsive or submitted by a bidder that is not responsible.
27. Tie Bids – In the event that an identical price is received from two or more responsive and responsible bidders, the City may re-advertise for bids or the successful bidder may be determined by the casting of lots with the tie bidders in public at a date and time set by City's Purchasing Officer.
28. East Palo Alto Business License – The successful bidder must either possess a current, valid East Palo Alto business license or must have submitted a East Palo Alto business license application and fee at the time of contract execution.
29. Contract Award – Contract award will be made to the lowest responsive and responsible bidder. In the event that bids are required on a Base Bid and Additive Alternates, contract award will be based solely on the Base Bid. The acceptance of a bid will be evidenced by a written Notice of Award delivered to the successful bidder.
30. Bid Protest – The City will issue a Notice of Intent to Award prior to the actual award. Any Bid protest must be submitted in writing to the Purchasing Division, City Hall Annex, 2415 University Avenue , East Palo Alto, California 94303, before 5:00 p.m. of the fifth (5th) calendar day following posting of a Notice of Intent to Award for Construction in the Lobby of the City Hall Annex. City will use reasonable efforts to deliver by electronic means a copy of the Notice of Intent to Award to all Bidders who submitted Bids and provided an email address or other forms of electronic communication no later than the working day after issuance, although any delay or failure to do so will not extend the Bid protest deadline described above. The following conditions will apply to all protests.
- a. The initial protest document must contain a complete statement of the basis for the protest;
 - b. The protest must refer to the specific portion of the document that forms the basis for the protest;
 - c. The protest must include the name, address and telephone number of the person representing the protesting party. If a fax number is available, it should also be included;
 - d. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

The procedure and time limits set forth in this paragraph are mandatory and are Bidder's sole and exclusive remedy in the event of Bid protest. Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.

31. Post-Notice of Award Requirements
- a. Within ten (10) calendar days of Notice of Award, the successful bidder shall submit to the person identified on the cover of this bid invitation the following:
 1. The General Construction Contract executed in duplicate by the successful bidder;
 2. Performance and Payment Bonds;
 3. Guaranty
 3. Evidence of the required insurance coverage;

4. A East Palo Alto business license tax and fee if bidder does not already possess such license; and
 5. A completed Internal Revenue Service Form W-9.
 - b. Successful Bidder's failure to submit the documents required herein, in a proper and timely manner, entitles City to rescind its award, and to cause Bidder's Bid Security to be forfeited as provided in paragraph 32.
 - c. City may elect in its sole discretion to extend the time to receive any of the documents listed herein.
32. Failure to Execute and Deliver Documents – If Bidder to whom Notice of Award is issued shall, for 10 days after such award, fail or neglect to execute and deliver all required contract documents, bonds, insurance certificates and other documents, City may, in its sole discretion, deposit Bidder's surety bond, cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for Bidder's failure to perform. Bidder agrees that calculating the damages City may suffer as a result of Bidder's failure to execute and deliver all documents would be extremely difficult and impractical, and that the amount of Bidder's required Bid security shall be the agreed and presumed amount of City's damages. City may then turn to the next Apparent Low Bidder and proceed as if this Apparent Low Bidder were the original Apparent Low Bidder.

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III. BID FORMS
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
Project No. WD-04

Bid To: City of East Palo Alto, City Clerks office
2415 University Avenue
East Palo Alto, CA 94303

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the City in the form included in the Contract Documents to perform the Work as specified or indicated in these Contract Documents entitled: UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT, Project WD-04.

Bidder accepts all the terms and conditions of the Contract Documents, including without limitation those in the Notice Inviting Bids and Instructions to Bidders, dealing with the disposition of the Bid Security. Attached hereto is a cashier's check, certified check or bid bond in the amount of \$____ as required in the Notice Inviting Bids.

This bid will remain open for the period stated in the Instructions to Bidders. Bidder will enter into an Agreement within the time and in the manner required in the Information to Bidders, and will furnish the insurance certificates, Payment Bond, Performance Bond, and Permits required by the Contract Documents.

Bidder has examined copies of all the Contract Documents including the following Addenda (receipt of which is hereby acknowledged):

Number _____	Number _____
Number _____	Number _____
Number _____	Number _____

Bidder has familiarized itself with the nature and extent of the Contract Documents, the Work, the site, the locality where the Work is to be performed, the legal requirements (federal, state, and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as Bidder deems necessary.

In conformance with current statutory requirements of California Labor Code Section 1860, et seq., the undersigned confirm the following as its certification:

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self insurance in accordance with the provisions before commencing the performance of the work of this contract.

Bidder agrees to complete the Work required under the Contract Documents (including all Bid Schedules, Subcontractor List, Bidder's General Information, and Non-Collusion Affidavit contained in these Bid Forms) within the Contract Time specified, and to accept in full payment the Contract Price based on the Lump Sum or Unit Bid Price(s) listed in the Bid Schedule(s).

Dated: _____ Bidder: _____
By: _____
(Print Name)
By: _____
(Signature)
Title: _____

BID SCHEDULE

Notes:

1. The Contract will be awarded on the basis of Total Base Bid amount only.
2. Table "A" is for work on University Avenue and Cooley Avenue. Table "B" is for work on Weeks Street.

BASE BID (UNIVERSITY AVENUE AND COOLEY AVENUE)
TABLE "A"

Item Number	Item Description	Qty	Unit	Unit Cost	Total Cost
1A	Mobilization (Limit 5%)	1	LS		
2A	Traffic Control	1	LS		
3A	Sheeting, Shoring, and Bracing	1	LS		
4A	Stormwater Pollution Prevention & Control	1	LS		
5A	12-Inch PVC Pipe	6,000	LF		
6A	6-Inch PVC Pipe	520	LF		
7A	Abandon In-Place Existing 8-Inch Watermain	1	LS		
8A	Connect to Existing 12-Inch Watermain	2	EA		
9A	Connect to Existing 8-Inch Watermain	9	EA		
10A	Connect to Existing 6-Inch Watermain	3	EA		
11A	Fire Hydrant Assembly	11	EA		
12A	Remove Existing Fire Hydrant	11	EA		
13A	Blow Off Assembly	3	EA		
14A	12-Inch Gate Valve, Box, and Cover	35	EA		
15A	6-Inch Gate Valve, Box, and Cover	2	EA		
16A	Fitting 12-Inch x 12-Inch Cross & Thrust Block	2	EA		
17A	Fitting 12-Inch x 12-Inch Tee & Thrust Block	7	EA		
18A	Fitting 12-Inch x 6-Inch Tee & Thrust Block	3	EA		
19A	Fitting 8-Inch x 8-Inch Tee & Thrust Block	1	EA		
20A	Fitting 12-Inch 45-Degree Bend & Thrust Block	139	EA		
21A	Fitting 12-Inch 22.5-Degree Bend & Thrust Block	2	EA		
22A	Fitting 12-Inch 11.25-Degree Bend & Thrust Block	1	EA		
23A	Fitting 6-Inch 22.5-Degree Bend & Thrust Block	2	EA		
24A	Fitting 12-Inch x 8-Inch Reducer & Thrust Block	9	EA		
25A	Water Service Lateral	94	EA		
26A	Traffic Loop Detector	1	LS		
27A	Remove and Replace Median Island	530	SF		
28A	Landscape Restoration	1	LS		
29A	Slurry Seal	22,530	SY		

30A	Thermoplastic Pavement Marking	10,080	SF		
31A	Sidewalk	1,290	SF		
32A	Curb and Gutter	240	LF		
33A	ADA Curb Ramp	2	EA		
34A	Curb Inlet	1	EA		
35A	Dewatering	1	LS		
TABLE "A" TOTAL					

TABLE "A" TOTAL BASE BID IN WORDS: _____

**BASE BID (WEEKS STREET)
TABLE "B"**

Item Number	Item Description	Qty	Unit	Unit Cost	Total Cost
1B	Mobilization (Limit 5%)	1	LS		
2B	Traffic Control	1	LS		
3B	Sheeting, Shoring, and Bracing	1	LS		
4B	Stormwater Pollution Prevention & Control	1	LS		
5B	12-Inch PVC Pipe	2,630	LF		
6B	8-Inch PVC Pipe	10	LF		
7B	6-Inch PVC Pipe	80	LF		
8B	2-Inch HDPE Pipe	10	LF		
9B	Abandon In-Place Existing 8-Inch Watermain	1	LS		
10B	Connect to Existing 8-Inch Watermain	4	EA		
11B	Connect to Existing 6-Inch Watermain	3	EA		
12B	Connect to Existing 2-Inch Watermain	1	EA		
13B	Fire Hydrant Assembly	2	EA		
14B	Remove Existing Fire Hydrant	2	EA		
15B	12-Inch Gate Valve, Box, and Cover	13	EA		
16B	8-Inch Gate Valve, Box, and Cover	3	EA		
17B	6-Inch Gate Valve, Box, and Cover	3	EA		
18B	Fitting 12-Inch x 8-Inch Cross & Thrust Block	1	EA		
19B	Fitting 12-Inch x 12-Inch Tee & Thrust Block	1	EA		
20B	Fitting 12-Inch x 8-Inch Tee & Thrust Block	1	EA		
21B	Fitting 12-Inch x 6-Inch Tee & Thrust Block	3	EA		
22B	Fitting 12-Inch 45-Degree Bend & Thrust Block	42	EA		

23B	Fitting 12-Inch x 8-Inch Reducer & Thrust Block	1	EA		
24B	Water Service Lateral	69	EA		
25B	Landscape Restoration	1	LS		
26B	Slurry Seal	10,810	SY		
27B	Thermoplastic Pavement Marking	1,330	SF		
28B	Sidewalk	910	SF		
29B	Curb and Gutter	190	LF		
30B	Dewatering	1	LS		
TABLE "B" TOTAL					

TABLE "B" TOTAL BASE BID IN WORDS: _____

BASE BID TOTAL (TABLE "A" + TABLE "B") IN WORDS: _____

SUBCONTRACTOR LIST
(Public Contract Code 4100 et seq.)

Name of Subcontractor	Address of Subcontractor and License Number <small>(PWC Registration Numbers shall be included in Part E under the 'Statement of Qualifications')</small>	Work to Be Performed	Value of Work to Be Performed by Subcontractor (\$)
1.	(License No.) _____		
2.	(License No.) _____		
3.	(License No.) _____		
4.	(License No.) _____		
5.	(License No.) _____		
6.	(License No.) _____		
7.	(License No.) _____		
8.	(License No.) _____		
9.	(License No.) _____		
10.	(License No.) _____		

Bidder: _____

By: (signature or initials) _____

BIDDER'S INFORMATION

The Bidder shall furnish the following information. Additional sheets shall be attached as required.

1. BIDDER'S name and street address:

Name: _____

Address: _____

2. BIDDER'S telephone No.: () _____ Fax No.: () _____

BIDDER's E-mail Address: _____

3. BIDDER'S East Palo Alto Business License No.: _____ BIDDER'S Tax ID No.: _____

4. TYPE OF BUSINESS

If you are an individual or partnership, so state. If you are a partnership, list the names of all general partners composing the partnership. If a corporation, list the names of president, secretary, treasurer, and manager.

Individual _____ Name(s): _____

Partnership _____ _____

Corporation _____

Names of Corporate Officers

State of Incorporation _____ President _____

Secretary _____

Treasurer _____

Manager _____

Joint Venture _____

Other _____

(Describe)

5. CONTRACTOR'S license: Primary Classification _____
State License No.: _____ Expiration Date: _____ / _____ / _____
Supplemental license classifications: _____

6. NAME of person who inspected the site of the proposed Work for the Bidder:
Name: _____ Date of inspection: _____

7. BIDDER'S EXPERIENCE

1. Bidder has been doing business under its present name for _____ years.
2. Bidder has experience in work comparable in type and complexity with that required under the proposed contract for _____ years as a General Contractor.

Bidder shall sign under penalty of perjury that all the information provided in this information sheet is true and correct.

Signature

Title

STATEMENT OF QUALIFICATIONS

Apparent low bidder shall complete this entire Statement of Qualifications questionnaire and submit it to City upon notification, in accordance with paragraph 23, Instruction to Bidders. Failure to complete the questionnaire or inclusion of any false statement is grounds for immediate disqualification. The City reserves the right to waive minor irregularities, inconsequential deviations and to make all final determinations. The City will evaluate the information contained in each applicant's questionnaire and responses received in reference checks. The sole and discretionary judgment of the City will determine if the Contractor is deemed qualified.

CONTACT INFORMATION

Company Name: _____

Form of Company: _____ Sole Proprietor _____ Partnership _____ Non-Profit 501 C3
_____ Corporation _____ other (please attach explanation)

Owner of Company: _____

Contact Person: _____

Street Address: _____

Mailing Address: _____

Phone: _____ Fax: _____

Federal Tax I.D. No. _____

PART A: GENERAL INFORMATION

Complete Part A before proceeding to Part B.

- 1. Contractor possesses a valid and current California Contractor's "A" license for the work proposed. Yes ___ No ___
- 2. Contractor has a minimum of \$1,000,000.00 liability insurance coverage. Yes ___ No ___
- 3. Contractor's license has been revoked at any time in the last five (5) years. Yes ___ No ___
- 4. Contractor has been "default terminated" by an owner (not for Yes ___ No ___

convenience), or a Surety has completed a contract for Contractor within the last five (5) years.

- 5. Contractor has been cited more than twice for failure to pay prevailing wages in the last five (5) years. Yes ___ No ___

Contractor will be immediately disqualified if any answer to questions 1 or 2 is No.
 Contractor will be immediately disqualified if any answer to question 3 is Yes.
 Contractor may be immediately disqualified if the answer to questions 4 or 5 is Yes. At a minimum to avoid such disqualification, Contractor must include with this Questionnaire a full description of the applicable circumstance and sufficient information to permit City to evaluate Contractor's overall qualifications to perform the work. City retains sole discretion to disqualify any Contractor who answers yes to either question 4 or 5.

PART B: SAFETY, PREVAILING WAGE, DISPUTES AND BONDS

SAFETY

- 1. Has CAL OSHA, Federal OSHA, the EPA or any Air Quality Management District cited your firm in the past five (5) years? Yes ___ No ___ If yes, attach description of each citation.
- 2. How often do you require documented safety meetings be held for:

Field Supervisor	Weekly ___	Bi-weekly ___	Monthly ___	Less than monthly ___
Employees	Weekly ___	Bi-weekly ___	Monthly ___	Less than monthly ___
New Hires	Weekly ___	Bi-weekly ___	Monthly ___	Less than monthly ___
Subcontractors	Weekly ___	Bi-weekly ___	Monthly ___	Less than monthly ___
- 3. How often do you conduct documented safety inspections?
 Quarterly ___ Semi-annually ___ Annually ___
- 4. Do you have home office safety representatives who visit/audit the job site?
 Quarterly ___ Semi-annually ___ Annually ___

PREVAILING WAGE PROVISIONS

- 5. Has your firm been fined, penalized or otherwise found to have violated any prevailing wage or labor code provision? If yes, attach description of each fine/penalty. Yes ___ No ___

(License Provisions)

6. Has your company changed names or license numbers in the past 10 years? If so, please state reason for change. Yes _____ No _____ Reason _____

(Disputes)

7. Has your firm had any claims, litigation, or disputes ending in mediation or arbitration, or termination for cause associated with any project in the past five (5) years? If yes, attach description of each such instance including details of total claim amount, settlement amount, and owner's name and phone number.

Yes _____ No _____

PART C: EXPERIENCE

The unique nature of this project requires prior similar project experience of the firm. Summarize your similar project experience below and provide the detailed project information requested:

General Contractor - List at least three (3) projects of similar size and scope with a construction cost not less than \$40,000 completed in the past (3) years.

Project name	Const. Cost (\$)	Date completed (year)	Name, address and telephone number of owners representative

Most Recently Completed Project.

In order to be considered responsive, Contractor must provide information about its most recently completed project. Names and references must be current and verifiable. If a separate sheet is used, it must contain all of the following information:

- Project Name: _____
 Location: _____
 Owner: _____
 Owner Contact (name and phone number): _____
 Architect: _____
 Architect Contact (name and phone number): _____
 Const. Mgr. or Project Mgr. (name and phone number): _____
 Description of Project, Scope of Work Performed: _____

Value of Construction Contract: _____
 Value of Change Orders: _____
 Original Scheduled Date of Completion: _____
 Time Extensions Granted (number of days): _____
 Actual Date of Completion: _____
 Number of Stop Notices filed by subcontractors or suppliers: _____

PART D: FINANCIAL AND OTHER INFORMATION

1. Has your firm ever reorganized under the protection of the bankruptcy laws? Yes _____ No _____
2. Have you ever had insurance terminated by a carrier? Yes _____ No _____
 If yes, explain on separate signed sheet.

Contractor shall sign under penalty of perjury that all the information provided in this questionnaire is true and correct. Contractor's signature authorizes the City and its agents and representatives, to obtain a credit report and/or verify any of the above information

 Signature

 Title

PART E: CONTRACTOR REGISTRATION WITH STATE OF CALIFORNIA

Please list your Public Works Contractor (PWC) Registration number(s) and Email Addresses:

		Name	PWC Registration Number	Email Address (Please Print)
1.	General Contractor			
2.	Subcontractors			

NON-COLLUSION AFFIDAVIT

State of California)
)
County of _____)

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

Name of Bidder

By (Signature)

Title: _____

Date: _____

Seal and Notary Acknowledgement
subscribed and sworn to me this

_____ of _____, _____

ATTACHMENT A - PLANS AND SPECIFICATIONS



CITY OF EAST PALO ALTO, CALIFORNIA

**PLANS AND SPECIFICATIONS FOR
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT**

PUBLIC WORKS PROJECT NO. WD-04

**PREPARED BY CITY OF EAST PALO ALTO
PUBLIC WORKS ENGINEERING DIVISION**

PART I – PLANS

SEE FOLLOWING PAGES

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

Construction contractor agrees that in accordance with generally accepted construction practices, construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property; that this requirement shall be made to apply continuously and not be limited to normal working hours, and construction contractor further agrees to defend, indemnify and hold design professional harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of design professional.

CITY OF EAST PALO ALTO

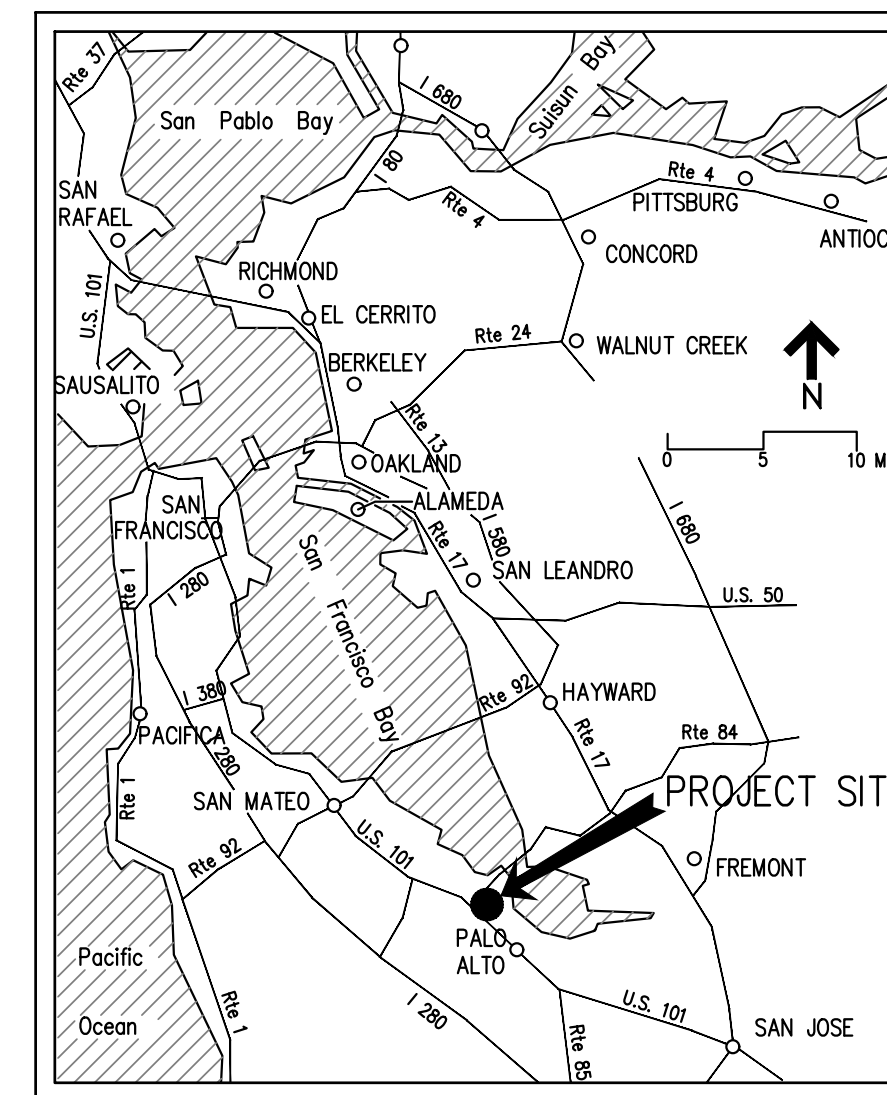
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT BID SET

CONSTRUCTION COMMENTS

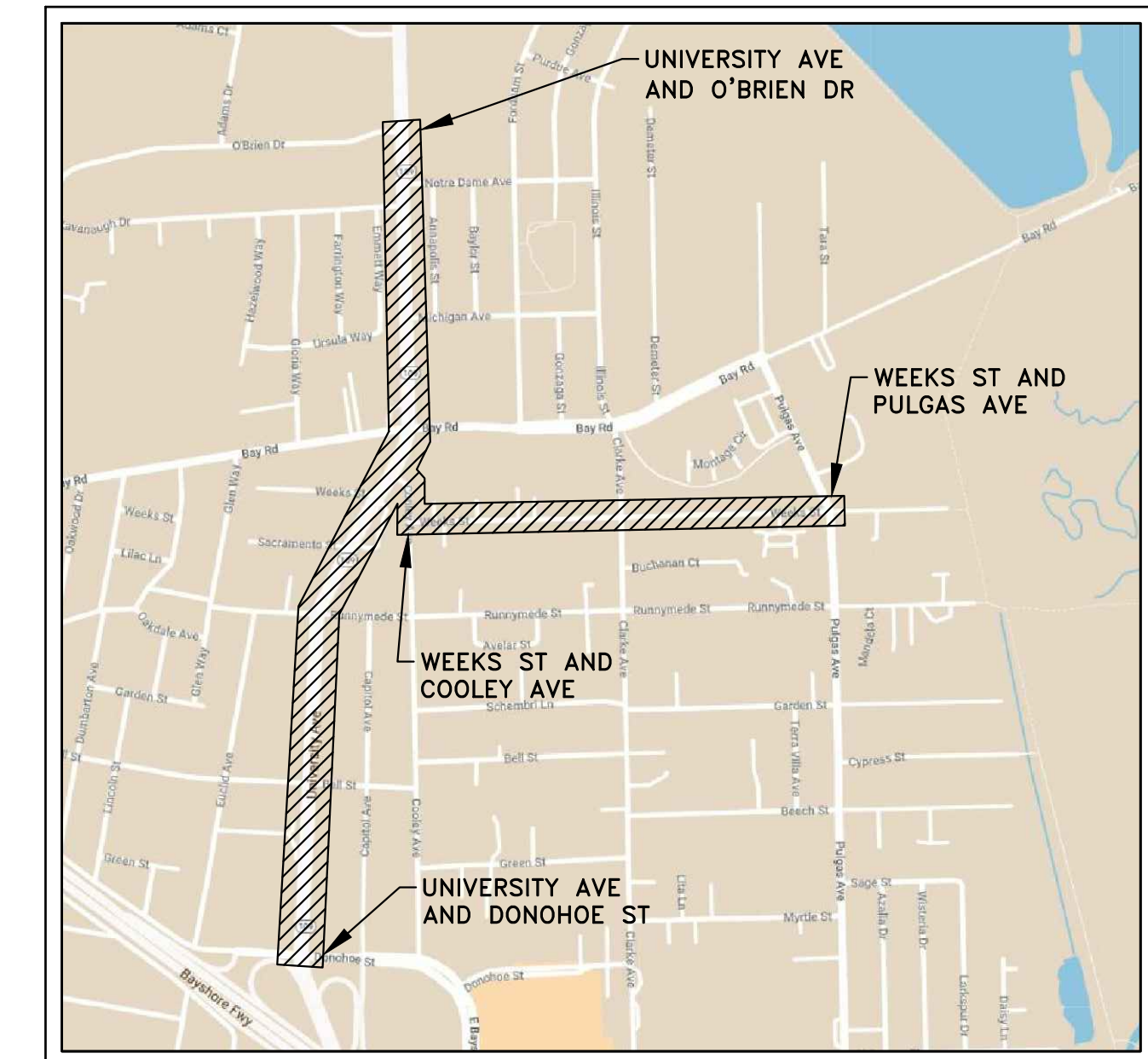
- CONTACT USA AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- EARTHWORK ACTIVITIES AND ASSOCIATED NOISE SHALL BE LIMITED TO WEEK DAYS BETWEEN THE HOURS OF 8:00 AM TO 5:00 PM. NO EARTHWORK ACTIVITIES ARE TO OCCUR ON SATURDAYS AND SUNDAYS WITHOUT SPECIAL PERMISSION FROM THE CITY ENGINEER.
- CONSTRUCTION TRAFFIC FOR DELIVERY OF MATERIALS AND LANE CLOSURES SHALL OCCUR AFTER 9:00 AM AND BEFORE 3:30 PM, EXCEPT CONCRETE AND OTHER LARGE COMPONENTS WHICH HAVE TO BE COORDINATED IN A CONSTRUCTION PHASING PLAN. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR ALL WORK IN THE CITY RIGHT-OF-WAY WHERE TRAFFIC MAY BE IMPACTED.
- CONTRACTORS AND SUBCONTRACTORS SHALL BE PROPERLY TRAINED AND MADE AWARE OF THE STORM WATER POLLUTION PREVENTION PROGRAM MEASURES. FAILURE TO COMPLY WITH THE APPROVED BMPs COULD RESULT IN A FINE OF \$1,000 FOR FIRST VIOLATION, INCREASING WITH EACH SUBSEQUENT VIOLATION. (SEE CONSTRUCTION BEST MANAGEMENT PRACTICES ON DETAIL SHEET)
- ALL ACAD FILES WITH SURVEY CONTROL POINTS WILL BE PROVIDED TO THE CONTRACTOR.

SHEET INDEX

SHEET NUMBER	DESCRIPTION
G-01	COVER SHEET
G-02	GENERAL NOTES
U-01	PLAN & PROFILE - UNIVERSITY AVE STA 0+00 TO 4+00
U-02	PLAN & PROFILE - UNIVERSITY AVE STA 4+00 TO 8+00
U-03	PLAN & PROFILE - UNIVERSITY AVE STA 8+00 TO 12+00
U-04	PLAN & PROFILE - UNIVERSITY AVE STA 12+00 TO 16+00
U-05	PLAN & PROFILE - UNIVERSITY AVE STA 16+00 TO 20+00
U-06	PLAN & PROFILE - UNIVERSITY AVE STA 20+00 TO 24+00
U-07	PLAN & PROFILE - UNIVERSITY AVE STA 24+00 TO 28+00
U-08	PLAN & PROFILE - UNIVERSITY AVE STA 28+00 TO 32+00
U-08A	PLAN & PROFILE - RUNNYMEDE ST CROSS SECTION E-E
U-09	PLAN & PROFILE - UNIVERSITY AVE STA 32+00 TO 36+00
U-10	PLAN & PROFILE - UNIVERSITY AVE STA 36+00 TO 40+00
U-11	PLAN & PROFILE - UNIVERSITY AVE STA 40+00 TO 44+00
U-11A	PLAN & PROFILE - BELL ST CROSS SECTION F-F
U-12	PLAN & PROFILE - UNIVERSITY AVE STA 44+00 TO 48+00
U-13	PLAN & PROFILE - UNIVERSITY AVE STA 48+00 TO 52+50
U-14	PLAN & PROFILE - COOLEY AVE
W-01	PLAN & PROFILE - WEEKS ST STA 0+00 TO 4+50
W-02	PLAN & PROFILE - WEEKS ST STA 4+50 TO 9+00
W-03	PLAN & PROFILE - WEEKS ST STA 9+00 TO 12+50
W-04	PLAN & PROFILE - WEEKS ST STA 12+50 TO 16+50
W-05	PLAN & PROFILE - WEEKS ST STA 16+50 TO 20+00
W-06	PLAN & PROFILE - WEEKS ST STA 20+00 TO 24+00
W-07	PLAN & PROFILE - WEEKS ST STA 24+00 TO 26+34
D-01	DETAIL SHEET
D-02	DETAIL SHEET
D-03	DETAIL SHEET
D-04	DETAIL SHEET
D-05	DETAIL SHEET
D-06	DETAIL SHEET
D-07	DETAIL SHEET
D-08	CONSTRUCTION BEST MANAGEMENT PRACTICES



VICINITY LOCATION
NTS



LOCATION MAP
NTS

LEGEND

SS	EXISTING SANITARY SEWER	CV	EXISTING GAS VALVE	UV	UTILITY VAULT
SD	EXISTING STORM DRAIN	WV	EXISTING WATER VALVE	COM	TELECOMMUNICATIONS VAULT
TELE	EXISTING COMMUNICATIONS LINE	WM	EXISTING WATER METER	COM MH	TELECOMMUNICATIONS MANHOLE
FO	EXISTING FIBER OPTIC LINE	CO	EXISTING CLEAN OUT	TS	TRAFFIC SIGNAL
G	EXISTING GAS LINE	FH	EXISTING FIRE HYDRANT	TSB	TRAFFIC SIGNAL BOX
E	EXISTING UNDERGROUND ELECTRICAL LINE	S/D	EXISTING SEWER / STORM DRAIN MANHOLE	SL	STREET LIGHT
W	EXISTING WATER LINE	CB	EXISTING CATCH BASIN	ICB	IRRIGATION CONTROL BOX
—	PROPOSED WATER MAIN	EB	EXISTING ELECTRICAL PULL BOX	W	PROPOSED WATER VALVE
—	ROLLED CURB AND GUTTER	TS	TRAFFIC SIGN	R	PROPOSED REDUCER
—	CURB AND GUTTER	M	MONUMENT	FH	PROPOSED FIRE HYDRANT
		JUP	JOINT UTILITY POLE	BO	PROPOSED BLOW OFF
		DET	DETECTOR	[PROPOSED CONCRETE CAP
		E	ELECTRIC MANHOLE		
		G	GUY WIRE		
		A	ANODE		
		ELEC	ELECTRIC VAULT		

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D

FREYER & LAURETA, INC.
CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

150 Executive Park Blvd. #4200 • San Francisco, CA 94134
(415)534-7070 • Fax (650)344-9920 • www.freyerlaureta.com



UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO

COVER SHEET

SHEET

G-01

JOB NO.

221005

CONSTRUCTION NOTES

THE FOLLOWING CONTROL MEASURES FOR CONSTRUCTION ACTIVITIES SHALL BE ADHERED TO, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

- FOR ANY PROJECT THAT REQUIRES LESS THAN FIVE WORKERS AT THE JOBSITE AT ANY ONE TIME, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTRICTIONS AND REQUIREMENTS AS OUTLINED PER THE SAN MATEO COUNTY HEALTH OFFICER ORDER APPENDIX B-1: SMALL CONSTRUCTION PROJECT SAFETY PROTOCOL, DATED 4/29/20. THIS INCLUDES, BUT IS NOT LIMITED TO: POSTING THE REQUIRED NOTICES AND PLANS ON THE JOBSITE, ESTABLISHING A DAILY SCREENING PROTOCOL, SANITIZING THE JOBSITE AND EQUIPMENT DAILY, PROVIDING APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) TO EMPLOYEES, IMPLEMENTING SOCIAL DISTANCING REQUIREMENTS, MAINTAINING A DAILY ATTENDANCE LOG, AND DESIGNATING A SITE-SPECIFIC COVID-19 SUPERVISOR OR SUPERVISORS. FOR MORE INFORMATION, SEE THE SAN MATEO COUNTY HEALTH OFFICER ORDER APPENDIX B-1.
- FOR ANY PROJECT THAT REQUIRES FIVE OR MORE WORKERS AT THE JOBSITE AT ANY ONE TIME, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTRICTIONS AND REQUIREMENTS AS OUTLINED PER THE SAN MATEO COUNTY HEALTH OFFICER ORDER APPENDIX B-2: LARGE CONSTRUCTION PROJECT SAFETY PROTOCOL, DATED 4/29/20. THIS INCLUDES, BUT IS NOT LIMITED TO: POSTING REQUIRED NOTICES AND PLANS ON THE JOBSITE, IMPLEMENTING REQUIRED SAFETY AND SANITIZATION PLANS, PROVIDING APPROPRIATE PPE TO EMPLOYEES, PROVIDING PPE TRAINING, IMPLEMENTING SOCIAL DISTANCING REQUIREMENTS, MAINTAINING ALL NECESSARY LOGS, AND ASSIGNING A COVID-19 SAFETY COMPLIANCE OFFICER (SCO) AND COVID-19 THIRD-PARTY JOBSITE SAFETY ACCOUNTABILITY SUPERVISOR (JSAS). FOR MORE INFORMATION, SEE THE SAN MATEO COUNTY HEALTH OFFICER ORDER APPENDIX B-2.
- USE CAUTION AND PROTECT EXISTING GAS, ELECTRICAL AND TELECOM LINES.
- LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND MINIMUM DEPTHS OF COVER HAVE BEEN ASSUMED. CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AT ALL KNOWN CROSSINGS PER PLAN IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS TO VERIFY CLEARANCE AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER.
- CONTRACTOR SHALL NOTE ELECTRICAL AND GAS LINE CROSSING LOCATIONS AND PROXIMITY OF (E) ELECTRICAL AND GAS LINES TO (N) WATER MAIN LINE CONSTRUCTION. CONTRACTOR SHALL MAKE ALL NECESSARY NOTIFICATIONS TO (E) UTILITY LINES PER UTILITY OWNER REQUIREMENTS.
- TRENCH DEWATERING WILL LIKELY BE NEEDED DUE TO A RELATIVELY SHALLOW GROUNDWATER ELEVATION. WATER GENERATED DURING DEWATERING SHALL BE HANDLED AS OUTLINED IN THE SPECIFICATIONS.
- SOIL TYPES WILL VARY ALONG THE PROPOSED PIPELINE ALIGNMENT AND TEMPORARY EXCAVATIONS SHALL EITHER BE SHORED OR SLOPED BACK TO MEET CAL-OSHA TRENCH EXCAVATION REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ANY EXCESS MATERIALS FROM THE WORK SITE.
- EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY TO PREVENT SEDIMENT RUNOFF TO PUBLIC ROADWAY DRAINAGE FACILITIES, ADJACENT PROPERTIES AND THE SAN FRANCISCO BAY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES ON OR OFF THE PROJECT SITE AS A RESULT OF LACK OF DUST CONTROL.
- DURING THE PROGRESS OF THE CONSTRUCTION WORK THE CONTRACTOR SHALL MAINTAIN THE PREMISES IN A NEAT AND CLEAN CONDITION, DISPOSING OF REFUSE IN A SATISFACTORY MANNER AS OFTEN AS DIRECTED OR AS MAY BE NECESSARY SO THAT THERE SHALL BE AT NO TIME ANY UNSIGHTLY ACCUMULATION OF RUBBISH AT THE JOB SITE.
- CONTRACTOR TO ADHERE TO ALL REQUIREMENTS OF THE SAN MATEO COUNTY HEALTH SERVICES AGENCY.
- STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENT WILL NOT BE ALLOWED IN OR UPON THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS INTENDED FOR USE ON ANY PROJECT SHALL BE OFFLOADED DIRECTLY FROM DELIVERY VEHICLES AND PLACED AS REQUIRED DURING THE COURSE OF CONSTRUCTION. SHOULD THE PERMIT HOLDER OR SUB-CONTRACTORS WISH TO STOCKPILE MATERIALS NEAR THE WORK SITE, THEY SHALL MAKE ARRANGEMENTS IN ADVANCE FOR STORAGE WITH APPROVAL FROM THE CITY. ALL STORAGE SITES SHALL BE SECURE, INACCESSIBLE TO THE GENERAL PUBLIC AND KEPT FREE OF CONSTRUCTION SPOILS, DEBRIS AND TRASH AT ALL TIMES STORAGE SITES SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY ENGINEER.
- CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS.
- THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY & TRAFFIC CONTROL.
- THE CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS FOR POLICE, FIRE, AMBULANCE, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF JOB SITE.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY SOIL OR WATER CONTAMINATION NOTICED DURING CONSTRUCTION TO THE CITY OF EAST PALO ALTO, THE SAN MATEO COUNTY DEPARTMENT OF HEALTH, AND THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE SITE OR SURROUNDING AREA DUE TO DUST OR EROSION, RESULTING FROM WORK DONE BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE A SEVEN (7) DAY PHONE NUMBER TO RECEIVE AND RESPOND TO DUST COMPLAINTS RESULTING FROM ALL CONSTRUCTION OPERATIONS AND SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE. ALL BUSINESSES AND RESIDENTS WITHIN 300' OF THE PROJECT SHALL BE NOTIFIED BY THE CONTRACTOR BY MAIL WITH INFORMATION AND COMPLAINT LINES TO BE CALLED.
- CONTRACTOR IS TO MAINTAIN ALL JOB SITE FACILITIES UNTIL ACCEPTED BY THE CITY.
- ALL EXCAVATION SPOILS SHALL BE PLACED DIRECTLY INTO TRUCKS AND DISPOSED OF AT AN APPROVED DUMPSITE.
- CONSTRUCTION HOURS IN THE CITY PUBLIC RIGHT-OF-WAY ARE LIMITED TO WEEKDAYS AND NON-CITY HOLIDAYS BETWEEN 8:00AM TO 5:00PM.
- CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED OR DISRUPTED STRIPING AND PAVEMENT MARKING IN-KIND.
- PETROMAT MAY BE FOUND IN THE AC. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL.
- CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED OR DISRUPTED SIDEWALK, CURB AND GUTTER, CURB RAMP, AND DRIVEWAY.
- ALL CURB AND GUTTER REPLACED SHALL HAVE A 2 FOOT SAWCUT CONFORM, UNLESS OTHERWISE NOTED ON PLANS.
- CONTRACTOR SHALL SUPPLY AND MAINTAIN SANITARY FACILITIES FOR THE WORKERS AT THE CONSTRUCTION SITE.
- CONTRACTOR SHALL MAINTAIN AND KEEP ALL VEHICULAR AND PEDESTRIAN TRAFFIC ACCESS OPEN TO SURROUNDING RESIDENTS UNLESS APPROVED BY THE ENGINEER.

UTILITY GENERAL NOTES

- WATER MAIN SHALL BE POLYVINYL CHLORIDE (PVC) C900 FOR THE PROPOSED IMPROVEMENTS. ALL NEW WATER MAIN PIPE IS PROPOSED TO BE 12-INCH DIAMETER PIPE.
- TRACER WIRE SHALL BE REQUIRED FOR ALL NEW WATER PIPE.
- PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- NEAREST OUTSIDE WALL OF PVC C900 WATER MAIN SHALL BE A MINIMUM HORIZONTAL DISTANCE OF 10 FEET FROM THE NEAREST OUTSIDE WALL OF THE SANITARY SEWER UNLESS OTHERWISE SPECIFIED. (N) WATER MAIN SHALL BE BACKFILLED WITH CDF IF CLOSER THAN 10 FEET TO THE SANITARY SEWER (OUTSIDE WALL TO OUTSIDE WALL).
- NEAREST OUTSIDE WALL OF PVC C900 WATER MAIN SHALL BE A MINIMUM HORIZONTAL DISTANCE OF 4 FEET FROM THE NEAREST OUTSIDE WALL OF THE STORM DRAIN. (N) WATER MAIN SHALL BE BACKFILLED WITH CDF IF CLOSER THAN 4 FEET TO THE STORM DRAIN (OUTSIDE WALL TO OUTSIDE WALL).
- WATER MAIN SHALL HAVE A MINIMUM COVER OF 30 INCHES. WATER LINES WITH LESS THAN 30 INCHES OF COVER SHALL COMPLY WITH SHEET D-03 DETAIL 2. WHERE PROFILE VIEW SHOWS WATER MAIN DEEPER THAN 3 FEET, THE PROFILE SHALL GOVERN.
- ALL VALVES ON ABANDONED PIPE SHALL BE ABANDONED IN PLACE UNLESS OTHERWISE NOTED.
- ALL WATER MAIN CROSSINGS WITH SANITARY SEWER LINES, STORM DRAIN LINES, SERVICE LATERALS, UTILITY CROSSINGS, AND WATER MAIN CROSSINGS SHALL HAVE A MINIMUM OF 1 FOOT VERTICAL CLEARANCE.
- CONTRACTOR SHALL SUPPLY AND INSTALL (N) GATE VALVES FOR ALL (N) WATER MAINS.
- THRUST BLOCKS SHALL BE CONSTRUCTED AT ALL BENDS, TEES, REDUCERS, BLIND FLANGES, CAPS, AND PLUGS PER SHEET D-02 DETAIL 3.
- ALL WATER SERVICE CONNECTIONS SHALL BE REPLACED FROM THE (N) WATER MAIN TO THE (E) WATER METER. PLANS SHOW SERVICE LATERALS LOCATED BY SURVEY. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND RECONNECTING ALL SERVICE LATERALS.
- RESURFACING AND BACKFILL IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO SHEET D-01 DETAIL 2 (EXCEPT WHERE NOTED) OR AS DIRECTED BY THE ENGINEERING DEPARTMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLING ALL TRAFFIC LOOP DETECTORS AFFECTED BY THE PROPOSED IMPROVEMENTS.
- WATER MAIN SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS AND PROJECT SPECIFICATIONS.
- WATER MAIN, SANITARY SEWER, AND STORM DRAIN CROSSING LOCATIONS SHALL COMPLY WITH TITLES 17 AND 22 OF THE CALIFORNIA CODE OF REGULATIONS RELATED TO DRINKING WATER INCLUDING BUT NOT LIMITED TO TITLE 22, CHAPTER 16, ARTICLE 4 "MATERIALS AND INSTALLATION OF WATER MAINS AND APPURTENANCES" FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES. INCLUDING IF CROSSING A SD OR SS THE (N) WATER MAIN SHALL BE CONSTRUCTED NO LESS THAN 45-DEGREES TO AND AT LEAST ONE FOOT ABOVE THE SD OR SS. NO CONNECTION JOINTS SHALL BE MADE IN THE (N) WATER MAIN WITHIN 8 HORIZONTAL FEET OF THE SD OR SS.

WATER UTILITY NOTES

- ALL HORIZONTAL BENDS MUST BE INSTALLED WITH PERMANENT MARKINGS INDICATING THE LOCATIONS OF BENDS.
- ALL THRUST BLOCKS MUST BE CONSTRUCTED WITH ALL THREAD RESTRAINT COUPLINGS AT TEES AND BENDS.
- ALL BLOW OFF APPARATUSSES SHALL BE INSTALLED ABOVE GROUND DUE TO THE PENINSULA REGION.
- CONTRACTOR SHALL USE ROCK SAW TO OPEN TRENCH ON UNIVERSITY AVENUE FROM BAY ROAD THROUGH DONOHOE STREET.
- CONTRACTOR SHALL USE TRACER WIRE THROUGHOUT THE ENTIRE PROJECT ON ALL WATER MAINS, LATERALS, FIRE LINES, AND FIRE HYDRANTS.
- ALL WATER FITTINGS SUCH AS CORPORATION STOPS, SADDLES, BUSHINGS, SPLICE COMPRESSION FITTINGS, ETC. MUST BE STAMPED NO LEAD (NL) IN ACCORDANCE WITH AWWA STANDARDS.
- ALL COUPLINGS AND FLANGES SHALL BE MJ X MJ AND/OR MJ X FLANGE.
- ALL PRODUCTS IN THE FIELD MUST MEET THE SUBMITTED PROJECT SPECIFICATIONS. NO REUSED MATERIALS AND NO SUBSTITUTIONS FOR SUBMITTED MATERIALS ARE ALLOWED.

STANDARDS FOR SYSTEM AND ALL SERVICE CONNECTIONS:

- FOR SERVICES 2" AND SMALLER, CONNECTION SHALL BE WET TAP ONLY USING DOUBLE STRAPPED BRONZE SADDLE. FOR SERVICES 3" AND LARGER, CONNECTION SHALL BE MADE USING A TEE.
- FOR 3/4" AND 1" SERVICES, POLYETHYLENE TUBING (PE3406) WITH MUELLER INSTA-TITE FITTINGS IS ALLOWED.
- FOR 3/4" AND 2" SERVICES, TYPE "K" SOFT COPPER TUBING (ASTM B-88-62) IS REQUIRED WITH COMPRESSION FITTINGS (NO SOLDERED JOINTS ARE ALLOWED)
- USE FUSION EPOXY COATED (EXTERIOR AND INTERIOR) MUELLER FULL BODIED TAPPING SLEEVE #H-615. USE STAINLESS STEEL BOLTS, TRIM, AND SLEEVES. FOR AC PIPES USE #316 STAINLESS STEEL SLEEVES.
- ALL BURIED FERROUS (IRON) FITTINGS AND VALVES SHALL BE FUSION EPOXY COATED (EXTERIOR AND INTERIOR) AND WRAPPED WITH SINGLE LAYER OF 8 MIL POLYETHYLENE COVERING, WITH ENDS TAPED.
- JOINTS SHALL BE RESTRAINED MECHANICAL, FLANGED OR FLEX (NO PUSH ON JOINTS ALLOWED), JOINTS SHALL BE FUSION EPOXY COATED (EXTERIOR AND INTERIOR)
- 2" NUT MUELLER RESILIENT WEDGE GATE VALVES SHALL BE FUSION EPOXY COATED (EXTERIOR AND INTERIOR).

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Cover Sheet.dwg
PLOT DATE: 08-01-23 PLOTTED BY: kyu

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
	BY	DATE	DESCRIPTION OF REVISIONS
			APP'D



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**UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO**

GENERAL NOTES

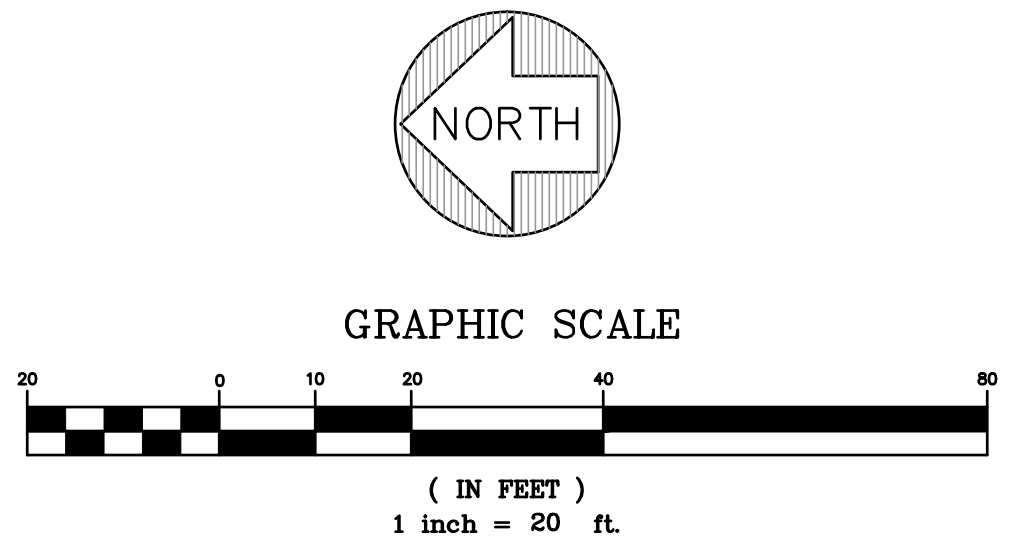
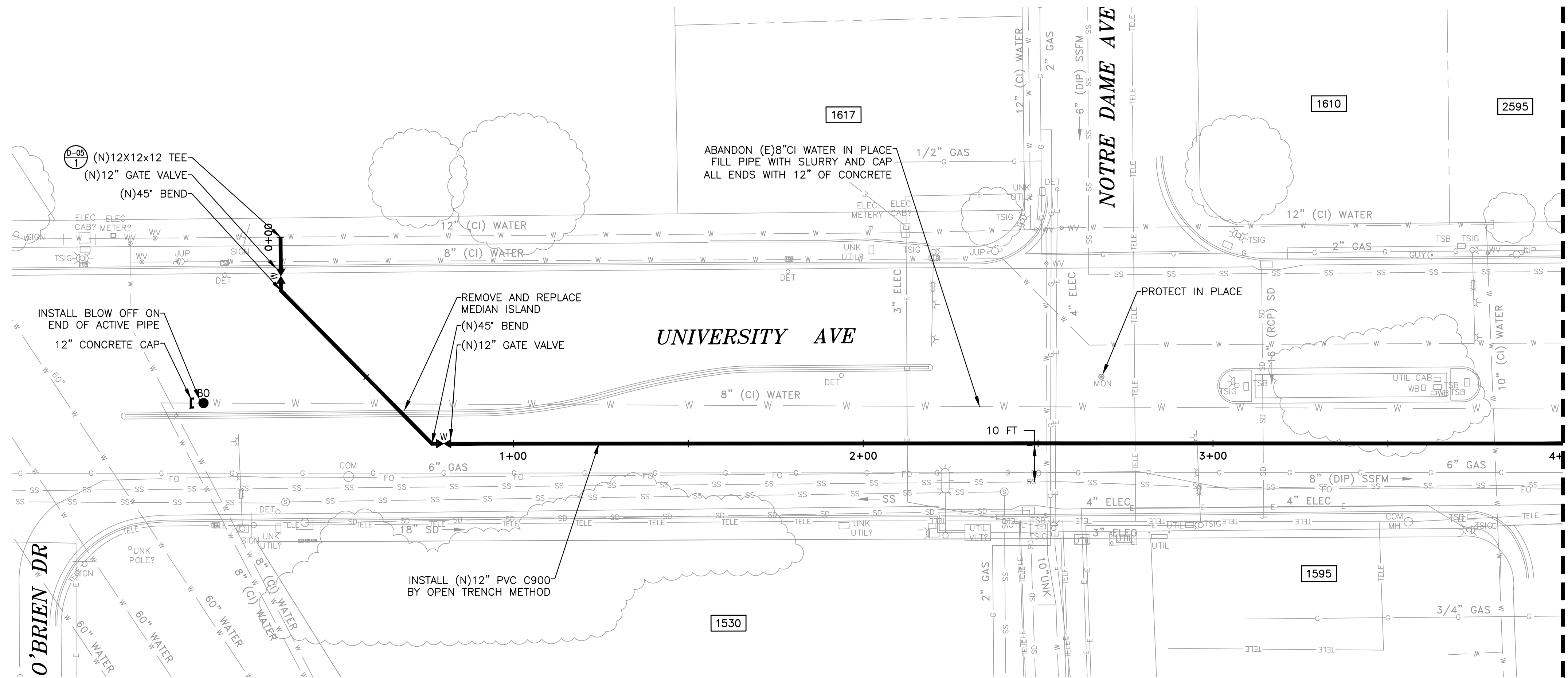
SHEET

G-02

JOB NO.

221005

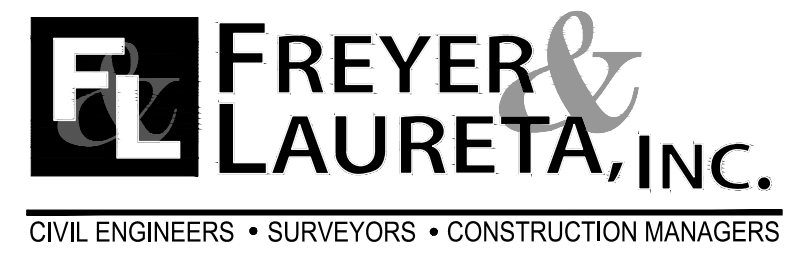
DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 PLOT DATE: 08-01-23 PLOTTED BY: kyau



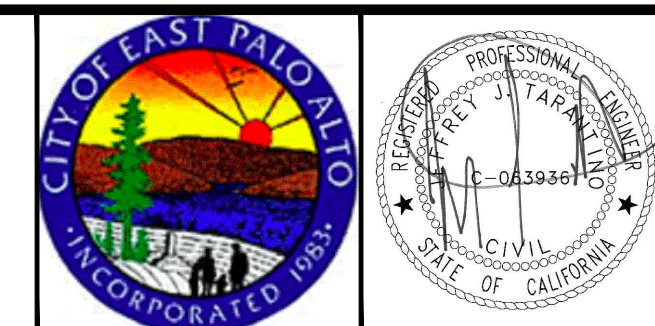
- UTILITY PLAN NOTES
- ① ALL NEW 12" WATER PIPE SHALL BE PVC C900.
 - ② EXISTING UTILITY LOCATION AND DEPTH SHALL BE CONFIRMED BY CONTRACTOR ON SITE PRIOR TO BEGINNING WORK.
 - ③ UTILITY DEPTH VERIFIED BY POTHOLING. SEE ATTACHMENT E OF THE SPECIFICATIONS FOR POTHOLING REPORT BY BESS TESTLAB DATED 4/6/2021 AND POTHOLING REPORT BY EXARO DATED 5/31/2023.
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 - ⑥ CURB INLETS THAT HAVE BEEN DISTURBED OR DAMAGED SHALL BE RESTORED OR REPLACED IN-KIND.

PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



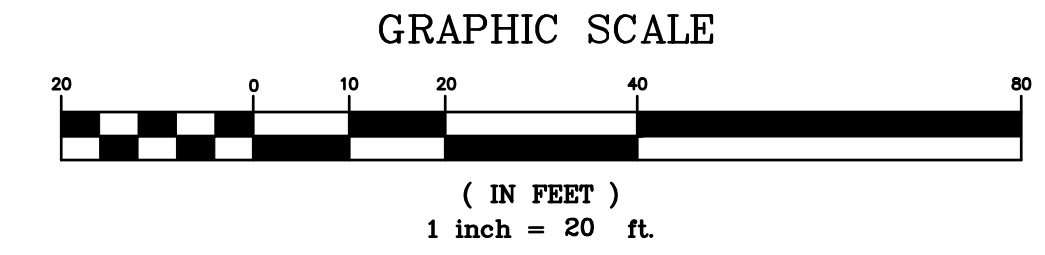
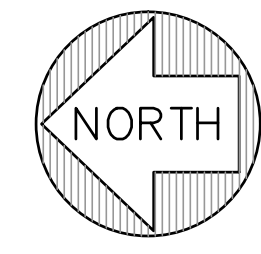
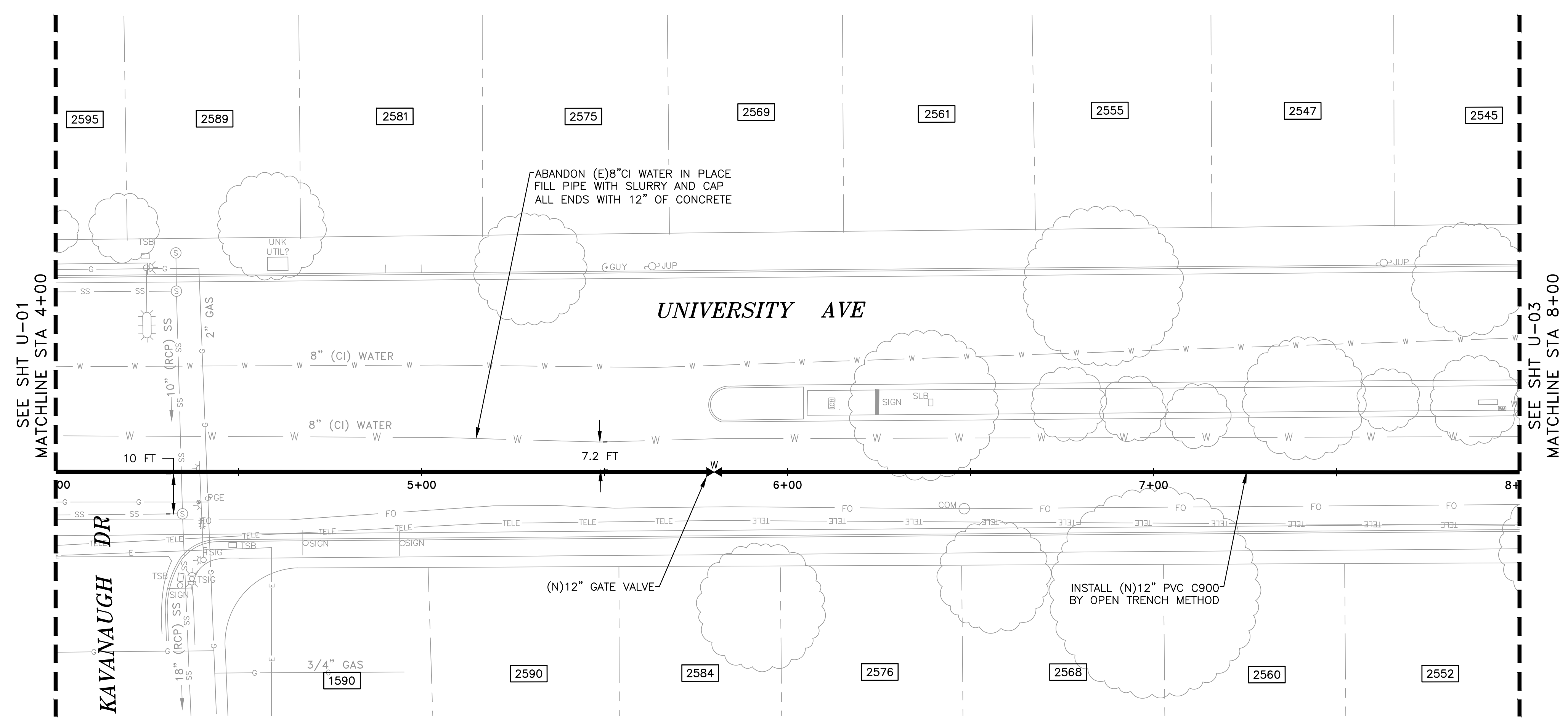
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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 0+00 TO 4+00

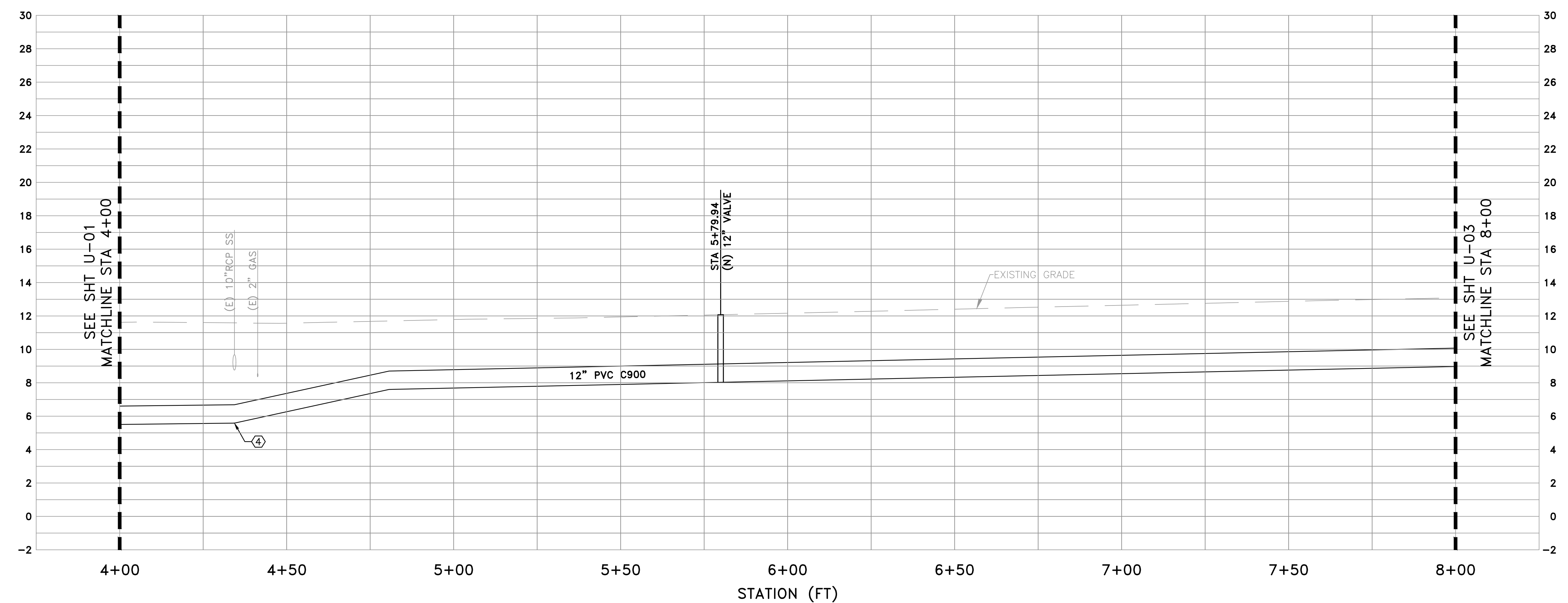
SHEET
U-01
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyu



UTILITY PLAN NOTES

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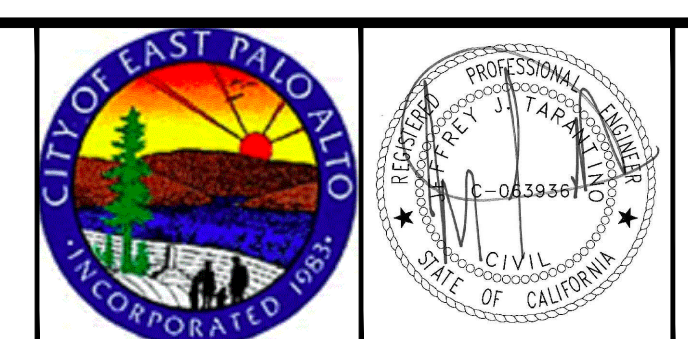


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



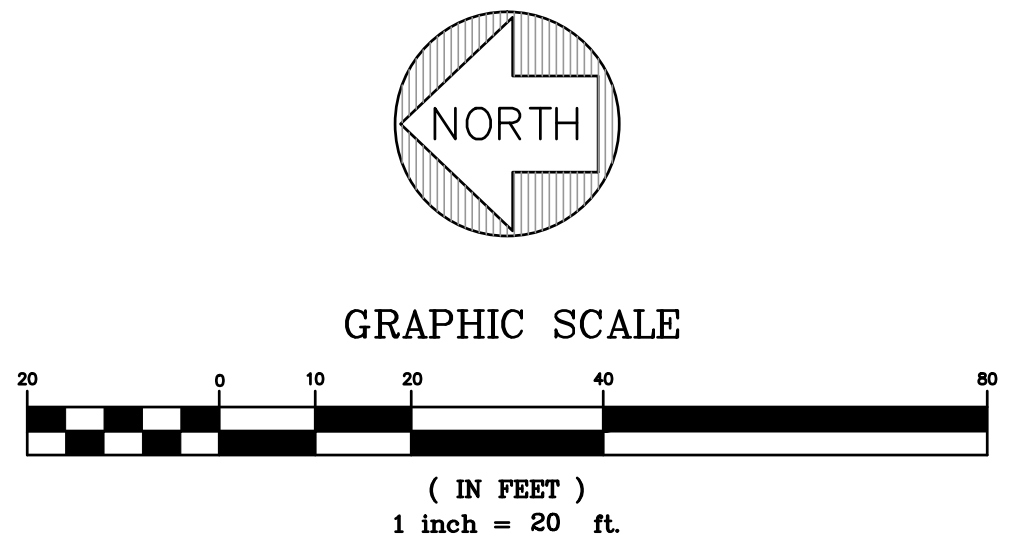
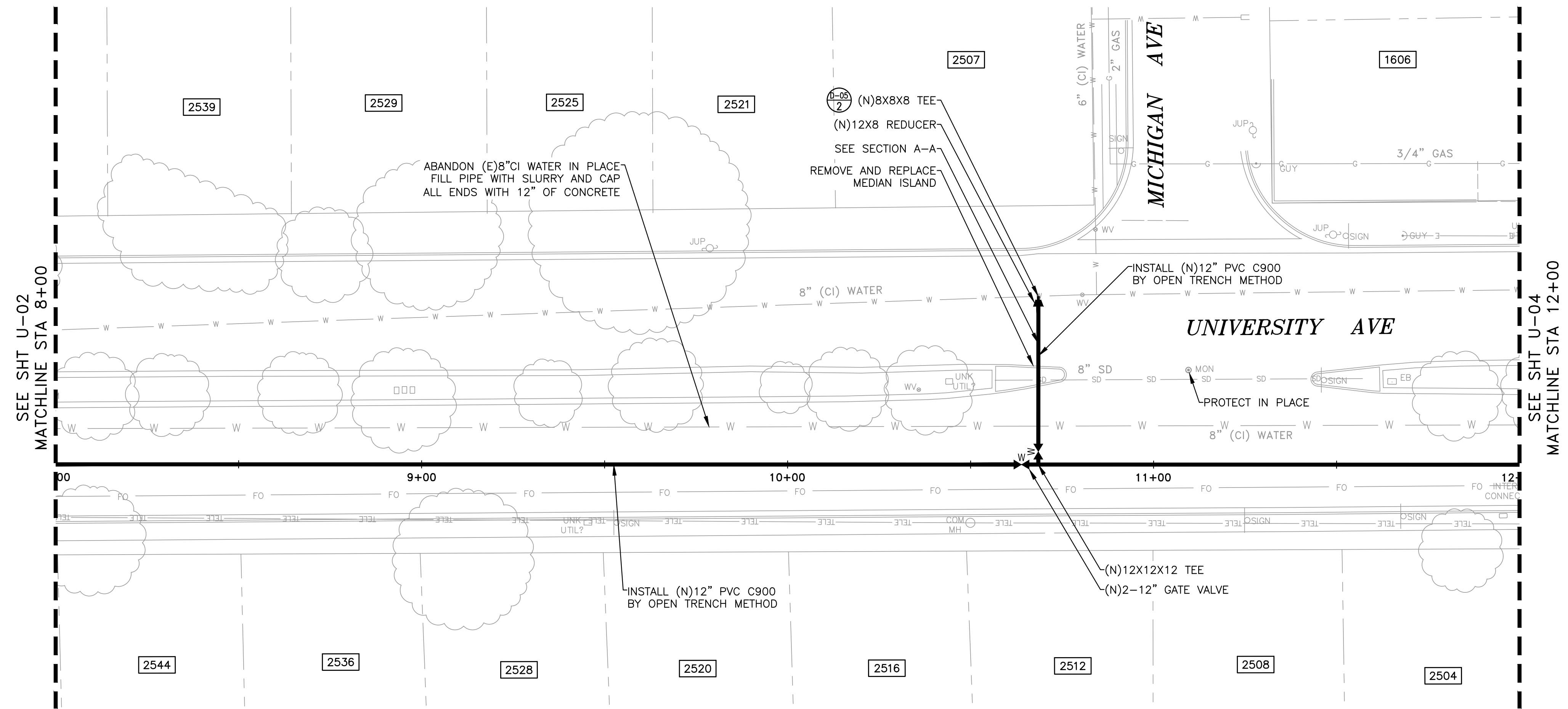
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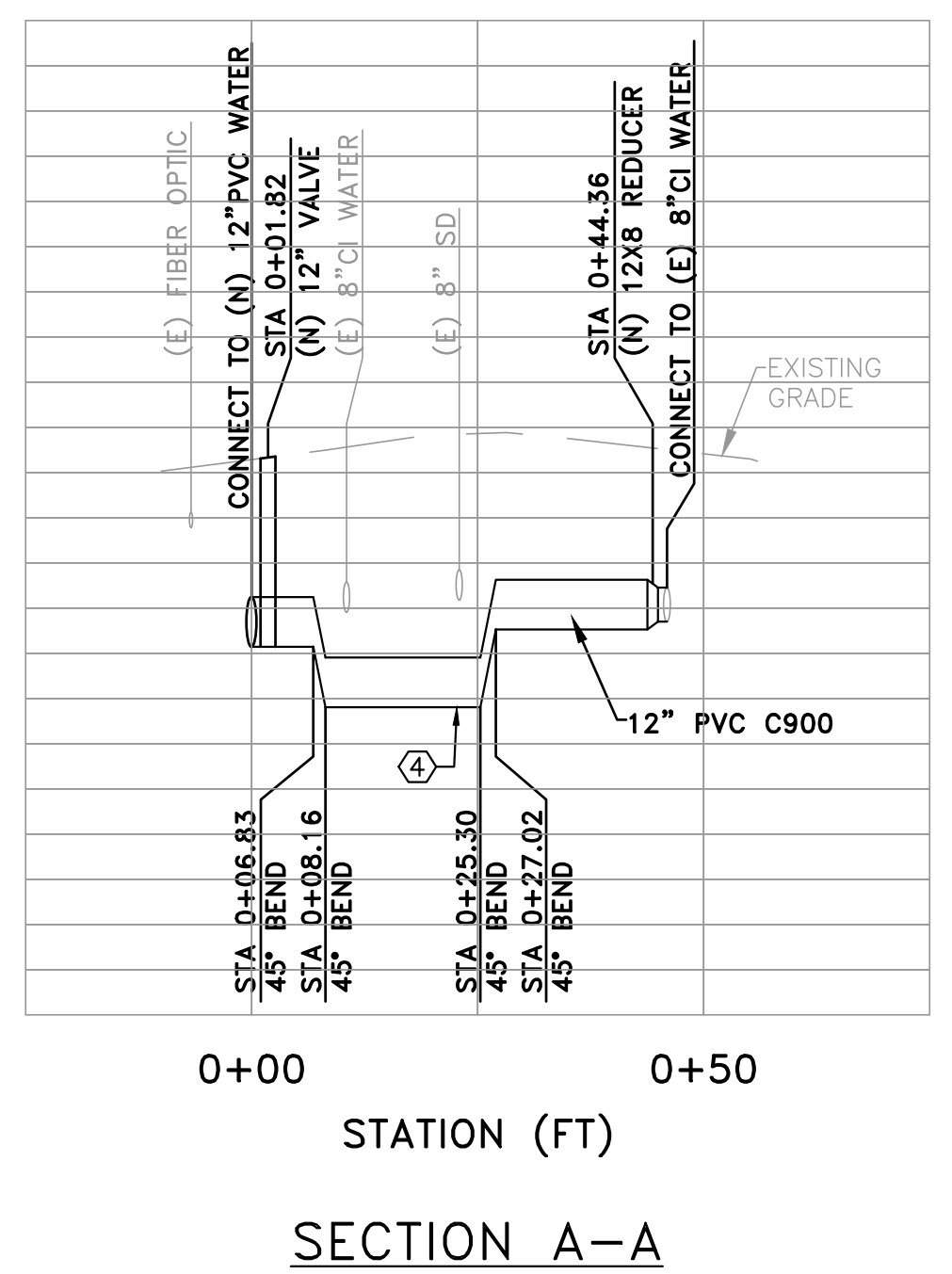
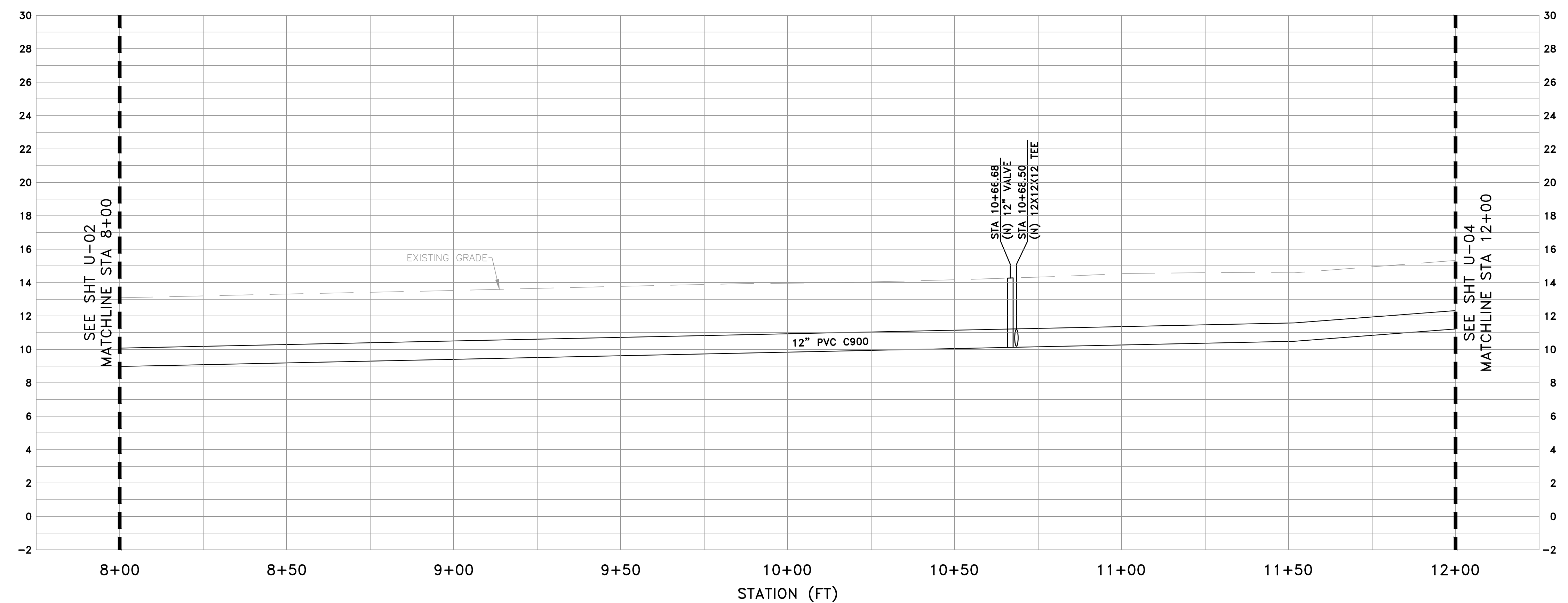
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 4+00 TO 8+00

SHEET	U-02
JOB NO.	221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 PLOT DATE: 08-01-23 PLOTTED BY: kyu



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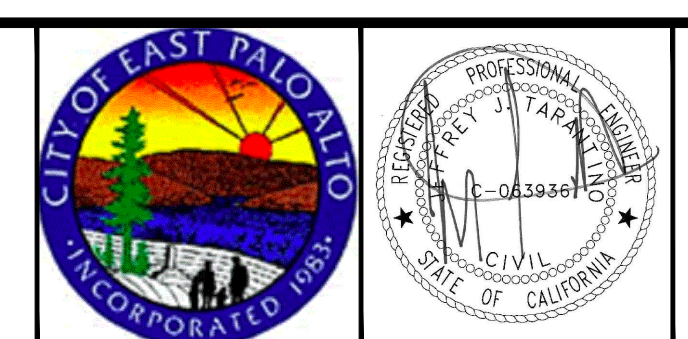


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



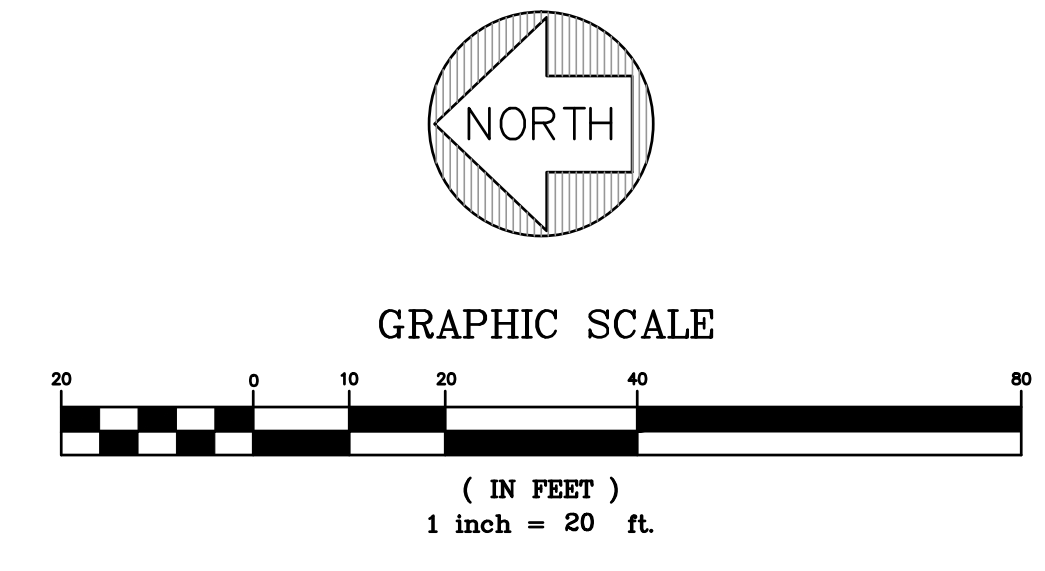
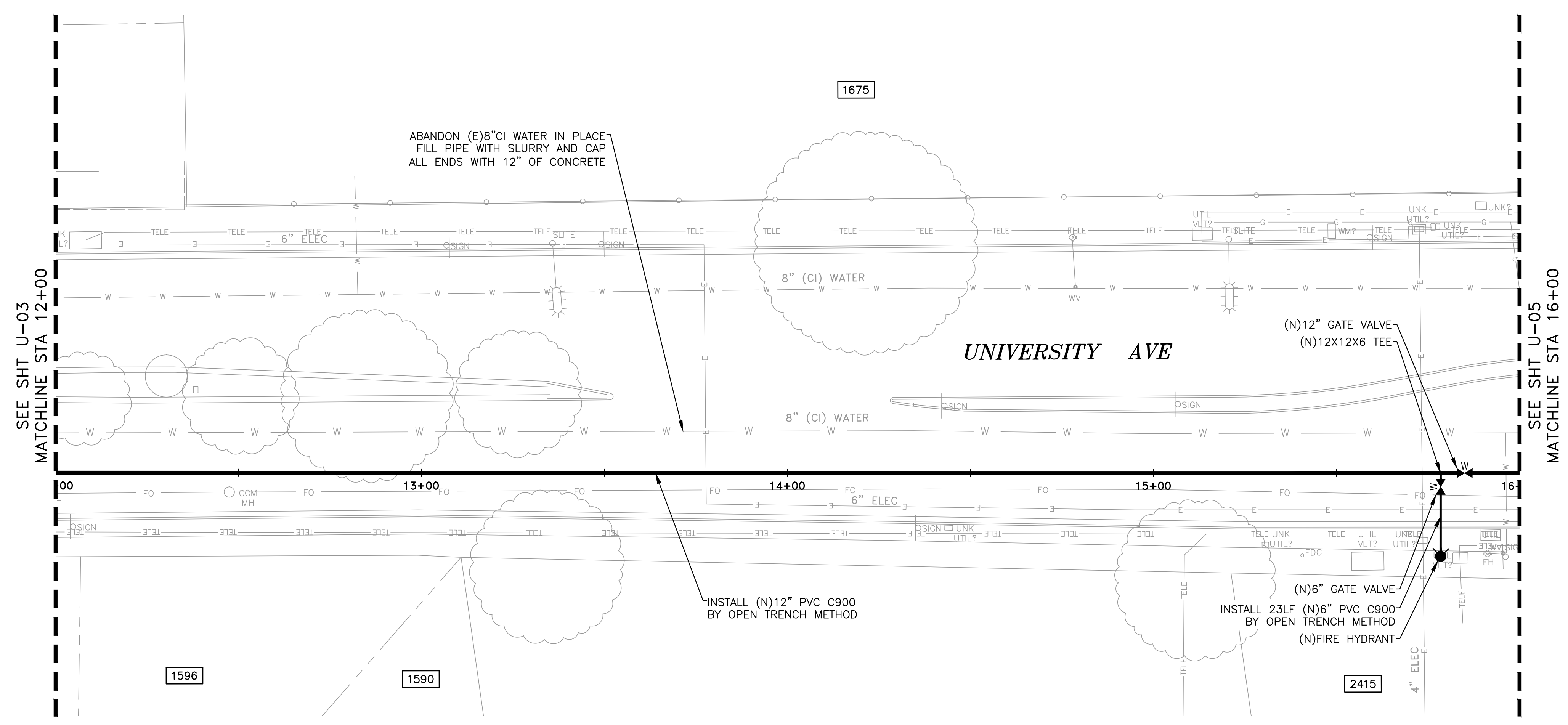
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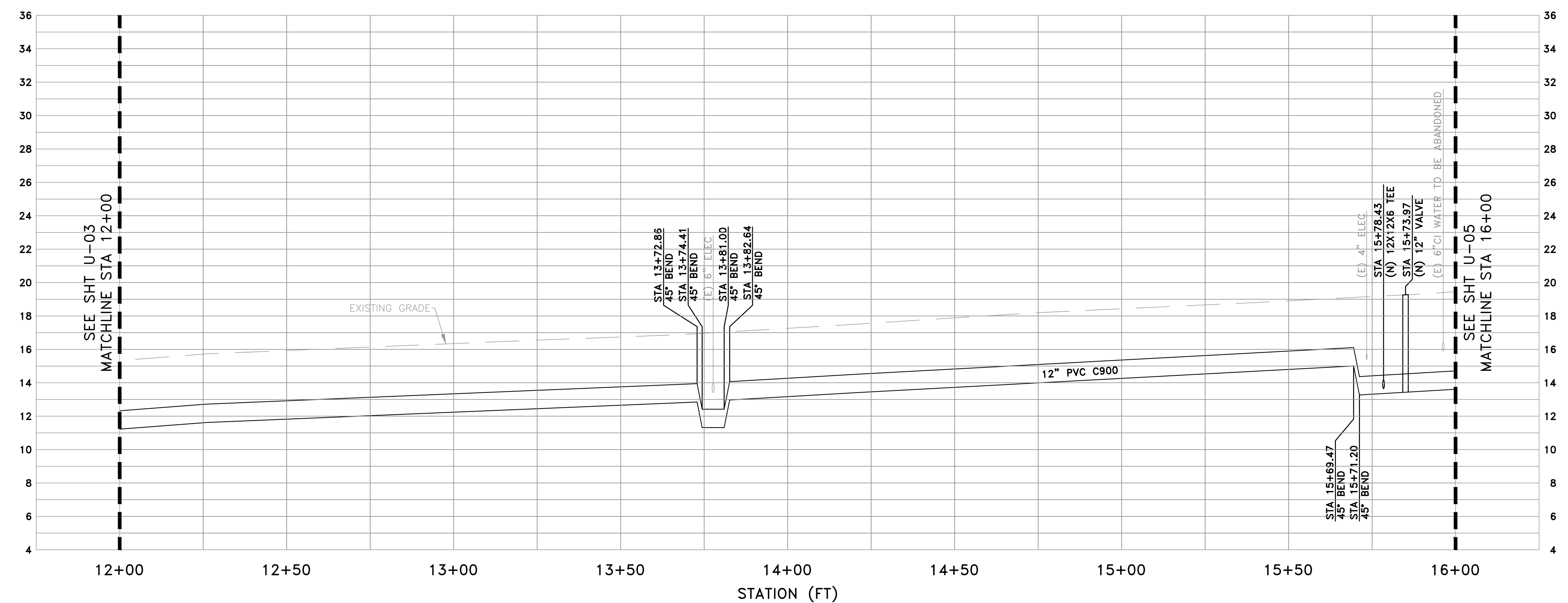
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 8+00 TO 12+00

SHEET
U-03
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyu



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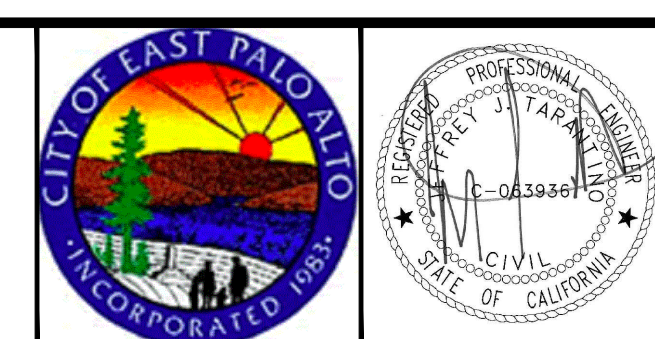


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
	BY	DATE	DESCRIPTION OF REVISIONS
			APP'D

FREYER & LAURETA, INC.
 CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

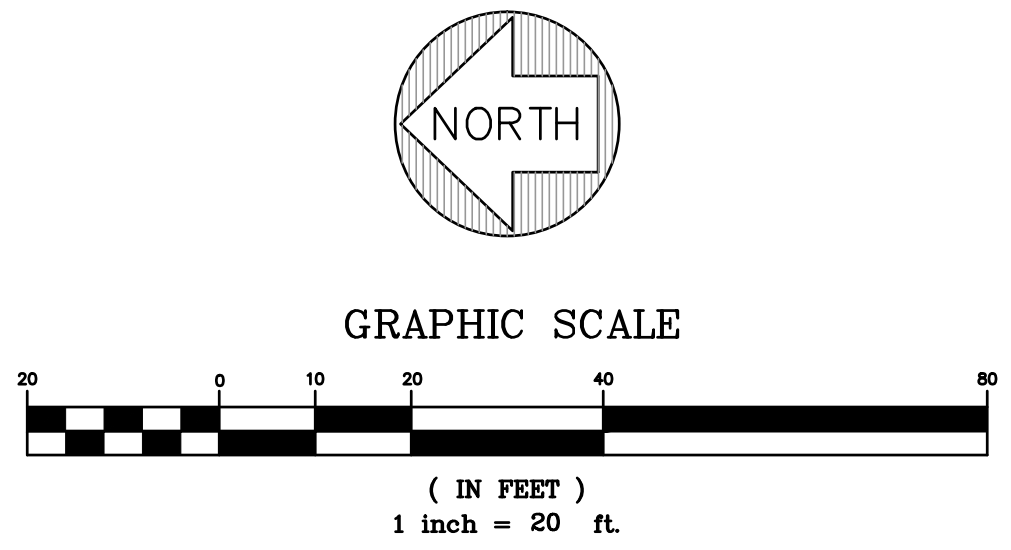
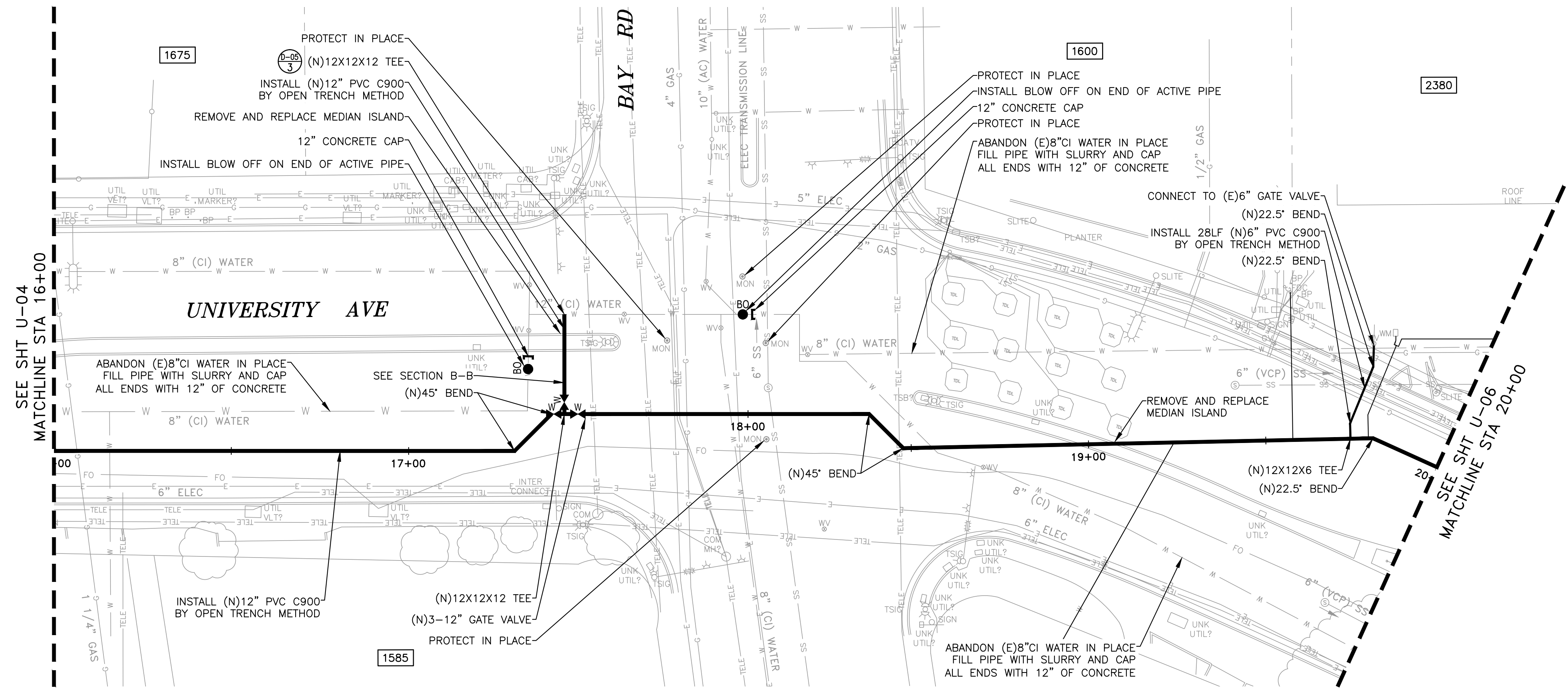
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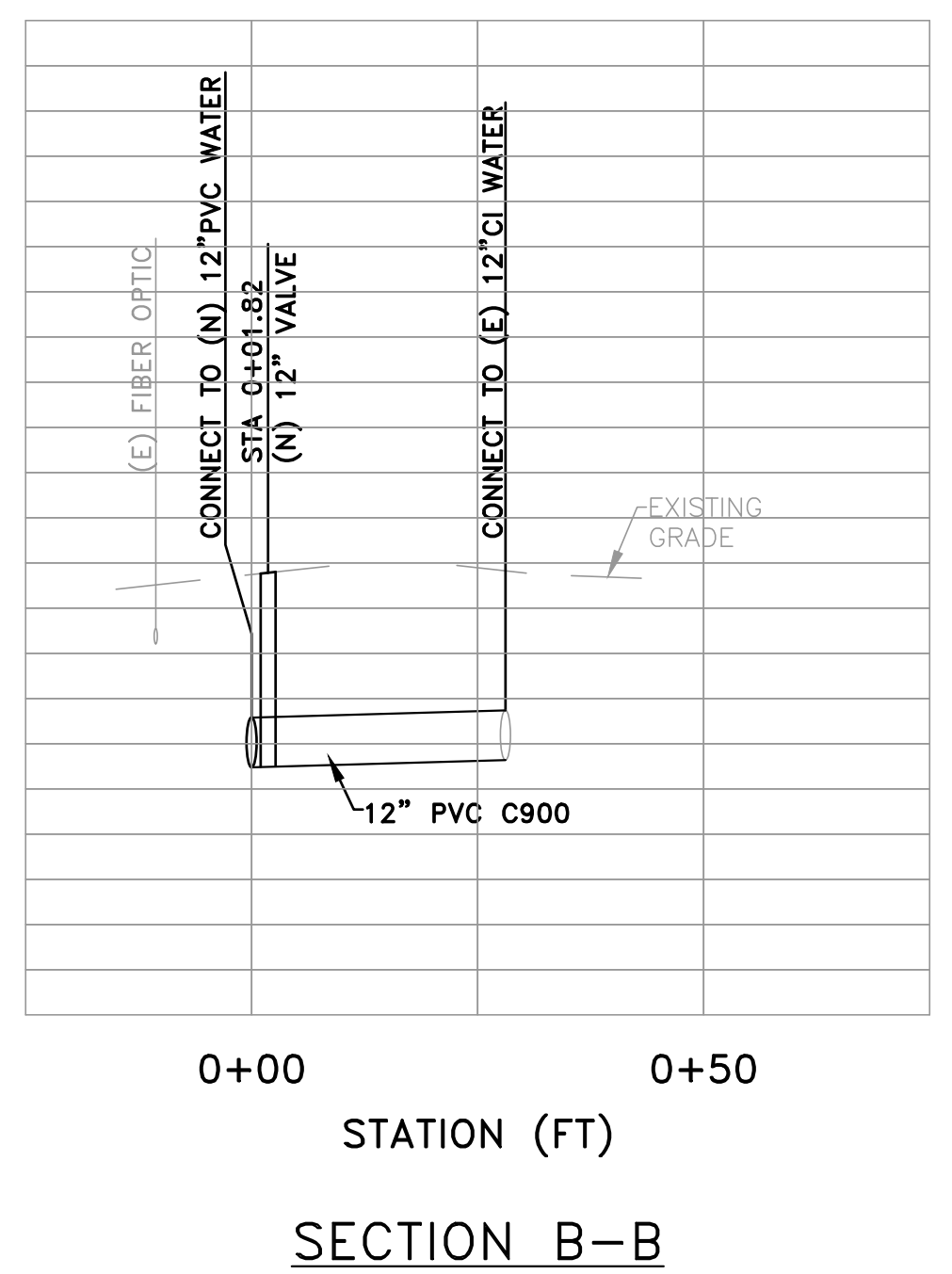
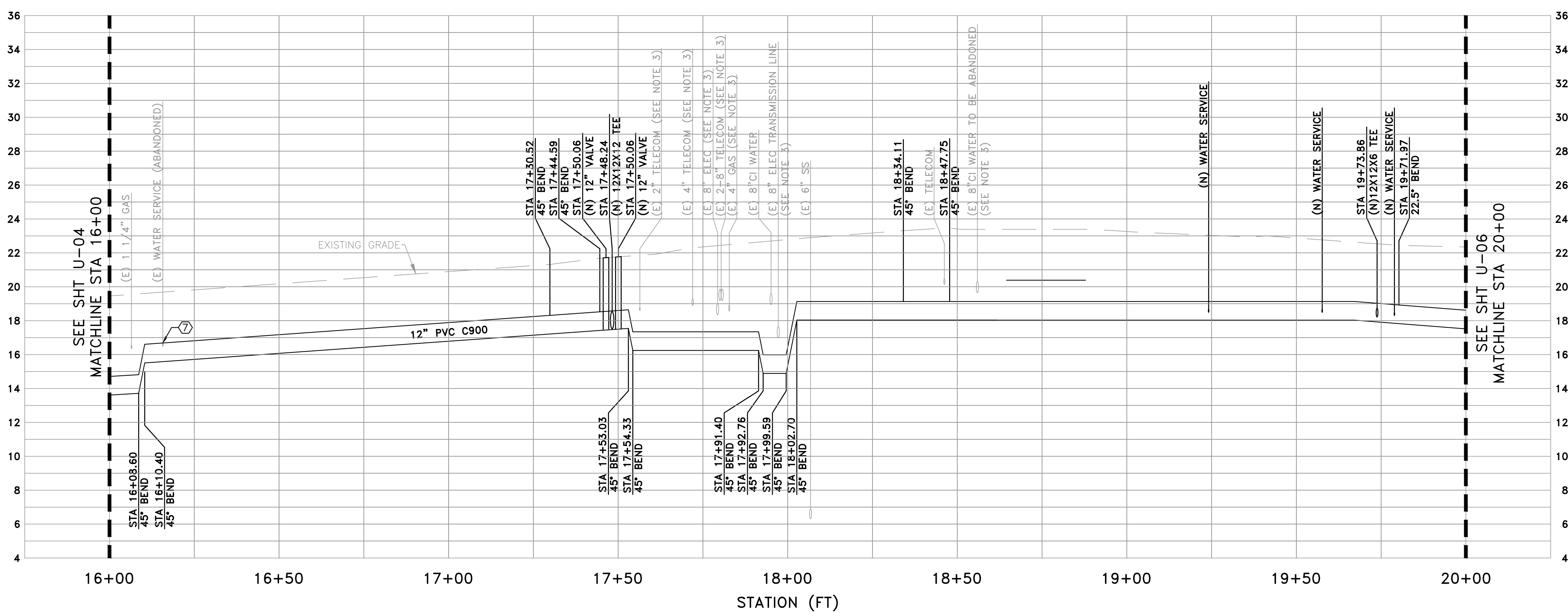
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 12+00 TO 16+00

SHEET	U-04
JOB NO.	221005

DRAWING NAME: Z:\Projects\21 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyau



- UTILITY PLAN NOTES**
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 - ⑥ CURB INLETS THAT HAVE BEEN DISTURBED OR DAMAGED SHALL BE RESTORED OR REPLACED IN-KIND.
 - ⑦ EXISTING CITY HALL WATER SERVICE LATERAL WILL BE ABANDONED BY VEOLIA WATER PRIOR TO THE START OF CONSTRUCTION.

