



### NOTICE TO PROCEED

Date: June 26, 2020  
Contractor: K & D Construction, Inc.  
Project: 2020 Waterline Replacement Project IFB-4798-20-DH

In accordance with the contract dated June 18, 2020 the Contractor is hereby notified to begin work on the Project on or before July 8, 2020.

The date of final completion as determined is 110 Calendar Days from the start date of this Notice to Proceed.

### CITY OF GRAND JUNCTION, COLORADO

DocuSigned by:  
Duane Hoff Jr., Senior Buyer - City of Grand Junction  
9F789E7D50F12BC  
Duane Hoff Jr., Senior Buyer

Receipt of this Notice to Proceed is hereby acknowledged:

Contractor: K & D Construction, Inc.

By: Kevin Hopkins - President, K&D Construction, Inc.  
F5EDB1D4831A45F...

Print Name: Kevin Hopkins - President, K&D Construction, Inc.

Title: President

Date: 6/26/2020 | 09:49 PDT



**NOTICE OF AWARD**

Date: June 18, 2020  
Company: K & D Construction, Inc.  
Project: 2020 Waterline Replacement Project IFB-4798-20-DH

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You have been awarded the City of Grand Junction 2020 Waterline Replacement Project IFB-4798-20-DH for a total price of **\$708,877.56**. **This amount includes the prompt payment discount of .25% for Net 15 Days offered by the Contractor.**

Please notify John Eklund, City of Grand Junction Project Engineer 970-244-1558 for project scheduling and return to the City Purchasing Division an acknowledged copy of this Notice of Award, signed Contract, Payment & Performance Bonds, and Insurance Certificate, as per the contract documents.

CITY OF GRAND JUNCTION, COLORADO

DocuSigned by:  
Duane Hoff Jr., Senior Buyer - City of Grand Junction  
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Duane Hoff Jr., Senior Buyer

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**SUPPLIER ACKNOWLEDGEMENT**

Receipt of this Notice to Award is hereby acknowledged:

Company: K & D Construction, Inc.

By: Kevin Hopkins - President, K&D Construction, Inc.  
F8ED81D4831A45F... Kevin Hopkins - President, K&D Construction

Title: President

Date: 6/19/2020 | 10:41 PDT



CITY OF GRAND JUNCTION, COLORADO

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**CONTRACT**

This CONTRACT made and entered into this 18<sup>th</sup> day of June, 2020 by and between the **City of Grand Junction, Colorado**, a government entity in the County of Mesa, State of Colorado, hereinafter in the Contract Documents referred to as the "Owner" and **K & D Construction, Inc.** hereinafter in the Contract Documents referred to as the "Contractor."

WITNESSETH:

WHEREAS, the Owner advertised that sealed Bids would be received for furnishing all labor, tools, supplies, equipment, materials, and everything necessary and required for the Project described by the Contract Documents and known as **2020 Waterline Replacement Project IFB-4798-20-DH.**

WHEREAS, the Contract has been awarded to the above named Contractor by the Owner, and said Contractor is now ready, willing and able to perform the Work specified in the Notice of Award, in accordance with the Contract Documents;

NOW, THEREFORE, in consideration of the compensation to be paid the Contractor, the mutual covenants hereinafter set forth and subject to the terms hereinafter stated, it is mutually covenanted and agreed as follows:

**ARTICLE 1**

**Contract Documents:** It is agreed by the parties hereto that the following list of instruments, drawings, and documents which are attached hereto, bound herewith, or incorporated herein by reference constitute and shall be referred to either as the "Contract Documents" or the "Contract", and all of said instruments, drawings, and documents taken together as a whole constitute the Contract between the parties hereto, and they are fully a part of this agreement as if they were set out verbatim and in full herein:

The order of contract document governance shall be as follows:

- a. The body of this contract agreement
- b. Solicitation Documents for the Project; **2020 Waterline Replacement Project;**
- c. Notice of Award
- d. Contractors Response to the Solicitation
- e. Work Change Requests (directing that changed work be performed);
- f. Field Orders
- g. Change Orders.

**ARTICLE 2**

**Definitions:** The clauses provided in the Solicitation apply to the terms used in the Contract and all the Contract Documents.

### ARTICLE 3

Contract Work: The Contractor agrees to furnish all labor, tools, supplies, equipment, materials, and all that is necessary and required to complete the tasks associated with the Work described, set forth, shown, and included in the Contract Documents as indicated in the Solicitation Document.

### ARTICLE 4

Contract Time and Liquidated Damages: Time is of the essence with respect to this Contract. The Contractor hereby agrees to commence Work under the Contract on or before the date specified in the Solicitation from the Owner, and to achieve Substantial Completion and Final Completion of the Work within the time or times specified in the Solicitation. In the event the Work is not completed in the times set forth and as agreed upon, the Contractor further agrees to pay Liquidated Damages to the Owner as set forth in the Solicitation. The Contractor acknowledges and recognizes the delays, expenses and difficulties involved in proving in a legal proceeding the actual losses suffered by the Owner if the work is not completed on time. Accordingly, instead of requiring any such proof, the Owner and the Contractor agree that as Liquidated Damages for delay, but not as a penalty, the Contractor shall pay to the Owner the amounts specified in the Solicitation.