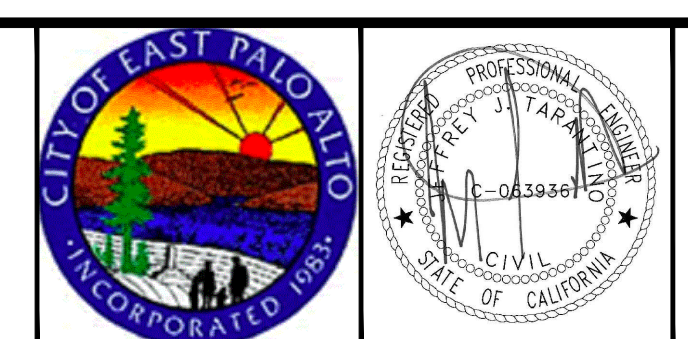


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



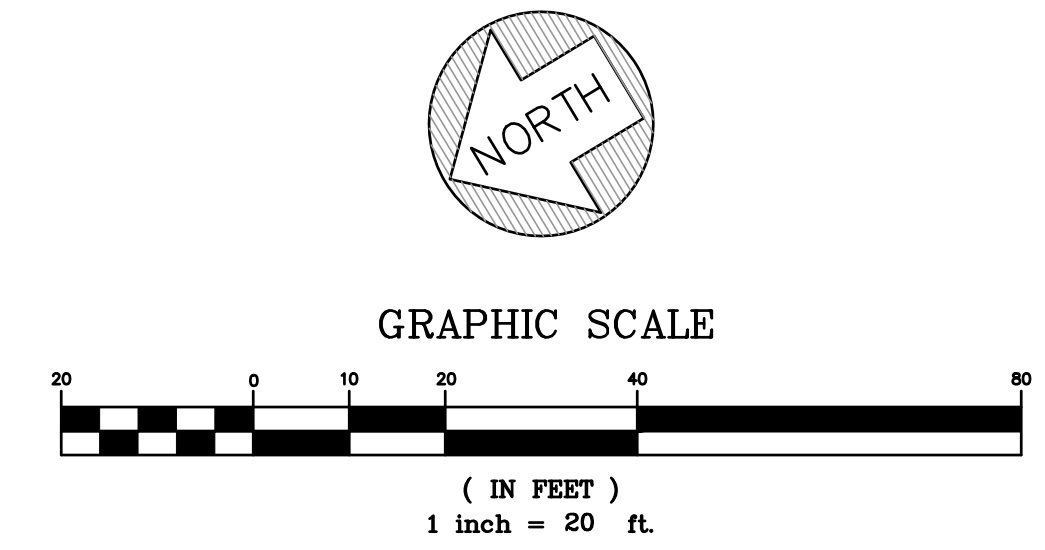
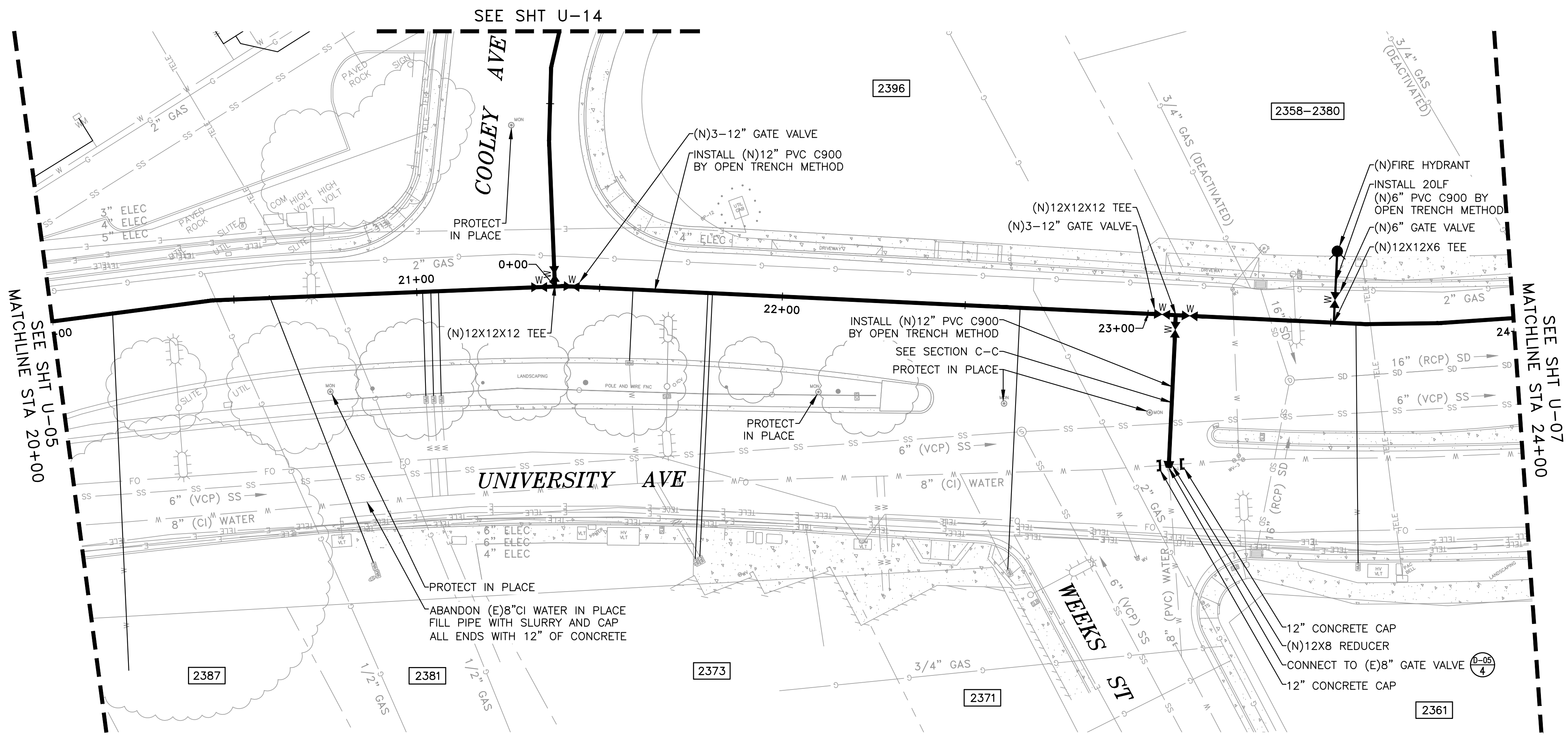
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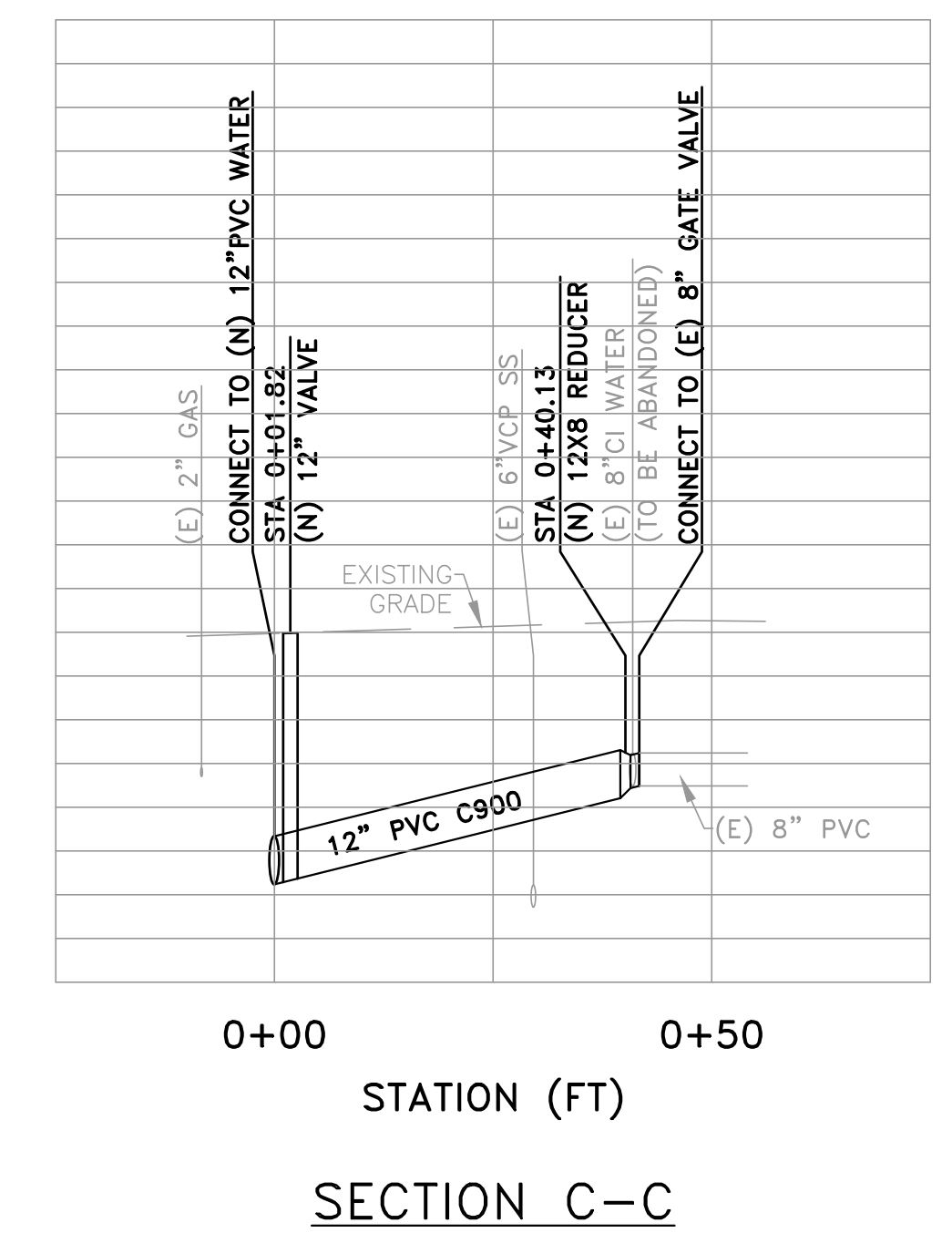
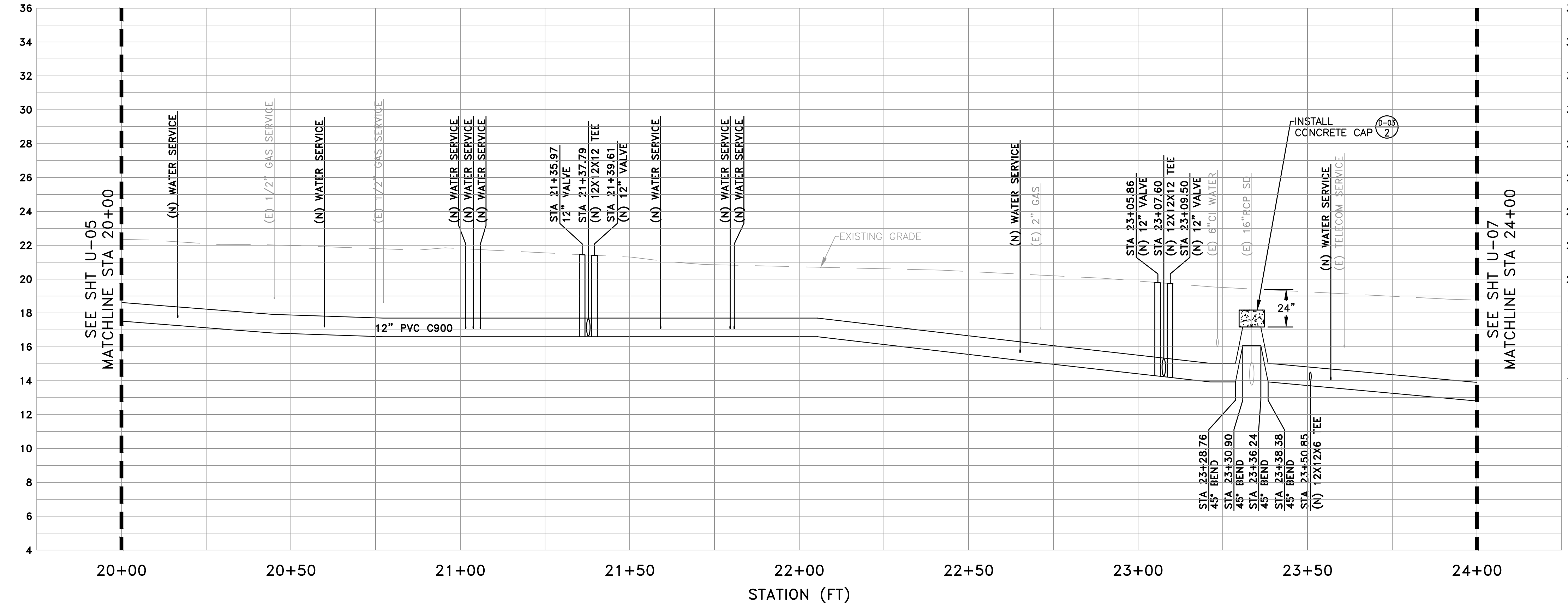
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 16+00 TO 20+00

SHEET
U-05
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyau



- UTILITY PLAN NOTES**
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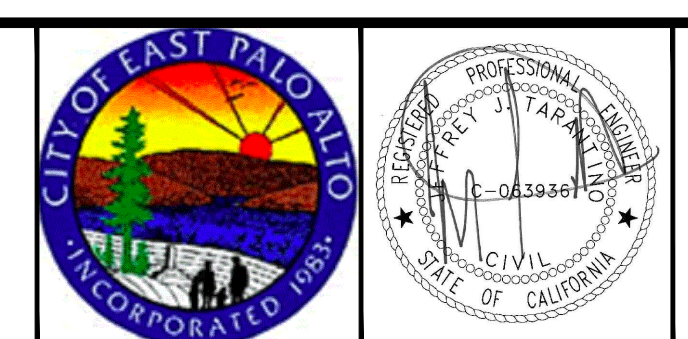


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



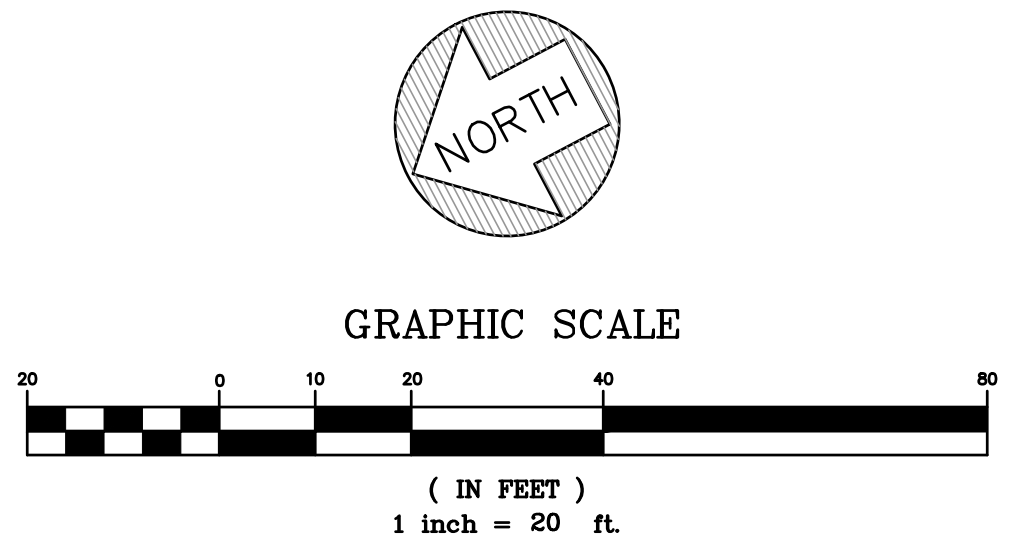
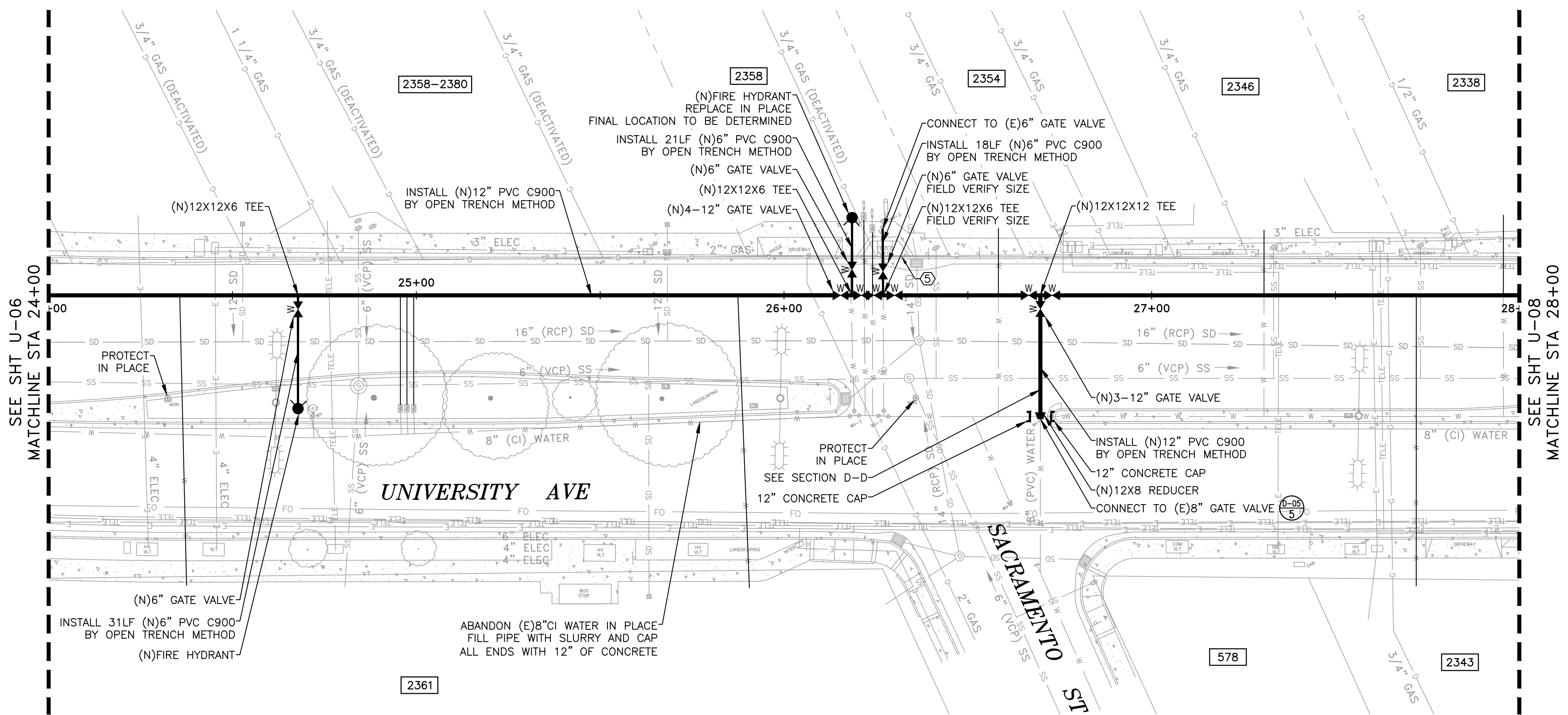
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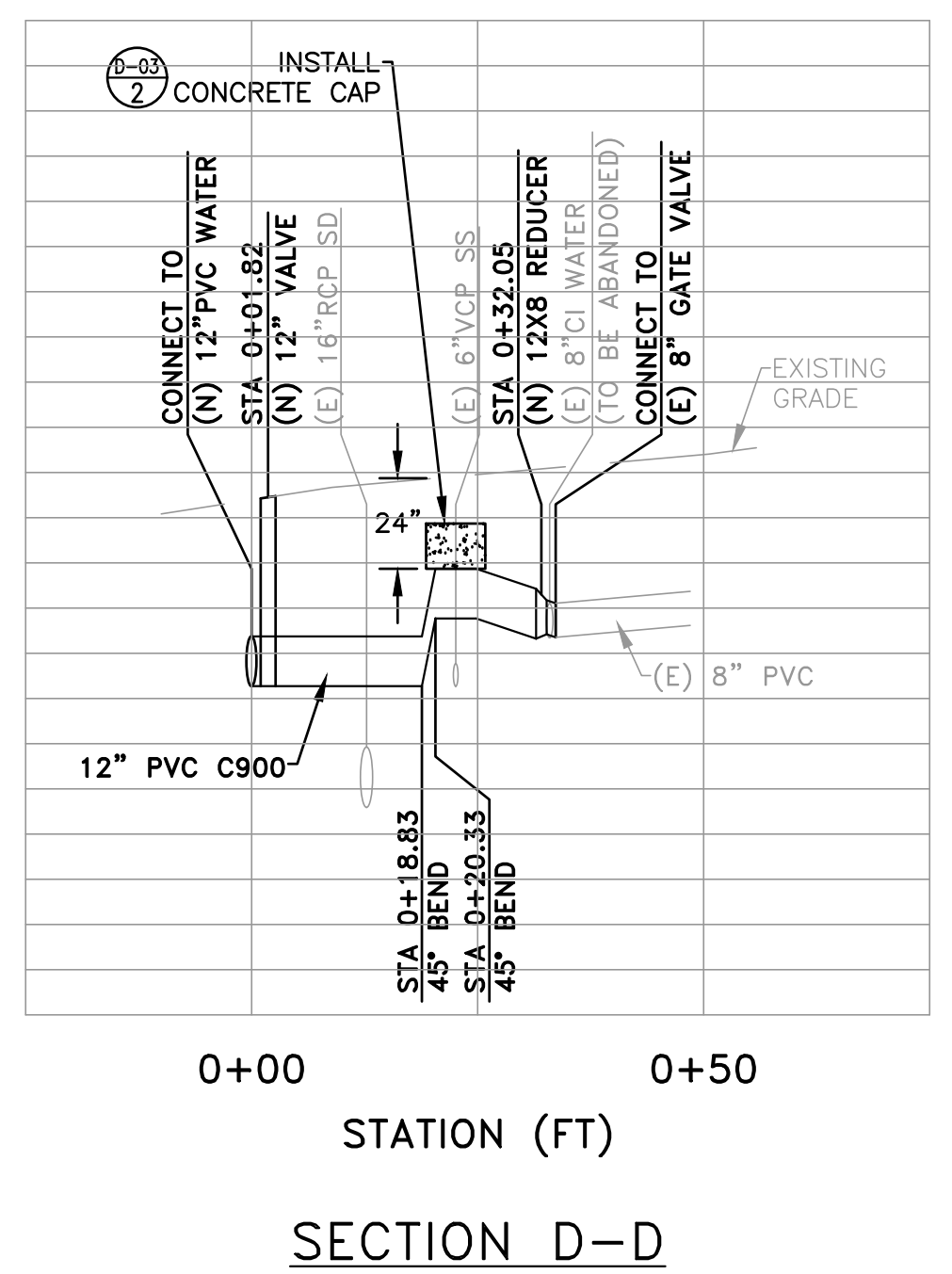
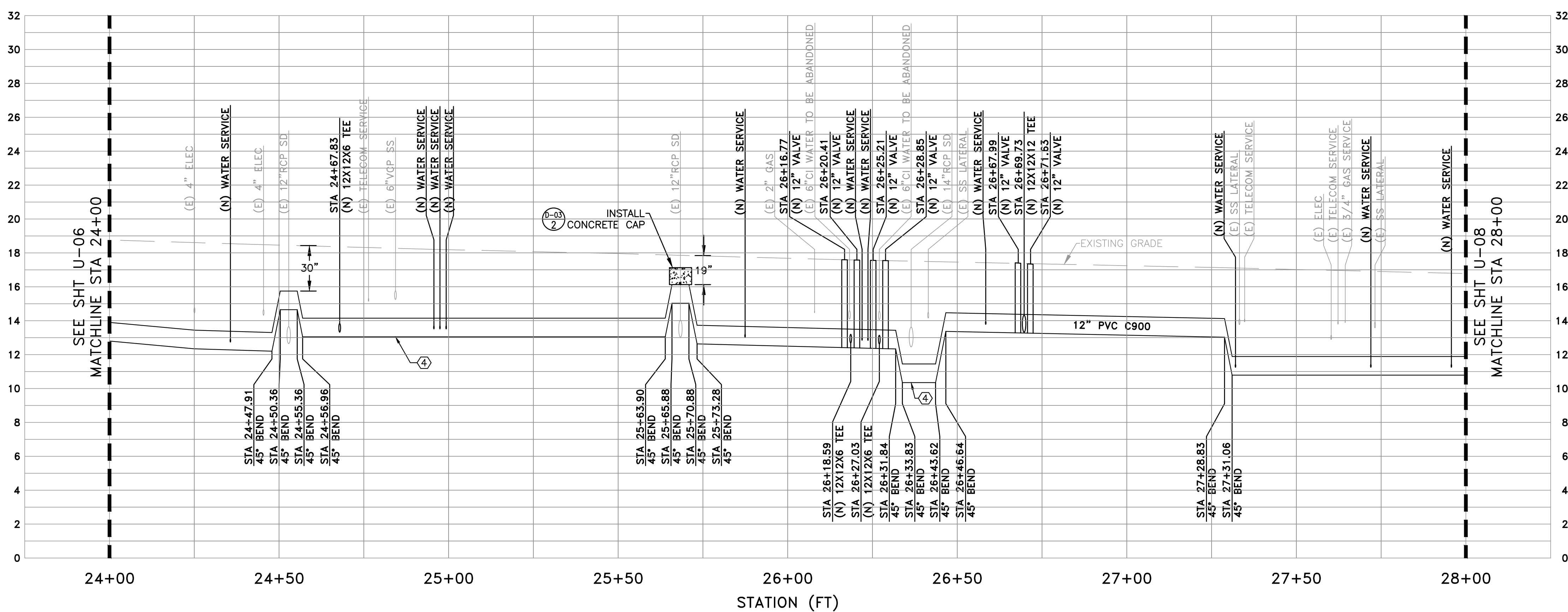
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 20+00 TO 24+00

SHEET
U-06
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyau



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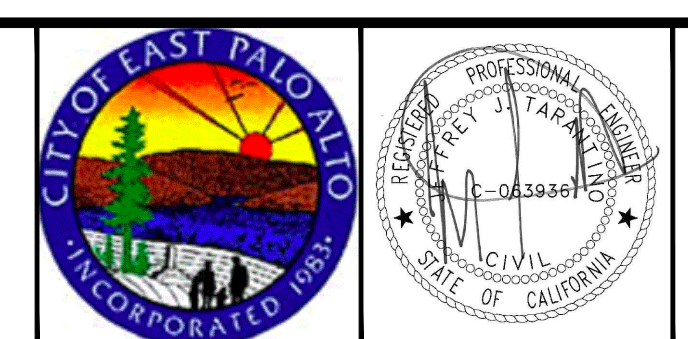


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



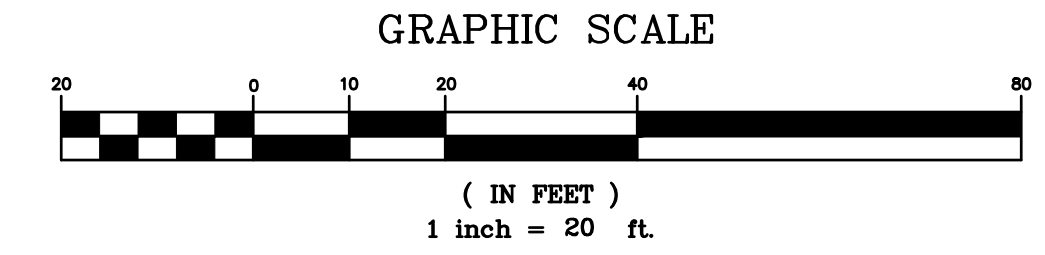
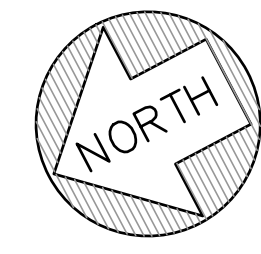
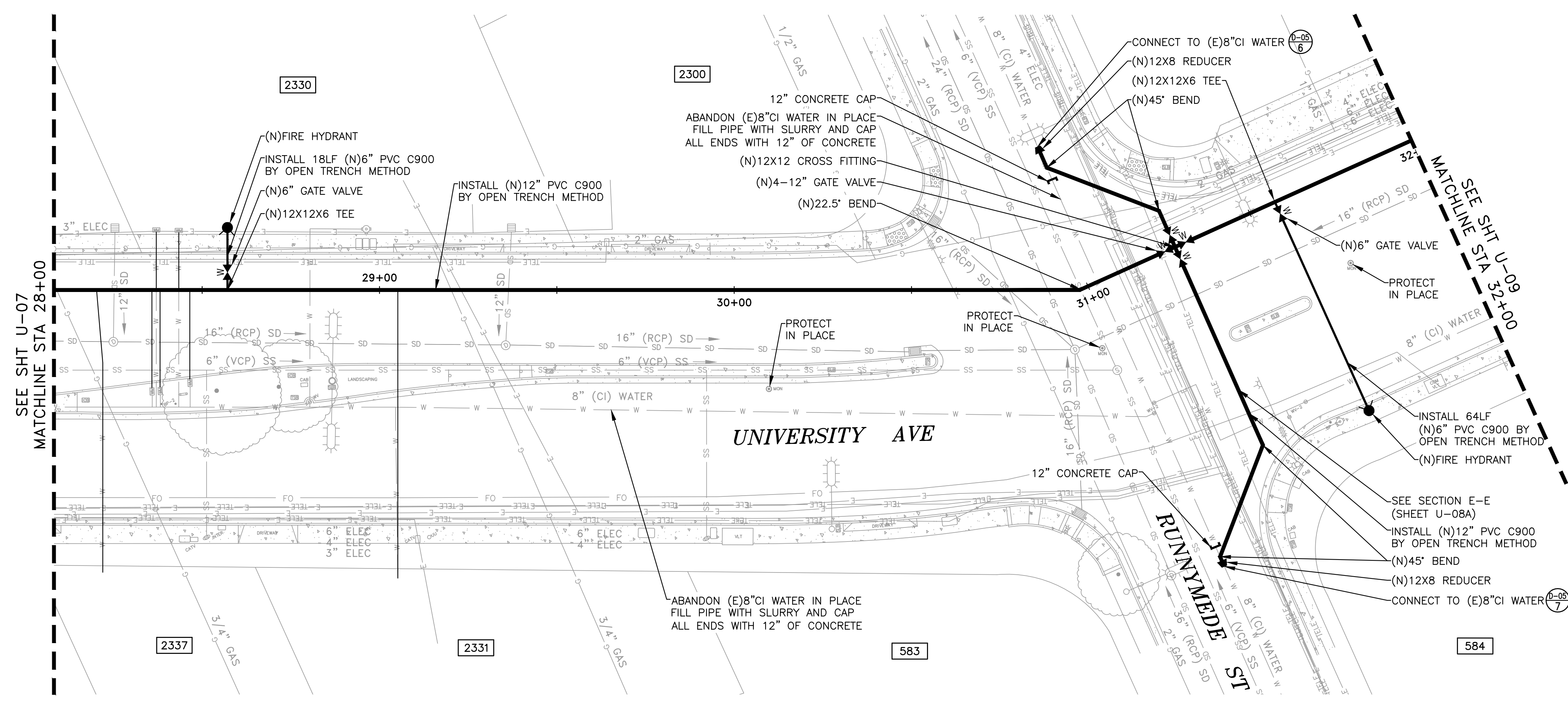
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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 24+00 TO 28+00

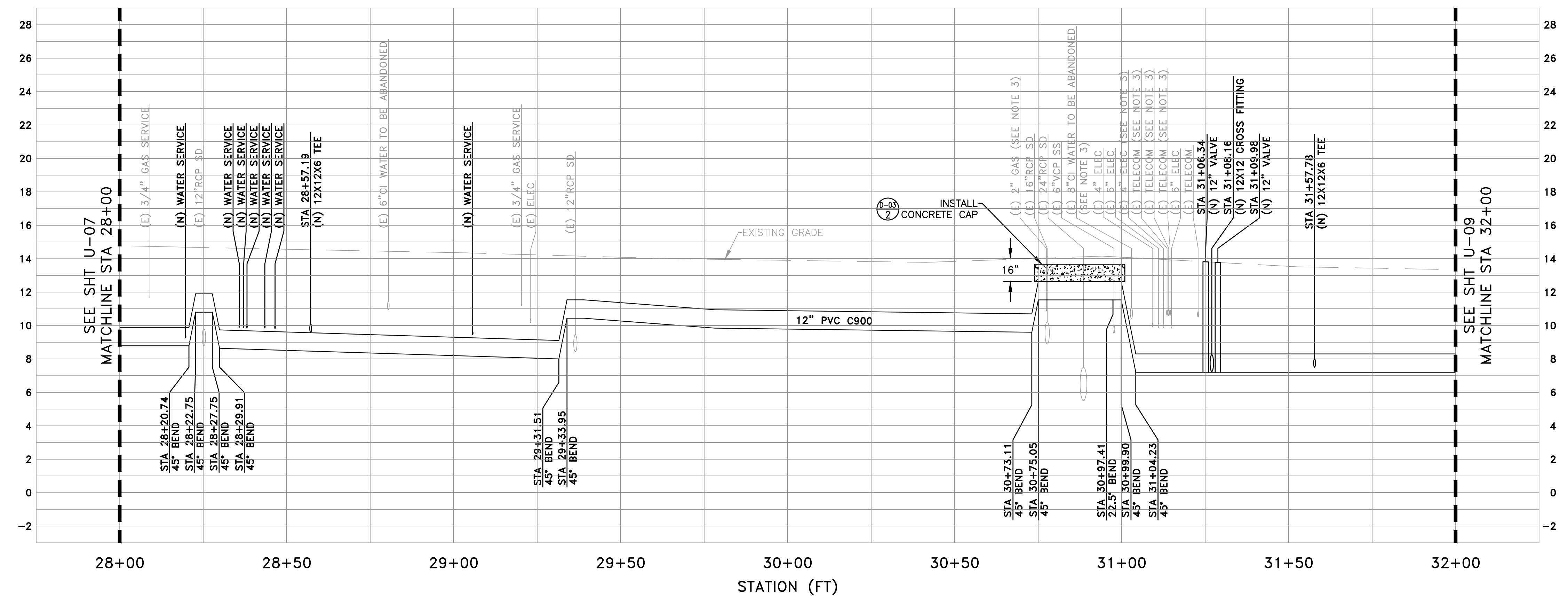
SHEET
U-07
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyau



UTILITY PLAN NOTES

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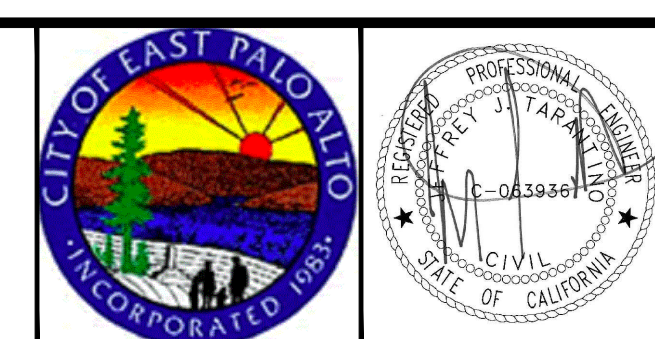


PROFILE VIEW
 HORIZ: 1" = 20'
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DATE:	08/01/23	08/01/23	BID SET
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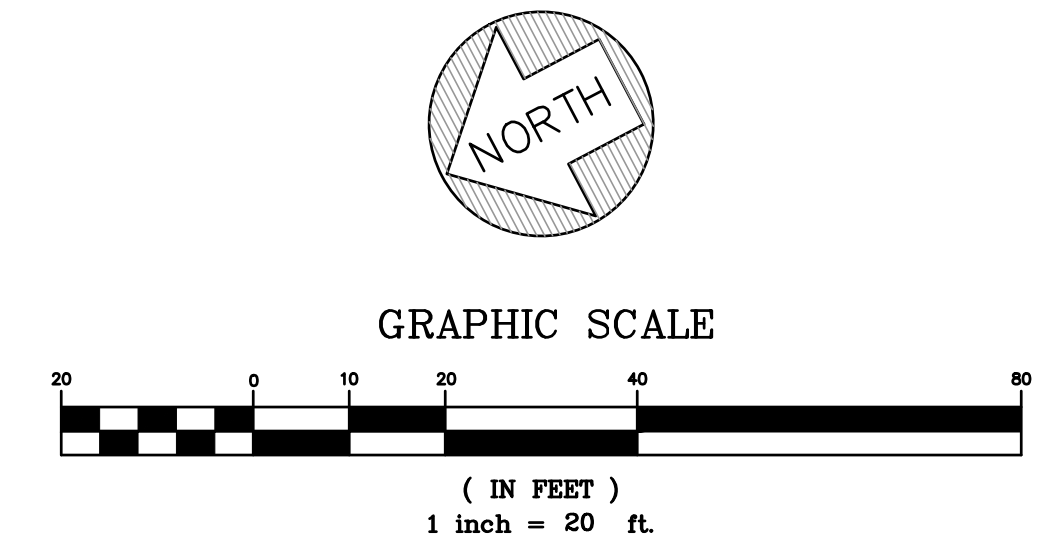
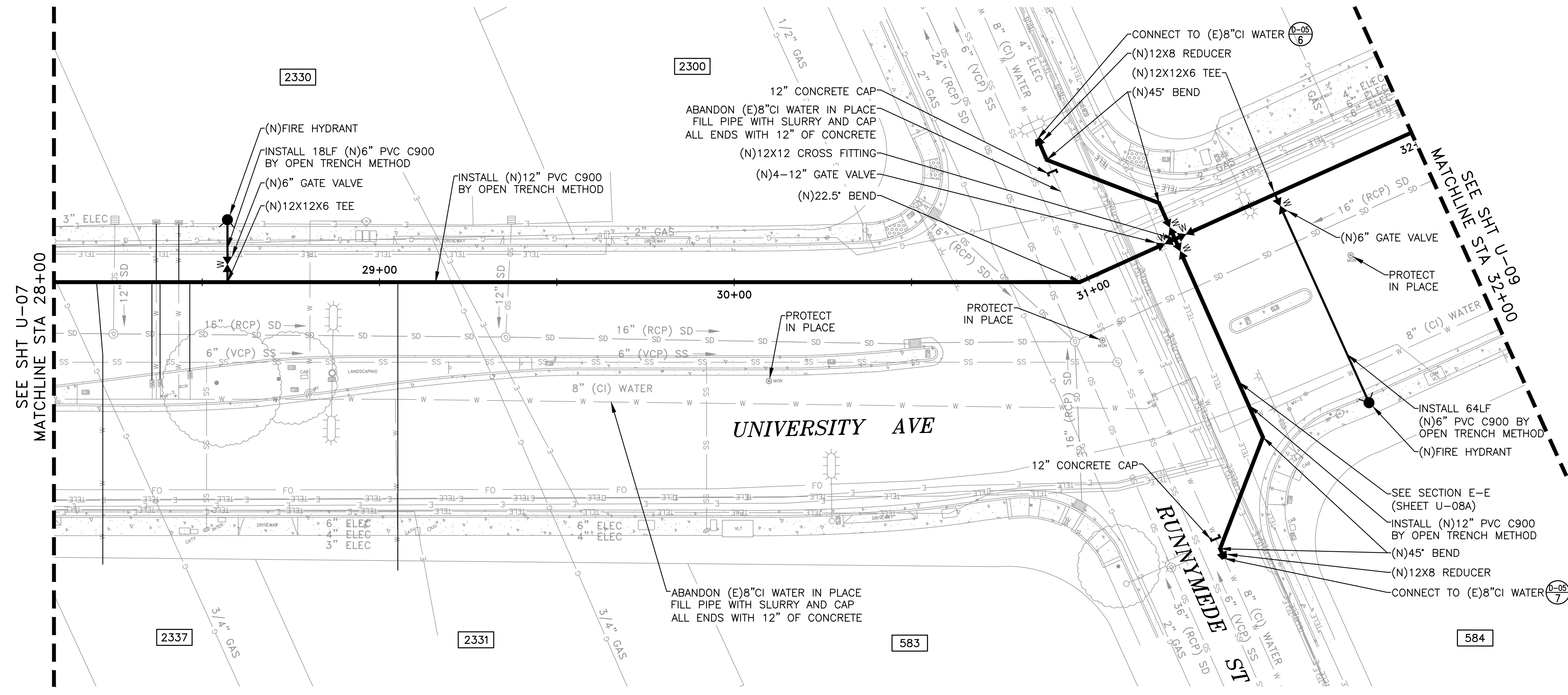
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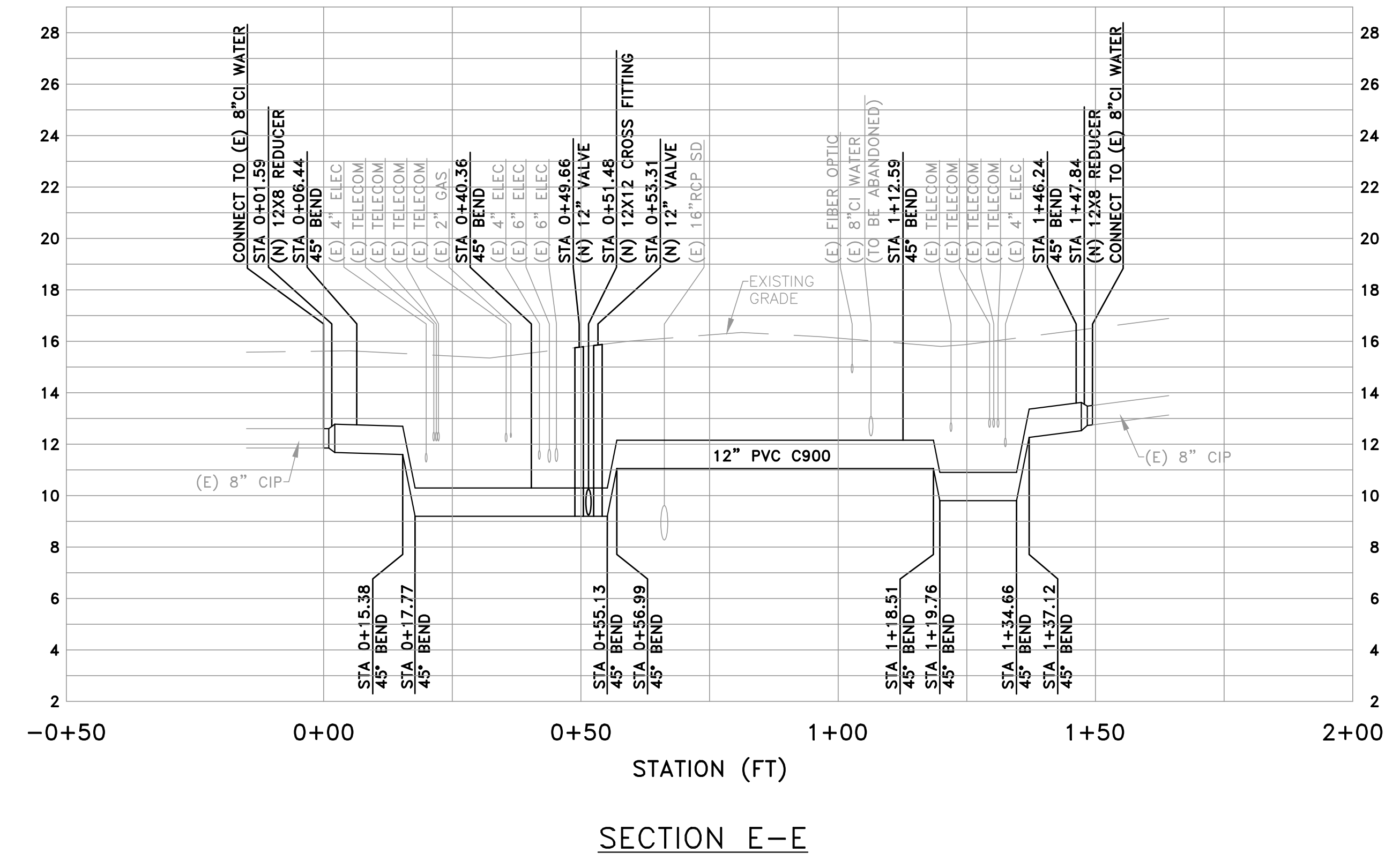
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 28+00 TO 32+00

SHEET
U-08
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\utility plan - university.dwg
 08-01-23 PLOTTED BY: kyau



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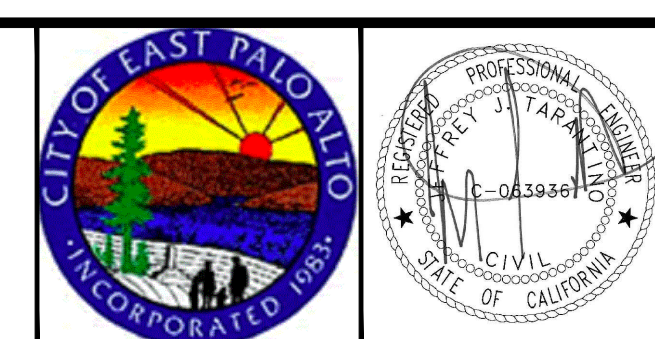


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



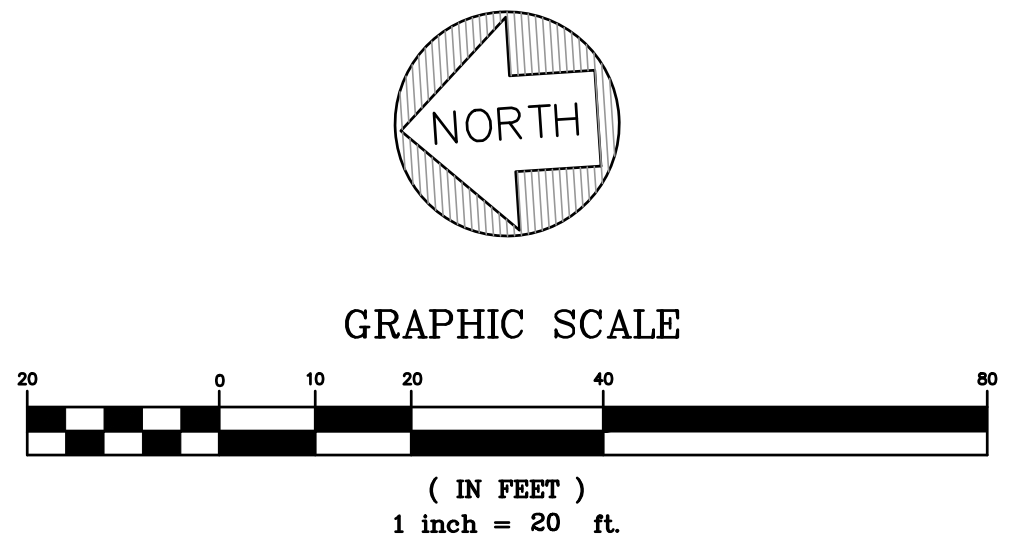
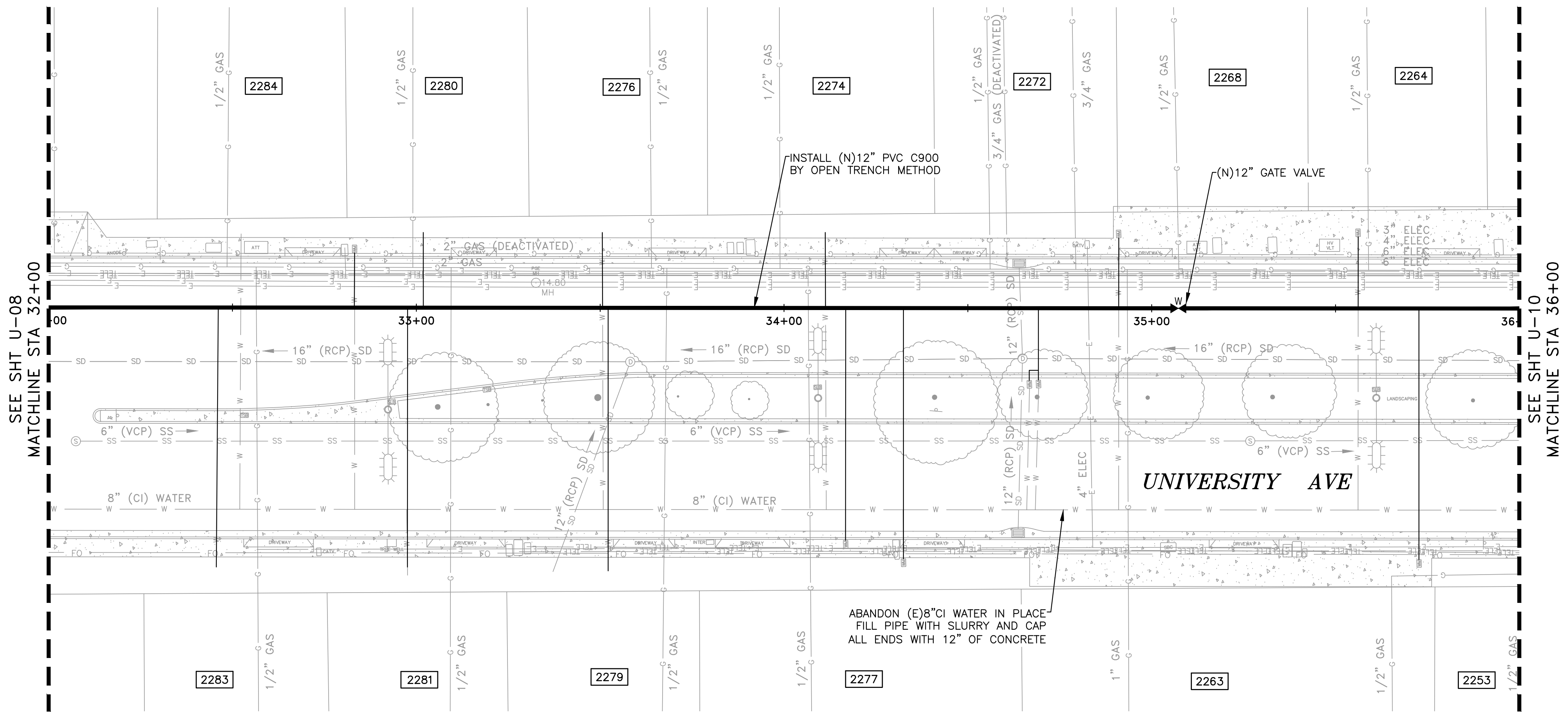
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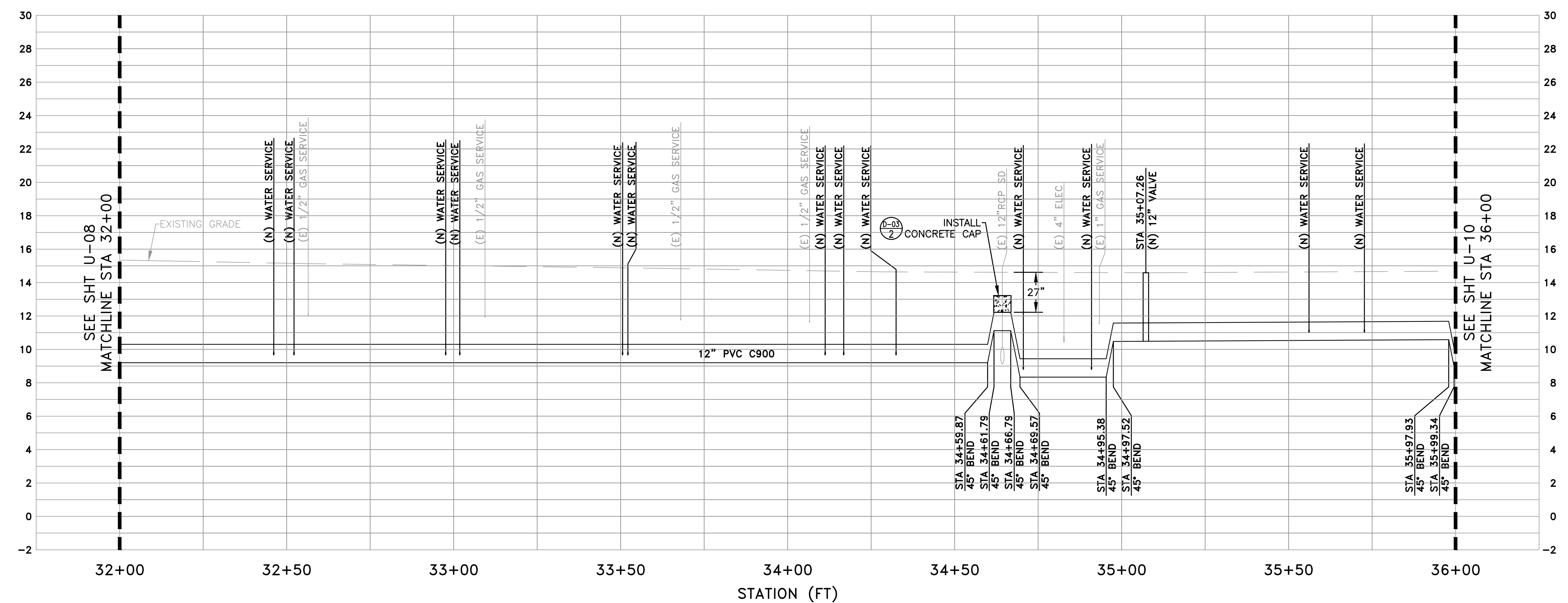
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - RUNNYMEDE ST
CROSS SECTION E-E

SHEET
U-08A
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyau



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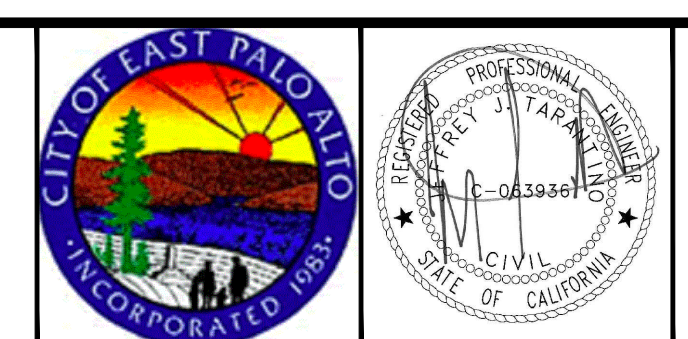


PROFILE VIEW
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 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
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DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



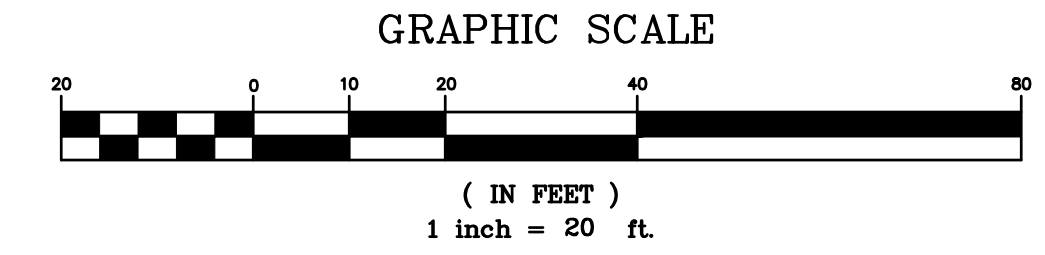
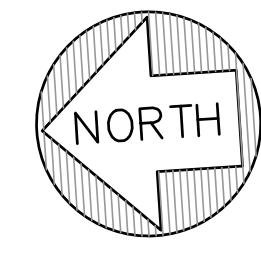
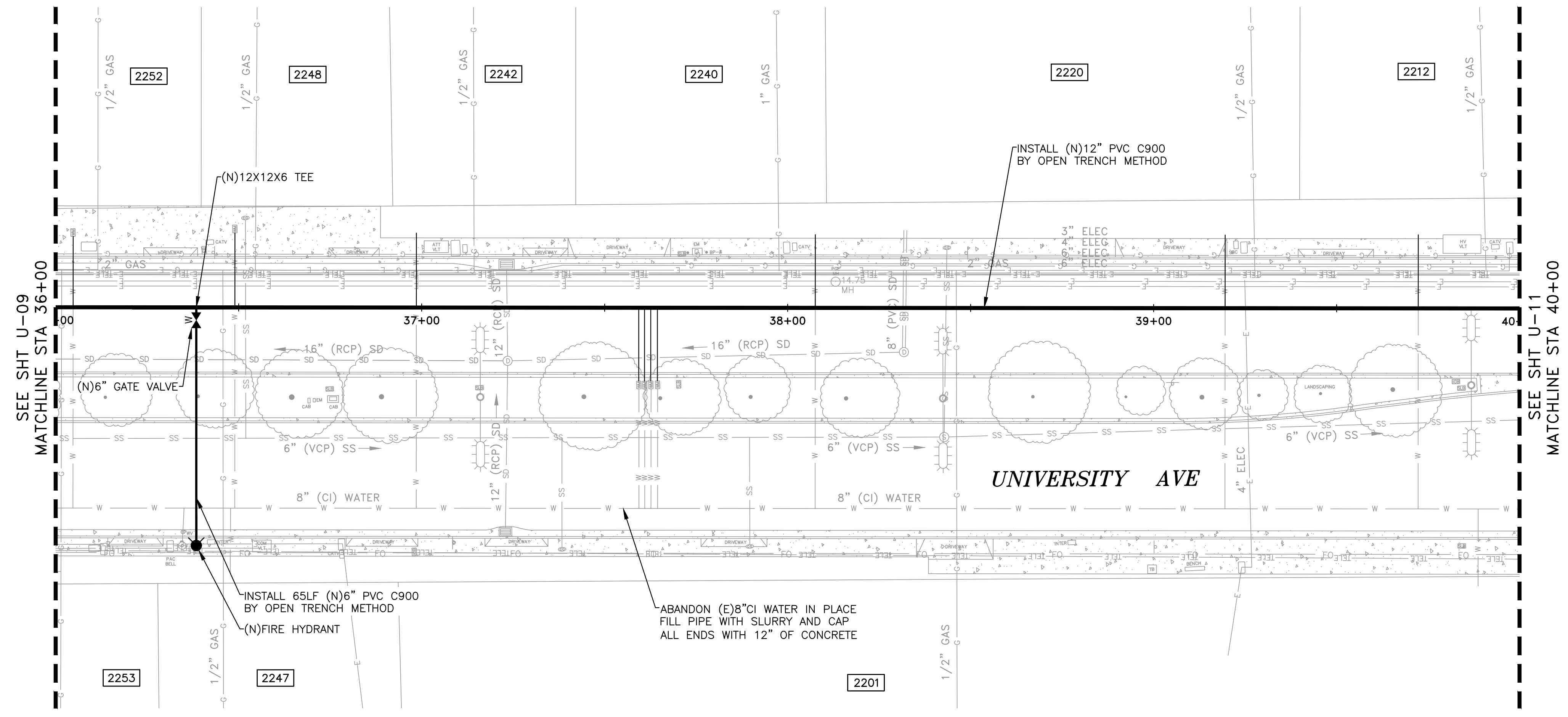
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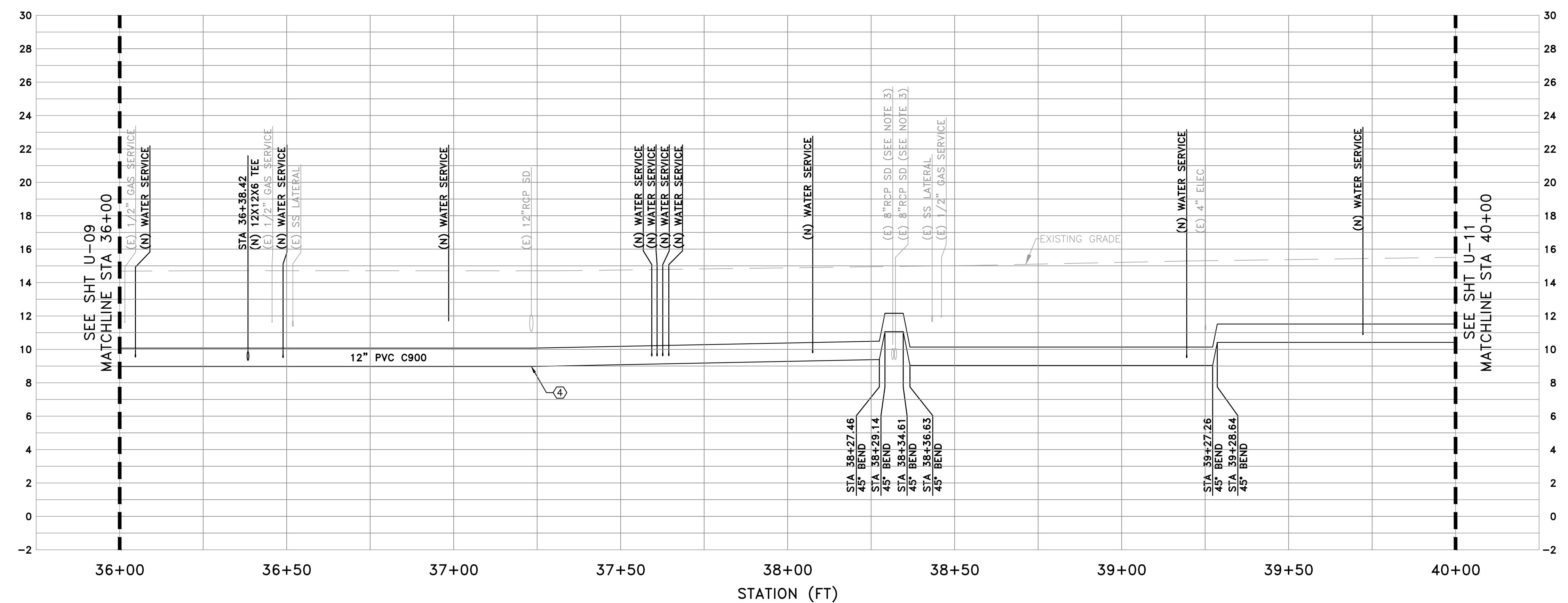
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 32+00 TO 36+00

SHEET
U-09
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyau



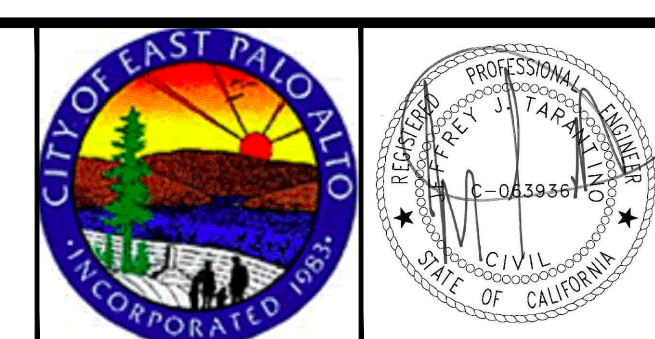
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DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



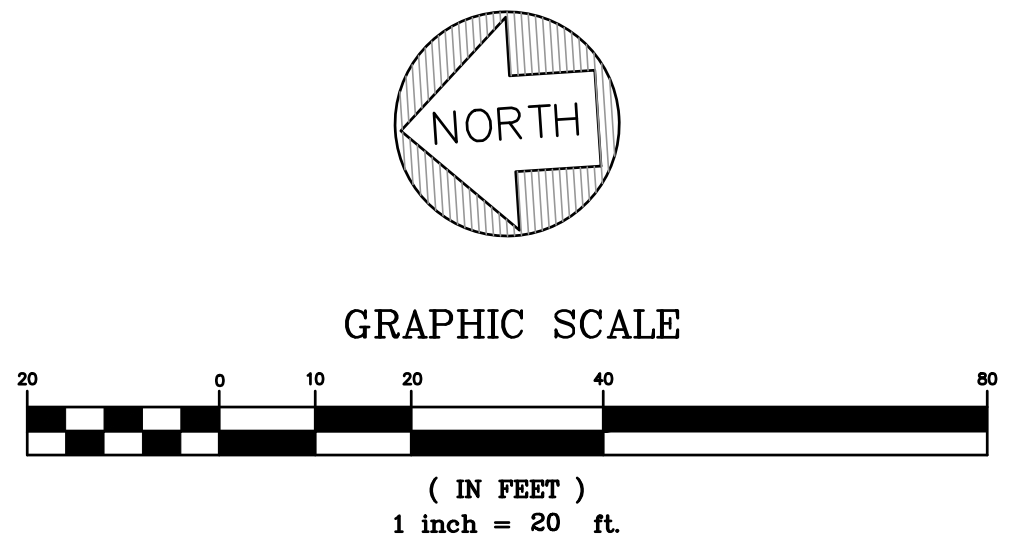
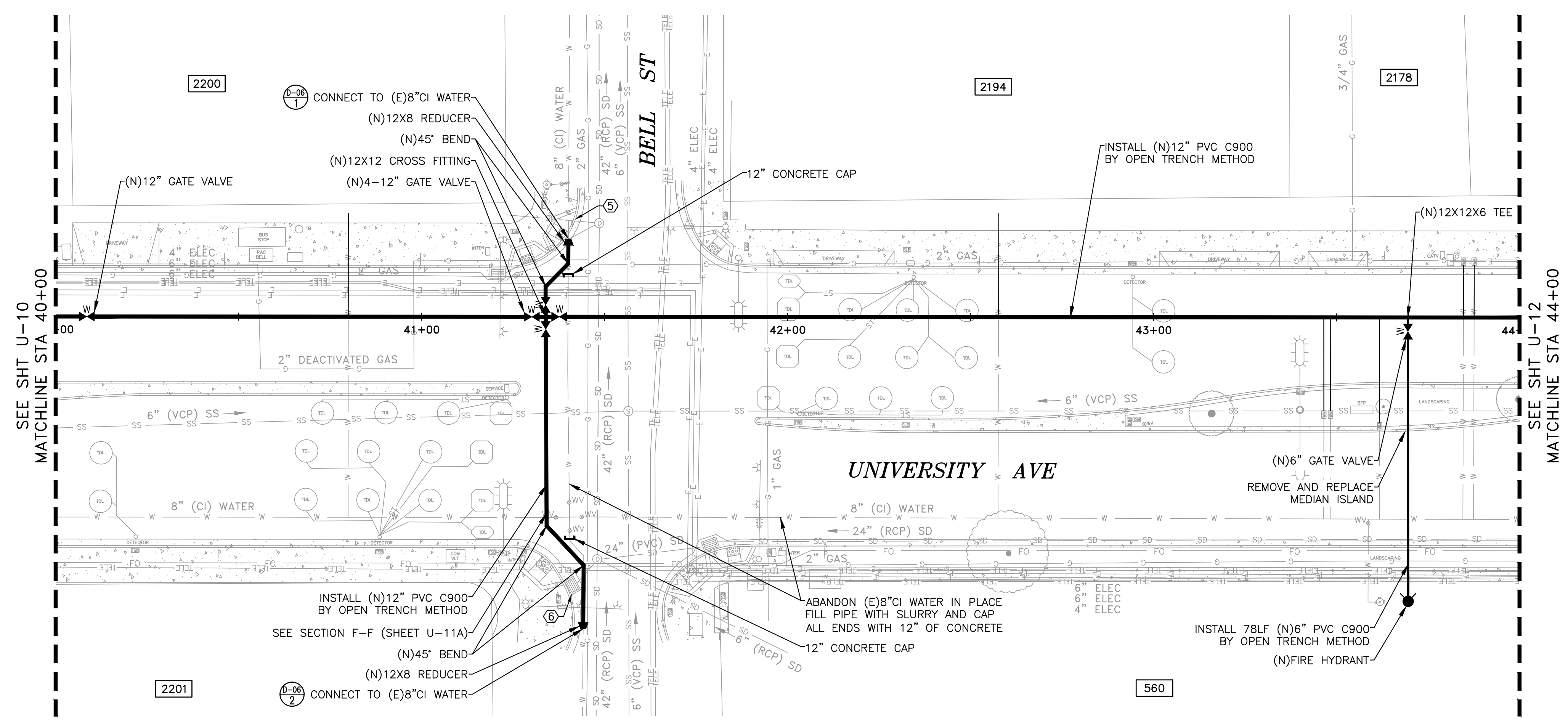
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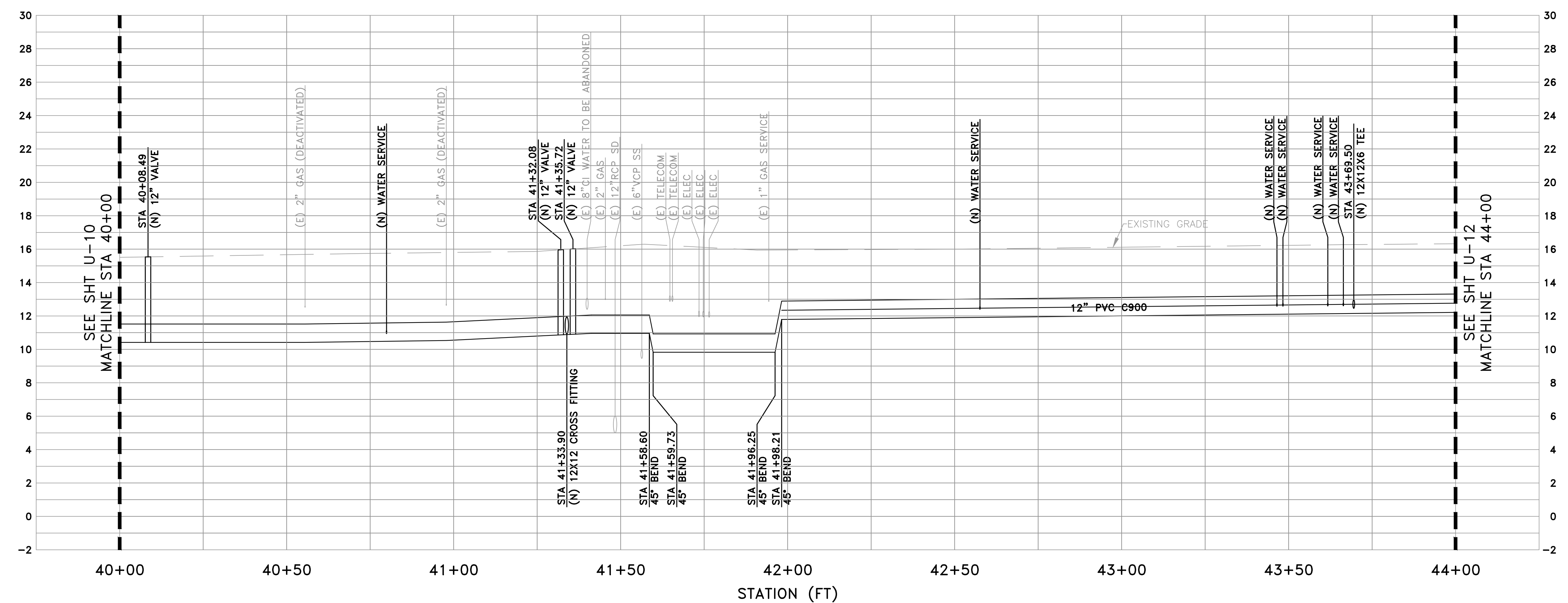
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
 STA 36+00 TO 40+00

SHEET	U-10
JOB NO.	221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyau



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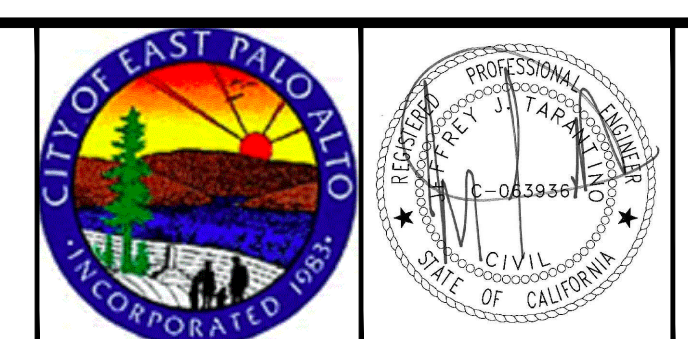


PROFILE VIEW
 HORIZ: 1" = 20'
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PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



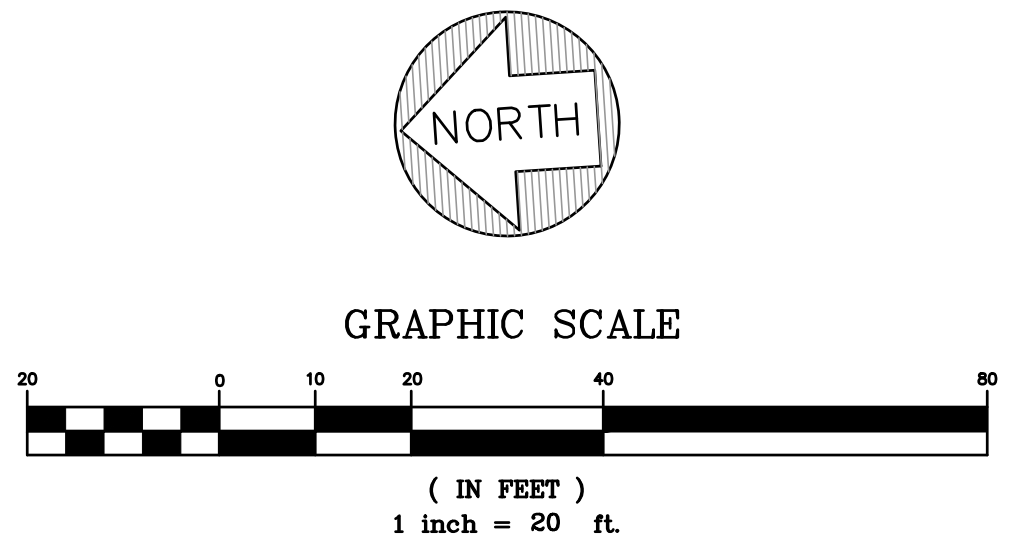
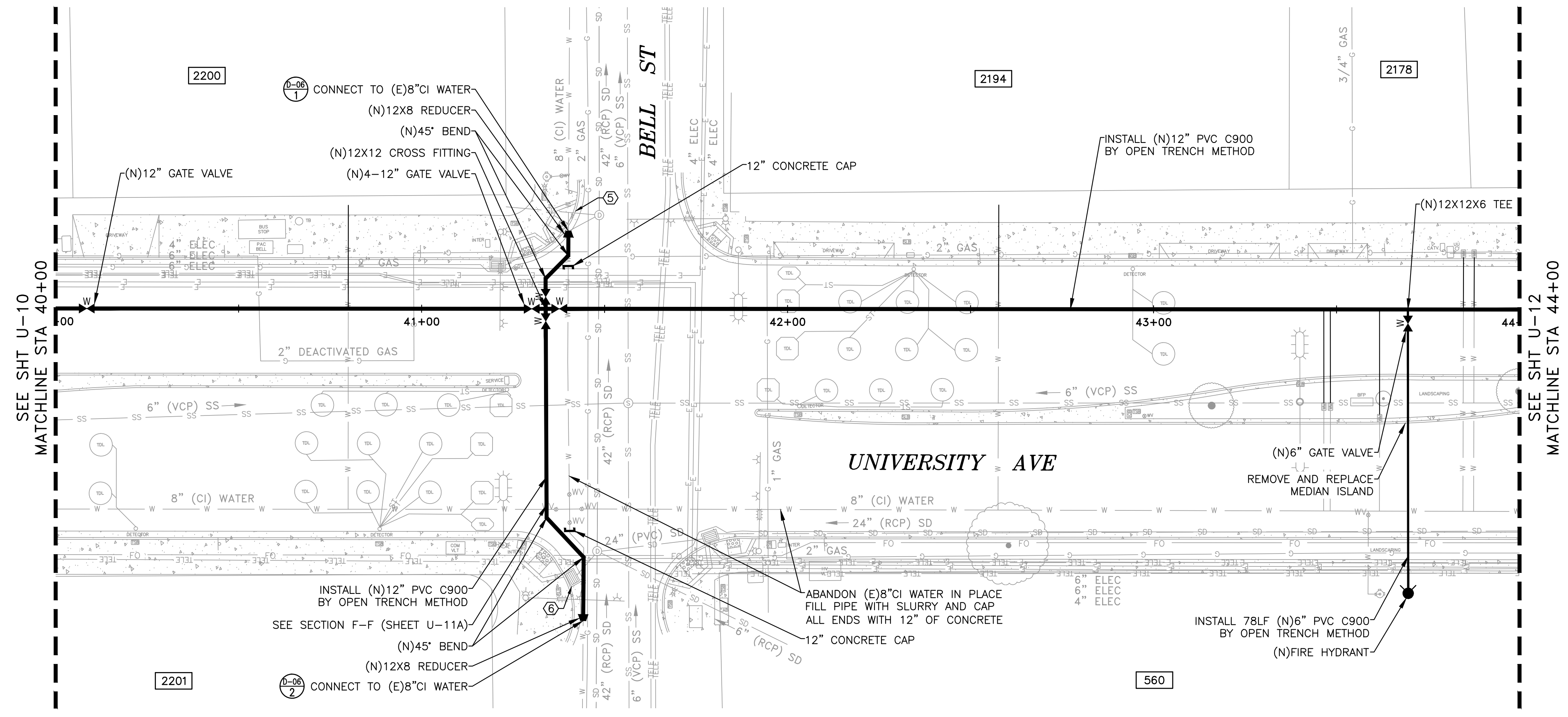
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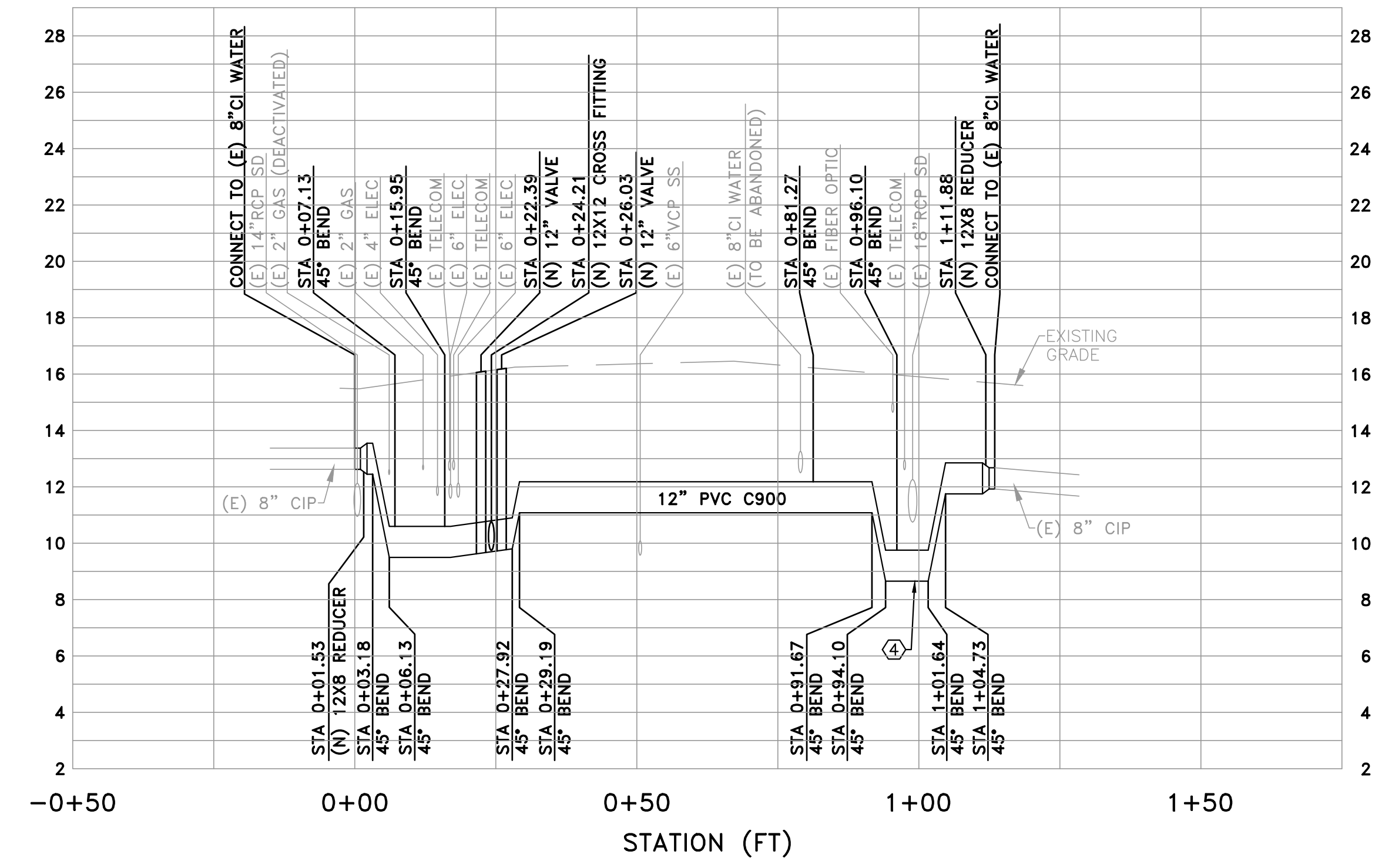
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 40+00 TO 44+00

SHEET
U-11
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\utility plan - university.dwg
 08-01-23 PLOTTED BY: kyau



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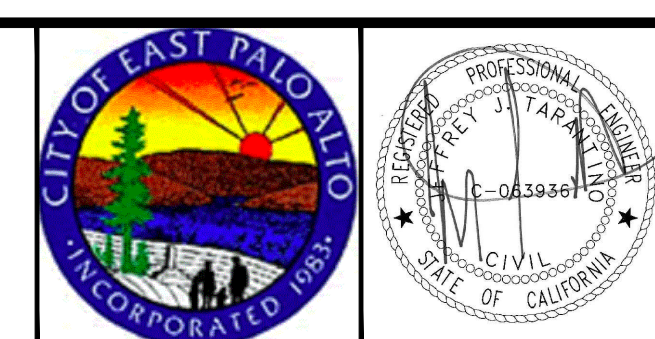
SECTION F-F

PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



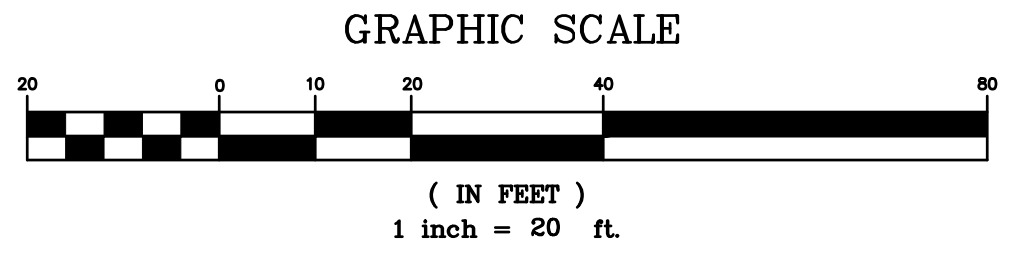
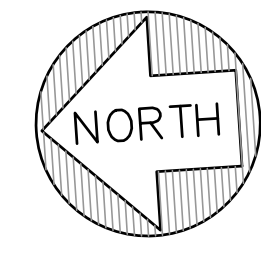
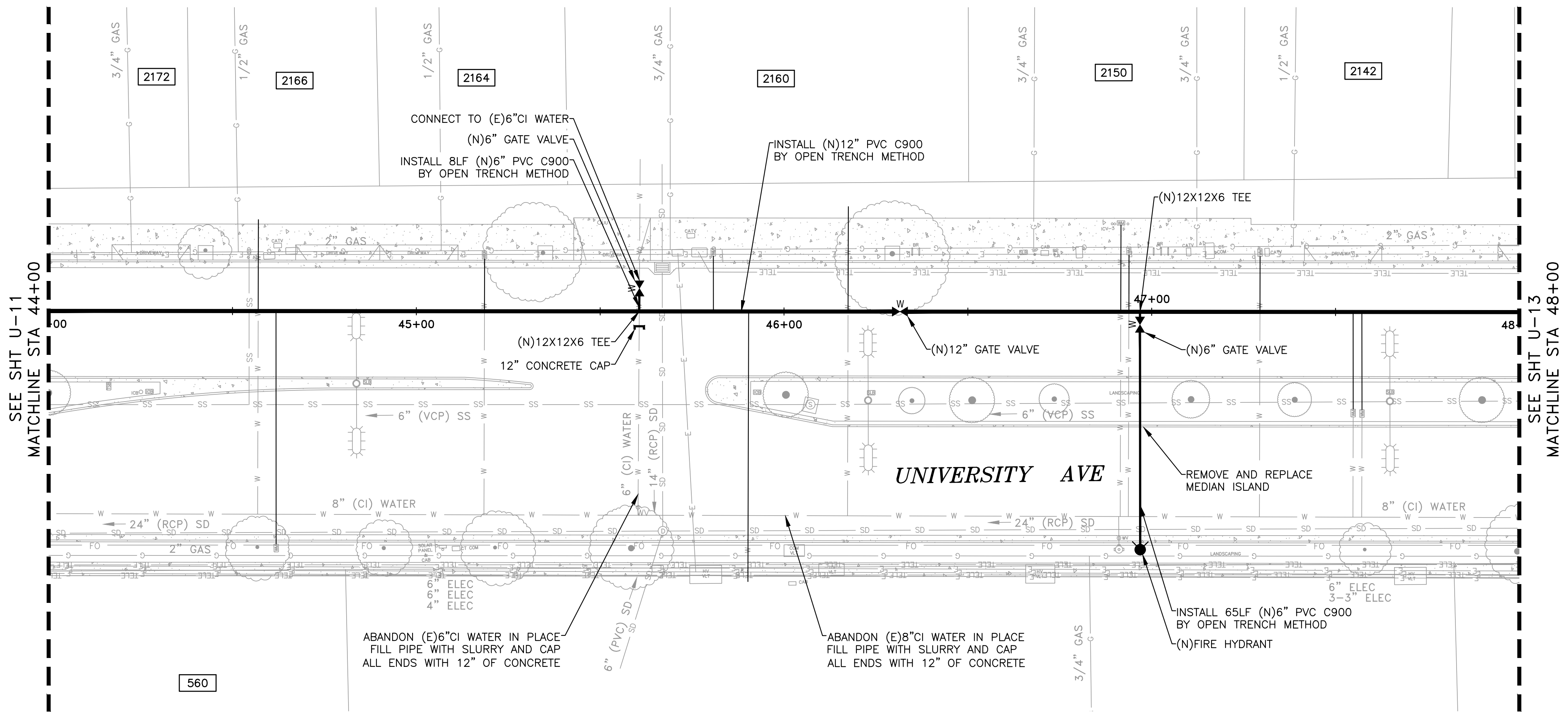
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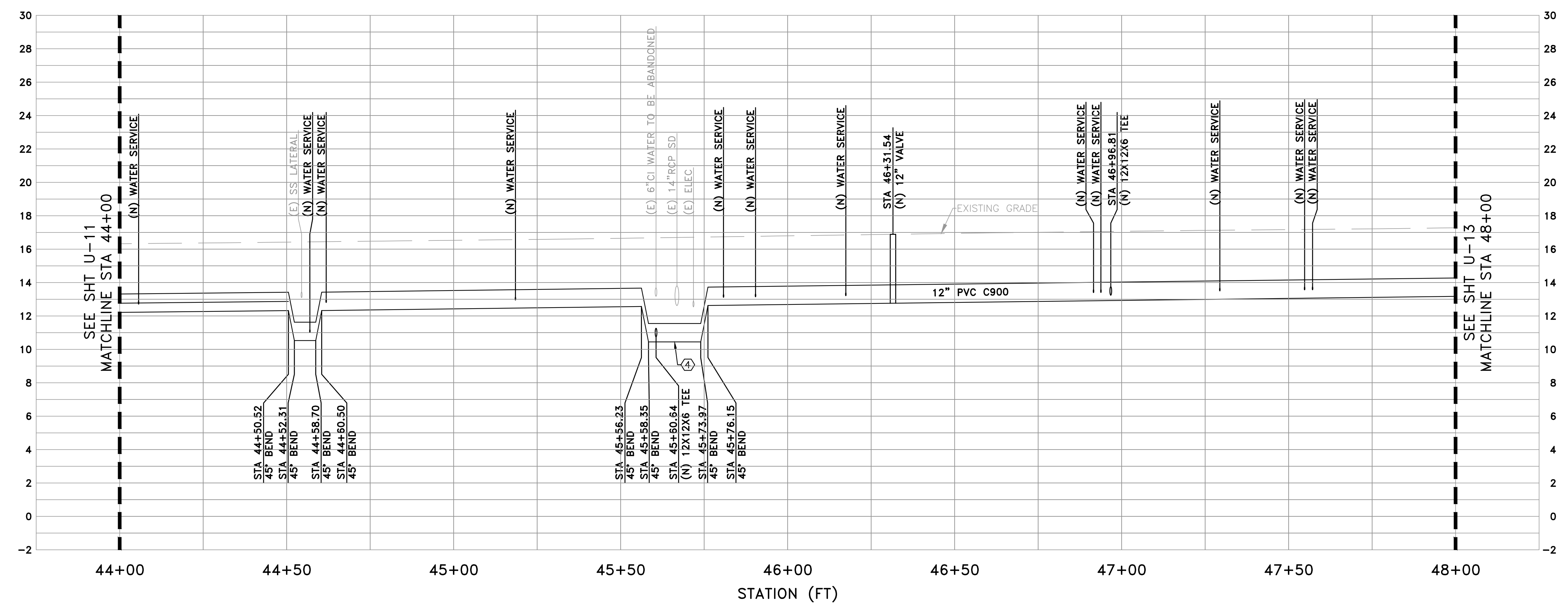
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - BELL ST
CROSS SECTION F-F

SHEET
U-11A
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyau



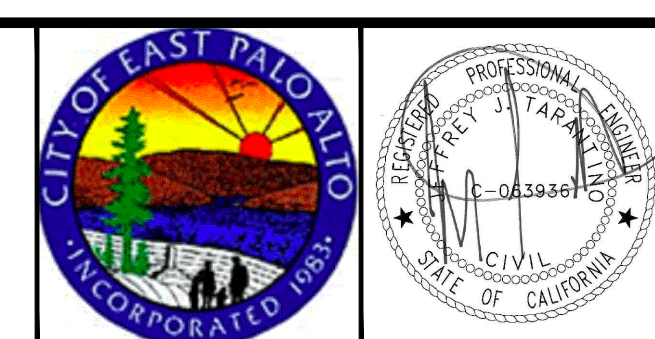
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BY	DATE	DESCRIPTION OF REVISIONS	APP'D



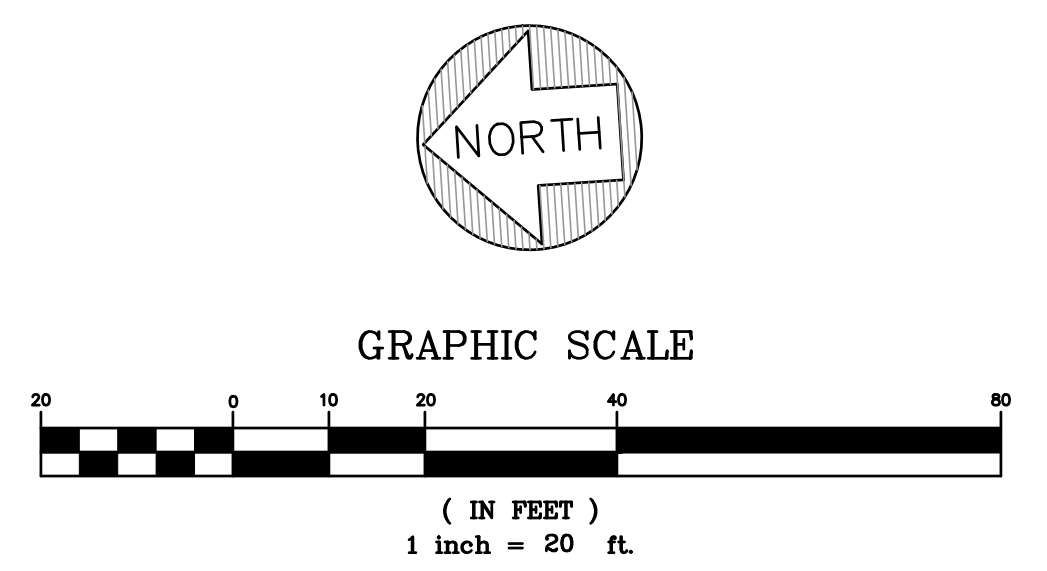
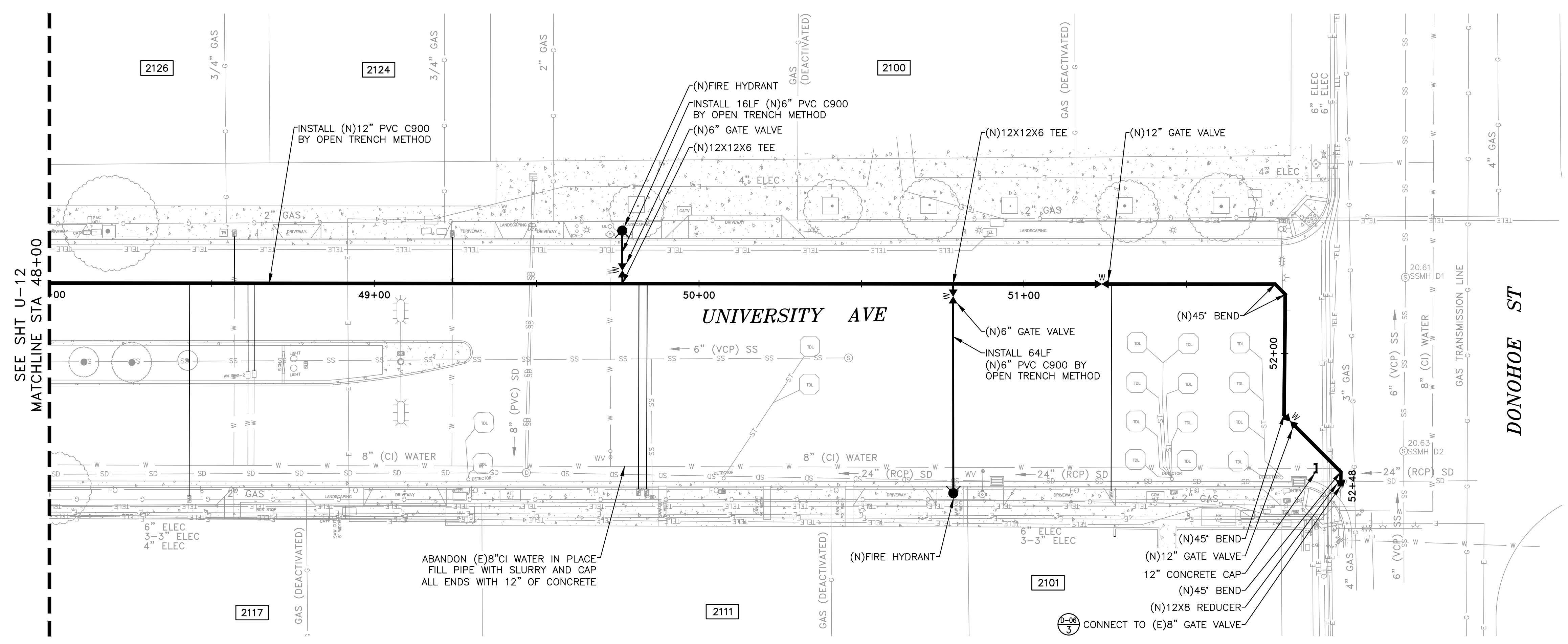
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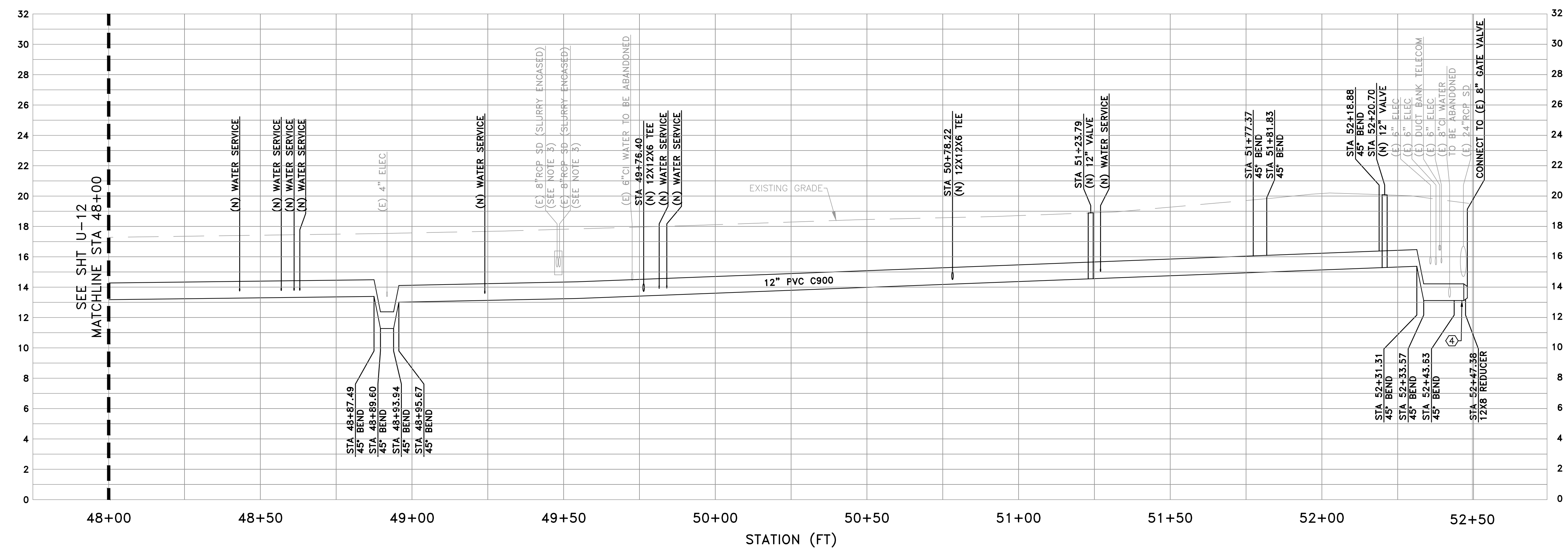
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 44+00 TO 48+00

SHEET
U-12
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - University.dwg
 08-01-23 PLOTTED BY: kyu



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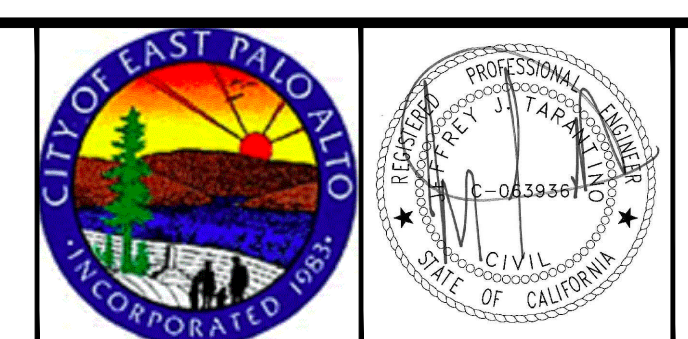


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
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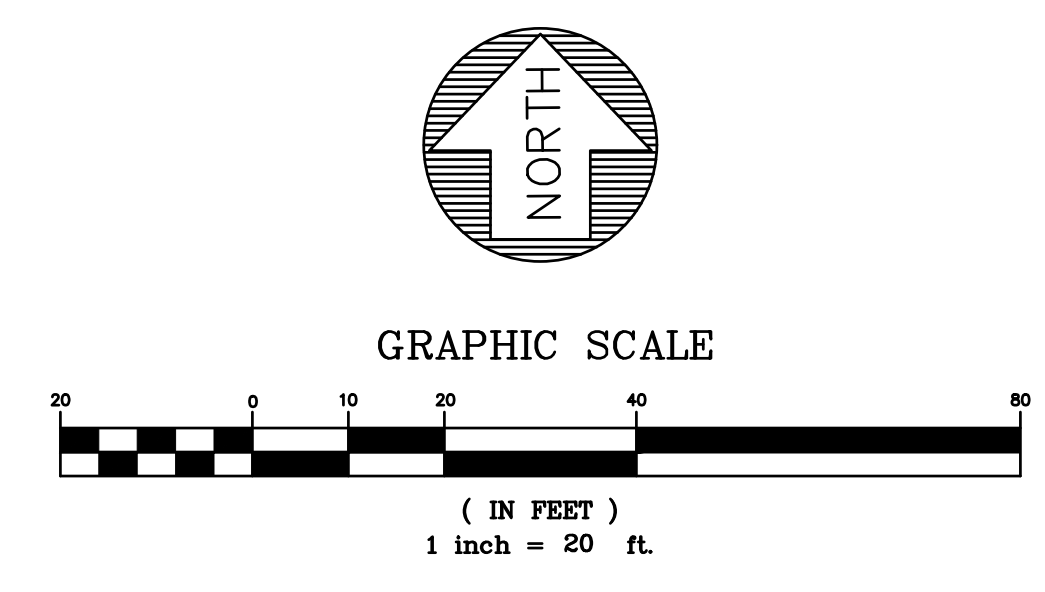
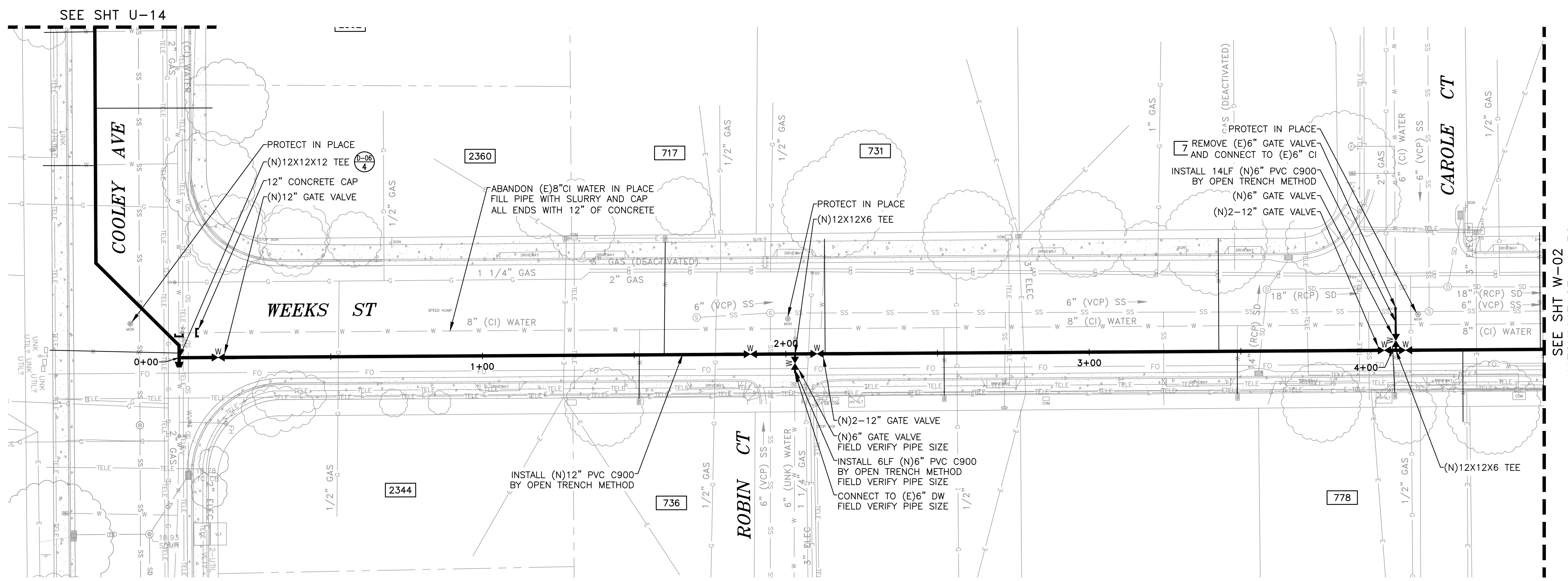
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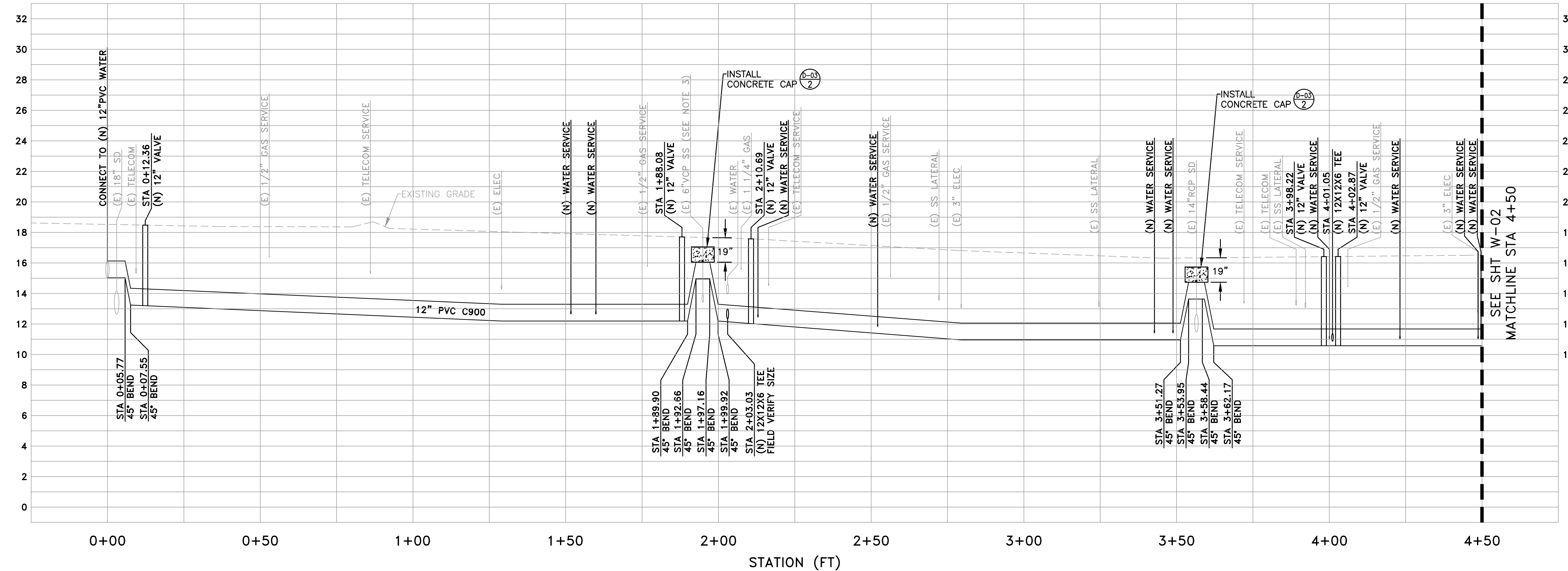
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - UNIVERSITY AVE
STA 48+00 TO 52+50

SHEET
U-13
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - Weeks.dwg
 08-01-23 PLOTTED BY: kyau



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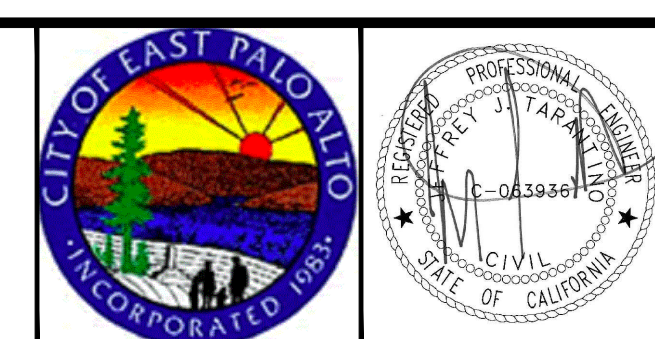


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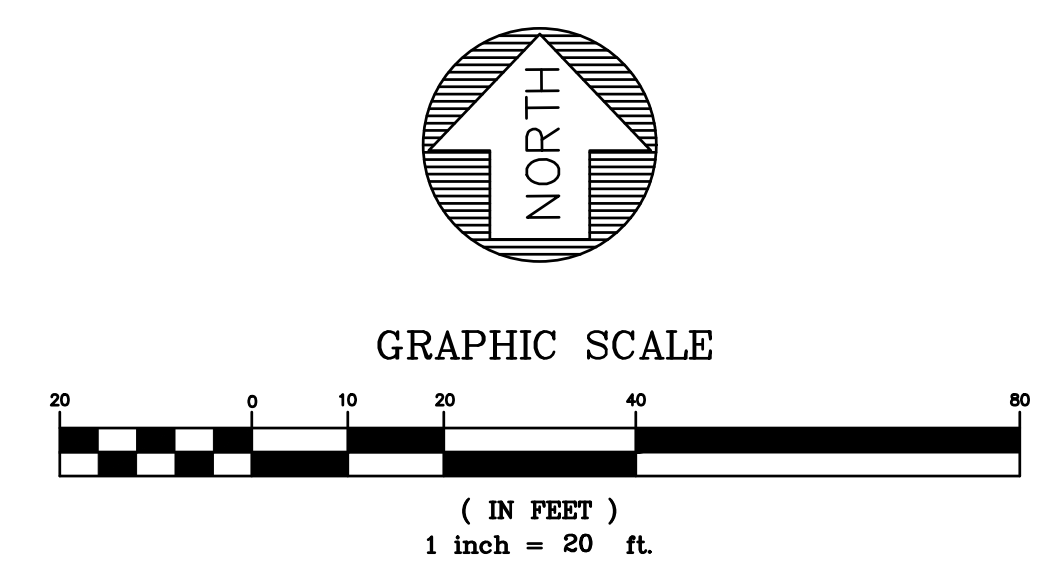
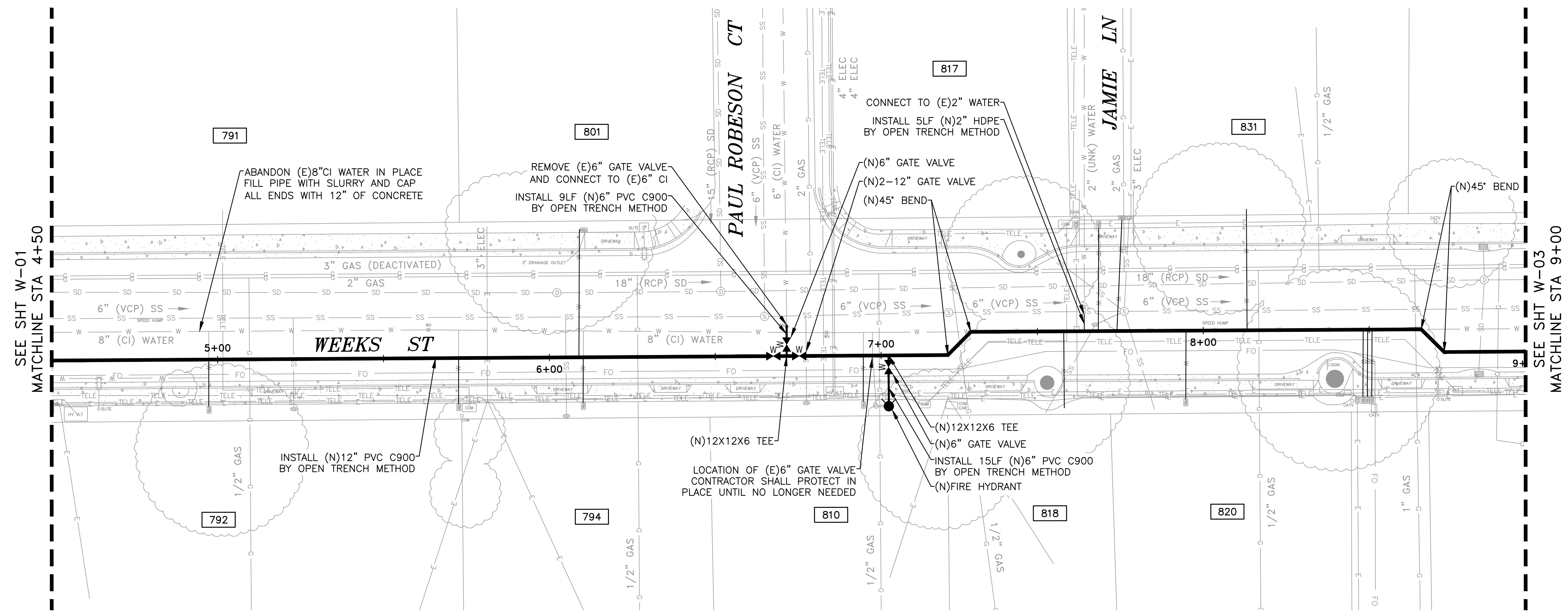
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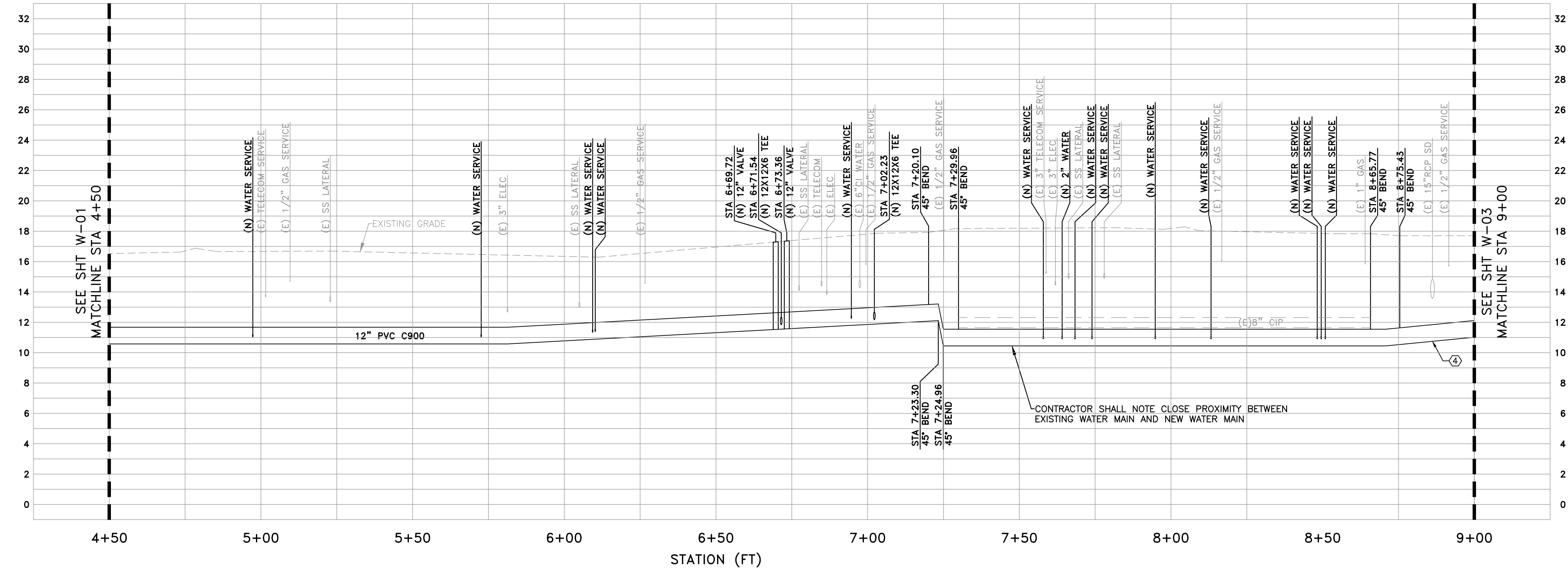
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - WEEKS ST
STA 0+00 TO 4+50

SHEET	W-01
JOB NO.	221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - Weeks.dwg
 08-01-23 PLOTTED BY: kyau



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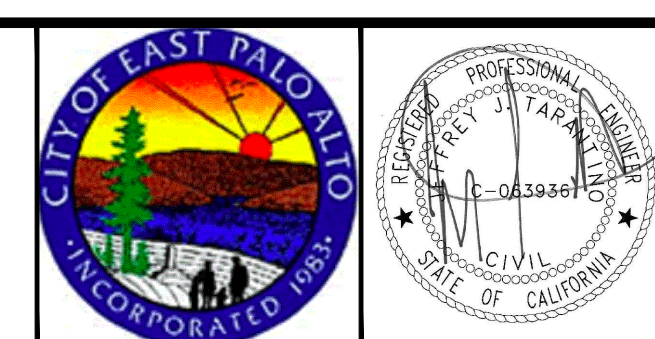


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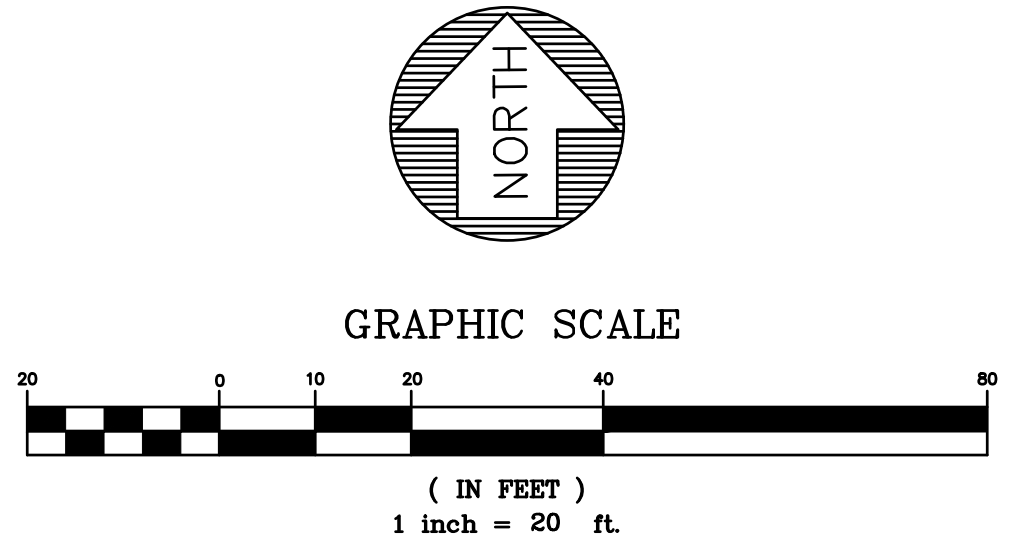
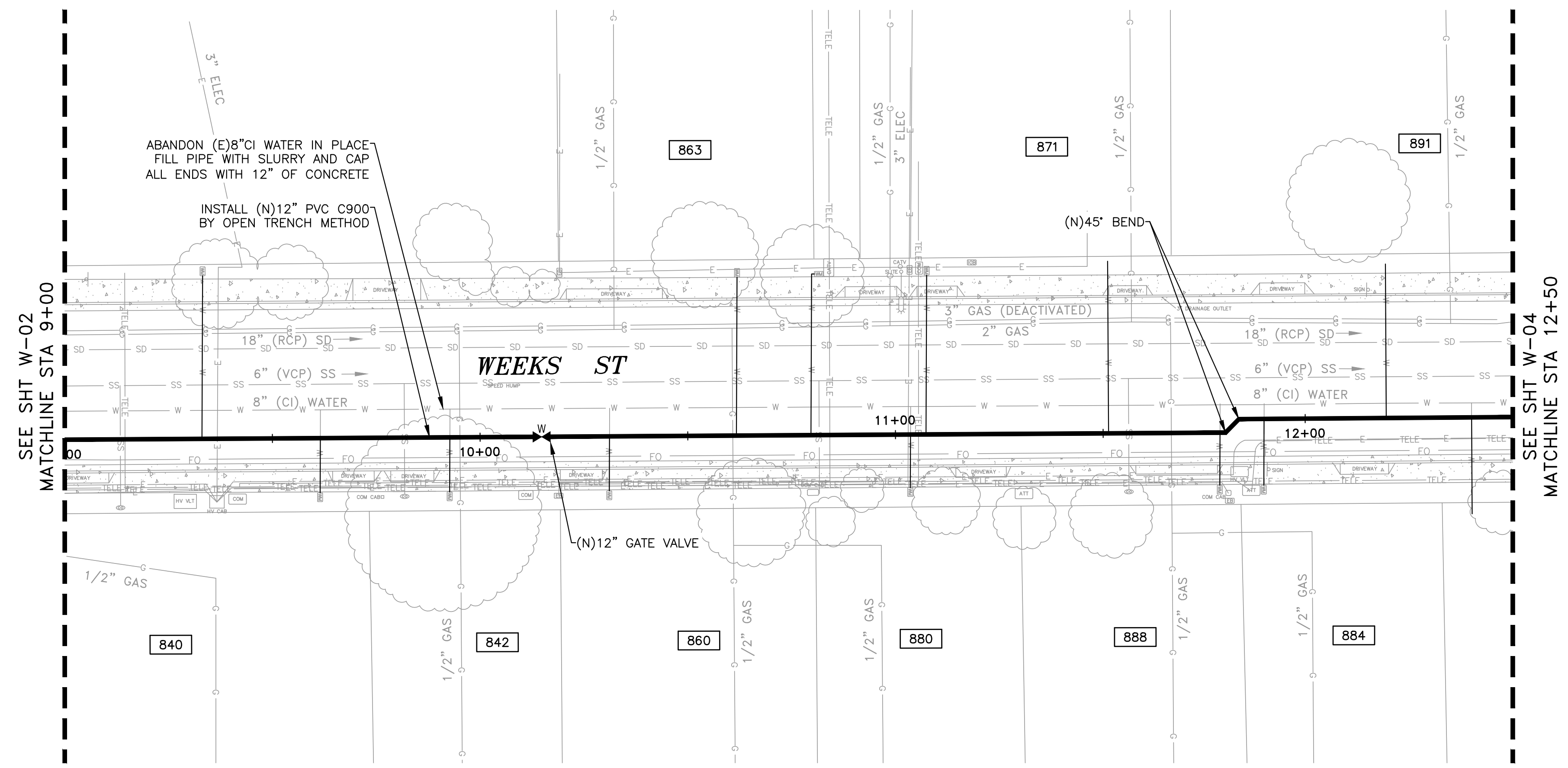
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 (415)534-7070 • Fax (650)344-9920 • www.freyerlaureta.com



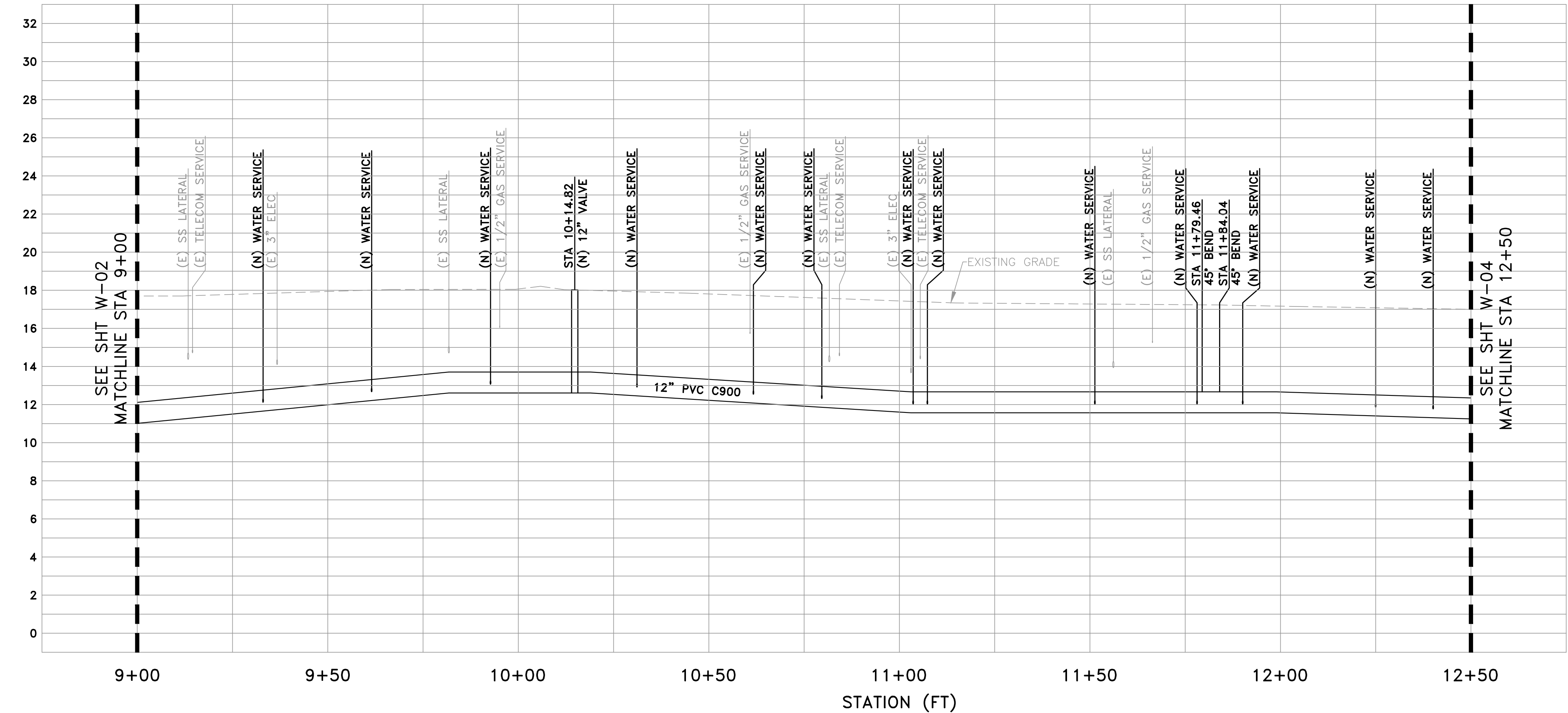
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - WEEKS ST
STA 4+50 TO 9+00

SHEET
W-02
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - Weeks.dwg
 08-01-23 PLOTTED BY: kyu



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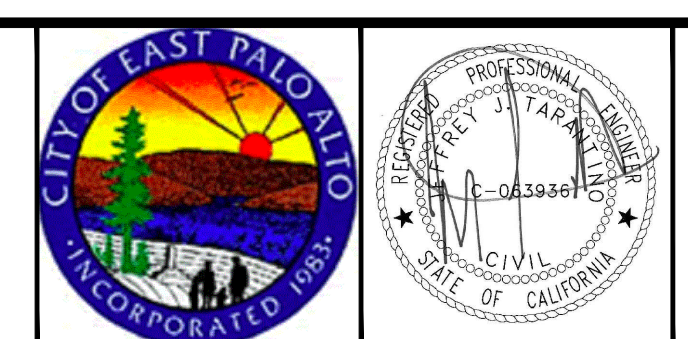


PROFILE VIEW
 HORIZ: 1" = 20'
 VERT: 1" = 4'

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



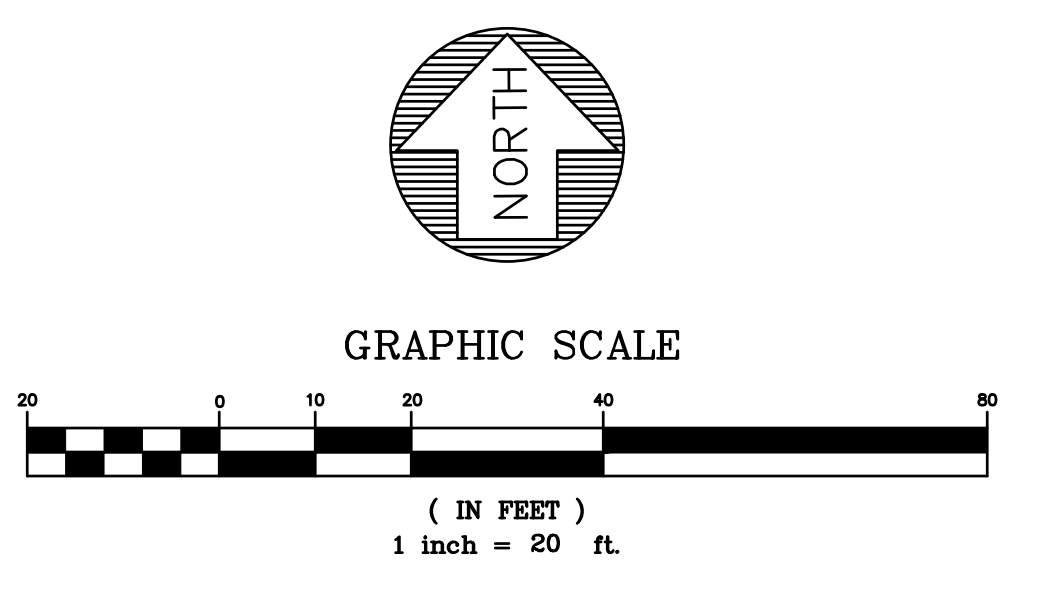
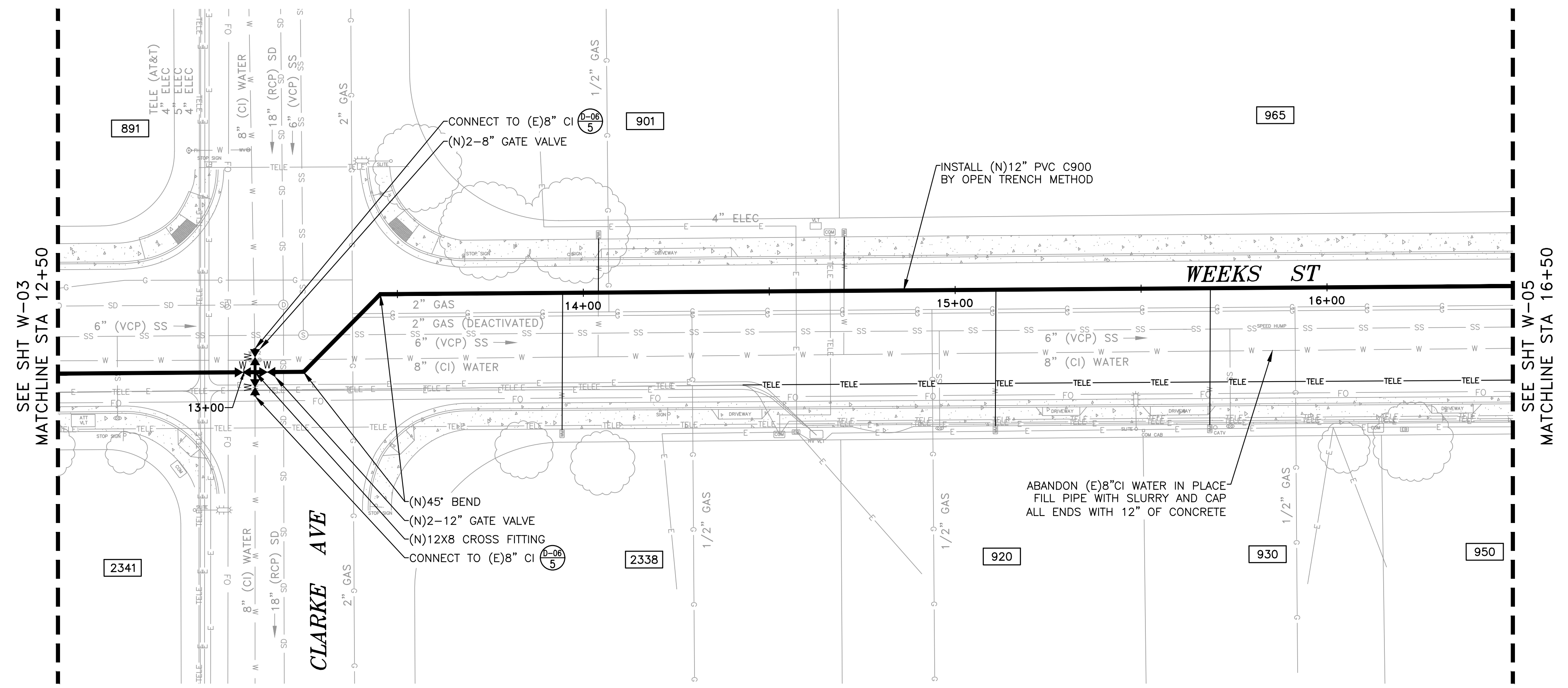
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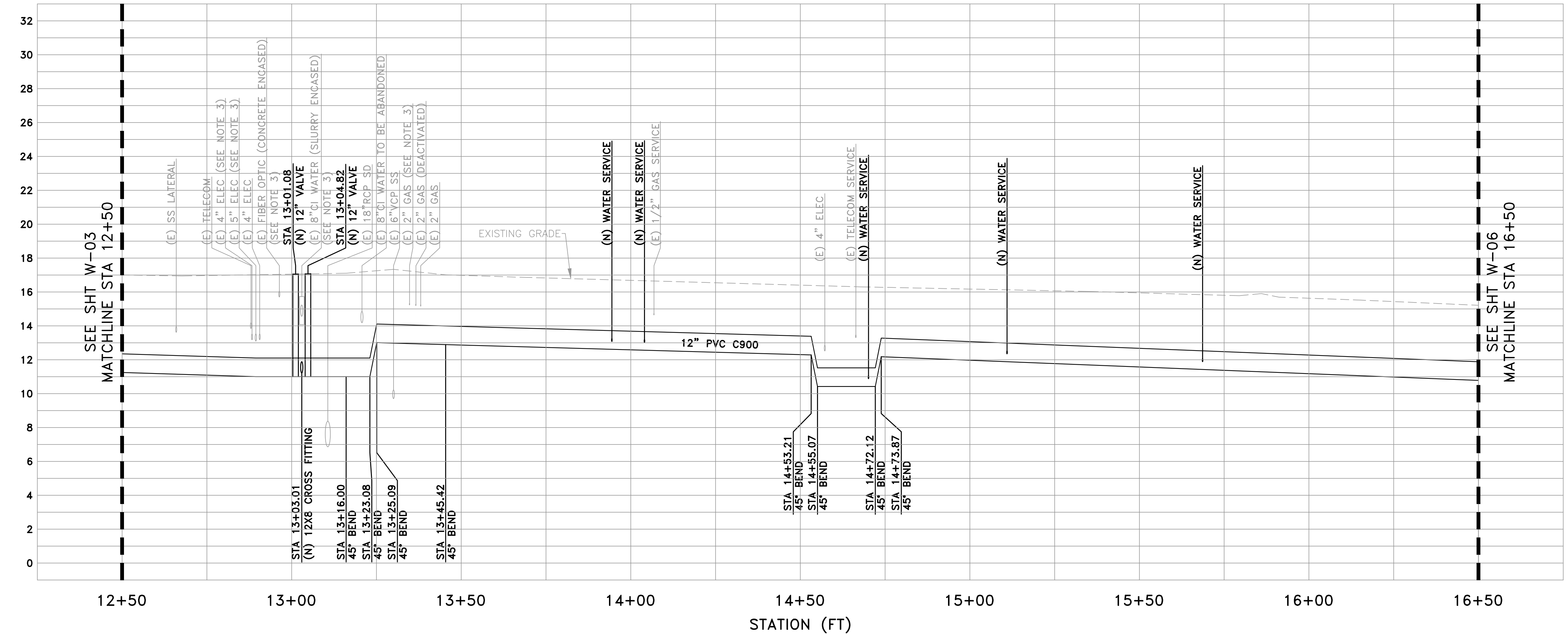
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - WEEKS ST
STA 9+00 TO 12+50

SHEET	W-03
JOB NO.	221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - Weeks.dwg
 08-01-23 PLOTTED BY: kyu



- UTILITY PLAN NOTES
- ① ALL NEW 12" WATER PIPE SHALL BE PVC C900.
 - ② EXISTING UTILITY LOCATION AND DEPTH SHALL BE CONFIRMED BY CONTRACTOR ON SITE PRIOR TO BEGINNING WORK.
 - ③ UTILITY DEPTH VERIFIED BY POTHOLING. SEE ATTACHMENT E OF THE SPECIFICATIONS FOR POTHOLING REPORT BY EXARO DATED 5/4/2023.
 - ④ STATE VARIANCE REQUIRED AT LOCATIONS WHERE NEW WATER PIPE CANNOT BE CONSTRUCTED ABOVE SANITARY SEWER AND STORM DRAIN CROSSINGS.

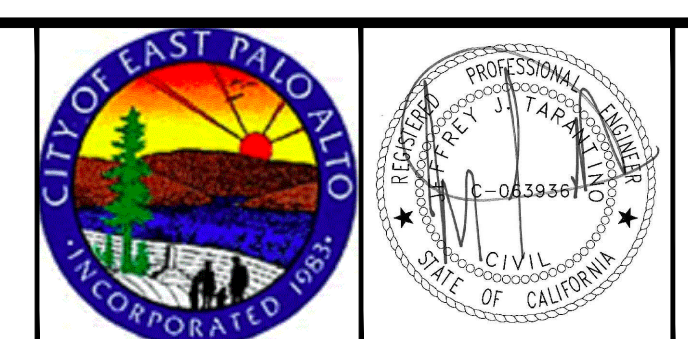


PROFILE VIEW
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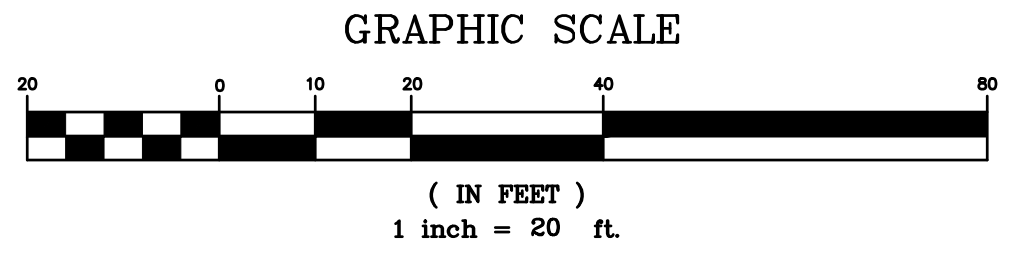
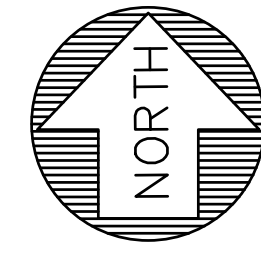
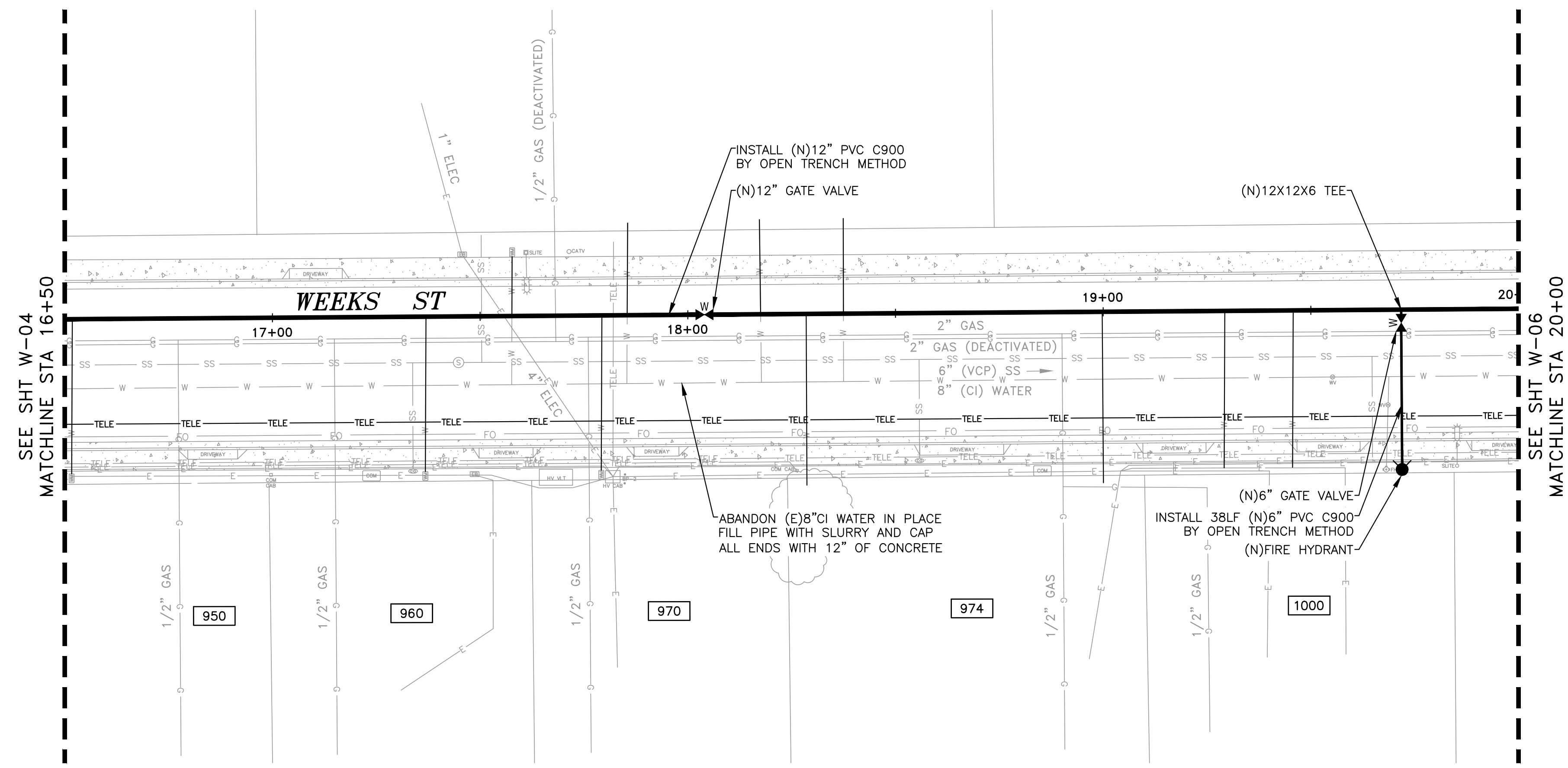
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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - WEEKS ST
STA 12+50 TO 16+50

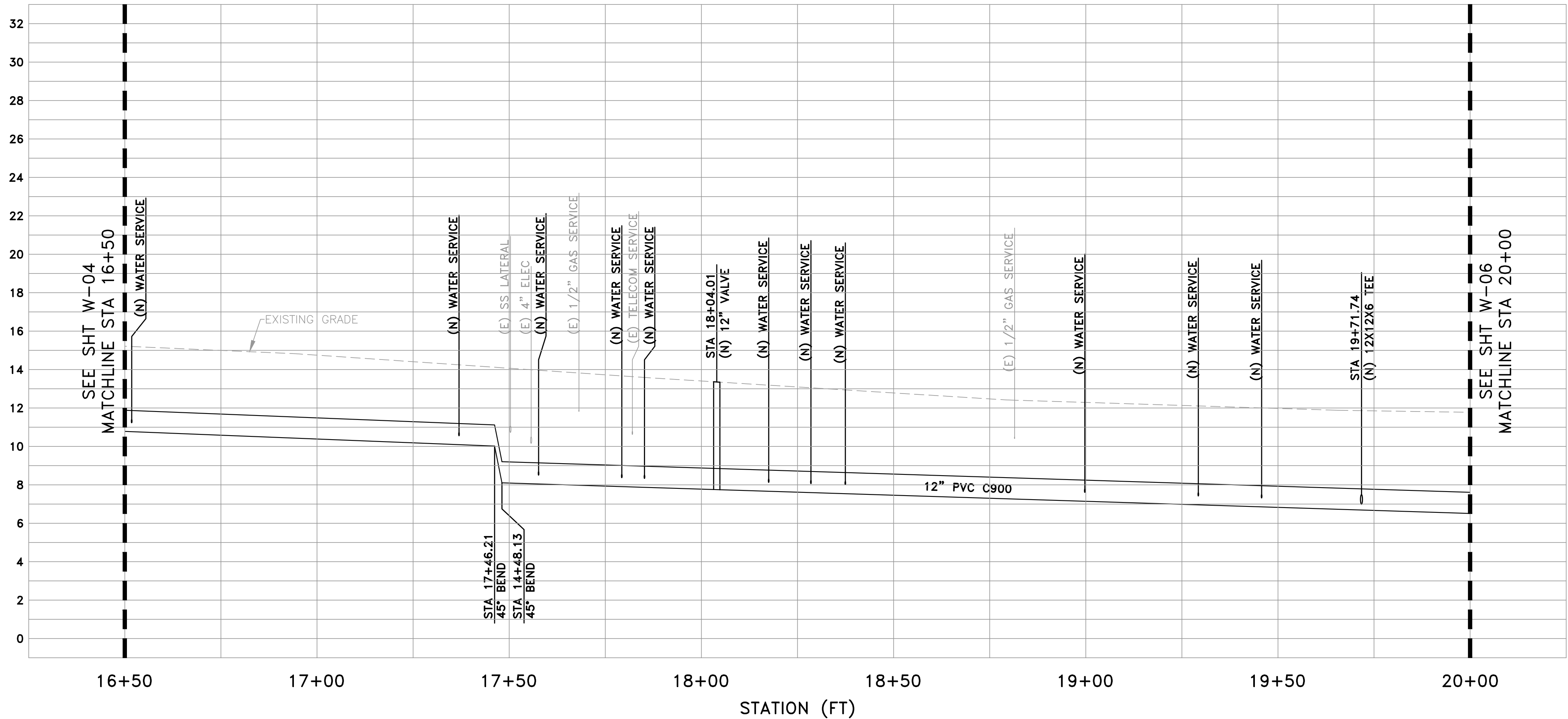
SHEET
W-04
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - Weeks.dwg
 08-01-23 PLOTTED BY: kyu



UTILITY PLAN NOTES

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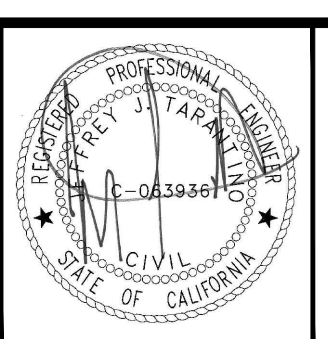


PROFILE VIEW
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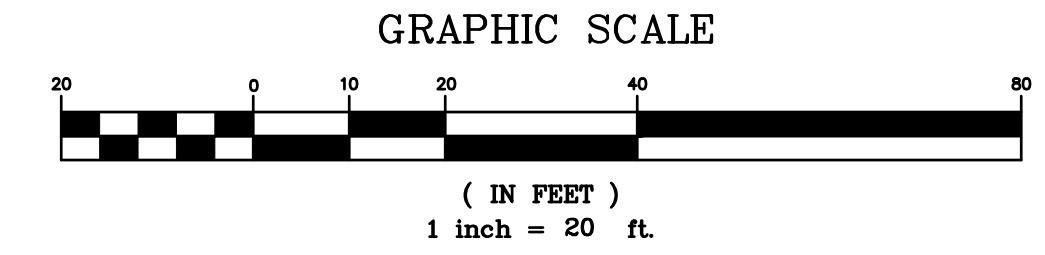
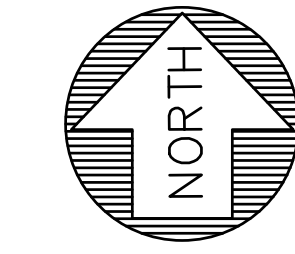
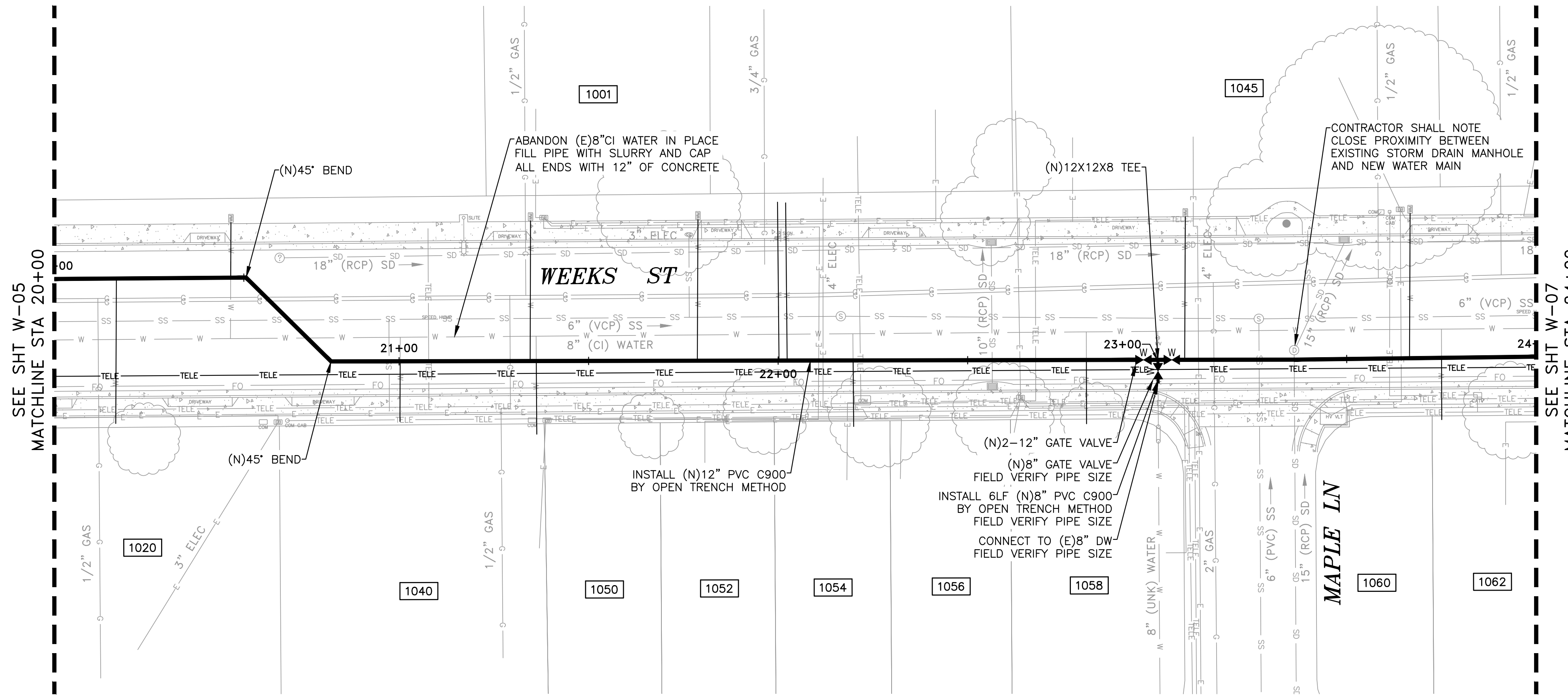
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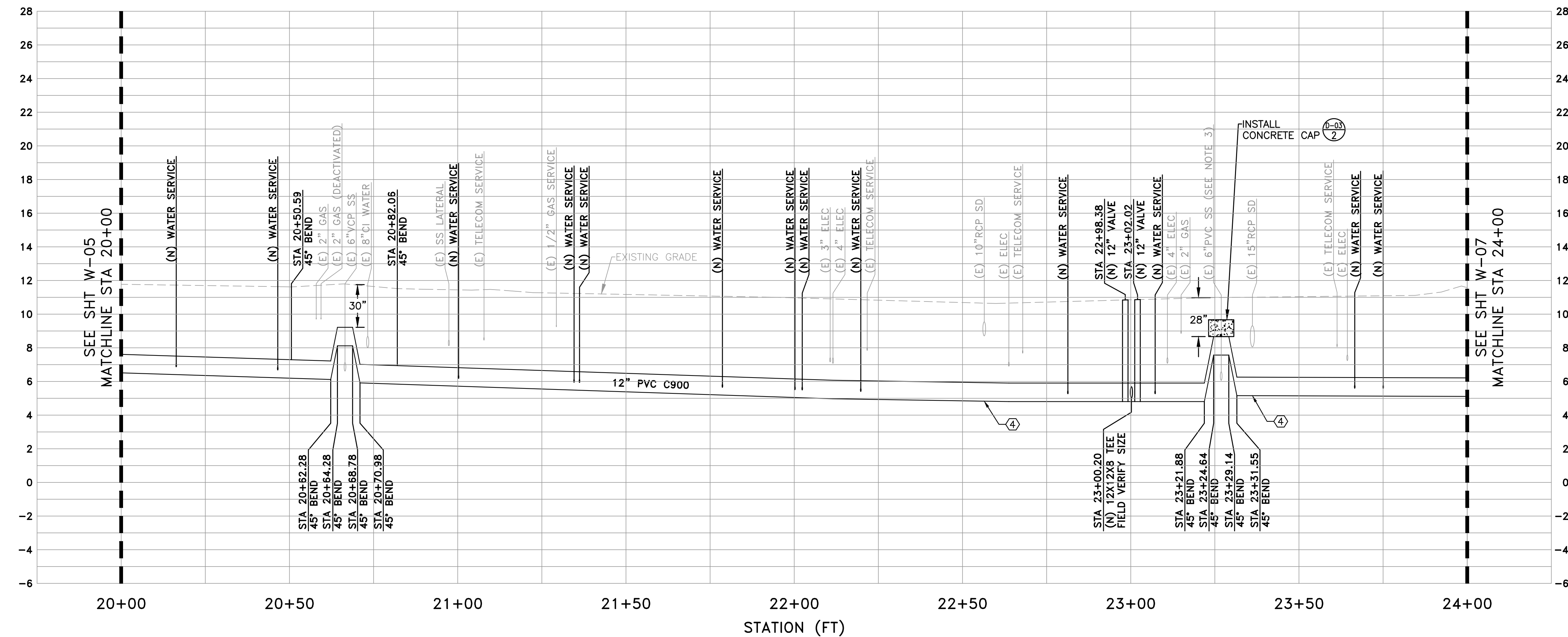
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO
PLAN & PROFILE - WEEKS ST
STA 16+50 TO 20+00

SHEET
W-05
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - Weeks.dwg
 08-01-23 PLOTTED BY: kyu



- UTILITY PLAN NOTES**
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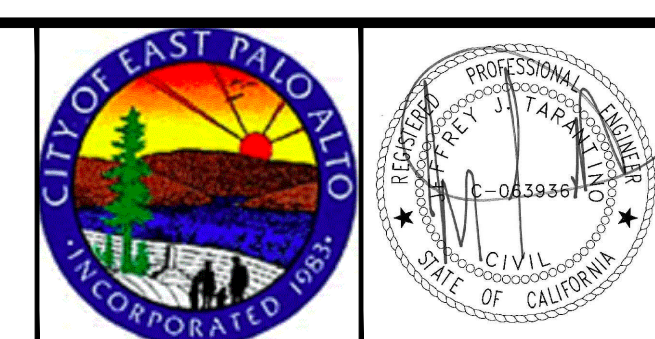


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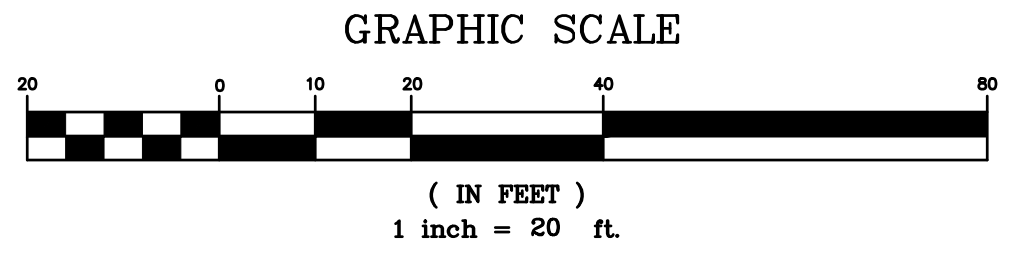
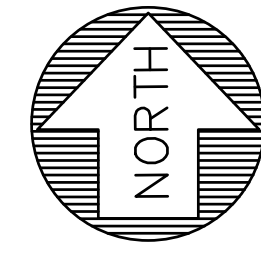
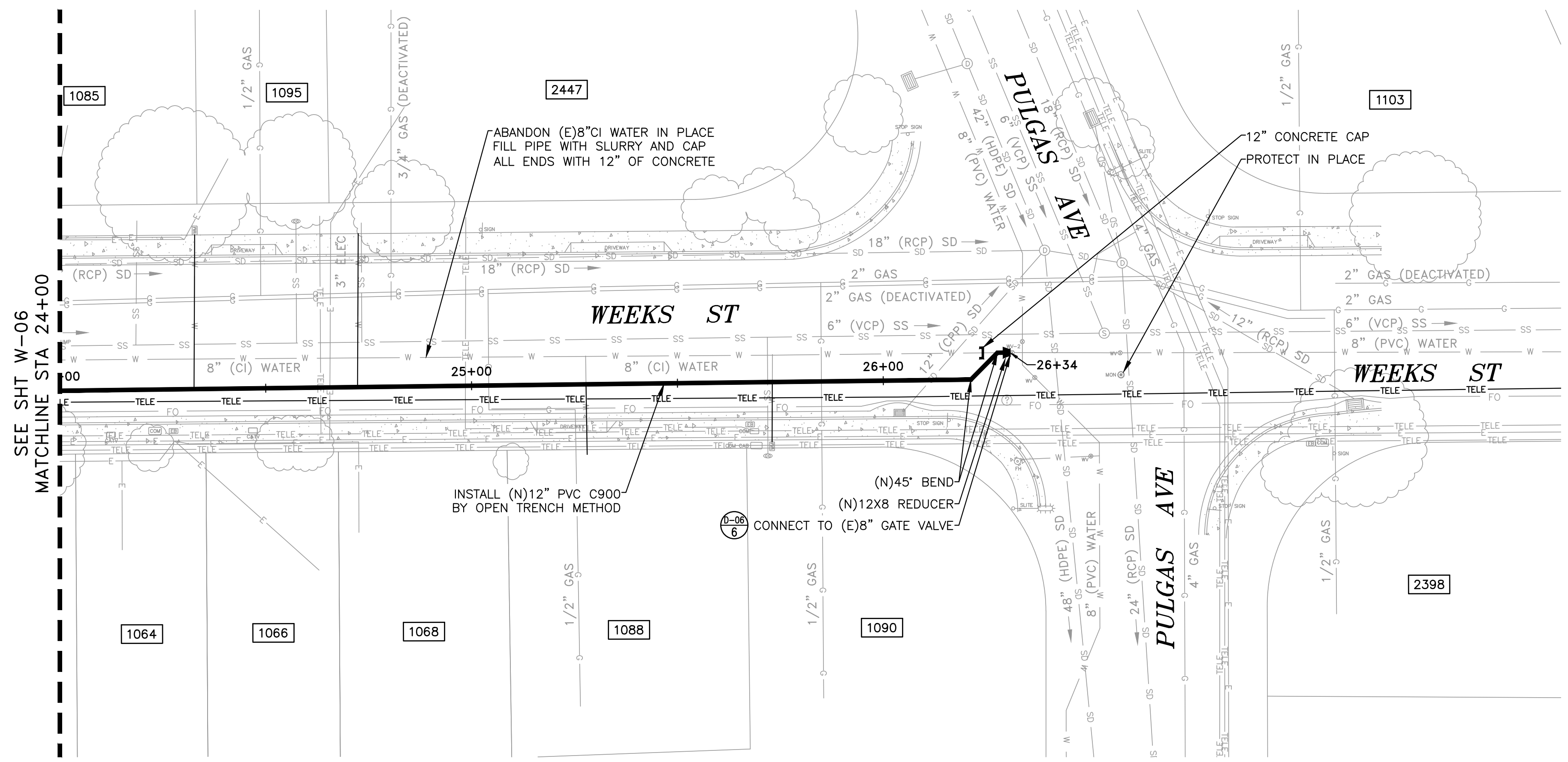
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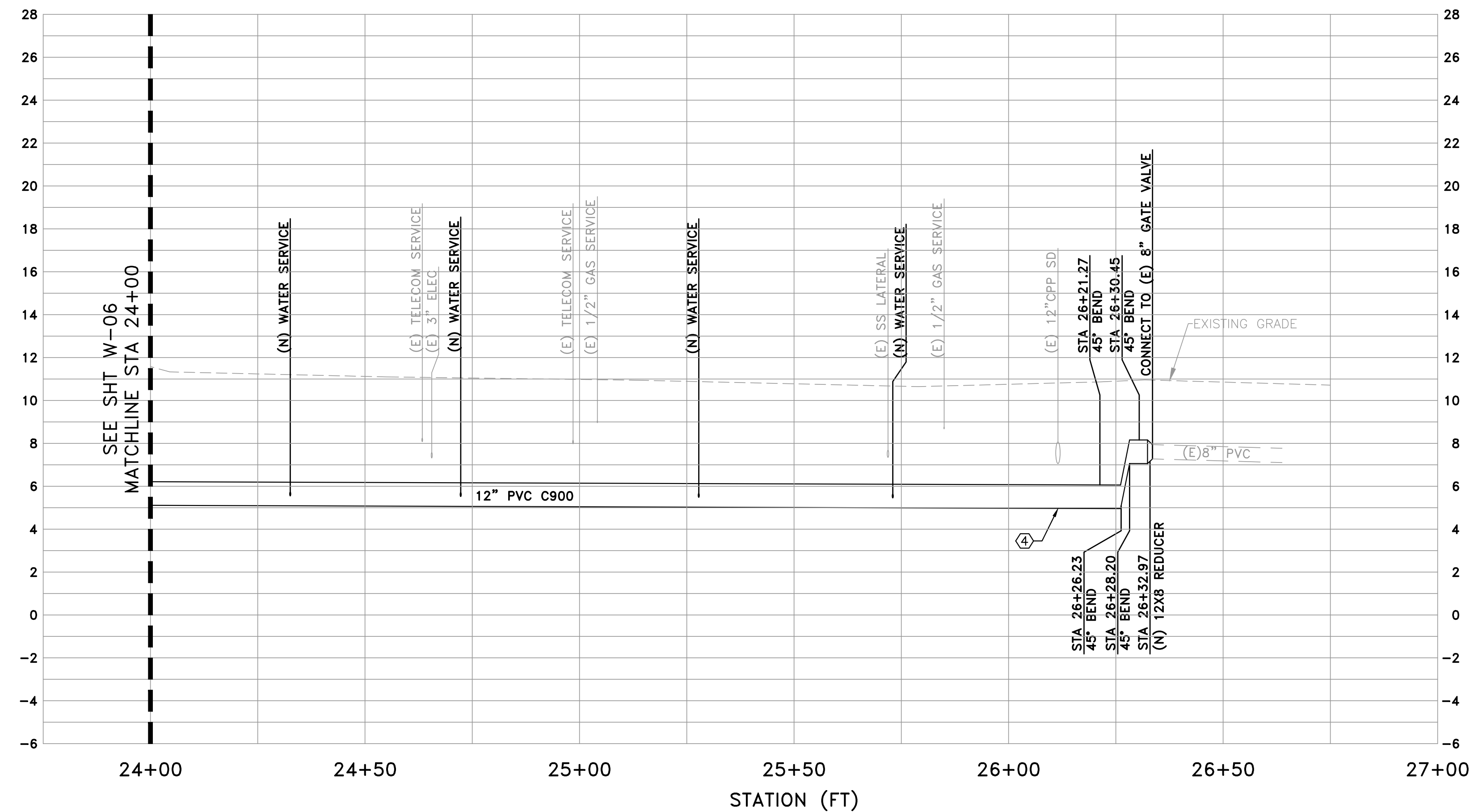
UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
PLAN & PROFILE - WEEKS ST
STA 20+00 TO 24+00

SHEET
W-06
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Utility Plan - Weeks.dwg
 08-01-23 PLOTTED BY: kyau
 PLOT DATE:



- UTILITY PLAN NOTES
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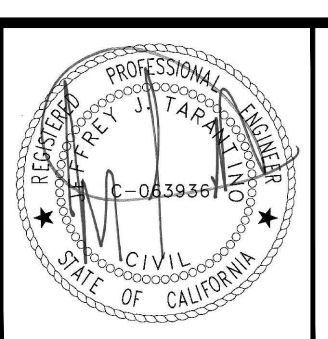


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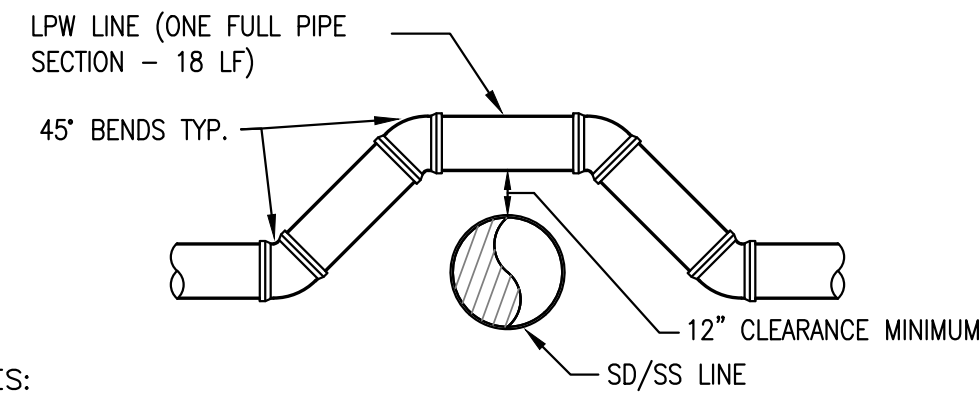


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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO
PLAN & PROFILE - WEEKS ST
STA 24+00 TO 26+34

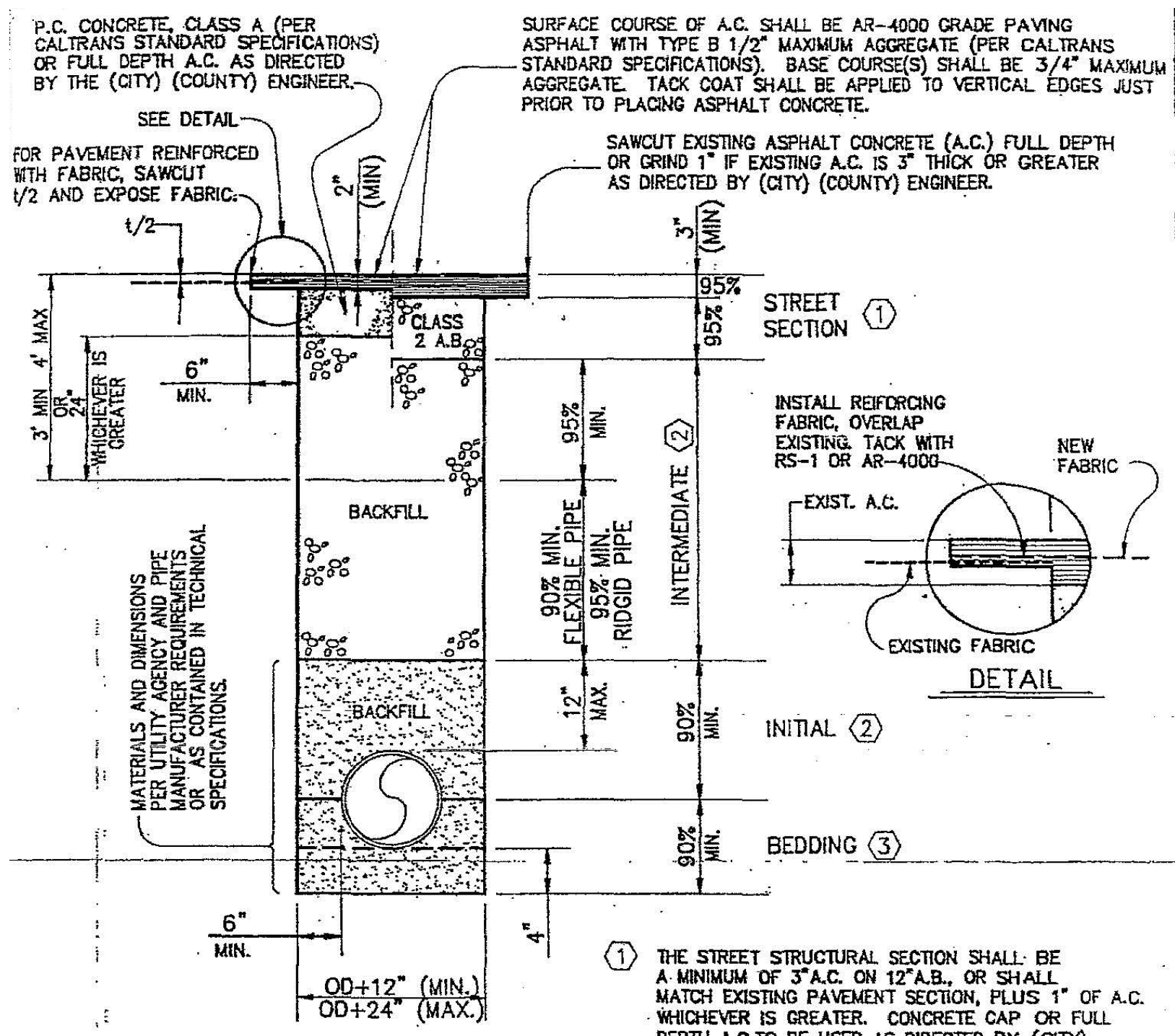
SHEET	W-07
JOB NO.	221005



NOTES:

- CONTRACTOR SHALL AVOID CONFLICTS WITH OTHER UTILITIES.
- PIPES SHALL HAVE A MINIMUM 12" CLEARANCE AT CROSSINGS.

1 UTILITY CROSSING DETAIL
SCALE: NO SCALE



NOTES:

- STREET ENCROACHMENT PERMIT WILL BE REQUIRED FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- ALL WORK TO BE DONE IN ACCORDANCE WITH (CITY) (COUNTY) STANDARDS AND SPECIFICATIONS.
- UNDERGROUND SERVICE ALERT (USA) SHALL BE NOTIFIED PRIOR TO BEGINNING WORK.
- ALL EXCAVATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (OSHA)
- INCLUDE SLURRY SEAL ALONG HALF OF THE STREET WIDTH OF UNIVERSITY AVE AND THE FULL WIDTH OF COOLEY AVE AND WEEKS ST WITHIN THE PROJECT LIMITS. SEE SLURRY SEAL DETAIL 3 ON SHEET D-03.

2 TRENCH SECTION
SCALE: NO SCALE

GENERAL WATER AND SEWER CONSTRUCTION NOTES

- APPROVAL OF THIS PLAN SHALL NOT CONSTITUTE A COMMITMENT FOR SERVICE OR AN AUTHORIZATION TO BEGIN THE SITE UTILITY SYSTEM CONSTRUCTION. THE APPLICANT SHALL BE REQUIRED TO OBTAIN A DIG PERMIT FROM THE INSTALLATION PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
- THE APPLICANT SHALL OBTAIN ALL NECESSARY PERMITS FROM ANY FEDERAL, STATE, AND/OR LOCAL PERMIT AUTHORITY HAVING JURISDICTION OVER ANY PHASE OF CONSTRUCTION ASSOCIATED WITH THE INSTALLATION OF THIS SITE UTILITY SYSTEM.
- THE CONTRACTOR SHALL NOTIFY THE VEOLIA WATER UTILITY MANAGER AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- BACKFLOW PREVENTION DEVICES ARE REQUIRED ON ALL CONNECTIONS TO THE EXISTING WATER SYSTEM. BACKFLOW PREVENTERS INSTALLED INSIDE ANY BUILDING SHALL REMAIN UNDER THE OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF THE GOVERNMENT UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL VEOLIA WATER FACILITIES AND OTHER UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER AND VEOLIA WATER OF ANY DISCREPANCIES FOUND IN THE FIELD OR ON THE DRAWINGS PRIOR TO CONSTRUCTION. ANY DEVIATIONS FROM THE CONSTRUCTION PLANS SHALL NEED TO BE APPROVED IN WRITING BY VEOLIA WATER.
- NOT USED
- A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE WHERE CONSTRUCTION IS TAKING PLACE, SHALL BE RESPONSIBLE FOR GENERAL OVERSIGHT AND OBSERVATION OF THE SITE UTILITY SYSTEM INSTALLATION FOR COMPLIANCE WITH AMERICAN WATER STANDARDS AND TESTING REQUIREMENTS.
- THE FOLLOWING TESTS SHALL BE ADMINISTERED BY THE CONTRACTOR AND WITNESSED AND REPORTED BY THE APPLICANT'S ENGINEER OR AGENT:
 - WATER - CHLORINE RESIDUAL
 - WATER - HYDROSTATIC
- ALL TESTING EQUIPMENT SHALL BE FURNISHED BY THE SITE UTILITY CONTRACTOR.
- WATER CONNECTION - CONNECTION OF THE SITE UTILITY WATER SYSTEM TO THE EXISTING VEOLIA WATER WATER DISTRIBUTION SYSTEM IS PROHIBITED UNTIL THE CHLORINE RESIDUAL AND BACTERIOLOGICAL TESTS AS WELL AS THE REQUIRED HYDROSTATIC TESTS HAVE BEEN PERFORMED AND THE RESULTS REPORTED. THE APPLICANT SHALL SUBMIT THE TEST RESULTS TO THE VEOLIA WATER UTILITY MANAGER OR PROJECT ENGINEER FOR APPROVAL.
- NOT USED
- SHOP DRAWINGS SHALL BE SUBMITTED TO VW FOR REVIEW AND APPROVAL PRIOR TO ANY CONSTRUCTION.
- ELECTRONIC FINAL AS-BUILT DRAWINGS PREPARED BY A REGISTERED PROFESSIONAL ENGINEER, COMPATIBLE WITH VEOLIA WATER'S GIS SYSTEM, SHALL BE SUBMITTED TO VEOLIA WATER. THE AS-BUILT DRAWING SHALL REFLECT ANY FIELD CHANGES AND INDICATE 'TIES' FOR THE LOCATION OF VALVES, BENDS, FIRE HYDRANTS, APPURTENANCES, ETC.
- THE CONTRACTOR SHALL NOT OPERATE ANY VALVES LOCATED ON THE EXISTING DISTRIBUTION SYSTEM. REQUESTS TO OPERATE VALVES MUST BE SUBMITTED TO THE VEOLIA WATER UTILITY MANAGER 48 HOURS IN ADVANCE.
- ALL MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
- WHEN A WATER MAIN AND A SEWER LINE ARE IN A PARALLEL ALIGNMENT, THE WATER MAIN SHALL NOT BE INSTALLED WITHIN TEN FEET (10') OF THE SEWER LINE. WHEN A WATER MAIN AND SEWER LINE ARE IN A PERPENDICULAR CROSSING ALIGNMENT, THE WATER MAIN SHALL NOT BE INSTALLED WITHIN TWO FEET (2') OF THE SEWER LINE AND NO WATER MAIN JOINTS SHALL BE ALLOWED WITHIN TEN FEET (10') OF THE SEWER LINE. SEPARATION DISTANCES MEASURED EDGE-TO-EDGE. IF REQUIRED CLEARANCES CAN NOT BE MAINTAINED, CONCRETE ENCASEMENT SHALL BE REQUIRED.
- SCHEDULE 40 AND SCHEDULE 80 PVC PIPE ARE NOT PERMITTED UNDER ANY CIRCUMSTANCES.

FINAL

MSG-ST-01

GUIDELINES FOR VARIANCES

- THE CITY OF EAST PALO ALTO CAPITAL PROJECT MANAGER AND HIS/HER DESIGNATED REPRESENTATIVE MAY ALLOW VARIANCES TO THE DESIGN STANDARDS AND STANDARD DETAILS WHEN STRICT ADHERENCE WOULD LESS ADEQUATELY PROVIDE FOR THE DEVELOPMENT, MAINTENANCE, EFFICIENCY, AND EFFECTIVENESS OF THE WATER UTILITIES. ANY VARIANCE GRANTED SHALL ENSURE THAT THE OBJECTIVES AND INTENT OF THE ORIGINAL DESIGN STANDARD OR STANDARD DETAIL TO WHICH THE VARIANCES IS GRANTED ARE SUBSTANTIALLY MET.
- VARIANCES MAY BE ALLOWED WHEN:
 - A SUBSTITUTION FOR A CHANGE IN STANDARD MATERIAL RESULTS IN THE USE OF A MATERIAL WHICH CAN BE CLEARLY DEMONSTRATED TO BE EQUAL TO OR OF SUPERIOR QUALITY;
 - A STRICT ADHERENCE TO A DESIGN STANDARD OR STANDARD DETAIL WOULD BE IMPRACTICAL OR IMPOSSIBLE BECAUSE OF FIELD CONDITIONS SUCH AS EXISTING UTILITY FACILITIES;
 - AN EMERGENCY SITUATION PROHIBITS STRICT ADHERENCE TO A DESIGN STANDARD OR STANDARD DETAIL;
 - AT THE DISCRETION OF THE CITY OF EAST PALO ALTO CAPITAL PROJECT MANAGER.

FINAL

MSG-ST-01A

3 WATER AND SEWER NOTES
SCALE: NO SCALE

DATE:	08/01/23	08/01/23	BID SET
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DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
	BY	DATE	DESCRIPTION OF REVISIONS
			APP'D

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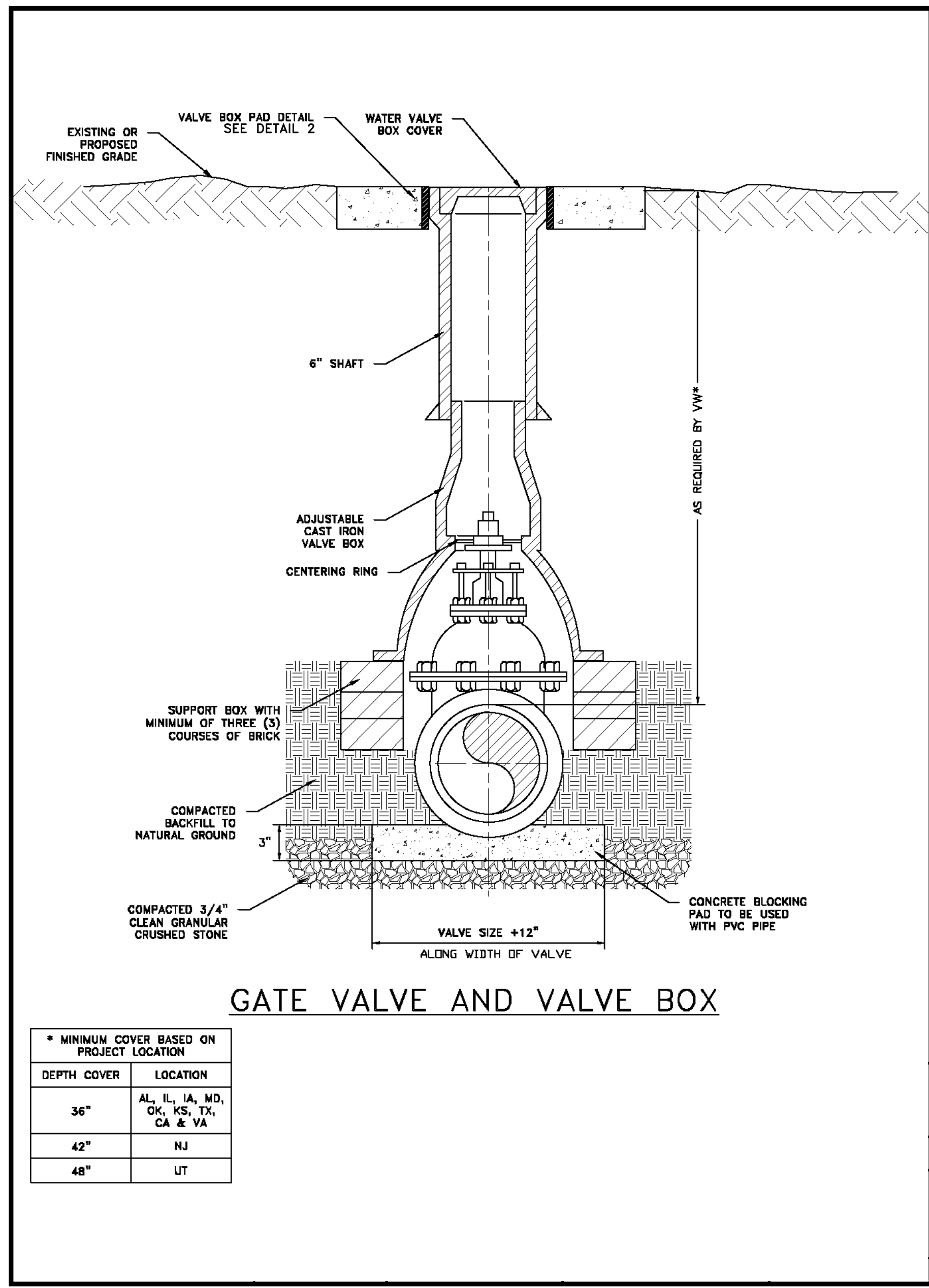
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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO

DETAIL SHEET

SHEET
D-01
JOB NO.
221005

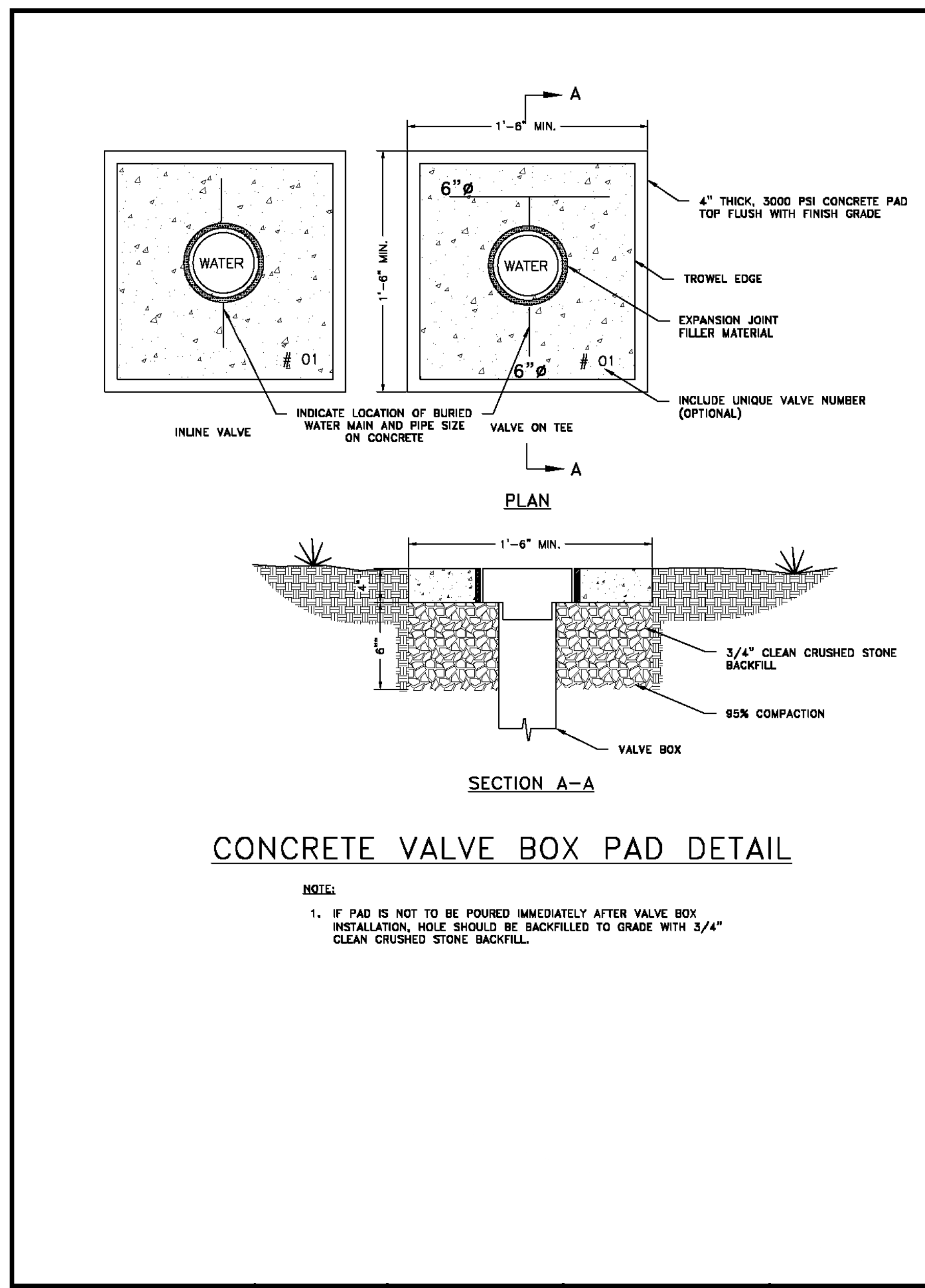


GATE VALVE AND VALVE BOX

* MINIMUM COVER BASED ON PROJECT LOCATION	
DEPTH COVER	LOCATION
36"	AL, IL, IA, MD, OK, KS, TX, CA & VA
42"	NJ
48"	UT

FINAL MS0-W-03

1 GATE VALVE AND VALVE BOX
SCALE: NO SCALE

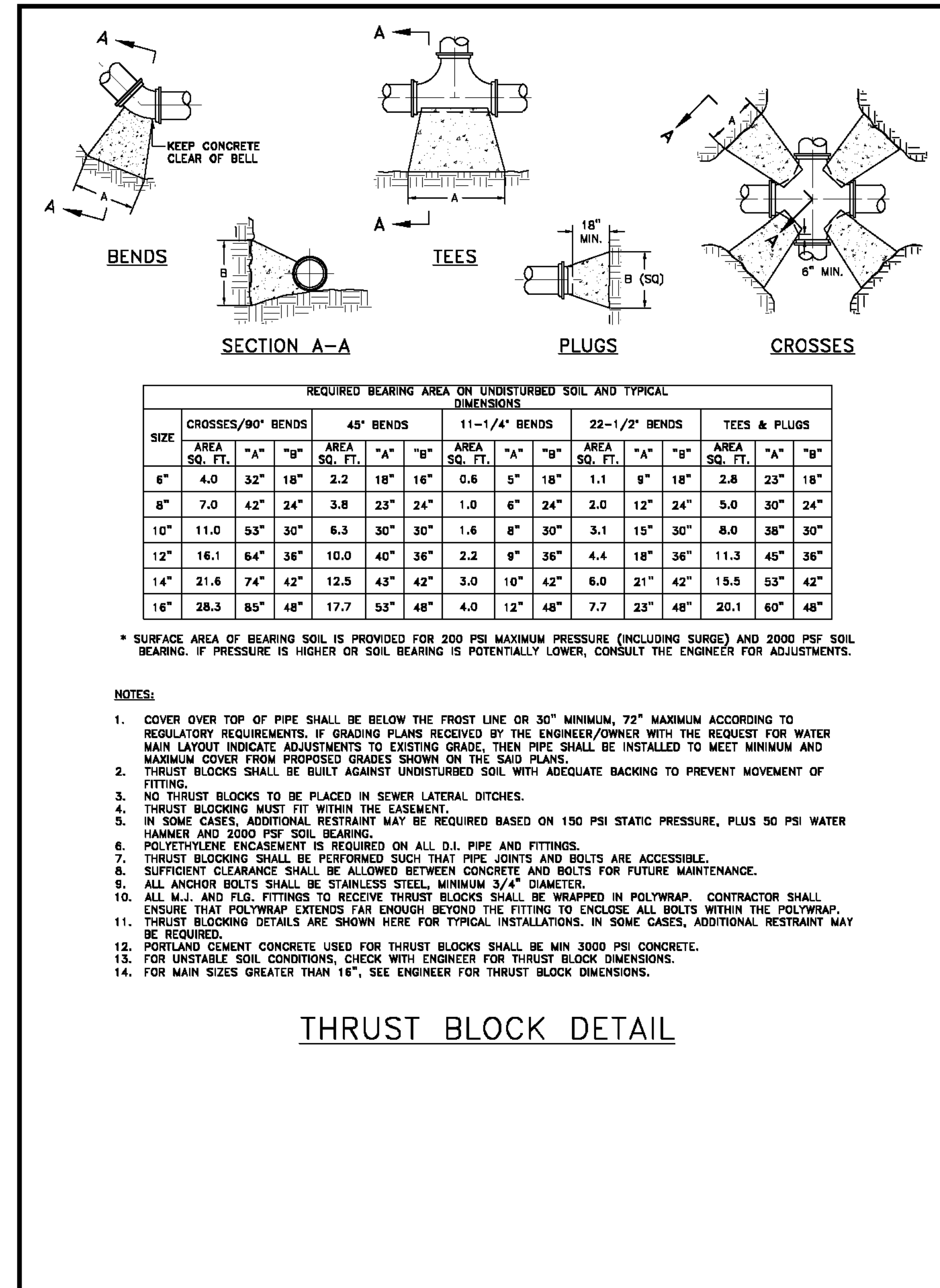


CONCRETE VALVE BOX PAD DETAIL

- NOTE:
- IF PAD IS NOT TO BE POURED IMMEDIATELY AFTER VALVE BOX INSTALLATION, HOLE SHOULD BE BACKFILLED TO GRADE WITH 3/4" CLEAN CRUSHED STONE BACKFILL.

FINAL MS0-W-04

2 CONCRETE VALVE BOX PAD
SCALE: NO SCALE



REQUIRED BEARING AREA ON UNDISTURBED SOIL AND TYPICAL DIMENSIONS

SIZE	CROSSES/90° BENDS		45° BENDS		11-1/4° BENDS		22-1/2° BENDS		TEES & PLUGS	
	AREA SQ. FT.	"A" "B"	AREA SQ. FT.	"A" "B"	AREA SQ. FT.	"A" "B"	AREA SQ. FT.	"A" "B"	AREA SQ. FT.	"A" "B"
6"	4.0	32" 18"	2.2	18" 16"	0.6	5" 18"	1.1	9" 18"	2.8	23" 18"
8"	7.0	42" 24"	3.8	23" 24"	1.0	6" 24"	2.0	12" 24"	5.0	30" 24"
10"	11.0	53" 30"	6.3	30" 30"	1.6	8" 30"	3.1	15" 30"	8.0	38" 30"
12"	16.1	64" 36"	10.0	40" 36"	2.2	9" 36"	4.4	18" 36"	11.3	45" 36"
14"	21.6	74" 42"	12.5	43" 42"	3.0	10" 42"	6.0	21" 42"	15.5	53" 42"
16"	28.3	85" 48"	17.7	53" 48"	4.0	12" 48"	7.7	23" 48"	20.1	60" 48"

* SURFACE AREA OF BEARING SOIL IS PROVIDED FOR 200 PSI MAXIMUM PRESSURE (INCLUDING SURGE) AND 2000 PSF SOIL BEARING. IF PRESSURE IS HIGHER OR SOIL BEARING IS POTENTIALLY LOWER, CONSULT THE ENGINEER FOR ADJUSTMENTS.

- NOTES:
- COVER OVER TOP OF PIPE SHALL BE BELOW THE FROST LINE OR 30" MINIMUM, 72" MAXIMUM ACCORDING TO REGULATORY REQUIREMENTS. IF GRADING PLANS RECEIVED BY THE ENGINEER/OWNER WITH THE REQUEST FOR WATER MAIN LAYOUT INDICATE ADJUSTMENTS TO EXISTING GRADE, THEN PIPE SHALL BE INSTALLED TO MEET MINIMUM AND MAXIMUM COVER FROM PROPOSED GRADES SHOWN ON THE SAID PLANS.
 - THRUST BLOCKS SHALL BE BUILT AGAINST UNDISTURBED SOIL WITH ADEQUATE BACKING TO PREVENT MOVEMENT OF FITTING.
 - NO THRUST BLOCKS TO BE PLACED IN SEWER LATERAL DITCHES.
 - THRUST BLOCKING MUST FIT WITHIN THE EASEMENT.
 - IN SOME CASES, ADDITIONAL RESTRAINT MAY BE REQUIRED BASED ON 150 PSI STATIC PRESSURE, PLUS 50 PSI WATER HAMMER AND 2000 PSF SOIL BEARING.
 - POLYETHYLENE ENCASEMENT IS REQUIRED ON ALL D.I. PIPE AND FITTINGS.
 - THRUST BLOCKING SHALL BE PERFORMED SUCH THAT PIPE JOINTS AND BOLTS ARE ACCESSIBLE.
 - SUFFICIENT CLEARANCE SHALL BE ALLOWED BETWEEN CONCRETE AND BOLTS FOR FUTURE MAINTENANCE.
 - ALL ANCHOR BOLTS SHALL BE STAINLESS STEEL, MINIMUM 3/4" DIAMETER.
 - ALL M.J. AND FLG. FITTINGS TO RECEIVE THRUST BLOCKS SHALL BE WRAPPED IN POLYWRAP. CONTRACTOR SHALL ENSURE THAT POLYWRAP EXTENDS FAR ENOUGH BEYOND THE FITTING TO ENCLOSE ALL BOLTS WITHIN THE POLYWRAP.
 - THRUST BLOCKING DETAILS ARE SHOWN HERE FOR TYPICAL INSTALLATIONS. IN SOME CASES, ADDITIONAL RESTRAINT MAY BE REQUIRED.
 - PORTLAND CEMENT CONCRETE USED FOR THRUST BLOCKS SHALL BE MIN 3000 PSI CONCRETE.
 - FOR UNSTABLE SOIL CONDITIONS, CHECK WITH ENGINEER FOR THRUST BLOCK DIMENSIONS.
 - FOR MAIN SIZES GREATER THAN 16", SEE ENGINEER FOR THRUST BLOCK DIMENSIONS.

THRUST BLOCK DETAIL

FINAL MS0-W-08

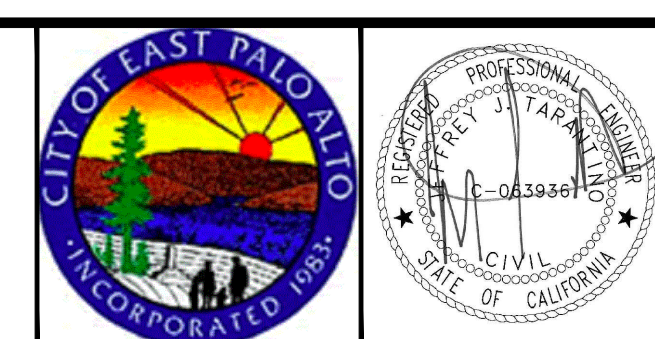
3 THRUST BLOCK
SCALE: NO SCALE

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\AAA Latest\Detail Sheet.dwg
PLOT DATE: 08-01-23 PLOTTED BY: kyu

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
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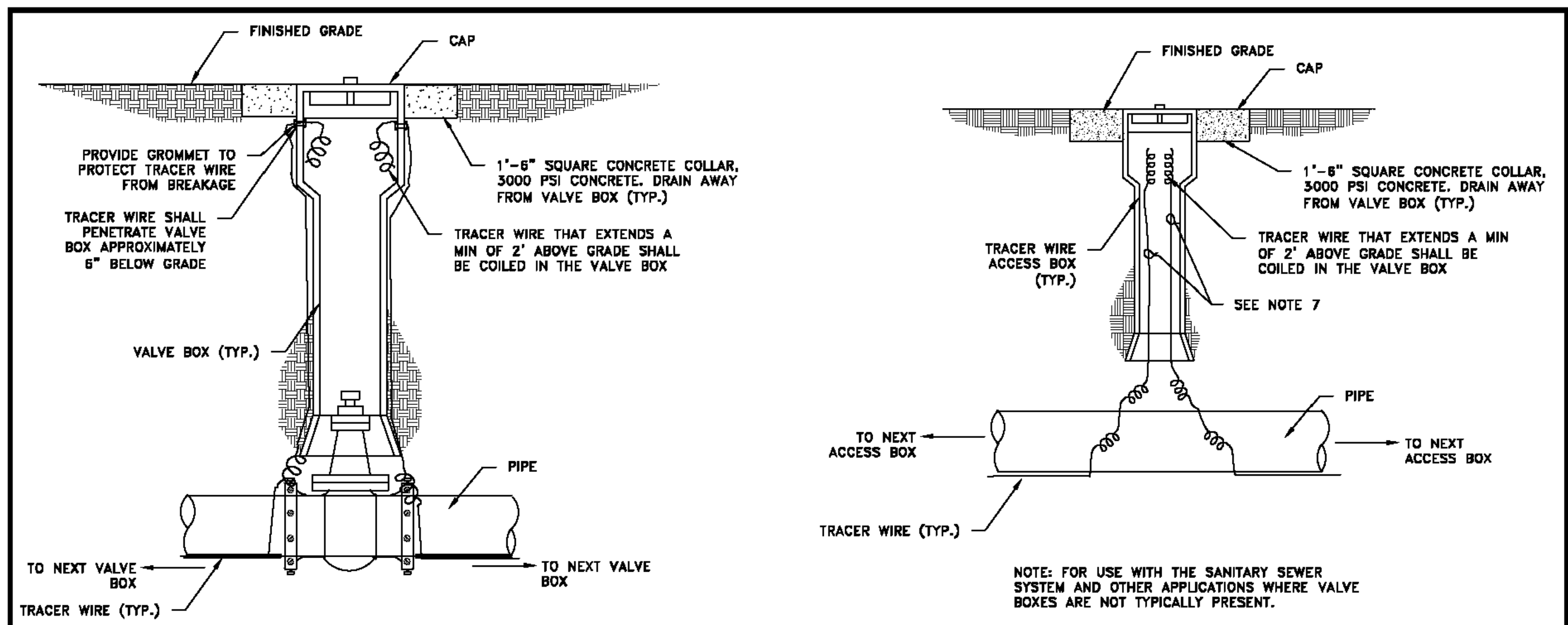
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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
DETAIL SHEET

SHEET	D-02
JOB NO.	221005



TYPICAL TRACER WIRE VALVE BOX INSTALLATION

TYPICAL TRACER WIRE ACCESS BOX INSTALLATION
NON VALVE LOCATIONS

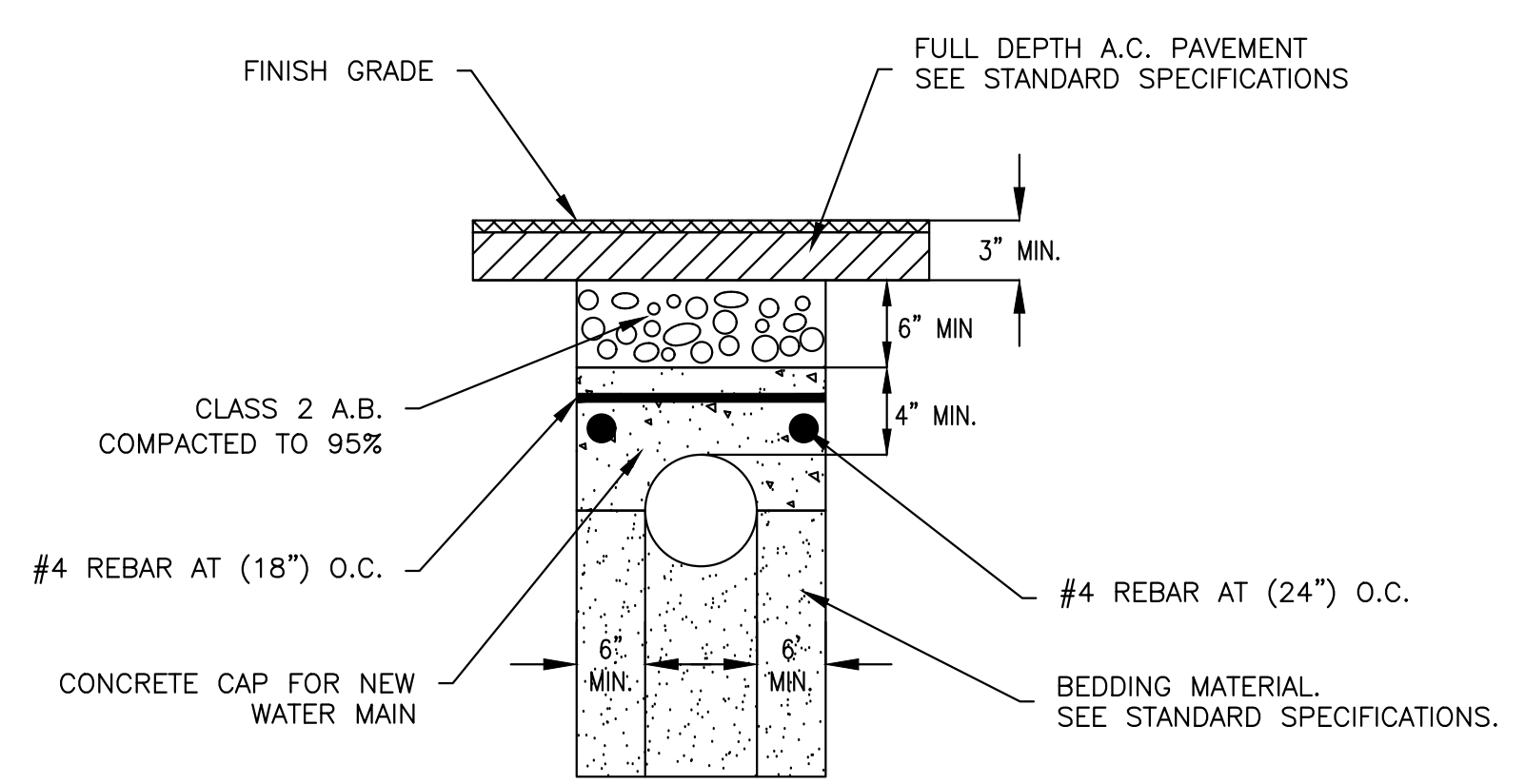
TRACER WIRE INSTALLATION

- NOTES:
1. TRACER WIRE SHALL BE TIED INTO EVERY VALVE, BLOW-OFF, ARV, AND OTHER DEVICES OR CHANGES IN DIRECTION. PROVIDE ONE TRACER WIRE TEST STATION AT MINIMUM INTERVALS AS PRESCRIBED IN AMERICAN WATER'S DESIGN GUIDE.
 2. TRACER LEADS SHALL BE INSTALLED IN APPROVED CURB BOXES OR TRACER WIRE ACCESS BOXES. ACCESS BOX STYLE (LIGHT DUTY, DRIVEWAY, OR ROADWAY) SHALL BE DETERMINED BY BOX LOCATION.
 3. CURB BOXES SHALL BE INSTALLED FLUSH WITH GROUND AND LOCATED OVER PIPE LINE TO WHICH TRACER LEAD IS ATTACHED.
 4. TRACER LEADS SHALL HAVE ADEQUATE SLACK THROUGHOUT THE INSTALLATION TO REDUCE BREAKAGE FROM PULLING.
 5. TRACER WIRE THAT EXTENDS A MIN OF 2' ABOVE GRADE SHALL BE COILED IN THE VALVE BOX AND WIRES SHALL BE PROPERLY CONNECT TO THE VALVE BOX PER MANUFACTURERS SPECIFICATIONS, ALL TRACER WIRES SHALL BE OF #12 TW SOLID COPPER WIRE.
 6. EARTH AROUND VALVE BOXES SHALL BE THOROUGHLY COMPACTED AT THE TIME OF INSTALLATION, SUBCONTRACTOR SHALL MAKE ADJUSTMENTS FOR FINAL GRADING, SODDING, PAVING, AND RESTORATION AT THE COMPLETION OF EACH PROJECT. SUBCONTRACTOR SHALL PROTECT THE LEADS, BOXES, AND ALL TRACER WIRES THROUGHOUT THE PROJECT. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL WATER AND WASTEWATER UTILITY LOCATIONS THROUGHOUT THE PROJECT AND UNTIL APPROVED AND ACCEPTED BY VEOLIA WATER.
 7. PROVIDE ONE TRACER LEAD IN EACH DIRECTION UNLESS OTHERWISE NOTED.
 8. CONTRACTOR SHALL CONFIRM THE REQUIREMENT FOR CONCRETE COLLARS WITH VW PRIOR TO CONSTRUCTION.

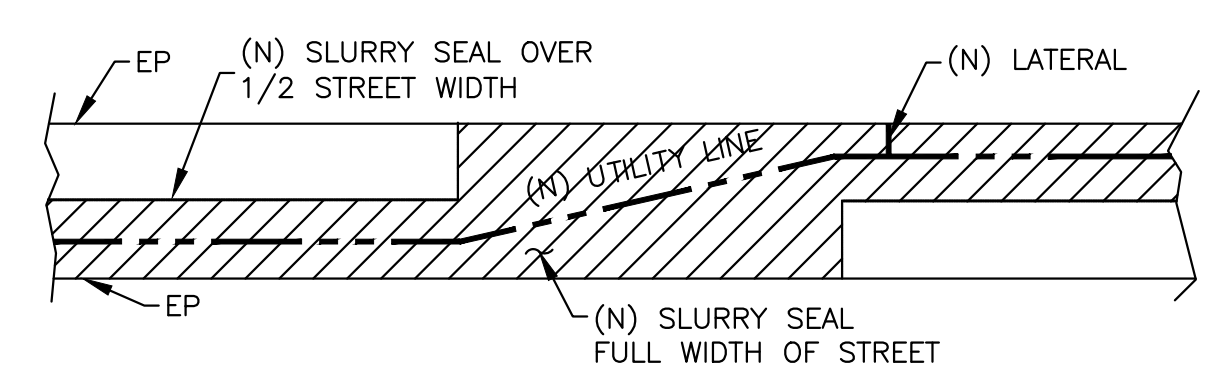
NOTE: FOR USE WITH THE SANITARY SEWER SYSTEM AND OTHER APPLICATIONS WHERE VALVE BOXES ARE NOT TYPICALLY PRESENT.

FINAL MSG-W-05

1 TRACER WIRE INSTALLATION
SCALE: NO SCALE



2 CONCRETE CAP DETAIL
TRENCHES WITH < 30" COVER
SCALE: NO SCALE



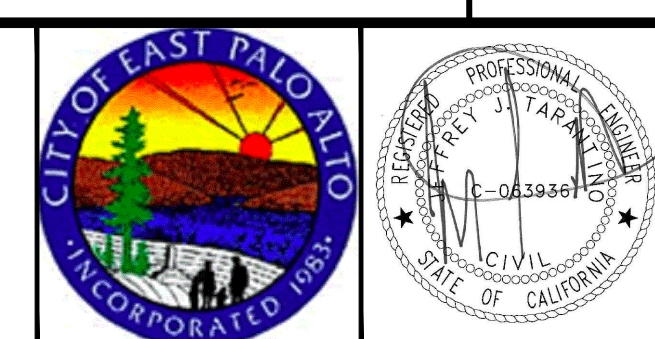
3 SLURRY SEAL
SCALE: NO SCALE

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PLOT DATE: 08-01-23 PLOTTED BY: kyau

DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
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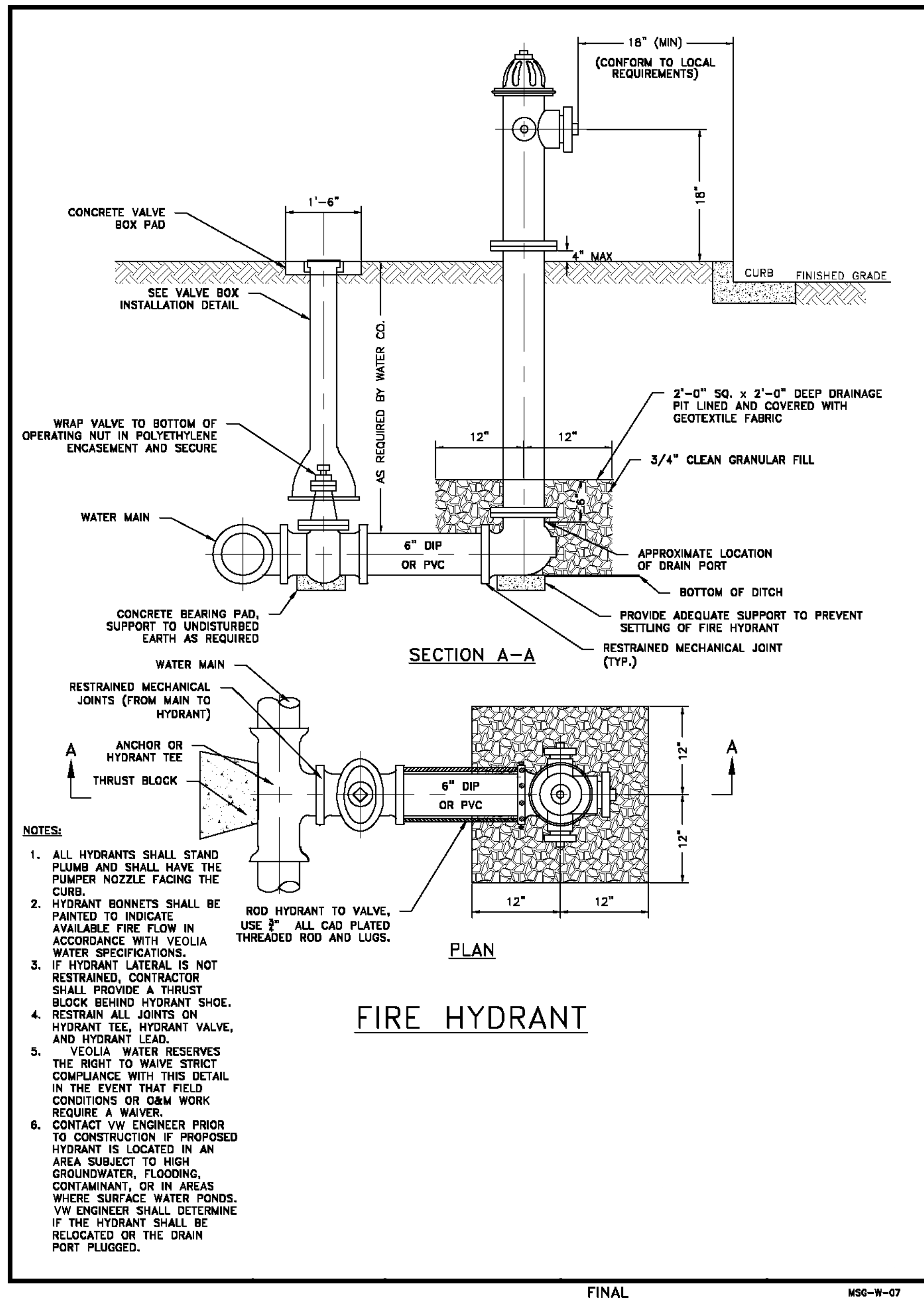


UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO

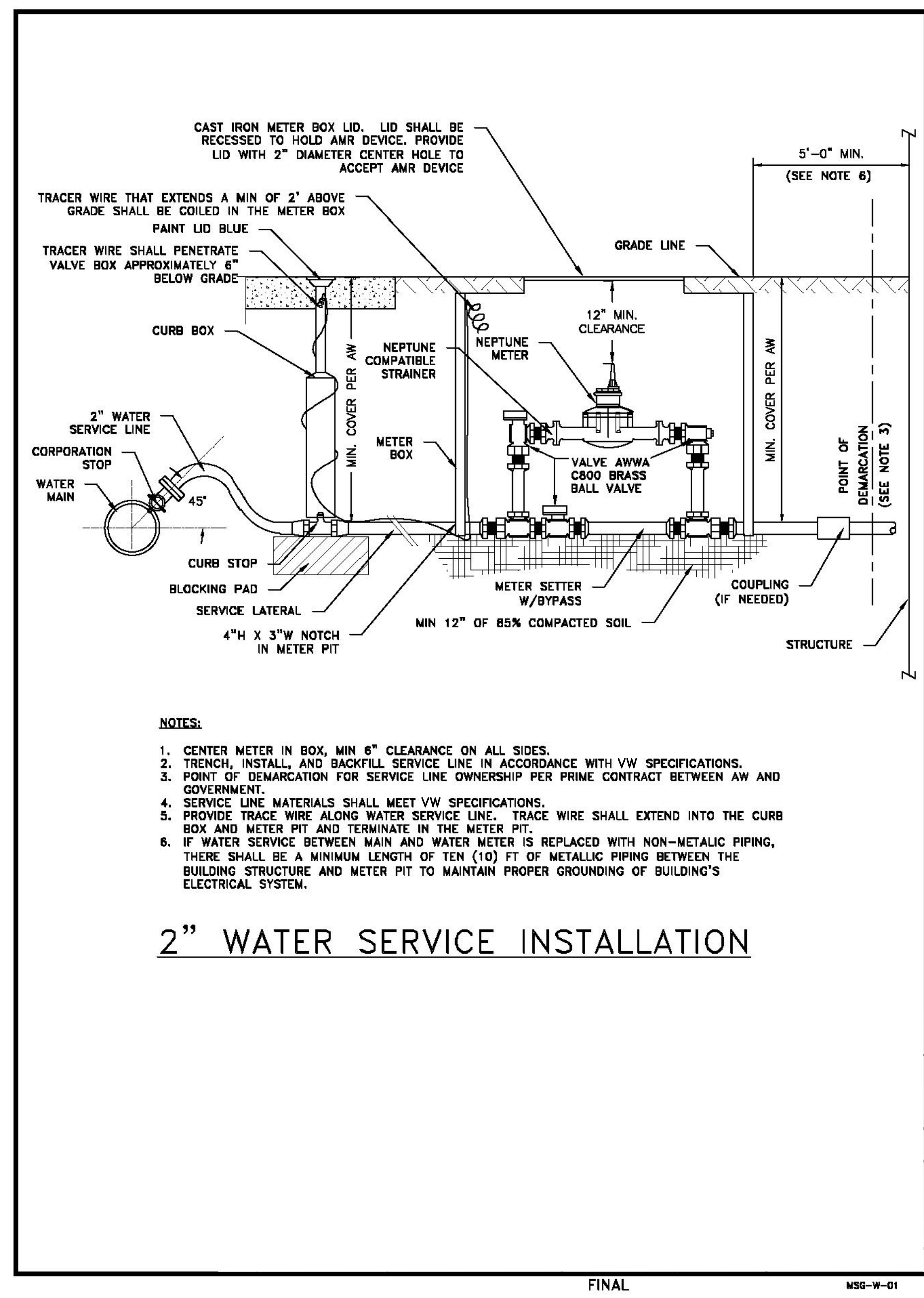
DETAIL SHEET

SHEET	D-03
JOB NO.	221005

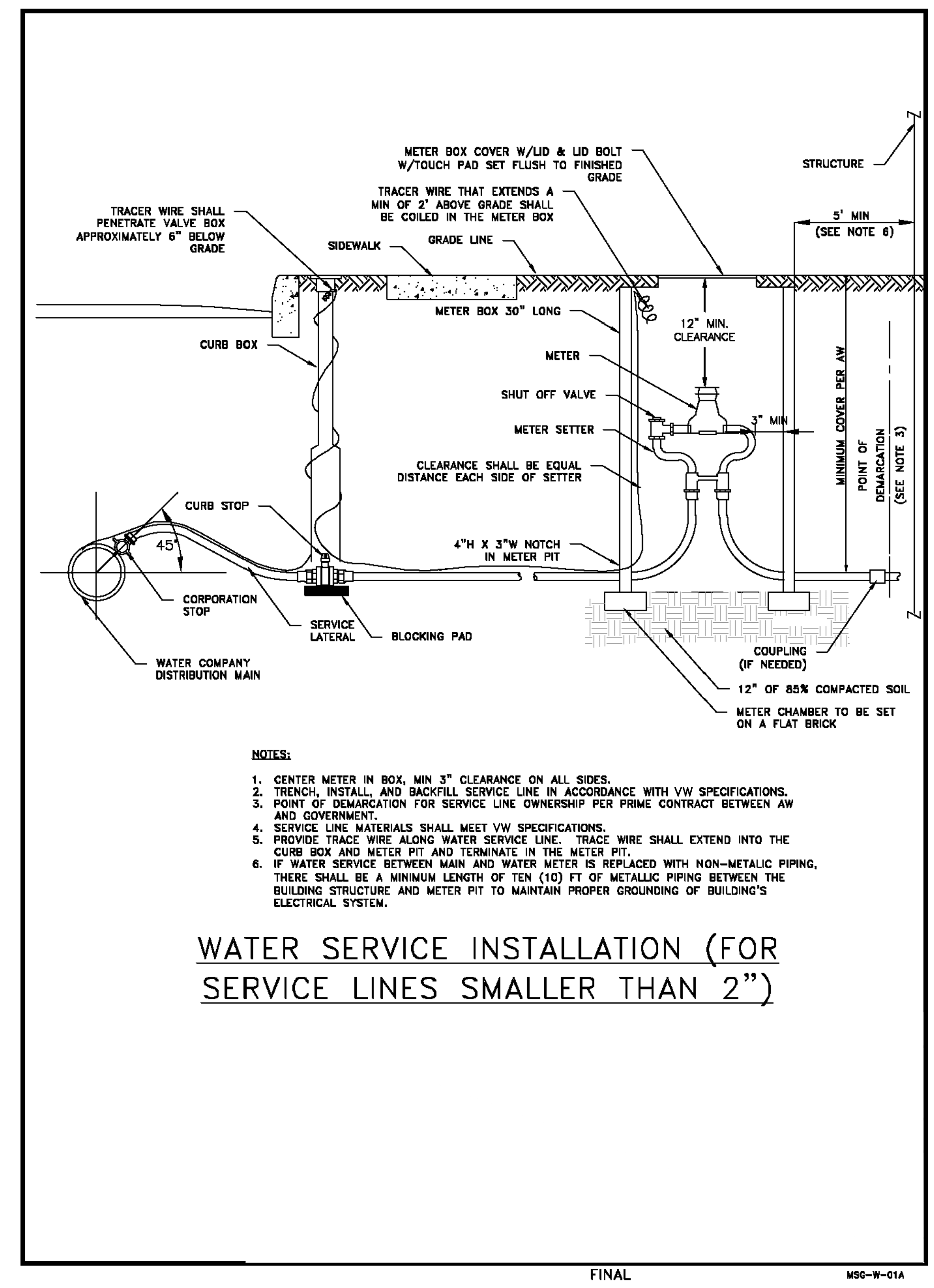
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 PLOT DATE: 08-01-23
 PLOTTED BY: kyu



1 FIRE HYDRANT
SCALE: NO SCALE



2 2" WATER SERVICE INSTALLATION
SCALE: NO SCALE

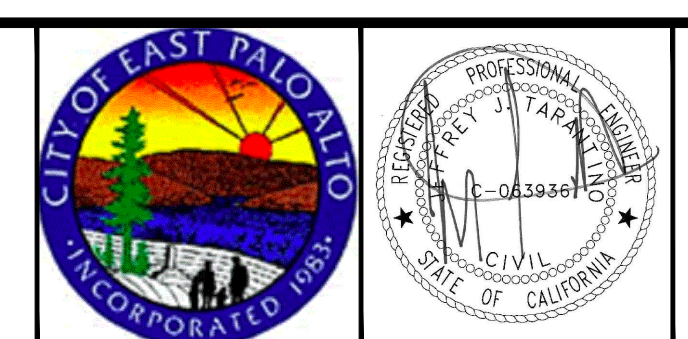


3 WATER SERVICE INSTALLATION (SMALLER THAN 2")
SCALE: NO SCALE

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DRAWN:	KMY		
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PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



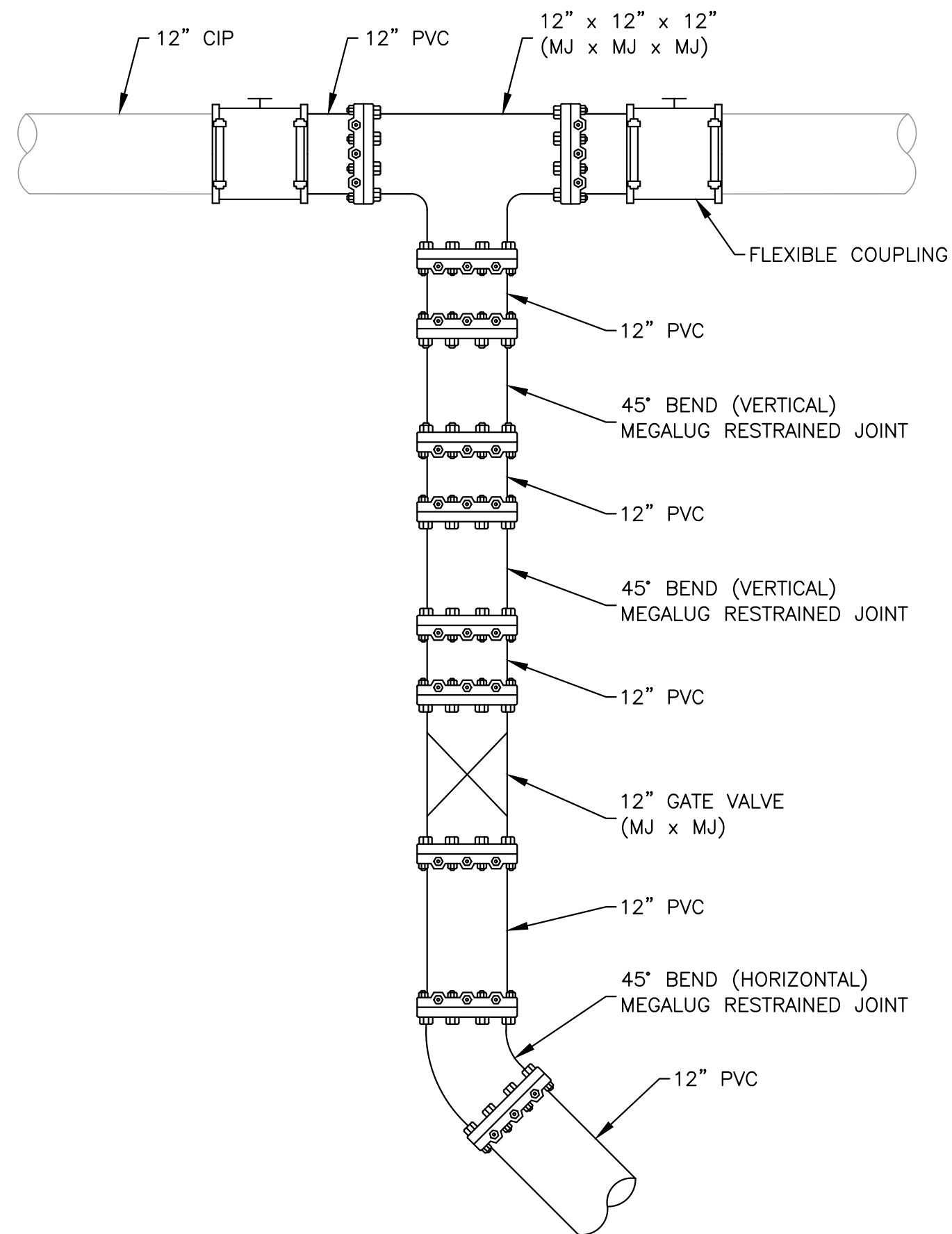
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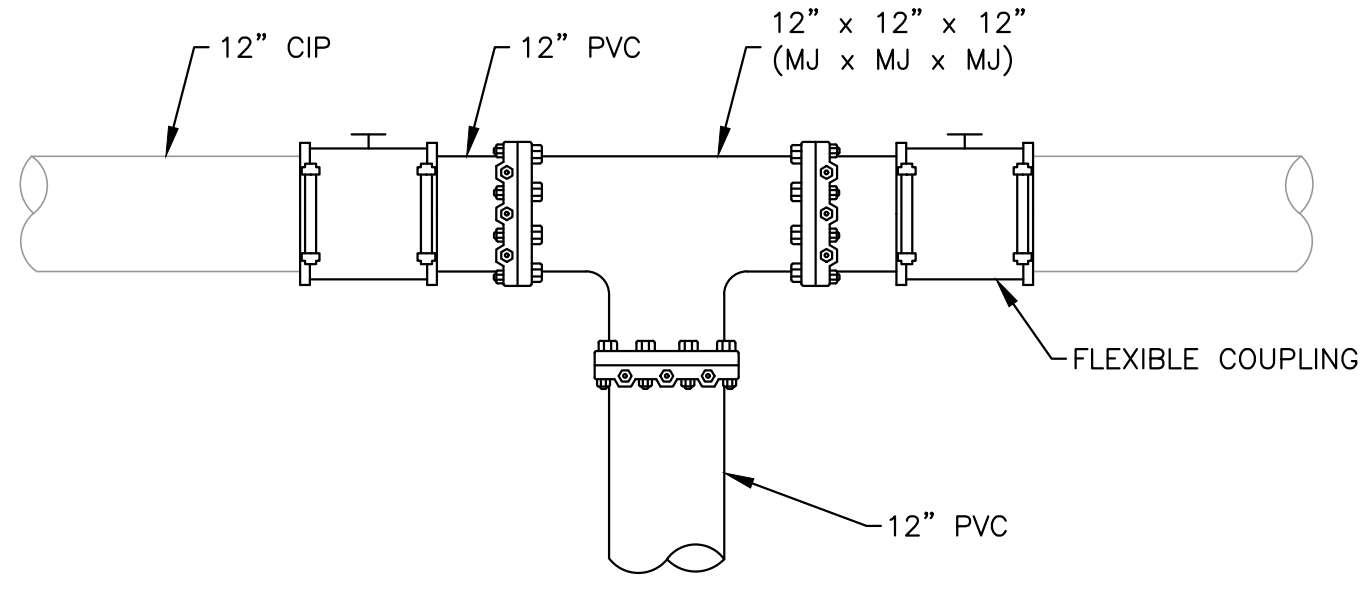
**UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO**

DETAIL SHEET

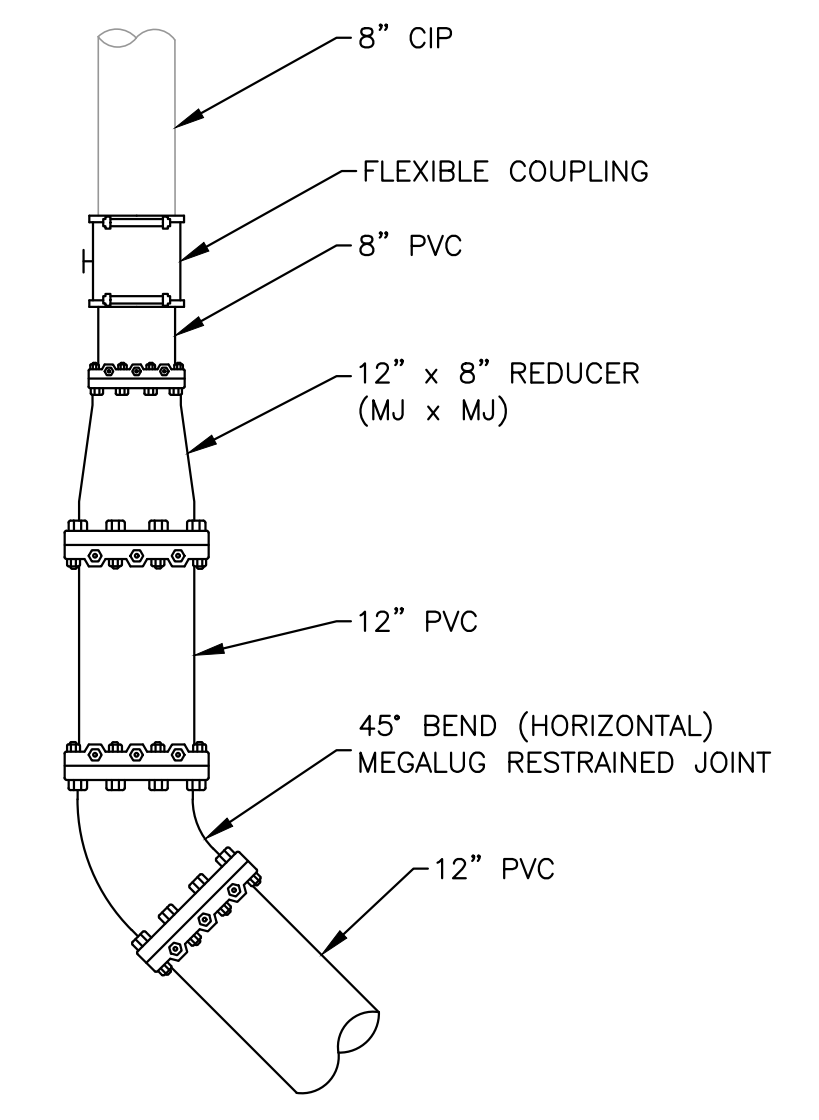
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JOB NO.	221005



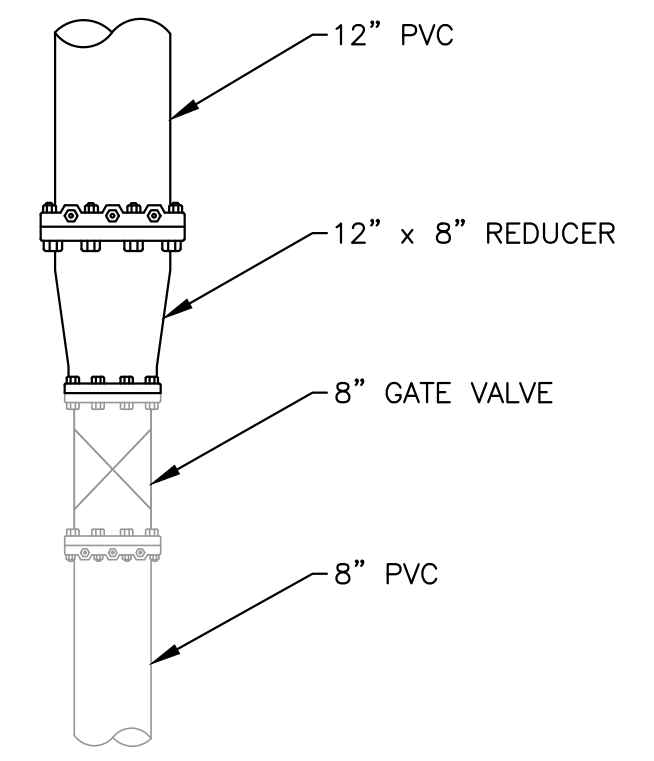
1 UNIVERSITY AVE & O'BRIEN DR CONNECTION
SCALE: NO SCALE



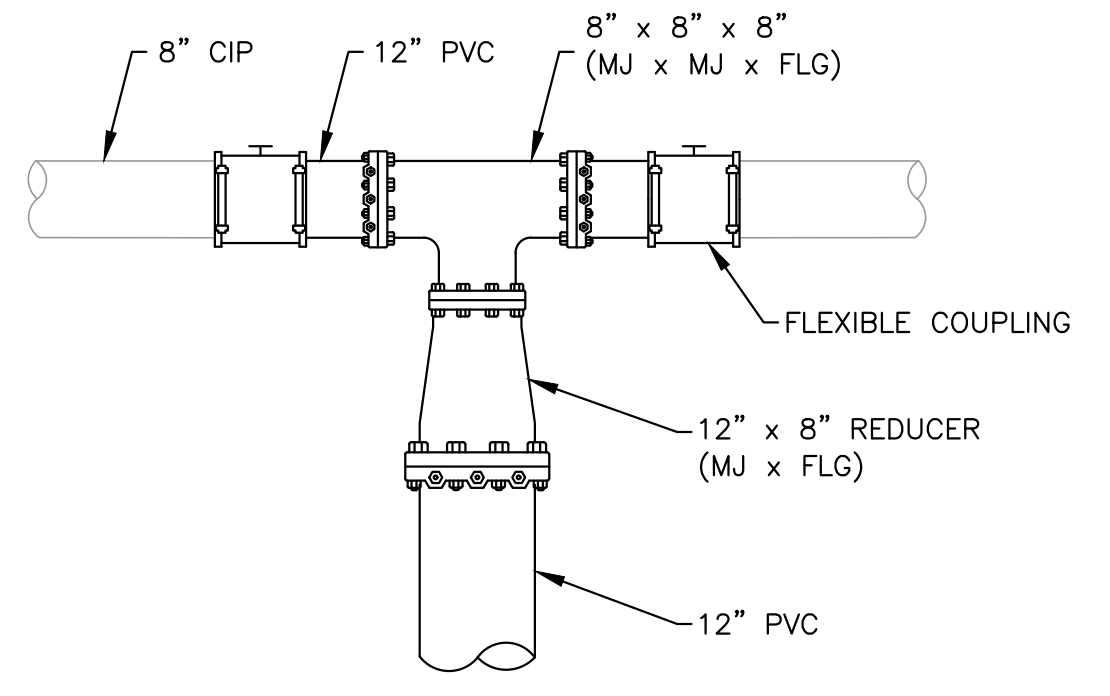
3 UNIVERSITY AVE & BAY RD CONNECTION
SCALE: NO SCALE



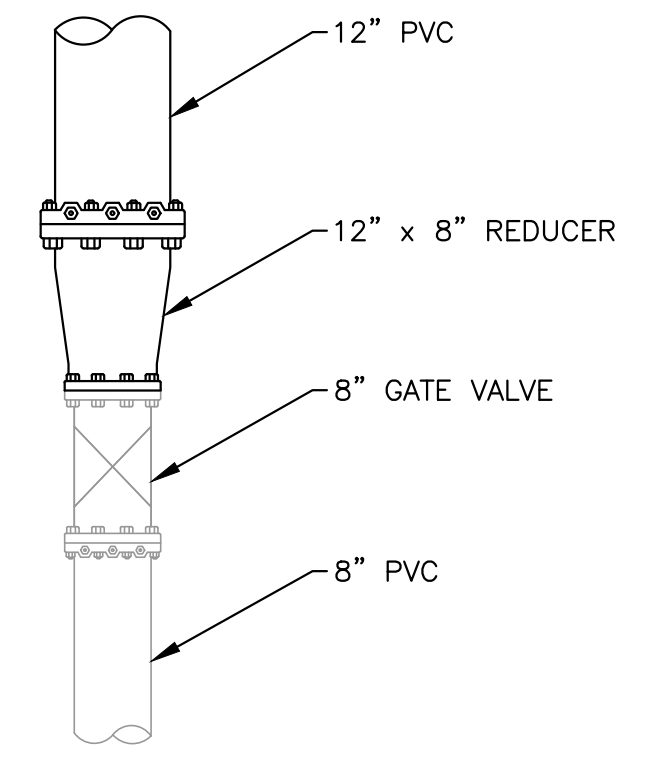
6 UNIVERSITY AVE & RUNNYMEDE ST CONNECTION (EAST SIDE)
SCALE: NO SCALE



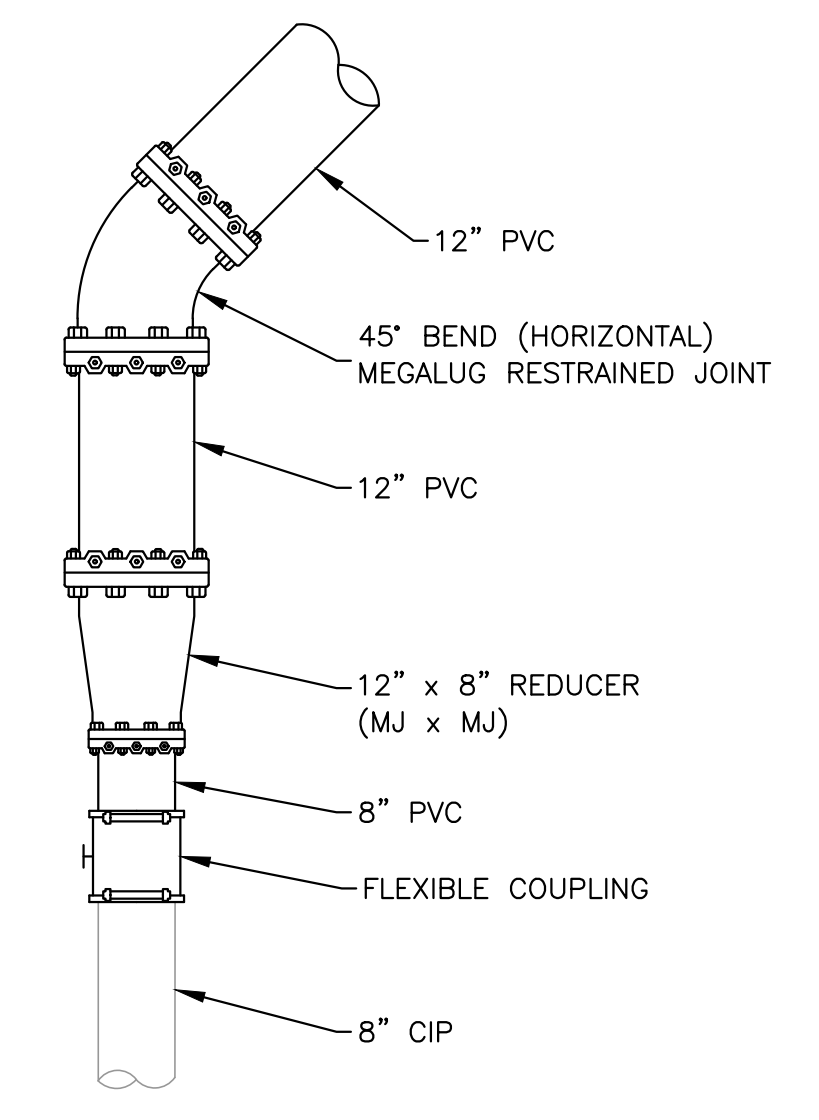
4 UNIVERSITY AVE & WEEKS ST CONNECTION
SCALE: NO SCALE



2 UNIVERSITY AVE & MICHIGAN AVE CONNECTION
SCALE: NO SCALE



5 UNIVERSITY AVE & SACRAMENTO ST CONNECTION
SCALE: NO SCALE



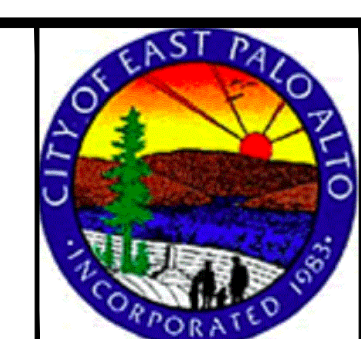
7 UNIVERSITY AVE & RUNNYMEDE ST CONNECTION (WEST SIDE)
SCALE: NO SCALE

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DATE:	08/01/23	08/01/23	BID SET
SCALE:	AS NOTED		
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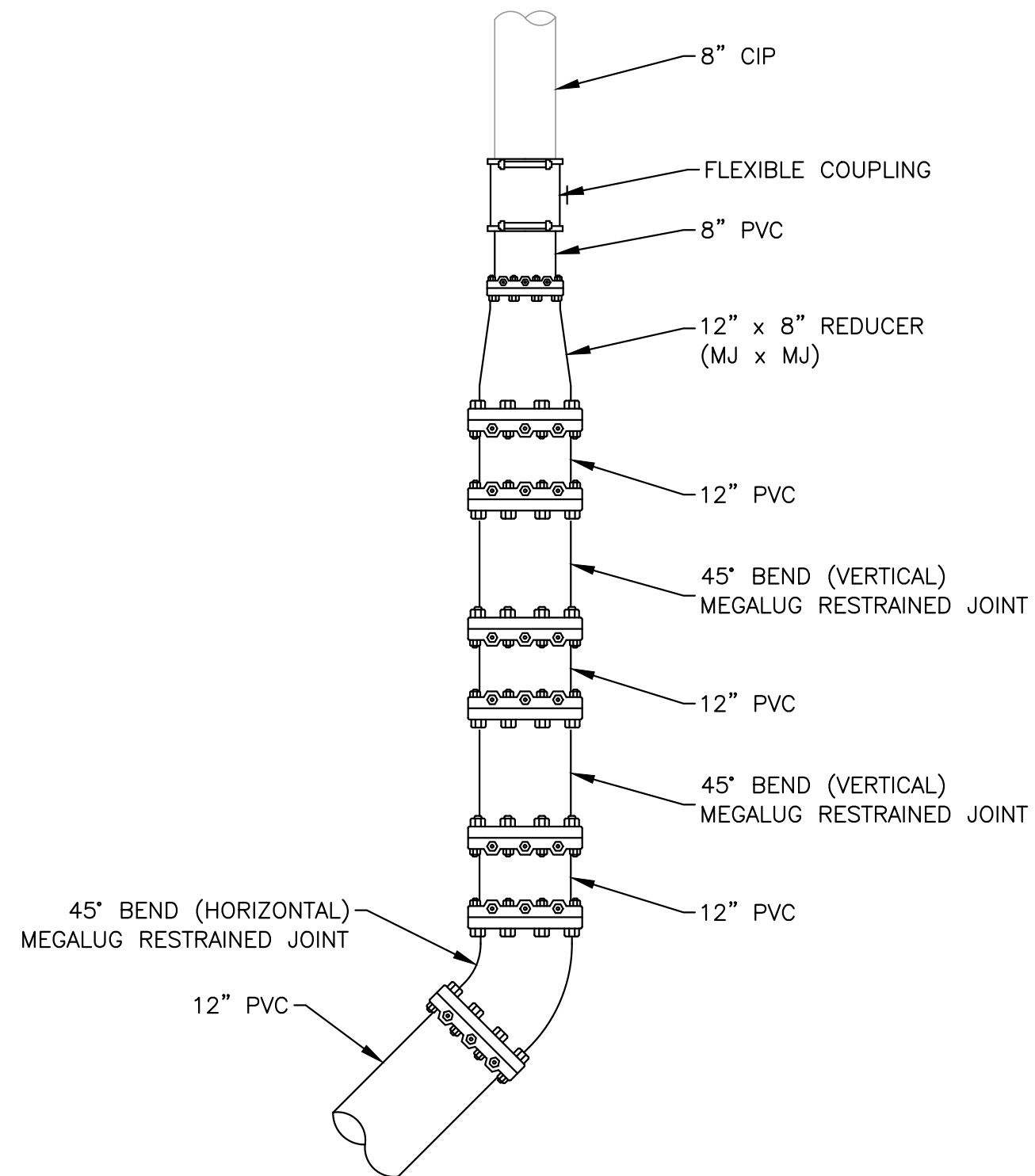


**UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO**

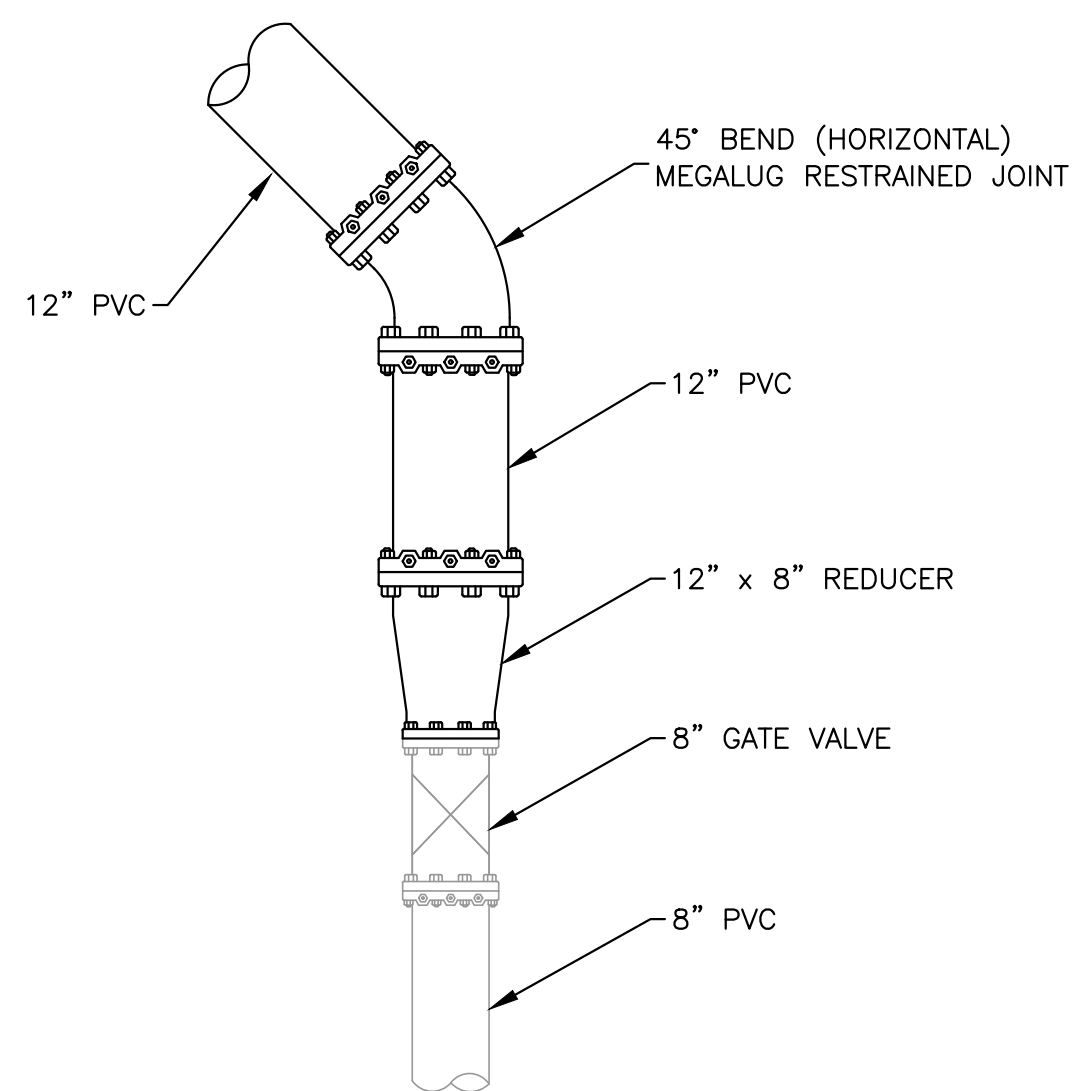
DETAIL SHEET

SHEET	D-05
JOB NO.	221005

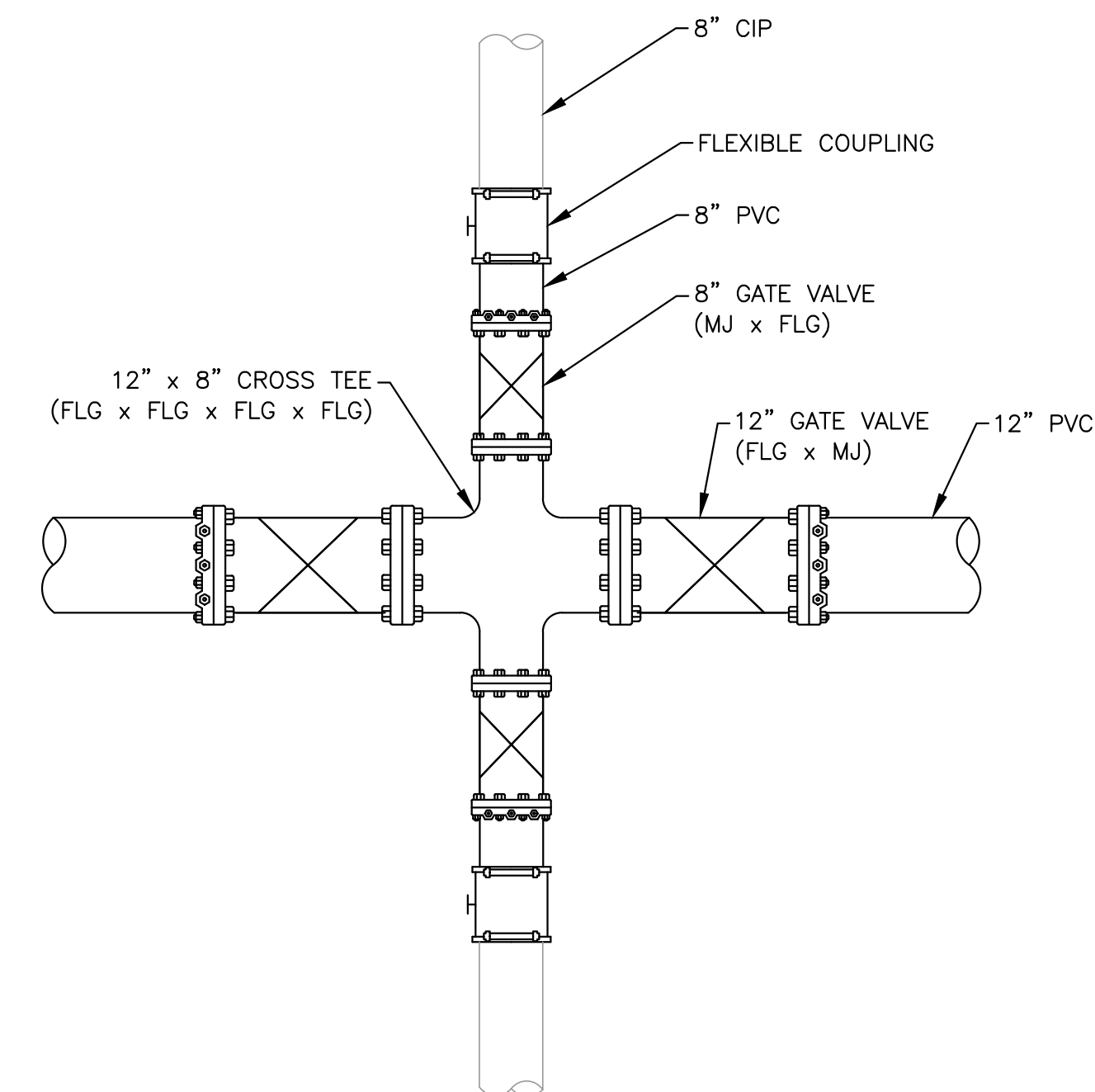
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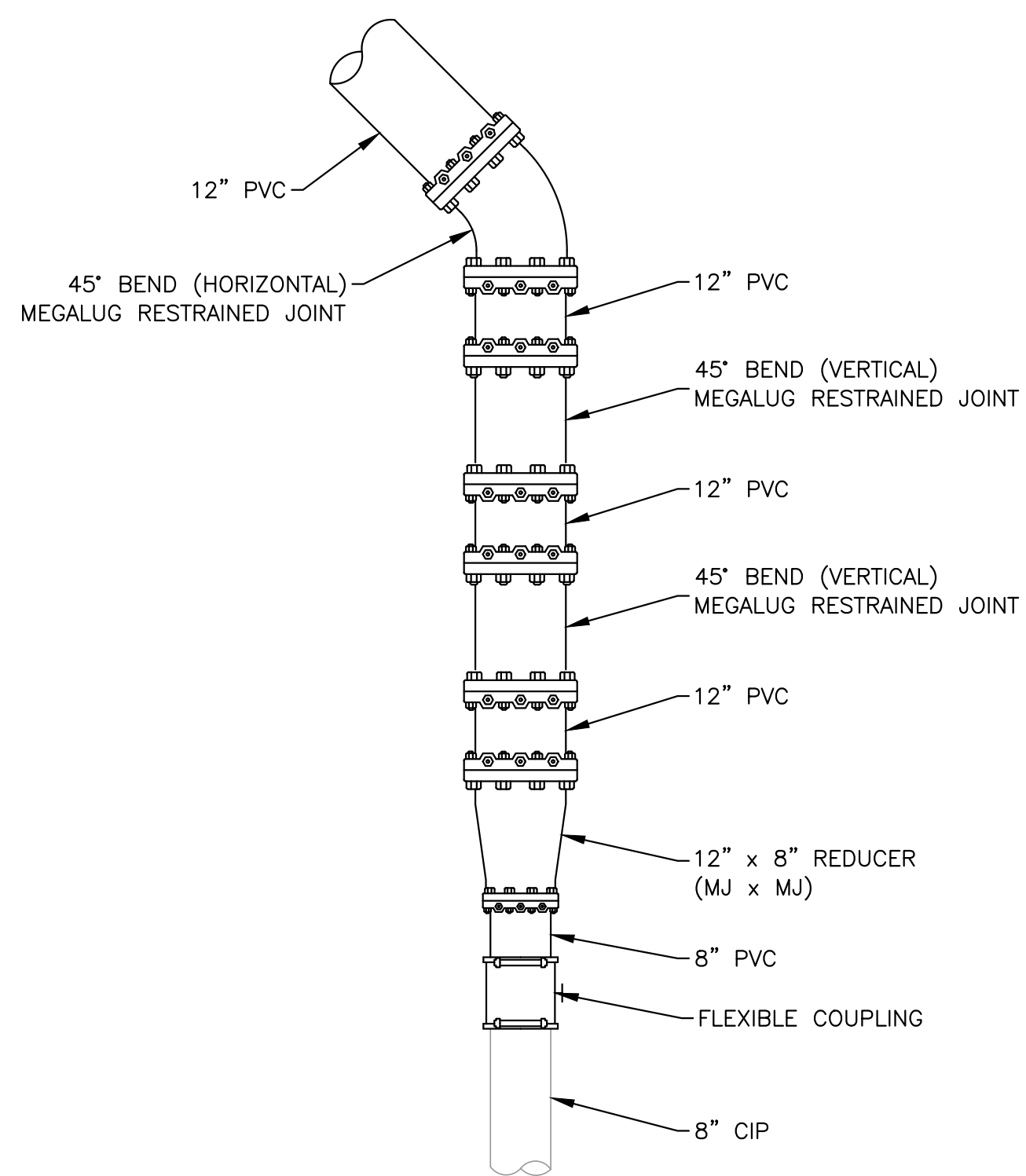
1 UNIVERSITY AVE & BELL ST CONNECTION (EAST SIDE)
 SCALE: NO SCALE



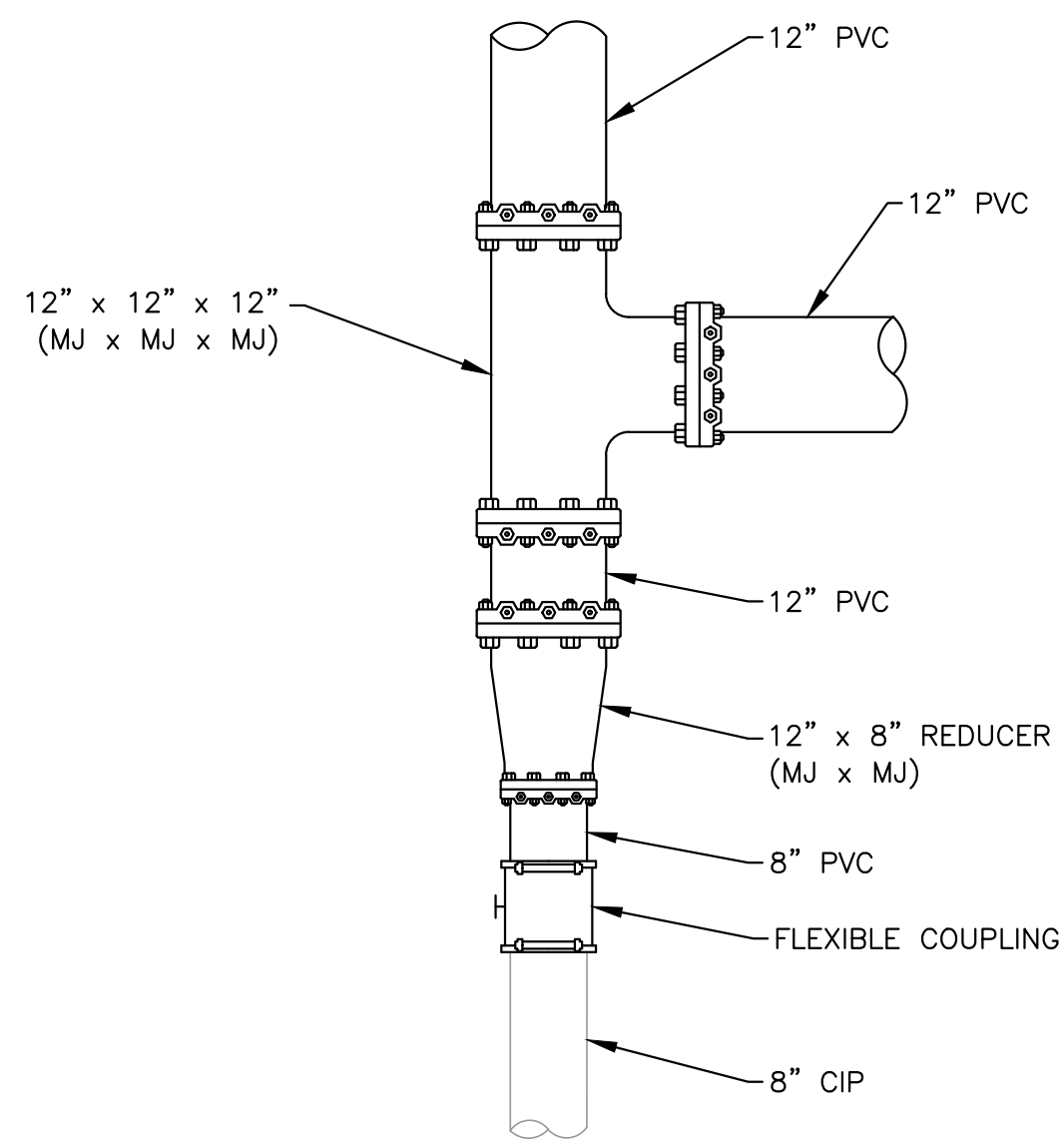
3 UNIVERSITY AVE & DONOHOE ST CONNECTION
 SCALE: NO SCALE



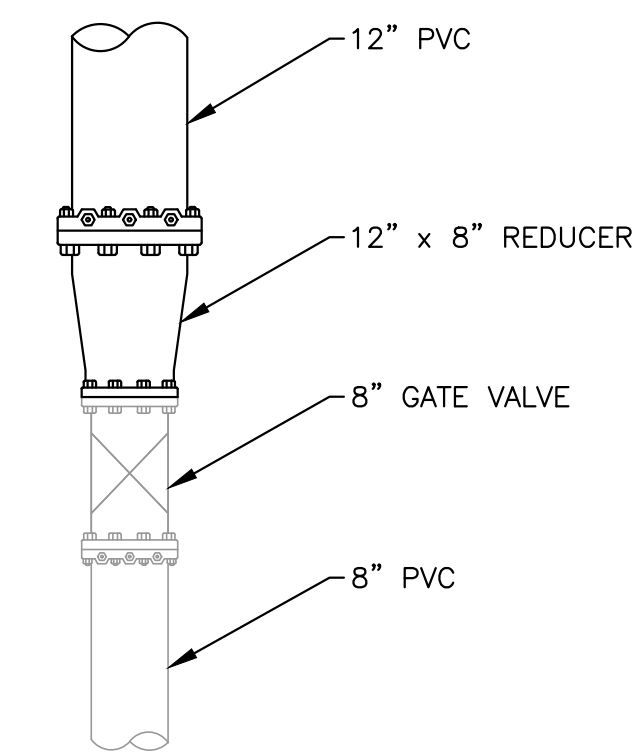
5 WEEKS ST & CLARKE AVE CONNECTION
 SCALE: NO SCALE



2 UNIVERSITY AVE & BELL ST CONNECTION (WEST SIDE)
 SCALE: NO SCALE

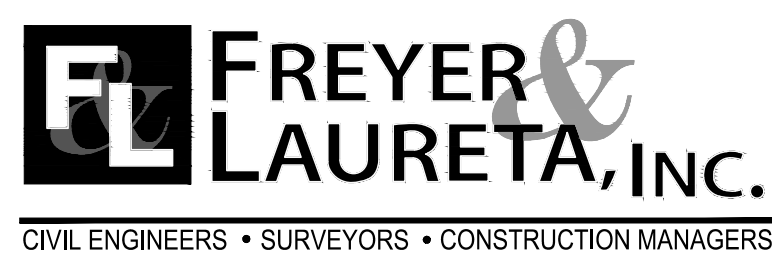


4 COOLEY AVE & WEEKS ST CONNECTION
 SCALE: NO SCALE

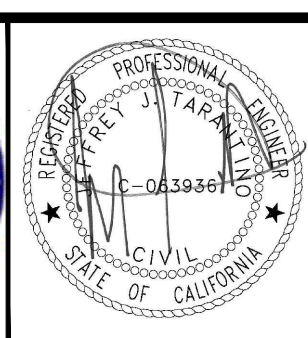


6 WEEKS ST & PULGAS AVE CONNECTION
 SCALE: NO SCALE

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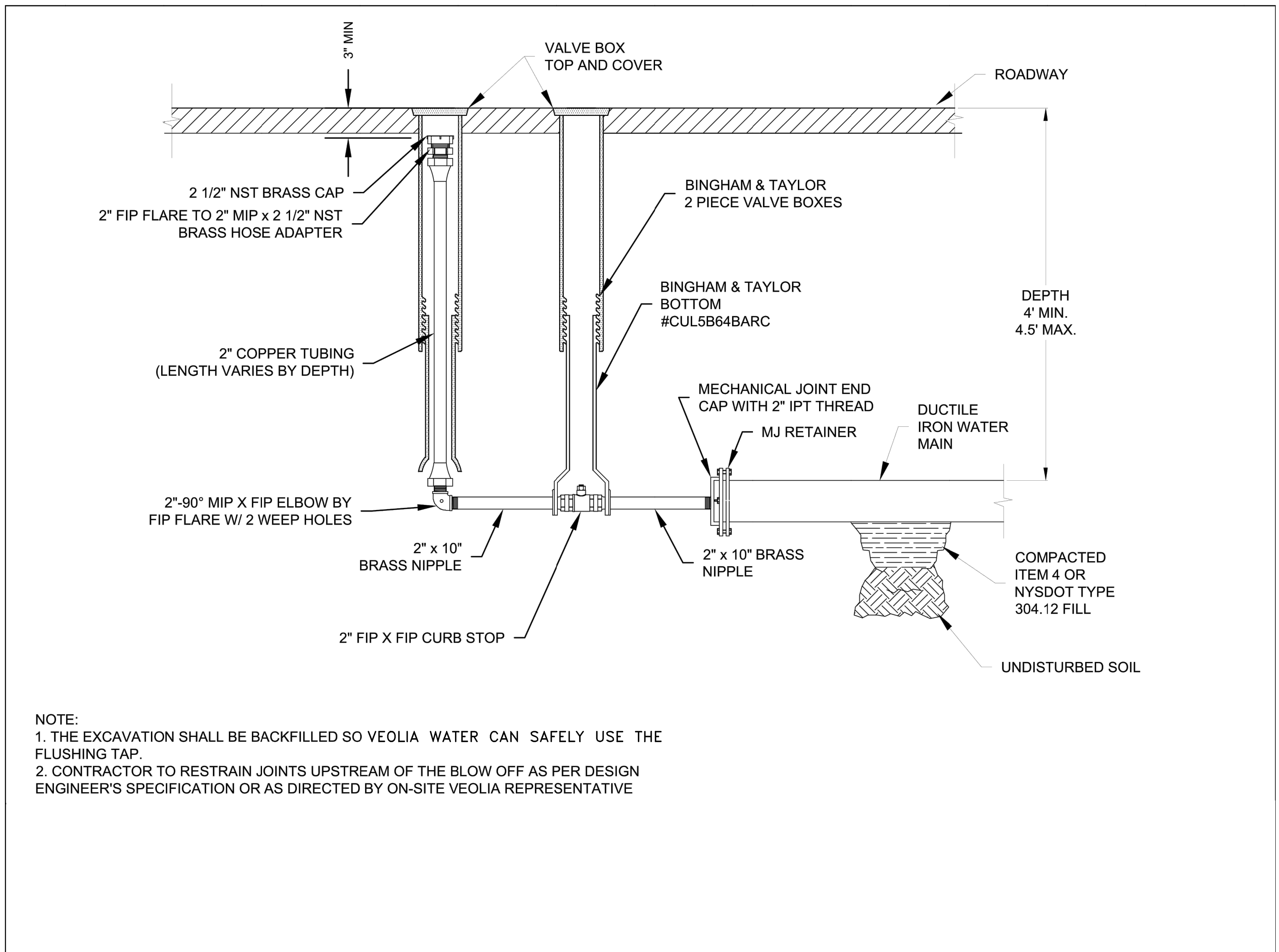
**UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO**

DETAIL SHEET

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D-06

JOB NO.
221005

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NOTE:
 1. THE EXCAVATION SHALL BE BACKFILLED SO VEOLIA WATER CAN SAFELY USE THE FLUSHING TAP.
 2. CONTRACTOR TO RESTRAIN JOINTS UPSTREAM OF THE BLOW OFF AS PER DESIGN ENGINEER'S SPECIFICATION OR AS DIRECTED BY ON-SITE VEOLIA REPRESENTATIVE

1 BLOW OFF ASSEMBLY
 SCALE: NO SCALE

DATE:	08/01/23	08/01/23	BID SET
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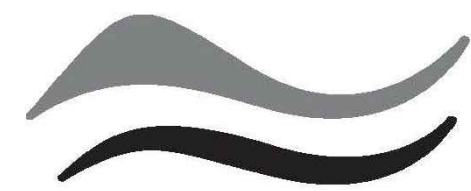
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 CITY OF EAST PALO ALTO

DETAIL SHEET

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JOB NO.	221005

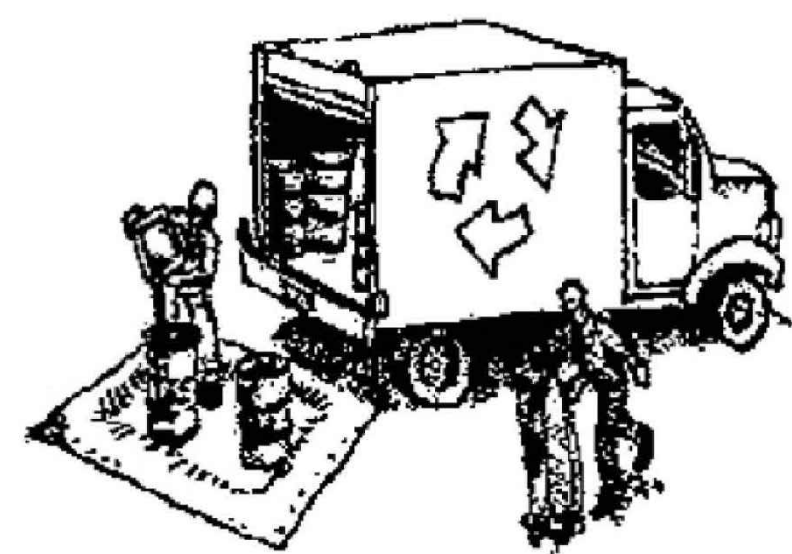


SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
 Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control



Maintenance and Parking

- Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, steam cleaning equipment, etc.

Spill Prevention and Control

- Keep spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- Clean up spills or leaks immediately and dispose of cleanup materials properly.
- Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthwork & Contaminated Soils



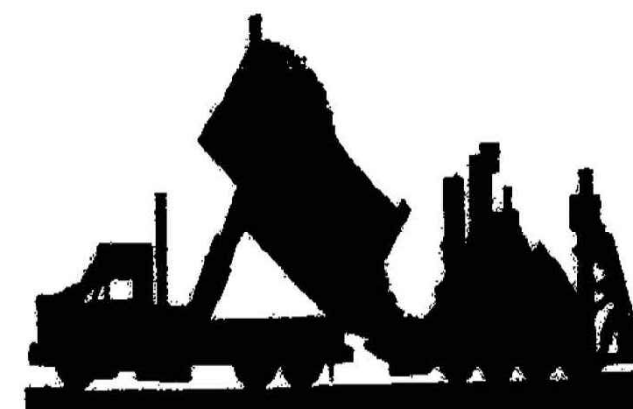
Erosion Control

- Schedule grading and excavation work for dry weather only.
- Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- Seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.

Sediment Control

- Protect storm drain inlets, gutters, ditches, and drainage courses with appropriate BMPs, such as gravel bags, fiber rolls, berms, etc.
- Prevent sediment from migrating offsite by installing and maintaining sediment controls, such as fiber rolls, silt fences, or sediment basins.
- Keep excavated soil on the site where it will not collect into the street.
- Transfer excavated materials to dump trucks on the site, not in the street.
- Contaminated Soils
- If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
 - Unusual soil conditions, discoloration, or odor.
 - Abandoned underground tanks.
 - Abandoned wells
 - Buried barrels, debris, or trash.

Paving/Asphalt Work



- Avoid paving and seal coating in wet weather, or when rain is forecast before fresh pavement will have time to cure.
- Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

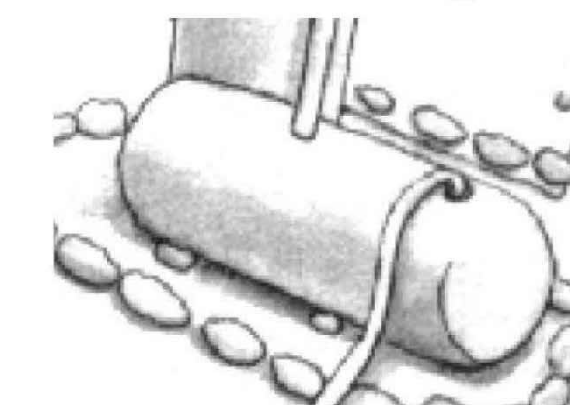
- Completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application



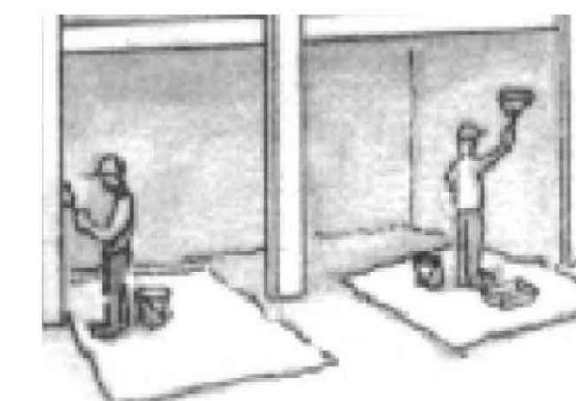
- Store concrete, grout and mortar under cover, on pallets and away from drainage areas. These materials must never reach a storm drain.
- Wash out concrete equipment/trucks offsite or in a contained area, so there is no discharge into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal offsite.

Dewatering



- Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Divert run-on water from offsite away from all disturbed areas or otherwise ensure compliance.
- When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine whether testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.

Painting & Paint Removal



Painting cleanup

- Never clean brushes or rinse paint containers into a street, gutter, storm drain, or surface waters.
- For water-based paints, paint out brushes to the extent possible. Rinse to the sanitary sewer once you have gained permission from the local wastewater treatment authority. Never pour paint down a drain.
- For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of residue and unusable thinner/solvents as hazardous waste.

Paint removal

- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead or tributyltin must be disposed of as hazardous waste.
- Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.

Landscape Materials



- Contain stockpiled landscaping materials by storing them under tarps when they are not actively being used.
- Stack erodible landscape material on pallets. Cover or store these materials when they are not actively being used or applied.
- Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

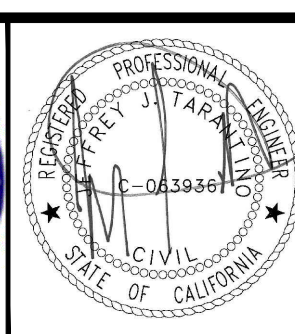
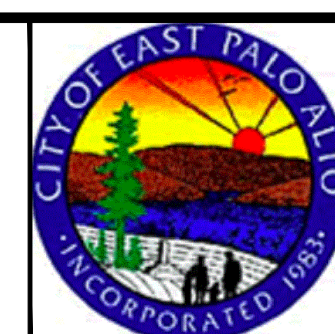
Storm drain polluters may be liable for fines of up to \$10,000 per day!

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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO

CONSTRUCTION BEST MANAGEMENT PRACTICES

SHEET

D-08

JOB NO.

221005

PART II – TECHNICAL SPECIFICATIONS

SEE FOLLOWING PAGES

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes (but is not necessarily limited to):
 - 1. Temporary barrier and protection systems.
 - 2. Security and Protection.
 - 3. Traffic control.

1.2 RELATED SECTIONS

- A. Section 015719—Temporary Environmental Controls

1.3 SUBMITTALS

- A. Pre-Job Submittals: At least four complete copies of the following Pre-Job Submittals shall be provided to the Owner's Representative and accepted as complete prior to starting any work at the site. The submittals shall be bound as a set, titled, and include a table of contents.
 - 1. Protections:
 - 1) Submit proposed barrier and protection systems to protect existing adjacent structures and surfaces including properties, trees, buildings, structures, overhead utilities, and other facilities, and prevent injury to persons during the work.
 - 2) Submit proposed barrier and protection systems to ensure safe passage of persons and traffic around and/or over areas of work.
 - 2. Traffic Control Plan: Submit a Traffic Control Plan in conformance with the City of East Palo Alto traffic control requirements including routing of trucks. The Traffic Control Plan shall also include:
 - 1) Spill prevention and control measures.
 - 2) Equipment fueling and maintenance.
 - 3. Encroachment Permit: Obtain and submit an Encroachment Permit from the City of East Palo Alto for work within the City's right of way (if necessary). If the City indicates an encroachment permit is not necessary, the Contractor shall comply with all City requirements presented on the General Conditions of Permit.
 - 4. Photographs: Prepare and submit a photographic record documenting the existing conditions of structures and surfaces (described above) within the limits of and adjacent to the work areas. Include documentation of the surface conditions of the streets at the approaches to the respective streets within which the work is being performed.

PART 2 - PRODUCTS

2.1 BARRICADES

- A. Furnish and maintain barricades, barricades with flashing yellow lights, signs and markings securing and demarcating excavated areas and for protection of the public in accordance with requirements of all federal, state and local codes and as herein specified.

PART 3 - EXECUTION

3.1 PROTECTIONS

- A. Construct barriers and protection systems to ensure safe passage of persons around and/or over areas of work as necessary.
- B. Conduct operations to prevent damage to existing adjacent structures and surfaces including properties, trees, buildings, structures, overhead utilities, and other facilities, and prevent injury to persons during the work.
- C. Contractor shall protect existing trees in accordance with the City of East Palo Alto Revised Tree Ordinance.
- D. Protect air quality in existing adjacent structures as necessary by protecting air intakes as necessary from dust and exhaust fumes.
- E. Protect and maintain benchmarks and survey control points from disturbance during construction.
- F. Protect live utilities and new utilities not yet activated and decommission abandoned utilities.
- G. Protect existing site improvements including the adjacent structures, utilities, pavements, landscaping, sidewalks, curb and gutter, driveways and streets.
- H. Remove protections at completion of work.

3.2 SECURITY AND PROTECTION

- A. General Security: Contractor is wholly responsible for security of the work areas and for prevention of unauthorized access. Contractor will not be compensated for theft of materials or equipment from the Site.
- B. Environmental Protection: Contractor shall provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

- C. Barricades, Warning Signs, and Lights: Contractor shall comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Contractor shall be responsible to protect all completed Work until final acceptance has been received from Owner Representative and formally documented.
- E. Temporary Fire Protection: Contractor shall install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241: Standard for Safeguarding Construction, Alteration, and Demolition Operations.
 - 1. Contractor shall prohibit smoking in construction areas and field offices. Smoking is only allowed outside of the Site boundary.
 - 2. Contractor shall supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Contractor shall develop and supervise an overall fire-prevention and protection program for personnel at the Site. Contractor shall comply with the Menlo Park Fire Prevention District requirements, establish procedures to be followed, instruct personnel in methods and procedures, and post warnings and information.
 - 4. Contractor shall perform work in accordance with the applicable Menlo Park Fire Protection Guidelines including maintaining fire equipment and other emergency equipment access through the work areas.

3.3 TRAFFIC

- A. Conduct all work including demolition operations and removal of debris in accordance with the Traffic Control Plan and to ensure minimum interference with roads, streets, walks, and other adjacent occupied or operational facilities.
- B. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from the City and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways as required by governing regulations.
- C. Staging of haul trucks, equipment, and materials shall be within the boundaries of the worksite and permitted by the City. Staging is not permitted on roadways and parking lots outside the worksite unless approved by the Owner's Representative and the City.
- D. Contractor shall not obstruct designated fire lanes and primary access routes.

3.4 OPERATION, TERMINATION, AND REMOVAL

- A. Maintenance: Contractor shall maintain facilities and protections in good operating condition until removal.

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- B. Termination and Removal: Contractor shall remove temporary facilities and protections when its service has ended.

END OF SECTION 01 50 00

SECTION 02 40 10

DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Demolition activities include all planning, administration and execution necessary to safely:
 - 1. Demolish, remove and dispose of existing curbs, concrete and asphalt concrete pavements as necessary to abandon the existing water line and appurtenances and install new water main, new water service laterals and appurtenances.
 - 2. Abandon existing water main and associated appurtenances.
 - 3. Remove select existing above grade and below grade water line piping, structures, and appurtenances as indicated on the Drawings.
 - 4. Assume ownership of debris and unwanted materials; remove from the site and dispose of legally and in accordance with applicable Federal, State, and local requirements. Sale of removed items or materials onsite shall not be permitted.
- B. All work shall be performed in strict accordance to latest requirements of EPA, OSHA, and other applicable Federal, State, and local requirements.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions.
- B. Section 01 50 00 – Temporary Facilities and Controls.
- C. Section 01 57 19 – Temporary Environmental Controls.
- D. Section 31 23 11 – Trenching and Backfilling.
- E. Section 31 25 10 – Erosion Control.

1.3 REFERENCE STANDARDS

- A. Drawings and general provisions of Contract, including General Conditions.
- B. City of East Palo Alto Standard Details.
- C. 29 Code of Federal Regulations 1926

1.4 SITE PREPARATIONS

- A. Demolition activities shall not commence until temporary erosion, sedimentation, and dust control measures are in place.
- B. Utility Location: Contractor shall notify Under Ground Service Alert (USA) a minimum of 48 hours before performing intrusive activities. Contractor shall utilize a utility locator to confirm utility locations within the limits of work and pothole to verify utility location. Contractor shall not perform invasive activities until the start time indicated on the USA ticket or after two working days (whichever is later) has passed.

1.5 SUBMITTALS

- A. Chain of Custodies for all disposed materials including weigh tickets and disposal documentation from disposal location.
- B. Results of Utility Location Survey: Contractor shall submit to Engineer results of the utility survey, including a copy of the USA ticket.

1.6 WORKSITE CONDITIONS

- A. Traffic: Contractor shall be aware of the hazards that may arise from vehicles moving within and adjacent to the limits of work. The work occurs within an active street that may include residential, commercial and construction related traffic.
- B. Occupancy: Contractor shall be aware that the work occurs within a residential neighborhood. The Contractor is responsible for protecting all pedestrians, residents and resident properties within and near the work areas.
- C. Condition of Site: The City assumes no responsibility for actual condition of site. Conditions existing at the time of bidding will be maintained by the City insofar as practicable.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SITE IMPROVEMENTS

- A. Contractor shall remove existing above- and at-grade existing water line features, pavements or other surface materials as necessary to complete the project.
- B. Contractor shall remove paving section to full depth. Contractor shall neatly saw cut pavements where specified leaving a clean vertical face.
- C. Contractor shall abandon the existing cast iron pipe (CIP) water main in place as indicated on the drawings. Contractor shall plug the open ends of abandoned CIP with concrete by completely sealing the first 12 inches (min.) with concrete.

3.2 DAMAGES

- A. Promptly repair damages caused to adjacent facilities by demolition operations to the satisfaction of the Owner's Representative, and at no cost to the Owner.
- B. The Owner and the Owner's Representative shall be notified of any damage to adjacent facilities.
- C. Repair procedures must be approved by the Owner's Representative.

3.3 UTILITY SERVICES

- A. Maintain and protect existing utilities not designated for abandonment.
- B. Do not interrupt existing utilities except when authorized in writing by the Owner's Representative. If interruptions are necessary, Contractor shall provide temporary services during interruptions as acceptable to the Owner's Representative.

END OF SECTION 02 40 10

SECTION 31 23 19

DEWATERING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Specifications and procedure for the de-watering of excavations and disposal of water.

1.2 SUBMITTALS

- A. Prior to installation of the de-watering system, submit shop drawings and design data indicating the following:
 - 1. The proposed type of de-watering system
 - 2. Arrangement, location and depths of system components
 - 3. Complete description of equipment and instrumentation to be used, with installation, operation and maintenance procedures
 - 4. Methods of disposal of pumped water
 - 5. Necessary permits for water disposal

1.3 RELATED REQUIREMENTS

- A. Section 31 23 33, "Trenching and Backfilling"
- B. Section 33 14 13, "Domestic Water"

PART 2 PRODUCTS

2.1 EQUIPMENT

- A. Furnish all materials, tools, equipment, facilities, and services as required for providing the necessary de-watering work and facilities.
- B. Provide backup equipment as necessary for the replacement and for unanticipated emergencies.

PART 3 EXECUTION

3.1 DE-WATERING

- A. Keep excavation and drilled shaft foundations reasonably free from water during construction.
- B. Disposal of water shall not damage property or create a public nuisance. Contractor is responsible for obtaining a discharge permit at no additional cost to the City.

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- C. Have on hand pump equipment and machinery in good working condition for emergencies and workmen available for its operation.
- D. De-watering systems shall operate continuously until drilled shaft foundations are poured.
- E. Groundwater shall be controlled to prevent softening of the bottom of excavations, or formation of “quick” conditions.
- F. De-watering systems shall not remove natural soils.
- G. Control surface runoff to prevent entry or collection of water in excavations.
- H. Extracted groundwater shall be stored, transported and disposed of and/or treated and discharged in accordance with applicable local, state and federal requirements.
- I. De-watering shall be limited to within the extent of the outer bentonite/concrete slurry wall or excavation trench.

END OF SECTION 31 23 19

SECTION 31 23 23

CONTROLLED DENSITY FILL

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Controlled Density Fill where called for on the plans.

1.2 REFERENCES

- A. Standards listed below apply where designation is cited in this Section. Where the applicable year of adoption or revision is not listed below, the latest edition applies.
- B. ASTM – American Society for Testing and Materials.
 - 1. C94 – Standard Specification for Ready-Mixed Concrete.
 - 2. C150 – Standard Specification for Portland Cement.
 - 3. C260 – Standard specification for Air-Entraining Admixtures for Concrete.
 - 4. C494 – Standard Specification for Chemical admixtures for Concrete.
 - 5. C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in concrete.
 - 6. D4832 – standard Test method for Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders.
 - 7. D5971 – Standard practice for Sampling Freshly Mixes Controlled Low Strength Material.
 - 8. D6023 – Standard Test Method for Density (Unit Weight) Yield, Cement Content, and Air Content (Gravimetric) of Controlled Low Strength Material (CLSM).
 - 9. D6024 – Standard Test Method for Ball Drop on Controlled Low Strength Material (CLSM) to Determine Suitability for Load Application.
 - 10. E329 – Standard Specification for Agencies Engaged in Construction Inspection, Special Inspection, or Testing Materials Used in construction.
- C. CBC – California Building Standards Commission’s “California Building Code”, 2010 Edition.

1.3 SUBMITTALS

- A. Submit the following:

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- B. Materials certificate for Controlled Density Fill materials, including cements, aggregates, fly ash and admixtures.
 - 1. Conform to requirements of City Standard General Concrete Notes.
- C. Controlled Density Fill Mix Design in accordance with applicable requirements of City Standard General Concrete Notes.
- D. Samples as requested by Testing Laboratory or City's Representative.
- E. Laboratory test reports documenting physical properties of the Controlled Density Fill.

1.4 QUALITY ASSURANCE

- A. The Controlled Density Fill Installer shall use skilled workers who are experienced and familiar with the requirements and the methods for proper performance of this work.

PART 2 PRODUCTS

2.1 PRODUCTS

- A. Materials:
 - 1. Portland Cement: ASTM C 150, Type I or Type II.
 - 2. Fly Ash: ASTM C618, Class F. Fly ash shall not inhibit air entrainment
 - 3. Water: Clean and potable, free from impurities detrimental to concrete.
 - 4. Air- Entraining Admixture: In accordance with ASTM C260, air content shall not exceed 10 percent.
 - 5. Aggregate: On-site screened sandy soils with 10 to 20 percent fines passing through a No. 200 sieve. Controlled Density Fill Mixture shall contain no aggregate larger than 3/8-inch. No plastic fines (clay fines) shall be present.

2.2 PROPERTIES

- A. The Controlled Density Fill Material shall consist of machine-mixed, self-compacting, low-strength fill consisting of fine aggregate, cementitious materials, entrained air, and water. Mix and Mixing shall conform to the recommendations of ACI 229R to achieve the following properties:
 - 1. Slump: 8 to 10 inches
 - 2. Compressive Strength for Controlled Density Fill: Minimum 50 psi to maximum 100 psi at 28 days
 - 3. Fresh Density: 115 to 145 pounds per cubic foot
 - 4. Subsidence: a maximum of 1/16-inch per foot of thickness

2.3 EQUIPMENT

- A. The batching, mixing, and placing equipment shall be automated with bulk handling equipment. Bulk cement shall be weighed on a scale that operates within a tolerance of 2 percent per batch.

2.4 SOURCE QUALITY CONTROL

- A. Inspection and Testing will be performed by the City as necessary.
- B. Testing Laboratory will:
 - 1. Review certificates of compliance for materials Contractor proposes to use.
 - 2. Provide Special Inspection where materials are measured similar to accordance with CBC 1704A.4.2. Inspection may be waived, subject to requirements of CBC 1704A.4.3.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Examine the areas where work of this Section will be performed. The Contractor shall correct conditions detrimental to timely and proper completion of the work before installation begins.
- B. Areas to receive Controlled Density Fill shall not have standing water or debris.
- C. Items to be encased in the Controlled Density Fill shall be set, stabilized, and anchored as required to prevent movement or flotation of the encased item during the installation or the Controlled Density Fill.
- D. Ensure that items to be encased in the Controlled Density Full are capable of with standing the horizontal and vertical pressures of the fluid Controlled Density fill during installation of the Controlled Density Fill without overstress.
- E. Ensure forms are substantial and rigid, true to line and dimension. Forms shall be capable of withstanding the horizontal lateral pressures of the fluid Controlled Density Fill during installation of the Controlled Density Fill without overstress.
- F. Protect finished surfaces adjacent to Controlled Density Fill receiving places. Ensure that existing surfaces and elements adjacent to the Controlled Density Fill are capable of with standing the horizontal and vertical pressures of the fluid Controlled Density fill during installation of the Controlled Density Fill without overstress.

3.2 PLACING

- A. Installer is to use automated job site batching, mixing, and placing equipment.

- B. Mix materials and convey promptly to the point of placement.
- C. Controlled Density Fill is to be cast in lifts.
- D. Controlled Density Fill material shall be placed in the excavations and trenches to be backfilled to the indicated levels in level layers. Do not perform any vibratory consolidation or compaction.
- F. Equipment, traffic, or backfill shall not be permitted on the Controlled Density Fill until the Controlled Density Fill has attained 70 percent of the specified minimum compressive strength, or until the surface of the Controlled Density Fill will with stand the weight of the equipment, traffic or backfill without displacement or damage to the Controlled Density Fill or the encased items.

3.3 CLEANING, PATCHING AND DEFECTIVE WORK

- A. Clean up and dispose of excess materials.

3.4 FIELD QUALITY CONTROL

- A. Inspection and Testing will be performed by the City as necessary.
- B. Testing Laboratory will:
 - 1. Special Inspect Controlled Density Fill placement, similar as required by CBC 1704A.4 for conformance with the Contract documents.
- C. City Testing Laboratory shall:
 - 1. During placement of the initial batches, check density and adjust the mix as required to obtain the specified cast density at the point of placement.
 - 2. Take four test specimens for each 300 cubic yards of Controlled Density Fill placed, or every four hours of placing.
 - a. Specimens shall be 6-inch diameter x 12-inch high cylinders.
 - b. Cylinders are to be covered after casting to prevent damage and loss of moisture.
 - c. Moist cure the specimens at least up to 7 days prior to a 28-day compressive strength test.
 - d. Specimens may be tested at any age to monitor the compressive strength.
 - e. Compressive strength tests shall be in accordance with ASTM D4832.

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- D. The Contractor shall:
1. Pay Testing Laboratory for investigating out-of-specification test results in accordance with CBC Section 1905A.6.4.

END OF SECTION 02223

SECTION 31 23 33

TRENCHING AND BACKFILLING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Trenching or excavation and backfilling for utility systems, and related appurtenances.
2. Excavation and backfilling for structures including dewatering, sediment control, and other items of earthwork as shown on Drawings and specified herein.

B. Related Documents and Reference Standards:

1. Drawings and general provisions of Contract, including General Conditions.
2. City of East Palo Alto Standard Details.
3. Occupational Safety and Health Administration (OSHA), 29 Code of Federal Regulations 1926.
4. 2006 California Department of Transportation (CalTrans) Standard Specifications.
5. State of California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), Title 8, Subchapter 4 Construction Safety Orders.

C. Related Sections:

1. Section 01 15 00 – Temporary Facilities and Controls
2. Section 02 40 10 – Demolition
3. Section 31 23 23 – Controlled Density Fill
4. Section 33 14 13 – Domestic Water

1.2 SUBMITTALS

A. Product Data:

1. Product data for each material type indicating compliance with requirements specified for approval prior to start of work.

B. Certifications:

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1. Contractor shall submit the name and contact information for all proposed material sources and certifications from the manufacturer or supplier that the materials are from a new source, not recycled, and are free of any dredge sand and free of any chemical contamination for the following materials.
 - a. Angular Bedding Material
 - b. Structural Backfill
 - c. Sand
 - d. CDF
2. Contractor shall submit certificate of compliance indicating that all materials comply with the specifications.

C. Underground Service Alert (USA):

1. Contractor shall comply with California Government Code 4216.
2. Contractor shall submit documentation of USA performance.

1.3 SHEETING SHORING AND BRACING

- A. For all excavations, greater than five (5) feet in depth, Contractor shall design, maintain, and install sheeting, shoring, and/or bracing. Sheeting, shoring and bracing shall be designed and certified by a professional Civil or Structural engineer licensed in the state of California. Sheeting, shoring and/or bracing shall be designed and installed per regulatory requirements of Cal/OSHA, California State Labor Code and the UBC. Design shall consider Project soils, seismic requirements, and other constraints.
- B. Where sheet piling is used as shoring, and is to be removed after backfilling, it shall be placed a minimum of two (2) feet away from existing pipes/conduits.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable requirements of federal, state and local laws, regulations and codes having jurisdiction at project site.
- B. Reference Standards: Applicable requirements of standards and specifications referenced herein apply to the work of this Section.

1.5 PROJECT CONDITIONS

- A. Coordination: Coordinate this work with the work of other Sections to avoid any delay or interference with other work.
- B. Cooperation: Coordinate this work with the work of other Sections to avoid any delay in the progress of this project or any interference with the progress of other work.
- C. The Contractor shall be responsible for the cost of preparing the site for the proposed construction including excavation, stockpiling, removal, and replacement of material to the depth and extent specified or shown on the Drawings for installation of all site improvements associated with abandonment and installation of water utilities and water

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utility structures. The cost for this shall be included in the Contractor's base bid and shall be at no additional cost to the Owner.

D. Existing Utilities:

1. Contractor is responsible for verification of actual location of utilities prior to commencement of work. Contractor shall mark out limits of invasive work in accordance with Underground Service Alert (USA) protocol and shall notify USA a minimum of 48 hours prior to performing invasive activities. Contractor shall not perform invasive work until USA respondents have completed utility location mark outs.
2. Existing utility locations indicated on the drawings are approximate and based on limited available information. There may be additional existing utilities not shown on the plans. Contractor shall be careful to avoid damage to any existing utility lines and services.
3. Contractor shall pothole and locate top of existing utilities at new water pipe crossings.
4. Perform other necessary exploratory tests for existing utility location if necessary. The City and the City representative will assume no responsibility for hazardous conditions, losses and accidents arising out of failure to verify location of existing utilities.
5. Should unanticipated utilities be encountered during excavation, Contractor shall stop work and consult City representative immediately for directions.
6. If existing utilities are damaged Contractor shall be responsible for the cost of the repair. Contractor shall cooperate with the utility owner to keep the respective services and facilities in operation. Contractor shall repair damaged utilities to the satisfaction of utility owner.
7. Location of gas and electrical service lines are approximate only.
8. Contractor shall visit site prior to performance of work and observe the type and location of overhead utilities in the work areas and plan execution of work accordingly.

E. Disposition of Utilities:

1. Observe rules and regulations governing respective utilities during execution of work of this Section.
2. Adequately protect all active utilities and utilities not designated for abandonment from damage.
3. Remove, plug or cap utilities verified as inactive or abandoned that are encountered within excavation and trench limits.

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4. Remove or abandon in place existing ACP water line and water line appurtenances as designated on the Drawings.
- F. Benchmarks, Monuments, and Other Reference Points: Protect from damage and displacement; if disturbed or destroyed, replace at Contractor's expense.
- G. Protection:
1. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
 2. Protect and bridge trenches that cannot be properly completed within a work day with temporary steel plate bridging.

PART 2 PRODUCTS

2.1 MATERIALS – GENERAL

- A. Pipeline Backfill
1. The design mix for import backfill including angular pipe bedding material, structural backfill and sand shall comply with construction documents.
 2. The design mix for CDF backfill shall comply with Section 31 23 23.
 3. Structural backfill shall also be comprised of non-expansive soil with a liquid limit no greater than 40% and a plasticity index no greater than 15%, free from clods or rocks larger than 2 inches in greatest dimension, and free from organic material.
- B. Temporary Steel Plate Bridging
1. Plates shall be of steel construction capable of supporting HS-20 loading.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas in which work is to be performed. Report in writing to Owner of all prevailing conditions that will adversely affect satisfactory execution of work. Do not proceed with work until unsatisfactory conditions have been corrected.
- B. Starting work constitutes acceptance of the existing conditions and the Contractor shall then, at his expense, be responsible for correcting all unsatisfactory and defective work encountered.

3.2 PREPARATION

- A. All work shall be performed in a conformance with the applicable requirements of the State of California Department of Industrial Relations, Division of Occupational Safety

and Health (Cal/OSHA), Title 8, Subchapter 4 Construction Safety Orders.

- B. Physical verification of utility locations shall be performed by potholing or hand digging and careful subsurface probing in conformance with Article 6 of the CAL/OSHA Construction Safety Orders. Any deviations from locations shown on plans shall be brought to the Owner Representative's attention before starting construction.

3.3 BRACING, SHEETING AND SHORING

- A. Pursuant to State law, all open excavations greater than five feet in depth shall be constructed with bracing, sheeting, shoring or other equivalent method designed for the protection of life and limb. The Contractor must at all times comply with the requirements of the construction safety orders of the Division of Occupational Safety and Health (Cal/OSHA).
- B. The contract price shown in the Proposal shall include all costs relating to trench safety and shoring of excavations. Changes in the support systems directed by the City to insure compliance with the Safety Orders, or changes required to accommodate conditions encountered in the field, will not be considered extra work and no extra payment will be forthcoming as a result of the changes required.

Where sheet piling, shoring, sheeting, bracing or other supports are necessary, they shall be furnished, placed, maintained and, except as shown or specified otherwise, removed by the Contractor.

The design, planning, installation and removal, if required, of all sheeting, shoring, sheet piling, lagging and bracing shall be accomplished in such a manner as to maintain the required excavation or trench section and to maintain the undisturbed state of the soils below and adjacent to the excavation.

The use of horizontal strutting below a pipe barrel or the use of the pipe as support for trench bracing will not be permitted. The use of the soldier pile and horizontal lagging method of support or the use of a traveling shield shall require the prior written acceptance of the City. Sheet piling and timbers in trench excavations shall be withdrawn in a manner so as to prevent subsequent settlement of a pipe or additional backfill loading which might overload the pipe.

When the construction sequence of structures requires the transfer of bracing to the completed portions of any structure, the Contractor shall secure written acceptance of the City prior to the installation of such bracing.

California Labor Code Section 6705, and all applicable Construction Safety Orders and shoring system standards with respect to excavation and construction shall be strictly observed at all times.

- C. The Contractor shall appoint a project safety supervisor who shall, by training and experience, be fully qualified to supervise the installation, maintenance and removal of sheeting, shoring and bracing. The project safety supervisor shall have full authority over the work in all job safety matters and shall be present at all times when work is in progress in excavations and trenches greater than five feet in depth.

- D. The above-stipulated requirements shall be considered the minimum to be provided. It shall be the Contractor's responsibility to provide the additional strength required to support the sides of the excavation against loads that may exceed those employed to derive the criteria set forth in the Industrial Safety orders. The Contractor shall be solely responsible for any and all liabilities which may arise from his failure to provide adequate shoring, bracing or sheeting as necessary to support the excavation under any and all of the conditions of loading which may exist or which may arise during construction of the project.

3.3 TRENCHING AND BACKFILLING FOR UTILITY SYSTEMS

A. Trench Excavation:

1. Sawcut existing AC Pavement Section. Contractor shall be aware that City roads may have concrete bases that will need to be sawcut as well.
2. Excavate to necessary width, depth and alignment for proper material installation. Cut trench banks as nearly vertical as practicable, but to safety standards of governing authorities.
3. Accurately grade trench bottoms to provide uniform bearing and support for each pipe section on undisturbed soil along full pipe length, except for areas where necessary to excavate for bell holes and for sealing pipe joints. Dig holes and depressions for joints after trench bottom has been graded, so pipe rests on prepared bottom for full length. Remove all stones to avoid point bearing.
3. Remove wet or otherwise unstable or unacceptable material encountered beyond depths indicated and replace with sand, gravel or concrete.
4. All costs associated with hand excavation shall be included into the cost of the item installed. Contractor shall be aware of the existing field conditions prior to the commencement of work.

- B. The Contractor shall perform his work in such a manner as not to harm the undisturbed condition of the underlying or adjacent soils or damage or prevent the proper placement of fill. When in the opinion of the City, natural soils or fill are damaged or disturbed by the operations of the Contractor, thereby precluding the utilization of the site as planned, the Contractor shall correct such damage or disturbance. Corrections shall be as directed by the City and may include, but not be limited to, the removing of natural and fill foundation soils both laterally and vertically and replacing with compacted fill to the required grades or the construction of alternative methods of support. The cost of any such repair, rehabilitation or modification shall be borne by the Contractor.

C. Dewatering:

1. Prevent ground and subsurface water from flowing into excavations, from flooding project site and surrounding properties, and from collecting and ponding; provide and maintain all temporary drainage and dewatering systems required.
2. Install pumps, sumps and suction and discharge lines, as required.
3. If water is encountered during excavation, install pumps of capacity to remove water while excavations are being made, pipe and appurtenances are being

installed and the excavations backfilled.

- D. Backfilling: Contractor shall place backfill on suitable subgrades that are free of mud, frost, snow or ice.
- E. Angular Bedding: Place angular bedding backfill material in horizontal layers not exceeding 12 inches in loose depth. Fill material shall have a moisture content such that the required degree of compaction may be obtained. Each layer shall be compacted by power-operated tampers, rollers, or other suitable equipment to an in-place dry density of 90 percent relative compaction as determined by the City in accordance with the Test Method of ASTM D1557. Each layer shall be compacted to the specified density prior to placing subsequent layers.
- F. Structural Backfill: Place structural backfill material in horizontal layers not to exceed 8 inches in loose depth. Fill material shall have a moisture content such that the required degree of compaction may be obtained. Each layer shall be compacted by power-operated tampers, rollers, or other suitable equipment to an in-place dry density of 95 percent relative compaction as determined by the City in accordance with the Test Method of ASTM D1557. Each layer shall be compacted to the specified density prior to placing subsequent layers.
- G. CDF: Place CDF in specified locations as specified in Section 31 23 23 Controlled Density Fill.
- H. Grading: The finished roadway (aggregate base and asphalt concrete) shall match the existing grades and shall be constructed to the requirements of the City. Contractor shall arrange for inspection of roadway finish with the City. The new roadway finish shall match the existing roadway finish.

3.4 SOIL MOISTURE CONTROL

- A. Contractor shall uniformly moisten or aerate subgrade and each subsequent backfill soil layer as necessary to at least optimum moisture content before compaction.
 - 1. Do not place backfill or import fill material on surfaces that are over saturated or muddy.
 - 2. Remove and replace or scarify (to at least 8 inches) and air dry otherwise acceptable soil material that exceeds optimum moisture content and is too wet to compact to specified dry unit weight.
 - 3. Soil Moisture control does not apply when subgrade is deeper than 10 feet below ground surface.

3.5 TEMPORARY STEEL PLATE BRIDGING

- A. The plates must extend beyond the edge of the trench wall to adequately support the traffic loads on it. All steel trench plates shall extend beyond the edges of the trench wall a minimum of twelve (12") inches.
- B. Plates shall be secured and ramped on all sides with a trench plate securing device, to ensure a smooth transition from the road surface to the top of the plate surface

and back to the road surface.

- C. The contractor is responsible for maintenance of the steel plates, shoring, and trench plate securing systems, and ensuring that they meet minimum specifications. Contractor will be charged for cost of corrective measures if required.
- D. The plates shall be secured to prevent any movement and to allow safe and unobstructed traffic flow.

3.6 FIELD QUALITY CONTROL

- A. Contractor shall perform excavations during periods of no precipitation and keep excavations free from water during construction. Backfill material shall not be placed in water.
- B. Testing and Inspection: City may perform observations, inspections and testing during execution of site work deemed necessary to determine compliance with specifications.
- C. Contractor shall coordinate with the City to perform any observation, inspection or testing required by the City.
- D. Upon completion of excavation, the City shall inspect and test the work and determine the suitability of the soil and preparation of subsequent site work.

3.7 DISPOSAL OF WASTE MATERIALS

- A. Contractor shall remove all waste material, including excavated soil, construction waste, asphalt debris, and contact water, and legally dispose of it offsite in accordance with federal, state and local requirements.
- B. Contractor shall remove any and all excess unused imported fill materials from the Site at no expense to Engineer or Owner.

END OF SECTION

SECTION 32 10 11

PAVEMENT MARKING

PART 1 - GENERAL

1.1 SUMMARY

- A. Specifications for replacing and repairing traffic striping and control markings on pavement and painted curbs as necessary.

1.2 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals governed by this section necessary to replace and repair existing pavement markings destroyed or damaged by water line abandonment and water line and appurtenance installation (referred to as the "work").

1.3 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions.
- B. Section 32 10 10 – Asphalt Paving

1.4 REFERENCES

- A. State of California Department of Transportation (Caltrans), 2006 Standard Specifications and Manual:
 - 1. Section 84 Traffic Stripes and Pavement Markings
 - 2. Traffic Manual Latest Edition
- B. State of California, Department of Transportation (Caltrans), Standard Test Methods Calif. Test 669 Testing for Specification Compliance of Non-Reflective and Reflective Pavement Markers.
- C. California Air Resources Board (CARB)/VOC Permissible Content of Volatile Compounds (VOC in Paints)

1.5 SUBMITTALS

- A. Shop Drawings
 - 1. Submit drawings indicating existing stripe width of roadway divider stripes, configuration and dimensions of directional arrows, style and size of letters for "STOP" designations, and any other traffic control markings on pavement that will be destroyed or damaged by the work.

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2. Drawing should include limits of existing curb paint, curb paint color, curb markings (including addresses) and parking stall lines that will be destroyed or damaged by the work including markings designating "fire lanes".

B. Certificate of Compliance

1. Submit evidence or affidavit which certifies that paint to be used complies with latest CARB/VOC regulations.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Thermoplastic Traffic Stripes and Pavement Markings: Provide thermoplastic traffic stripes and pavement markings including glass beads conforming to the requirements of Section 84-2 of the Caltrans Standard Specifications.
- B. Curb Paint:
 1. If necessary, provide paint conforming to the requirements of Section 84-2 of the Caltrans Standard Specifications, red in color for curbs where no parking is indicated, white in color for curbs where passenger discharge and pickup is indicated.
 2. Replace any removed or damaged pavement and curb markings with the same color paint as existing. Any fire lane or other fire related markings shall comply with Menlo Park Fire Protection District Fire Prevention Code and Policy Manual.

PART 3 EXECUTION

3.1 APPLICATION

- A. Provide traffic striping and control markings on pavement and curbs to replace existing striping and control markings damaged or removed during performance of the project.
- B. Paint application equipment shall conform to the requirements of the Caltrans Standard Specifications. Place markers in accordance with Section 84 of the Caltrans Standard Specifications.
- C. Traffic control markings shall be applied with the use of substantial cutout patterns and templates, or with striping equipment which applies straight, uniform width, sharp lines. Coverage of paint shall be thorough and complete in accordance with the paint manufacturer's instructions and recommendations.
- D. Traffic control markings shall be sharp and accurate, straight where required, without fuzziness at edges of lines.
- E. At completion, Contractor shall check the work thoroughly and shall touch-up traffic control markings and parking stalls which are not distinct or thorough in coverage, or which are not uniform in color.

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END OF SECTION

SECTION 32 12 16

ASPHALT CONCRETE PAVING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Granular base.
2. Prime coat.
3. Bituminous paving.
4. Tack coat.
5. Sealer coats.

B. Related Documents:

1. The Contract Documents, as defined in the General Conditions, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.
2. State of California Department of Transportation Standard Specifications, 2006 edition. Referenced to herein as "Caltrans" or the "State Standard Specifications".

C. Related Sections:

1. Section 31 23 33 – Trenching and Backfilling.

1.2 QUALITY ASSURANCE

A. Reference Standards:

1. State of California Department of Transportation Standard Specifications, 2006 edition. Referenced to herein as "Caltrans" or the "State Standard Specifications".

B. Field Samples (Pavement Coring):

1. City reserves the right to make corings of the bituminous paving to establish the depth of the paving layers.
2. The location and timing of the corings shall be at the discretion of the City and at City's expense.

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3. The indicated depths are minimum; if a core indicates undersize, the City may require additional corings (at no expense to City) to establish the extent of the under sizing.
4. If under sizing is indicated, methods of correction shall be submitted for City's approval. Correction shall be at no expense to City.
5. Contractor shall fill boring holes with bituminous material.

1.3 PROJECT CONDITIONS

- A. Coordination: coordinate this work with the work of other Sections to avoid any delay or interference with other work.

1.4 SUBMITTALS

- A. Contractor shall submit a mix design for the following for approval by the City Representative at least 7 days before placement of the material commences. The mix design shall result in a project that is suitable for the traffic, climate conditions, curing conditions and final use.
 - a. Asphalt Mix
 - b. Tack Coat
 - c. Slurry Seal

PART 2 PRODUCTS

2.1 MATERIALS

- A. Asphalt: Caltrans Section 39.
- B. Mineral Aggregate: Caltrans Section 39.
- C. Aggregate Base Course shall be Class II Aggregate Base Course in conformance with Caltrans Section 26 Class 2.
- D. Slurry Seal:
 1. Asphalt Emulsion: The emulsified asphalt shall be a quick traffic, quick cure (QT-QC) type, shall be homogeneous and show no separation after thorough mixing, shall break and set on the aggregate within five (5) minutes and shall be ready for cross-traffic within fifteen (15) to forty-five (45) minutes. The latex asphalt emulsion shall conform to the requirements in Table I. Upon standing undisturbed for a period of twenty- four (24) hours, the emulsion shall show no white or milky colored substance on its surface and shall conform to the requirements below.

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Test on Emulsion	Method of Test	Requirement
Viscosity, SSF, @ 77 degrees F, sec.	ASTM D244	15 – 100
pH		2 +/- 1
Distillation Residue %, Minimum		60

Test on Residue from Distillation Test	Method of Test	Requirement
Penetration, 77 degrees F., 100g, 5s	ASTM D5	40 – 80
Softening Point (Ring & Ball), degrees F	ASTM D36	130 +
Ductility, 77 degrees. F,(25C, 5 cm/Min., Minimum	ASTM D113	25
Fraass-Breaking Point (degrees C.)	DIN 52012	-18 min.

2. Polymer Latex: Styrene Butadiene Rubber (SBR) latex shall be added to the water/soap phase by injection prior to the mill manufacture of the asphalt emulsion by the emulsion producer. The latex shall be BASF NX 4190 or approved equal. The amount of latex solids shall be between 3 and 4 percent of the asphalt residual content and shall be certified by the emulsion producer on each load of emulsion delivered to the jobsite. No post or field addition of Polymer Latex will be allowed. Samples of latex shall be provided and shall conform to the following requirements.

Test	Requirement
Total Solids, min %	60
Bound Styrene %	24 - 60
pH at 25 Degrees C	4.2 - 5.2
Brookfield Viscosity RVT	1000 - 4000
Residual Monomer %	0.08 max.

3. Water: Water shall be potable, free of harmful soluble salts and shall be of such quality that the asphalt will not separate from the emulsion before the slurry seal is in place in the work. No reclaimed water shall be used.
4. Aggregate: Aggregate shall be Type II, 100% crushed with no round particles, volcanic in origin and black in color and comply with the requirements specified in Section 37-2.02C, "Aggregate" of the State Standard Specifications. The application rate shall be 14-18 pounds per square yard.

Aggregate shall consist of sound, durable, crushed gravel and approved mineral filler. The material shall be free from vegetable matter and other deleterious substances.

5. Mineral Filler: The mineral filler shall be either commercially available Type II Portland Cement or other approved mineral fillers, if required by the mix design. Mineral filler shall be free of lumps and clods and shall be considered as part of the dry aggregate.
6. Mix Design: The Contractor shall submit a job mix design for approval by the Engineer at least 7 working days before slurry seal placement commences. The mix design shall conform to the requirements of Section 37- 2.03, "Mix Design" of the State Standard Specifications and result in a product that is suitable for the traffic, climate conditions, curing conditions and final use. The mix design shall also include the recommended application rate of slurry to suit the job conditions.

The percentage of asphalt emulsion proposed in the mix design shall be within the percentage range specified in Section 37-2.04, "Proportioning" of the State Standard Specifications and, in addition, shall satisfy pass a wet track abrasion test with a loss of more than 50 grams per square foot.

In addition to the requirements in Section 37-2.03 of the Standard Specifications, the Contractor shall submit laboratory analyses of the aggregates and the emulsion, as well as any admixtures proposed to be included in the mix. In addition, the Contractor shall provide a Certificate of Compliance with the Standard Specifications and the requirements of this section, for the mix design and the mix design components.

The tests shall be performed by a State-certified laboratory capable of performing the applicable tests. The laboratory report shall be signed by the laboratory that performed the tests and shall show the results of the tests on individual materials, comparing the test results to those required by the specifications. The report shall clearly show the proportions of aggregate, filler (as determined from the tests, minimum and maximum), water (minimum and maximum), and asphalt solid content based on the dry weight of aggregate and set-control agent usage. Previous laboratory reports covering the same materials may be accepted provided they are made during the same calendar year.

Certificate of Compliance shall be furnished by the Contractor, in accordance with Section 6-1.07 of the Standard Specifications for aggregates used in the slurry seal. The Certificate of Compliance shall include laboratory test results indicating the average gradation, minimum sand equivalent, residual asphalt as per cent (%) of aggregate weight, emulsified asphalt as per cent (%) of aggregate weight, maximum film stripping (25% max., Calif. 302) and durability index (60 min., Calif. 229), all in accordance with Sections 37-2 of the Standard Specifications and these Special Provisions.

7. Proportioning: The Slurry Seal mixture shall be proportioned by the operation of a single start/stop switch or lever that automatically sequences the introduction of aggregate, emulsified asphalt, admixtures, if used, and water to the pug mill. The asphalt binder shall be uniformly distributed throughout the mixture. Calibrated flow

meters shall be provided to measure both the addition of water and liquid additives to the pug mill. If necessary for workability, water and a retarding agent, that will not adversely affect the seal, may be used to permit uncontrolled traffic on the slurry seal within three (3) hours after placement, and prevent the development of bleeding, raveling, separation or other distress within seven (7) calendar days after placing the slurry.

E. Prime Coat: Caltrans Section 39-4.02

PART 3 EXECUTION

3.1 EXAMINATION

- A. Starting work constitutes acceptance of the existing conditions and the Contractor shall then, at his expense, be responsible for correcting all unsatisfactory and defective work encountered.

3.2 SUBGRADE PREPARATION

- A. Backfill shall be earth compacted to density specified in Section 31 23 33 – Trenching and Backfill.
- B. The Contractor shall be solely responsible for all lines, levels, and measurements for this work. Contractor shall provide his own instruments and survey crew to maintain this control throughout the duration of his work.
- C. Bituminous paving shall not be placed when the ambient temperature is below 40°F., or when there is frost in the base, during rain, or any other time when weather conditions are unsuitable.
- D. If the surface to be paved is both in sunlight and shade, the surface temperatures shall be taken in the shade.

3.3 GENERAL

- A. Preparing Area to be Paved: The area to be paved shall be substantially true to line and grade. It shall have a dry, firm, and properly prepared surface before paving operations begin. All loose and foreign material shall be removed.
- B. Generally, the asphalt base shall be applied separately from the surface course. Early in the project the granular base and asphaltic base (or "binder") course shall be applied in conjunction with curbs, gutter, and other site utilities, to provide a satisfactory surface for construction traffic.
- C. Environmental Limitations: Contractor shall not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:
 - 1. Asphalt Base Course: Minimum subbase surface temperature of 50 deg F and rising at time of placement.

2. Asphalt Surface Course: Minimum surface temperature of 60 deg F at time of placement.
3. Paint Binder (Unmodified): Minimum surface temperature of 60 deg F.
4. If the surface to be paved is both in sunlight and shade, the pavement surface temperatures shall be taken in the shade.

E Contractor shall not pave on days when rain is forecast for the day, unless a change in the weather results in favorable conditions as determined by the City representative.

3.4 TRENCH PAVING

- A. Prime granular base with 0.25 gal/yd² of cutback or emulsified asphalt prime coat as specified herein. Immediately prior to application of the asphalt prime coat all loose and foreign material shall be removed by sweeping or by blowing, or both. Surfaces of curbs, gutters, vertical faces of existing pavements, and all structures to be in actual contact with the asphalt-aggregate mixture shall be given a thin, even coating of asphalt material. Care shall be taken to prevent splattering with asphalt surfaces that will be in contact with asphalt-aggregate mixture.
- B. Placing the Mix: The surface course mixtures shall be placed with an asphalt paver to provide a nominal compacted thickness of 6" in accordance with construction documents. Placing the mixture shall be a continuous operation. If any irregularities occur, they shall be corrected before final compaction of the mixture. The minimum lift thickness (surface course) shall be at least two times the maximum particle size.
- C. Compacting the Mix: The mix shall be compacted immediately after placing. Initial rolling with a steel-wheeled tandem roller, steel three-wheeled roller, vibratory roller, or a pneumatic-tired roller shall follow the paver as closely as possible. If needed, intermediate rolling with a pneumatic-tired roller shall be done immediately behind the initial rolling. Final rolling shall eliminate marks from previous rolling. In areas too small for the roller, a vibrating plate compactor or a hand tamper shall be used to achieve thorough compaction.
- D. Tack Coat: A tack coat of 0.15 gal/yd² of diluted emulsified asphalt, of the type and grade designated herein, shall be applied on each layer of the base course and allowed to cure before placing the succeeding course. The emulsified asphalt shall be diluted with equal parts of water. The tack coat shall be applied on only as much pavement as can be covered with asphalt-aggregate mixture in the same day.
- E. Acceptance Requirements:
 1. Acceptance of the compacted mixture with respect to density shall be based on relative density (specific gravity). Relative density is the ratio, expressed in percent, between the density determined at a test location of compacted mixture from the finished pavement with the theoretical maximum specific gravity determined in a laboratory. Obtain ten evenly distributed readings from the paved areas using the Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods (ASTM D2950/D2950M – 14). Determine the

theoretical maximum specific gravity in accordance with ASTM Method of Test D2041. The compacted base and surface will be accepted when the average of the 10 specific gravity determinations is equal to or greater than 92 percent of the theoretical maximum specific gravity and when no individual determination is lower than 90 percent.

2. Thickness: The compacted base and surface shall have average thicknesses no less than specified on the Drawings and in this Section. Any deficiency in base thickness shall be made up with surface mixture when the surface course is placed.
3. Smoothness: The surface of the completed pavement will be checked longitudinally and transversely for smoothness with a 10-foot straightedge. The surface shall not vary more than 1/8 inch in 10 feet parallel to the centerline and not more than 1/4 inch at right angles to the centerline.

3.5 FINISH

- A. After final rolling, no traffic shall be permitted on paving until its mid depth temperature is below 160 degrees F in accordance with Caltrans Section 39-2.01C (15) (a).
- B. The paved areas shall drain to drain; no bumps or "bird baths" will be accepted.
- C. The black top shall be clean and free of dirt or debris, ready for traffic pavement marking painting, after a minimum 30-day curing period.
- D. Traffic pavement marking shall be replaced in-kind.

3.6 SLURRY SEAL

- A. Mixing Equipment: A minimum of two operational mixing machines shall be provided with a storage capacity of 12 cubic yards or larger. Mixing machines shall be maintained with sufficient material such that an adequate and undisrupted supply of slurry seal can be provided to the job.

The mixing machine shall be self-propelled, equipped with a continuous flow pug mill capable of accurately delivering and automatically proportioning the aggregate, emulsified asphalt, water, and additives to a double shafted, multi-blade pug mill mixer capable of minimum speeds of 200 revolutions per minute. The slurry seal retention time in the pug mill shall be less than three seconds, and the pug mill shall not be shut-off with gates or other mechanical means.

The mixing machine shall be equipped with hydraulic controls for proportioning the material by volume to the mix. Each material control device shall be calibrated, properly marked, preset and lockable at the direction of the Engineer. The mixing machine shall be equipped with a water pressure system and nozzle type spray bars to provide a water spray immediately ahead of the spreader box.

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The mixing machine shall be equipped with an approved fines feeder that provides a uniform, positive, accurately metered, pre-determined amount of a mineral filler, if used, at the same time and location that the aggregate is fed.

- B. Spreader Box: The slurry mixture shall be uniformly spread by means of a controlled spreader box capable of spreading a full-width traffic lane. Strips of flexible rubber belting or similar material shall be placed on each side of the spreader box in contact with the pavement to prevent loss of slurry from the box. The box shall have baffles, or other suitable devices, to insure uniform application on super-elevated sections and shoulder slopes. The spreader box shall be maintained in such a manner as to prevent chatter (wash boarding) or other surface defects that will affect the esthetic value of the finished slurry seal mat.

The rear flexible strike-off blade shall make close contact with the pavement and shall be capable of being adjusted to the various crown shapes so as to apply a uniform slurry seal.

- C. Weather Conditions: The slurry seal shall not be placed if either the pavement or the air temperature is below 55 degrees F and falling, but may be applied when both the air and pavement temperature is 45 degrees F or above and rising. The mixture shall not be applied if high relative humidity prolongs the curing beyond a reasonable time.

In the event that a scheduled street should become wet due to rain, fog, a water main break, or any other reason, the street shall be re-scheduled for construction no sooner than 3 days from the date of the incident. "No Parking" signs must be re-posted with the minimum 48-hour advance warning.

- D. Notifications: 72 hours prior to the slurry seal operations, the contractor shall notify all residents, businesses and agencies with an approved written notice detailing the streets and limits of work to be done along, with the hours of work. The contractor shall also post all streets with temporary "No Parking - Tow Away" signs at 50 foot staggered intervals.
- E. Traffic Controls and Road Closures: Adequate means shall be provided to protect the slurry seal from damage from traffic until such time that the mixture has cured sufficiently so that the slurry seal will not adhere to and be picked up by the tires of the vehicles.

The Contractor shall be responsible for adequate barricading of the work area and controlling of traffic in the vicinity of the project as specified in the Section entitled "Traffic Control" or as directed by the Engineer.

When necessary to provide vehicular or pedestrian crossings over the fresh slurry, the Engineer shall direct the Contractor to spread sufficient black sand or black rock dust on the affected area to eliminate tracking or damage to the slurry. Black sand or black rock dust used for this purpose shall be at the Contractor's expense.

- F. Sweeping and Surface Preparation: Surface to receive slurry seal shall be prepared in accordance with the requirements specified for preparing surfaces to receive asphaltic emulsion as specified in Section 37-1.04, "Preparation for Seal Coat", of the State Standard Specifications.

The Contractor shall be responsible for killing and removing all weeds and plant material growing within the street surface, including adjacent to the lip of gutter. Removal shall be performed using a systemic chemical weed killer such as "Roundup" or approved equal, performed at least 2-weeks prior to resurfacing. A Light-colored dye with just a hint of color (yellow suggested) shall be added to the weed spray to facilitate inspection. Immediately prior to the resurfacing operations, dead weeds shall be removed utilizing a propane torch, or by mechanical means such as a weed whacker or router.

All existing pavement markers and thermoplastic striping and legends shall be removed and disposed of by the contractor. Removal shall not occur any sooner than 2 days prior to the day that slurry sealing is to be performed.

Crack sealing is required as prep-work on streets that have been selected for slurry seal at the Contractor's expense. Attention is directed to Section 37-5.2 of the State Standard Specifications for requirements.

Special care shall be taken to thoroughly clean the pavement surface before the slurry seal application. The Contractor shall be responsible for sweeping the street until sufficiently cleaned to the satisfaction of the Engineer. This shall involve a minimum of three (3) complete street-width passes using a power rear-broom street sweeper (Mobile or equivalent). Streets shall be swept from face of curb to face of curb. Pavement missed by, or inaccessible to broom sweepers shall be swept clean by other approved methods. Contractor shall provide whatever cleaning methods necessary to remove all dirt, vegetation, and loose material from the pavement.

- G. Protection of Existing Facilities: Immediately before commencing the slurry seal operations, all surface metal utility covers, boxes, and monument lids shall be protected by thoroughly covering the surface with an appropriate adhesive of paper or plastic. Diesel shall not be utilized as a protective measure. No adhesive material shall be permitted to cover, seal or fill the joint between the frame and cover of the structure. Covers are to be uncovered and cleaned of slurry material prior to opening the road to traffic.
- H. Weighmaster Certificates: The Contractor shall supply the Engineer with certified weight tags for all aggregate delivered to the job during the course of each day and shall also present certified weight tags for the amount of such materials remaining unused at the completion of the work. Certificates shall be presented to the Engineer at the time of delivery. Compensation for compliance with this subsection shall be considered included in the unit prices bid for slurry; no additional compensation will be allowed.

Aggregate so certified as being delivered to the project shall only be used in the slurry mixture and shall only be used on this project. No outside work shall be performed utilizing materials from the stockpiles delivered as part of this Contract.

- I. Application of Slurry Seal: Immediately ahead of the mixer, the pavement shall be pre-wetted by a pressure water distribution system equipped with a fog type spray bar that will completely fog the surface of the pavement. The rate of spray application shall be as approved by the Engineer.

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Roofing paper or a comparable substitute shall be used at all ends of slurry seal limits to provide for clean, neat, and straight definition of the end of the slurry seal surfacing.

Slurry mixture, to be spread in areas inaccessible to the controlled spreader box, may be spread by other approved methods.

The slurry seal mixture shall be applied to slightly overlap the lip of gutter; this overlap is not to exceed beyond two inches (2") from the lip of gutter toward the face of curb. On streets that have no concrete gutter, the slurry seal shall extend to the face of curb. Any application or spillage beyond this two-inch limit shall be removed or cleaned up by the Contractor to the satisfaction of the Engineer. Gutter spills shall be cleaned immediately.

Hand tools shall be available in order to remove spillage. Ridges or bumps in the finished surface will not be permitted. The mixture shall be uniform and homogeneous after spreading on the existing surface and shall not show separation of the emulsion and aggregate after setting.

Evidence of solidification of the asphalt, balling or lumping of the aggregates or the presence of uncoated aggregates shall be cause for rejection of the slurry.

The use of black sand to cover uncured slurry areas will be required by the Engineer, when and if necessary to allow cross traffic, at commercial driveways and or intersections. The material shall be "Kleen Blast", or approved equal, slag ground to fine sand, with no toxic residues.

- J. Joints: Longitudinal joints shall be at the crown of the street or at the edge of existing travel lanes. Other patterns of longitudinal joints may be permitted, as determined, and approved by the Engineer if such patterns will not adversely affect the quality of the finished product.

Through traffic lanes shall be spread in full lane width units only. Longitudinal joints, common to two traffic lanes, shall be butt joints with overlaps not to exceed 3 inches. Building paper shall be placed at transverse joints, over previously placed slurry seal, or, other suitable methods shall be used to avoid double placement of slurry seal. Hand squeegees and other hand equipment shall be provided to remove spillage and spread slurry in areas inaccessible to the spreader box. The Contractor shall apply slurry in such a manner that no ridges, bumps or excessive buildup of material occur.

The seal coat shall be applied in such a manner that the joint between the new and existing surface is neat and uniform in appearance true to the line shown on the typical cross section and established by the Engineer. Roofing paper or a comparable substitute shall be used at all ends of slurry seal limits to provide for a clean, neat, and straight definition of the end of the slurry.

- K. Repair and Acceptance of the Work: In the event that the applied slurry seal surface violates the contract specifications or has the following conditions: tire or wheel tracks, longitudinal or transverse ridges, surface blemishes, washboarding, footprints, excessively rough sand blotter locations, lack of uniformity in color, or other undesired markings; the Contractor shall, at the direction of the Engineer and at no additional cost to the City, repair and reseal those locations where the conditions exists. The method of

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treatment shall be approved by the Director of Public Works or his authorized representative.

Spillage from hauling operations deposited along and across public streets and sidewalks shall be immediately removed by the Contractor at his expense. Should the City have to clean, maintain, or remove spillage along these streets, the actual costs of this operation shall be deducted from progress payments and final payment.

- L. Rolling: Rolling shall be required within all cul-de-sac bulbs utilizing a 6-7-ton pneumatic roller with a tire pressure of 50 psi. Water spray shall not be utilized. Rolling shall occur before the roadway is opened for traffic, however, it should not commence until the slurry has cured enough to where it is not picked up by the roller. The surface area to be rolled shall be subjected to a minimum of 20 minutes per cul-de-sac, achieving a minimum of at least 5 complete passes across all surfaces, performed at a slow speed.
- M. Final Clean Up and Sweeping: The Contractor shall exercise care to prevent slurry from being deposited on other asphalt concrete surfaces and shall remove slurry from surfaces not designated to be sealed at no cost to the City. The method of slurry removal shall be approved by the Engineer or his authorized representative.
- N. Striping to Occur after Slurry Has Cured: Permanent traffic stripes, pavement markings and pavement markers shall be installed on or between the seventh (7th) and thirteenth (13th) calendar day following the day of slurry sealing to allow for the slurry seal to cure. During this time the Contractor shall be responsible for implementing and maintaining temporary delineation.

The Contractor shall schedule a final street sweeping of all slurry sealed streets. Sweeping shall occur no sooner than 14 calendar days and no later than 28 calendar days after application. In addition, cul- de-sac streets, and any street showing excessive sand deposits, as determined by the Engineer, shall have an additional sweeping performed approximately six weeks following the application of the slurry seal.

END OF SECTION

SECTION 32 16 13

CONCRETE CURB AND SIDEWALK

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Curbs.
2. Curb/gutter combination.
3. Sidewalk

B. Related Documents:

1. Drawings and general provisions of Contract, including General Conditions.
2. City of East Palo Alto Standard Details.
3. 29 Code of Federal Regulations 1926.

1.2 PROJECT CONDITIONS

- A. Coordination: Coordinate this work with the work of other Sections to avoid any delay or interference with other work.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Concrete per City Standard Details and Specifications.
- B. Expansion Joints: ASTM D1751 or D1752.
- C. Joint Sealer: ASTM D1850.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Starting work constitutes acceptance of the existing conditions and the Contractor shall then, at his expense, be responsible for correcting all unsatisfactory and defective work encountered.

3.2 SUBGRADE PREPARATION

- A. The subgrade shall be thoroughly wetted and then compacted with two passes of a 500-pound roller.

- B. Yielding material deflecting more than 1/2" under the specified roller shall be removed to a depth of not less than 4" below subgrade elevation and replaced with an approved granular material which shall then be compacted as described above.
- C. The subgrade shall be in a moist condition when the concrete is placed.
- D. The City will direct Contractor for compaction of subgrade in tree zones to protect tree roots.

3.3 FORM CONSTRUCTION

- A. Install sufficient quantity of forms to allow continuous progress of the work and so that forms can remain in place at least 24 hours after concrete placement.
- B. Check completed formwork for grade and alignment to the following tolerances:
 - 1. Top of form: Not more than 1/16" in 10 feet.
 - 2. Vertical face: Longitudinal axis not more than 1/4" in 10 feet.

3.4 EXPANSION JOINTS

- A. Install transverse expansion joints at returns and 10 feet o.c., or as required by City. There shall always be an expansion joint at the point where curved and tangent sections of curb or combination curb and gutter sections joint.
- B. Install expansion joints where curbs abut concrete paving, stationary structures, buildings, other concrete slabs, pads or vertical restraints.
- C. Fill joints with 1/2" thick joint filler strips conforming to ASTM D1751 or D1752, or with resin-impregnated fiberboard conforming to the physical requirements of ASTM D1752.
- D. Place joint filler with top edge 1/4" below the surface and shall be held in place with steel pins or other devices to prevent warping of the filler during floating and finishing.
- E. Immediately after finishing operations are completed, round joint edges with edging tool having a radius of 1/8". Remove concrete over the joint filler.
- F. At the end of the curing period, clean and fill expansion joints with joint sealer conforming to ASTM D1850. Fill joints flush with concrete surface. Dummy groove joints shall not be sealed.

3.5 CONCRETE PLACEMENT, FINISHING AND CURING

- A. Moisten subgrade as required to reduce suction at the time concrete is placed. Do not place concrete around structures until they have been brought to the required grade and alignment.
- B. Deposit and spread concrete in a continuous operation between transverse joints. If interrupted for more than 1/2 hour, place a construction joint. Sections less than 10 feet

in length between transverse joints will not be permitted except that in short radius curve sections shall not exceed 6 feet in length.

- C. Automatic machine may be used for curb and gutter placement at Contractor's option, if accepted by local authorities. If machine placement is to be used, submit revised mix design and laboratory test results. Machine placement must produce curbs and gutters to the required cross-section, lines, grades, finish, and jointing as specified for formed concrete. If results are not acceptable, remove and replace with formed concrete as specified.
- D. After spreading and compacting, finish unformed surfaces with a wood float to produce a uniform texture and finish throughout. Inspect formed surfaces immediately after stripping forms, grind down fins and repair sand runs and honeycombs with the same mix used for the curbs and gutters minus the coarse aggregates. Mortar used in pointing shall not be more than one hour old. All surfaces shall be kept wet during the finishing operation.

3.6 CURING AND BACKFILLING

- A. Curing: Immediately after the finishing operations, the exposed concrete surface shall be cured for a minimum 7 days.
- B. Backfilling: After curing, debris shall be removed and the areas adjoining shall be backfilled, graded and compacted to conform to the surrounding area in accordance with the lines and grades indicated.

3.7 PROTECTION

- A. Protect completed work from damage until accepted. Repair damaged concrete and clean concrete discolored during construction. Work that is damaged shall be removed and reconstructed to the entire length between regularly scheduled joints. Refinishing the damaged portion will not be acceptable.

END OF SECTION

SECTION 33 14 13

DOMESTIC WATER

PART 1 – GENERAL

1.1 REFERENCE STANDARDS

- A. AWWA Standards, Latest Revision.
- B. AWWA M23 PVC Pipe Design and Installation Manual
- C. ANSI/AWWA C150/A21.50 Thickness Design of Ductile Iron Pipe
- D. AWWA C600 Installation of Ductile Iron Water Mains and Their Appurtenances
- E. AWWA C651 Disinfecting Water Mains
- F. City of East Palo Alto (City) Standard Details.
- G. California Administrative Code, Title 22, §64572, Water Main Separation.
- H. National Fire Protection Association (NFPA) 24 Standard for the Installation of Private Fire Service Mains and Their Appurtenances.

1.2 WORK INCLUDED

- A. Section includes (but is not necessarily limited to):
 - 1. Furnishing and installation of low-pressure water pipe, valves, fittings and appurtenances.
 - 2. Installation of water services.
 - 3. Installation of fire service and fire hydrant laterals.
 - 4. Installation of fire hydrant assemblies.
- B. Comply with all other provisions of the Plans and these Specifications.

1.3 RELATED SECTIONS

- A. Section 31 23 33 - TRENCHING AND BACKFILLING

1.4 RESPONSIBILITY

- A. All underground fire piping system shall be installed in accordance with NFPA 24 and by an individual holding a Class A or C-16 State of California Contractor's license.

1.5 QUALITY ASSURANCE

- A. All disinfection and testing required by this Section and other Sections of these Specifications shall be in accordance with City requirements and witnessed by the City. Retesting required because of failed tests shall be at the expense of the Contractor.

- B. All materials and equipment furnished under this Section shall: (1) be of an American manufacturer who has been regularly engaged in the design and manufacture of the materials and equipment and (2) be demonstrated to the satisfaction of the City that the quality is equal to the materials and equipment made by those manufacturers specifically named herein, if an alternate product manufacturer is proposed.

1.6 EQUIPMENT

- A. Contractor shall ensure that all equipment used on this site is operated, inspected, and maintained in accordance with applicable Cal/OSHA standards.

1.7 SUBMITTALS

- A. Submit complete specifications, catalog information and cut sheets, descriptive drawings, and literature for each equipment item to be furnished under this Section, with all exceptions to the Specifications noted.

Provide submittals for:

1. Pipe, valves, fittings & appurtenances
2. Service pipe and fittings
3. Lug, tie rods and other devices for restraining pipe points
4. Meter box and cover
5. Valve box and cover
6. Valve operating nut extension (for deep valves)
7. Other materials or drawings necessary to complete the installation.
8. Disinfection schedule and procedures including:
 - a. "Normal" disinfection procedure.
 - b. Emergency disinfection procedure for mains and services which must be returned to service immediately.
 - c. Disinfection schedule including number and type of services and length of disruption of service.
 - d. Disinfecting agent(s).
 - e. Method of disposal of chlorinated water.

1.8 POTHOLING

- A. Do not begin any construction until potholing has been performed and existing utility locations have been confirmed. If interferences are found in any section of valve, fire hydrant or pipeline installation, do not begin construction for that valve, fire hydrant or section of pipeline until the installation location or pipeline alignment has been modified by the City Representative to eliminate all such interferences.

1.9 CONSTRUCTION SCHEDULING/SEQUENCING

- A. Construction includes expansion and/or modification of the existing water system which must continue to provide service to all customers during construction.

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- B. Connections and utility changes must be programmed to provide the least possible interruptions of service. Prior to any shutdown all materials, fittings, supports, equipment and tools shall be on the site and all necessary labor scheduled prior to starting any connection work. The Contractor shall notify the City in writing at least 7 days in advance of any required shutdowns so that affected customers may be notified. In general, shutdowns shall not exceed four hours in duration unless specifically authorized or indicated in the suggested construction sequence.
- C. All work shall be conducted in a manner which will minimize shutdowns, open roadways, or traffic obstructions caused by the construction. Shutdowns causing damage to adjacent public and private property shall not be permitted, and any damage resulting shall be the sole responsibility of the Contractor.
- D. Planned water service shutdowns shall be accomplished during periods of minimum use. In some cases, this will require night or weekend work. The Contractor shall program his work so that service will be restored in the minimum possible time and shall cooperate with the City in reducing shutdowns of the water system to a minimum. No water interruption will be permitted without the prior approval of the City. The Contractor shall notify residents and businesses at least 48 hours in advance of any required shutdowns.

PART 2 – PRODUCTS

A. GENERAL

- 1. Pipe and valve sizes are nominal inside diameter unless otherwise noted.
- 2. All materials delivered to the job site shall be new, free from defects, and marked to identify the material, class, and other appropriate data such as thickness for piping.
- 3. Acceptance of materials shall be subject to strength and quality testing in addition to inspection of the completed product. Acceptance of installed piping systems shall be based on inspection and leakage and bacteriological tests as specified hereinafter.
- 4. All fitting and valve joints shall be mechanical, flanged or flex (no push on joints allowed). All joints shall be restrained as indicated in these Specifications. Joints shall be fusion epoxy coated (exterior and interior).
- 5. Buried nuts and bolts for flanges and couplings shall be Type 316 stainless steel unless otherwise specified herein.
- 6. Fusion Epoxy Coating: Materials and application shall be in accordance with AWWA C213, except application shall be by the fluid bed method only unless the greatest dimension of the article to be coated exceeds 10 feet, in which case electrostatic spray method may be used.
- 7. All brass components in contact with potable water shall be composed of either CDA/UNS Brass Alloys C89520 or C89833 with a maximum lead content of 0.25% by weight in accordance with ANSI/AWWA C-800. Brass alloys not listed in ANSI/AWWA C-800 Paragraph 4.1.2 are not approved. Brass saddles shall be composed of CDA/UNS C83600.
- 8. Fire Protection Piping and Fittings: All metallic pipe and fittings associated

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with fire protection shall be epoxy coated and polyethylene encased. All bolts, nuts, tie rods, ect for all portions of underground mains shall be 316 stainless steel. The transition from underground main to sprinkler riser shall have a dielectric flange connection.

2.2 PIPING MATERIALS

A. Pipe Designation:

1. New water mains shall be polyvinyl chloride (PVC) pipe or ductile iron pipe (DIP) as specified on the drawings.
2. Service connections between the water main and the water meter shall be copper.

B. Polyvinyl Chloride (PVC)

1. No fusible PVC pipe allowed.
2. Pipe: PVC Eagle Loc 900 or favorably reviewed equivalent pressure pipe, cast iron pipe outside dimensions. Pipe shall be UL listed or Factory Mutual Approved.
3. Pressure Class 235 psi (DR 18).
4. Joints:
 - a. All joints shall be internally restrained Eagle Loc 900 push on joints or favorably reviewed equivalent or restrained mechanical or flanged joints.
 - b. Restraint Coupling: Mechanical joints using ductile iron clamp-on restraining devices.
 - 1) Restraining devices: Ductile iron with ductile iron or cor-ten rods and bolts. Pressure rating of at least 200 psi. Series 1500 by EBAA Iron; equivalent by Uni-Flange; or equal for bell and spigot joints. Series 500 by EBAA Iron; equivalent by Uni-Flange; or equal for mechanical joints.
5. Gaskets: Styrene Butadiene Rubber (SBR). Submit two sample gaskets of each gasket type with an explanation of the markings.

C. Ductile Iron (DIP)

1. Pipe: Asphalt coated U.S. Pipe TR FLEX (or favorably reviewed equivalent) ductile iron, Pressure Class 350, ANSI/AWWA C151/A21.50 with cement mortar lining.
2. Joints: Pipe joints shall be restrained push on TR FLEX Restrained Joints or approved equal.
 - a. Gaskets: Rubber in accordance with ANSI/AWWA C111/A21.11
 - b. Restrained joints: Restrained pipe joints shall be U.S. Pipe's TR FLEX Pipe or favorably reviewed equivalent. Restraint of field cut pipe shall be provided with U.S. Pipe's TR FLEX GRIPPER® Ring, TR FLEX Pipe field weldments or approved equal.
3. Cement Mortar Lining: Standard thickness cement mortar lining per ANSI/AWWA C104/A21.4.
4. Field closure connections for restrained joints: Pipe cut in the field where necessary and when favorably reviewed by the Owner Representative

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shall be connected by one of the following methods:

- a. TR FLEX Gripper Ring System by United States Pipe & Foundry Company.
 - b. Series 1100 Megalug mechanical joint restraint by EBAA Iron, Inc.
 - c. Favorably reviewed equivalent.
5. Protection:
- a. DIP polyethylene encasement, AWWA C105, black. Single wrap pipe. Double wrap flanged fittings, mechanical joints, or other appurtenances with significantly different outside diameters from the pipe. Tape to seal seams and overlaps shall be plastic adhesive tape at least 4 mils thick and at least 2 inches wide.
 - b. Provide external epoxy coating (12 mil thickness – minimum) on all DIP fittings.
 - c. DIP Asphalt Coating. Asphalt coating shall conform to ANSI/AWWA C151/A21.51 for pipe, AWWA C115 for flanged pipe and AWWA C110 and C153 for fittings.
- C. Copper Pipe:
1. Pipe: Copper (Cu), ASTM B-88-62, Type K.
 2. Joints: Compression.
- D. Schedule 80 PVC:
1. Pipe: ASTM D-1785 and listed by NSF for potable water applications.
 2. Fittings: ASTM D-1785, Cell Classification 12454B, Type 1, Grade 1.
 3. Joints: Solvent Welded, ASTM D-2564, and listed by NSF for potable water applications.

2.3 PIPE COUPLINGS AND FITTING

- A. General:
1. For typical pipe joints refer to pipe material specifications. Other joint devices shall be furnished where called for and as specified below.
 2. Handle fusion epoxy coated material with care. If material is damaged before installation, the Contractor shall repair or replace at the direction of the City Engineer.
 3. All pipe fitting joints including valves, bends, reducers, couplings, plugs and tees shall be restrained.
 4. All pipe fittings and restraint devices shall be listed by Underwriters Laboratories and approved by Factory Mutual.
 5. Follow pipe manufacturer specifications for buried vertical installations greater than 45 degrees.
- B. Fittings:
1. Restrained joint fittings and restrained components shall be ductile iron in accordance with applicable requirements of ANSI/AWWA C111/A21.111 and/or C153/A21.53 with the exceptions of the manufacturer's proprietary design dimensions.
 2. All PVC pipe connections to fittings shall be restrained using 1100 Megalug Mechanical Joint Restraint or favorably reviewed equivalent.

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3. Mechanical or flange connections or ductile iron clamp-on restraining harnesses:
 - a. Provide external epoxy coating (12 mil thickness – minimum) and 316 stainless steel bolt up kits including trim and sleeves for all fittings.

- C. Flexible Couplings and Flange Coupling Adaptors:
 1. Sleeve: Cast iron or fabricated steel.
 2. Followers: Cast iron, ductile iron, or steel.
 3. Sleeve bolts: ASTM A325, Type 3; 316 stainless steel; or equivalent.
 4. Coating: Fusion epoxy line and coat sleeve and followers.
 5. Pressure rating: 200 psi.
 6. Buried flexible coupling sleeve: Long barrel
 7. Manufacturers:
 - a. Flexible couplings:
 - 1) Connecting pipe with identical outside diameters: Smith-Blair 411 or 431, Dresser Style 38 or 53, or favorably reviewed equivalent.
 - 2) Connecting pipe with slightly different outside diameters: Smith- Blair 413 or R 441, Dresser Style 162, or favorably reviewed equivalent.
 - b. Flange coupling adaptors:
 - 1) Connecting new pipe or new pipe to existing non-ferrous pipe: Smith-Blair 912 or 913, Dresser Style 127 or 128, or favorably reviewed equivalent.
 - 2) Connecting new pipe to existing ferrous pipe: Insulating flange coupling adaptor with insulating boot: Smith-Blair 932 or 933, or favorably reviewed equivalent.
 8. Gaskets: Oil and grease resistant; Smith-Blair Grade 60; or favorably reviewed equivalent.
 9. Joint restraint: Provide joint harnesses (tie rod lug or attachment plate assemblies) across flexible couplings and flange coupling adaptors where indicated on the Drawings or City's Standard Drawings. For flanged coupling adaptors, anchor studs may be substituted for the harnesses on pipe up to 12-inch. Design restraint in accordance with AWWA M-11 for 200 psi if size of the rods are not indicated on the Drawings.

- D. Tapping Sleeves and Tapping Valves:
 1. All bolts must be tightened to the manufacturer's specifications. All bolts, nuts, and washers shall be epoxy coated (12 mil thickness – minimum) Type 316 stainless steel with anti-seize coating on threads. Contractor shall present City with all tapping coupons upon completion of tap. Coupons are to be tagged or marked as to location, date of tap and pipe size.
 2. Mueller tapping gate valves shall be as specified in Section 2.4 Valves and Accessories – Gate Valves.
 3. Valve box and riser pipe shall conform to details on the plans.

2.4 VALVES AND ACCESSORIES

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- A. General Requirements for Valves:
1. All valves shall be connected to pipe using restrained mechanical joints using EBAA Iron Series 1100 Megalug mechanical joint restraint or favorably reviewed equivalent.
 2. All valves of each type shall be the product of one manufacturer.
 3. All valves shall be of an American manufacturer.
 4. All valves shall be furnished with control assembly, operators, handwheels, levers, or other suitable type wrench including handles as specified herein or as shown on the Drawings or City's Standards.
 5. All threaded stem valves shall open by turning the valve stem counter-clockwise.
 6. The exterior of all valves and valve operators shall be painted with two coats of Tape Coat Mastic; Protecto Wrap CA1180 Mastic; or favorably reviewed equivalent, except where otherwise indicated.
 7. Provide bronze operating nuts, external epoxy coating (12 mil thickness – minimum), and 316 stainless steel bolt up kits for all valves.
- B. Valves and Accessories:
1. Gate Valves:
 - a. Rating: 250 psi water
 - b. Type: Resilient seated, non-rising stem, AWWA C509, as modified herein
 - c. Connection: Flanged or Mechanical joint.
 - d. Materials: Ductile iron body
 - e. Stem seal: O-ring
 - f. Finish: Fusion epoxy coated
 - g. Manufacturers: Mueller, American, Kennedy or City approved, or favorably reviewed equivalent.
 - h. Use on lines 12 inches or smaller.
 2. Air Release Valve: APCO No. 55 or City favorably reviewed equivalent.
 3. All valves associated with fire service lines shall be an indicating type.
 4. Valve boxes: Per details on plans or City favorably reviewed equivalent.

2.5 SERVICE CONNECTIONS

- A. General: All corporation stops, service clamps or saddles, and service connection accessories shall be the product of one (1) manufacture. All components shall meet the latest version of AWWA C800.
- B. Service Saddles:
1. Rating: 200 psi water
 2. Type:
 - a. For Polyvinyl Chloride pipe: Mueller series H-13000 c. IPS threads are not permitted on 1 inch service.
 - b. For Ductile Iron pipe: Bronze, double strap, Mueller BR 2 B, retained o-ring gasket, rolled strap threads, and tapping boss with full length AWWA threads.
 3. Manufacturer: Mueller Co. or City favorably reviewed equivalent.

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- C. Corporation Stops:
 - 1. Rating: 300 psi water
 - 2. Type: AWWA thread inlet; compression connection outlet. IPS threads are not permitted on 1 inch service.
 - 3. Manufacturer: Mueller Co. or favorably reviewed equivalent.

- D. Angle Stops:
 - 1. Rating: 300 psi water
 - 2. Type: Compression inlet; Meter connection outlet. IPS threads are not permitted.
 - 3. Manufacturer: Mueller Co. or favorably reviewed equivalent.

- E. Meter Box:
 - 1. 1 inch Service - Christy B-16 with Christy FL16P-F reading lid labeled "WATER", or City favorably reviewed equivalent.
 - 2. 2-inch Service – Christy B-36 with FL36P-F reading lid labeled "WATER", or City approved equal, separate City approval required.

- F. Water Meter:
 - 1. Water meters shall be provided by the City.

- G. Locator Wire:
 - 1. Single length of #8 Blue Locator Wire. Coat at end of wire.
 - 2. Tracer wire is required for all underground fire lines and shall be a minimum of 10 A.W.G.

2.6 APPURTENANCES

- A. Provide all necessary assembly bolts, washers, and nuts, thrust blocks, supports, gaskets, flanges, and all other appurtenant items shown on the City's Standard Drawings, specified, or required for the proper installation and operation of the new water main, fire hydrants, and service connections.

PART 3 – EXECUTION

3.1 PIPING INSTALLATION

- A. General Handling and Placing:
 - 1. Exercise great care to prevent injury to or scoring of the pipe lining and coating, as applicable, during handling, transportation, or storage; 10% of pipe thickness maximum allowed. Handle fusion epoxy coated pipe in accordance with AWWA C213. Pipe shall not be stored on rough ground and rolling of the pipe on the coating will not be permitted. Contractor shall be responsible for the repair of any damaged pipe sections, specials, or fittings or replace at the direction of the City.
 - 2. Inspect each pipe fitting, valve, and accessories carefully before installation. Inspect the interior and exterior protective coatings and patch all damaged areas in the field or replaced at the direction of the City.
 - 3. Place or erect all piping to accurate line and grade and backfill, support, hang, or brace against movement as specified or shown within the Construction Documents and City's Standards, or as required for proper

installation. Remove all dirt and foreign matter from the pipe interior prior to installation and thoroughly clean all joints before joining. All exposed pipe ends shall be covered and sealed with plastic, and shall not be uncovered until just prior to completing the joint.

4. Use reducing fittings where any change in pipe size occurs. Bushings shall not be used. Use eccentric reducing fittings wherever necessary to provide free drainage of lines.
5. Connections between ferrous and non-ferrous piping and accessories shall be made using a dielectric coupling, union, or flange.

B. General Buried Piping Installation:

1. Trenching, bedding, and backfill for buried piping shall be as shown on the Drawings.
2. Where no grade elevations are shown on the Drawings, buried piping shall have at least 30 inches of cover.
3. Provide each pipe with a firm, uniform bearing for its full length in the trench except at field joints. Do not lay pipe in water or when trench conditions or weather are unsuitable for such work.
4. Protect buried piping against thrust by use of restrained joints and thrust blocks at all fittings and valves. Securely brace all exposed free pipe ends.
5. Do not pull bell and spigot, gasketed joints more than 75% of the maximum deflection permitted by the pipe manufacturer.
6. Service connections shall be installed by open trench method, or using trenchless technologies. This applies for service connections ONLY.

C. Water Main Installation:

1. DO NOT MAKE ANY CONNECTIONS BETWEEN THE NEW MAIN AND THE OLD MAIN UNTIL THE NEW MAIN HAS BEEN DISINFECTED AND TESTED AND THE CITY DIRECTS THAT CONNECTIONS CAN BE MADE.
2. The Contractor is advised that precautions taken to keep the pipeline clean during construction will facilitate achieving the disinfection requirements of this project with a minimum of effort and expense. Compliance with these suggested minimum procedures will not relieve the Contractor of the disinfection requirements.
3. Prior to installation, thoroughly clean the interior of each length of pipe and each fitting or valve and inspect to ensure that no foreign material remains. All exposed pipe ends shall be covered and sealed with plastic, and shall not be uncovered until just prior to completing the joint.
4. Pipe laying shall begin at the low end of the project and proceed uphill, as authorized by the City. Pipe bells shall face uphill.
5. Whenever pipe laying is discontinued for short periods, or whenever work stopped at the end of the day, close the open ends of the pipe with plugs or bulkheads.
6. Provide adequate trench pumping to ensure against groundwater contacting the inside of the pipeline at any time. Do not lower any pipe or fitting into trench where groundwater is present and may enter the pipe. When necessary, pump the water from trenches and keep the trench dry until joints have been completed and the open ends of the pipe have been sealed with a

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watertight plug. Do not remove the plug until the trench has again been pumped dry.

7. Keep new pipe sections clean and dry.
8. When making the connection between a new pipeline and an existing or when repairing a damaged pipe, take the following extra precautions:
 - a. Clean the exterior of the existing pipeline of all dirt and debris, and spray or swab with a standard 5.25% or stronger chlorine solution (as specified) in the immediate vicinity of the work. Clean equipment and materials, including new pipe and fittings, to be used in making these connections of all dirt and debris and disinfect them. Allow at least 30 minutes' contact time for disinfection before the chlorine solution is diluted or rinsed off. Provide sufficient trench pumps to prevent flooding of the trench.
 - b. When an old line is opened, either by accident or by design, the excavation may be wet or badly contaminated from groundwater. Apply liberal quantities of standard chlorine solution or tablets to the open trench areas to lessen the danger from such pollution. Tablets are recommended because they dissolve slowly and continue to release hypochlorite as water is pumped from the excavation. Scatter liberally around and locate the tablets so that flow entering the work site will contact the disinfecting agent. Trench application should be done very carefully to avoid contact by skin and clothing with chlorine solution.
9. Water Department personnel must be present during hot tap and inspection of materials and installation. The location of hot tap to be verified by the Contractor to insure a minimum of 2 feet is kept from tap location and a bell end or end of pipe on a dead end.

E. Installation Specifics:

1. Polyvinyl Chloride Pipe: Installation shall conform to AWWA M23, Chapters 6 and 7.
2. Ductile Iron Pipe: Installation shall conform to ANSI/AWWA C150/A21.50 and AWWA C600.
3. Copper Pipe:
 - a. Bends shall be made in a manner that does not crimp or flatten pipe.
 - b. Dielectric unions shall be installed at connections with ferrous piping.
 - c. Pipe shall have joints squarely cut clean, properly fluxed and heated before solder is placed in the joint. Joints must be driven up tight before solder is added. Compression and flared joints shall be made up in accordance with the manufacturer's instructions.
4. Locator Wire:
 - a. Locator wire shall be installed on the outside of pipe between valve box and valve box riser. Hook wire over top of riser leaving 12 inches of slack within valve box and riser. Wire shall be loose over pipe joints and couplings. Wire shall be taped to top of main at approximate 3 foot intervals with 6 inch lengths of 1 inch wide filament tape (Scotch Brand No. 898 or approved equivalent). See City Standard Details for installation requirements – this detail applies to all new water main (both

metallic and nonmetallic) regardless of pipe material.

3.2 FIRE HYDRANT INSTALLATION AND TESTING

- A. All fire hydrant installations shall have cathodic protection in accordance with City Standard Details.
- B. Install fire hydrants in accordance with City details, Menlo Park Fire District requirements, NFPA 24 and local water purveyor standards.
- C. Hydrants shall be installed with a minimum 6" diameter service lateral. Service lateral shall include a thrust block in accordance with City Standard Detail.
- D. Existing fire hydrant and fire service locations shall not be moved without written approval by the Menlo Park Fire District Fire Prevention Division.
- E. Install a blue reflective fire hydrant location marker on the nearest access road in accordance with Menlo Park Fire District standards.
- F. Fire hydrants, fire service lines and appurtenances shall be tested in accordance with NFPA 24 and Menlo Park Fire District testing procedure requirements.

3.3 COUPLING INSTALLATION

- A. Flexible Couplings and Flange Coupling Adaptors: Prior to installation, thoroughly clean oil, scale, rust, and dirt from the pipe to provide a clean seat for the gasket. Care shall be taken that the gaskets are wiped clean before they are installed. If necessary, flexible couplings and flanged coupling adapter gaskets may be lubricated with soapy water or manufacturer's standard lubricant before installation on the pipe ends. Install in accordance with the manufacturer's recommendations. Bolts shall be tightened progressively, drawing up bolt on opposite sides a little at a time until all bolts have a uniform tightness. Workers tightening bolts shall be equipped with torque-limiting wrenches or other favorably reviewed type. Anchor studs on restrained flanged coupling adapters shall be installed to lock into holes drilled through pipe wall in accordance with manufacturer's recommendation.

3.4 INSTALLATION OF VALVES AND ACCESSORIES

- A. Wrap buried valve bodies as specified for flexible couplings and flanged coupling adapters.
- B. Use reducing fittings where any change in pipe size occurs between valves or accessories and the attached pipeline. Bushings shall not be used, unless Use eccentric reducing fittings wherever necessary to provide free drainage of lines. Inspect each piece of pipe and each fitting carefully to see that there is no defective workmanship on pipe, or obstructions in pipes and fittings.

3.5 INSTALLATION OF SERVICE LINES

- A. New water service laterals and connections shall be installed by the Contractor and replace existing water service laterals.
- B. Contractor shall install new water service connections up to the existing water meters as in accordance with City Standard Details.

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- C. Contractor shall provide and install remaining water service line appurtenances.
- D. Contractor shall remove and dispose of existing water service laterals all other water service line appurtenances up to the effluent side of the water meter.
- E. Contractor shall preserve the existing water service connection at each existing water service lateral. Contractor shall make new water service connection and supply any fittings and piping necessary to properly connect new water service line to the existing water meters.

3.6 QUALITY CONTROL

- A. Factory Quality Control: The Contractor shall test all products as required herein and by the reference specifications.
- B. The Contractor shall:
 - a. Perform leakage tests.
 - b. Be responsible for the costs of additional inspection and retesting by the City resulting from non-compliance.
 - c. Perform bacteriological analysis for pipelines to be disinfected.
 - d. Perform flush and pressure test for fire hydrant and fire service lines in accordance with the Menlo Park Fire Protection District and NFPA 24 requirements. Fire hydrant and fire service line flush and tests shall be witnessed by Menlo Park Fire District Inspectors.
 - e. Submit a Menlo Park Fire District Plan Review Application and schedule inspections as required by the Menlo Park Fire Protection District.

3.7 CLEANING

- A. Prior to testing, the inside of each completed pipeline shall be thoroughly cleaned of all dirt, loose scale, sand, and other foreign material. Cleaning shall be by sweeping, flushing with water internal cleaning device or "pig", or blowing with compressed air, as appropriate for the size and type of pipe. Flushing shall achieve a velocity of at least 3 feet per second. The Contractor shall install temporary strainers, temporarily disconnect equipment, or take other appropriate measures to protect equipment while cleaning piping. Cleaning shall be completed after any repairs.
- B. The Contractor shall comply with the Municipal Regional Stormwater Permit (MRP) for discharge water.

3.8 FIELD TESTING

- A. General: Perform leakage tests on all pipe installed in this project. Furnish all equipment, material, personnel, test media and supplies to perform the tests and make all taps and other necessary temporary connections. The test pressure, allowable leakage and test medium shall be as specified. Perform leakage tests on all piping at a time agreed

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upon and in the presence of the City.

- B. Buried Piping: Perform the leakage test for buried piping after all pipe is installed and backfilled. However, preliminary tests may be conducted prior to backfill. If preliminary tests are conducted, provide any necessary temporary thrust restraint.
- C. Accessories: It is the responsibility of the Contractor to block off or remove equipment, valves, gauges, etc., which are not designed to withstand the full test pressure.
- D. Testing Apparatus: Provide pipe taps, nozzles, and connections as necessary in piping to permit testing, addition of test media, and draining lines and disposal of water, as is necessary. Plug these openings in a manner favorably reviewed by the Engineer after use. Provide all required temporary bulkheads.
- E. Correction of Defects: If leakage exceeds the allowable, repair or replace the installation and repeat leakage tests as necessary until conformance to the leakage test requirements specified herein have been fulfilled. All visible leaks shall be repaired even if the pipeline passes the allowable leakage test.
- F. Reports: Keep records of each piping test, including:
 - 1. Description and identification of piping tested.
 - 2. Test pressure.
 - 3. Date of test.
 - 4. Witnessing by Contractor and City.
 - 5. Test evaluation.
 - 6. Remarks, to include such items as:
 - a. Leaks (type, location).
 - b. Repairs made on leaks.
 - c. Submit test reports to the City.
- G. Venting: Where not shown on the Drawings, the Contractor may install corporation stops with saddles or "TEES" with shutoff valves at high points on piping to permit venting of air. Valves shall be capped after testing is completed.
- H. Testing Specifics:
 - 1. Water Transmission Mains:
 - a. Method: AWWA C600, as modified herein.
 - b. Duration: Two hours.
 - c. Pressure: Hydrostatic test equal to 200 psi.
 - d. Medium: Potable water.
 - e. Allowable Leakage: Leakage shall be defined as the quantity of test medium that must be added to the section of pipeline being tested to maintain the specified test pressure for the specified test duration. Maximum allowable leakage shall be as specified in AWWA C600.

3.9 DISINFECTION OF POTABLE WATER SYSTEMS

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- A. Disinfect all water mains and interconnected piping after testing and before being placed into service to ensure their bacteriological safety. Disinfection shall be accomplished under the supervision of the Contractor by a person skilled and experienced in the operation of water systems. Following disinfection and flushing, the Contractor will take water samples for bacteriological analysis of the water. If the specified bacteriological requirements are not satisfied, the disinfection procedure must be repeated until the requirements are met.
- B. Disinfect water mains, service laterals, fire service laterals, fire hydrants, and appurtenances in accordance with AWWA C651 as amended herein.
 - 1. Forms of Chlorine: Sodium hypochlorite or calcium hypochlorite.
 - 2. Method: Continuous-Feed.
- C. Chlorine Residual Testing: Latest version of AWWA C651, Appendix A, DPD Drop Dilution Method, except where otherwise specified.
- D. Bacteriological Analyses of Water: After the completion of disinfecting procedure, including the final flushing as described heretofore, the City Representative will obtain water samples from this system for bacteriological analyses. Requirements for satisfactory disinfection of water supply are that bacteriological analyses (Heterotrophic plate count) indicate that water samples are negative for coliformnerogenes organisms, and that total plate count is less than 100 bacteria per cubic centimeter. If bacteriological analyses do not satisfy the above requirements, then disinfection procedure must be repeated until these requirements are met.
- E. Disposal of Disinfection Solution: Dechlorinate and dispose of disinfection solution in accordance with applicable regulations. Take special measures to prevent chlorinated water from entering the ground, surface water, or sanitary sewer and storm drainage systems. Dechlorinate chlorinated water prior to discharge.

3.10 ABANDONMENT OF EXISTING WATERLINES AND APPURTENANCES

- A. Valves: Cut existing valves riser 12 inches (12") below surface and fill riser with concrete. Repair surface. See plans for details.

END OF SECTION

ATTACHMENT B – GENERAL CONSTRUCTION CONTRACT

GENERAL CONSTRUCTION CONTRACT

This General Construction Contract ("Contract") is made at East Palo Alto, California, dated for reference this _____ day of _____, 20____, by and between the City of East Palo Alto, a municipal corporation ("City") and [type in Contractor's name], a [type in the type of entity], hereinafter referred to as "Contractor", who agree as follows:

1. Scope of Work. Contractor agrees to furnish all tools, equipment, apparatus, facilities, labor, transportation, and material necessary to perform and complete the project in a good and workmanlike manner. The work consist(s) of furnishing all labor, materials, equipment, tools and services necessary to [type project description], as further set forth in the Scope of Work, Exhibit A. The Project also includes [type additional information if necessary], as called for, and in the manner designated in, and in strict conformity with, the Plans and Specifications prepared by [type who prepared Plans and Specifications] and adopted by the City. These Plans and Specifications are entitled [type exact name of Plans and Specifications].

Contractor understands and agrees that the work will be performed and completed as required in the Plans and Specifications under the sole direction and control of the Contractor, and subject to inspection and approval of the City, or its representatives. The City hereby designates as its representative for the purpose of this contract the Senior Civil Engineer for Construction or an employee of the City who will be designated in writing by the Director of Community and Economic Development.

2. Contract Price. The City agrees to pay and the Contractor agrees to accept, in full payment for the work above agreed to be done, the sum of exceed [insert dollar amount in words - e.g. Two Thousand Five Hundred Fifty Dollars and 13 Cents] ([insert dollar amount in number- e.g., \$2,550.13]) subject to final determination of work performed and materials furnished at unit prices per Exhibit "A", and subject to additions and deductions in accordance, as provided in the Documents and in accordance with Contract Documents. The sum includes base bid and accepted Additive Alternate(s) No. [type number(s) of alternatives]. All other Additive Alternate(s) are rejected by City and are not included in this contract.

3. The Contract Documents. The complete Contract consists of the following documents: Notice Inviting Bids; Instructions to Bidders; Performance Bond; Payment Bond; Guaranty; Plans and Specifications for [type name of project], Project No. [type project number]. These documents are all incorporated herein by reference.

This Contract also contains the following Exhibits, attached and incorporated by reference:

- Exhibit A – [Type in Contractor's name] Construction Bid Proposal
- Exhibit B – Faithful Performance Bond
- Exhibit C – Labor and Materials Bond
- Exhibit D – Insurance Requirements
- Exhibit E – City of East Palo Alto's Policy Against Discrimination, Harassment, and Retaliation

The documents incorporated by reference and any exhibits, including any attachments, comprise the complete contract and are collectively referred to as the Contract Documents. Any and all obligations of the City and the Contractor are fully set forth and described therein. All of the above documents are intended to work together so that any work called for in one and not mentioned in the other or vice versa is to be executed the same as if mentioned in all documents.

4. Permits; Compliance with Law. Contractor shall, at its expense, obtain all necessary permits and licenses, easements, etc., for the construction of the project, give all necessary notices, pay all fees required by law, and comply with all laws, ordinances, rules and regulations relating to the work and to the preservation of the public health and safety.

5. Inspection by City. Contractor shall at all times maintain proper facilities and provide safe access for inspection by the City to all parts of the work, and to the shops wherein the work is in preparation. Where the Specifications require work to be specially tested or approved, it shall not be tested or covered up without timely notice to the City of its readiness for inspection and without the approval thereof or consent thereto by the latter. Should any such work be covered up without such notice, approval, or consent, it must, if required by City, be uncovered for examination at the Contractor's expense.

6. Extra or Additional Work and Changes. Should City at any time during the progress of the work request any alterations, deviations, additions or omissions from the Specifications or Plans or other Contract Documents it shall be at liberty to do so, and the same shall in no way affect or make void the contract, but will be added to or deducted from the amount of the contract price, as the case may be, by a fair and reasonable valuation, agreed to in writing between the parties hereto. No extra work shall be performed or change be made unless in pursuance of a written order from the Director of Community Development or authorized representative, stating that the extra work or change is authorized and no claim for an addition to the contract sum shall be valid unless so ordered.

7. Time for Completion. All work under this contract shall be completed before the expiration _____(XXX) calendar days from the date specified in the Notice to Proceed.

If Contractor shall be delayed in the work by the acts or neglect of City, or its employees or those under it by contract or otherwise, or by changes ordered in the work, or by strikes, lockouts by others, fire, unusual delay in transportation, unavoidable casualties or any causes beyond the Contractor's control, or by delay authorized by the City, or by any cause which the City shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the City may decide.

This provision does not exclude the recovery of damages for delay by either party under other provisions.

8. Inspection and Testing of Materials. Contractor shall notify City a sufficient

time in advance of the manufacture or production of materials, to be supplied under this contract, in order that the City may arrange for mill or factory inspection and testing of same, if City requests such notice from Contractor.

9. Termination for Breach, etc. If Contractor should file a bankruptcy petition and/or be judged bankrupt, or if Contractor should make a general assignment for the benefit of creditors, or if a receiver should be appointed on account of insolvency, or if Contractor or any subcontractors should violate any of the provisions of the Contract, City may serve written notice upon Contractor and its surety of City's intention to terminate the Contract. The notice shall contain the reasons for such intention to terminate the Contract, and, unless within ten days after serving such notice, such violation shall cease and satisfactory arrangements for correction thereof be made, upon the expiration of the ten days, the Contract shall cease and terminate. In the event of any such termination, City shall immediately serve written notice thereof upon the surety and the Contractor, and the surety shall have the right to take over and perform the Contract; provided, however that, if the surety within fifteen days after the serving upon it of notice of termination does not give City written notice of its intention to take over and perform the Contract or does not commence performance thereof within thirty days from the date of the serving of such notice, City may take over the work and prosecute the same to completion by contract or by any other method it may deem advisable, for the account and at the expense of Contractor, and Contractor and its surety shall be liable to City for any excess cost occasioned City thereby, and in such event City may without liability for so doing take possession of and utilize in completing the work, such materials, appliances, plant and other property belonging to Contractor as may be on the site of the work and necessary therefor.

10. City's Right to Withhold Certain Amounts and Make Application Thereof. In addition to the amount which City may retain under Paragraph 21 until the final completion and acceptance of all work covered by the Contract, City may withhold from payment to Contractor such amount or amounts as in its judgment may be necessary to pay just claims against Contractor or any subcontractors for labor and services rendered and materials furnished in and about the work. City may apply such withheld amount or amounts to the payment of such claims in its discretion. In so doing City shall be deemed the agent of Contractor and any payment so made by City shall be considered as a payment made under the Contract by City to the Contractor and City shall not be liable to Contractor for any such payment made in good faith. Such payment may be made without prior judicial determination of the claim or claims.

11. Notice and Service Thereof. All notices required pursuant to this Contract shall be communicated in writing, and shall be delivered in person, by commercial courier or by first class or priority mail delivered by the United States Postal Service. Transmission of notice by facsimile or by telephone may be deemed sufficient if the requirement for written notice is waived, in writing, by the receiving party. Notices delivered in person shall be deemed communicated as of actual receipt. Notices sent by mail or courier service shall be deemed communicated as of three days after mailing or dispatch, unless that date is a date on which there is no mail or delivery service, in which case communication shall be deemed to occur the next mail service or delivery day. The burden of proof of compliance with this requirement for written notice shall be on the sending party. All notices sent pursuant to this Contract shall be addressed as

follows:

City: City of East Palo Alto
Community & Economic Development Department
Attn: City Engineer
1960 Tate Street
East Palo Alto, CA 94303

Contractor: _____

12. Assignment of Contract. Neither the Contract, nor any part thereof, nor moneys due or to become due thereunder may be assigned by Contractor without the prior written approval of City.

13. Compliance with Specifications of Materials. Whenever in the Specifications, any material or process is indicated or specified by patent or proprietary name, or by name of manufacturer, such Specifications must be met by Contractor, unless City agrees in writing to some other material, process or article offered by Contractor which is equal in all respects to the one specified.

14. Contract Security. Contractor shall furnish a surety bond in an amount at least equal to 100 percent of the contract price as security for the faithful performance of this Contract. Contractor shall also furnish a separate surety bond in an amount at least equal to 100 percent of the contract price as security for the payment of all persons for furnishing materials, provisions, provender, or other supplies, or teams, used in, upon, for or about the performance of the work contracted to be done, or for performing any work or labor thereon of any kind, and for the payment of amounts due under the Unemployment Insurance Code with respect to such work or labor in connection with this Contract, and for the payment of a reasonable attorney's fee to be fixed by the court in case suit is brought upon the bond. Bonds shall be issued by an admitted surety insurer authorized to operate in the state of California.

15. Insurance. Contractor shall not commence work under this Contract until all insurance required as set forth in Exhibit _____ has been obtained and such insurance has been approved by the City, nor shall Contractor allow any subcontractor to commence work on a subcontract until all similar insurance required of the subcontractor has been so obtained and approved. Contractor shall furnish the City with satisfactory proof of the carriage of insurance required, and there shall be a specific contractual liability endorsement extending the Contractor's coverage to include the contractual liability assumed by the Contractor pursuant to this Contract and particularly Paragraph 16 hereof. Any policy of insurance required of the Contractor under this Contract shall also contain an endorsement providing that thirty (30) days' notice must be given in writing to the City of any pending change in the limits of liability or of any cancellation or modification of the policy. Insurance carrier shall be California-admitted.

16. Hold Harmless. Contractor agrees to defend, save, indemnify and hold

harmless City and all its officers, employees, agents, independent contractors and and volunteers against any and all liability, claims, judgments, or demands, including demands arising from injuries or death of persons (Contractor's employees included) and damage to property, arising directly or indirectly out of the obligations herein undertaken or out of the operations conducted by Contractor, save and except claims or litigation arising through the active negligence or willful misconduct of City, or of City's officials, agents, employees, independent contractors or volunteers who are directly responsible to City. Contractor shall make good and reimburse City for any expenditures, including reasonable attorneys' fees, City may make by reason of such claim or litigation, and, if requested by City, Contractor shall defend any such suits at the sole cost and expense of Contractor.

17. Hours of Work. Eight hours of labor during any one calendar day and forty hours of labor during any one calendar week shall constitute the maximum hours of service upon all work done hereunder, and it is expressly stipulated that no laborer, worker, or mechanic employed at any time by the Contractor or by any subcontractor or subcontractors under this Contract, upon the work or upon any part of the work contemplated by this Contract, shall be required or permitted to work thereon more than eight hours during any one calendar day and forty hours during any one calendar week, except, as provided by Section 1815 of the Labor Code of the State of California, work performed by employees of contractors in excess of eight hours per day and forty hours during any one week shall be permitted upon public work upon compensation for all hours worked in excess of eight hours per day at not less than one and one-half times the basic rate of pay. It is further expressly stipulated that for each and every violation of Sections 1811-1815, inclusive, of the Labor Code of the State of California, all the provisions whereof are deemed to be incorporated herein, Contractor shall forfeit, as a penalty to City, fifty dollars (\$50.00) for each laborer, worker, or mechanic employed in the execution of this Contract by Contractor, or by any subcontractor under this Contract, for each calendar day during which the laborer, worker, or mechanic is required or permitted to work more than eight hours in any one calendar day and forty hours in any one calendar week in violation of the provisions of the Sections of the Labor Code.

Contractor, and each subcontractor, shall, in accordance with California Labor Code Section 1776 or as the same may be later amended, keep accurate payroll records showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with work under this agreement. Each payroll record shall contain or be verified by a written declaration under penalty of perjury, in accordance with Labor Code Section 1776(a). Such payroll records shall be made available at all reasonable times at the Contractor's principal office to the persons authorized to inspect such records pursuant to Labor Code Section 1776. A certified copy of all payroll records shall be made available for inspection or furnished upon request to a representative of the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations, as well as to the City's representative. In the event the Contractor or a Subcontractor fails to comply in a timely manner within ten days to a written notice requesting the records, such contractor or subcontractor shall forfeit twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker, until strict compliance

is effectuated, in accordance with Labor Code Section 1776(g).

18. Wage Rates. Pursuant to the Labor Code of the State of California, or any applicable local law, City has ascertained the general prevailing rate per diem wages and rates for holidays, and overtime work in the City, for each craft, classification or type of laborer, worker, or mechanic needed to execute this Contract. City has adopted, by reference, the general prevailing rate of wages applicable to the work to be done under the Contract, as adopted and published by the Division of Labor Standards Enforcement and Labor Statistics and Research of the State of California, Department of Industrial Relations, to which reference is hereby made for a full and detailed description. A copy of the prevailing wage rates may be reviewed in the office of the Director of Community Development, City of East Palo Alto, 1960 Tate Street, East Palo Alto, California. Wage rates can also be obtained through the California Department of Industrial Relations website at:

<http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>

Neither the notice inviting bids nor this Contract shall constitute a representation of fact as to the prevailing wage rates upon which the Contractor or any subcontractor may base any claim against City.

It shall be mandatory upon Contractor and upon any subcontractor to pay not less than the specified rates to all laborers, workers, and mechanics employed in the execution of the Contract. It is further expressly stipulated that Contractor shall, as a penalty to City, forfeit fifty dollars (\$50.00) for each calendar day, or portion thereof, for each laborer, worker, or mechanic paid less than the stipulated prevailing rates for any work done under this Contract by Contractor or by any subcontractor; and Contractor agrees to comply with all provisions of Section 1775 of the Labor Code.

In case it becomes necessary for Contractor or any subcontractor to employ on the project under this Contract any person in a trade or occupation (except executives, supervisory, administrative, clerical, or other non-manual workers as such) for which no minimum wage rate is herein specified, Contractor shall immediately notify City who will promptly thereafter determine the prevailing rate for such additional trade or occupation and shall furnish Contractor with the minimum rate based thereon. The minimum rate thus furnished shall be applicable as a minimum for such trade or occupation from the time of the initial employment of the person affected and during the continuance of such employment.

19. Accident Prevention. Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment, and other hazards shall be guarded or eliminated in accordance with the safety provisions of the Construction Safety Orders issued by the Industrial Accident Commission of the State of California.

20. Contractor's Guarantee. City shall not, in any way or manner, be answerable or suffer loss, damage, expense or liability for any loss or damage that may happen to the building, work, or equipment or any part thereof, or in, on, or about the same during its construction and before acceptance. Contractor unqualifiedly

guarantees the first-class quality of all workmanship and of all materials, apparatus, and equipment used or installed by Contractor or by any subcontractor or supplier in the project which is the subject of this Contract, unless a lesser quality is expressly authorized in the Plans and Specifications, in which event Contractor unqualifiedly guarantees such lesser quality; and that the work as performed by Contractor will conform with the Plans and Specifications or any written authorized deviations therefrom. In case of any defect in work, materials, apparatus or equipment, whether latent or patent, revealed to City within one year of the date of acceptance of completion of this Contract by City, Contractor will forthwith remedy such defect or defects without cost to City.

21. Liquidated Damages. Time shall be the essence of this Contract. If Contractor fails to complete, within the time fixed for such completion, the entire work mentioned and described and contracted to be done and performed, Contractor shall become liable to City for liquidated damages in the sum of _____ Hundred and No/100 Dollars (\$XXX.00) for each and every calendar day during which work shall remain uncompleted beyond such time fixed for completion or any lawful extension thereof. The amount specified as liquidated damages is presumed to be the amount of damage sustained by City since it would be impracticable or extremely difficult to fix the actual damage; and the amount of liquidated damages may be deducted by City from moneys due Contractor hereunder, or its assigns and successors at the time of completion, and Contractor, or its assigns and successors at the time of completion, and its sureties shall be liable to City for any excess.

22. Additional Provisions.

None.

IN WITNESS WHEREOF, two identical counterparts of this contract, each of which shall for all purposes be deemed an original thereof, have been duly executed by the parties.

CITY OF EAST PALO ALTO
a municipal corporation

[INSERT CONTRACTOR'S NAME &
TYPE OF COMPANY]

License No. _____

By _____
Melvin Gaines
City Manager

By _____
[INSERT NAME]
[INSERT TITLE]

By _____
James Colin
City Clerk

By _____
[INSERT NAME]
[INSERT TITLE]

(SEAL)

APPROVED AS TO CONTENT

By _____
Humza Javed, PE
Public Works Director

APPROVED AS TO FORM:

John Le
City Attorney

(Notice: The signatures of the Contractor's officers on this contract must be acknowledged before a notary.)

ACKNOWLEDGMENT

State of California)
County of)

On _____ before me, _____
personally appeared _____

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

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

WITNESS my hand and official seal.

Signature _____

(SEAL)

ATTACHMENT C – GENERAL PROVISIONS

GENERAL PROVISIONS

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SECTION 1 – TERMS AND DEFINITIONS

1.01 Terms

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

1.02 Definitions

Except as amended or supplemented, whenever in the Contract Documents the following terms are used, the intent and meaning shall be interpreted as follows:

ASTM – American Society for Testing and Materials specifications.

AWWA – American Water Works Association and its Standard Specifications.

Addenda – Written or graphic instruments issued prior to the opening of bids which clarify, correct or change the bidding documents or the Contract Documents.

Bid – The offer or proposal of the bidder submitted on the prescribed forms setting forth the prices for the work to be performed.

Bid Forms – Includes the Bid Schedule, Designation of Subcontractors, Bidders Statement of Responsibility, Bidder's Non-Collusion Affidavit, Bid Security, and all other information requested by the Bid Proposal Documents.

Bidder – Any individual, firm, partnership, corporation, or other legal entity submitting a bid for the work, acting directly or through a duly authorized representative. After the City awards the Contract, the term "Bidder" shall be equivalent to the term "Contractor" for the purpose of identifying the Contractor's rights and obligations under the Contract Documents.

Bidding Documents – The Notice Inviting Bids, Instruction to Bidders, Bid Proposal forms and Bidders Bond.

Bonds – Bid, performance, labor and material, and warrantee bonds and other instruments of security.

Calendar Day – A 24-hour period beginning at 12:00 AM and ending at 11:59 PM.

Change Order – A document recommended by the Engineer which is signed by the Contractor and City authorizing an addition, deletion or revision in the work, with possible adjustment in the contract price or the contract time, issued on or after the effective date of the Agreement.

City – City of East Palo Alto, California, as City,; a political subdivision of the State of California, acting through the City Council as the Governing Body or duly authorized agents.

City's Representative – The Director of Public Works or the Director's authorized representative, acting on behalf of the City, designated by the City to act as its agent on specified matters relating to this contract.

City Regulations – All written laws, rules, and policies established by the City, including those set forth in the General Plan, East Palo Alto Municipal Code, ordinances, resolutions, policies, procedures, and City Design Documents (including the Standard Plan, Standard Specifications, Design Standards, and relevant Public Facility Master Plans).

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

Completion – The point at which work has been completed in accordance with the contract plans and specifications to the satisfaction of the Engineer and there are no items of work remaining to be completed. See General Provisions, Section 7.19, “Project Completion and Closeout”.

Consulting Engineer/Architect – One of several consulting firms or their designated representatives having a contractual relationship with the City to perform certain duties.

Contract – The entire written agreement covering the performance of the work as more fully described in Section 3.05: “Contract Documents and Precedence”.

Contract Time – Number of days, calendar or working, stated in the contract as the duration for the completion of the various parts of the Work (defined as Milestones) and the whole of the Work.

Contract Unit Price – The Contractor’s original bid for a single unit of an item of work in the bid.

Contractor – An individual, partnership, corporation or other legal entity entering into a contract with the City to perform the work. After the City awards the Contract, the term “Contractor” shall be equivalent to the term “Bidder” for the purpose of identifying the Contractor’s rights and obligations under the Contract Documents.

Council – The City Council of the City of East Palo Alto.

Days – Days shall mean calendar days unless otherwise specified.

Defective Work – Work that is unsatisfactory, faulty, omitted, incomplete, deficient, or does not conform to the requirements of the Contract Documents, directives of the Engineer, or requirements of any inspection, reference standard, test, or approval specified in the Contract Documents, or has been damaged prior to the Engineer’s recommendation of final acceptance.

Directive – Any written instruction to the Contractor pertaining to the completion of a project objective including, but not limited to Field Orders, responses to Requests for Information, Clarifications and the Notice to Proceed.

Engineer – The City Engineer or his/her designee.

Final Acceptance – Determination by the Director of Public Works that the entire contract has been completed in all respects in accordance with the Contract Documents and any modifications previously approved, evidenced by a Certificate of Final Acceptance signed by the Director of Public Works.

Float – The number of days between early and late completion. The float will be assigned to the project and will be available to both the City and the Contractor as needed to complete the work in accordance with the agreement.

Greenbook – The Standard Specifications promulgated by Public Works Standards, Inc., entitled “Standard Specifications for Public Works Construction” (SSPWC), and current editions.

Laboratory – The laboratory approved by the Engineer to test materials and work involved in the contract.

Liquidated Damages – The amount prescribed in the contract documents to be paid to the City or to be deducted from any payments due or to become due to the Contractor for each contract day’s delay in completing the whole of the Work and/or any of the Milestones.

Losses – Any and all losses, costs, liabilities, claims, damages, and expenses, including reasonable attorneys’ fees and expenses.

Milestone – An event specified in the Contract Documents relating to an intermediate completion date or time prior to completion of all the work.

Notice of Intent to Award – Indicates the intent of the City to present a contract to Council for award at the council meeting indicated.

Notice to Proceed – A written notice by the City to the Contractor authorizing the start of work and fixing the date on which the contract time will start.

Owner – The City of East Palo Alto.

Plans – The contract drawings approved by the Engineer which show the location, character, dimensions and details of the work.

Project – The work performed under the Contract Documents.

Punchlist – A list generated by the City or the City's Representative of any work to be completed or corrected by the Contractor before the contract work will be recommended for acceptance by the Director of Public Works.

Record Documents - Contract drawings, Contractor shop drawings, and equipment manuals revised by the Contractor to reflect actual installation where it deviates from the original document, or to show features constructed or found that do not show on the original document.

Reference Specifications – Those standards, rules, method of tests or analysis, codes, and specifications of other agencies, engineering societies, or industrial associations referred to in the Contract Documents. These refer to the current edition or amendments in effect at the time of advertising the project unless specifically referred to by edition, volume or date.

Revocable Bid Items – Bid items noted as "revocable items" may be deleted entirely or in part from the Work at the option of the City. The provisions in Section 4.07(b) and 4.07(c), "Unit Price Adjustments", shall not apply to such deletion, and no compensation will be allowed the Contractor by reason of such deletion.

Shop Drawings – All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the Contractor to illustrate some portion of the work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a supplier and submitted by the Contractor to illustrate material or equipment for some portion of the work.

Special Provisions – Any provisions which supplement or modify these General Provisions.

Specifications – General Provisions, Special Provisions, Technical Specifications and Standard Specifications incorporated by reference.

Standard Details – The City of East Palo Alto Standard Details for Public Works Construction, 2006 Edition and subsequent updates.

Standard Specifications – The City of East Palo Alto Standard Specifications for Public Works Construction, current edition.

State – State of California.

State Standard Plans – The Standard Plans of the Department of Transportation of the State of California (Caltrans), entitled "Standard Plans", current edition.

State Standard Specifications – The Standard Specifications of the Department of Transportation of the State of California (Caltrans), entitled "Standard Specifications", current edition. Also, Revised Standard Specifications.

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

Submittal – Any document or material required to be submitted to the City for the City's review or information.

Substantial Completion – When the work (or a specified part thereof) has progressed to the point where it is sufficiently complete and in accordance with the Contract Documents.

Surety – Any individual, firm or corporation, bound with and for the Contractor for the acceptable performance and completion of the work, and the satisfaction of all obligations incurred.

Surveyor – A land surveyor licensed in the State of California.

Work – The construction services required by the Contract Documents.

Working Day – Any day except Saturday, Sunday or Holidays observed by the City.

SECTION 2 – Bid REQUIREMENTS AND CONDITIONS

2.01 General

Bidders may obtain complete sets of the Contract Documents, including the bid forms to be used for bidding, at the location designated in the Notice to Bidders. Bidders shall use complete sets of Contract Documents in the preparation of bids. The City makes copies of the Contract Documents available, on the above terms, for the sole purpose of obtaining Bids for the work and does not confer a license or grant permission for any other use of the Contract Documents.

2.02 Bid Prices to Cover Entire Work

The quantities listed in the Bid Schedule do not govern final payment, as payments to the Contractor will only be made for the actual quantities constructed in accordance with the plans and specifications as measured by the appropriate unit of measurement indicated in the Bid Schedule, complete in place to the satisfaction of the Engineer. Such payment shall constitute the full compensation for furnishing all materials, labor, tools and equipment for performing the work, and for all other incidentals necessary to complete the work as shown on the plans and described in these specifications.

No separate payment will be made for incidentals or any items delineated on the plans or called for in the specifications to be supplied or installed which are not specifically listed as bid items but are required to complete the project. Full compensation for such items shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed.

2.03 Listing of Proposed Subcontractors

The Bidder shall not list any Subcontractor who is ineligible pursuant to Labor Code, Sections 1777.1 and 1777.7, and Public Contract Code, Section 6109.

If, after the execution of the Agreement, the successful Bidder subcontracts except as provided for in the Subcontracting Act, or if the Bidder lists in his bid another Contractor who will in turn sublet portions constituting the majority of work covered by the prime contract, the Contractor shall be subject to the penalties set forth in the Subcontracting Act. If the Contractor violates any provisions of the Subcontracting Act, the Contractor violates the Agreement and the City may either terminate the Agreement or assess a penalty to the Contractor in accordance with the terms of the Subcontracting Act.

2.04 Proposal Guarantee

In accordance with the Public Contract Code, Section 20170, each Bid shall be accompanied by a Bid Security, in the amount of ten percent (10%) of the Bid Amount.

2.05 Withdrawal of Bids

After the time fixed in the Notice to Bidders for the opening of bids, no bid may be withdrawn for a period of at least ninety (90) calendar days without consent of the awarding authority that the Bidder has established all of the following occurrences identified in California Public Contract Code, Section 5103.

2.06 Rejection of Bids

More than one proposal from an individual, firm, partnership, corporation, or combination thereof under the same or different names will not be considered. Reasonable grounds for believing that any individual, firm, partnership, corporation or combination thereof is interested in more than one proposal for the work contemplated may cause the rejection of all proposals in which that individual, firm, partnership, corporation or combination thereof is interested. If there is reason for believing that collusion exists among the bidders, any or all proposals may be rejected.

SECTION 3 – SCOPE AND CONTROL OF WORK

3.01 Work to be Done

It is the intent of this contract to obtain a finished, workmanlike job, complete and in place, with all equipment properly installed and operating. The work to be done consists of furnishing all labor, materials, tools, equipment and services necessary to complete the project, as further described in these Specifications, and as necessary to leave the site in a neat and finished condition with all equipment properly installed and working.

While the City has endeavored to accurately represent in the plans and specifications the physical conditions which may affect the cost of the proposed work, the City does not warrant the completeness or accuracy of such information. It is the Contractor's responsibility to ascertain the existence of any such conditions affecting the cost of the work, which would have been disclosed by reasonable examination of the site.

Conclusions pertaining to any test, investigation, statement or estimate of fact incorporated in the plans and specifications shall be considered by the Contractor to be a recommendation only. The Contractor may request equal access to the underlying or background information to arrive at his own opinion thereon, including his determination of how reliable might be any conclusion appearing in (or inferred from) the information. The Contractor may not rely upon "record drawings" or similar final or accepted drawings or maps constructed on public or private property. Such information may be used for reference only. Actual locations and depths shall be determined by field investigations by the Contractor.

No oral or telephonic agreement or conversation with any officer, agent, or employee of the City or the Engineer, either before or after execution of the contract, shall affect or modify any of the terms or obligations contained in any of the contract documents.

3.02 Plans and Specifications

It is the intent of the Plans and Specifications to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. For convenience, the Specifications are arranged in several sections, but such separation shall not be considered as the limits of the work required by any separate trade. The terms and conditions of such limitations are wholly between the Contractor and his subcontractors. In general, the Special Provisions, General Provisions, and other sections of the specifications indicate the responsibilities of the Contractor and the quality of material and methods of workmanship. The plans indicate dimensions, quantities, positions, and various other details of construction.

Any work, materials or equipment that may be reasonably inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words, which have a well-known technical or trade meaning, are used to describe the work, materials or equipment, such words shall be interpreted in accordance with that meaning.

3.03 References to Standards and Codes

Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of the opening of bids except as may be otherwise specifically stated.

3.04 Authority of the Engineer

The City has the final authority in all matters affecting the work. Within the scope of the Agreement, the Engineer has the authority to enforce compliance with the Plans and Specifications and the Contractor shall promptly comply with instructions from the Engineer. The decision of the Engineer is final and binding on all questions relating to: quantities; acceptability of materials furnished and work performed; equipment; work execution, rate of progress or sequence of work; and interpretation of the Plans,

Specifications, or other drawings. This shall be precedent to any payment under the Agreement, unless otherwise ordered by the City.

3.05 Contract Documents and Precedence

The Contract Documents consist of the documents listed below, in order of precedence. If there is a conflict between component parts of the Contract Documents, the document highest in precedence controls.

- a. Change Orders.
- b. Directives.
- c. Permits in the following order: those issued by other agencies, those issued by the City.
- d. Project Specifications, in the following order – Supplemental Agreements, Addenda, General Construction Contract, Instructions to Bidders, Notice Inviting Bids, Special Provisions, General Provisions and Technical Specifications.
- e. Project Plans and Drawings. Figure dimensions on drawings shall govern over scale dimensions. Details shall govern over general arrangements.
- f. County of San Mateo Standard Specifications.
- g. County of San Mateo Standard Plans and Details.

All of the individual components of the Contract Documents are intended to be complementary and what is required by one shall be binding as if required by all. Interpretation of a disputed meaning or intent of the plans and specifications shall be made initially by the Engineer in accordance with the application of the order of precedence. Any final decision required regarding precedence and the clarification of discrepancies in the Contract Documents shall be made by the Engineer.

3.06 Record Documents

The Contractor shall keep at the worksite a record copy of all Drawings, Specifications, Addenda, Change Orders, Work Directives, Field Orders and written interpretations and clarifications. These record documents together with all approved submittals, samples and shop drawings will be available to the Engineer as a reference at all times.

3.07 Record Drawings

- a. The Contractor shall maintain a "job site" print of contract drawings and favorably reviewed shop drawings and "design/build" design drawings on the construction site at all times. These "job site" drawings are to be marked up daily with red ink or pencil to record:
 1. where actual installation differs from that shown on the original drawings,
 2. where underground or concealed features are uncovered during the work, whether unforeseen or not,
 3. field changes or deletions to the work,
 4. additional work, whether by Contract Change Order or not.

Underground features and features that are concealed during construction, or work that is added or changed, shall be recorded by both scaling and dimensioning. Elevation shall be recorded accurately to 0.1' and plan dimensions to 0.25'.

Maintaining "job site" record drawings up to date on a daily basis will be subject to specific inspection by the City. Progress payment requests will not be processed unless appropriately certified as to the currency of record drawing updating.

Each "job site" record drawing print shall be stamped "Contractor's Record Drawing" and signed and dated by the Contractor's Representative.

When a portion of the work is "design/build," the Contractor shall transfer all changes to the original (or a reproducible) of the design drawings. Drafting standards shall be in accordance with currently acceptable engineering standards, and they shall be clearly marked "RECORD DRAWINGS".

- b. Record Drawings Submittal - Organize record drawing sheets into a manageable set, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover. Upon completion of work, submit the "job site" record drawings for City's review.

3.08 Reuse of Documents

Neither the Contractor nor any Subcontractor or supplier or other person or organization performing or furnishing any of the work under a direct or indirect agreement with the City shall have any title or rights to any of the Drawings, Specifications or other documents (or copies thereof) which bear the seal of the design engineer. Such documents shall not be reused on extensions of the project or for any other project without written consent of the City and the design engineer.

3.09 Subsurface Data

All soil and soil test data, water table elevations, and soil analyses included or referred to in the Contract Documents apply only at the location of the test holes and to the depths indicated. Soil test reports for test holes which have been drilled are available for inspection at the office of the Engineer. Any additional subsurface exploration shall be done by the Contractor at their own expense.

The elevation of the water table indicated by soil test reports is that which existed on the date the test hole was drilled. It is the Contractor's responsibility to determine and allow for the possibility of differing ground water elevations on the date of the project's construction. A difference in elevation between ground water shown in soil boring logs and ground water actually encountered during construction will not be considered as a basis for extra work.

3.10 Right-of-Way

Acquisition of right-of-way or permanent easements necessary for the improvements as shown on the plans will be provided by the City. Unless otherwise provided, the Contractor shall make his own arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas, easements, and temporary facilities required. Contractor shall identify and hold the City harmless from all claims for damages resulting from such actions.

3.11 Removal of Defective Work

The Contractor's Quality Control Manager shall be responsible for certifying that all materials and all work is installed in accordance with the Contract Documents. The Contractor's Quality Control Manager must inspect all work for compliance with the project documents and shall review and sign all test results. Additionally the Contractor's Quality Control Manager shall notify the Owner of any non-compliant work within 24 hours, plus provide a proposal for corrective measures within 48 hours. As part of the monthly progress pay applications, the Contractor's Quality Control Manager shall also sign certification that all work included in the progress pay application is in compliance with the contract documents.

Any work which does not conform to the requirements of these specifications shall be considered as defective, and all such work or materials, whether in place or not, shall be rejected by the Owner and, unless otherwise permitted by the Owner, shall be rectified/removed immediately from the site of the work. Rejected work shall be rectified/replaced by the Contractor at the Contractor's expense. No rejected work, the defects of which have been subsequently corrected, shall be used until accepted in writing by the Owner.

3.12 Acceptance of Defective Work

The City shall have the option, at its sole discretion and by notice to the Contractor, to accept defective work instead of requiring its removal or correction, in which case the contract sum shall be reduced by an amount equal to the difference between the value to the City such work would have were it complete, correct, and in conformity with the Contract Documents and the value to the City of such defective work. Such option shall be exercised solely by notice to the Contractor and shall not be implied from any act or omission by the City or the Engineer. If the remaining payments and retention are insufficient to cover the amount of the reduction of the contract sum, the Contractor shall promptly pay to the City the amount of any such deficiency.

3.13 Submittals

Within ten (10) working days following the Notice to Proceed, the Contractor shall provide a detailed list of all individual submittals required to be submitted under the contract. The list shall reference the specification section and paragraph that requires the submittal along with the date the Contractor plans to transmit the submittal to the City for review.

Unless otherwise requested by the Engineer, submittals shall be provided electronically in .pdf format at least 28 calendar days prior to the approval being necessary for the work. Submittals shall be transmitted via e-Builder submittal module. Large submittals consisting of reports, oversized or colored pages, full sized shop drawings, manuals contained in binders, or submittals in other forms not easily reproduced shall be provided in hard copy format.

When requested by the Engineer, the Contractor shall provide hard copy submittals for items included in the Special Provisions.

For items requiring shop drawings, no materials shall be furnished, and no work shall be performed, until the drawings have been favorably reviewed. Shop drawings shall be of a size and scale to clearly show all necessary details.

After review by the City of each of the Contractor's submittals, submittals will be marked with actions defined as follows:

- a. NO EXCEPTIONS TAKEN – Accepted subject to its compatibility with future submissions and additional partial submissions for portions of the work not covered in this submission. Does not constitute acceptance of deletion of specified or required items not shown in a partial submission.
- b. MAKE CORRECTIONS NOTED – The same as item (a), except that minor corrections as noted by the City shall be made by the Contractor. No resubmission is required.
- c. AMEND AND RESUBMIT – Rejected because of major inconsistencies or errors which shall be resolved or corrected by the Contractor prior to subsequent review by the City.
- d. REJECTED – Submitted material does not conform to plans and Specifications in major respects. This material is not expected to be resubmitted.
- e. ACCEPTED FOR RECORD – Submittals not reviewed by the City but accepted for record purposes.
- f. All submittals (shop drawings and supporting data, catalogs, schedules, etc.), shall be submitted as the instruments of the Contractor, who shall be responsible for their accuracy and completeness. These submittals may be prepared by the Contractor, subcontractors, or suppliers, but the Contractor shall ascertain that submittals meet all of the requirements of the Contract Documents, while conforming to structural, space, and access conditions at the point of installation. The Contractor shall check all submittals before submitting them to the City.
- g. By submitting the bid, the Contractor agrees that the City has no duty to the Contractor or any of its subcontractors or suppliers for the accuracy, completeness, or sufficiency of the City's review of submittals. The Contractor further agrees to incorporate this requirement in all of its subcontracts or purchase agreements.
- h. Each submittal shall relate only to one item or groups of items logically related.
- i. Allow the number of days stated in the Special Provisions for the City's review of submittals and resubmittals. Note that there are some different requirements for Construction Schedule submittals. No extension of time will be allowed through failure of the Contractor to either transmit submittals sufficiently in advance of the work or on account of resubmittals.

- j. Incomplete submittals will not be accepted.
- k. If the City's review of a submittal requires cross reference to, or coordination with, another submittal not yet transmitted to the City for review, it will be returned to the Contractor for resubmittal at a more appropriate time.

Alternatively, and at the City's discretion, the City may elect to advise the Contractor that the submittal review will be deferred for review. In such circumstances the City's review time will correspondingly be increased so the effective review time allowed is not reduced.

- l. If the City's review of a submittal reveals that supplemental information is necessary to complete the review, it will be returned to the Contractor for augmentation and resubmittal.

Alternatively, and at the City's discretion the Contractor may be requested to provide supplemental information to enable a review to be completed, in which case the City's review time will correspondingly be increased so the effective review time allowed is not reduced.

- m. The City shall review schedules, shop drawings, etc., submitted by the Contractor only for general design conformance with the concept of the project and compliance with the information given in the Contract Documents. Acceptance by the City of any drawings, method of work, or any information regarding materials and equipment the Contractor proposes to furnish shall not relieve the Contractor of its responsibility for any errors therein and shall not be regarded as an assumption of risks or liability by the City, or any officer or employee thereof, and the Contractor shall have no claim under the Contract on account of the failure or partial failure or inefficiency or insufficiency of any plan or method of work or material and equipment so accepted. Such acceptance shall be considered to mean merely that the City has no objection to the Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the materials and equipment proposed.
- n. Submittals shall be reviewed as a complete package and will not be returned marked with more than one of the actions noted above. Any submittal that requires further review shall be resubmitted in its entirety until the full submittal has been favorably reviewed.
- o. The Contractor shall not proceed with the fabrication, delivery, construction or installation of items requiring a submittal without favorable review of the submittal by the City. No site construction shall commence without a favorable review of the Baseline Construction Schedule, and the Submittal List. Items (a) and (b) above (no resubmittal required) are considered "favorable review". Items (c) and (d) above (correction and resubmittal required) are considered "unfavorable review". Favorable review shall not relieve the Contractor of its obligation to meet safety requirements and all other requirements of Law, nor constitute a Contract Change Order.

Favorable review of the shop drawings by the Engineer is interpreted to mean that there is substantial and acceptable conformance with the contract plans, but details of design may not necessarily be checked for adequacy or accuracy. Such acceptance shall not relieve the Contractor from the responsibility for errors or omissions in the shop drawings or from deviations from the contract documents unless such errors, omissions, or deviations were specifically called to the attention of the Engineer in writing. The Contractor shall be responsible for the correctness of the shop drawings, for shop fits and field corrections, and for the results obtained by the use of such plans.

Neither review nor approval of Contractor's submittal shall relieve the Contractor of its obligations with respect to the performance under the contract.

3.14 Substitutions

A request for substitution will be considered if received within 20 calendar days from the date of Award, or within 15 days from the date the Notice to Proceed is issued, whichever is the later. Within 10 calendar days of receipt of the request for substitution, the City may request additional information necessary for

evaluation. Within 21 calendar days from receipt of the request for substitution, or 14 calendar days from receipt of additional information, whichever is later, the City will respond to the request for substitution. If a decision on use of a substitute cannot be made within these time limits, the product specified shall be used.

Proposed requests by the Contractor for changes in products, materials, equipment, and methods of construction required under the Contract Documents after the award of contract are considered "requests for substitutions". For proposed "or equal" substitutions, attention is directed to Section 5.03, "Trade Names or Approved Equals" of these General Provisions. The following are not considered substitutions:

- a. Revisions to Contract Documents requested by the City.
- b. Specified options of products and construction methods included in Contract Documents.
- c. Compliance with governing regulations and orders issued by governing authorities.

Each request for substitution shall be prepared and presented to the City in accordance with the procedures for submittals, except that the following additional information shall be provided.

- a. An explanation of the advantages to the City for accepting the substitution.
- b. A comparison of significant qualities of the proposed substitution with those specified.
- c. A list of changes or modifications needed to other parts of the work and to construction performed by the City and separate Contractors that will be necessary to accommodate the proposed substitution.
- d. A statement indicating the substitution's effect on the Construction Schedule compared to the Construction Schedule without acceptance of the substitution. Indicate the effect of the proposed substitution on overall contract time.
- e. Cost information, including a proposal of the net change, if any, in the Contract Sum.
- f. Certification that the substitution is equal to or better in every respect to that required by Contract Documents, and that it will perform adequately in application indicated. Include Contractor's waiver of rights to additional payment or time extensions that may be necessary because of the substitution's failure to perform adequately.

The Contractor's substitution request will be considered by the City when the following conditions are satisfied, as determined by the City; otherwise, requests will be returned without action except to record noncompliance with these requirements:

- a. Extensive revisions to Contract Documents are not required.
- b. Proposed changes are in keeping with the general intent of Contract Documents.
- c. The request is timely, fully documented and properly submitted.
- d. The specified product or method of construction cannot be provided within the Contract Time. The request may not be considered if the product or method cannot be provided as a result of failure of the Contractor to pursue the work promptly or coordinate activities properly, unless the product proposed is at least equal or better.
- e. A substantial advantage is offered the City, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the City may be required to bear. Additional responsibilities for the City may include additional compensation to the Consulting Engineer/Architect for redesign and evaluation services, increased cost of other

construction by the City or separate contractors, and similar considerations.

- f. The specified product or method of construction cannot receive necessary approval by a regulatory agency, and the requested substitution can be approved.
- g. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the compatibility.
- h. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
- i. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution can provide the required warranty.

The Contractor's submittal and City's acceptance of Shop Drawings, Product Data or Samples that do not comply with the Contract Documents does not constitute a valid request for substitution, nor does it constitute acceptance of a substitution.

The City will notify the Contractor of acceptance or rejection of the proposed substitution within the time limits stated in the Special Provisions. If a decision on use of a substitute cannot be made within these time limits the product specified shall be used.

No extension of time will be allowed through failure of the Contractor to either transmit requests for substitution sufficiently in advance of the work, or on account of processing time outside the time limits noted.

3.15 Survey

The Contractor shall provide all survey required by an independent land surveyor licensed in the State of California.

3.16 Construction Staking Lines and Grades

Unless otherwise stated in the Special Provisions, the Contractor shall provide, preserve, and replace if necessary, all of the necessary construction stakes required for the construction of the project. Grades for underground conduits will be set on the ground surface and shall then be transferred to the bottom of the trench by the Contractor.

Stakes or marks will be set by a California Licensed Surveyor or a California Registered Civil Engineer to establish the lines and grades required for the completion of the work as specified in the Contract Documents. It shall be the Contractor's responsibility to notify the Engineer of any discrepancies found between field grades and notes shown within the Contract Documents.

Contractor shall furnish horizontal control and cut sheets to the Engineer immediately upon the setting of construction or boundary markers. Upon completion, all work shall conform to the lines, elevations, and grades shown on the plans. All staking including staking notes and notations on survey stakes shall be in accordance with the Caltrans Staking Manual. All staking notes shall be provided within 24 hours after survey staking.

3.17 City's Construction Inspector's Work Hours

The Contractor shall give the City one working day's notice before beginning work so the City's inspection of the work can be arranged. Regular working hours for City Construction Inspectors are between 8:00 a.m. and 4:00 p.m., Monday through Friday, excluding City holidays. If the Contractor works outside these times, the Contractor may be charged for additional inspection.

3.18 Inspection of the Work

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

If a portion of the work is covered contrary to the Engineer's request or direction, or contrary to the requirements of the Contract Documents, it must, if required in writing by the Engineer, be uncovered for the Engineer's observation and be replaced at Contractor's expense without adjustment of the contract time or the contract sum.

If a portion of the work has been covered, which is not required by the Contract Documents to be observed or inspected prior to it being covered and which the Engineer has not specifically requested to observe prior to its being covered, the Engineer may request to see such work and it shall be uncovered and replaced by Contractor. If such work is in accordance with the Contract Documents, the costs of uncovering and replacing the work shall be added to the contract sum by change order; and if the uncovering and replacing of the work extends the contract time, an appropriate adjustment of the contract time shall be made by change order. If such work is not in accordance with the Contract Documents, the Contractor shall pay such costs and shall not be entitled to an adjustment of the contract time or the contract sum.

3.19 Special Inspections

Unless otherwise indicated in the Contract Documents, all special inspections are required to be provided by an independent company, properly certified, coordinated and paid for by the Contractor.

3.20 Sampling and Testing

All sampling and testing is to be performed by the Contractor in order to meet the standard expressly described in the specification and in the City's Quality Assurance Program. Unless otherwise stated in the Contract Documents, all required sampling and testing will be performed directly by an independent laboratory, coordinated and paid for by the Contractor. Contractor shall cooperate with the City in coordinating the necessary testing. The coordination of testing is the responsibility of Contractor. The coordination of testing shall be the responsibility of the contractor. The frequency and location of tests shall be as indicated in the Special Provisions and the Technical Specifications. All compaction test sites deeper than five (5') feet below grade shall be properly shored by the Contractor to protect testing personnel.

The cost for performing re-tests due to failures, or additional call-outs if work is not ready to test, will be paid for by the Contractor. The City shall require retesting until all required tests are successfully passed.

SECTION 4 – CHANGES IN WORK

4.01 Limited City Authority to Approve Change Orders

The Contractor recognizes that the City is a public agency and that it can only act through its duly authorized agents. In this regard, the Contractor agrees that only written change orders, executed by the City, shall be valid.

4.02 Contractor Liability for Unapproved Change Orders

Unless a valid change order is issued, all changes in the work performed by the Contractor shall be at the Contractor's own risk, and shall not be entitled to any additional compensation. Furthermore, the Contractor may be required to make the work conform to the plans and specifications. No act or series of acts by the City during the course of the contract shall be deemed to constitute a waiver of the City's rights to rely upon this provision.

4.03 Non-Material Change Requests by the Contractor

Changes in the plans and specifications requested in writing by the Contractor, which do not materially affect the work and which are not detrimental to the work or to the interests of the City, may be granted to facilitate the work, when approved in writing by the Engineer. If such changes are granted, they shall be made at a reduction in cost or at no additional cost to the City. Nothing herein shall be construed as granting a right to the Contractor to demand acceptance of such changes or to increase the contract sum or contract time as a result of the proposed change.

4.04 Directives

The Engineer may issue Directives in the form of Field Orders, Clarifications, responses to Requests for Information, or any other document which makes interpretations or clarifications to the Contract Documents. Directives shall be binding upon the Contractor, and the Contractor shall promptly carry out the requirements of such Directives.

4.05 Requests for Information, Inconsistencies and Changed Conditions

Before undertaking each part of the work, the Contractor shall carefully study all pertinent figures shown in the Contract Documents and verify that all applicable field measurements are free of conflicts, errors, discrepancies, inconsistencies and omissions. If such conditions are discovered, the Contractor shall notify the Engineer by writing a Request for Information, and await direction from the Engineer before proceeding.

The means of seeking this clarification shall be via e-Builder Request for Information process.

If the Contractor encounters a changed condition, as defined by one or more of the conditions below, the Contractor shall notify the Engineer by submitting a Request for Information before proceeding.

- a. Material differing from that represented in the Contract which the Contractor believes may be hazardous waste, as defined by Health and Safety Code, Section 25117 that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provision of existing law; and
- b. Subsurface or latent physical conditions at the site differing materially from those represented in the Contract Documents; and
- c. Unknown physical conditions at the site of any unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent in the work and of the character provided for in the Contract Documents.

No extension of Contract time shall be made by the City due to the Contractor's failure to provide a timely written notice of any inconsistency or changed condition requiring direction. The Engineer will respond to the Contractor's Request for Information, providing an interpretation, clarification or change order for an

appropriate adjustment in contract time and cost pursuant to General Provisions, Section 4.07, “Change Orders”. Contractor shall wait for the Engineer’s written response to a Request for Information before proceeding with any work.

The Contractor shall not be liable to the City for failure to report any conflict, error, or discrepancy in the Contract Documents, unless the Contractor had actual knowledge or could foresee such conditions as may be discovered by a reasonable examination of the work site or materials. If the Contractor performs any construction activity in which he knows or should know involves an error, inconsistency, ambiguity, or omission referred to in this Section, without notifying and obtaining the written consent of the Engineer, Contractor shall be responsible for the resultant costs, including, without limitation, the costs of correcting defective work. However, in an emergency affecting the safety of persons or property, the Contractor shall take all reasonably necessary precautions to prevent or minimize damage, injury, or loss.

4.06 Extra Work

New or unforeseen work may be classified as “Extra Work” when the Engineer determines that the work is not covered by contract unit prices, not stipulated in the scope of work, represents work that is substantially different from what the Contractor bid upon, or falls under the category of a changed condition. The General and Special Provisions shall apply to all of the work, including extra work authorized. Payment for extra work will be made on the basis of General Provisions, Section 4.07, “Change Orders”.

The Contractor shall maintain records sufficient to distinguish the direct cost of extra work from the cost of other operations. The Engineer will compare his records with the Contractor’s reports, to make the necessary adjustments and compile the costs associated with the extra work.

When extra work reports are agreed upon and signed by both parties, they shall become the basis of payment. When extra work is still under negotiation or has not been agreed upon, the Contractor shall keep daily detailed and accurate records itemizing each element of cost and shall provide certified payroll, invoices, and other substantiating records and documentation.

When extra work is to be paid on a force account basis, the labor, materials and equipment used in the performance of that work shall be paid in accordance with the following. To the total of the direct costs computed, there will be an added markup of 35% to the cost of labor, 15% to the cost of materials and 15% to the cost of equipment. These markups shall constitute full compensation for any and all overhead costs, profit, or other costs not specifically designated as a cost of labor, material or equipment. When subcontractors perform force account work, an additional 5% markup shall be added to the total cost of the extra work to reimburse the Contractor for additional administrative costs. No markup for any subcontractor beyond the first tier shall be paid.

During the performance of extra work by force account, and as a condition to the Contractor’s right to an adjustment of the contract sum, the Contractor shall prepare daily reports itemizing all costs for labor, materials, and equipment rental. For labor costs, the reports shall include names, job classifications, hours worked and rates of pay. For equipment costs, the reports shall include size, type, identification number and hours of operation. All records and reports shall be submitted to the Engineer for approval on a daily basis. Reports shall be made on the City of East Palo Alto Daily Extra Work Report form.

4.07 Change Orders

At any time during the progress of the work, and without in any way rendering void the Contract, the City may order alterations, additions or deductions from the work by change order, without notice to sureties. When so ordered in writing, the Contractor shall proceed with work as directed by the change order.

The change order shall describe the change in the work, the adjustment of the contract sum (if any), and the adjustment of the contract time (if any). The Contractor shall not be entitled to any extension of time for the completion of the work by virtue of any change order unless the change order specifically affects the controlling operation and provides for this. If, after receiving a change order, the Contractor feels that they are entitled to an extension of time, the Contractor may, within five (5) working days file a written request for consideration by the Engineer.

The process of submitting a proposed change, a cost proposal, negotiating an agreed upon change order, or any failure to reach an agreement as to an adjustment in the contract sum or the contract time, shall not relieve the Contractor of their obligation to perform in accordance with the Contract Documents.

Change orders may be Unilateral Change Orders or Agreed Upon Change Orders. Upon the receipt of either form of change order, the Contractor shall proceed promptly and diligently with the extra work.

- a. *Unilateral Change Orders* – A Unilateral Change Order may be issued by the City without the Contractor's signature where the City determines that it is in the City's best interest to proceed with the work, and the change does not materially alter the character of the work. The Contractor shall be deemed to have accepted the terms of any Unilateral Change Order unless the Contractor submits a written protest with respect to the change order, no later than ten (10) working days following the Contractor's receipt of the change order. See General Provisions, Section 4.08, "Disputed Work".
- b. *Agreed Upon Change Orders* – Within five (5) working days after receiving a request from the City for a written proposal for an Agreed Upon Change Order, the Contractor shall provide the Engineer with a cost proposal in a form satisfactory to the Engineer, setting forth the Contractor's proposed adjustments to the contract sum and contract time for performing the extra work.

Compensation for Agreed Upon Change Orders shall be calculated based upon the bid item unit prices stated in the Bid Schedule and no additional markup for overhead or profit will be provided. If there are no unit prices for the extra work, the Contractor and the City may agree upon unit prices or lump sum prices, which shall be used to increase or decrease the contract sum. When extra work changes the scope of bid item work, payment can be made by paying an agreed upon unit price adjustment or lump sum price adjustment of compensation. In the absence of price agreement, the contract sum shall be adjusted by force account.

The City pays for change order work based on one or a combination of the following:

1. Bid item unit prices
2. Agreed upon unit prices
3. Agreed upon lump sum price
4. Force account
5. Adjustment of compensation

Changed Quantity Payment Adjustments:

- a. *Increases of More Than 25 Percent* – If the total bid item quantity exceeds 125 percent of the quantity shown on the Bid Item List and if no approved Change Order addresses payment for the quantity exceeding 125 percent, the Engineer may adjust the unit price for the excess quantity under the 2010 State Standard Specification, Section 9-1.04 (force account) or the following:
 1. The adjustment is the difference between the unit price and the unit cost of the total item pay quantity.
 2. In determining the unit cost, the Engineer excludes the item's fixed costs. You have recovered the fixed costs in the payment for 125 percent shown on the Bid Item List.
 3. After excluding fixed costs, the Engineer determines the item unit cost under the 2010 State Standard Specification, Section 9-1.04 (force account).
 4. If the payment for the number of units of a bid item in excess of 125 percent of the Bid Item List is less than \$5,000 at the unit price, the Engineer may not adjust the unit price unless you request it.
- b. *Decreases of More Than 25 Percent* – If the total item pay quantity is less than 75 percent of the quantity shown on the Bid Item List and if no approved Change Order addresses payment for the quantity less than 75 percent, you may request a unit price adjustment. The Engineer may adjust the unit price for the decreased quantity under the 2010 State Standard Specification, Section 9-

1.04 (force account) or the following:

1. The adjustment is the difference between the unit price and the unit cost of the total pay quantity.
2. In determining the unit cost, the Engineer includes the item's fixed costs.
3. After including fixed costs, the Engineer determines the item unit cost under the 2010 State Standard Specification, Section 9-1.04 (force account).
4. The City does not pay more than 75 percent of the item total in the Bid Item List.

c. Eliminated Items

1. If the Engineer eliminates an item, the City pays your costs incurred before the Engineer's elimination notification date.
2. If you order authorized material for an eliminated item before the notification date and the order cannot be canceled, either of the following occurs:
3. If the material is returnable to the vendor, the Engineer orders you to return the material and the Department pays your handling costs and vendor charges.
4. The City pays your cost for the material and its handling and becomes the material owner.
5. The Engineer determines the payment for the eliminated bid item under the 2010 State Standard Specification, Section 9-1.04 (force account).

Agreed Upon Price Adjustments – If there are no unit prices for proposed extra work, the Contractor and the City may agree upon unit prices or lump sum costs, by written change order, prior to commencing work. In the absence of any such agreement, the contract sum shall be adjusted by force account.

Force Account – When extra work is to be paid on a force account basis, the labor, materials and equipment used in the performance of that work shall be paid in accordance with the 2010 State Standard Specification, Section 9-1.04 (force account) and as provided for below. To the total of the direct costs computed, there will be an added markup of 35% to the cost of labor, 15% to the cost of materials and 15% to the cost of equipment. These markups shall constitute full compensation for any and all overhead costs, profit, or other costs not specifically designated as a cost of labor, material or equipment. When subcontractors perform force account work, an additional 5% markup shall be added to the total cost of the extra work to reimburse the Contractor for additional administrative costs. No markup for any subcontractor beyond the first tier shall be paid.

- a. *Labor* – Labor costs shall be based on the prevailing wage scale for each craft or type of work. Employer payments for payroll taxes and insurance, health and welfare, pension, vacation, and other direct labor costs shall be included and will be calculated as the Labor Surcharge stipulated in the State of California, Labor Surcharge and Equipment Rental Rates book.
- b. *Materials* – Materials cost shall be the cost of all materials purchased by the Contractor and used in the extra work and shall be the actual cost of such materials, including sales taxes, freight and delivery charges. The City reserves the right to approve materials to be furnished by the Contractor, sources of supply or, if necessary, to furnish the materials to the Contractor. No compensation will be paid to the Contractor for any material furnished by the City or for materials not used.
- c. *Equipment Rental* – The Contractor will be allowed the actual rental rate of equipment, prorated over the time the machinery or equipment is required. For Contractor owned equipment, this rate shall be as stipulated in the State of California, Labor Surcharge and Equipment Rental Rates book. In addition, the Contractor will be allowed reasonable move-in and move-out charges, if applicable. All equipment shall, in the opinion of the Engineer, be in good working order, good condition, and suitable for its purpose. Equipment or tools having a replacement value of \$200.00 or less, whether or not consumed by use, shall be considered small tools and no payment will be made therefore.

- d. *Other Services or Expenditures* – The City may authorize and approve payment for work performed by special forces or necessary services and expenditures other than labor, materials, and equipment rental.

During the performance of extra work by force account, and as a condition to the Contractor's right to an adjustment of the contract sum, the Contractor shall prepare daily reports itemizing all costs for labor, materials, and equipment rental. For labor costs, the reports shall include names, job classifications, hours worked and rates of pay. For equipment costs, the reports shall include size, type, identification number and hours of operation. All records and reports shall be submitted to the Engineer for approval on a daily basis. Reports shall be made on the City of East Palo Alto Daily Extra Work Report Form.

4.08 Resolution of Disputes

It is the intent of this Contract that disputes regarding the Contract be resolved promptly and fairly between the City and the Contractor. However, it is recognized that some disputes will require detailed investigation and review by one or both parties before a determination and resolution can be reached. For the protection of the rights of both the Contractor and the City, the following is required to initiate review, determination and resolution.

4.08.1 Notice - Contractor shall provide a written notice of disputed work to the Engineer's attention prior to the commencement of and sufficiently in advance of performing the disputed work to allow the Engineer initial review of the disputed work. The notice shall be submitted in accordance with General Provisions, Section 4.05, "Requests for Information, Inconsistencies and Changed Conditions". If the Contractor disagrees with the Engineer's decision, or in any case where the Contractor deems additional compensation or a time extension to the Contract time is due the Contractor for work or materials not covered in the Contract or which the Engineer has not recognized as extra work, the Contractor shall notify the Engineer, in writing, of its intention to dispute the Engineer's decision.

Timely notice of potential claim is of great importance to the Engineer and the City, and is not merely a formality. Such notice allows the City to consider preventative action, to monitor the Contractor's increased costs resulting from the situation, to marshal facts, and to plan its affairs. Such notice by the Contractor, and the fact that the Engineer has kept account of the work in question, shall not in any way be construed as proving the validity of the dispute.

Notice pertaining to decisions provided in General Provisions, Section 4.05, "Requests for Information, Inconsistencies and Changed Conditions", or such other determinations by the Engineer shall be filed in writing to the Engineer within ten (10) days of receipt of such decision and prior to the commencement of such work. Written notice shall be clearly titled "Notice of Potential Claim" and shall be numbered starting with Number 1.

Such notice of potential claim must be stated with specificity, including identification of the event giving rise to potential claim, the date of the event, and the asserted effect on contract sum and contract time. The notice of potential claim shall include adequate supporting data. Adequate supporting data for a potential claim for an adjustment of the contract time shall include scheduling data demonstrating the impact of the event on the completion of the work. Adequate supporting data for a potential claim for an adjustment of the contract sum shall include a detailed cost breakdown of the items allowed, isolating labor, material, and equipment costs, and providing detailed quantities and unit prices for changed work. If the exact amount of a potential claim is not ascertainable at the time such potential claim is made, the supporting data currently available shall be submitted. Supplemental data supporting the exact amount of the potential claim shall be submitted as soon as available.

In proceeding with a disputed portion of the Work, the Contractor shall keep accurate records of all costs, including a summary of the hours and classification of equipment and labor utilized on the disputed work, as well as a summary of any materials or any specialized services which are used. Such information shall be submitted to the Engineer daily, receipt of which shall not be construed as an authorization for or acceptance of the disputed work.

No claim for additional compensation or extension of time for a delay will be considered unless the provisions of General Provisions, Section 7.17, “Delays and Extensions of Time” are complied with. No claim filed after the date of final payment will be considered.

Unless notice is properly given, the Contractor shall not recover costs or any damages incurred by it because of the alleged extra work, changed work or other situation which had required notice been given, would have given rise to a right for additional compensation.

4.08.2 Response by Engineer - The Engineer shall review the “Notice of Potential Claim” and within ten (10) days of receipt of the notice shall respond to the Contractor in writing with its determination, or if it is necessary to extend this period, the Engineer shall notify the Contractor in writing as to when a decision will be provided.

4.08.3 Appeals to the Assistant Director of Public Works/City Engineer - In the event the Contractor disagrees with the Engineer’s determination provided in accordance with Section 4.08.2, “Response by Engineer”, the Contractor may, within ten (10) days of receipt of such determination, appeal the determination to the Assistant Director of Public Works/City Engineer for review. The Assistant Director of Public Works/City Engineer shall review the appeal and transmit the decision in writing to the Contractor within 30 days from the date of receipt of the appeal.

In the event the Contractor disagrees with the determination of the Assistant Director of Public Works/City Engineer, the Contractor shall notify the Engineer, in writing within ten (10) days of receipt of such determination, of its intention to file a claim in accordance with General Provisions, Section 4.09, “Resolution of Claims Under Public Contract Code Section 20101” and Section 4.10. “Resolution of Claims under Public Contract Code Section 9204”. Failure of the Contractor to appeal the determination of the Engineer within said ten (10) day period shall constitute a waiver of the Contractor’s right to file a claim resulting from such determination or decision.

4.08.4 Dispute Meetings - From time to time the Contractor may request or the Engineer may call a special meeting to discuss outstanding disputes should it deem this a means of possible help in the resolution of the dispute. The Contractor shall cooperate and attend prepared to discuss its dispute and make available the personnel, subcontractors and suppliers necessary for resolution, and all documents which may reasonably be requested by the Engineer.

4.08.5 Submission of Potential Claim Costs – Potential claim costs must be submitted within thirty (30) days after the last cost of work for which the Contractor contends it is due additional compensation. But if costs are incurred over a span of more than thirty (30) days, then within fifteen (15) days after the thirtieth day and every month thereafter, the Contractor shall submit to the Engineer, as best the Contractor is able, its costs incurred for the claimed matter.

Potential claims shall be made in itemized detail and should the Engineer be dissatisfied with the format or detail of presentation, upon request for more or different information, the Contractor will promptly comply, to the satisfaction of the Engineer. If the additional costs are in any respect not knowable with certainty, they shall be estimated as best can be done. The Engineer shall have the right as provided in Section 4, “Changes in Work” to review the Contractor’s records pertaining to a submitted claim. In case the claim is found to be just, it shall be allowed and paid for as provided in Section 4, “Changes in Work”.

4.09 Resolution of Claims Under Public Contract Code Section 20104

Disputes pertaining to this Agreement for three hundred and seventy-five thousand dollars (\$375,000) or less which cannot be resolved between the parties pursuant to Section 4.08, “Resolution of Disputes”, shall be resolved pursuant to the provisions of Public Contract Code commencing at Section 20104.

4.09.1 Disputes for \$375,000 or Less - Said Code sections provide in part that:
Under the law (starting at Public Contract Code Section 20104.2) construction claims of \$375,000.00 or less on local public agency construction contracts must be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of

final payment.

The City must respond in writing to any written claim of three hundred seventy-five thousand dollars (\$375,000) or less within 60 days (or, in the case of claims of less than \$50,000, within 45 days) of receipt of claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the City may have against the claimant.

If additional information is thereafter required, it shall be requested and provided, pursuant to Public Contract Code Section 20104.2, upon mutual agreement of the City and the claimant. The City's written response to the claim, as further documented, shall be submitted to the claimant within 30 days (or, for claims of less than \$50,000, within 15 days) after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.

If the claimant disputes the City's written response (or if the City fails to respond within the time periods prescribed above) the claimant may notify the City, in writing, within 15 days of receipt of the City's response or within 15 days of the City's failure to respond within the times prescribed, respectively, and demand an informal settlement conference. The City must then schedule a settlement conference within 30 days.

Following the settlement conference, if the claim or any portion remains in dispute, the claimant may file a claim as required by the claims statute commencing at California Government Code Section 910 and in accordance with the East Palo Alto Municipal Code. The time within which a Government Code claim must be filed is tolled from the time the claimant submits the Public Contract Code claim until the time when the claim is denied. Pursuant to East Palo Alto Municipal Code, the claim must be filed with the City Clerk.

4.09.2 Disputes Exceeding \$375,000 - Unless this Contract provides otherwise, all claims between the City and the Contractor that are not resolved between the parties and are not governed by Public Contract Code Section 20104 shall be resolved per the procedures established in Public Contract Code Section 9204 and per Section 4.10, "Resolution of Claims under Public Contract Code Section 9204" below.

4.09.3 Civil Action Proceedings - If a civil action is filed to resolve the claim, then between 30 and 60 days after the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by the parties. The parties are given 15 days to select a disinterested third person as mediator. Mediation must commence within 30 days of submittal and conclude within 15 days of commencement unless the time is extended for good cause by the court.

If the matter remains in dispute, the case must be submitted to judicial arbitration pursuant to procedures set forth in the Code of Civil Procedure commencing at Section 1141.10. Discovery is permitted consistent with the rules pertaining to judicial arbitration.

Arbitrators shall be experienced in construction law.

A party who appeals an arbitration award and does not obtain a more favorable judgment shall pay the attorney's fees on appeal of the other party. The City must pay interest at the legal rate on any arbitration award or judgment, commencing on the date when suit was filed. Except as otherwise provided in the Contract, the City must pay the undisputed portions of any claims.

Should either party to this Contract bring legal action against the other, the case shall be handled either by the Superior Court of the State of California in the County of Santa Clara, or the United States District Court, Northern District of California. The Agreement shall be construed and its performance enforced under California Law.

4.10 Resolution of Claims under Public Contract Code Section 9204

The provisions of this section are provided pursuant to Public Contract Code Section 9204. These provisions are applicable only until January 1, 2020 and then are repealed and not applicable to this Contract unless another State statute extends the date of these provisions.

4.10.1 Claim Definition - "Claim" means a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

- a. A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the City.
- b. Payment by the City of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the Contract and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled.
- c. Payment of an amount that is disputed by the City.

4.10.2 Claim Process - Upon receipt of a claim pursuant to this Section, the City shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the Contractor a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, the City and Contractor may, by mutual agreement, extend the time period provided in this subsection.

The Contractor shall furnish reasonable documentation to support the claim.

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

Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the City issues its written statement. If the City fails to issue a written statement, provision of General Provisions, Section 4.10.3.1, "City's Failure to Respond", shall apply.

4.10.3 Disputed Claims - If the Contractor disputes the City's written response, or if the City fails to respond to a claim issued pursuant to this section within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the City shall schedule a meet and confer conference within 30 days for settlement of the dispute.

Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the City issues its written statement. Any disputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The City and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

For purposes of this section, mediation includes any nonbinding process, including, but not limited to,

neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

Unless otherwise agreed to by the City and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has been commenced.

4.10.3.1 City's Failure to Respond - Failure by the City to respond to a claim from the Contractor within the time periods described in this subsection or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied because of the City's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the Contractor.

4.10.3.2 Interest - Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

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

4.10.3.4 Waiver of Provisions - A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) the City may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

SECTION 5 – CONTROL OF MATERIALS

5.01 Materials and Workmanship

All materials, parts and equipment furnished by the Contractor in the work shall be new, high grade, and free from defects. Workmanship shall be in accordance with generally accepted standards. Materials and workmanship shall be subject to the Engineer's approval.

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

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

Used or secondhand materials, parts and equipment is permissible only if permitted by the Special Provisions.

Submittals for specialized material or equipment to be used in the work that is not readily available from material suppliers (such as electroliers, luminaries, signal poles, heads, cable, controllers, pumps, etc.) shall be submitted within five (5) working days after Notice to Proceed. Time extensions will not be granted for project delays due to the unavailability of such specialized material and equipment unless the Contractor furnishes the Engineer with documentation of purchase order dates, acceptable reason for delay of delivery, or proof of diligent efforts to obtain said items from alternate sources.

The Contractor shall provide the Engineer with periodic reports to inform the Engineer of any changes in the projected material or equipment delivery dates.

5.02 Protection of Work and Materials

The Contractor shall provide and maintain storage facilities and employ such measures as will preserve the specified quality and fitness of materials to be used in the work. Stored materials shall be reasonably accessible for inspection. The Contractor shall also adequately protect new and existing work and equipment for the duration of the contract.

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

5.03 Trade Names or Approved Equals

Whenever any particular material, process, or equipment is indicated by patent, proprietary or brand name, or by name of a manufacturer, such wording is used for the purpose of facilitating its description and shall be deemed to be followed by the words "or approved equal". Because products specified may have a uniqueness that can't be matched, the Contractor must "bid" the work based upon the products specified. If, during the submittal process, an equivalent product is proposed by the contractor, the contractor must provide data to show that the product is considered equal. Contractor shall also identify any price differences, which shall be considered as part of the substitution and if accepted, shall result in an appropriate credit or cost to the City by change order should the substitution be made.

Wherever catalog numbers and specific brands of trade names followed by the designation "or approved equal" are used in conjunction with a designated material, product, item, or service mentioned in these specifications, they are used to establish the standards of quality and utility required. "Or approved equal" proposals will be subject to acceptance by the City.

Unless otherwise authorized by the Engineer, the proposed substitution must be submitted in sufficient time, before the normal use or installation of the material, process or equipment, for the Engineer to determine the equivalency and for the Contractor to make any required purchases (including delivery).

At the Contractor's expense, shall furnish data concerning items offered by the Contractor as equivalent to those specified. The Contractor shall have the material tested as required by the Engineer to determine that the quality, strength, physical, chemical, or other characteristics, including durability, finish, efficiency, dimensions, service, and suitability are such that the item will fulfill its intended function. Installation and use of a proposed item shall not occur until after approval by the Engineer.

Test methods shall be submitted for approval by the Engineer prior to the test being performed on an item proposed for substitution. Test results shall be reported promptly to the Engineer, who will evaluate the results and determine if the proposed item is equivalent. The Engineer shall determine whether the material offered is equivalent to that specified, and the Engineer's findings shall be final. If a substitute offered by the Contractor is found to be not equal to the specified material, the Contractor shall furnish and install the specified material.

The specified contract completion time shall not be affected by any circumstances developing from the provisions of this Section.

5.04 Inspection of Materials by City

Unless otherwise specified, inspection may be required at the source for such typical materials and fabricated items as bituminous paving mixtures, structural concrete, metal fabrication, metal casting, welding, concrete pipe manufacture, protective coating application, and similar shop or plant operations.

Standard items of equipment such as electric motors, conveyers, elevators, plumbing fixtures, etc., are subject to inspection at the job site. Special items of equipment such as designed electrical panel boards, large pumps, sewage plant equipment, etc., are subject to inspection at the source, normally only for performance testing. The Special Provisions may specify additional inspection requirements.

5.05 Inspection of Materials by Others

When the City does not elect to make its own inspection at the source, the Contractor shall, at its expense, engage an inspector or accredited testing laboratory to inspect the materials, equipment or process. The inspector or representative of the testing laboratory shall judge the materials by the requirements of the plans and specifications. No materials or equipment shall be shipped nor any processing, fabrication or treatment of such materials shall be done without a favorable inspection. These materials shall be subject to re-inspection at the job-site.

5.06 Certification

The Engineer may waive material testing requirements of the Specifications and accept the manufacturer's written Certificate of Compliance or test data demonstrating that the materials to be supplied meet the requirements of the Specifications. A Certificate of Compliance is acceptable for authorizing the use of steel pipe in sizes less than 18 inches and vitrified clay, cast iron or ductile iron pipe in all sizes. The City may request any materials used on the basis of a Certificate of Compliance to be sampled or tested at any time. The fact that material is used on the basis of a Certificate of Compliance shall not relieve the Contractor of the responsibility for incorporating materials in the work which conforms to the requirements of the Contract Documents. The Certificate of Compliance shall be signed and dated by the manufacturer, state the lot number for which the Certificate applies, indicate the specifications which the materials comply with, state the quantity of material covered by the certificate, and clearly demonstrate that the materials certified are specifically to be used for this project. Unsigned, generic, or non-project specific certificates of compliances will not be accepted as a means of release. In addition, the Contractor's Quality Control Manager shall be responsible for reviewing the Certificates of Compliances to verify acceptability and conformance with these specifications prior to submitting to the City.

5.07 Weighing and Metering Equipment

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

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

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

5.08 Calibration of Testing Equipment

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

SECTION 6 – UTILITIES

6.01 Contractor's Obligation to Identify and Protect Subsurface Infrastructure

The Contractor shall locate and protect service laterals, conduits, and appurtenances of any underground facility, the presence of which could be reasonably inferred from the Contract Documents or from the presence of visible facilities such as buildings, meters, and junction boxes, prior to doing any work that may damage any such facilities, or interfere with their service. Where underground main distribution conduits, such as water, gas, sewer, electric power, telephone, or cable television are shown on the plans, the Contractor shall assume that every parcel will be served by a service connection for each type of utility. The Contractor shall comply with all requirements for the protection of underground infrastructure.

It shall be the Contractor's responsibility to complete all work in a manner that satisfies utility company standards, providing if requested, detailed plans prepared by a California Registered Civil Engineer showing necessary temporary support of utilities during coordinated construction work. The Contractor is directed to contact these agencies before submitting bids and to be familiar with their requirements.

The Contractor agrees to assume liability and to hold the City of East Palo Alto, its officers, and employees harmless from any damages resulting from the existence of underground utilities and structures not reported to the Engineer, not indicated on the public records examined, or located at variance with that reported or shown on records examined.

6.02 Location

The City will search known records and indicate on the plans those utilities, except service connections, which may affect the work. All available information regarding removal, relocation, or disconnection of utilities, or installation of new utilities, will be furnished to prospective bidders before the receipt of bids. The Contractor shall immediately report to the Engineer those utilities omitted from the plans or found substantially at variance with the location shown.

Existing and proposed utilities and improvements are shown in their approximate locations. Locations may not have been field verified and no guarantee is made as to the accuracy and completeness of the information shown. The fact that any facility is not shown on the plans shall not relieve the Contractor of responsibility under this Section. It shall be the Contractor's responsibility to determine the existence and location of utilities shown on the plans, indicated by field locating services, or evidenced by facilities visible in the field. No additional compensation will be allowed for delays incurred as a result of the Contractor's failure to field verify and/or pothole existing utilities prior to beginning construction. Potholing shall be considered as part of the various contract bid items and no additional compensation will be allowed.

At least two (2) working days prior to commencing work, the Contractor shall request utility owners to mark or otherwise indicate the location of their substructures. Contractor shall contact Underground Service Alert (USA) at (800) 642-2444 and the Engineer at least 48 hours prior to excavation. The locations of utilities as shown on the plans are approximate and are not to be construed as certainty. It shall be the Contractor's responsibility to determine the true location and depth of all utilities and service connections affecting or conflicting with the work, prior to the performance of the work. As necessary, the Contractor shall pothole these utilities prior to working in the area to avoid damage to them. Potholing shall be considered as part of the contract bid items, and no separate payment will be made. Contractor shall familiarize himself with the type, material, age and condition of any utility which may be affected by the work.

6.03 Protection

As necessary or as directed by the Engineer, the Contractor shall field adjust proposed improvements to avoid conflicts with existing improvements. The Contractor shall not interrupt the service function or disturb the supporting base of any utility, without authority from the utility owner or order from the City.

Where protection is required to insure support of existing underground, overhead and at-grade utilities (including their associated structures and service connections) as shown on the plans, the Contractor shall furnish and place the necessary protection at Contractor's expense. In case of damage, the Contractor, without additional compensation, shall restore utilities to as good of a condition as they were found.

Upon learning of the existence and location of any utility omitted from or shown incorrectly on the plans, the Contractor shall notify the City and be fully responsible for protecting such utility. When authorized by the Engineer, additional protection may be paid by change order, for utilities other than a service connection.

The Contractor shall immediately notify the Engineer and the utility owner if the Contractor disturbs, disconnects or damages any utility. If the utility is located substantially as indicated on the plans, the Contractor shall bear the costs of repair or replacement.

When placing concrete around or contiguous to any utility, at the Contractor's expense, shall furnish and install a cushion of expansion joint material, clear opening, sleeve, or other suitable material approved by the Engineer so as to prevent embedment or bonding of the utility with the concrete.

6.04 Shut Down Notification

Contractor shall coordinate all shut downs with the City's Public Works Department, and follow all of their requirements for exercising and shutting off water valves on main lines. The Contractor shall have all materials required for the work at the job site prior to requesting a shut off.

Shut down of water or sewer services shall be done only after the Contractor has coordinated the shut down with the Engineer and the property owners. When a water main, sewer main, or service lateral is to be shut down, the Contractor shall coordinate with and notify the Engineer in writing, at least seventy-two (72) hours in advance of the shut down. Except for scheduled shutdowns and in cases of emergency, the Contractor shall notify all customers and effected parties of a shut down at least forty-eight (48) hours in advance by writing and four (4) hours in advance by person to allow adequate draw time. Once shut down, the Contractor shall proceed with the work in an expedient manner until the water lines or sewer lines are back in service.

6.05 Removal

Unless otherwise specified, the Contractor shall remove all portions of interfering utilities shown on the plans as 'abandoned' or "to be abandoned in place". Before starting removal operations, the Contractor shall ascertain from the utility owner whether abandonment is complete. The costs involved in the removal and disposal of utilities to be abandoned shall be considered as part of the contract bid items, and no separate payment will be made.

6.06 Relocation

When feasible, the owners of utilities within the area affected by the work will complete their necessary installations, relocations, repairs, or replacements before commencement of work by the Contractor. When the Contract Documents or plans indicate that a utility is to be relocated, altered or constructed by others, the City will conduct all negotiations with the owners and the work will be done at no cost to the Contractor.

Utilities interfering with the permanent project work, discovered after the award of the contract, shall either be relocated, altered, or reconstructed by the utility owners, or the Engineer may order changes in the work to avoid interference. Such changes will be addressed in accordance with General Provisions, Section 4, "Changes in Work".

When the plans or Specifications provide for the Contractor to alter, relocate, or reconstruct a utility, all costs for such work shall be absorbed in the contract bid items. Temporary or permanent relocation or alteration of utilities by and for the Contractor's convenience shall be the Contractor's responsibility, and the Contractor shall make all arrangements, obtain all approvals, and bear all costs. The Contractor may,

agree with the owner of any utility to disconnect and reconnect interfering service connections for the Contractor's own convenience or to expedite the work. The City shall not be involved in any such agreement.

6.07 Delays

The Contractor is responsible for notifying utility owners in time to prevent delays attributable to utility relocations or alterations as called for in the Contract Documents. The Contractor shall not be entitled to damages or additional payment if such delay does occur. The Engineer will determine the extent of the delay on the project as a whole, and any commensurate extension of time.

6.08 Cooperation

When necessary, the Contractor shall conduct operations so as to permit access to the worksite and provide time for utility work to be accomplished during the progress of the contract work.

SECTION 7 – PROSECUTION AND PROGRESS

7.01 Notice to Proceed

Following contract execution the City shall issue the Contractor a Notice to Proceed provided that the documents are acceptable to the City. Unless stated otherwise, the contract time shall commence upon the receipt date on the Notice to Proceed.

7.02 Commencement of Work

Work shall commence within fifteen (15) calendar days following the receipt date on the Notice to Proceed, and shall be diligently prosecuted to completion within the time provided in the Notice to Bidders.

7.03 Administrative Duties

The Contractor shall coordinate the scheduling and timing of administrative duties with other activities to avoid conflicts and to ensure orderly project progress. Such activities include, but shall not be limited to, the preparation of construction schedules, preparation and processing of submittals, requests for information and responding to requests for quotations, attending and preparing for progress meetings and coordinating project closeout activities.

7.04 Construction Schedule

The Contractor shall submit to the Engineer an acceptable Critical Path Method (CPM) progress schedule showing the critical path for completing the various items of work within the number of contract days specified. The schedule shall show the order in which the Contractor proposes to carry out the major items of work and the dates on which the Contractor will start and finish the various items (including procurement of materials and equipment). If requested, the schedule shall reflect person/crew hours and equipment loading for various construction activities in order for the City to better evaluate the proposed schedule.

The Contractor shall submit a schedule showing all work completed within the contract time. If the Contractor's schedule shows completion prior to the contract time this creates float at the end of the schedule, as a mutual resource. For example, the City will not charge liquidated damages in case the actual completion of work goes beyond the contractor's proposed completion date as long as the contract time is not exceeded. Similarly, the Contractor cannot charge any extended overhead or any additional costs if the Contractor's proposed completion date is not met for any reason as long as the completion is not delayed beyond the contract time. Contract time is the specified contract duration plus any additional days provided by contract change order.

A Preliminary Construction Schedule shall be submitted at least three (3) working days prior to the Preconstruction Conference. The Preconstruction Conference may be postponed if the Preliminary Construction Schedule is not received prior to the meeting. The Preliminary Construction Schedule shall be prepared in any time-scaled graphical form the Contractor chooses, and shall show or allow for the following;

1. The time scale shall be in days (not dates) and the work shall be shown as finishing on, or before, the number of days specified as the Contract Duration.
2. Specified Milestones shall be identified and shall conform to specification requirements.
3. Time for Contractor's preparation of and City's review of submittals, particularly in the early phases of the work, and for procurement activities.
4. Time for final inspection and completion of punchlist correction work at the end of the project.
5. The activities shall follow a logical progressive sequence to completion of the project.
6. The City will review the Preliminary Construction Schedule within the number of days stated in the Special Provisions, after receipt of the Preliminary Construction Schedule.

Within the number of days stated in the Special Provisions after receiving review comments of the Preliminary Construction Schedule, the Contractor shall submit the Baseline Construction Schedule. The City will review the Baseline Construction Schedule within the number of days stated in the Special Provisions. No progress payments will be made until the Baseline Construction Schedule has been favorably reviewed by the City. No construction work shall commence at the site until the Baseline Construction Schedule has been favorably reviewed by the City.

With each monthly progress payment request, the Contractor shall submit an Updated Construction Schedule showing actual progress of activities to date, and the remaining activities to completion. Progress payment requests will not be actioned if not accompanied by an Updated Baseline Schedule. Upon acceptance, the Baseline Construction Schedule shall become the working construction schedule unless replaced by a Revised Construction Schedule.

If at any time the Updated Baseline Construction Schedule indicates that the completion date has fallen behind the current due date by more than either 30 days or 20% of the remaining duration, whichever is less, or the activity logic has become unfeasible for any reason, the Baseline Construction Schedule shall be revised by the Contractor. The Revised Construction Schedule shall incorporate any additional or changed work to date (identified by Contract Change Order number or Request for Quote number (but not both)) and any revised activity logic. Requirements for submittal of the Baseline Construction Schedule shall apply to the Revised Construction Schedule. Revised Construction Schedules shall be identified by sequential number and a revision date. Upon acceptance, the Revised Construction Schedule shall become the working construction schedule unless replaced by a subsequent Revised Construction Schedule. Updating of Revised Construction Schedules shall occur as specified for the Baseline Construction Schedule, including the criteria requiring further revisions.

7.05 Three Week Look Ahead Schedule

The Contractor is required to furnish to the Engineer, on a weekly basis at the project's weekly progress meetings, a 3-week look ahead schedule. The schedule must show planned activities in sufficient detail to allow proper monitoring of the planned construction activities.

7.06 Construction Sequence

When required by the Special Provisions or plans, the Contractor shall follow the sequence of operations as set forth therein. The Contractor shall prepare and submit at the pre-construction meeting a staging or phasing plan identifying the sequence of construction work and traffic control needed to complete the project. The staging plan shall be subject to review and approval by the Engineer, prior to the start of construction. The goal of the phasing plan will be to minimize impacts to surrounding businesses and residents in the project areas.

7.07 Recording Existing Conditions

Existing conditions throughout the project site shall be photographed and video recorded by the Contractor. Recordings of these pre-construction conditions shall be complete, comprehensive, and shall be submitted to the Engineer five (5) days before start of construction. Recording shall include and show every detail of existing improvements, including the current condition of the curb, gutter, sidewalk, signs, landscaping, streetlights, roadway, structures near the project including face of buildings, canopies, shades, fences, calabazas creek, pedestrian/bike trail, and any other features within the limits of work.

7.08 Preconstruction Conference

The City shall designate a date and time for the pre-construction conference once the contract has been fully executed. The meeting shall be attended by responsible representatives of the Contractor, including the designated Contractor's Representative and Job Superintendent. At the pre-construction conference, the City shall discuss various administrative procedures and project coordination issues. The City will provide one full size set of reproducible contract drawings, and one unbound set of project specifications and addenda to the Contractor at the Preconstruction Conference, or shortly thereafter. The Contractor shall be responsible for conforming the drawings and specifications to incorporate the addenda, and for

printing sufficient copies of drawings and specifications for the use of the Contractor, subcontractors and suppliers.

At a minimum, the Contractor should be prepared to furnish and discuss the following:

1. Letter designating the Superintendent.
2. A list of key personnel and emergency contact information including telephone numbers to be used in case of emergency.
3. Preliminary schedule and project phasing plans, including lead time for submittal and fabrication of critical features.
4. Utility company coordination and/or permit issues.

7.09 Progress Meeting

The Contractor's Project Manager, Job Superintendent and if requested by the City, Subcontractors shall attend weekly progress meetings to be scheduled by the Engineer at a time agreeable to both the Engineer and the Contractor. Contractor shall also attend special meetings in addition to regular progress meetings if necessary and directed by the Engineer.

7.10 Hours of Construction

Construction activities shall be limited to the hours of 8:00 a.m. to 5:00 p.m., unless otherwise noted or further restricted in the Special Provisions, Contract Documents, or as directed by the Engineer. No work shall be done on weekends, holidays or outside these specified hours, unless otherwise approved by the Engineer. The Contractor shall take into consideration and coordinate time constraints for special events or activities organized by the City or other agencies. No mechanical equipment, including hauling or deliveries by trucks, shall start before 8:00 a.m. and all equipment must shut down before 5:00 p.m. unless approved by the Engineer.

Written requests to exceptions shall be provided by the Contractor at least 7 calendar days prior to proposed work.

Exceptions to working days or hours will be considered only when, in the opinion of the Engineer, construction during the specified work days/hours would inconvenience the public and neighboring residents more than working at other hours or on weekends or holidays, or is deemed to be in the best interest of the City. Exceptions will not be granted merely to expedite the construction work or for the Contractor's convenience. If these exceptions are granted, Contractor shall comply with East Palo Alto Municipal Code Section 16.08.030, which restricts hours of construction noise Monday - Friday between 7:00 a.m. and 6:00 p.m. Saturday hours of operation shall be between 8:00 a.m. – 5:00 p.m.

No work shall be performed on Sundays and City Holidays. City Holidays are:

- New Year's Eve and New Year's Day
 - If the 1st of January falls on a Saturday, the holiday will be observed on the Thursday and Friday prior to New Year's Day. If the 1st of January falls on a Sunday or Monday, the holiday will be observed on Friday and Monday.
- Martin Luther King, Jr. Day
- Lincoln's Birthday
- Cesar Chavez Day
- Presidents Day
- Memorial Day
- Independence Day
 - If the 4th of July falls on a Saturday, the holiday will be observed on the Friday prior to Independence Day. If the 4th of July falls on a Sunday, the holiday will be observed on the following Monday.

- Labor Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Day

7.11 Prosecution of Work

To minimize public inconvenience and possible hazards and to restore the streets and other work areas to their original condition and former state of usefulness as soon as practicable, the Contractor shall diligently prosecute the work to completion. If, in the Engineer's opinion the Contractor fails to prosecute the work to the extent that the above purposes are not being accomplished, the Contractor shall, upon orders from the Engineer, immediately take the steps necessary to fully accomplish said purposes. All costs for prosecuting the work as described herein shall be absorbed in the Contractor's bid. Should the Contractor fail to take the necessary steps to fully accomplish said purposes, after orders of the Engineer to do so, the Engineer may suspend the work in whole or in part, until the Contractor takes said steps. With or without such suspension, the Engineer may cause such steps to be taken by force account or by other means at the Contractor's expense.

7.12 Suspension of Work

Work may be stopped or suspended in whole or in part when, in the Engineer's opinion, the suspension is necessary and in the interest of the City. The Contractor shall immediately comply with any written order of the Engineer suspending work. Suspended work shall be resumed upon written order of the Engineer. An extension of contract time equal to the period of suspension shall be issued to the Contractor by change order. Any claim by the Contractor for an adjustment of the contract sum or the contract time shall be made within ten (10) working days after the start of suspension of the work.

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

7.13 Default by the Contractor and Termination of Control

As a result of any of the following events, the Contractor shall be deemed to be in default:

- a. If the Contractor is in bankruptcy or makes a general assignment for the benefit of creditors, or
- b. If the Contractor fails to make prompt payment to subcontractors for labor or materials, or
- c. If a receiver is appointed on account of the Contractor's insolvency, or
- d. If the Contractor fails to provide enough properly skilled workmen or enough materials to insure compliance with the construction time schedule, or
- e. If the Contractor fails to perform any portion of the work within the timing requirements of the Contract Documents, or abandons the project site, or
- f. If the Contractor disregards instructions from the Engineer or violates any provision of the contract, or
- g. If the Contractor fails to replace or repair any damage caused by the Contractor or its agents, representatives, contractors, subcontractors, or employees in connection with the performance of the work, or
- h. If the Contractor violates any legal requirement related to the work.

In case of default, the City may give written notice to the Contractor and the Contractor's bonding agent that if the default is not remedied within ten (10) calendar days or the Contractor does not provide adequate written assurance to the satisfaction of the Engineer that the cure will be forthcoming, the Contractor's control over the work may be terminated as of the date specified in the written notice.

Upon such termination of control the City may enter upon and take possession of the entire work and may also take possession, for the purpose of completing the work, of all of the Contractor's tools, equipment

and appliances upon the work, and all materials on the site or stored off-site for incorporation into the work. The City may, at its sole option and without further notice to anyone, complete the work by day labor, by contract entered into by negotiations, by competitive bidding, by calling upon the performance of the performance bond surety, or by other means as the City, in its discretion, shall elect.

After termination of the Contractor's control over the work as herein provided, the Contractor shall not be entitled to any further payments under the contract until the entire work thereunder has been fully completed and finally accepted by the City. After such completion and acceptance, if the "unpaid balance of the contract price" (as defined in the next paragraph) exceeds the sum of the amounts expended by the City in taking over and completing the work, including all managerial and administrative expense incurred by the City on account thereof and the amount of all damages incurred by the City by reason of the Contractor's default, such excess shall be paid to the Contractor. If the said amount expended exceeds the unpaid balance, the Contractor and the Contractor's surety shall be liable to the City for the difference. At the Contractor's request, the expense incurred by the City in taking over and completing the work, and the amount of any damage incurred by the City by reason of the Contractor's default shall be audited and certified by an independent third party, whose certificate thereof shall be binding and conclusive upon the parties.

For the purposes of the computations required by the paragraph above, the "unpaid balance of the contract price" shall be the original contract price as adjusted by any change orders issued prior to termination of the Contractor's control, less all payments made on account thereof prior to such termination, and less any and all amounts withheld or paid pursuant to stop notices filed with the City upon claims of subcontractors or others from equipment, labor or materials furnished to the work on behalf of the Contractor.

Upon completion and acceptance of the work, the Contractor shall be entitled to the return of all materials not used in the work, but without claim against the City for loss or damage with respect thereto, and shall be entitled to the return of all the Contractor's equipment, tools and appliances taken possession of by the City, but without claim against the City for any charge for the use thereof or for usual and ordinary depreciation and wear and tear.

The exercise of remedies provided for in this sub-section, for default by the Contractor, shall be in addition to, and shall not be deemed a waiver by the City of any other rights or remedies due the City under the contract provisions, for default by the Contractor.

7.14 City's Right to Terminate Contract

The City may, at its option, terminate the Agreement, in whole or from time to time in part, at any time by giving notice to the Contractor. Upon such termination, the Contractor agrees to waive any claims for damages, including loss of anticipated profits, on account thereof; and, as the sole right and remedy of the Contractor, the City shall pay the Contractor in accordance with this sub-section. Upon termination, the obligations of the Contractor for portions of the work already performed shall continue.

- a. Upon receipt of a Notice of Termination, the Contractor shall, unless the notice directs otherwise, do the following:
 1. Immediately discontinue the work to the extent specified in the notice.
 2. Place no further orders or subcontracts for materials, equipment, services, or facilities, except as may be necessary to complete such portion of the work that are not to be discontinued.
 3. Promptly cancel, on the most favorable terms reasonably possible, all subcontracts to the extent that they relate to the performance of the discontinued portion of the work.
 4. Thereafter do only such work as may be necessary to preserve and protect the work already in progress and to protect materials, plants, and equipment on the project site or in transit thereto.

- b. Upon such termination, the City shall pay to the Contractor as a sole and exclusive remedy for the termination, the sum of the following, and the Contractor will be entitled to no other compensation or damages, and expressly waives same:
 1. The amount of the contract amount allocated to the portion of the work properly performed by the Contractor as of the date of termination, less sums previously paid to the Contractor, plus
 2. Previously unpaid costs of any items delivered to the project site which were fabricated for subsequent incorporation in the work, plus
 3. Any proven losses with respect to materials and equipment directly resulting from such termination, plus
 4. Reasonable demobilization costs in excess of what would have been incurred if work were not terminated, plus
 5. Reasonable costs for preparing a statement of the aforesaid costs, expenses, and losses in connection with such termination.

The City may terminate the Agreement at its own discretion or when conditions encountered during the work make it impossible or impracticable to proceed, or when the City is prevented from proceeding with the Agreement by act of God, by law, or by official action of a public authority.

7.15 Time of Completion and Days Charged

The Contractor shall diligently prosecute and fully complete the work within the number of calendar or working days set forth in the Notice to Bidders or shall be subject to liquidated damages. Full liquidated damages will be assessed for delays beyond the required substantial completion date. Reduced liquidated damages will be assessed for delays after the substantial completion date. LDs Time is of the essence in the performance of all obligations under the Contract Documents, and all timing requirements shall be strictly adhered to unless otherwise modified by the City. See General Provisions, Sections 7.12, "Prosecution of Work", and 7.16, "Liquidated Damages".

Under a calendar day contract, City observed holidays and inclement weather delays are to be anticipated and unless there is a deviation from what is customary for the time of year the project is under construction, no additional days will be granted. Every day, including holidays, Saturdays and Sundays shall be counted as a day charged under a calendar day contract.

Under a working day contract, the Contractor will be given credit for City observed holidays and inclement weather delays, in accordance with the State Standard Specifications. Should the Contractor prepare to begin work at the regular starting time in the morning of any day on which inclement weather, or the conditions resulting from the weather prevents the work from beginning at the usual starting time and the crew is dismissed as a result thereof and the Contractor does not proceed with at least 75 percent of the normal labor and equipment force engaged in the current controlling operations for at least 60 percent of the total daily time being currently spent on the controlling operations, the Contractor will not be charged for a working day whether or not conditions should change thereafter.

7.16 Liquidated Damages

The City and the Contractor, by execution of the agreement, each agree that time is of the essence in the performance of the work, and that actual damages for inconvenience and loss from any delay in completion of the contract beyond the date provided in the Notice to Bidders is extremely difficult or impossible to determine.

The City and the Contractor further agree, as specified in the Notice to Bidders, that liquidated damages shall be assessed for each and every calendar or working day required to complete the contract in excess of the contract time established for the project, and that the amount stated therein is a reasonable

estimate of the amount of such damages. The Engineer may deduct any liquidated damages owed to the City, as determined by the Engineer from any payments otherwise payable to the Contractor under this agreement.

Nothing contained herein shall limit the City's rights or remedies against Contractor for any default other than failure to complete the work within the contract time. This provision for liquidated damages shall not be applicable nor act as a limitation upon the City if the Contractor abandons the work. In such event, the Contractor shall be liable to the City for all losses incurred.

The date of the Engineer's Certificate of Substantial Completion shall be the termination date, if applicable, of full liquidated damages. The completion date of the project shall be the termination date, if applicable, of reduced liquidated damages, after substantial completion. Tiered liquidated damages shall be more fully detailed in the Special Provisions.

Separate from the above-mentioned liquidated damages, the Contractor may be responsible for paying all damages incurred by third parties due to non-completion of the project by the date specified.

7.17 Delays and Extensions of Time

- a. *Excusable Delays* – shall mean delays in the prosecution or completion of the work which result from causes beyond the control of the Contractor and City and which could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor, suppliers, or any tier of the Contractor's subcontractors. Excusable Delays fall into the following categories:
 1. *Abnormal Delays* – Excusable Delays caused by acts of god, fire, unusual storms, floods, tidal waves, earthquakes, strikes, labor disputes, freight embargoes, and shortages of materials insofar as they prevent the Contractor from proceeding with at least seventy-five (75) percent of the normal labor and equipment force for at least five (5) hours per day toward completion of the current critical path activity.
 2. *Weather Delays* – Excusable Delays due to inclement weather conditions or the conditions resulting from weather prevent the Contractor from proceeding with seventy-five (75) percent of the normal labor and equipment force engaged in the current critical activity item for a period of at least five (5) hours per day toward completion of the current critical path activity.
 3. *Material Shortage Delays* – Excusable Delays due to shortages of material, provided that the Contractor submits satisfactory proof to the Engineer. For the proof to be satisfactory, the Contractor must demonstrate that every effort to obtain the materials from all known sources within reasonable reach of the proposed work. Only the physical shortage of material, caused by unusual circumstances, will be considered under these provisions as an excusable delay, and no consideration will be given to any claim that material could not be obtained at a reasonable, practical, or economical price, unless it is shown to the satisfaction of the Engineer that such material was only available at exorbitant prices. A material shortage delay will not be considered for material ordered or delivered late or for material whose availability is affected by virtue of mishandled procurement. The above provisions shall apply equally to equipment to be installed in the work.
- b. *Compensable Delays* – shall include delays that occur in the prosecution or completion of the work, through no fault of the Contractor which prevent the Contractor from proceeding with at least seventy-five (75) percent of the normal labor and equipment force for at least five (5) hours per day toward completion of the current critical activity item(s) on the latest favorably reviewed progress schedule due to the following causes:
 1. Delays due solely to the actions and/or inactions of the City.

2. Delays due to changed conditions as defined in General Provisions, Section 4.05, “Requests for Information, Inconsistencies and Changed Conditions”.
 3. Delays due to other Contractors employed by the City who interfere with the Contractor's prosecution of the work as defined above.
- c. Inexcusable Delay – means any delay in the completion of the work beyond the expiration of the contract time resulting from causes other than Excusable Delays or Compensable Delays. An Inexcusable Delay shall not entitle the Contractor to an extension of the contract time or an adjustment of the contract sum.
- d. Concurrent Delays – those periods of delay when the prosecution of the work is delayed during the same period of time due to causes from a combination of the delays defined as Excusable, Compensable or Inexcusable.

If the Contractor desires an extension of time, the Contractor shall file a written request based upon the delays reported. The Engineer will ascertain the facts, the extent of the delays, and the effect upon the entire project, and the City will grant an extension of time equivalent to verified time lost. The request for an extension of time must be made no later than ten (10) working days after the start of the condition that purportedly caused the delay, and no later than fifteen (15) working days after the date on which performance on the condition purportedly causing the delay has ended.

Contractor may make a delay claim for an extension of the contract time for an Excusable Delay or a Compensable Delay. If an Excusable Delay and a Compensable Delay occur concurrently, the maximum extension of the contract time shall be the number of calendar days from the commencement of the first delay to the cessation of the delay which ends last. If an Inexcusable Delay occurs concurrently with either an Excusable Delay or a Compensable Delay, the maximum extension of the contract time shall be the number of calendar or working days, if any, by which the Excusable Delay or the Compensable Delay exceeds the Inexcusable Delay.

For a Compensable Delay, the Contractor may make a delay claim for an adjustment in the contract sum in an amount equal to the sum of the actual and unavoidable additional costs of labor, material, and equipment furnished at the site by the Contractor or subcontractors.

Extensions of time, when granted, will be based upon the effect of delays to the project as a whole and will not be granted for non-controlling delays to minor portions of the work unless it can be shown that such delays did, in fact, delay the progress of the project as a whole. For purposes of determining delays, all float associated with the project schedule shall belong to the project. See General Provisions, Section 7.04, “Construction Schedule”.

If delays are caused by unforeseen events beyond the control of either the Contractor or the City, such delays will entitle the Contractor to an extension of time as provided herein, but the Contractor shall not be entitled to damages or additional payment due to these delays. War, governmental regulations, labor disputes, strikes, fires, floods, adverse weather necessitating cessation of work, other similar action of the elements, inability to obtain materials, equipment, or labor because of Federal Government restrictions arising out of National Defense, required extra work, action or inaction by the City, or other specific reasons as may be further described in the specifications may constitute such a delay. If delays beyond the Contractor's control are caused by reasons other than those mentioned above, but are substantially equal in gravity to those enumerated, an extension of time may be granted, if deemed by the Engineer to be in the best interests of the City.

For Compensable Delay periods resulting in indirect overhead expenses, the Contractor shall be reimbursed as provided for in General Provisions, Section 4, “Changes in Work”.

7.18 Substantial Completion

When work in accordance with the Contract Documents has progressed to a stage of one-hundred percent (100%) complete, as determined by the Engineer, except for the completion of minor punch list items of deficiencies or omissions in the work which require correction in order to satisfy the agreement, yet do not impair the City's ability to occupy and fully utilize the work for its intended purpose, the project shall be deemed "Substantially Complete". Portions of the work may also be designated by the City as substantially complete if the Contract Documents require separate delivery.

When the Engineer determines that the work or such designated portions of the work are substantially complete, the Engineer will prepare and sign a Certificate of Substantial Completion. The date of substantial completion shall establish the date of occupancy by the City and the transfer of responsibility from the Contractor to the City for such items as security, maintenance, heat, utilities, insurance, and damage to the work from causes other than that of the Contractor. Unless otherwise indicated in the Certificate of Substantial Completion, the Contractor's guarantee for the work shall commence upon the date of substantial completion.

7.19 Project Completion and Closeout

After the Contractor has received the Certificate of Substantial Completion and has only minor work remaining, project closeout may begin. The following items and procedures are required as part of the project close out process.

- a. Within 14 days from the issuance of the Certificate of Completion, a pre-final inspection will be scheduled and conducted by the City. As a result of the inspection, the City will advise the Contractor of any work that must be completed, in the form of a punch list.
- b. Following the completion of punch list items, the Contractor shall make a written request to the city to conduct a final inspection. The written request shall be accompanied by a Certification that the work has been performed in accordance with the Contract Documents and shall be on the Contractor's Certification of Completion form enclosed in Appendix A of these General Provisions.
- c. Upon satisfactory completion of the punch list items, the City will consider the construction work complete and issue a completion letter establishing the completion date and detailing required closeout items for the contract.
- d. The contractor shall provide a final payment request with lien releases (if applicable) in a format acceptable to the City.

Should it become necessary, due to developed conditions, for the City to occupy any portion of the work, or any part of any structure or equipment, before the contract is completed or accepted, such occupancy shall not constitute an acceptance of any part of the work, unless so stated in writing by the City.

7.20 Acceptance

Acceptance by the Director of Public Works will be recommended after the work has been fully completed and when all the requirements for Acceptance are met as set forth in the Contract Documents. Following acceptance, a Notice of Completion will be filed with the County Recorder. Remaining contract retention will be released within 35 days of recording of the Notice of Completion with the County Recorder or within 60 calendar days, whichever is shorter.

7.21 Protection and Cleanup

The scope of this project includes the protection of all work until completion of all the work and removal of all excess construction equipment, materials and debris from the site, in accordance with these specifications.

The Contractor shall be responsible for repair or replacement of work damaged due to any vandalism prior to completion of the work.

7.22 Risk of Loss

The Contractor shall be responsible for the charge, care and protection of the project and shall bear all risks of injury or damage to the work, materials or equipment delivered to the site, by any means including fire, earthquake, wind, storm or other action of the elements, vandalism, or loss by theft, from the date of commencement of construction to the date of formal acceptance by the City Council. The Contractor shall rebuild, repair, restore and make good all injuries or damage to any portion of the work, and shall bear the entire expense thereof, except such injuries or damages that are caused by riot, insurrection, acts of the Federal or State Government, or a public enemy in time of war.

7.23 Use of Improvements During Construction

The City reserves the right to take over and utilize all or part of any completed facility or appurtenance. Such action by the City will not relieve the Contractor of responsibility for injury or damage to said completed portions of the improvement resulting from use by public traffic, from the action of the elements or from any other cause attributable to the Contractor's operations or negligence. The Contractor will be required to restore such portions of the improvement before final acceptance. Nothing in this Section shall be construed as relieving the Contractor from full responsibility for correcting defective work or materials.

SECTION 8 – RESPONSIBILITIES OF THE CONTRACTOR

8.01 Contractor's Responsibility for the Work

The Contractor shall supervise, coordinate, and direct the work using Contractor's best skill and attention. Contractor shall have control over and be solely responsible for construction means, methods, techniques, sequences, procedures, and the coordination of all portions of the work in accordance with the terms of the Contract Documents.

The Contractor shall be responsible for assuring that all portions of the work, including those portions already performed under the Contract, conform to the requirements of the Contract Document and are ready to receive subsequent work.

The Contractor shall furnish and maintain in good condition all equipment and facilities as required for the proper execution and inspection of the work. Such equipment and facilities shall meet all requirements of applicable ordinances and laws.

8.02 Contractor's Responsibility for Subcontracted Work

The City will deal directly with, and make all payments to the Contractor only. The Contractor shall be responsible for the coordination of all trades, subcontractors, and suppliers engaged upon the work. Neither the City nor the Engineer will undertake to settle any differences between the Contractor and the Contractor's subcontractors.

All persons engaged in the work, including subcontractors, will be considered as employees of the Contractor. The Contractor will be held responsible for their work and shall be responsible to the City for acts and omissions including those by their respective agents and employees.

When subcontracted work is not prosecuted in a manner satisfactory to the Engineer, the Contractor shall be notified to take corrective action within a specified time. If timely correction is not made, then upon receipt by the Contractor of written instructions from the Engineer, the Subcontractor shall be removed immediately from the work and shall not be reemployed.

8.03 Superintendent

The Contractor shall have on the job at all times a competent superintendent, employed by the Contractor, who can read and write in English, and shall represent the Contractor and all direction given to the superintendent shall be as binding as if given to the Contractor. The Contractor shall employ, and provide a written letter designating a superintendent or representative who shall be present on the job site whenever work is in progress to coordinate all work with the City and neighboring property owners. A backup representative may also be provided. A joint venture shall designate only one Superintendent.

Directions and information given to the Superintendent shall be considered as having the same effect as if delivered to the Contractor and the Superintendent shall have complete authority to act on behalf of the Contractor.

City approval of the Superintendent is required prior to starting work. The City reserves the right to request an appropriately qualified replacement of the Superintendent any time during construction of the project. Contractor shall provide the Engineer with the Superintendent's telephone number, along with an after-hours emergency contact number of a responsible person who shall correct hazardous situations, should they occur, during times other than the normal working hours.

8.04 Character of Employees

Only competent supervisors and workers shall be employed on the work, and, if required by the Owner, the Contractor shall discharge any person who commits trespass or is, in the opinion of the Owner, disorderly, dangerous, insubordinate, incompetent, or otherwise objectionable. Such discharge shall not

be the basis of any claim for compensation or damages against the City of East Palo Alto or any of its officers, employees or agents.

8.05 Laws to be Observed

The Contractor shall fully observe and comply with all State and Federal laws including those of CAL-OSHA and municipal ordinances and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having jurisdiction or authority over the same. The Contractor shall also cause all agents and employees engaged on the project to observe and comply with all such laws, ordinances, regulations, orders and decrees of bodies or tribunals having any jurisdiction or authority over the work; and shall protect and indemnify the City of East Palo Alto and all officers, employees, and agents thereof connected with the work against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or its employees, or subcontractors. If any discrepancy or inconsistency is discovered in the plans, drawings, specifications or contract for the work in relation to any such law, ordinance, regulation, order or decree, whether by the Contractor or its employees, or subcontractors, the Contractor shall forthwith report the same to the Owner in writing.

- a. *Non-Discrimination* – Contractor shall abide by all federal and state laws preventing discrimination in the employment of persons upon public works and shall ensure by appropriate contract provisions that all subcontractors are similarly obligated to comply with all such laws. These laws include, but are not limited to the following California Labor Code Section 1735 which provides that “No discrimination shall be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, or sex of such persons, except as provided in Section 12940 of the Government Code, and every contractor for public works violating this section is subject to all the penalties imposed for a violation of this chapter”. Likewise, Contractor and all of its subcontractors shall abide by the provisions of California Labor Code Section 1777.6 prohibiting discrimination in the acceptance of otherwise qualified apprentices; and California Labor Code Section 3095 which declares unlawful the discrimination in any recruitment or apprenticeship program on stated grounds. City shall be entitled to retain and withhold all penalties as authorized pursuant to California Labor code, Division 2, Part 7, Chapter 1, commencing with Section 1720 and following, in accordance with the provisions of that Chapter, and the regulations established by the Director of Industrial Relations pursuant to the statutory authority of such chapter.
- b. *Hours of Labor* – Pursuant to Labor Code, Sections 1810, eight (8) hours labor shall constitute a legal day’s work and as such, the Contractor shall not permit any worker to labor more than eight (8) hours during any one (1) calendar day or more than forty (40) hours during any one (1) calendar week, except as permitted by law and in such cases only upon such conditions as are provided by law. Pursuant to Labor Code, Sections 1813, Contractor shall forfeit to the City, as a penalty, twenty-five dollars (\$25.00) for each worker employed in the execution of this Agreement by Contractor, or any Subcontractor, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one (1) calendar day or more than forty (40) hours in any one (1) calendar week in violation of the terms of this Section or in violation of the provision of any law of the State of California. Such forfeiture amounts may be deducted from the contract sum. Contractor and each Subcontractor shall keep, or cause to be kept, an accurate record showing the actual hours worked each calendar day and each calendar week by each worker employed on the project, which record shall be kept open at all reasonable hours to the inspection of the City, its officers and agents, and to the inspection of the appropriate enforcement agency of the State of California.
- c. *Prevailing Wage* – As identified in the Notice to Bidders, the work contemplated by this agreement is a public work subject to prevailing wages under California Labor Code, Sections 1720 et. seq. The State of California Department of Industrial Relations has ascertained the general prevailing per diem wage rates in the locality in which the work is to be performed for

each craft, classification, or type of worker required to perform the work. A schedule of the most recent general prevailing per diem wage rates made available to the City will be on file at the City's principal facility office and will be made available to any interested party upon request. This prevailing wage rate schedule is provided by the City for Bidder's information only and is not guaranteed by the City to be current. Contractor is obligated to verify all appropriate prevailing wage rates and pay those rates as required. By this reference the verified current schedule of prevailing wage rates is made part of the Contract Documents. Contractor shall pay not less than the prevailing per diem wage rates, as specified in the schedule and any amendments thereto, to all workers employed by Contractor in the execution of the work. Contractor shall cause all subcontracts to include the provision that all Subcontractors shall pay not less than the specified prevailing per diem wage rates to all workers employed by such Subcontractors in the execution of the work.

Contractor shall forfeit to the City, as a penalty, no more than fifty dollars (\$50.00) for each calendar day or portion thereof for each worker that is paid less than the specified prevailing per diem wage rates for the work or craft in which the worker is employed for any portion of the work done by Contractor or any Subcontractor in violation of the provisions of the Labor Code, and in particular Sections 1770 to 1781 thereof, inclusive. Such forfeiture amounts may be deducted from the contract sum. Contractor shall also pay to any worker who was paid less than the specified prevailing per diem wage rate for the work or craft for which the worker was employed for any portion of the work, for each calendar day, or portion thereof, for which the worker was paid less than the specified prevailing per diem wage rate, an amount equal to the difference between the specified prevailing per diem wage rate and the amount which was paid to the worker.

The City will not recognize any claim for additional compensation because of the payment by the Contractor for any wage rate in excess of prevailing wage rates set forth in the Agreement, including payment in excess of the prevailing wage for extra work paid by force account. The possibility of wage increases is one of the elements to be considered by the Contractor in determining the Contractor's bid and will not, under any circumstances be considered as the basis of a claim against the City under the Agreement.

- d. *Certified Payroll Records* – Pursuant to Labor Code, Sections 1776, Contractor and all Subcontractors shall keep an accurate payroll record, showing the name, address, social security number, job classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in connection with the work. All payroll records shall be certified as being true and correct by Contractor or Subcontractors keeping such records; and the payroll records shall be provided to the City no later than three weeks after closing of payroll for City-funded projects, and no later than one week for federal aid projects. Certified payroll shall also be made available for inspection upon request by the State of California Division of Labor Standards Enforcement, or the Division of Apprenticeship Standards of the State of California Division of Industrial Relations.

Each Contractor and every lower-tier Subcontractor will be required to submit certified payrolls and labor compliance documentations electronically via the software LCPTracker. Electronic submission will be a web-based system, accessed on the World Wide Web by a web browser. Each Contractor user will be given a Log-On identification and password to access the City's reporting system.

- e. *Apprentice Program* – Attention is directed to State of California Labor Code, Sections 3095, 1777.5, 1777.6, and 1777.7 and Title 8, California Code of Regulations, Section 200, and the applicable Sections that follow. Responsibility for compliance with these requirements lies with the Contractor. To ensure compliance and complete understanding of the law requiring apprentices, and specifically the required ratio thereunder, Contractor or Subcontractors should, where some question exists, contact the Division of Apprenticeship Standards, 525 Golden Gate Avenue, San Francisco, California, or one of its branch offices prior to commencement of the

work. In the event Contractor willfully fails to comply with this Section, it will be considered in violation of the requirements of the Contract.

Contractor and all of its subcontractors shall abide by the provisions of California Labor Code Section 1777.6 prohibiting discrimination in the acceptance of otherwise qualified apprentices; and California Labor Code Section 3095 which declares unlawful the discrimination in any recruitment or apprenticeship program on stated grounds. City shall be entitled to retain and withhold all penalties as authorized pursuant to California Labor code, Division 2, Part 7, Chapter 1, commencing with Section 1720 and following, in accordance with the provisions of that Chapter, and the regulations established by the Director of Industrial Relations pursuant to the statutory authority of such chapter.

Nothing contained herein shall be considered or interpreted as prohibiting or preventing the hiring by Contractor or Subcontractors of journeyworker trainees who may receive on-the-job training to enable them to achieve journeyworker status in any craft or trade under standards other than those set forth for apprentices.

8.06 Special Permits, Licenses and Fees

Unless otherwise stated in the Special Provisions, the Contractor shall procure all permits and licenses, pay all charges and fees, including a City business license tax, and give all notices necessary for lawful prosecution of the work. All permits, licenses, and other authorizations shall be secured in sufficient time to prevent delays to the work. The Contractor shall comply with the provisions of said permits, licenses and other authorizations.

In the event that the City has obtained permits, licenses, or other authorization applicable to the work in conformance with the requirements of California Environmental Quality Act (CEQA) (Public Resources Code, Sections 21000 and following), the Contractor shall comply with the provisions of these permits, licenses, and other authorizations.

For City Capital Improvement Construction Projects, the Contractor shall obtain a “No Fee” encroachment and/or building permit. Contractor shall coordinate through the Engineer and the City’s Building Division to insure that all appropriate construction inspections occur. Contractor shall be responsible to obtain all signatures required for the work.

8.07 Coordination and Cooperation

Construction work by utility companies or other contractors may be needed or may be occurring simultaneously within or adjacent to the limits of work for this project. The Contractor shall coordinate and cooperate with all other contractors and utility companies throughout the duration of this project to avoid delays and minimize interference and conflicts. Cooperation will be required in the arrangement for the storage of materials, and in the detailed execution of the work. It is the Contractor’s responsibility to ascertain the nature of work by others, coordinate the work, and install, modify, and maintain traffic control as necessary to avoid interferences and delays on the construction activities. Failure of the Contractor to keep informed of the work progressing on the site and failure to give written notice of lack of progress or defective workmanship by others shall be construed as acceptance by the Contractor of the status of the work as being satisfactory for proper coordination with Contractor’s own work.

The City reserves the right to perform work or allow others to perform work, as necessary, within or adjacent to the limits of this project, at any time. If the Contractor or any of the Contractor’s Subcontractors or employees cause loss or damage to any separate contractor on the work, the Contractor, by agreement or arbitration will settle any claim for such loss or damage if the Contractor deems it necessary. If such separate contractor shall sue the City, on account of any loss so sustained, the City shall notify the Contractor, who shall indemnify and save harmless the City against any loss or damage arising therefrom, including the cost and expense of defending any such suit.

The Contractor's bid shall absorb all costs involved in coordinating the work with others. The Contractor will not be entitled to additional compensation from the City for damages resulting from such simultaneous, collateral and essential work.

8.08 Use of Premises

The Contractor shall confine construction activities to the project limits; which shall consist of right-of-way, easements and/or property owned by the City of East Palo Alto, without exception, unless otherwise authorized in writing by the City. With prior approval of the Engineer, adjacent street right-of-way may also be utilized for day-to-day operations. Unless approved by the Engineer, no storage of materials and equipment will be allowed to remain within the right-of-way during non-working hours, on the weekends, or during holidays.

Each day, after the completion of construction operations, unless otherwise approved by the Engineer, the project limits shall be secured. All excess materials and equipment not protected by approved traffic control devices (such as k-rails) shall be relocated to a staging area or demobilized. If the area is accessible to the public, trench spoils shall be off-hauled daily and open excavations shall be protected with steel plates.

Personnel of Contractor and Subcontractors shall not occupy, live upon, or otherwise make use of the project site during any time that work is not being performed at the project site, except as otherwise provided for in the Contract Documents for issues such as site security.

8.09 Construction Staging and Field Office

If additional space beyond the construction limits is necessary for staging, the Contractor shall make special arrangements with neighboring property owner(s) to secure a staging area for a field office and/or material and equipment storage at the Contractor's own cost and initiative. The staging area must be fenced, with screening, and shall be operated in a manner that minimizes the inconvenience to neighbors.

Areas used to store materials, supplies or equipment overnight shall be defined as a staging area. City streets shall not be used as staging areas unless specifically authorized in writing by the City Representative. Vacant and/or city controlled land may be used as staging area only with written permission of the City Representative. Privately owned lots shall not be used as staging areas without specific written consent of the property owner. A copy of such private property owner consent shall be submitted to the City Representative prior to use of private property as a staging area. No equipment shall be left on residential streets on Saturday, Sunday or holidays unless work is active on the day.

The Contractor is encouraged to negotiate side agreements with the property owner of such sites prior to submitting bids. In addition to approval from the property owner, the Contractor may also need to secure a Use Permit from the City's Planning Division.

8.10 Site Security

Contractor shall be responsible for the care and custody of work and the site, including all necessary security provisions, on a 24-hour per day basis throughout the entire term of the Agreement. The Contractor shall provide and maintain storage facilities and employ such measures as will preserve the specified quality and fitness of materials to be used in the work.

8.11 Construction Water

Construction water is available at cost to the Contractor. The Contractor is responsible for obtaining the required hydrant construction meter from the Water Department located at 2415 University Ave, second floor, in the City of East Palo Alto.

The Water Department shall equip the construction meter with a Back Flow Preventer (BFP) with a single or double check valve. The Contractor shall bare full responsibility of the water meter and any apparatuses attached once issued by the Water Department. The Contractor shall be responsible in maintaining all *hydrant valve stems* using the proper *hydrant wrench* and maintained *correct placement* of

the meter to the hydrant at all time. Contractor shall use proper treatment methods of cleaning all attached hoses prior of connection to the (BFP).

8.12 Project Site Maintenance

- a. *Disposal of Material* – Unless otherwise shown on the plans or specified herein, all excess materials and materials removed from existing improvements shall become the property of, and be disposed by the Contractor. The Contractor shall be responsible for all costs associated with disposing all excess materials in a safe and legal manner. No material shall be placed on private or public property without prior approval from the City and the property owner. The Contractor shall not allow any refuse, excavated material, surplus concrete or mortar, or any associated washings, to be disposed upon paved streets, into manholes or into the City’s storm drain system.

Contractor shall establish a system for daily collection and disposal of waste materials from construction areas and elsewhere on the site. Contractor shall handle waste materials that are hazardous, dangerous, or unsanitary separately from inert waste by containerizing appropriately. Burning or burying of waste materials on site will not be permitted.

All materials removed from the existing improvements identified in the project plans to be salvaged, shall be delivered to the City Corporation Yard at 221 Commercial Street or at any other site designated by the Engineer within the City, at no additional cost.

- b. *Cleanup and Dust Control* – At all times during construction, including weekends and holidays, and throughout all phases of construction, including work suspensions and until final acceptance of the project, the Contractor shall keep the work site clean and free from rubbish, debris, and prevent the formation of an airborne dust nuisance.

Materials and equipment shall be removed from the site as soon as they are no longer necessary. Upon completion of the work and before final inspection, the entire site shall be cleared of equipment, unused materials, and rubbish so as to present a satisfactory clean and neat appearance. All cleanup costs shall be absorbed in the Contractor’s bid.

The Contractor shall abate dust nuisance by cleaning, sweeping, and sprinkling with water, those excavated areas of dirt or other materials which are prone to causing dust, within both the project site and the storage or staging area. If required or directed by the Engineer, the Contractor shall provide an approved water truck of large capacity with spraying capability.

Contractor shall perform thorough daily street sweeping as deemed necessary by the City Representative. The contractor shall have on-site or readily available, street sweeping equipment capable of performing sweeping with mechanical brooms and with either regenerative air vacuum filter technology. Mechanical brooms shall be used for wet soil, or soils that are ground into the texture of the pavement. Regenerative air or vacuum filter equipment shall be used for dry soils to minimize dust disturbance. If in the opinion of the City Representative, sweeping is not performed in an adequate manner, the City reserves the right to perform the necessary work with City or other forces and back-charge the contractor for the cost.

The Contractor shall be required to apply water for dust control immediately during construction efforts and within one (1) hour after notification by the Engineer that an airborne nuisance exists. If dust control is not adequate in the opinion of the Engineer, the Engineer will have this work done by others and will deduct such cost from the total contract price.

All hauling trucks or other construction vehicles leaving the site shall be cleaned of mud or dirt clinging to exterior body surfaces or wheel rims before traveling on City streets outside the work limits. All trucks coming to or leaving the site with materials or loose debris shall be loaded in a manner, which will prevent the dropping of materials or debris on City streets. Spillage resulting

from hauling operations along or across any public traveled way shall be removed immediately at the Contractor's expense.

When construction operations cause dirt to be deposited on public streets, the Contractor shall immediately remove such material. Streets shall be cleaned by street sweeping, rather than flushing, so as to prevent mud from entering the storm drain system.

Excess excavated material shall be removed from the site immediately. Sufficient material may remain for use as backfill if permitted by the specifications. Forms and form lumber shall be removed from the site as soon as practicable after stripping.

Failure of the Contractor to comply with the Engineer's cleanup orders may result in an order to suspend work until the condition is corrected. No additional compensation will be allowed as a result of such suspension.

- c. *Air Pollution Control* – The Contractor shall not discharge smoke, dust, or any other air contaminants into the atmosphere in such quantity as will violate the regulations of any legally constituted authority.
- d. *Noise Control* – The Contractor shall make every reasonable effort to control noise generated as a result of construction to the satisfaction of the Engineer. Use of an air compressor, jackhammer or other loud, vibrating sound generating device shall be limited to operations between the hours of 8:00 a.m. and 4:00 p.m. unless otherwise authorized by the Engineer.
- e. *Pest Control* – At the time of acceptance, structures entirely constructed under the contract shall be free of rodents, insects, vermin and pests. Necessary extermination work shall be arranged and paid for by the Contractor as part of the contract work within the contract time and shall be performed by a licensed exterminator in accordance with requirements of governing authorities. The Contractor may be liable for injury to persons or property and responsible for the elimination of offensive odors resulting from extermination operations.
- f. *Sanitation* – The Contractor shall provide and maintain enclosed toilets and hand washing stations for the use of employees engaged in the work. These accommodations shall be maintained in a neat and sanitary condition. They shall also comply with all applicable laws, ordinances and regulations pertaining to the public health and sanitation of dwellings and camps.
- g. *Wastewater* – Wastewater systems shall not be interrupted. Should the Contractor disrupt existing sewer facilities, the Contractor shall immediately notify the Engineer, and the Contractor shall establish a plan, subject to the approval of the City, to convey the sewage in closed conduits and disposed of it back into the sanitary sewer system. Sewage shall not be permitted to flow in trenches or be covered by backfill.
- h. *Temporary Light, Power and Water* – The Contractor shall furnish, install, maintain, and remove all temporary light, power, and water, including piping, wiring, lamps, and other equipment, necessary for the work at the Contractor's own expense. The Contractor shall not draw water from any City water source, except to extinguish a fire, without first obtaining a hydrant meter from the City. Temporary wiring and electrical facilities shall be in accordance with applicable provisions of Electrical Safety Orders of the State of California. The Contractor shall provide, maintain, and remove upon completion of work, temporary utilities and construction required for performance of the work, and safety of personnel.

For permanent utility connections, the Contractor shall coordinate with the proper agencies, any utility connections required. Contractor shall be responsible for distribution of power or water to points of use.

- i. *Storm Water Pollution Control* – Storm Water Pollution Control work shall consist of following

Best Management Practices (BMP) for storm water pollution prevention, submitting a Storm Water Pollution Prevention Plan (SWPPP) in compliance with all NPDES requirements, and constructing those facilities which may be required to provide prevention, control, and abatement of water pollution. SWPPP shall address how the Contractor will prevent materials specified above from being rinsed or washed into the storm drain system and which BMPs will be implemented for preventing sediment and pollutant discharges into the stormwater system.

In compliance with State and Federal regulations on construction storm water management and non-point source pollution control, no pollutants will be allowed to enter the storm drainage system. The Contractor shall be responsible for containing and removing any waste from the Contractor's construction operations using the appropriate BMP. The Contractor shall be responsible for cleaning catch basins of solid or liquid waste materials originating from the Contractor's operation before this material migrates further into the storm drain system. Violation of this provision shall cause the City to issue a stop-work notice and take necessary action to require the Contractor to correct and comply with regulations. All costs related to the stop-work action and corrective work to come into compliance shall be fully borne by the Contractor.

All construction efforts shall be conducted in a manner which prevents the release of hazardous material or hazardous waste into the soil or groundwater, and minimizes the discharge of pollutants into the storm drain system. The Contractor shall comply with guidelines to prevent pollutants from entering the public storm drain system that would otherwise allow pollutants to flow into creeks and then directly into San Francisco Bay.

All fines or enforcement action by regulatory agencies for violations of permits or NPDES requirements shall be the full responsibility of the Contractor.

The Contractor is prohibited from rinsing or washing any of the following materials into the streets, shoulder areas, inlets, catch basins, or gutters:

- Concrete
- Grout
- Mortar
- Drywall compound
- Cement and stucco
- Solvents and adhesives
- Thinners
- Sediment/dirt
- Cleared vegetation/plant material
- Paints (water and oil based) and paint chips
- Gasoline
- Diesel Fuel
- Oil
- Sawdust
- Asphalt and concrete sawcut slurry
- Fertilizer or pesticides
- Sand blast grit and material
- Other construction materials or wastes

In addition, the Contractor shall implement appropriate measures to reduce sediment and pollutants in storm water discharges from construction sites on jobs within the City of East Palo Alto. Information on Best Management Practices (BMPs) is available from a variety of sources, including (but not limited to) the following references:

[Blueprint for a Clean Bay - Best Management Practices for the Construction Industry to prevent Stormwater Pollution from Construction-Related Activities; City of East Palo Alto latest revision at http://East Palo Alto.ca.gov/Portals/0/East Palo Alto/CDD/Permits/Building/BlueprintforaCleanBay.pdf](http://EastPaloAlto.ca.gov/Portals/0/EastPaloAlto/CDD/Permits/Building/BlueprintforaCleanBay.pdf)

[California State Best Management Practices \(BMP\) Handbooks \(Construction, New Development and Redevelopment, Municipal, and Industrial\) Revised](#). California Storm Water Quality Association, 2003.

[Erosion and Sediment Control Field Manual](#), Third Edition. California Regional Water Quality Control Board San Francisco Bay Region, 1999.

The Contractor shall refer to the Technical Specifications for any additional requirements related to discharges to storm sewers. The City will monitor the construction site to insure that the Contractor complies with all contract requirements. The Contractor shall submit for review a Storm Water Pollution Prevention Plan that addresses:

1. How the Contractor will prevent materials specified above from being rinsed or washed into the storm drain system, and
2. Which BMPs will be implemented for preventing sediment and pollutant discharges into stormwater discharges.

The Contractor shall not proceed with any site work which potentially creates any material that could enter the storm drain system, until the accepted Storm Water Pollution Prevention Plan is in place.

The first progress payment will not be made until the Storm Water Pollution Prevention Plan has been submitted and favorably reviewed.

8.13 Climate Preservation

Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]), or less. Clear signage will be provided at all access points to remind construction workers of idling restrictions.

8.14 Preservation of Property

The Contractor shall be responsible for the protection of public and private property adjacent to the work.

Due care shall be exercised to avoid damage to existing roadway improvements and facilities, adjacent property, roadside trees, lawn and shrubbery not designated for removal, pole lines, fences, signs, survey markers and monuments, buildings and structures, conduits, pipe lines under or above ground, sewer and water laterals, and any other improvements or facilities within or outside the limits of construction. As ordered and approved by the Engineer, the Contractor shall provide and install suitable safeguards to protect such objects from injury or damage. If such objects are injured or damaged by reason of the Contractor's operations, they shall be replaced or restored, at the Contractor's expense, to a condition as good as when the Contractor entered upon the work, or as good as required by the Contract Documents.

Existing striping damaged during construction within and adjacent to the project site shall be replaced in kind. Partially damaged striping (such as what might occur trenching through a pavement legend), shall be replaced in their entirety.

Any survey monuments that are damaged or removed as part of the construction shall be replaced by the Contractor and a Record of Survey, as required by State law, shall be filed by a licensed Land Surveyor at the Contractor's expense, or as specified above.

The fact that any such improvement or facility is not shown upon the plans shall not relieve the Contractor's responsibility under this Section. It shall be the Contractor's responsibility to ascertain the existence of any underground improvements or facilities indicated on the plans, indicated by locating services, or as evidenced by facilities visible in the field.

8.15 Protection of Traffic Signal Facilities

The Contractor shall give at least 72 hours advance notice to the Engineer before commencing any street work (such as pavement grinding or trenching) that may potentially damage any traffic signal detection loop wires or any other signal facility. This requirement is in addition to any Underground Services Alert notifications. The City will then mark the underground traffic signal facilities.

The Contractor shall not proceed with any grinding, trenching or other underground work until it has been verified with the City Representative that signal facilities have been marked. The Contractor shall be responsible for all damage to traffic signal facilities arising from failure to properly comply with these provisions.

In the event that the Contractor's construction activities cause any failure of a traffic facility, it shall be repaired and be made fully operable within 24 hours of the damage occurring. In the event that such repair is not undertaken within this time limit, the City may repair the facility at the Contractor's expense. In the event that such repair is not undertaken within this time limit, the City will repair the facility and deduct the cost from monies due to the Contractor. The amount deducted will include actual expenses incurred.

8.16 Restoration of Adjacent and Existing Improvements

Contractor shall do all cutting, fitting, or patching of the work required to make all parts of the work come together properly with existing and adjacent conditions.

Unless otherwise provided, the Contractor shall repair or replace all existing improvements (e.g., curbs, sidewalks, driveways, fences, signs, utilities, street surfaces, structures, etc.) damaged or removed as a result of the Contractor's operations. Repairs and replacements shall be at least equal to existing improvements, and shall match in terms of condition, finish and dimension.

All Underground Services Alert (USA) markings on concrete or asphaltic pavement or other structures shall be removed when they are no longer required. Acceptable means of removal include sand blasting or high pressure washing.

All traffic signs and street signs within the limit of work necessarily removed during the various phases of operations shall be temporarily reset by the Contractor at or near the original location upon completion of each phase of construction operations. Prior to removal of all traffic control signs, the Contractor shall take photographs of the site which show the existing location of these signs so that upon completion the photographs will aid in resetting the signs at or near their original location. Traffic control signs and street signs will be replaced upon completion of the work and the cost of removal and replacement will be included in various bid items and no separate payment will be made.

Rural type mail boxes shall be maintained by the Contractor in a manner satisfactory to the property owner and postal service, and the Contractor shall relocate the same as soon as possible to a permanent location in accordance with postal regulations and in a location acceptable to the property owner.

Any object to be removed and reused at other locations shall be removed with due care and delivered or stored at the project's construction storage area, or if approved by the Engineer, at any other site designated by the Engineer within the City. Such objects may consist of street light poles, signal mast arms and other objects directed by the Engineer. Items not approved by the Engineer for reuse purposes, and without salvage value, shall become the property of the Contractor, to be disposed of at Contractor expense, in an acceptable manner.

8.17 Archeological Remains

If archeological remains are uncovered during excavation, earthwork within 100 feet of these materials will be stopped until a professional archeologist registered by the Society for California Archeology (SCA) and/or the Society of Professional Archeology (SOPA) has had an opportunity to evaluate the significance of the find and suggest appropriate mitigation measures.

8.18 Access to Private Property

The Contractor shall schedule and perform operations so as to minimize disruption of access to private property. Prior to blocking access to any private driveway or parking lot entrance, the Contractor shall notify the resident, business owner or tenant of pending closure and allow residents to remove vehicles. During non-working hours no driveway, house or parking lot shall be denied access to a public roadway.

The Contractor shall coordinate with the adjacent property owners and businesses and maintain vehicle and pedestrian access to their properties at all times. Temporary access ramps, fencing, or other measures shall be provided as needed.

8.19 Notification and Relations with Property Owners

A two-week and a **72-hour** prior to construction public notification is required. Two weeks prior to beginning any work on the project, the Contractor shall deliver written notice to all adjoining residents, businesses, tenants and other applicable parties. Notice shall be given for general construction activity as well as specific activities that will inconvenience residents/property owners/tenants or, in any way, affect their operations or access to their property. Such notices shall include the expected date for start of construction, a general description of the construction activity to take place, expected duration, and the name, address, and an approved emergency contact number for the public to reference during the construction. A follow up notice shall be distributed 72-hours prior to the construction activity. Copies of all notices shall be submitted to the Engineer for review and approval prior to public distribution.

All costs involved in providing notification and access shall be included in the amount bid for the various bid items and no additional compensation will be allowed.

8.20 Traffic Control and Public Convenience

The Contractor shall provide for safe movement of all vehicular, bicycle and pedestrian traffic through and around the construction operations with as little inconvenience and delay as possible. The Contractor shall have no amount of work under construction other than what the Contractor can properly prosecute with due regard to the rights and convenience of the public.

Proper conveyance of vehicular traffic and pedestrians through the work area depends upon navigating under unexpected situations. The means of clarifying such conditions to the public include the Contractor's use of signs, flagmen, pavement markings, barricades, lights, cones and delineators. No one standard sequence of signs or control devices will suit all conditions which may result from construction operations. Even for the same work, the conditions may vary from hour to hour, requiring adjustment and revisions of the traffic control in effect. The traffic control requirements specified herein are therefore intended to establish general principles to be observed in the control and regulation of traffic through and around the construction operations anticipated for this project. The requirements set forth in this Section represent the minimum traffic control requirements imposed and the Contractor shall be solely responsible for providing the full extent of traffic control measures that are necessary. Only individuals trained and certified in the principles of implementing traffic control and/or traffic control flagging shall be assigned that responsibility at the work site.

The Contractor shall maintain sufficient safeguards against occurrence of accidents, injuries, or damage to any person or property and shall be responsible for same if such occurs. The Contractor shall also maintain adequate protection of its work and materials from destruction and loss and shall protect the City's property from damage arising in connection with this contract, and shall make good any such damage, destruction or loss.

- a. *Traffic Control Plan* – The Contractor shall submit a Traffic Control Plan to clearly describe proposed traffic control measures. The plan shall be generally in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).
- b. *Traffic Control Devices* - Traffic control devices shall be provided in sufficient quantities and types as required to provide safe and adequate traffic control. During hours of darkness, approved lights and/or flares shall be included, in proper working order, to illuminate signs and hazards and alert approaching traffic. Barricades shall be furnished and maintained along all open trenches in contact with traffic. No work may begin on any day or at any time before traffic control devices have been placed, test driven and, if required, adjusted and revised. All traffic control devices shall be placed in accordance with the Manual of Uniform Traffic Control Devices and the

Contractor's favorably reviewed traffic control plans. Locations of devices shall be adjusted to suit the conditions and circumstances of each detour situation. In all cases, signs shall be placed to most effectively convey their messages to approaching traffic.

The Contractor shall maintain all traffic control devices, at proper locations and in proper working order, at all times during construction operations and whenever a hazard resulting from Contractor's operations exists. The Contractor shall adjust and revise traffic control devices, placement, etc., to suit changing conditions around construction operations. Traffic control devices shall remain in place at all times, as required to alert approaching traffic of upcoming hazards. After hazards have been removed, all traffic control devices shall be removed. Temporary signs shall be removed or their messages covered.

Daily traffic control measures shall continue until cleanup activities have been satisfactorily completed and all of the Contractor's equipment has been removed from the traveled way.

- c. *Traffic Control Detours* - The Contractor shall direct, divert and detour traffic through, around and adjacent to construction operations in accordance with the traffic control plans specified in the Contract Documents or in accordance with the Contractor's favorably reviewed traffic control plans.
 1. *Field Review of Detours* - Immediately after traffic control devices have been placed, the detour shall be test driven by the Engineer and the Contractor's Superintendent. The test drive shall include approaches to the detour from each possible direction, and traverse the full length of each detour route. The Contractor shall adjust and revise all traffic control devices as determined to be required by the test drive and the test drive shall be repeated, if determined necessary by the Engineer. The Contractor shall provide additional traffic control devices as required to maintain the flow of traffic throughout construction operation.
 2. *Diverting Bicycle and Pedestrian Traffic* – Whenever construction operations obstruct the flow of bicycle and pedestrian traffic or present a hazard to bicycles and pedestrians, the Contractor shall take appropriate action to protect and separate bicycles and pedestrians from the work area. Such action may include placement of barricades between bicycles and pedestrians and the work areas, placement of warning signs, and provisions utilizing personnel as required to protect and maintain access for bicycles and pedestrians as conditions warrant.
 3. *Diverting Vehicular Traffic* - Whenever construction operations obstruct the flow of vehicular traffic or present a hazard to vehicles operating in the vicinity of construction operations, the Contractor shall take appropriate action to warn, detour and otherwise protect approaching drivers and vehicles.
 4. *Flagmen* - The Contractor shall employ flagmen as required for each specific detour and at all locations where barricades and warning signs cannot control the movement of traffic. A warning sign shall be placed ahead of the flagman reading: "Flagman Ahead." The distance between the sign and the flagman should be based on the average traffic speed, allowing approximately 50 feet for each 10 miles per hour. During hours of darkness, flagman stations shall be illuminated such that the flagman will be clearly visible to approaching traffic. Lights for illuminating the flagman station shall receive favorable review by the Engineer. The flagman shall wear a red or orange warning garment when flagging. Flagmen shall be provided with approved red flags or STOP/SLOW hand paddles, and two-way radios for communication. When flagging during hours of darkness, the flagman shall signal with a red light or flare and shall have a belt and suspender harness fitted with reflectors or made from reflectorized cloth on the outside of the garment, unless the garment is well reflectorized in one of these ways.

5. Notice to Agencies - The Contractor shall notify the Engineer and all agencies having jurisdiction over the work, in writing, at least seventy two (72) hours, excluding holidays and weekends, prior to instituting any lane closure or detour. At the end of each workday, the Contractor shall inform the Engineer, Police Department and Fire Departments of the status of all detours, lane restrictions, or road closures. The Contractor shall cooperate and coordinate with the various parties involved in the collection and removal of trash and garbage, the transit providers, the U.S. Postal Service, and others, as necessary, in order to maintain existing schedules and services.
 6. Emergency Vehicle Access Through Detours - During all detours and/or street closures the Contractor shall provide for the movement of emergency vehicles through the work area. It is essential that the Contractor's work and equipment does not impede emergency access.
 7. Night Detours – Except for the detour shown on the project plans, the Contractor shall not be permitted to maintain any lane closure or road closure during non-working hours without first obtaining written approval from the Engineer. During non-working hours the Contractor shall restore travel lanes to their original alignment and configuration by means of placing temporary asphalt pavement or bridging with steel plates. The Contractor shall place "ROUGH ROAD" signs conforming to the Manual of Uniform Traffic Control Devices at uneven temporary pavement or bridging locations. See General Provisions, Section 9.18 (b), "Trench Safety Requirements".
 8. Temporary Traffic Lanes – Temporary traffic lanes shall be at least 10 feet wide, or 11 feet wide around curves. Provide an additional two (2) feet of clearance from curbs. The length of temporary lanes should be limited to the area under construction and the distance necessary to divert traffic.
- d. *Lane Closure Restrictions* – See Special Provisions for project specific restrictions.
- e. *Parking Restrictions* - The Contractor shall post approved "No Parking" signs at all locations necessary to establish work areas and detour traffic. Signs shall read: "NO PARKING - CONSTRUCTION TOW - AWAY ZONE," show the actual day and hours of parking restriction and indicate the telephone number of the City's Police Department or agency having jurisdiction. Signs shall be placed at least forty hours (48) hours in advance of the restriction. The Engineer shall approve the location and duration of no parking limits and verify their placement. "No Parking" signs shall be removed when no work is under construction and must be reposted forty eight (48) hours before the resumption of construction activities.

For any violation of "No Parking" signs by motorists, the Contractor shall contact and coordinate directly with the City's Police Department for removal of vehicles in accordance with the California Vehicle Code. The Contractor shall also coordinate with the Police Department directly for enforcement and towing of parked vehicles.

8.21 Safety

In accordance with generally accepted construction practices and State Law, the Contractor shall be solely and completely responsible for conditions on the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours, and shall encompass all persons, including City Staff and its Consultants.

The services of the Owner in conducting inspection or construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's work methods, equipment, bracing, shoring or scaffolding, or safety measures, in, on, or near the construction site.

OSHA approved safety vests and hardhats shall be worn by the Contractor, all subcontractors and other personnel when working or present on the site.

The Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instructions as are necessary to prevent injury to personnel and damage to property. Special care shall be exercised relative to work underground.

All work and materials shall be in strict accordance with all applicable, City, County, State and Federal Rules, Regulations, and Codes, and attention is drawn to the requirements of CAL/OSHA. The Contractor shall be solely responsible for compliance with all City, County and State blasting requirements and for any damages caused by its operations. The Contractor shall be responsible for obtaining permits required by Section 6500 of the State Labor Code and Section 341 of Title 8 of the California Code of Regulations.

In accordance with Section 6705 of the State Labor Code, the Contractor shall submit to the Owner specific plans to show details of provisions for worker protection from caving ground. This in no way relieves the Contractor from the requirement of maintaining safety in all operations it or its subcontractor's performance. The detailed plan showing design of shoring, bracing, sloping or other provisions shall be prepared by a Civil or Structural Engineer registered in the State of California as required. Acceptance by the Owner only constitutes acknowledgment of the submission and does not constitute review or acceptance of the designs, design assumptions or criteria, completeness of submissions, applicability to areas of intended use, nor implementation of the plans, which are solely the responsibility of the Contractor and its registered engineer.

Notwithstanding any classifications relative to the Tunnel Safety Orders, work within confined spaces on this project is subject to the definitions and applicable provisions of Title 8, California Code of Regulations, Section 5156 et seq.

The Contractor shall so perform its work as not to expose personnel to, or to discharge into the atmosphere from any source whatever, smoke, dust, asbestos, toxic chemicals or other air contaminants in violation of the laws, rules, and regulations of the regulatory agencies having jurisdiction. All work involving exposure to hazardous materials shall be performed with protection of personnel in compliance with all applicable regulations and safety requirements.

Nothing in these Specifications is to be construed to permit work not conforming to governing codes. When Contract Documents differ from governing codes, the Contractor shall furnish and install the higher standards called for without extra charge.

8.22 Patent Fees or Royalties

The patent fees or royalties on any patented article or process which may be furnished or used in the work shall be absorbed in the Contractor's bid. The Contractor shall indemnify, defend and hold the City harmless from any legal action that may be brought for infringement of patents.

8.23 Advertising

The names of the Contractor or Subcontractors, with their addresses and the designation of their particular specialties, may be displayed at the job site on removable signs only if written approval is received from the Engineer. Commercial advertising material shall not be attached to, or painted on the surfaces of, any buildings, fences, canopies, or barricades.

8.24 Antitrust Claims

Attention is directed to Public Contract Code, Section 7103.5 which provides: "In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor or Subcontractor offers and agrees to assign to the City all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec 15) or the Cartwright Act (Chapter 2, commencing with Section 16700, of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or subcontract. The assignment shall be made and become effective at the time the City tenders final payment to the Contractor, without further acknowledgement by the parties".

8.25 Audit and Examination of Records

The City and entities and agencies designated by the City, shall have access to, and the right to audit and examine at no additional cost, all of the Contractor's project related data including but not limited to, books, estimates, records, contracts, bid cost data, Subcontractor and supplier job cost data, change orders, correspondence, instructions, drawings, receipts, vouchers, purchase orders, notes, computations, daily logs, and memoranda relating to the work. Pursuant to Government Code, Section 8546.7, the Contractor shall preserve all such records and will be subject to examination and audit by the State Auditor, at the request of the City, for a period of three (3) years after final payment under the Agreement.

8.26 Web-Based Construction Document Management

The Contractor shall utilize e-Builder for submission of data and documents throughout the duration of the Contract, unless specified otherwise in the Contract Documents. e-Builder is a web-based construction management application hosted by e-Builder. It shall be the primary means of project information submission and management or as otherwise agreed upon with the Engineer. The Engineer will establish the Contractor's access to e-Builder by providing one license to Contractor personnel at City's cost. The contractor and users will be required to set up their computers/systems to use e-Builder in accordance to the e-Builder User Training Guider-2015. The City will provide one classroom training or a web-based seminar. A training session is 1 - 2 hours.

e-Builder is a web-based environment and therefore it is subject to the inherent speed and connectivity limitations of the Internet. The Contractor is responsible for its own connectivity to the Internet. e-Builder response time is dependent on the Contractor's equipment, including processor speed, Internet access speed, etc. and current traffic on the Internet. The City will not be liable for any delays associated from the usage of e-Builder including, but not limited to: slow response time, down time periods, connectivity problems, or loss of information. The Contractor shall ensure connectivity to the e-Builder system whether at the home office or job site. Under no circumstances will usage of e-Builder be grounds for a time extension or cost adjustment to the Contract.

Data entered in a collaborative mode (entered with the intent to share as determined by permissions and workflows within the e-Builder system) by the Engineer and the Contractor will be jointly owned.

The Contractor is responsible for managing, tracking, and documenting the Work to comply with the requirements of the Contract Documents. The City's acceptance via automated system notifications or audit logs extends only to the face value of the submitted documentation and does not constitute validation of the Contractor's submitted information.

While regular email will still be used for communication, e-Builder shall be utilized as much as possible in connection with all document and information management required by these Contract Documents. Contractor shall be responsible for scanning or otherwise converting to electronic format all project submittals and Contractor correspondence, drawings, sketches, etc., and uploading them to the e-Builder web site and shall be responsible for the validity of its information placed in e-Builder. The Contractor shall utilize the existing forms and processes in e-Builder to the maximum extent possible. If a required form does not exist in e-Builder, the Contractor shall include a form of its own or one provided by the Engineer (if available) as an attachment to a submittal or process. Documents and information to be submitted electronically include, but are not limited to:

1. Submittals using the Submittal Module
2. Requests for Information using the RFI process
3. Change Order Requests using RFQ and CCO processes
4. Progress payments requests using Pay Application process
5. Construction Closeout process
6. Compliance documentation (test reports, QA/QC reports, certifications)
7. Schedules and associated updates

The term "Copy" or "Copies" shall refer to electronic copies unless a hard copy is specified. Where a hard copy is specified, both electronic and paper versions shall be submitted.

Related Sections: Article 3.13, Submittals, General Provisions

SECTION 9 – MEASUREMENT AND PAYMENT

9.01 Measurement of Quantities for Unit Price Work

Materials and items of work which are to be paid for on the basis of measurement shall be measured in accordance with the methods stipulated in the particular sections of the Contract Documents involved.

Unless otherwise specified, quantities of work shall be determined from measurements or dimensions in the horizontal planes. Stationing shall be along the street centerline, lengths of sanitary sewers, storm drains and water lines shall be measured as the horizontal distances from center to center of structures, rounded to the nearest foot, and lengths of all return radii and curb data shall be measured along the face of curb.

Unless otherwise provided in the Contract Documents, volumetric quantities shall be the product of the mean area of vertical or horizontal sections and the intervening horizontal or vertical dimensions. Measurements shall be in accordance with U.S. Standard Measures. A pound is an avoirdupois pound. A ton is 2,000 pounds avoirdupois. The unit of liquid measure is the U.S. gallon.

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

9.02 Bid Items

Should any bid item be eliminated in its entirety, payment will be made to the Contractor for actual costs incurred, in connection with such eliminated contract work, and for costs incurred prior to the date of the Engineer's written notification eliminating such work. The actual costs to be paid to the Contractor shall be computed in the same manner as if the work were to be paid on a force account basis. No compensation will be made to the Contractor, in any case, for loss of anticipated profits. Increased or decreased scope involving a change order will be paid as stipulated in the change order.

The estimated value of work performed, for lump sum bids or lump sum bid items will be determined from the Schedule of Values. The schedule of values shall be required by the Contractor for all lump sum bid items that breaks down the work into individual quantifiable components, plus quantities and unit prices of those components that when summed up equates to the lump sum amount of the bid item. Change order pricing for addition or deletion of those components shall be based on the lump sum breakdown contained in the Schedule of Values. No progress payment will be made until a Schedule of Values has been submitted by the Contractor and accepted by the City. Progress payments for unit price bid items will be based on the estimated quantity of work performed during the month.

Elements of work shall be separated into groupings appropriate for the project. The Technical Specifications may be used as a guide for establishing these groupings. Within each grouping, work shall be itemized by readily measurable quantities of work complete in place. The Schedule of Values shall be broken down on the basis of each lump sum bid item. Move-on costs, bond and insurance costs, and submittal preparation costs can be included in the schedule of values under a separate mobilization line item. This line item shall not exceed 5% of the contract's value. Overhead and profit shall not be allowed as line items but shall be prorated over other items of work. In the event that the Schedule of Values is not accepted by the City, another Schedule of Values shall be submitted that is acceptable to the City. The Schedule of Values shall be submitted by the Contractor within 14 days of Notice to Proceed.

The estimated value of work performed, for lump sum bids or lump sum bid items will be determined from the schedule of values, to be prepared by the Contractor and presented at the preconstruction meeting. Elements of work on the schedule of values shall be separated into groupings appropriate for the project. The Technical Specifications may be used as a guide for establishing these groupings. Move-in costs, bond and insurance costs, and submittal preparation costs can be included in the schedule of values

under a separate mobilization line item. This line item shall not exceed 5% of the contract's value. Overhead and profit shall not be allowed as a line item, but shall be prorated over other items of work.

9.03 Bid Quantities

Payments to the Contractor will be made only for the actual quantities of contract items constructed in accordance with the plans and specifications. Payment will not be made for materials wasted or disposed of in a manner not called for under the contract. This includes rejected material not unloaded from vehicles, material rejected after it has been placed and material placed outside of the plan lines. Unless otherwise provided, no payment will be made for materials delivered to the site but not incorporated in the work. Such quantities will not be included in the final pay quantities. No compensation will be allowed for the disposal of rejected or excess material.

When the estimated quantity for a specific portion of work is designated on the Bid Schedule as a "Final Pay Quantity", the estimated quantity specified shall be the final quantity for which payment for such specified portion of the work will be made, regardless of the actual quantity constructed, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If such dimensions are revised and such revisions result in an increase or decrease in the quantity of such work, the final quantity for payment will be revised by the amount represented by the change. The estimated quantity for any portion of the work designated as a Final Pay Quantity shall be considered as approximate only and no guarantee is made that the quantity, which can be determined by computations, based upon the details and dimensions shown on the plans, will equal the estimated quantity. No allowance will be made in the event that the quantities based upon computations do not equal the estimated quantities. Final pay quantities will be designated on the Bid Schedule with the letter (F) and shall only apply to the corresponding portions of work specifically designated on the plans. Any portion of work not designated as a final pay quantity will be measured and paid for as specified under other provisions of the Contract Documents.

9.04 Progress Payments

On or about the 25th day of each month may be designated as the date which would terminate each working month for the purpose of making progress payments. In the event that this estimate cannot be mutually agreed, the City will determine the value for progress payment purposes.

The Contractor's request for a progress payment shall be submitted via e-Builder. Request for Progress Payment form (PAS Form 051) enclosed in Appendix A of these General Provisions shall be attached to the process. The Request for Progress Payment form shall be complete and properly executed by the contractor, and have, as attachments, the items listed on the form.

The Contractor shall, on the date established, prepare and submit a progress estimate to the City for work accomplished during the previous working month, based on the various contract bid items and the unit bid prices. Invoices shall include amounts previously paid, itemized retention and any deductions or additions authorized by change order. Consultation with the Engineer may be necessary to determine the amount of work accomplished.

The first progress payment will not be made until the following submittals and documents have been provided and accepted: list and schedule of submittals, baseline construction schedule, schedule of values, SWPPP, and certified payroll submitted plus uploaded onto the DIR online payroll system covering the work pay period. Subsequent progress payment requests will not be accepted unless accompanied by the progress payment cover letter, an updated baseline or revised schedule, a certification that the record drawings have been updated as of the date of the invoice, and certified payroll covering the work pay period.

Upon receipt of a progress payment request, the City shall, within seven (7) days, determine if the request is proper, and if disputed the City will return the progress payment to the Contractor along with a written document setting forth the progress payment request's shortcomings. Following receipt of an

undisputed and properly submitted progress payment request, the City shall make payment within thirty (30) days.

Contractor may request partial payment for materials delivered to the site but not yet incorporated into the work (materials on hand). To receive consideration for payment of materials on hand, the Contractor shall provide the Engineer with a list of such materials at least five (5) working days prior to submitting the monthly estimate of amount earned for work completed. At the Engineer's sole discretion, up to seventy-

five percent (75%) of the estimated value of materials on hand may be considered for payment, subject to the following:

- a. Only materials which have received favorable review of shop drawings will qualify.
- b. Eligible materials must be delivered and properly stored, protected, and maintained in a manner favorably reviewed by the Engineer, at the job site or at a bonded warehouse.
- c. The Contractor's actual net cost for the materials must be supported by paid invoices to suppliers or other documentation requested by the Engineer.
- d. Materials delivered to the site less than thirty (30) days prior to their scheduled incorporation in the work shall not qualify.
- e. Partial payments for materials on hand shall not be deemed to be final payment for the material nor relieve the Contractor's obligations under the Contract.
- f. Partial payments for materials on hand shall be subject to retention.
- g. City reserves and shall have the right to withhold payment for any equipment and/or specifically fabricated materials that, in the sole judgment of City, is not adequately and properly protected against weather and/or damage, prior to or following incorporation into the Work.

From each progress estimate, five percent (5%) will be deducted and retained by the City, and the remainder of the amount due, less the amount of all previous payment will be paid to the Contractor provided all work invoiced has been completed and approved by the Engineer.

The Engineer may withhold or nullify, the whole or any part of any payment to such extent as may be necessary to protect the City from loss on account of any of the following:

- a. Defective or vandalized work not remedied,
- b. Damage to the City or another Contractor,
- c. Stop notices, or failure of the Contractor to make payments properly to subcontractors or laborers or suppliers, in which case 125% of the stop notice amount shall be withheld until a release form is received,
- d. Failure of Contractor to maintain, update and submit record documents, schedules or other submittals as required by the Contract Documents,
- e. Any other failure of Contractor to perform its obligations under the Contract Documents.

The Contractor may elect to receive one hundred percent (100%) of payments due under the contract from time to time, without retention of any portion of the payment by the City, by depositing and maintaining securities of a value equivalent to the retention amount with the City in accordance with the provisions of Public Contract Code, Section 22300. Such securities, if deposited by the Contractor, shall be valued by the City's Finance Director, whose decision on valuation of the securities shall be final.

Contractor warrants that, upon submittal of an application for payment, all work for which payment has been previously issued by the City and received by the Contractor, shall be free and clear of all claims, stop notices, security interests, and encumbrances in favor of Contractor, Subcontractors, or other persons or firms entitled to make claims by reason of having provided labor, materials, or equipment relating to work.

The payment of progress payments by the City shall not be construed as an absolute acceptance of the work done up to the time of such payments and shall not constitute acceptance of defective work.

9.05 Final Payment

The City shall, prior to final acceptance, provide the Contractor with a copy of the final quantities for the various contract bid items and a summary of contract change orders for the Contractor's review. All prior payments shall be subject to correction in determining the total contract sum. The Contractor shall reply promptly in writing, to indicate either the Contractor's concurrence or an explanation of possible discrepancies in the total contract sum.

The project will not be submitted to the Director of Public Works for acceptance until the Engineer and the Contractor concur with the totals of all quantities, costs, contract change orders and the total contract sum. Following concurrence, a semi-final payment will be made to the Contractor after deducting all previous payments and all amounts to be retained under the provisions of the contract. The retention payment shall be due and payable as a final payment after the expiration of thirty-five (35) days following the date of recording at the County after final acceptance of the work.

If within the time fixed by law, a properly executed notice to stop payment is filed with the City, due to Contractor's failure to pay for labor or materials used in the work, all money due for such labor or materials will be withheld from payment to the Contractor in accordance with applicable laws.

If releases are required, the Contractor shall pay or cause to be paid to Subcontractors the amount stated in the conditional releases within five (5) days after receipt of the semi-final payment, and shall promptly thereafter furnish evidence of such payment to the City.

The securities deposited by the Contractor will be released, providing that the following requirements of the contract have been fulfilled:

- a. Satisfactory completion of all construction work and written acceptance of said work by the City;
- b. The submission by the Contractor to the Engineer of all required stop notice releases, submittals, written guarantees, warranties, operating manuals, and other project related documentation;
- c. The return to the Engineer of all drawings and written specifications loaned to the Contractor during the construction period.
- d. The submission by the Contractor to the Engineer of record documents and a set of red-lined drawings showing the revisions to the original set of drawings which reflect the actual construction of the project for preparation of "Record Drawings".

The Contractor agrees that the payment of the final amount due under the contract shall release the City of East Palo Alto from any and all claims or liability on account of all work performed under the contract, except those items previously made in writing and identified by the Contractor as unsettled. Release of the final payment by the City shall not be construed as an acceptance of any defective work or acceptance of improper materials.

9.06 Claims

The term “Claim” shall mean a written demand or assertion by the Contractor seeking, as a matter of asserted right, adjustment in the terms of the Contract Documents, payment of money, extension of time, or other relief with respect to the Contract Documents, or determination of other disputes or matters in question between the City and Contractor arising out of or related to the Contract Documents or the performance of the work, including claims alleging an error or omission.

A notice of potential claim must be stated with specificity, including identification of the event giving rise to potential claim, the date of the event, and the asserted effect on contract sum and contract time. The notice of potential claim shall include adequate supporting data. Adequate supporting data for a potential claim for an adjustment of the contract time shall include scheduling data demonstrating the impact of the event on the completion of the work. Adequate supporting data for a potential claim for an adjustment of the contract sum shall include a detailed cost breakdown of the items allowed, isolating labor, material, and equipment costs, and providing detailed quantities and unit prices for changed work. If the exact amount of a potential claim is not ascertainable at the time such potential claim is made, the supporting data currently available shall be submitted. Supplemental data supporting the exact amount of the potential claim shall be submitted as soon as available.

Notwithstanding the making of any potential claim or the existence of any dispute regarding any potential claim, unless otherwise directed by the Engineer, the Contractor shall not cause any delay, cessation, or termination in the performance of the work, including portions of the work pertaining to a potential claim.

9.07 Time Limit on Potential Claims

Contractor shall submit any and all notices of potential claims, together with adequate supporting data to the Engineer as soon as possible but not later than ten (10) working days after occurrence of the event giving rise to the claim, or the date the Contractor first recognized, or reasonably should have recognized, the condition giving rise to the claim, whichever is earlier. Contractor hereby expressly waives all claims not made within this time limit.

Contractor is expressly barred from asserting any potential claims of which the Contractor was aware, whether or not the exact amount of such potential claims was ascertainable, that is not submitted to the Engineer prior to the Contractor proceeding with the work.

9.08 City Response to Potential Claims

The Engineer shall promptly review potential claims. If additional supporting data is deemed necessary, the Engineer shall request such additional data within ten (10) working days after receipt of the potential claim. The Contractor shall furnish such additional data no later than ten (10) working days after receipt of the City’s request. The Engineer shall render a decision promptly, but in any event, within thirty (30) working days after the receipt of the potential claim or the receipt of additional supporting data. If the amount of the claim is in excess of \$50,000, the aforesaid thirty (30) working day period shall be sixty (60) working days. Failure of the Engineer to render a decision within the aforesaid thirty (30) or sixty (60) working day period shall be deemed a decision denying the claim and the last day of such period shall be the date of such decision. The decision of the Engineer shall be final and binding unless appealed in accordance with the General Provisions, Section 9.09, “Appeal of the Engineer’s Decision”.

9.09 Appeal of Engineer’s Decision

If Contractor disputes the Engineer’s decision of a claim, the Contractor shall, within thirty (30) calendar days of the decision, make a written appeal of the decision to the Engineer. The written appeal shall include all supporting data upon which the Contractor requests the City to modify its decision, including all documentation transmitted between the Contractor and the Engineer on the underlying potential claim. The Engineer shall make a good faith effort to resolve the potential claim prior to final completion of the Project. In the event the potential claim is not resolved prior to final completion, the Contractor’s potential claim shall be heard by the Director of Public Works prior to recommending final acceptance of the Contract. The Contractor’s administrative remedies under the Contract Documents shall be exhausted

after the decision of the Director of Public Works is rendered. In case of disagreement with the decision of the Director of Public Works, the Contractor may pursue the resolution of the dispute by presenting a formal claim to the City.

SECTION 10 – GUARANTEE

10.01 Warranties

The Contractor shall be held responsible for and shall make good any defects through faulty or improper workmanship or through defective materials, arising or discovered, in any part of this work within the time specified (stated in the Special Provisions) after the completion and acceptance of the entire project.

- a. *Warranty Form* – Contractor warranties shall be on the Contractor's own letterhead, addressed to the City, and shall in all cases be furnished to the City in duplicate. In addition, furnish City with original copies of all manufacturer's warranties.
- b. *Standard Product Warranties* – are pre-printed written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the City. Contractor shall provide to the City the Manufacturer's Standard written warranties of all the equipment installed for the project.
- c. *Special Warranties* – are written warranties required by or incorporated in Contract Documents, to extend time limits provided by standard warranties or to provide greater rights for the City. Special warranties for products and installations that are specified to be warranted, shall be provided. When a special warranty is to be executed by the Contractor, or the Contractor and a Subcontractor, or the Contractor and a Supplier or Manufacturer, the Contractor shall prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the City, for approval, prior to final execution.
- d. *Disclaimers and Limitations* – Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor from providing the specified warranty on the work that incorporates the products. Nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor, from meeting specified warranty obligations.
- e. *Rejection of Warranties* – The City reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents. The City reserves the right to refuse to accept work where a special warranty, or similar commitment is required, until evidence is presented that entities required to countersign commitments are willing to do so.
- f. *Related Damages and Losses* – When correcting warranted work that has failed, the contractor shall remove and replace other work that has been damaged as a result of such failure, or that which must be removed and replaced to provide access for correction of the warranted work.
- g. *Reinstatement of Warranty* – When work covered by a warranty has failed and been corrected, the warranty shall be reinstated by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for time.
- h. *Replacement Cost* – On determination that work covered by a warranty has failed, the contractor shall replace or rebuild the work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective work regardless of whether the City has benefited from use of the work through part of its useful service life.
- i. *City's Recourse* – Written warranties made to the City are in addition to implied warranties, and shall not limit duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the City can enforce such other duties, obligations, rights, or remedies.

- j. *Notice to Perform Warranty Work* – The Contractor is required to repair or replace warranted work within 10 days of receiving written notice from the City of a failure of warranted work. If the required repair or replacement work has not been performed by the Contractor within the time allowed, the City may, at its sole discretion, undertake appropriate warranty work without further notice to the Contractor.

In the event that the nature of the failed warranted work is such that further damage will occur, or there is a danger to life or property, the City may undertake immediate repair or replacement without notice to the Contractor.

The cost of repair work undertaken by the City under these provisions shall be recoverable from the Contractor.

10.02 Contractor's Guarantee

Prior to final acceptance, the Contractor shall warrant and guarantee to the City that all work is in accordance with the Contract Documents and is not defective.

The guarantee shall be accompanied by a warranty bond for ten percent (10%) of the final contract sum, which shall warrant the quality of the work for a period of one (1) year after acceptance. The guarantee and warranty bond shall be in accordance with the Agreement Forms furnished in the Contract Documents.

10.03 Correction of Defective Work During the Guarantee Period

If within one (1) year after the date of acceptance, or such longer period of time as may be prescribed by laws or regulations or by the terms of any applicable special guarantee required by the Contract Documents, any work is found to be defective, the Contractor shall promptly without cost to the City and in accordance with the City's written instructions, either correct such defective work or if it has been rejected by the City, remove it from the site and replace it with non-defective work.

If the Contractor does not promptly comply with the terms of such instructions within ten (10) working days after written demand by the City, the City may have the defective work corrected. The City may also correct defective work immediately in cases of emergency where delay would cause serious risk of loss or damage. All direct, indirect and consequential costs of correcting defective work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) shall be absorbed by the Contractor.

The Contractor shall remove from the Project site portions of the work and materials which are not in accordance with the Contract Documents and which are neither corrected by the Contractor nor accepted by the City.

APPENDIX A – GENERAL PROVISION FORMS

Form Title	General Provisions Reference Section
Three Week Look Ahead Schedule	7.05
Daily Extra Work Report (SAMPLE)	4.06
Request For Progress Payment	9.04
Contractor's Certification of Completion	7.19

City of East Palo Alto, 3-Week Look Ahead Schedule
Project's Title,
Contractor's Name

Task No.	Work To Be Performed	Comments	Month																														Mo	
			5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2				
			M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S				
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DAILY EXTRA WORK REPORT

No. _____

RFQ No. _____

Project _____

Project No _____

Date of Work ____ / ____ / ____

Work Performed by _____

Contractor's Job No. _____

Date of Report ____ / ____ / ____

Description of Work _____

Code.	Equipment (and I.D. No.)	Hours	Hrly. Rate	Ext. Amounts	Labor	Class.	Hours	Hrly. Rate	Ext. Amounts
							Reg.		
							O.T.		
SAMPLE									
							O.T.		
							Reg.		
							O.T.		
Material and/or Work done by Specialist (provide invoices)					SUB-TOTAL				
Description		No.	Unit Cost	Ext. Amounts	Labor Surcharge (Reg.) _____%				
					Labor Surcharge (O.T.) _____%				
					Other _____				

					Sub-Total Cost of Labor		A		
Sub-Total Cost of Equipment, Materials and Specialist Work							B		
CONTRACTOR'S REPRESENTATIVE _____					Markup on Labor Cost _____%		(A)		
Hours and Quantities accepted as correct					Markup on Equipment, Material and Work _____%		(B)		
CITY INSPECTOR _____							TOTAL		

REQUEST FOR PROGRESS PAYMENT

No. _____

Project _____

Project No. _____

Date ____ / ____ / ____

To: Director of Public Works
City of East Palo Alto
1960 Tate Street
East Palo Alto, CA 94303

From: _____

Attn: Construction Contract Administrator

A progress payment is requested in accordance with the following:

For the first Progress Payment

This request for a progress payment has the following attached:

- Invoice (Invoice No. _____ dated ____ / ____ / ____)
- Schedule of Values analysis supporting the invoice
- Certified Payroll

and I certify that the following have been submitted and approved by the City:

- Schedule of Submittals required
- Baseline Construction Schedule
- Schedule of Values (if applicable)
- Storm Water Pollution Prevention Plan

For the second and subsequent Progress Payment

This request for a progress payment has the following attached:

- Invoice (Invoice No. _____ dated ____ / ____ / ____)
- Schedule of Values analysis supporting the invoice
- Certified Payroll
- An Updated Baseline (or Revised-No. _____) Construction Schedule dated ____ / ____ / ____, updated to ____ / ____ / ____

and I certify that the Record Drawings have been updated to incorporate all field changes and extra/changed work as of ____ / ____ / ____ . Furthermore, I have sought and obtained the assigned City Inspector's review of the status of the Record Drawings as evidenced by the Inspector's signature of acknowledgment on this Request.

City Inspector's Signature

Dated ____ / ____ / ____

Contractor's Signature

CONTRACTOR'S CERTIFICATION OF COMPLETION

Project _____ **Project No.** _____ **Date** ___ / ___ / ___

To: Director of Public Works
City of East Palo Alto
1960 Tate Street
East Palo Alto, CA 94303

From: _____

Attn: Construction Contract Administrator

This is to certify that I, _____
am an authorized official of _____
working in the capacity of _____

and have been properly authorized by the firm or corporation to sign the following statements pertaining to the subject contract:

I know of my own personal knowledge, and do hereby certify, that the work of the contract described above has been performed, and materials used and installed in every particular, in accordance with, and in conformity to, the contract drawings and specifications.

The contract work is now complete in all parts and requirements, and ready for your final inspection.

I understand that neither the determination by the Owner that the work is complete, nor the acceptance thereof by the City, shall operate as a bar to claim against the Contractor under the terms of the guarantee provisions of the contract documents.

Contractor's Signature

Title

ATTACHMENT D – SPECIAL PROVISION

SPECIAL PROVISIONS

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1. Description and Location

The project is located at various locations in the City of East Palo Alto, California.

The project consists of furnishing all tools, equipment, apparatus, facilities, labor, transportation, and material necessary to perform site preparation and improvements for the UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT in accordance with these plans and specifications.

2. Pre-Bid Conference

N/A

3. Contractor's License

Contractor shall be licensed under the provisions of chapter 9, Division 3 of the Business and Profession Code of the State of California to do the type of work contemplated in the project. The general class or type of work called for under the contract requires a class "A" General Engineering Contractor license. Contractor shall maintain this license for the duration of the work.

4. Preconstruction Conference - The City will schedule a preconstruction conference to be held within 10 calendar days of the date specified in the Notice to Proceed.

5. Time for Completion

Contractor has (200) working days to complete the project from the date specified in the Notice to Proceed.

6. Coordination

The Contractor shall coordinate all project work with the City's electrical contractor at the project site.

7. Submittals

a. The Contractor shall provide submittals for the following. The submittals are anticipated to include, but are not limited to the following: concrete, all materials and equipment pertaining to luminaires, cantilever, poles, traffic control plan.

b.

Submittal Type		Number of copies/units
List and Schedule of Submittals		1 hardcopy and via email
Proposed Substitutions List		1 hardcopy and via email
Schedule of Values		1 hardcopy and via email
Construction Schedules (Preliminary, Baseline & Revised)		1 hardcopy and via email
Other Submittals		1 hardcopy and via email
Samples		1 (unless required otherwise in the Technical Specifications)
Shop Drawings		1 hardcopy and via email
Manuals and Instructions		3 (unless the number specified in the Technical Specifications is greater)
Warranties/Guaranties		1 hardcopy and via email
Record Drawings	a. Original contract drawings	The "job site" print.
	b. "As Built" Drawings	Original reproducible drawings with all changes marked

b Detailed requirements for specific submittals (other than the number to be provided and review times) may be received from the City.

- c The List and Schedule of Submittals shall be provided within 10 working days from the date the Notice to Proceed is issued.
- d The Owner shall review submittals (other than Construction Schedule submittals for which there are different requirements) within 28 days of receipt and shall review each resubmittal within 21 days of receipt of complete submittal.
- e The Construction Schedule submitted shall identify major noise generating construction activities. Contractor to notify adjacent affected properties at least 72 hours prior to major noise generating construction activities.

8. Liquidated Damages

Liquidated damages shall be in the sum of one thousand and 00/100 (\$1,000) per calendar day.

9. Bid Items

Bid Items and total project costs shall include the entire project as shown in the drawings and described in the specifications. All bid items must be filled in completely. Quote in figures only, unless words are specifically requested. Full compensation for conforming to the requirements of each section shall be included in the contract price for each item and no additional compensation will be allowed therefore. See Caltrans Standard Specifications for more information on specs for items not detailed in the Technical Specifications.

The contract price paid for each bid item shall include full compensation for performing the scope of work specified on the plans and specifications including all labor, material, tools, equipment, and incidentals, and for doing all the work associated with each bid item. Refer to the Technical Specifications for details.

Bid Item 1A – Mobilization

Mobilization (includes bonds and insurance) – The Contractor shall furnish all labor, materials, tools, equipment and incidentals to and away from the project site; for establishment and dismantling of all facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning and after completing work on the various contract items on the project site. These include obtaining all necessary permits, providing on site sanitary facility, address numbers providing all OSHA and City required notices and signs, and providing initial submittals. All the work involved in mobilization as specified herein, and no additional compensation will be allowed therefore. Allowable payment for mobilization shall not exceed 5% of the total for contract items of work. Payment for this item shall be on a lump sum basis.

Payments for mobilization will be made as follows:

- a. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is less than 5 percent of the original contract amount, 25 percent of the contract item price for mobilization will be included in the estimate for payment.
- b. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is 5 percent or more of the original contract amount, 50 percent of the contract item price for mobilization will be included in the estimate for payment.
- c. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is 10 percent or more of the original contract amount, 75 percent of the contract item price for mobilization will be included in the estimate for payment.
- d. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is 20 percent or more of the original contract amount, 95 percent of the contract item price for mobilization will be included in the estimate payment.
- e. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is 50 percent or more of the original contract amount, 100 percent of the contract item price for mobilization will be included in the estimate for payment

Bid Item 2A – Traffic Control

See item 27 of these provisions. Payment for this item shall be on a lump sum basis.

Bid Item 3A – Sheeting, Shoring, and Bracing

“Sheeting, Shoring, and Bracing” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work involved to provide sheeting, shoring and bracing, complete in place, including design stamped by a California Professional Civil or Structural Engineer, installation and removal of sheeting, shoring, bracing and other excavation supports, labor, materials and all other incidentals necessary to complete all work in compliance with the California Occupational Safety and Health (CAL-OSHA) standards and as described with in the Contract Documents including the Project Plans and Specifications. All work and materials shall conform to the Contract Documents including the Project Plans and Specifications, as described herein. Payment for this item shall be on a lump sum basis.

Bid Item 4A – Stormwater Pollution Prevention & Control

“Stormwater Pollution Prevention & Control” includes, but is not limited to, all labor, materials (including dust palliative binder), tools, equipment, and incidentals and for doing all the work involved in Stormwater Pollution Prevention, complete in place, including inlet protection, installing fiber roll and silt fence along the perimeter of the limits of work, installing stabilized construction entrance and exits, removal of nonhazardous material and waste management, hazardous material / waste management, spill prevention, vehicle / equipment inspection and cleaning, concrete truck / equipment wash out, paint cleanup, street sweeping, recycling, controlling dust resulting from the Contractor’s operations, public traffic, wind, or other conditions at all times including Saturdays, Sundays, holidays, and when directed by the City, as specified in Laws and Regulations and the technical specifications, and no additional payment shall be made therefore, and all other work as shown on the plans, as specified in the Standard Specifications, the special provisions, and the technical specifications, and as directed by the Engineer. In addition, storm drainage inlets directly affected by construction shall be protected per Association of Bay Area Governments (ABAG) requirements and this item shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals in accordance with such requirements. Payment for this item shall be on a lump sum basis.

Bid Item 5A – 12-Inch PVC Pipe

“12-Inch PVC Pipe” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the new water main pipe, profile adjustments necessary to avoid utility conflicts, trenching, asphalt concrete paving work per trenching detail on sheet D-01, backfilling and compacting the bedding material and structural backfill material, off-haul, disposal of spoils, disposal of valves, removing existing water mains and tees, saw cutting, testing, cleaning, disinfecting, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, mechanical joints, tracer wire, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per linear foot.

Bid Item 6A – 6-Inch PVC Pipe

“6-Inch PVC Pipe” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the new water main pipe, profile adjustments necessary to avoid utility conflicts, trenching, asphalt concrete paving work per trenching detail on sheet D-01, backfilling and compacting the bedding material and structural backfill material, off-haul, disposal of spoils, disposal of valves, removing existing water mains and tees, saw cutting, testing, cleaning, disinfecting, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, mechanical joints, tracer wire, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per linear foot.

Bid Item 7A – Abandon In-Place Existing 8-Inch Watermain

“Abandon In-Place Existing 8-inch Watermain” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: shutting down existing water mains, abandoning water mains in place, filling with slurry for all locations as shown on the plans, capping abandoned water main ends; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of

the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a lump sum basis.

Bid Item 8A – Connect to Existing 12-Inch Watermain

“Connect to Existing 12-Inch Watermain” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: connecting the existing 12” water main to the new water main, shutdown, including profile adjustments necessary to avoid utility conflicts, flushing, disinfection, pressure testing, compaction, warning tape, excavation, off-haul, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, and mechanical joints, backfilling and compacting the bedding material and structural backfill material, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 9A – Connect to Existing 8-Inch Watermain

“Connect to Existing 8-Inch Watermain” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: connecting the existing 8” water main to the new water main, shutdown, including profile adjustments necessary to avoid utility conflicts, flushing, disinfection, pressure testing, compaction, warning tape, excavation, off-haul, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, and mechanical joints, backfilling and compacting the bedding material and structural backfill material, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 10A – Connect to Existing 6-Inch Watermain

“Connect to Existing 6-Inch Watermain” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: connecting the existing 6” water main to the new water main, shutdown, including profile adjustments necessary to avoid utility conflicts, flushing, disinfection, pressure testing, compaction, warning tape, excavation, off-haul, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, and mechanical joints, backfilling and compacting the bedding material and structural backfill material, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 11A – Fire Hydrant Assembly (including gate valves, tee, and thrust blocks)

“Fire Hydrant Assembly” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the fire hydrant assembly, excavation, backfill, off-haul, disposal, saw cutting, testing, cleaning, disinfecting, and installing the tee at the main, fittings, thrust blocks, hydrant, hydrant bury, spacer, 6” gate valve on hydrant lead on the downstream side of the main, valve box, connection accessories, restoring the surface to City standards with aggregate base, asphalt concrete, concrete, and other existing surface landscaping material; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 12A – Remove Existing Fire Hydrant Assembly

“Remove Existing Fire Hydrant Assembly” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: removal of fire hydrant and appurtenances, excavation, off-haul, disposal, saw cutting, backfilling, restoring the surface to City standards with aggregate base, asphalt concrete, concrete, and other existing surface

landscaping material; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 13A – Blow Off Assembly

“Blow Off Assembly” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the blow offs, enclosures, copper tubing, valve connection, adapters, valve box and cover, brass nipples, fittings, thrust blocks and/or mechanical restraints, appurtenances; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 14A – 12-Inch Gate Valve, Box, and Cover

“12-Inch Gate Valve, Box, and Cover” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, cutting of existing pipe, installing 12” gate valves, valve connection, adapters, valve boxes and covers, thrust blocks and/or mechanical restraints; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 15A – 6-Inch Gate Valve, Box, and Cover

“6-Inch Gate Valve, Box, and Cover” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installing 6” gate valves, valve connection, adapters, valve boxes and covers, thrust blocks and/or mechanical restraints; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 16A – Fitting 12-Inch x 12-Inch Cross & Thrust Block

“Fitting 12-Inch x 12-Inch Cross & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x12” cross fittings and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 17A – Fitting 12-Inch x 12-Inch Tee & Thrust Block

“Fitting 12-Inch x 12-Inch Tee & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x12” tees and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 18A – Fitting 12-Inch x 6-Inch Tee & Thrust Block

“Fitting 12-Inch x 6-Inch Tee & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x6” tees and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 19A – Fitting 8-Inch x 8-Inch Tee & Thrust Block

“Fitting 8-Inch x 8-Inch Tee & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 8”x8” tees and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and

Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 20A – Fitting 12-Inch 45-Degree Bend & Thrust Block

“Fitting 12-Inch 45-Degree Bend & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of required ductile iron mechanical joint 12” 45-degree elbows and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 21A – Fitting 12-Inch 22.5-Degree Bend & Thrust Block

“Fitting 12-Inch 22.5-Degree Bend & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of required ductile iron mechanical joint 12” 22.5-degree elbows and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 22A – Fitting 12-Inch 11.25-Degree Bend & Thrust Block

“Fitting 12-Inch 11.25-Degree Bend & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of required ductile iron mechanical joint 12” 11.25-degree elbows and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 23A – Fitting 6-Inch 22.5-Degree Bend & Thrust Block

“Fitting 6-Inch 22.5-Degree Bend & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of required ductile iron mechanical joint 6” 22.5-degree elbows and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 24A – Fitting 12-Inch x 8-Inch Reducer & Thrust Block

“Fitting 12-Inch x 8-Inch Reducer & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x8” reducers and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 25A – Water Service Lateral

“Water Service Lateral” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing water services from the new water main to the existing water meter, trenching, asphalt concrete paving work per trenching detail on sheet D-01, backfill, off-haul, disposal, saw cutting, testing, cleaning, disinfecting, removing the existing water service, installing fittings, adapters, HDPE pipe, couplings, corporation stops, service clamps, saddles, connection accessories, valves, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 26A – Traffic Loop Detector

“Traffic Loop Detector” includes, but is not limited to, all labor, materials, tools, equipment, and

incidentals for doing all the work associated with this item including; properly disposing existing traffic loop detector as necessary; replacing in-kind traffic loop detectors that have been disturbed or damaged; excavation and backfill; replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a lump sum basis.

Bid Item 27A – Remove and Replace Median Island

“Remove and Replace Median Island” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; properly disposing existing median island as necessary; replacing in-kind median island that has been disturbed or damaged; excavation and backfill; concrete materials and installation, formwork, steel reinforcing; replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per square foot.

Bid Item 28A – Landscape Restoration

“Landscape Restoration” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: replacing in-kind improvements as necessary for landscape that has been disturbed or damaged; replacing plants, rocks, and other landscaping items and properly disposing of removed landscaping; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Installation shall conform to manufacturer’s recommendation. Payment for this item shall be on a lump sum basis.

Bid Item 29A – Slurry Seal

“Slurry Seal” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; slurry seal materials and installation; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per square yard.

Bid Item 30A – Thermoplastic Pavement Marking

“Thermoplastic Pavement Marking” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; replacing in-kind improvements as necessary for pavement delineation and markings that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per square foot.

Bid Item 31A – Sidewalk

“Sidewalk” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; properly disposing existing sidewalk, as necessary; replacing in-kind improvements as necessary for sidewalk and pavers that have been disturbed or damaged; excavating, grading, backfilling and compacting materials; concrete materials and installation, formwork, steel reinforcing; replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per square foot.

Bid Item 32A – Curb and Gutter

“Curb and Gutter” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; properly disposing existing curb and gutter as necessary; replacing in-kind curb and gutter that have been disturbed or damaged; excavating, grading, backfilling and compacting materials; concrete materials and installation, formwork, steel reinforcing; replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per linear foot.

Bid Item 33A – ADA Curb Ramp

“ADA Curb Ramp” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; properly disposing existing curb ramp as necessary; replacing curb ramps that have been disturbed or damaged; concrete materials and installation, formwork, steel reinforcing; providing and installing truncated domes; replacing in-kind improvements as necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, landscape, driveway that have been disturbed or damaged; excavating and backfilling; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 34A – Curb Inlet

“Curb Inlet” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; properly disposing existing curb inlet as necessary; replacing in-kind curb inlet that have been disturbed or damaged; excavating, grading, backfilling and compacting materials; concrete materials and installation, formwork, steel reinforcing; providing and installing frame and grate; replacing in-kind improvements as necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, landscape, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 35A – Dewatering

“Dewatering” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all work associated with this item including; prevention of ground and subsurface water from flowing into excavations, from flooding project site and surrounding properties, and from collecting and ponding; providing and maintaining temporary drainage and dewatering systems; pumps, sumps, and suction and discharge lines; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a lump sum basis.

Bid Item 1B – Mobilization

Mobilization (includes bonds and insurance) – The Contractor shall furnish all labor, materials, tools, equipment and incidentals to and away from the project site; for establishment and dismantling of all facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning and after completing work on the various contract items on the project site. These include obtaining all necessary permits, providing on site sanitary facility, address numbers providing all OSHA and City required notices and signs, and providing initial submittals. All the work involved in mobilization as specified herein, and no additional compensation will be allowed therefore. Allowable payment for mobilization shall not exceed 5% of the total for contract items of work. Payment for this item shall be on a lump sum basis.

Payments for mobilization will be made as follows:

- a. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is less than 5 percent of the original contract amount, 25 percent of the contract item price for mobilization will be included in the estimate for payment.

- b. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is 5 percent or more of the original contract amount, 50 percent of the contract item price for mobilization will be included in the estimate for payment.
- c. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is 10 percent or more of the original contract amount, 75 percent of the contract item price for mobilization will be included in the estimate for payment.
- d. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is 20 percent or more of the original contract amount, 95 percent of the contract item price for mobilization will be included in the estimate payment.
- e. When the monthly partial payment estimate of the amount earned, not including the amount of mobilization, is 50 percent or more of the original contract amount, 100 percent of the contract item price for mobilization will be included in the estimate for payment.

Bid Item 2B – Traffic Control

See item 27 of these provisions. Payment for this item shall be on a lump sum basis.

Bid Item 3B – Sheeting, Shoring, and Bracing

“Sheeting, Shoring, and Bracing” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work involved to provide sheeting, shoring and bracing, complete in place, including design stamped by a California Professional Civil or Structural Engineer, installation and removal of sheeting, shoring, bracing and other excavation supports, labor, materials and all other incidentals necessary to complete all work in compliance with the California Occupational Safety and Health (CAL-OSHA) standards and as described with in the Contract Documents including the Project Plans and Specifications. All work and materials shall conform to the Contract Documents including the Project Plans and Specifications, as described herein. Payment for this item shall be on a lump sum basis.

Bid Item 4B – Stormwater Pollution Prevention & Control

“Stormwater Pollution Prevention & Control” includes, but is not limited to, all labor, materials (including dust palliative binder), tools, equipment, and incidentals and for doing all the work involved in Stormwater Pollution Prevention, complete in place, including inlet protection, installing fiber roll and silt fence along the perimeter of the limits of work, installing stabilized construction entrance and exits, removal of nonhazardous material and waste management, hazardous material / waste management, spill prevention, vehicle / equipment inspection and cleaning, concrete truck / equipment wash out, paint cleanup, street sweeping, recycling, controlling dust resulting from the Contractor’s operations, public traffic, wind, or other conditions at all times including Saturdays, Sundays, holidays, and when directed by the City, as specified in Laws and Regulations and the technical specifications, and no additional payment shall be made therefore, and all other work as shown on the plans, as specified in the Standard Specifications, the special provisions, and the technical specifications, and as directed by the Engineer. In addition, storm drainage inlets directly affected by construction shall be protected per Association of Bay Area Governments (ABAG) requirements and this item shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals in accordance with such requirements. Payment for this item shall be on a lump sum basis.

Bid Item 5B – 12-Inch PVC Pipe

“12-Inch PVC Pipe” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the new water main pipe, profile adjustments necessary to avoid utility conflicts, trenching, asphalt concrete paving work per trenching detail on sheet D-01, backfilling and compacting the bedding material and structural backfill material, off-haul, disposal of spoils, disposal of valves, removing existing water mains and tees, saw cutting, testing, cleaning, disinfecting, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, mechanical joints, tracer wire, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per linear foot.

Bid Item 6B – 8-Inch PVC Pipe

“8-Inch PVC Pipe” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the new water main pipe, profile adjustments necessary to avoid utility conflicts, trenching, asphalt concrete paving work per trenching detail on sheet D-01, backfilling and compacting the bedding material and structural backfill material, off-haul, disposal of spoils, disposal of valves, removing existing water mains and tees, saw cutting, testing, cleaning, disinfecting, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, mechanical joints, tracer wire, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per linear foot.

Bid Item 7B – 6-Inch PVC Pipe

“6-Inch PVC Pipe” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the new water main pipe, profile adjustments necessary to avoid utility conflicts, trenching, asphalt concrete paving work per trenching detail on sheet D-01, backfilling and compacting the bedding material and structural backfill material, off-haul, disposal of spoils, disposal of valves, removing existing water mains and tees, saw cutting, testing, cleaning, disinfecting, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, mechanical joints, tracer wire, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per linear foot.

Bid Item 8B – 2-Inch HDPE Pipe

“2-Inch HDPE Pipe” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the new water main pipe, profile adjustments necessary to avoid utility conflicts, trenching, asphalt concrete paving work per trenching detail on sheet D-01, backfilling and compacting the bedding material and structural backfill material, off-haul, disposal of spoils, disposal of valves, removing existing water mains and tees, saw cutting, testing, cleaning, disinfecting, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, mechanical joints, tracer wire, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per linear foot.

Bid Item 9B – Abandon In-Place Existing 8-Inch Watermain

“Abandon In-Place Existing 8-inch Watermain” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: shutting down existing water mains, abandoning water mains in place, filling with slurry for all locations as shown on the plans, capping abandoned water main ends; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a lump sum basis.

Bid Item 10B – Connect to Existing 8-Inch Watermain

“Connect to Existing 8-Inch Watermain” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: connecting the existing 8” water main to the new water main, shutdown, including profile adjustments necessary to avoid utility conflicts, flushing, disinfection, pressure testing, compaction, warning tape, excavation, off-haul, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, and mechanical joints, backfilling and compacting the bedding material and structural backfill material, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform

to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 11B – Connect to Existing 6-Inch Watermain

“Connect to Existing 6-Inch Watermain” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: connecting the existing 6” water main to the new water main, shutdown, including profile adjustments necessary to avoid utility conflicts, flushing, disinfection, pressure testing, compaction, warning tape, excavation, off-haul, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, and mechanical joints, backfilling and compacting the bedding material and structural backfill material, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 12B – Connect to Existing 2-Inch Watermain

“Connect to Existing 2-Inch Watermain” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: connecting the existing 2” water main to the new water main, shutdown, including profile adjustments necessary to avoid utility conflicts, flushing, disinfection, pressure testing, compaction, warning tape, excavation, off-haul, installing fittings, thrust blocks, bolts, flanges, couplings, tees, reducers, and mechanical joints, backfilling and compacting the bedding material and structural backfill material, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 13B – Fire Hydrant Assembly (including gate valves, tee, and thrust blocks)

“Fire Hydrant Assembly” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing the fire hydrant assembly, excavation, backfill, off-haul, disposal, saw cutting, testing, cleaning, disinfecting, and installing the tee at the main, fittings, thrust blocks, hydrant, hydrant bury, spacer, 6” gate valve on hydrant lead on the downstream side of the main, valve box, connection accessories, restoring the surface to City standards with aggregate base, asphalt concrete, concrete, and other existing surface landscaping material; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 14B – Remove Existing Fire Hydrant Assembly

“Remove Existing Fire Hydrant Assembly” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: removal of fire hydrant and appurtenances, excavation, off-haul, disposal, saw cutting, backfilling, restoring the surface to City standards with aggregate base, asphalt concrete, concrete, and other existing surface landscaping material; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 15B – 12-Inch Gate Valve, Box, and Cover

“12-Inch Gate Valve, Box, and Cover” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, cutting of existing pipe, installing 12” gate valves, valve connection, adapters, valve boxes and covers, thrust blocks and/or mechanical restraints; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 16B – 8-Inch Gate Valve, Box, and Cover

“8-Inch Gate Valve, Box, and Cover” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installing 8” gate valves, valve connection, adapters, valve boxes and covers, thrust blocks and/or mechanical restraints; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 17B – 6-Inch Gate Valve, Box, and Cover

“6-Inch Gate Valve, Box, and Cover” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installing 6” gate valves, valve connection, adapters, valve boxes and covers, thrust blocks and/or mechanical restraints; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 18B – Fitting 12-Inch x 8-Inch Cross & Thrust Block

“Fitting 12-Inch x 8-Inch Cross & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x8” cross fittings and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 19B – Fitting 12-Inch x 12-Inch Tee & Thrust Block

“Fitting 12-Inch x 12-Inch Tee & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x12” tees and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 20B – Fitting 12-Inch x 8-Inch Tee & Thrust Block

“Fitting 12-Inch x 8-Inch Tee & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x8” tees and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 21B – Fitting 12-Inch x 6-Inch Tee & Thrust Block

“Fitting 12-Inch x 6-Inch Tee & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x6” tees and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 22B – Fitting 12-Inch 45-Degree Bend & Thrust Block

“Fitting 12-Inch 45-Degree Bend & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of required ductile iron mechanical joint 12” 45-degree elbows and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 23B – Fitting 12-Inch x 8-Inch Reducer & Thrust Block

“Fitting 12-Inch x 8-Inch Reducer & Thrust Block” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: excavation, installation of 12”x8” reducers and required thrust blocks; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 24B – Water Service Lateral

“Water Service Lateral” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: installing water services from the new water main to the existing water meter, trenching, asphalt concrete paving work per trenching detail on sheet D-01, backfill, off-haul, disposal, saw cutting, testing, cleaning, disinfecting, removing the existing water service, installing fittings, adapters, HDPE pipe, couplings, corporation stops, service clamps, saddles, connection accessories, valves, replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a per each basis.

Bid Item 25B – Landscape Restoration

“Landscape Restoration” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including: replacing in-kind improvements as necessary for landscape that has been disturbed or damaged; replacing plants, rocks, and other landscaping items and properly disposing of removed landscaping; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Installation shall conform to manufacturer’s recommendation. Payment for this item shall be on a lump sum basis.

Bid Item 26B – Slurry Seal

“Slurry Seal” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; slurry seal materials and installation; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per square yard.

Bid Item 27B – Thermoplastic Pavement Marking

“Thermoplastic Pavement Marking” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; replacing in-kind improvements as necessary for pavement delineation and markings that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per square foot.

Bid Item 28B – Sidewalk

“Sidewalk” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; properly disposing existing sidewalk, as necessary; replacing in-kind improvements as necessary for sidewalk and pavers that have been disturbed or damaged; excavating, grading, backfilling and compacting materials; concrete materials and installation, formwork, steel reinforcing; replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per square foot.

Bid Item 29B – Curb and Gutter

“Curb and Gutter” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all the work associated with this item including; properly disposing existing curb and gutter as necessary; replacing in-kind curb and gutter that have been disturbed or damaged; excavating, grading, backfilling and compacting materials; concrete materials and installation, formwork, steel reinforcing; replacing in-kind improvements as-necessary such as but not limited to pavement, pavement delineation and markings, City monuments, curb and gutter, sidewalk, lawn, driveway that have been disturbed or damaged; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for a satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be per linear foot.

Bid Item 30B – Dewatering

“Dewatering” includes, but is not limited to, all labor, materials, tools, equipment, and incidentals for doing all work associated with this item including; prevention of ground and subsurface water from flowing into excavations, from flooding project site and surrounding properties, and from collecting and ponding; providing and maintaining temporary drainage and dewatering systems; pumps, sumps, and suction and discharge lines; labor, materials and all other incidentals as shown on plans and specified in these specifications, and for all the work needed for satisfactory completion of the project. All work and materials shall conform to the Project Plans and Contract Documents and Specifications, as described herein. Payment for this item shall be on a lump sum basis.

10. Specialty Items

N/A

11. Warranty Duration

Unless specifically stated in the Technical Specifications, all items shall have a one-year warranty from the date of final acceptance of the project.

12. Disposal Fees

The Contractor shall be responsible to pay all applicable disposal fees and the cost of this shall be included in the various bid items.

13. Materials Supplied by City

None

14. Testing

All lights shall be tested with night inspections prior to approval.

15. Water The Contractor shall pay for and shall construct all facilities necessary to furnish water for its use during construction, including potable water service. Water used for human consumption shall be kept free from contamination and shall conform to the requirements of the State and local authorities for potable water. The Contractor will pay for all water used for their operations on site.

The purchase of potable water for construction purposes requires obtaining a Hydrant Permit from the City’s Water Company located at City Hall, 2415 University Avenue, East Palo Alto.

16. Special Permits

N/A

17. Revocable Items

Items listed as "revocable" may be deleted entirely or in part, or added at the sole discretion of the City. All provisions of Section 9-1.06 of the Standard Specifications shall not apply to entire or partial deletion of or addition to revocable items

18. Hazardous Materials/Conditions

N/A

19. Disclosure Information/Documents (Not part of the contract documents and not bound in)

N/A

21. Work to be Performed by Contractor - The Contractor shall perform, with its own organization,

Contract work amounting to at least **25%** percent of the Contract price, except that any designated "Specialty Items" may be performed by subcontract, and the amount of any such "Specialty Items" so performed may be excluded from the computation.

22. **Work Sites and Payment** - This contract is made of many individual work sites. A work site is typically all concrete replacement work at a single addressed parcel or property. Typically, all tasks, as prescribed in the specifications, are required to be performed to constitute a completed work site. All variances from typical shall be defined in writing by the City Inspector/Representative.

Payment shall be on the basis of completed individual work sites; this shall include all work tasks required to complete an individual work site, including cleanup and restoration work.

23. **Progress Payment Retention** - Retention shall be five percent (5%) for the estimated value of work.
24. **Working Hours** - Construction work shall be limited to 8:00 a.m. to 5:00 p.m. as detailed in the General Specifications. Additional restrictions below. Exceptions shall be approved by City Engineer.
25. **Notification and Relations with Property Owners** At ten (10) working days and again at two (2) working days prior to mobilizing to a site or performing any action which affects residents, schools or businesses, the Contractor shall distribute an approved written notice to all adjoining residents and businesses, property owners, tenants and applicable parties. Such notice shall include the expected date for start of construction, a general description of the construction activity to take place, expected duration of the activity, traffic delays, alternative routes, driveway closures and the name, address, and a 24-hour local telephone number of the Contractor. A draft copy of the notice shall be provided to the City Engineer for approval, prior to distribution.

The Contractor shall provide the Engineer a copy of the proposed written notification prior to mailing or delivery for approval at least 5 days prior to their distribution.

Delays in performing the work or changes in the construction schedule, for any reason, shall require the Contractor to provide written re-notification to residents, businesses, City services within 24 hours that any delay or change is reported to or discovered by the City Engineer.

The Contractor shall not impede or impair waste haulers, recycling operations and buses within the project area. It is the Contractor's responsibility to determine which waste haulers, recycling operators and buses are scheduled to work/run in the project area and to develop a project schedule that will not impede or impair their operations.

26. **Public Convenience and Safety** – The Contractor shall provide for the convenience and safety of traffic and the public in conformance with the provisions in Section 7-1.03 and Section 7-1.04 of the 2010 Caltrans Standard Specifications.
27. **Traffic Control** – The contractor is required to provide and maintain throughout the duration of the project adequate traffic control for all modes of traffic. No blocking of the public way is permitted at any time. CAMUTCD standards must be used for all forms of Traffic Control. A traffic control plan is required for approval prior to beginning of the project. Traffic control plans shall include Changeable message signs to be placed throughout the project job for the duration of construction.
28. **Staging Areas and Field office** – N/A
29. **Protection and Restoration of Existing Improvements** – Contractor shall protect in place, or remove and replace, existing improvements which may be damaged by Contractor's operations. Existing improvements may include, but are not limited to, irrigation lines, irrigation control wiring, landscaping, trees/roots, pavement, drainage devices, lighting, roads and roadway markings, and pedestrian walkways. Any damage to existing facilities, landscape, or irrigation shall corrected by the Contractor to original condition at no cost to the City.

Contractor shall ensure construction or resurfacing materials do not enter the storm drain system.

**I. ESCROW AGREEMENT FOR SECURITY DEPOSITS
IN LIEU OF RETENTION**

This Escrow Agreement is made and entered into by and between CITY OF EAST PALO ALTO whose address is 2415 University Avenue, East Palo Alto, California 94303 hereinafter called "Owner", and _____, whose address is _____, hereinafter called "Contractor", and _____, whose address is _____, hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the Owner, Contractor, and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by Owner pursuant to the Construction Contract entered into between the Owner and Contractor for _____ in the amount of _____ dated _____ (hereinafter referred to as the "Contract"). Alternatively, on written request of the contractor, the owner shall make payments of the retention earnings directly to the escrow agent. When Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Owner within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the Owner and Contractor. Securities shall be held in the name of the City of East Palo Alto, and shall designate the Contractor as the beneficial owner.

(2) The Owner shall make progress payments to the Contractor for such funds which otherwise would be withheld from progress payments pursuant to the Contractor provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the Owner makes payment of retentions earned directly to the escrow agent, the escrow agent shall hold them for the benefit of the contractor until such time as the escrow created under this contract is terminated. The contractor may direct the investment of the payments into securities. All terms and conditions of this agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the owner pays the escrow agent directly.

(4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the Owner. These expenses and payment terms shall be determined by the Owner, Contractor and Escrow Agent.

(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Owner.

(6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the Owner to the Escrow Agent that Owner consents to the withdrawal of the amount sought to be withdrawn by Contractor. The signature of the representative of Owner granting such consent shall be acknowledged by a notary public.

(7) The Owner shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven days' written notice to the Escrow Agent from the owner of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the Owner.

(8) Upon receipt of written notification from the Owner certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the Owner and the Contractor pursuant to Sections (4) to (8), inclusive, of this agreement, provided that the written authorization from Owner to Escrow Agent given pursuant to paragraph 6 above authorizing release of funds to Contractor, has an acknowledgment of the signature of Owner's representative. Assuming that any notice received by Escrow Agent which is required to have a notary's acknowledgment of a signature according to this agreement, is so acknowledged, the Owner and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the Owner and on behalf of Contractor in connection with the foregoing, and exemplars of the respective signatures are as follows:

On behalf of Owner:

Signature

Name (typed or printed)

Title

Address

On behalf of Contractor:

Signature

Name (typed or printed)

Title

Address

On behalf of Escrow Agent:

Signature

Name (typed or printed)

Title

Address

At the time the Escrow Account is opened, the Owner and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the dates set forth below.

By: City of East Palo Alto
(Owner)

By: _____
(Contractor)

Signature

Signature *

Name (typed or printed)

Name (typed or printed)

Title

Title

Date

Date

Signature *

Name (typed or printed)

Title

Date

By: _____
(Escrow Agent)

Signature**

Name (typed or printed)

Title

Date

** Signature of Contractor shall be notarized. Signature shall be of two classes of officers of a corporation, unless accompanied by copy of Resolution of Board of Directors authorizing execution of this agreement.*

*** Signature of Escrow Agent shall be notarized*

ATTACHMENT E – POTHOLING REPORTS

PART I – UNIVERSITY AVENUE AND COOLEY AVENUE

SEE FOLLOWING PAGES



UTILITY LOCATING
POTHOLE DEPTH REPORT
BTL P6-1-1160

SPECIALLY PREPARED FOR:



PROJECT SITE:

Palo Alto, California

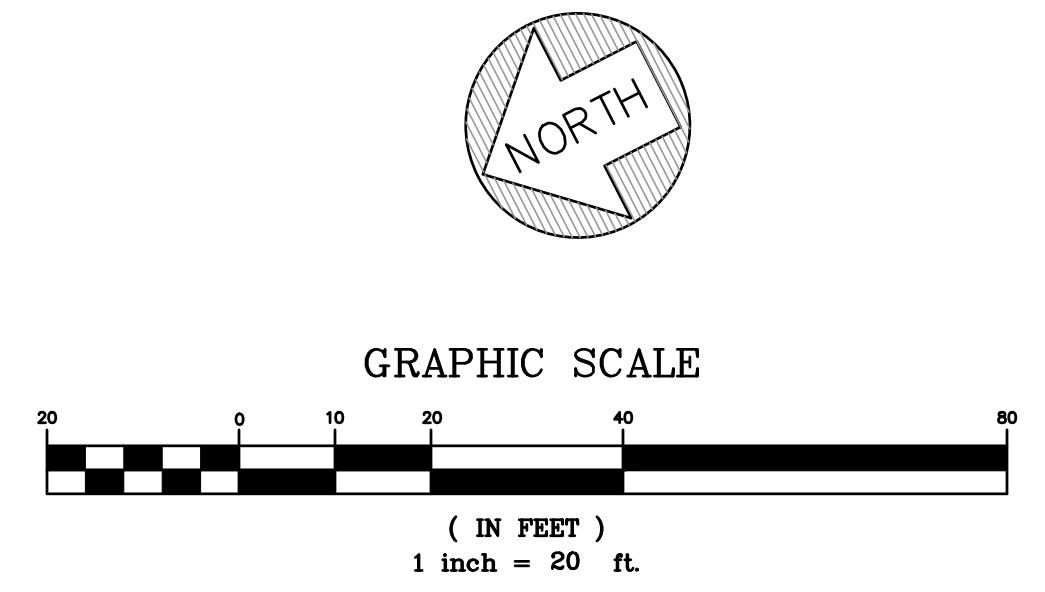
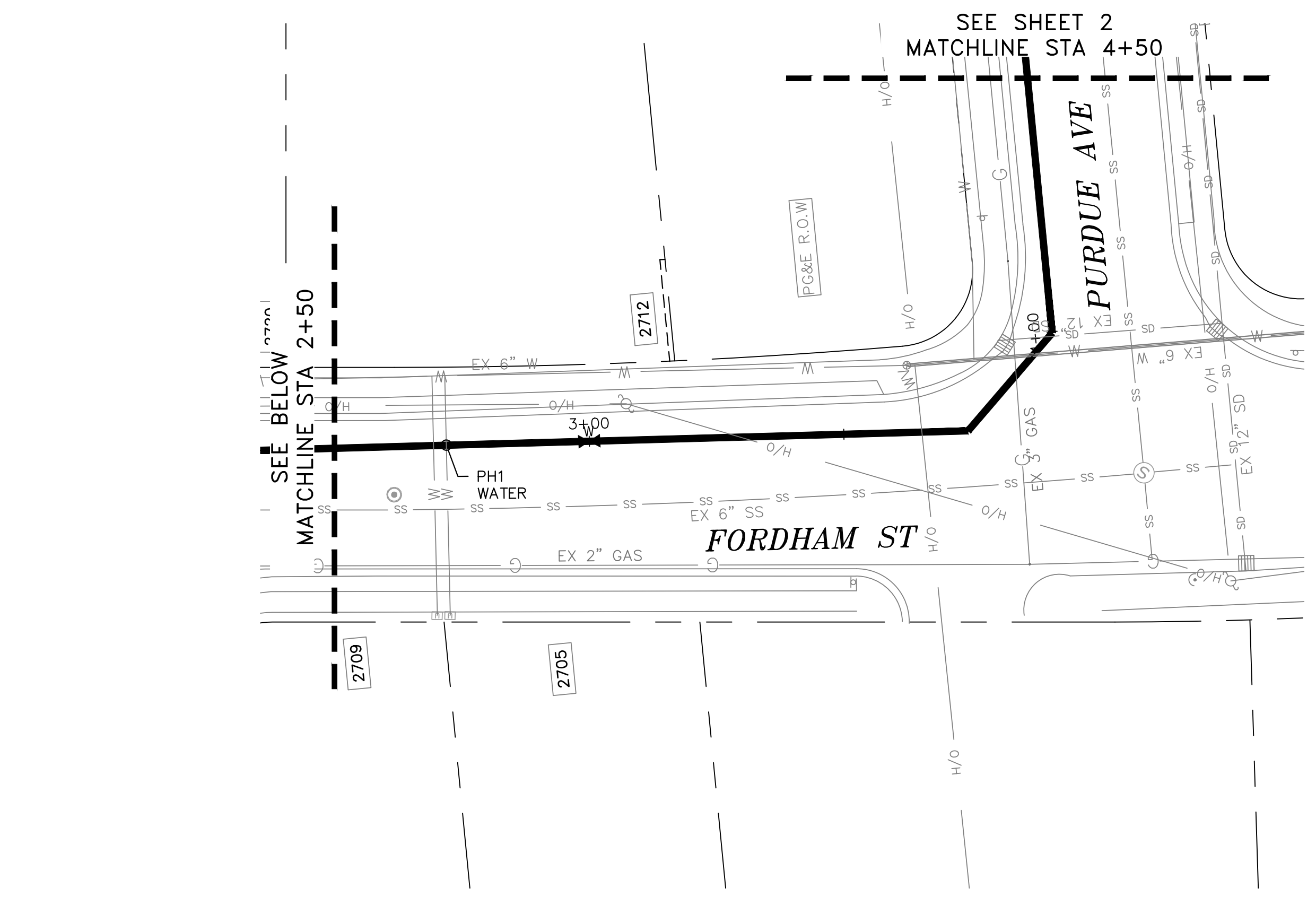
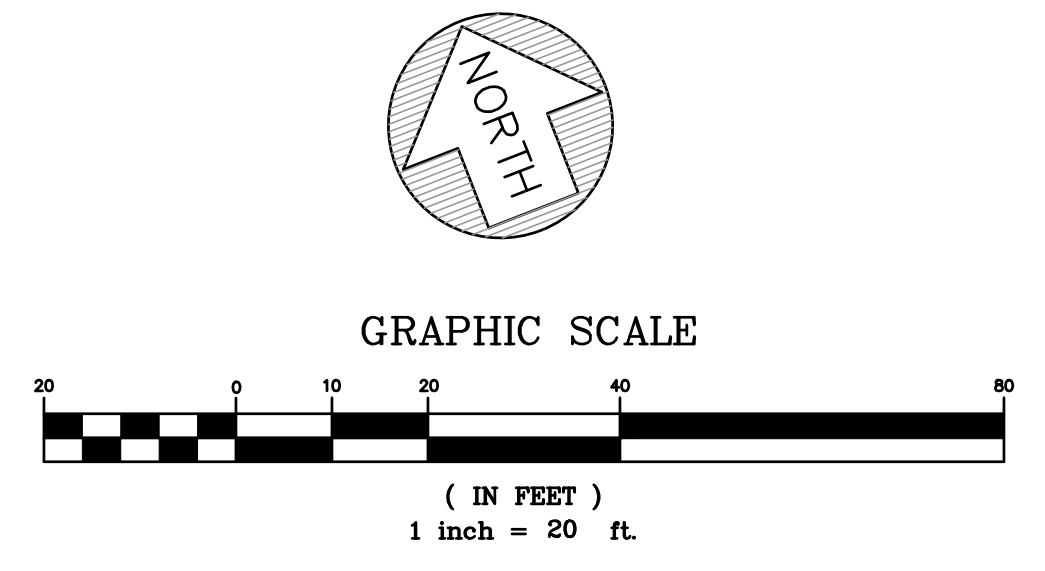
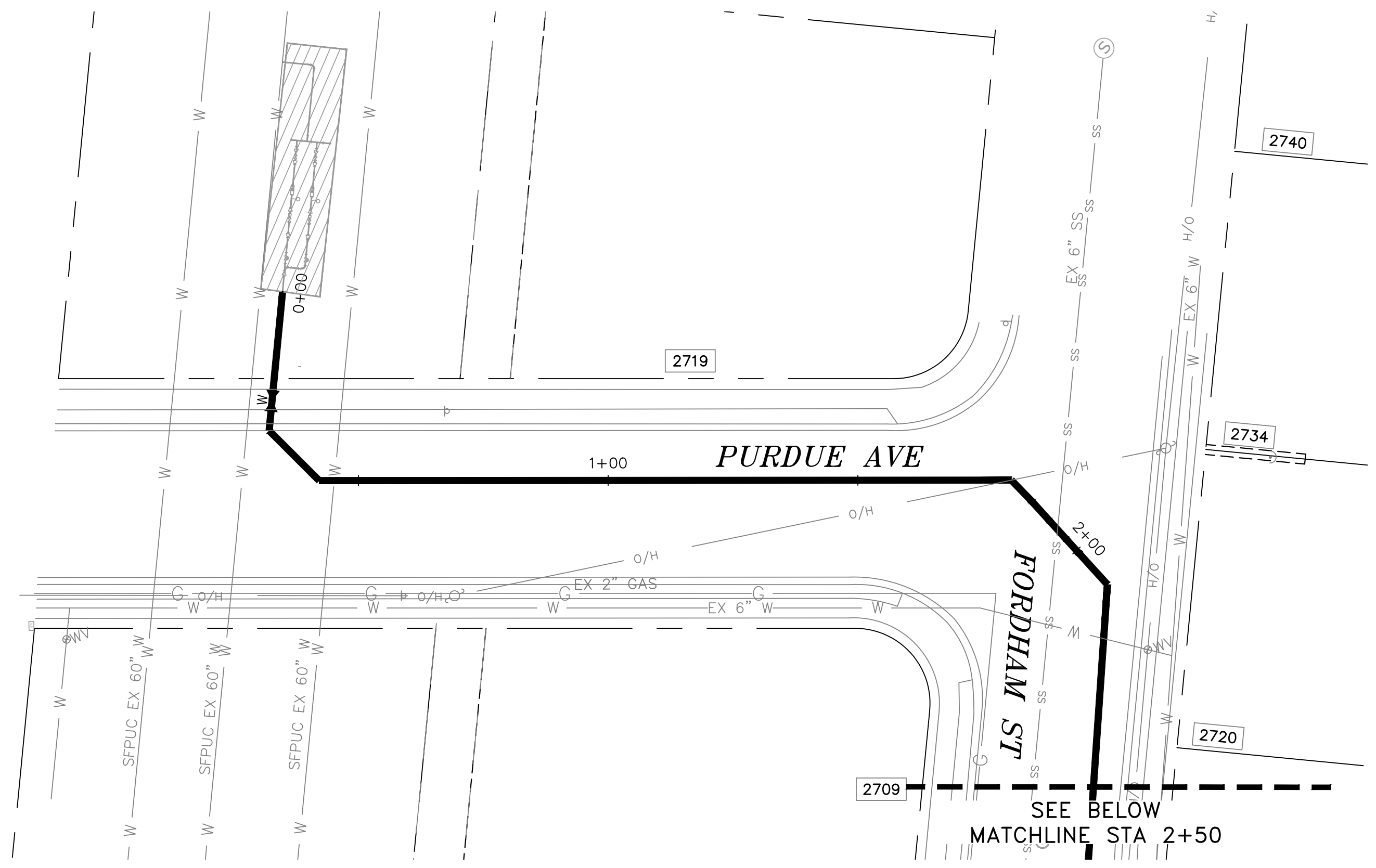
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2. Tabulation
3. Record of Test Hole Date Sheets

Bess Testlab Inc.
2463 Tripaldi Way
Hayward, CA 94545
Submitted By: Michael Bohorquez
Office: (408) 988-0101
Email: Michael@besstestlab.com

LEGEND

- COM — EXISTING COMMUNICATIONS LINE
- G — EXISTING GAS LINE
- E — EXISTING UNDERGROUND ELECTRICAL LINE
- W — EXISTING WATER LINE
- O/H — EXISTING ELECTRIC LINE OVERHEAD
- SS — EXISTING SANITARY SEWER LINE
- SD — EXISTING STORM DRAIN LINE
- SSFM — EXISTING SANITARY SEWER FORCEMAIN LINE

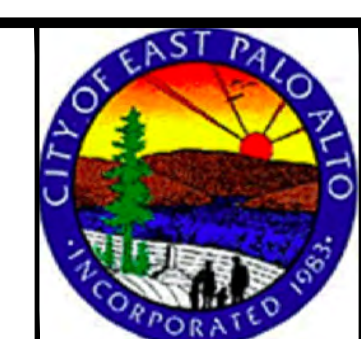


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SCALE:	AS NOTED	12/15/20	SUBMITTAL
DESIGNED:	JJF		
DRAWN:	DZ		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D

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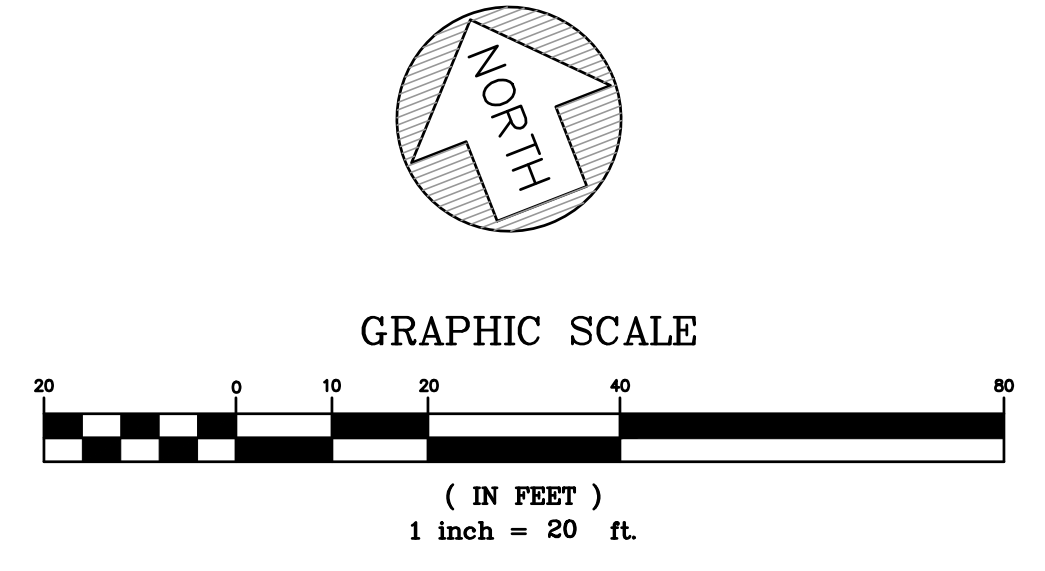
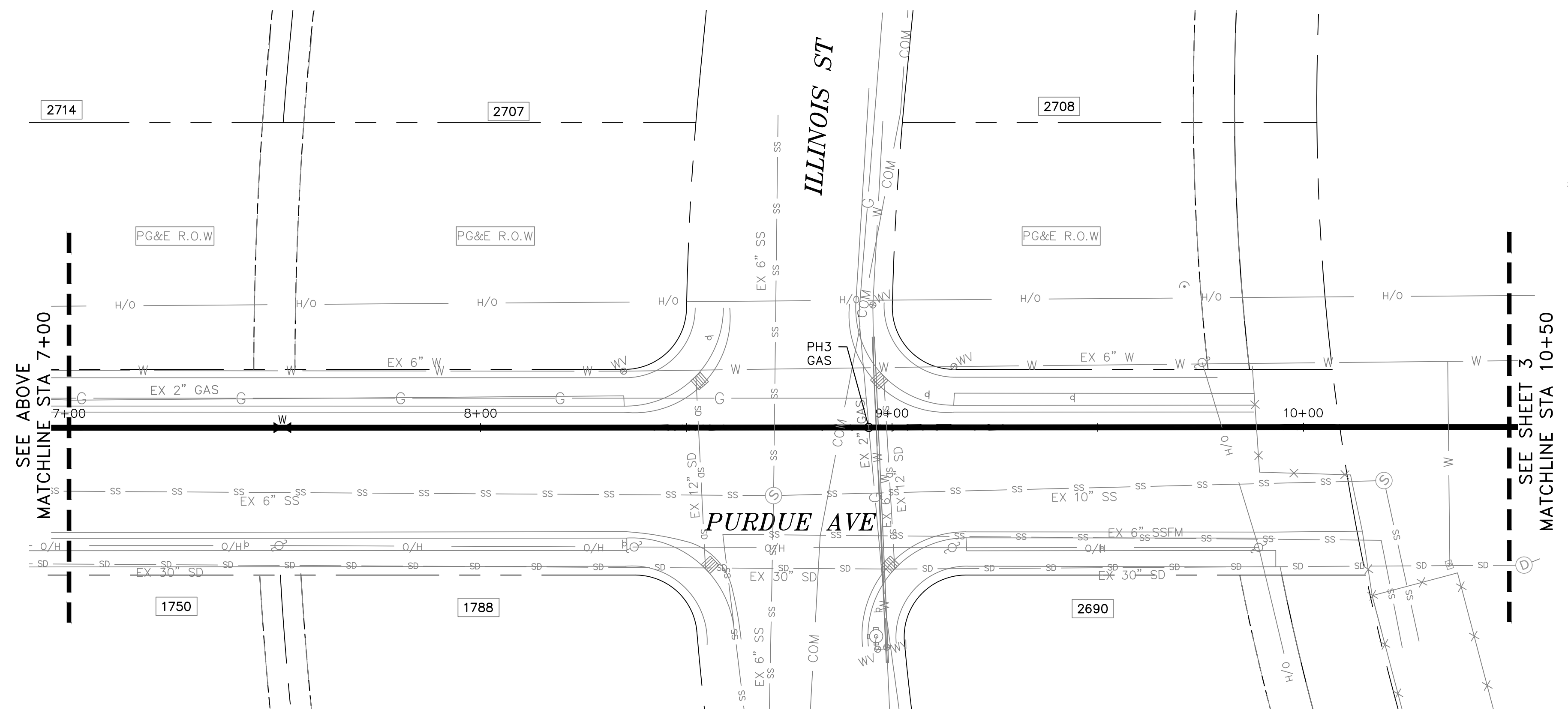
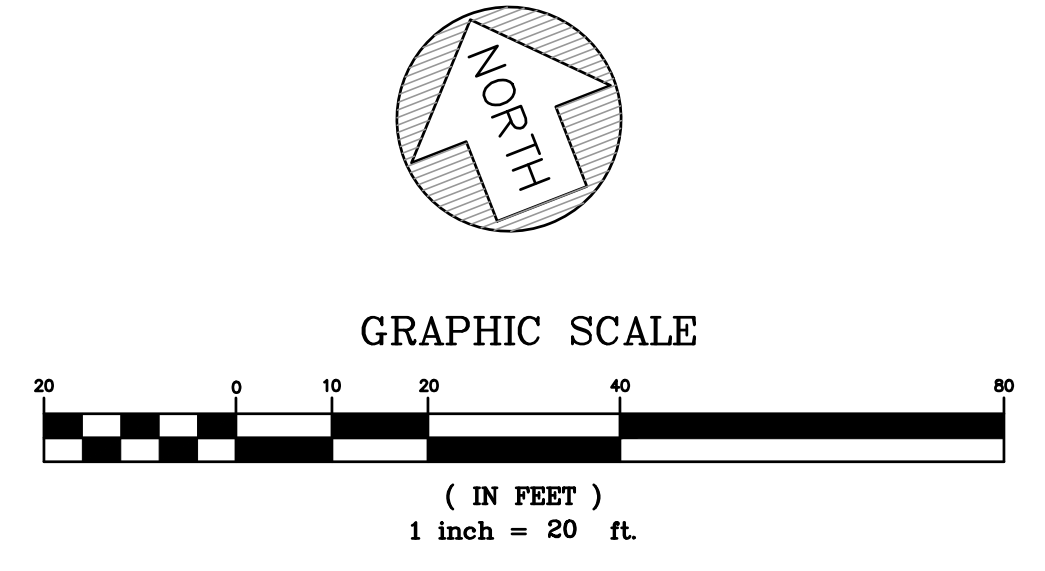
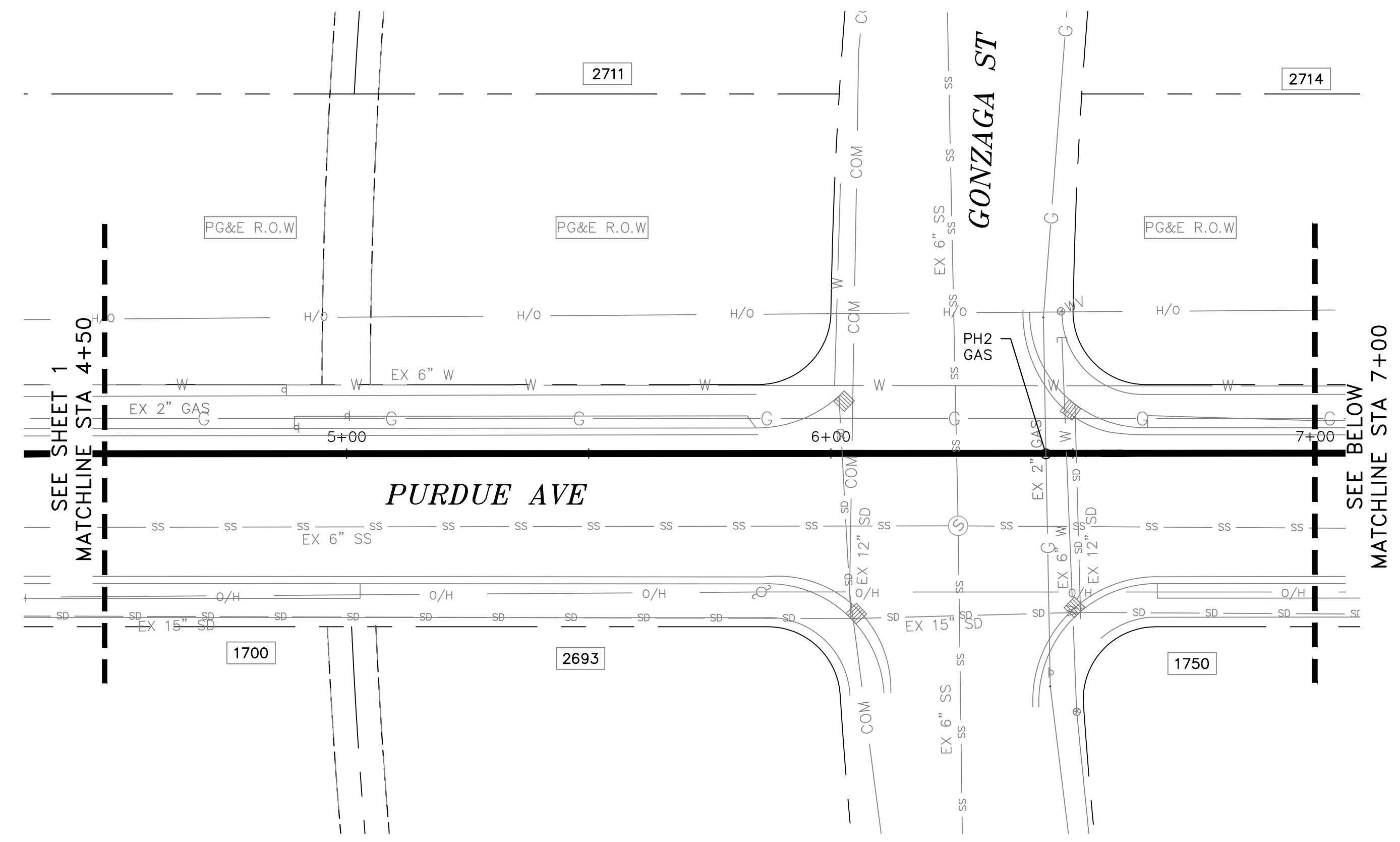


CITY OF EAST PALO ALTO
16-INCH WATER TRANSMISSION MAIN PROJECT
POTHOLING PLAN
PURDUE AVE AND FORDHAM ST

SHEET
1
OF 3 SHEETS
JOB NO.
221006

LEGEND

- COM ——— EXISTING COMMUNICATIONS LINE
- G ——— EXISTING GAS LINE
- E ——— EXISTING UNDERGROUND ELECTRICAL LINE
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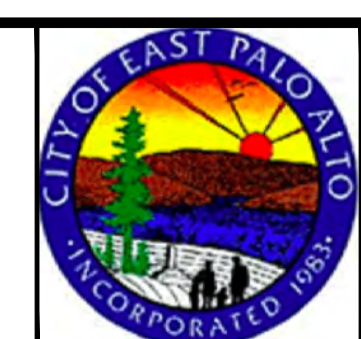


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DESIGNED:	JJF		
DRAWN:	DZ		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



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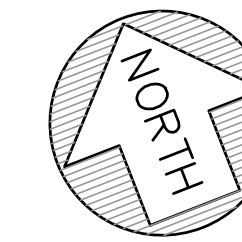
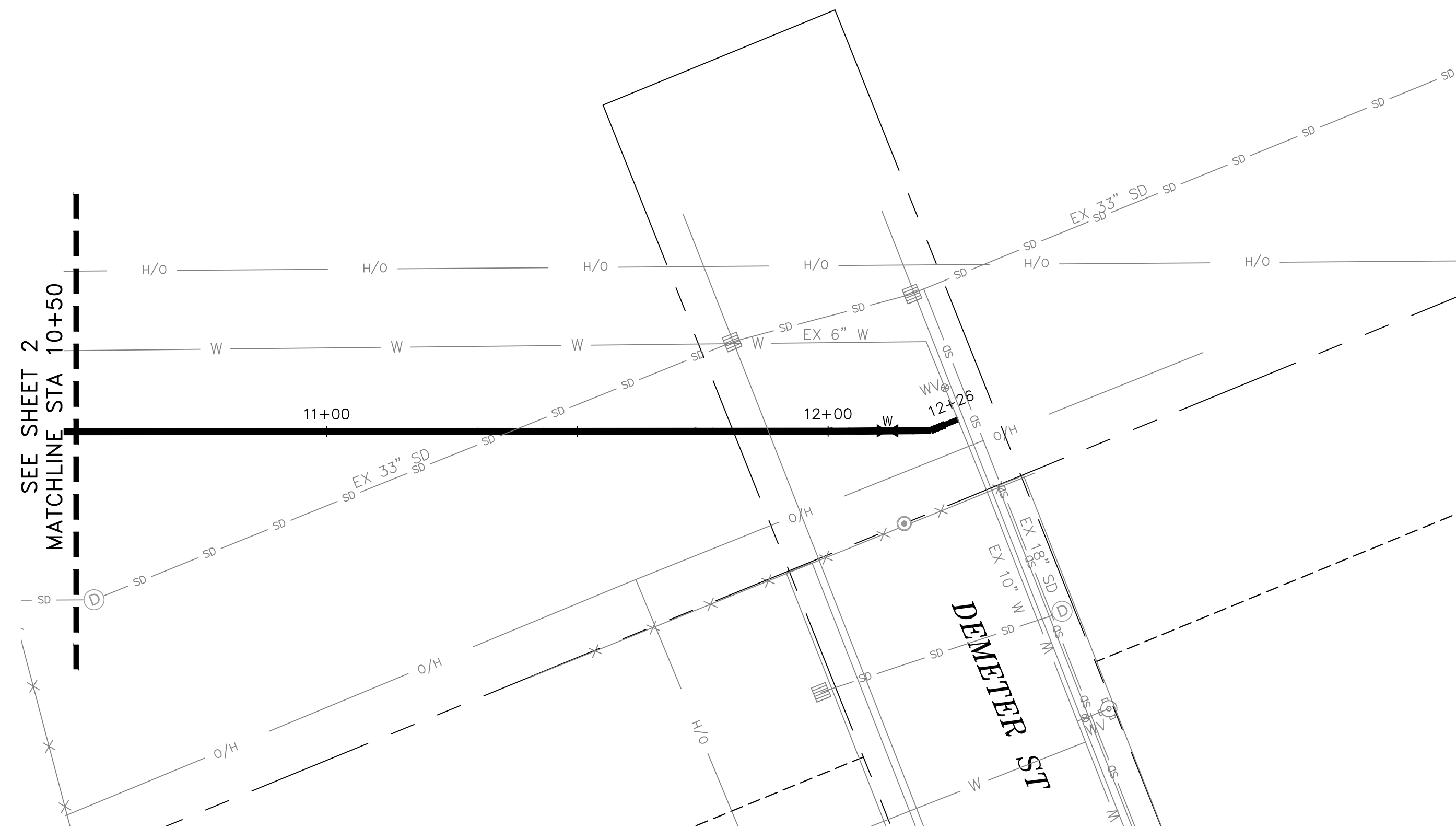


CITY OF EAST PALO ALTO
16-INCH WATER TRANSMISSION MAIN PROJECT
POTHOLING PLAN
PURDUE AVE

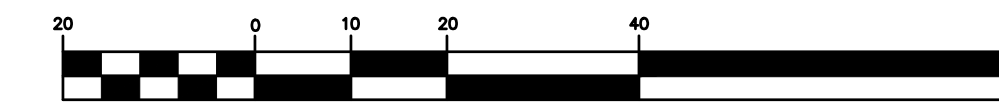
SHEET
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 OF 3 SHEETS
 JOB NO.
221006

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GRAPHIC SCALE



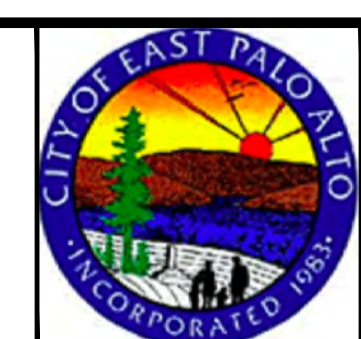
(IN FEET)
1 inch = 20 ft.

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SCALE:	AS NOTED	12/15/20	SUBMITTAL
DESIGNED:	JJF		
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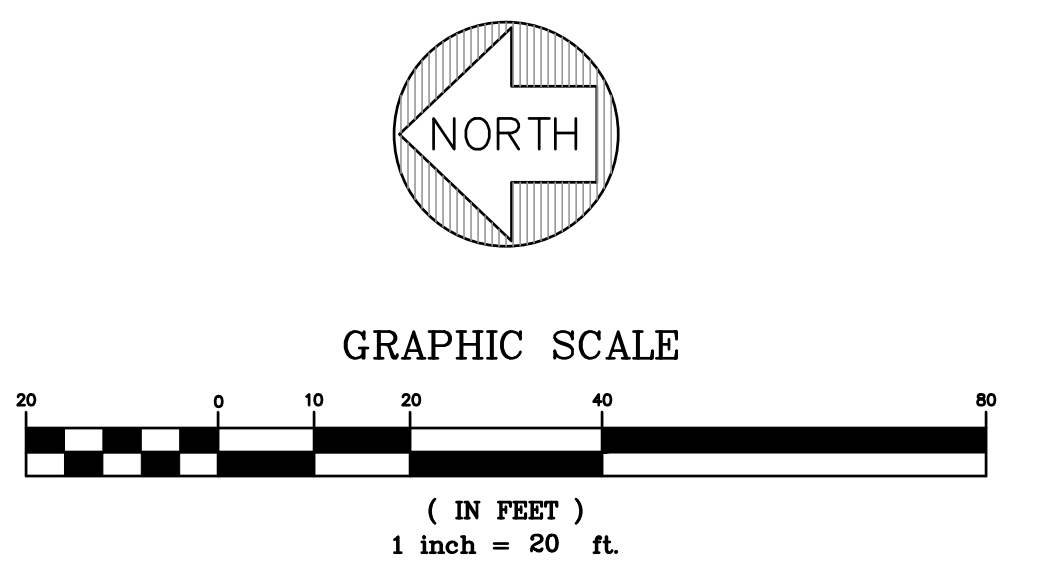
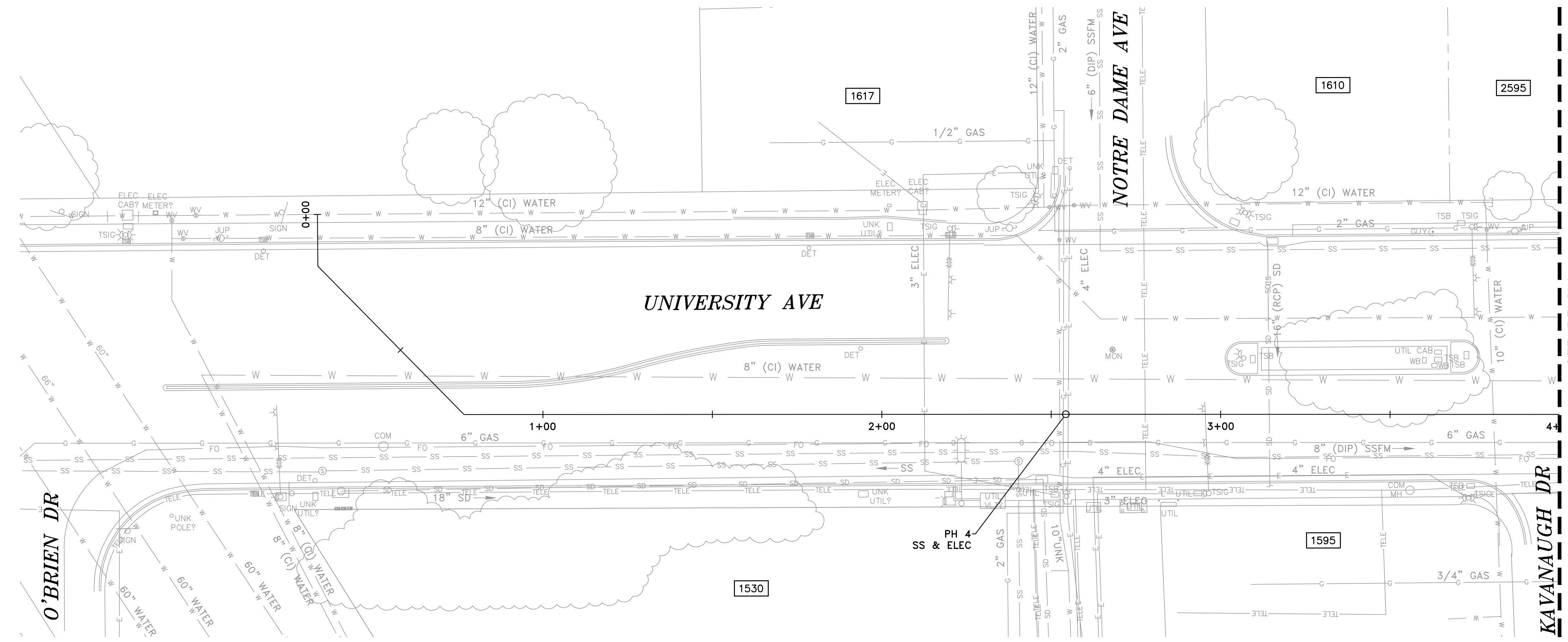
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16-INCH WATER TRANSMISSION MAIN PROJECT
POTHOLING PLAN
PURDUE AVE AND DEMETER ST

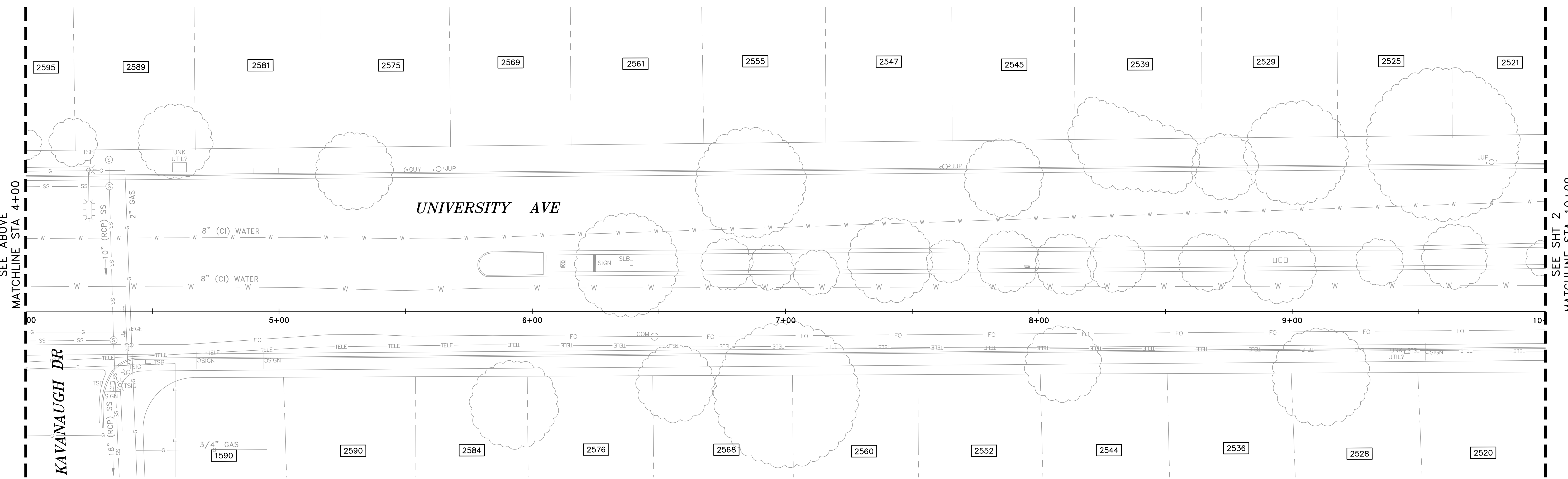
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OF 3 SHEETS
JOB NO.
221006

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- LEGEND**
- TELE — EXISTING COMMUNICATIONS LINE
 - FO — EXISTING FIBER OPTICS LINE
 - G — EXISTING GAS LINE
 - E — EXISTING UNDERGROUND ELECTRICAL LINE
 - W — EXISTING WATER LINE
 - SS — EXISTING SANITARY SEWER LINE
 - SD — EXISTING STORM DRAIN LINE

NOTE: POT HOLE LOCATIONS ARE APPROXIMATED BASED ON SWING TIE DISTANCES IN POT HOLING REPORT BY BESS TESTLAB.



DATE:	7/27/23	7/27/23	POTHOLE LOCATIONS
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



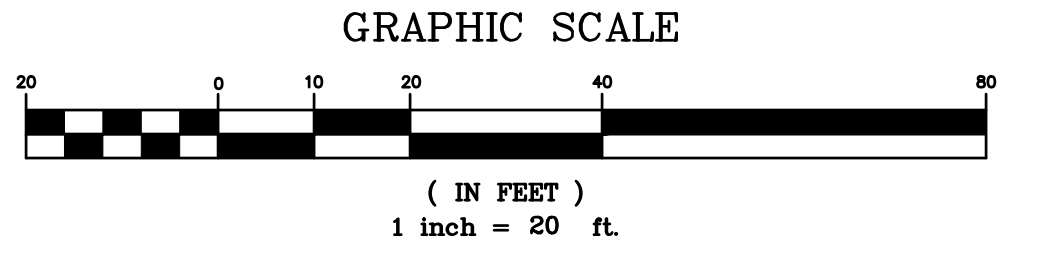
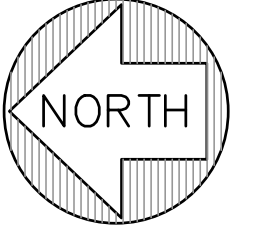
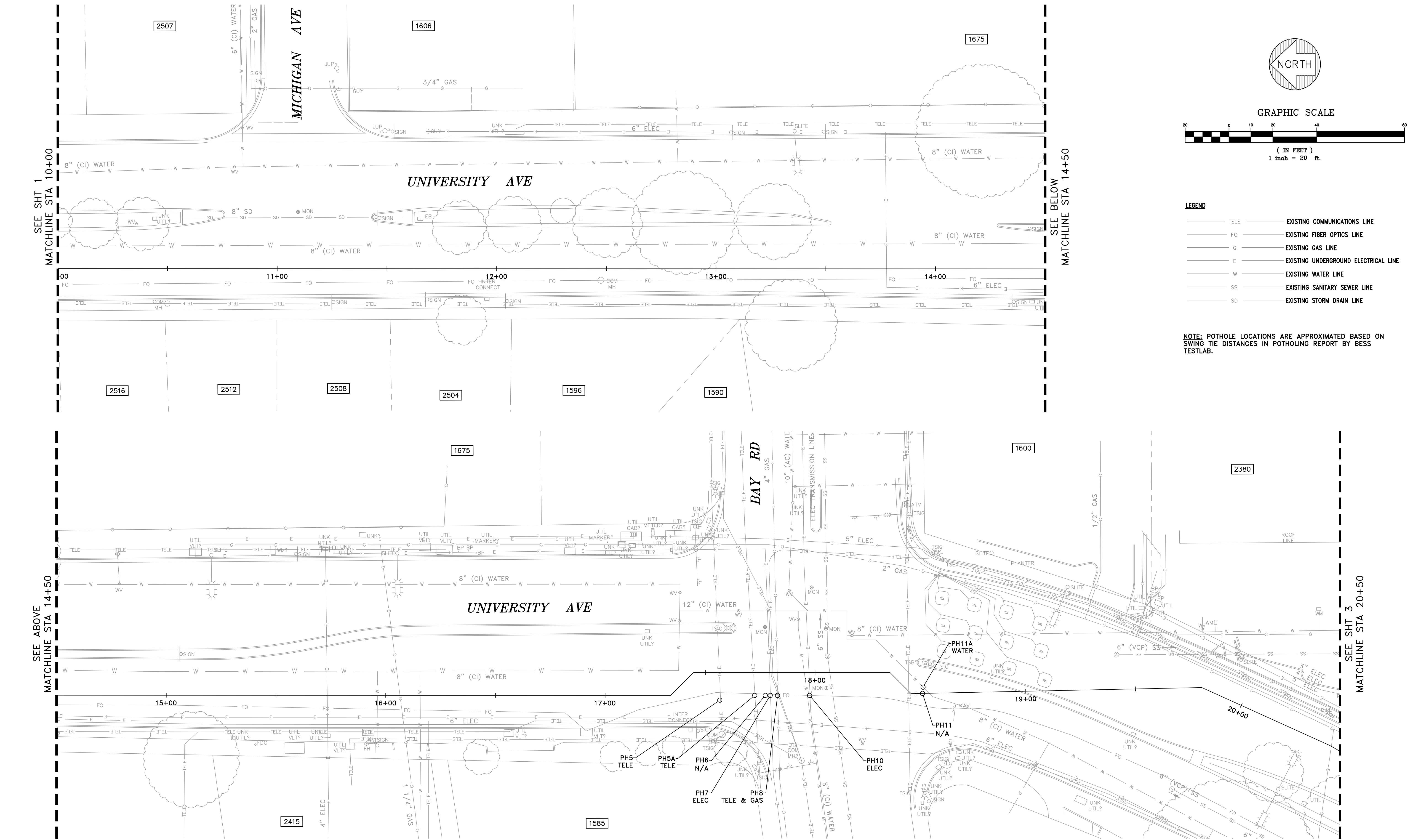
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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
UNIVERSITY AVE AND COOLEY AVE

SHEET
1
 OF 5 SHEETS
 JOB NO.
221005

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- LEGEND**
- TELE — EXISTING COMMUNICATIONS LINE
 - FO — EXISTING FIBER OPTICS LINE
 - G — EXISTING GAS LINE
 - E — EXISTING UNDERGROUND ELECTRICAL LINE
 - W — EXISTING WATER LINE
 - SS — EXISTING SANITARY SEWER LINE
 - SD — EXISTING STORM DRAIN LINE

NOTE: POT HOLE LOCATIONS ARE APPROXIMATED BASED ON SWING TIE DISTANCES IN POT HOLING REPORT BY BESS TESTLAB.

DATE:	7/27/23	7/27/23	POTHOLE LOCATIONS
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



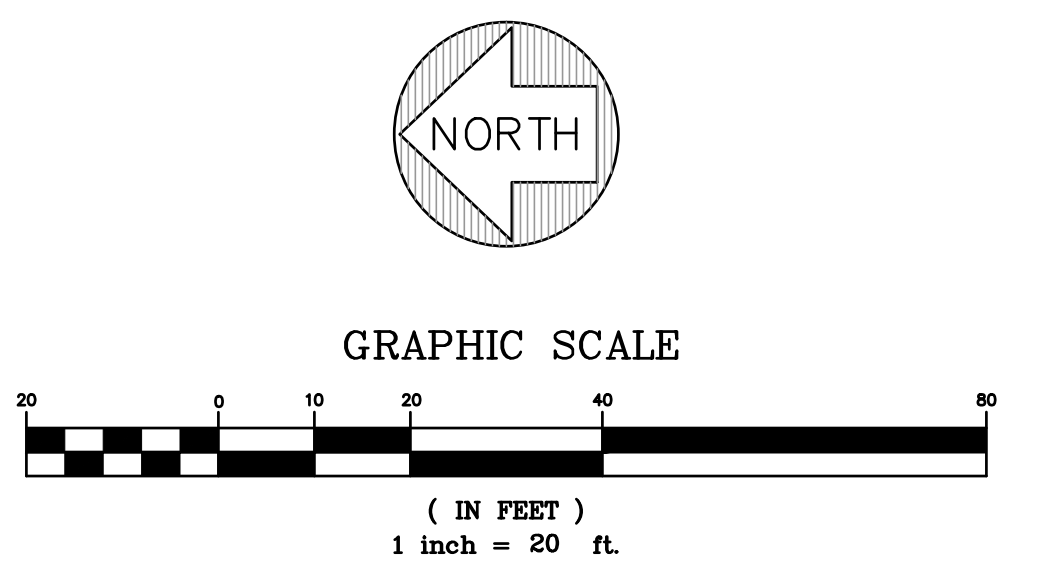
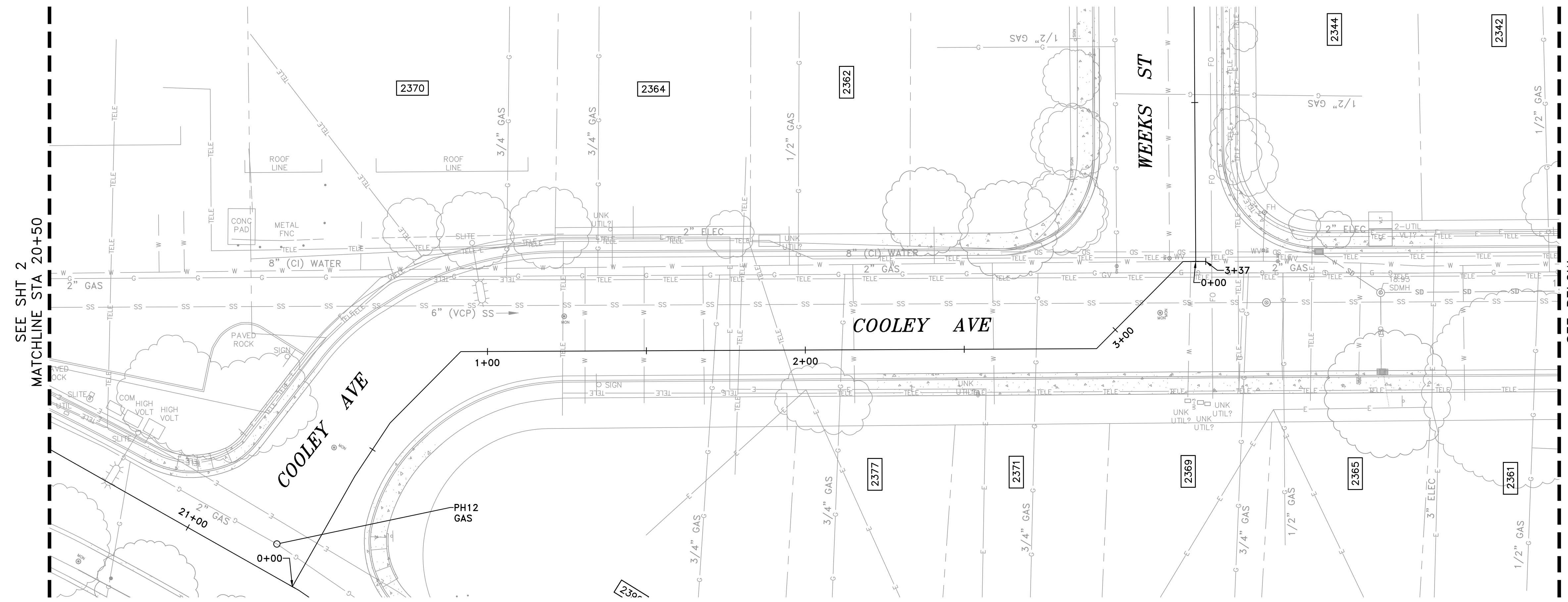
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 (415)534-7070 • Fax (650)344-9920 • www.freyerlaureta.com



UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
UNIVERSITY AVE AND COOLEY AVE

SHEET
2
 OF 5 SHEETS
 JOB NO.
221005

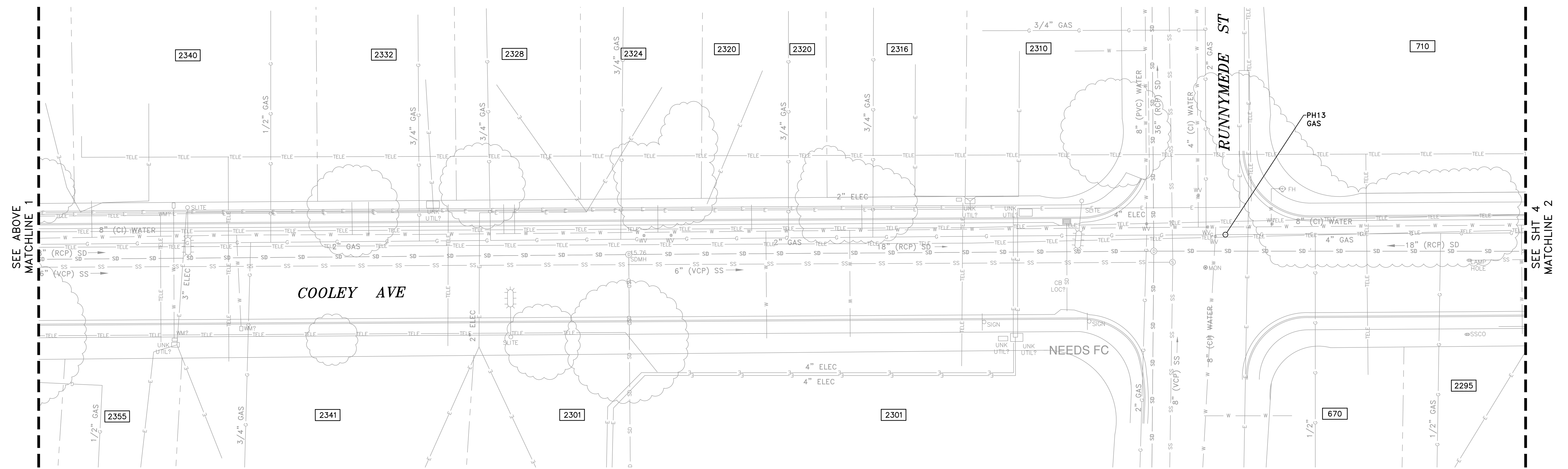
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 PLOT DATE: 07-28-23 PLOTTED BY: kyau



LEGEND

— TELE —	EXISTING COMMUNICATIONS LINE
— FO —	EXISTING FIBER OPTICS LINE
— G —	EXISTING GAS LINE
— E —	EXISTING UNDERGROUND ELECTRICAL LINE
— W —	EXISTING WATER LINE
— SS —	EXISTING SANITARY SEWER LINE
— SD —	EXISTING STORM DRAIN LINE

NOTE: POTHOLE LOCATIONS ARE APPROXIMATED BASED ON SWING TIE DISTANCES IN POTHOLOGING REPORT BY BESS TESTLAB.



DATE:	7/27/23	7/27/23	POTHOLE LOCATIONS
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



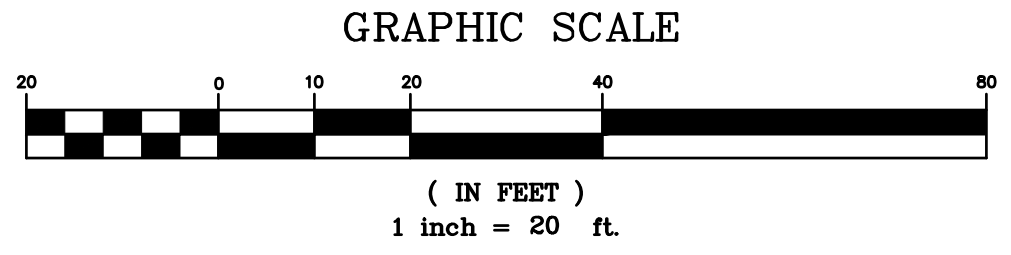
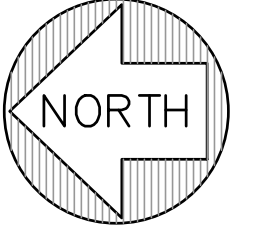
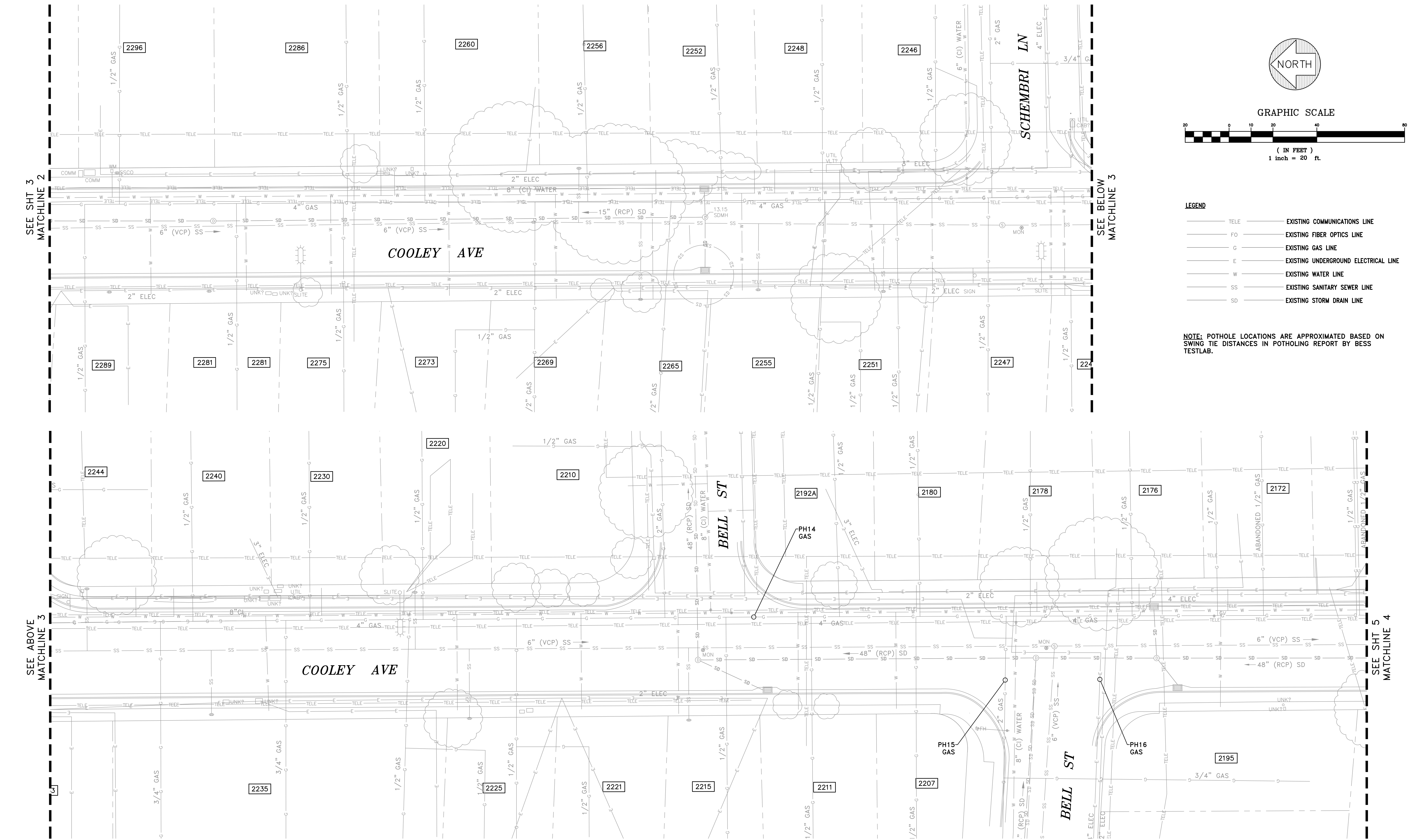
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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
UNIVERSITY AVE AND COOLEY AVE

SHEET
3
 OF 5 SHEETS
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\Exhibit\2023-07-26 Potholing Report Locations\Pothole Locations.dwg
 PLOT DATE: 07-28-23 PLOTTED BY: kyau



LEGEND

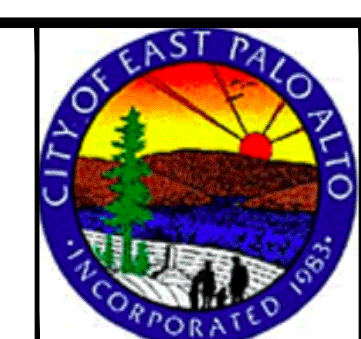
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FO	EXISTING FIBER OPTICS LINE
G	EXISTING GAS LINE
E	EXISTING UNDERGROUND ELECTRICAL LINE
W	EXISTING WATER LINE
SS	EXISTING SANITARY SEWER LINE
SD	EXISTING STORM DRAIN LINE

NOTE: POT HOLE LOCATIONS ARE APPROXIMATED BASED ON SWING TIE DISTANCES IN POT HOLING REPORT BY BESS TESTLAB.

DATE:	7/27/23	7/27/23	POTHOLE LOCATIONS
SCALE:	AS NOTED		
DESIGNED:	JJF		
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CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



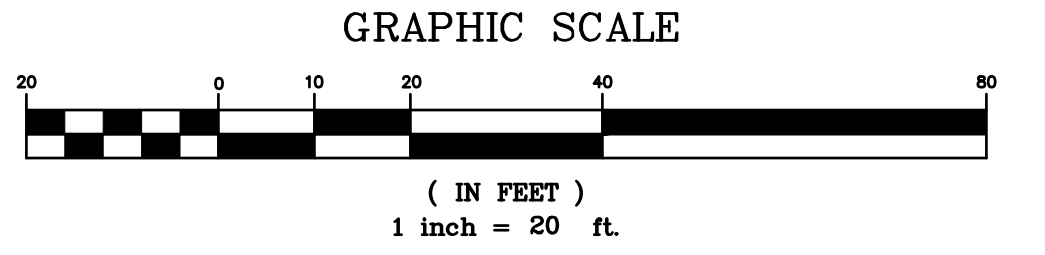
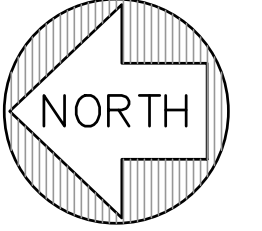
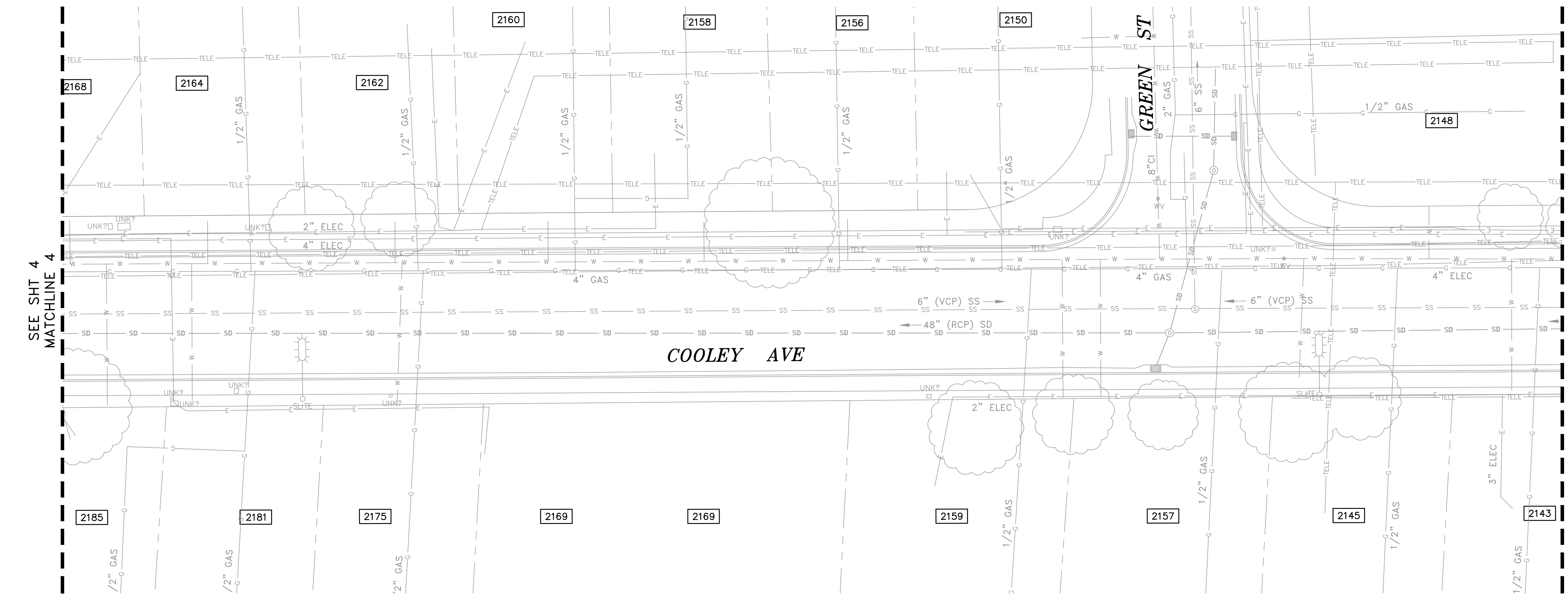
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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
UNIVERSITY AVE AND COOLEY AVE

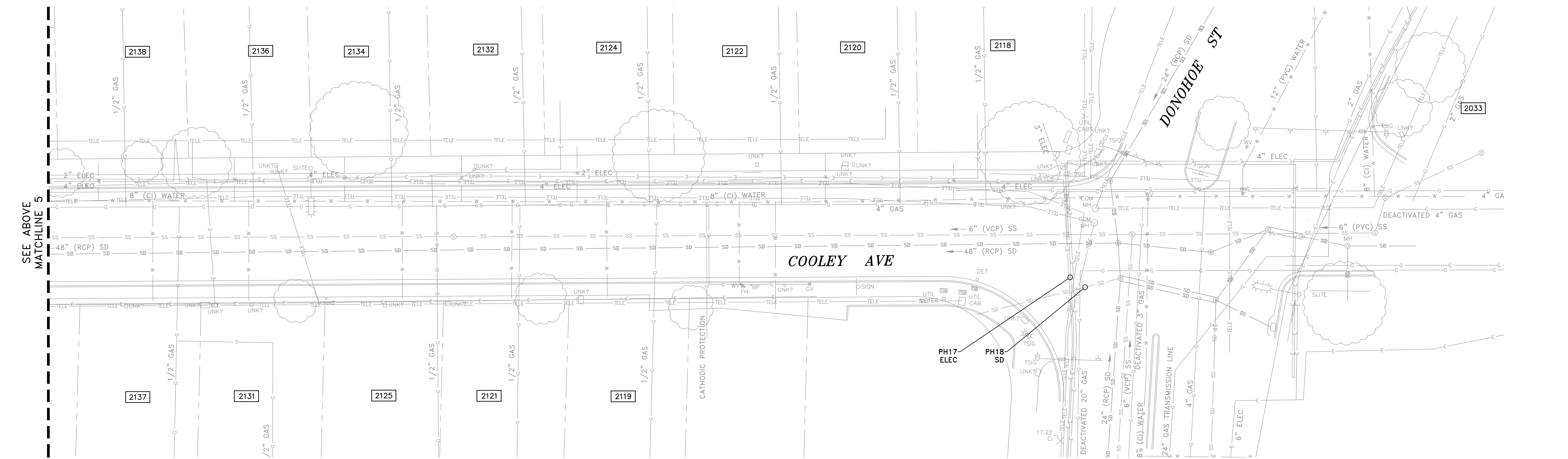
SHEET
4
 OF 5 SHEETS
 JOB NO.
221005

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\Exhibit\2023-07-26 Potholing Report Locations.dwg
 PLOT DATE: 07-28-23 PLOTTED BY: kyau



- LEGEND**
- TELE — EXISTING COMMUNICATIONS LINE
 - FO — EXISTING FIBER OPTICS LINE
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NOTE: POTHOLE LOCATIONS ARE APPROXIMATED BASED ON SWING TIE DISTANCES IN POTHOLING REPORT BY BESS TESTLAB.



DATE:	7/27/23	7/27/23	POTHOLE LOCATIONS
SCALE:	AS NOTED		
DESIGNED:	JJF		
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BY	DATE	DESCRIPTION OF REVISIONS	APP'D



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**UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
 CITY OF EAST PALO ALTO
 POTHOLE LOCATIONS
 UNIVERSITY AVE AND COOLEY AVE**

SHEET
5
 OF 5 SHEETS
 JOB NO.
221005

Pothole Tabulation Sheet for FREYER & LAURETA INC. - Palo Alto

Locating Methods: (PH - Pothole); (GPR - Ground Penetrating Radar); (EP - Electronic Probing via Radio/ RF Detection, Magnetic Detection, PCM and others)

Pothole No.	Locating Method	Utility Type	Utility Material	Utility Diameter (in)	Soil Type	Paving Type	Paving Thickness (in)	Utility Depth (in)	Notes
1	PH	Water	N/A	N/A	Rocky,Hard Pan,Dirt	Asphalt	3"	N/A	Cleared 104" Dug on USA marks
1A	PH	Water	Cooper	3/4"	Rocky,Hard Pan,Dirt	Asphalt	3"	33"	USA marks where 70" off Roy (Bess test lab) came to locate
1B	PH	Water	N/A	N/A	Rocky,Hard Pan,Dirt	Asphalt	3"	N/A	Cleared 60" dug on USA marks
2	PH	Gas	Steel	2"	Clay,Sand	Asphalt	3"	40"	Pipe traveling northeast to southwest
3	PH	Gas	Steel	2"	Hard Pan,Dirt	Asphalt	4"	35"	Pipe traveling northeast to southwest
4	PH	A)Gas B)Electric	A)Plastic B)PVC	A)2" B)4"	Rocky,Sand	Asphalt	15"	A)44" B)43"	Found Gas at 44" and Electric at 43" in the same joint trench both utilities running east to west. No USA water marks
5	PH	Communication	Steel	2"	Dirt,Hard Pan	Asphalt	16"	37"	Pipe traveling east to west
5A	PH	Communication	PVC	4"	Hard Pan,Dirt	Asphalt	17"	36"	Pipe traveling east to west
6	PH	Water	N/A	N/A	Dirt	Asphalt	17"	N/A	Cleared 88" no USA MARKS
7	PH	Electric	PVC	8"	Dirt	Asphalt	17"	41"	Pipe traveling east to west
8	PH	A)Gas B)Comm.	A)Steel B)PVC	A)6" B)8"	Dirt	Asphalt	16"	A)43" B)31"	In same pothole found Two 8" pvc comm. pipes Parallel at 31" Traveling Northeast to southwest Gas 6" steel pipe at 43" traveling east to west
10	PH	Electric	Steel	8"	Hard Pan,Dirt	Asphalt	16"	61"	Pipe traveling east to west
11	PH	Water	N/A	N/A	Rocky,Dirt	Asphalt	18"	N/A	Clear 120" dug side to side 14" both directions
11A	PH	Water	Cast Iron	8"	Rocky,Dirt	Asphalt	16"	37"	Pipe traveling northeast to southwest
12	PH	Gas	Plastic	2"	Dirt	Asphalt	18"	37"	Pipe traveling north to south

13	PH	Gas	Steel	4"	Rocky	Asphalt	5"	35"	Pipe traveling north to south
14	PH	Gas	Steel	4"	Rocky,Dirt,Sand	Asphalt	5"	30"	Pipe traveling north to south
15	PH	Gas	Steel	2"	Hard Pan,Dirt	Asphalt	4"	40"	Pipe traveling from east to west
16	PH	Electric	PVC	2"	Rocky,Sand	Asphalt	4"	38"	Pipe traveling northeast to southwest
17	PH	Electric	PVC	4"	Rocky	Asphalt	7"	43"	Two 4" PVC pipes parallel at 43" traveling east to west
18	PH	Communication	N/A	N/A	Rocky,Dirt	Asphalt	26"	N/A	Dug on USA marks found 14" rcp storm drain at 69" running towards the manhole

Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	03/31/21
Creator	Juan Rojas
Latitude	37.478297
Longitude	-122.137200
Date	03/31/21 07:56 PM

Utility Data

Test hole No.
PH-1
Utility Type/Owner
Water
Material
N/A
Soil
Rocky, hard pan , dirt
Pavement Thickness
3"
Diameter
N/A
Ground to top of Utility
N/A
Swing Tie 1
From face of curb 57" northw est to center of pothole
Swing Tie 2
From monument cover 195" southeast to center of pothole
Swing Tie 3
Notes
Cleared 104" Dug on USA marks



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	03/31/21
Creator	Juan Rojas
Latitude	37.478415
Longitude	-122.136719
Date	03/31/21 08:04 PM

Utility Data

Test hole No.
PH-1A
Utility Type/Owner
Water
Material
Copper
Soil
Rocky , hard pan , dirt
Pavement Thickness
3"
Diameter
3/4"
Ground to top of Utility
33"
Swing Tie 1
From face of curb 53" northw est to PK nail
Swing Tie 2
From monument cover 150" southeast to PK nail
Swing Tie 3
Notes
USA marks w here 70" off Roy (Bess test lab) came to locate



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	03/31/21
Creator	Juan Rojas
Latitude	37.478411
Longitude	-122.136808
Date	03/31/21 07:59 PM

Utility Data	
Test hole No.	
	PH-1B
Utility Type/Owner	
	Water
Material	
	N/A
Soil	
	Rocky, hard pan , dirt
Pavement Thickness	
	3"
Diameter	
	N/A
Ground to top of Utility	
	N/A
Swing Tie 1	
	From face of curb 57" northw est to center of pothole
Swing Tie 2	
	From monument cover 180" southeast
Swing Tie 3	
Notes	
	Cleared 60" dug on USA marks

Image Unavailable



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	03/31/21
Creator	Juan Rojas
Latitude	37.478046
Longitude	-122.136563
Date	03/31/21 10:01 PM

Utility Data

Test hole No.
PH-2
Utility Type/Owner
Gas
Material
Steel
Soil
Clay, sand
Pavement Thickness
3"
Diameter
2"
Ground to top of Utility
40"
Swing Tie 1
From face of curb 88" southw est to PK nail
Swing Tie 2
From w ater valve cover 427" southeast to PK nail
Swing Tie 3
Notes
Pipe traveling northeast to southw est



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	03/31/21
Creator	Juan Rojas
Latitude	37.477632
Longitude	-122.135760
Date	03/31/21 08:54 PM

Utility Data

Test hole No.
PH-3
Utility Type/Owner
Gas
Material
Steel
Soil
Hard pan ,dirt
Pavement Thickness
4"
Diameter
2"
Ground to top of Utility
35"
Swing Tie 1
From manhole (center of road/intersection)338""east to PK nail
Swing Tie 2
From the face of curb 132" southw est to PK nail
Swing Tie 3
Notes
Pipe traveling northeast to southw est



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/01/21
Creator	Juan Rojas
Latitude	37.475923
Longitude	-122.139619
Date	04/01/21 10:54 PM

Utility Data

Test hole No.
PH-4
Utility Type/Owner
Gas(A), electric (B)
Material
Gas (A) plastic , elec.(B) pvc
Soil
Rocky, sand
Pavement Thickness
15"
Diameter
(A) 2" , (B) 4"
Ground to top of Utility
(A) 44" , (B) 43"
Swing Tie 1
From center of monument cover 256" w est to gas PK NAIL
Swing Tie 2
From face of curb 249" east to (gas) PK NAIL
Swing Tie 3
Notes
Found Gas @44" and Electric @43" in the same joint trench both utilities running east to w est. No USA w ater marks



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/02/21
Creator	Juan Rojas
Latitude	37.471598
Longitude	-122.139377
Date	04/02/21 08:35 PM

Utility Data

Test hole No.
PH-5
Utility Type/Owner
Comm.
Material
Steel
Soil
Dirt, hard pan
Pavement Thickness
16"
Diameter
2"
Ground to top of Utility
37"
Swing Tie 1
From center median curb 325"West to PK nail
Swing Tie 2
From center of crossw alk line (bay road) 141" north to PK nail
Swing Tie 3
Notes
Pipe traveling east to west



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/02/21
Creator	Juan Rojas
Latitude	37.471036
Longitude	-122.138582
Date	04/02/21 08:42 PM

Utility Data

Test hole No.
PH-5A
Utility Type/Owner
Comm.
Material
PVC
Soil
Hard pan, dirt
Pavement Thickness
17"
Diameter
4"
Ground to top of Utility
36"
Swing Tie 1
From comm. box cover(Caltrans) 279"East to PK nail
Swing Tie 2
From monument cover 392" north To PK nail
Swing Tie 3
Notes
Pipe traveling East to west



Form	Bess Utility Solutions - Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/02/21
Creator	Juan Rojas
Latitude	37.471741
Longitude	-122.139588
Date	04/02/21 09:34 PM

Utility Data

Test hole No.
PH-6
Utility Type/Owner
Water
Material
N/A
Soil
Dirt
Pavement Thickness
17"
Diameter
N/A
Ground to top of Utility
N/A
Swing Tie 1
Swing Tie 2
Swing Tie 3
Notes
Cleared 88" no USA MARKS



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/02/21
Creator	Juan Rojas
Latitude	37.471139
Longitude	-122.138720
Date	04/02/21 08:50 PM

Utility Data

Test hole No.
PH-7
Utility Type/Owner
Electric
Material
PVC
Soil
Dirt
Pavement Thickness
17"
Diameter
8"
Ground to top of Utility
41"
Swing Tie 1
From monument cover 318" north to PK nail
Swing Tie 2
From center of comm. box cover (cal trans) 284" southeast
Swing Tie 3
Notes
Pipe traveling east to west



Form	Bess Utility Solutions - Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/02/21
Creator	Juan Rojas
Latitude	37.471023
Longitude	-122.138565
Date	04/02/21 09:11 PM

Utility Data

Test hole No.
PH-8
Utility Type/Owner
(A) gas , (B) comm.
Material
(A) steel , (B) PVC
Soil
Dirt
Pavement Thickness
16"
Diameter
(A) 6" , (B) 8"
Ground to top of Utility
(A) gas @43" , (B) comm. @31"
Swing Tie 1
From center of crosswalk line 113" south to gas PK nail
Swing Tie 2
From center of cal trans comm. comm. box cover 336" southeast to gas PK nail
Swing Tie 3
Notes
In same pothole found Tw o 8" pvc comm. pipes Parallel @31" Traveling Northeast to southw est Gas 6" steel pipe @43" traveling east to west



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/02/21
Creator	Juan Rojas
Latitude	37.471024
Longitude	-122.138565
Date	04/02/21 05:44 PM

Utility Data

Test hole No.
PH-10
Utility Type/Owner
Electric
Material
Steel
Soil
Hard pan, dirt
Pavement Thickness
16"
Diameter
8"
Ground to top of Utility
61"
Swing Tie 1
From monument cover 100"north to PK nail
Swing Tie 2
From crossw alk line (bay rd) 225" to PK nail
Swing Tie 3
Notes
Pipe traveling east to west



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/05/21
Creator	Juan Rojas
Latitude	37.471706
Longitude	-122.139533
Date	04/05/21 04:42 PM

Utility Data

Test hole No.
PH-11
Utility Type/Owner
Water
Material
N/A
Soil
Rocky,dirt
Pavement Thickness
18"
Diameter
N/A
Ground to top of Utility
NA
Swing Tie 1
Swing Tie 2
Swing Tie 3
Notes
Clear 120" dug side to side 14" both directions



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/05/21
Creator	Juan Rojas
Latitude	37.471595
Longitude	-122.139569
Date	04/05/21 05:11 PM

Utility Data	
Test hole No.	
	PH-11A
Utility Type/Owner	
	Water
Material	
	Cast iron
Soil	
	Rocky, dirt
Pavement Thickness	
	16"
Diameter	
	8"
Ground to top of Utility	
	37"
Swing Tie 1	
	From face of curb 110"w est to PK NAIL
Swing Tie 2	
	From center of w ater valve cover 206" North to PK nail
Swing Tie 3	
Notes	
	Pipe traveling northeast to southw est



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/01/21
Creator	Juan Rojas
Latitude	37.470802
Longitude	-122.139716
Date	04/01/21 09:21 PM

Utility Data

Test hole No.
PH-12
Utility Type/Owner
Gas
Material
Plastic
Soil
Dirt
Pavement Thickness
18"
Diameter
2"
Ground to top of Utility
37"
Swing Tie 1
From center of cross walk lane line 55" west to PK nail
Swing Tie 2
From stop sign pole 431" southw est to PK nail
Swing Tie 3
Notes
Pipe traveling north to south



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/05/21
Creator	Juan Rojas
Latitude	37.471123
Longitude	-122.138542
Date	04/05/21 06:15 PM

Utility Data

Test hole No.
PH-13
Utility Type/Owner
Gas
Material
Steel
Soil
Rocky
Pavement Thickness
5"
Diameter
4"
Ground to top of Utility
35"
Swing Tie 1
From center of water valve cover 58" southeast to PK nail
Swing Tie 2
From water center water valve cover 231" southw est to PK nail
Swing Tie 3
Notes
Pipe traveling north to south



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/01/21
Creator	Juan Rojas
Latitude	37.465802
Longitude	-122.139042
Date	04/01/21 06:34 PM

Utility Data

Test hole No.
PH-14
Utility Type/Owner
Gas
Material
Steel
Soil
Rocky , dirt, sand
Pavement Thickness
5"
Diameter
4"
Ground to top of Utility
30"
Swing Tie 1
From center of water valve cover 122" south to PK nail
Swing Tie 2
From face of curb 155" west to PK nail
Swing Tie 3
Notes
Pipe traveling north to south



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/01/21
Creator	Juan Rojas
Latitude	37.465577
Longitude	-122.139436
Date	04/01/21 05:25 PM

Utility Data

Test hole No.
PH-15
Utility Type/Owner
Gas
Material
Steel
Soil
Hard pan , dirt
Pavement Thickness
4"
Diameter
2"
Ground to top of Utility
40"
Swing Tie 1
From center of S/S manhole 240"northw est to PK nail
Swing Tie 2
From center of fire extinguisher 264" east to PK NAIL
Swing Tie 3
Notes
Pipe traveling from east to w est



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/01/21
Creator	Juan Rojas
Latitude	37.465469
Longitude	-122.139387
Date	04/01/21 05:56 PM

Utility Data

Test hole No.
PH-16
Utility Type/Owner
Electric
Material
PVC
Soil
Rocky, sand
Pavement Thickness
4"
Diameter
2"
Ground to top of Utility
38"
Swing Tie 1
From center of storm drain 332"northw est to PK nail
Swing Tie 2
From stop sign pole (Cooley and bell ave) 225" northeast to PK nail
Swing Tie 3
Notes
Pipe traveling northeast to southw est



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/05/21
Creator	Juan Rojas
Latitude	37.460861
Longitude	-122.140823
Date	04/05/21 08:10 PM

Utility Data

Test hole No.
PH#17
Utility Type/Owner
ELECTRIC
Material
PVC
Soil
ROCKY
Pavement Thickness
7"
Diameter
4"
Ground to top of Utility
43"
Swing Tie 1
FROM CENTER OF COMM. MANHOLE 281" WEST TO PK NAIL
Swing Tie 2
FROM CENTER S/S MANHOLE 225" NORTH TO PK NAIL
Swing Tie 3
Notes
TWO 4" PVC PIPES PARALLEL AT 43" TRAVELING EAST TO WEST



Form	Bess Utility Solutions -Test Hole Data
Version	12
Project	P6-1-1160- Unviersity Ave- Palo Alto-East Palo Alto Water 1
Site	04/05/21
Creator	Juan Rojas
Latitude	37.462668
Longitude	-122.139387
Date	04/05/21 07:40 PM

Utility Data

Test hole No.
PH-18
Utility Type/Owner
Comm.
Material
N/A
Soil
Rocky, dirt
Pavement Thickness
26"
Diameter
N/A
Ground to top of Utility
N/A
Swing Tie 1
Swing Tie 2
Swing Tie 3
Notes
Dug on USA marks found 14" rcp storm drain @69" running tow ards the manhole



PART II – UNIVERSITY AVENUE

SEE FOLLOWING PAGE



**Freyer & Laureta
Potholing Report**

5/30/2023
5/31/2023

EXARO Technologies Corporation

1831 Bayshore Highway

Burlingame, California

Mario Lopez

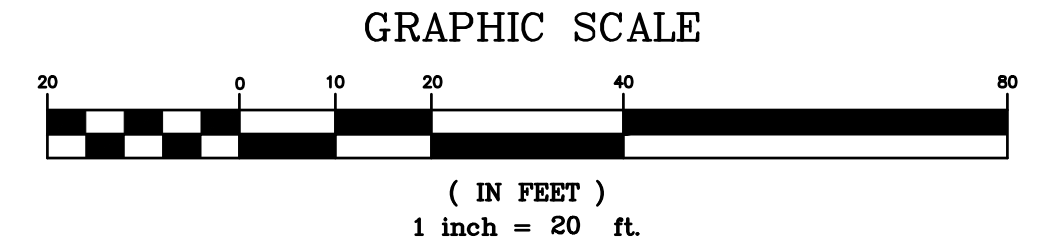
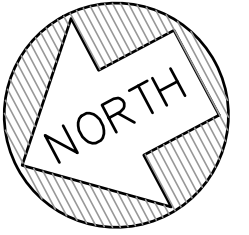
Office (650)777-4324

Cell: (408)221-5090

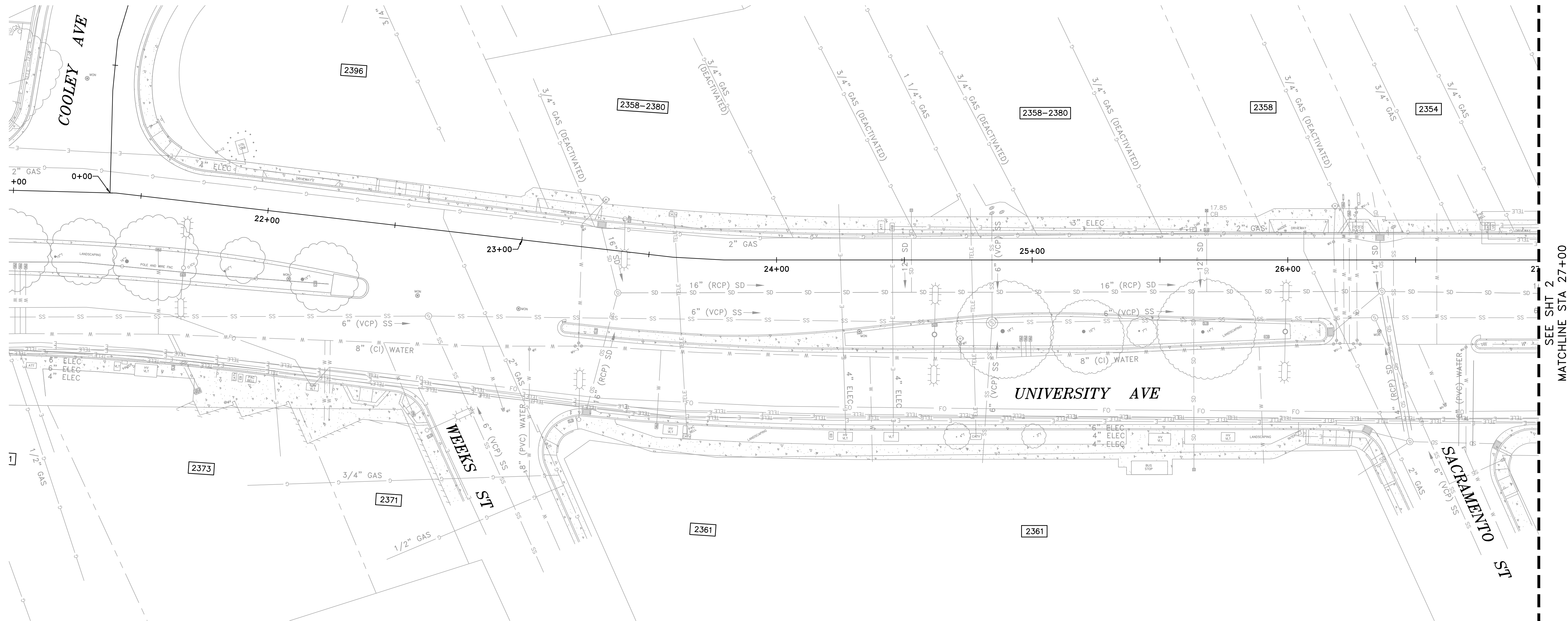
mle@exarotec.com

LEGEND

- TELE — EXISTING COMMUNICATIONS LINE
- FO — EXISTING FIBER OPTICS LINE
- G — EXISTING GAS LINE
- E — EXISTING UNDERGROUND ELECTRICAL LINE
- W — EXISTING WATER LINE
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- SD — EXISTING STORM DRAIN LINE



NOTE: POT HOLE LOCATIONS ARE APPROXIMATED BASED ON LOCATION REFERENCES IN POT HOLING REPORT BY EXARO.



SEE SH 2
MATCHLINE STA 27+00

DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\Exhibit\2023-07-26 Pot Holing Report Locations\Pot Holing Locations.dwg
PLOT DATE: 07-28-23 PLOTTED BY: kyau

DATE:	7/27/23	7/27/23	POT HOLE LOCATIONS
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
	BY	DATE	DESCRIPTION OF REVISIONS
			APP'D



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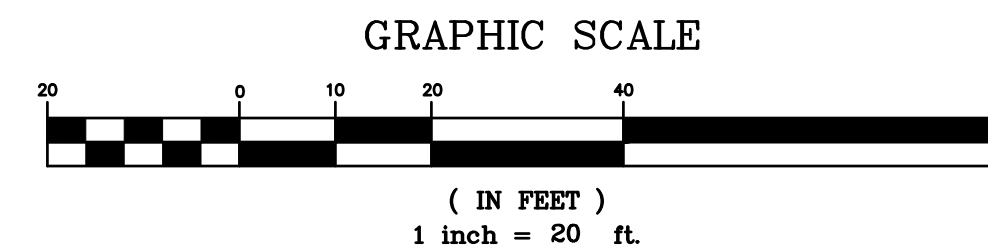
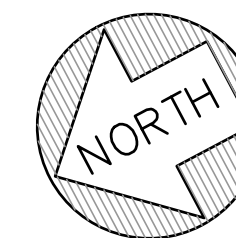


UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POT HOLE LOCATIONS
UNIVERSITY AVE

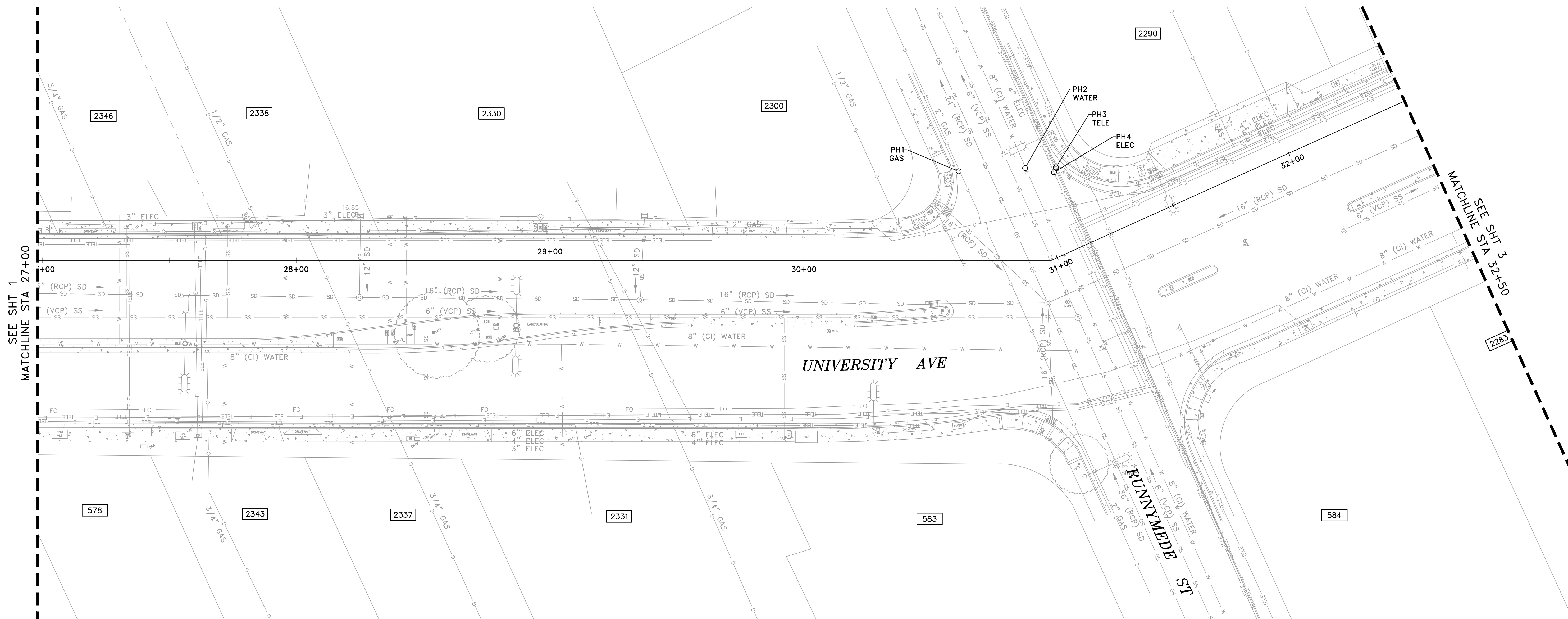
SHEET
1
OF 6 SHEETS
JOB NO.
221005

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PLOT DATE: 07-28-23 PLOTTED BY: kyau

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BY	DATE	DESCRIPTION OF REVISIONS	APP'D



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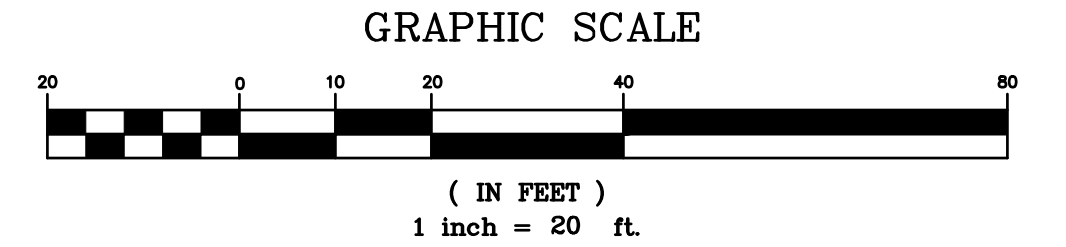
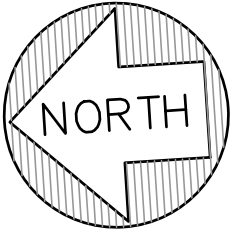


UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
UNIVERSITY AVE

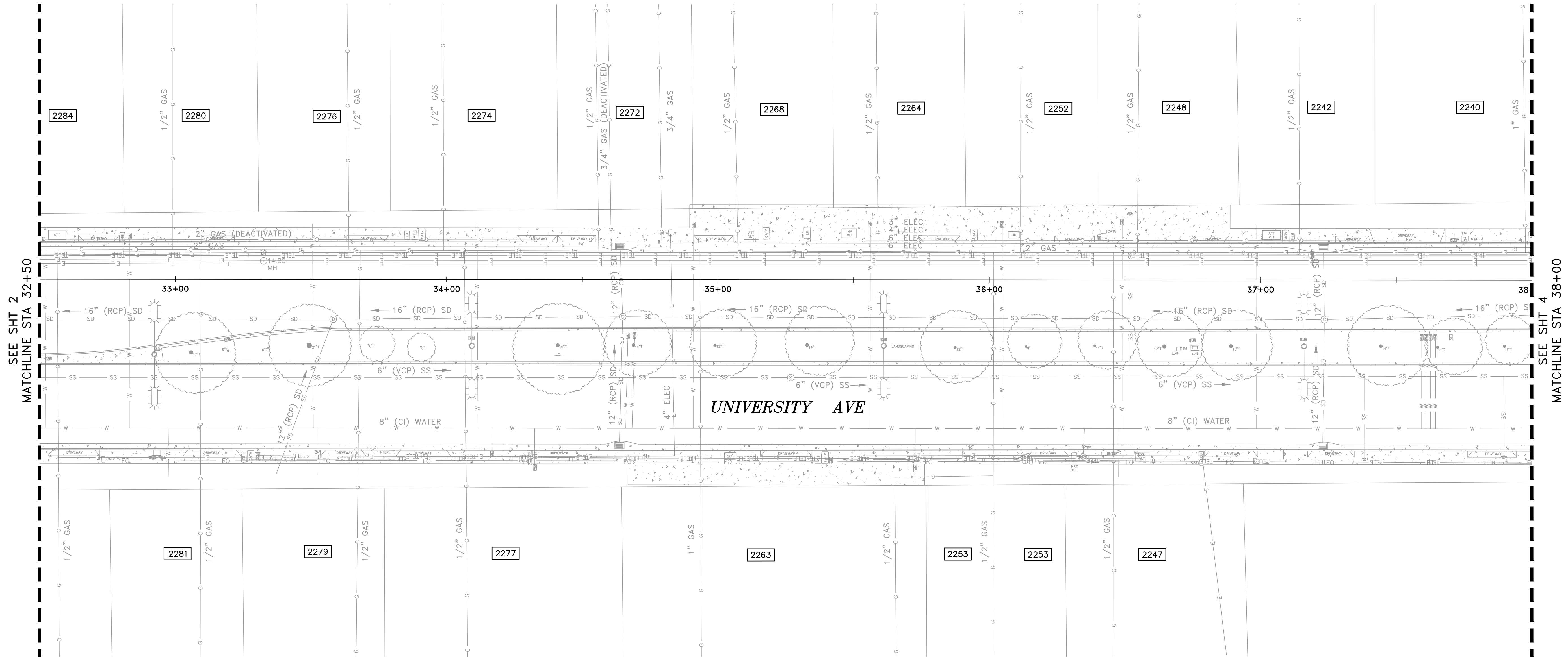
SHEET
2
OF 6 SHEETS
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BY	DATE	DESCRIPTION OF REVISIONS	APP'D

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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POT HOLE LOCATIONS
UNIVERSITY AVE

SHEET	3
OF 6 SHEETS	
JOB NO.	221005

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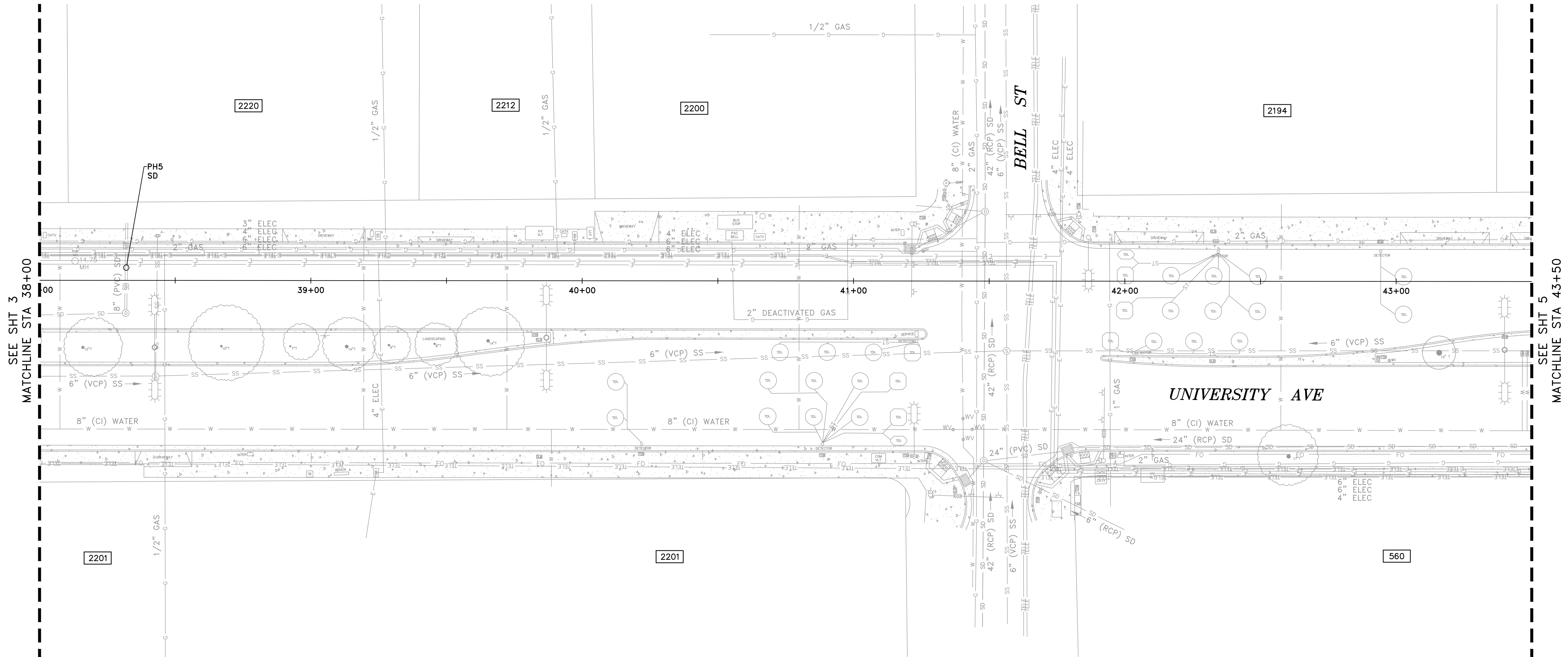


GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

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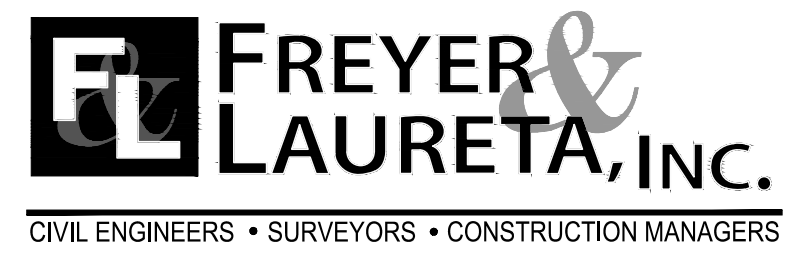


SEE SHT 3
MATCHLINE STA 38+00

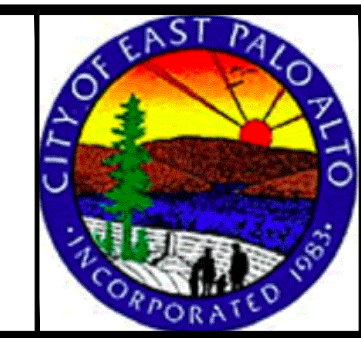
SEE SHT 5
MATCHLINE STA 43+00

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PLOT DATE: 07-28-23 PLOTTED BY: kyau

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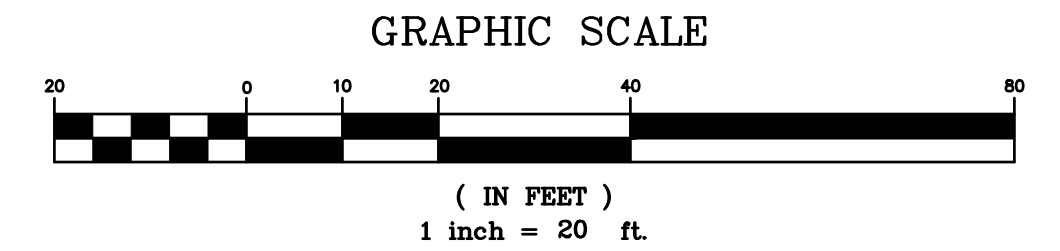
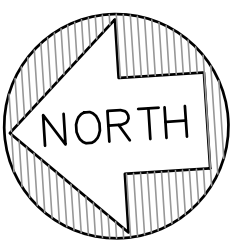


UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
UNIVERSITY AVE

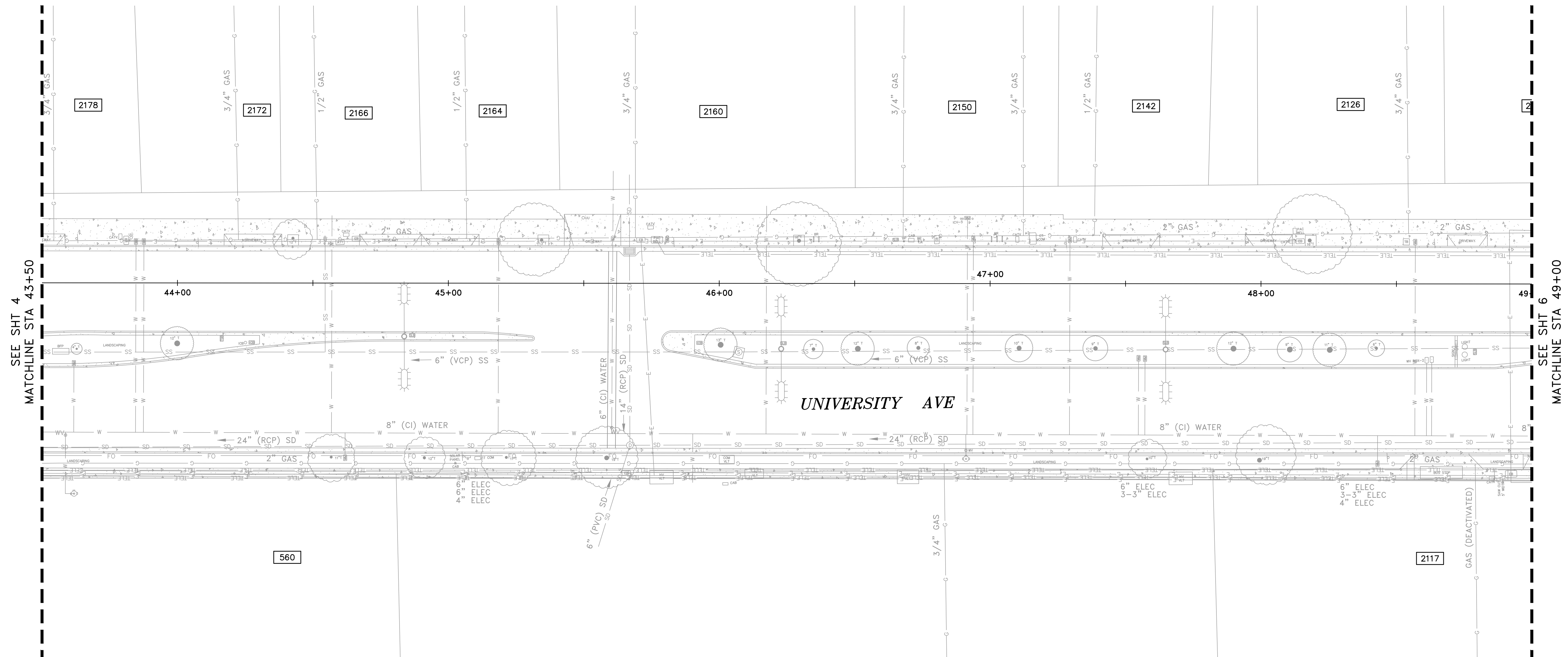
SHEET
4
OF 6 SHEETS
JOB NO.
221005

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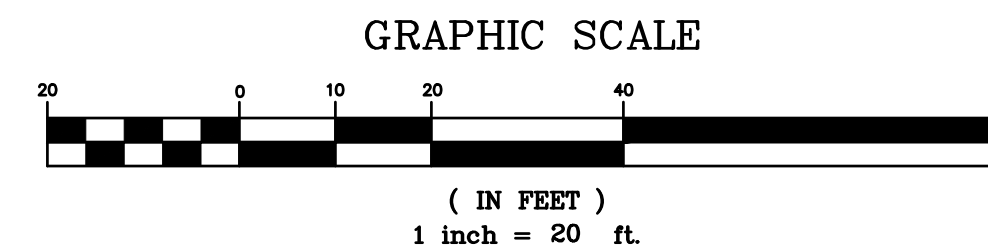
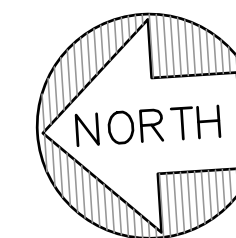


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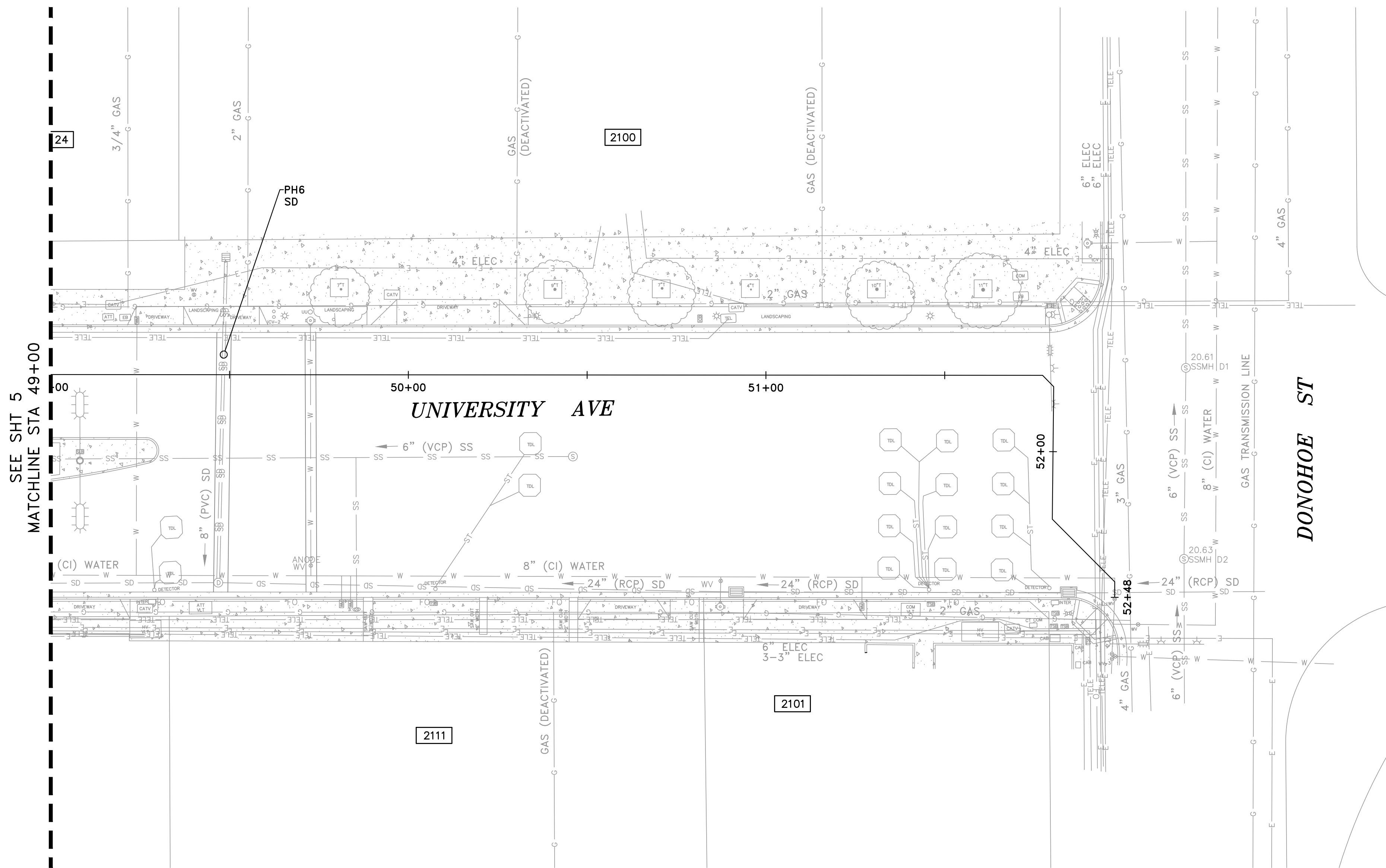


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 PLOT DATE: 07-28-23 PLOTTED BY: kyau

DATE:	7/27/23	7/27/23	POTHOLE LOCATIONS
SCALE:	AS NOTED		
DESIGNED:	JJF		
DRAWN:	KMY		
CHECKED:	JJT		
PROJ. ENGR:	JJF		
BY	DATE	DESCRIPTION OF REVISIONS	APP'D



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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
UNIVERSITY AVE

SHEET
6
 OF 6 SHEETS
 JOB NO.
221005

Subsurface Utility Report	
Client	Freyer & Laureta
Project #	23-1057
City	East Palo Alto
Date	5/30/2023



Pothole # 4

Street: University Ave & Runnymede St

<p>Cut Size: 1' x 1'</p> <table border="1"> <tr> <td>Asphalt:</td> <td>12"</td> </tr> <tr> <td>Concrete:</td> <td>0</td> </tr> <tr> <td>Depth:</td> <td>46"</td> </tr> <tr> <td>Utility:</td> <td>Electric</td> </tr> <tr> <td>Size:</td> <td>4"</td> </tr> <tr> <td>Material:</td> <td>PVC</td> </tr> <tr> <td>Soil:</td> <td>Dirt, Rocks</td> </tr> </table>		Asphalt:	12"	Concrete:	0	Depth:	46"	Utility:	Electric	Size:	4"	Material:	PVC	Soil:	Dirt, Rocks	<p>Location: 82" N from face of curb. 112" W from street light christy box.</p>
Asphalt:	12"															
Concrete:	0															
Depth:	46"															
Utility:	Electric															
Size:	4"															
Material:	PVC															
Soil:	Dirt, Rocks															
		<p>Notes:</p>														



Subsurface Utility Report	
Client	Freyer & Laureta
Project #	23-1057
City	East Palo Alto
Date	5/30/2023



Pothole # 3

Street: University Ave & Runnymede St

Cut Size: 1' x 1'		Location: 59" N from face of curb. 139" W from street light christy box.
Asphalt: 10" Concrete: Depth: 33" Utility: Telephone Size: 3 - 4" Material: PVC Soil: Clay, Sand		Notes:



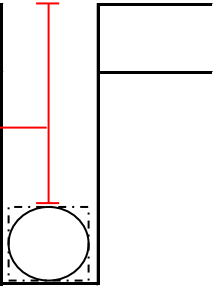
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Subsurface Utility Report	
Client	Freyer & Laureta
Project #	23-1057
City	East Palo Alto
Date	5/30/2023



Pothole # 1

Street: University Ave & Runnymede St

<p>Cut Size: 1' x 1'</p> <p>Asphalt: 7"</p> <p>Concrete:</p> <p>Depth: 37"</p> <p>Utility: Gas</p> <p>Size: 2"</p> <p>Material: Plastic</p> <p>Soil: Dirt, Sand</p> 		<p>Location: 32" S from face of curb. 124" W from fire hydrant.</p> <p>Notes:</p>
--	--	---



Date:	5/31/2023
Prepared For:	Freyer & Laureta
Project #:	23-1057
Location:	East Palo Alto



PH #	Street	Cut Size	Asph	Conc.	Soil	Utility	Utility Size	Material	Depth	Location Reference / Notes
6	2124 University Ave	1' x 1'	15"		Slurry	Storm Drain	2 - 8"	PVC	Slurry @ 17"	Possible slurry cap at 17". 94" W from face of curb. 195" N from street light.
5	2220 University Ave	1' x 1'	13"		Dirt, Rock	Storm Drain	2 - 8"	PVC	55"	105" W from face of curb. 77" S from water meter.
2	University Ave & Runnymede St	1' x 1'	11"		Dirt, Rock	Water	8"	Steel	40"	172" N from face of curb. 212" W from water valve.
										Note: PH6, dipped, roddered storm drain on the east side - Top of pipe @ 3'.
Foreman				Add'l Crew/Flagger					Standby Rep	
Technician				Add'l Crew/Flagger					Client Rep	
Timesheet	Date	Start/End	Hours	OT	Night Stay	Check	Check	Additional Equipment/Material used:		
Monday		/				Arrow Board <input type="checkbox"/>	Electronic Detector <input type="checkbox"/>			
Tuesday		/				Cold patch <input type="checkbox"/>	GPR <input type="checkbox"/>			
Wednesday	5/31/2023	/	8			Class II <input type="checkbox"/>	Pk nails & shiners <input type="checkbox"/>			
Thursday		/				Hotmix Aspht <input type="checkbox"/>	Vibra-plate <input type="checkbox"/>	Field Changes or Special Requests from Client Representative:		
Friday		/				CDF/slurry <input type="checkbox"/>	Flat bed <input type="checkbox"/>			
Saturday		/				Ready-mix conc <input type="checkbox"/>	Pick-up truck # 27 <input checked="" type="checkbox"/>			
Sunday		/				Cutback <input type="checkbox"/>	Vac rig # 9 <input checked="" type="checkbox"/>	Client Representative Signature:		

Subsurface Utility Report	
Client	Freyer & Laureta
Project #	23-1057
City	East Palo Alto
Date	5/31/2023



Pothole # 6

Street: 2124 University Ave

<p>Cut Size: 1' x 1'</p>		<p>Location: Possible slurry cap at 17". 94" W from face of curb. 195" N from street light.</p>
<p>Asphalt: 15" Concrete: Depth: Slurry @ 17" Utility: Storm Drain Size: 2 - 8" Material: PVC Soil: Slurry</p>		<p>Notes: PH6, dipped, roddered storm drain on the east side - Top of pipe @ 3'.</p>

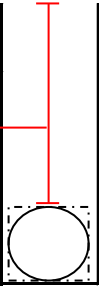


Subsurface Utility Report	
Client	Freyer & Laureta
Project #	23-1057
City	East Palo Alto
Date	5/31/2023



Pothole # 5

Street: 2220 University Ave

<p>Cut Size: 1' x 1'</p> <p>Asphalt: 13"</p> <p>Concrete:</p> <p>Depth: 55"</p> <p>Utility: Storm Drain</p> <p>Size: 2 - 8"</p> <p>Material: PVC</p> <p>Soil: Dirt, Rock</p> 		<p>Location: 105" W from face of curb. 77" S from water meter.</p> <p>Notes:</p>
--	--	--



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Subsurface Utility Report	
Client	Freyer & Laureta
Project #	23-1057
City	East Palo Alto
Date	5/31/2023



Pothole # 2

Street: University Ave & Runnymede St

<p>Cut Size: 1' x 1'</p> <p>Asphalt: 11"</p> <p>Concrete:</p> <p>Depth: 40"</p> <p>Utility: Water</p> <p>Size: 8"</p> <p>Material:</p> <p>Soil: Dirt, Rock</p>		<p>Location: 172" N from face of curb. 212" W from water valve.</p> <p>Notes:</p>
--	--	---



PART III – WEEKS STREET

SEE FOLLOWING PAGE



Freyer and Laureta Potholing Report

5/4/2023

5/5/2023

EXARO Technologies Corporation

1831 Bayshore Highway

Burlingame, California

Mario Lopez

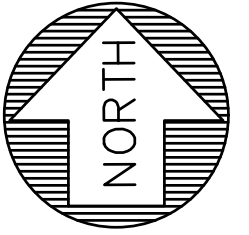
Office (650)777-4324

Cell: (408)221-5090

mle@exarotec.com

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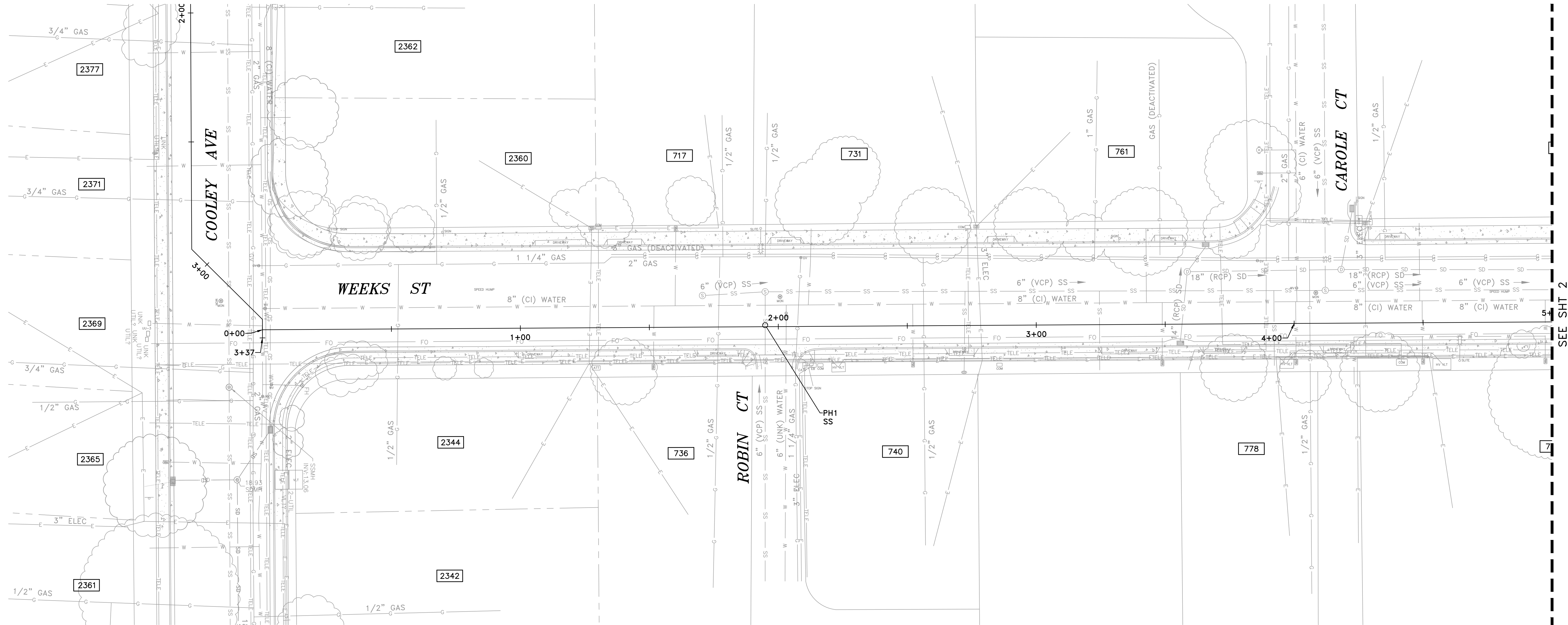


GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

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SEE SHT 2
MATCHLINE STA 5+00

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	BY	DATE	DESCRIPTION OF REVISIONS	APP'D

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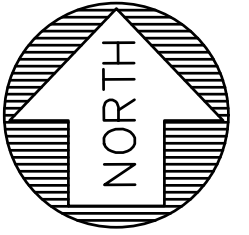


**UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
WEEKS ST**

SHEET
1
OF 5 SHEETS
JOB NO.
221005

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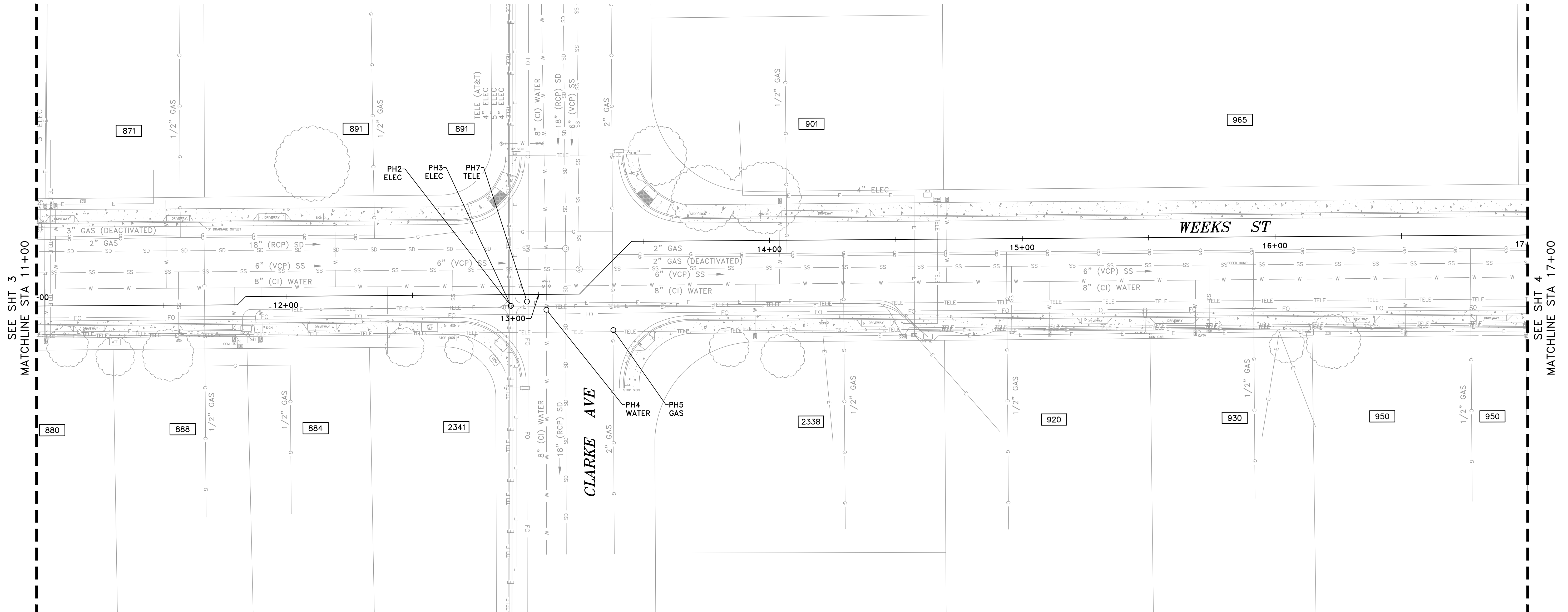


GRAPHIC SCALE



(IN FEET)
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SEE SHT 3
MATCHLINE STA 11+00

SEE SHT 4
MATCHLINE STA 17+00

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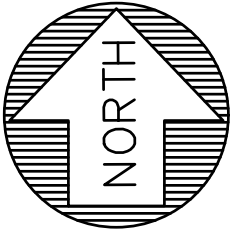


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POTHOLE LOCATIONS
WEEKS ST

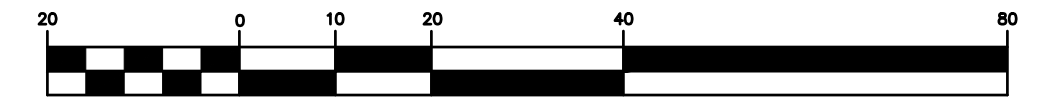
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- E — EXISTING UNDERGROUND ELECTRICAL LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- SD — EXISTING STORM DRAIN LINE

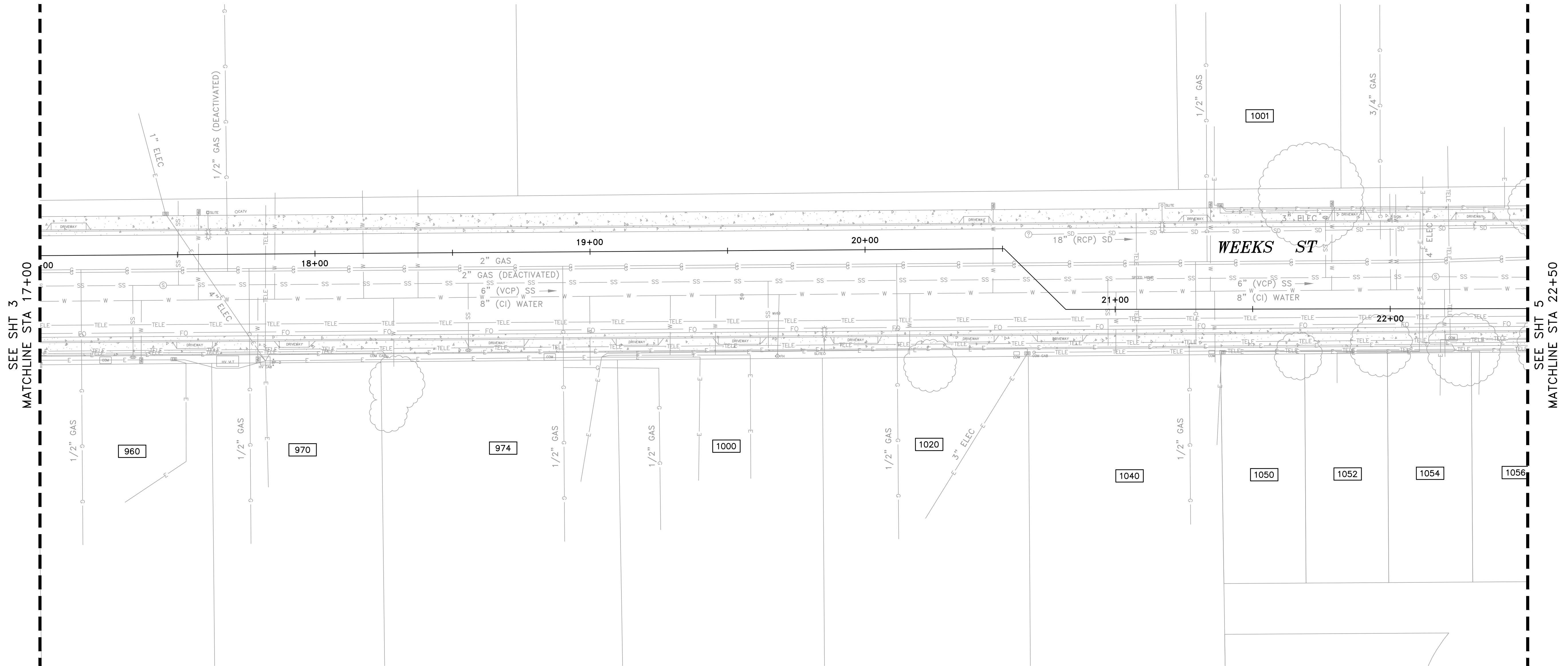


GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

NOTE: POTHOLE LOCATIONS ARE APPROXIMATED BASED ON LOCATION REFERENCES IN POTHOLING REPORT BY EXARO.



DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\Exhibit\2023-07-26 Potholing Report Locations\Pothole Locations.dwg
PLOT DATE: 07-28-23 PLOTTED BY: kyau

DATE:	7/27/23	7/27/23	POTHOLE LOCATIONS	
SCALE:	AS NOTED			
DESIGNED:	JJF			
DRAWN:	KMY			
CHECKED:	JJT			
PROJ. ENGR:	JJF			
BY	DATE	DESCRIPTION OF REVISIONS	APP'D	



150 Executive Park Blvd. #4200 • San Francisco, CA 94134
(415)534-7070 • Fax (650)344-9920 • www.freyerlaureta.com

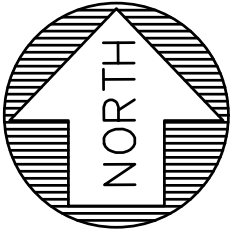


UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
WEEKS ST

SHEET
4
OF 5 SHEETS
JOB NO.
221005

LEGEND

- TELE — EXISTING COMMUNICATIONS LINE
- FO — EXISTING FIBER OPTICS LINE
- G — EXISTING GAS LINE
- E — EXISTING UNDERGROUND ELECTRICAL LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- SD — EXISTING STORM DRAIN LINE

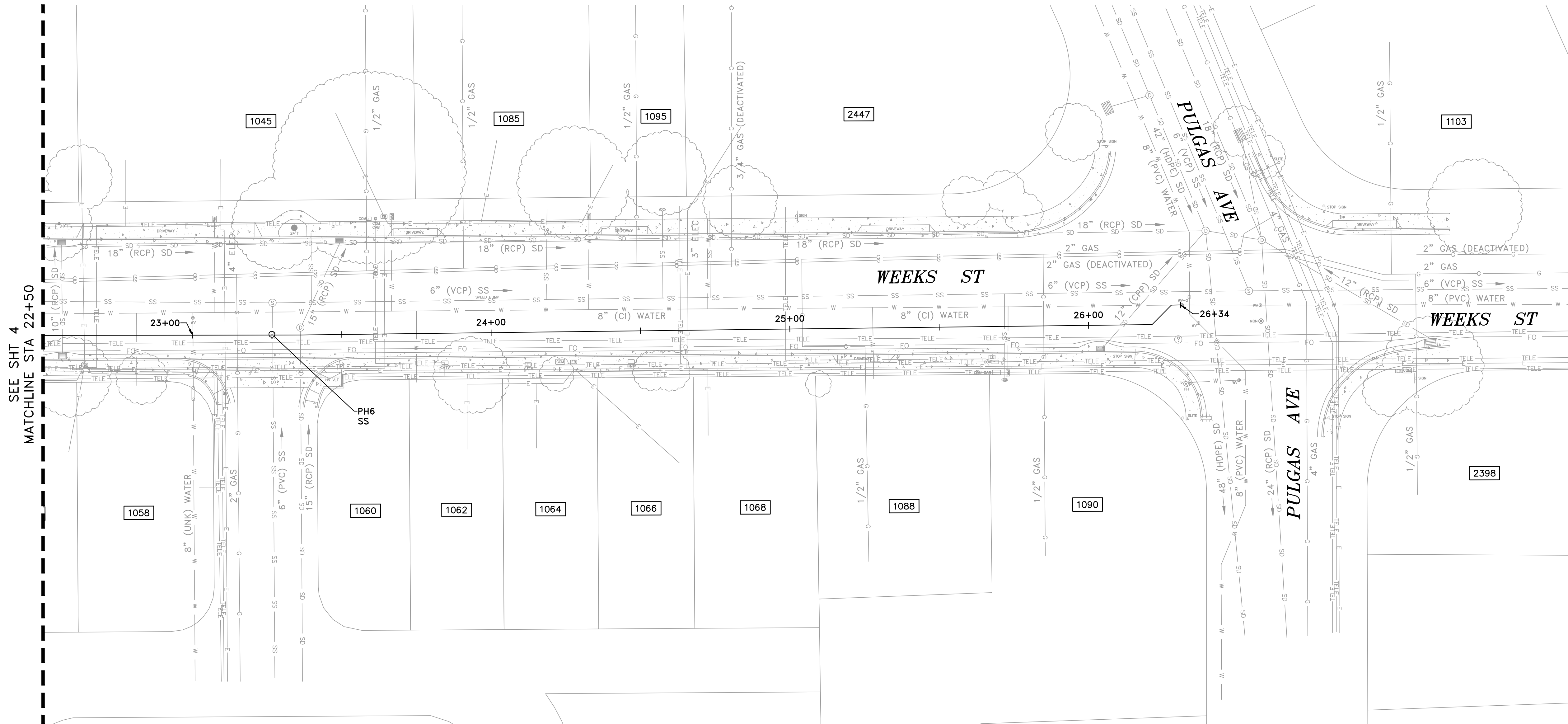


GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

NOTE: POTHOLE LOCATIONS ARE APPROXIMATED BASED ON LOCATION REFERENCES IN POTHOLOGING REPORT BY EXARO.



DRAWING NAME: Z:\Projects\221 City of East Palo Alto\005_12inch Transmission Watermain\Exhibit\2023-07-26 Potholing Report Locations\ Pothole Locations.dwg
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DESIGNED:	JJF		
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BY	DATE	DESCRIPTION OF REVISIONS	APP'D

FL FREYER & LAURETA, INC.
CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

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UNIVERSITY AVENUE AND WEEKS STREET 12-INCH WATERMAIN PROJECT
CITY OF EAST PALO ALTO
POTHOLE LOCATIONS
WEEKS ST

SHEET
5
OF 5 SHEETS
JOB NO.
221005

Date:	5/4/2023
Prepared For:	Freyer and Laureta
Project #:	23-1049
Location:	East Palo Alto



PH #	Street	Cut Size	Asph	Conc.	Soil	Utility	Utility Size	Material	Depth	Location Reference / Notes
1	740 Weeks St	1' x 1'	4"		Hard Dirt	Sanitary Sewer	8"	Plastic	45"	113" S from face of curb. 100" W from water valve.
2	Weeks St & Clarke Ave	1' x 3'	4"		Hard Dirt	Electric	4"	PVC	42"	107" N from face of curb. 145" W from water valve.
2 (2nd)	Weeks St & Clarke Ave	1' x 3'	4"		Hard Dirt	Unknown	3"	PVC	34"	107" N from face of curb. 145" W from water valve.
3	Weeks St & Clarke Ave	1' x 1'	4"		Hard Dirt	Electric	4"	PVC	42"	107" N from face of curb. 145" W from water valve.
4	Weeks St & Clarke Ave	1' x 1'	4"		Hard Dirt	Looking for Water	unknown	unknown	Slurry @ 16"	Found slurry at 16". 112" S from water valve. 176" E from white line.
5	Weeks St & Clarke Ave	1' x 1'	4"		Hard Dirt	Gas	2"	Steel	23"	47" E from face of curb. 101" N from white line.
6	1058 Weeks St	1' x 1'	4"		Hard Dirt	Sanitary Sewer	6"	Plastic	53"	101" W from storm drain. 112" S from sanitary sewer.
Foreman	Juan Carlos			Add'l Crew/Flagger		Eddie O.		Standby Rep		
Technician	Candido Gomez			Add'l Crew/Flagger				Client Rep		
Timesheet	Date	Start/End	Hours	OT	Night Stay	Check	Check	Additional Equipment/Material used:		
Monday		/				Arrow Board <input type="checkbox"/>	Electronic Detector <input type="checkbox"/>			
Tuesday		/				Cold patch <input type="checkbox"/>	GPR <input type="checkbox"/>			
Wednesday		/				Class II <input type="checkbox"/>	Pk nails & shiners <input checked="" type="checkbox"/>			
Thursday	5/4/2023	/	8			Hotmix Asph <input type="checkbox"/>	Vibra-plate <input type="checkbox"/>	Field Changes or Special Requests from Client Representative:		
Friday		/				CDF/slurry <input checked="" type="checkbox"/>	Flat bed # 29 <input checked="" type="checkbox"/>			
Saturday		/				Ready-mix conc <input type="checkbox"/>	Pick-up truck # <input type="checkbox"/>			
Sunday		/				Cutback <input type="checkbox"/>	Vac rig # 7 <input checked="" type="checkbox"/>	Client Representative Signature:		

Subsurface Utility Report

Client	Freyer and Laureta
Project #	23-1049
City	East Palo Alto
Date	5/4/2023



Pothole # 1

Street: 740 Weeks St

<p style="text-align: center;">Cut Size: 1' x 1'</p> <table style="width: 100%;"> <tr> <td style="width: 15%;">Asphalt:</td> <td style="width: 15%;">4"</td> <td rowspan="2" style="width: 15%;"></td> <td rowspan="2" style="width: 15%;"></td> <td rowspan="2" style="width: 15%;"></td> <td rowspan="2" style="width: 15%;"></td> </tr> <tr> <td>Concrete:</td> <td>0</td> </tr> <tr> <td>Depth:</td> <td>45"</td> <td rowspan="2" style="text-align: center; vertical-align: middle;"> </td> <td colspan="3" rowspan="2" style="vertical-align: top;"> <p>Location: 113" S from face of curb. 100" W from water valve.</p> <p>Notes:</p> </td> </tr> <tr> <td>Utility:</td> <td>Sanitary Sewer</td> </tr> <tr> <td>Size:</td> <td>8"</td> <td colspan="3"></td> </tr> <tr> <td>Material:</td> <td>Plastic</td> <td colspan="3"></td> </tr> <tr> <td>Soil:</td> <td>Hard Dirt</td> <td colspan="3"></td> </tr> </table>	Asphalt:	4"					Concrete:	0	Depth:	45"		<p>Location: 113" S from face of curb. 100" W from water valve.</p> <p>Notes:</p>			Utility:	Sanitary Sewer	Size:	8"				Material:	Plastic				Soil:	Hard Dirt				
Asphalt:	4"																															
Concrete:	0																															
Depth:	45"		<p>Location: 113" S from face of curb. 100" W from water valve.</p> <p>Notes:</p>																													
Utility:	Sanitary Sewer																															
Size:	8"																															
Material:	Plastic																															
Soil:	Hard Dirt																															



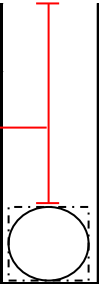
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Subsurface Utility Report	
Client	Freyer and Laureta
Project #	23-1049
City	East Palo Alto
Date	5/4/2023



Pothole # 2

Street: Weeks St & Clarke Ave

<p>Cut Size: 1' x 3'</p> <p>Asphalt: 4"</p> <p>Concrete:</p> <p>Depth: 42"</p> <p>Utility: Electric</p> <p>Size: 4"</p> <p>Material: PVC</p> <p>Soil: Hard Dirt</p> 		<p>Location: 107" N from face of curb. 145" W from water valve.</p> <p>Notes:</p>
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Subsurface Utility Report	
Client	Freyer and Laureta
Project #	23-1049
City	East Palo Alto
Date	5/4/2023



Pothole # 2 (2nd)

Street: Weeks St & Clarke Ave

<p>Cut Size: 1' x 3'</p>		<p>Location: 107" N from face of curb. 145" W from water valve.</p>
<p>Asphalt: 4"</p> <p>Concrete:</p>		<p>Notes:</p>
<p>Depth: 34"</p> <p>Utility: Unknown</p> <p>Size: 3"</p> <p>Material: PVC</p> <p>Soil: Hard Dirt</p>		



Subsurface Utility Report	
Client	Freyer and Laureta
Project #	23-1049
City	East Palo Alto
Date	5/4/2023



Pothole # 3

Street: Weeks St & Clarke Ave

Cut Size: 1' x 1'		Location: 107" N from face of curb. 145" W from water valve.
Asphalt: 4" Concrete: Depth: 42" Utility: Electric Size: 4" Material: PVC Soil: Hard Dirt		Notes:



Subsurface Utility Report	
Client	Freyer and Laureta
Project #	23-1049
City	East Palo Alto
Date	5/4/2023



Pothole # 4

Street: Weeks St & Clarke Ave

<p>Cut Size: 1' x 1'</p> <p>Asphalt: 4"</p> <p>Concrete:</p> <p>Depth: Slurry @ 16"</p> <p>Utility: Looking for Water</p> <p>Size: unknown</p> <p>Material: unknown</p> <p>Soil: Hard Dirt</p>		<p>Location: Found slurry at 16". 112" S from water valve. 176" E from white line.</p> <p>Notes:</p>
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Subsurface Utility Report	
Client	Freyer and Laureta
Project #	23-1049
City	East Palo Alto
Date	5/4/2023



Pothole # 5

Street: Weeks St & Clarke Ave

<p>Cut Size: 1' x 1'</p>			<p>Location: 47" E from face of curb. 101" N from white line.</p>
<p>Asphalt: 4"</p> <p>Concrete:</p> <p>Depth: 23"</p> <p>Utility: Gas</p> <p>Size: 2"</p> <p>Material: Steel</p> <p>Soil: Hard Dirt</p>	<p>Notes:</p>		



Subsurface Utility Report	
Client	Freyer and Laureta
Project #	23-1049
City	East Palo Alto
Date	5/4/2023



Pothole # 6

Street: 1058 Weeks St

Cut Size: 1' x 1'		Location: 101" W from storm drain. 112" S from sanitary sewer.
Asphalt: 4" Concrete: 6" Depth: 53" Utility: Sanitary Sewer Size: 6" Material: Plastic Soil: Hard Dirt		Notes:



Date:	5/5/2023
Prepared For:	Freyer and Laureta
Project #:	23-1049
Location:	East Palo Alto



PH #	Street	Cut Size	Asph	Conc.	Soil	Utility	Utility Size	Material	Depth	Location Reference / Notes
7	Weeks St & Clarke Ave	1' x 1'	2"		Hard Dirt	Comm	unknown	Concrete	12"	Comm line covered with concrete. 73" S from water valve. 84" E from white line.
										Paved all locations with 12" T-Cut
Foreman	Juan Carlos			Add'l Crew/Flagger		Eddie O		Standby Rep		
Technician	Candido Gomez			Add'l Crew/Flagger				Client Rep		
Timesheet	Date	Start/End	Hours	OT	Night Stay	Check	Check	Additional Equipment/Material used:		
Monday		/				Arrow Board <input type="checkbox"/>	Electronic Detector <input type="checkbox"/>			
Tuesday		/				Cold patch <input type="checkbox"/>	GPR <input type="checkbox"/>			
Wednesday		/				Class II <input type="checkbox"/>	Pk nails & shiners <input checked="" type="checkbox"/>			
Thursday		/				Hotmix Aspht <input checked="" type="checkbox"/>	Vibra-plate <input checked="" type="checkbox"/>	Field Changes or Special Requests from Client Representative:		
Friday	5/5/2023	/	8			CDF/slurry <input type="checkbox"/>	Flat bed <input checked="" type="checkbox"/>			
Saturday		/				Ready-mix conc <input type="checkbox"/>	Pick-up truck # <input type="checkbox"/>			
Sunday		/				Cutback <input type="checkbox"/>	Vac rig # <input checked="" type="checkbox"/>	Client Representative Signature:		

Subsurface Utility Report	
Client	Freyer and Laureta
Project #	23-1049
City	East Palo Alto
Date	5/5/2023



Pothole # 7

Street: Weeks St & Clarke Ave

<p>Cut Size: 1' x 1'</p>			<p>Location: Comm line covered with concrete. 73" S from water valve. 84" E from white line.</p>
<p>Asphalt: 2"</p> <p>Concrete:</p> <p>Depth: 12"</p> <p>Utility: Comm</p> <p>Size: unknown</p> <p>Material: Concrete</p> <p>Soil: Hard Dirt</p>	<p>Notes:</p>		