### ARTICLE 5

Contract Price and Payment Procedures: The Contractor shall accept as full and complete compensation for the performance and completion of all of the Work specified in the Contract Documents, the sum of **Seven Hundred Eight Thousand Eight Hundred Seventy Seven and 56/100 Dollars (\$708,877.56)**. **This amount includes the prompt payment discount of .25% for Net 15 Days offered by the Contractor.** If this Contract contains unit price pay items, the Contract Price shall be adjusted in accordance with the actual quantities of items completed and accepted by the Owner at the unit prices quoted in the Solicitation Response. The amount of the Contract Price is and has heretofore been appropriated by the Grand Junction City Council for the use and benefit of this Project. The Contract Price shall not be modified except by Change Order or other written directive of the Owner. The Owner shall not issue a Change Order or other written directive which requires additional work to be performed, which work causes the aggregate amount payable under this Contract to exceed the amount appropriated for this Project, unless and until the Owner provides Contractor written assurance that lawful appropriations to cover the costs of the additional work have been made.

Unless otherwise provided in the Solicitation, monthly partial payments shall be made as the Work progresses. Applications for partial and Final Payment shall be prepared by the Contractor and approved by the Owner in accordance with the Solicitation.

Upon Final Completion of the Work under the Contract and before the Contractor shall receive final payment, the Owner shall publish at least twice in a newspaper of general circulation published in the County a notice that: 1. the Owner has accepted such Work as completed according to the Contract Documents; 2. the Contractor is entitled to final payment therefore; 3. thirty days after the first publication, specifying the exact date, the Owner shall pay the full balance due under the Contract; and 4. persons having claims for labor, materials, team hire, sustenance, provisions, provender, or other supplies used or

consumed by the Contractor or a subcontractor shall file a verified statement of the amount due and unpaid on account of such claim prior to the date specified for such payment. Nothing herein shall be construed as relieving the Contractor and the Sureties on the Contractor's Bonds from any claim or claims for work or labor done or materials or supplies furnished in the execution of the Contract.

ARTICLE 6

Bonds: The Contractor shall furnish currently herewith the Bonds required by the Contract Documents, such Bonds being attached hereto. The Performance Bond shall be in an amount not less than one hundred percent (100%) of the Contract Price set forth in Article 5. The Payment Bond shall be in an amount not less than one hundred (100%) of the Contract Price set forth in Article 5.

ARTICLE 7

Contract Binding: The Owner and the Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contract Documents constitute the entire agreement between the Owner and Contractor and may only be altered, amended or repealed by a duly executed written instrument. Neither the Owner nor the Contractor shall, without the prior written consent of the other, assign or sublet in whole or in part its interest under any of the Contract Documents and specifically, the Contractor shall not assign any moneys due or to become due without the prior written consent of the Owner.

ARTICLE 8

Severability: If any part, portion or provision of the Contract shall be found or declared null, void or unenforceable for any reason whatsoever by any court of competent jurisdiction or any governmental agency having the authority thereover, only such part, portion or provision shall be effected thereby and all other parts, portions and provisions of the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, City of Grand Junction, Colorado, has caused this Contract to be subscribed and sealed and attested in its behalf; and the Contractor has signed this Contract the day and the year first mentioned herein.

The Contract is executed in two counterparts.

**CITY OF GRAND JUNCTION, COLORADO**

DocuSigned by:  
By: Duane Hoff Jr., Senior Buyer - City of Grand Junction 6/19/2020 | 13:33 MDT  
Duane Hoff Jr., Senior Buyer \_\_\_\_\_ Date \_\_\_\_\_

**K & D Construction, Inc.**

DocuSigned by:  
By: Kevin Hopkins - President, K&D Construction, Inc. 6/19/2020 | 10:41 PDT  
Kevin Hopkins - President, K&D Construction, Inc. \_\_\_\_\_ Date \_\_\_\_\_



**Purchasing Division**

## **Invitation for Bid**

**IFB-4798-20-DH**

**2020 Waterline Replacement Project**

### **Responses Due:**

**May 28, 2020 prior to 3:30 pm**

**Accepting Electronic Responses Only**

**Responses Only Submitted Through the Rocky Mountain E-Purchasing System (RMEPS)**

**<https://www.rockymountainbidssystem.com/default.asp>**

**(Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor MUST contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)**

### **IMPORTANT NOTICE:**

**Due to the recent developments with COVID-19, public bid openings are temporarily being suspended. Bid openings will still take place on their designated date and time, and bid tabulations will still be posted for public view/access. However, the bid openings itself will be closed to the public. Once the crisis has passed, public bid openings will resume as normal.**

### **Purchasing Representative:**

**Duane Hoff, Senior Buyer**

**[duaneh@gjcity.org](mailto:duaneh@gjcity.org)**

**970-244-1545**

This document has been developed specifically to solicit competitive responses for this solicitation, and may not be the same as previous City of Grand Junction solicitations. All vendors are urged to thoroughly review this solicitation prior to responding. Submittal by **FAX, EMAIL or HARD COPY IS NOT ACCEPTABLE** for this solicitation.

# **Invitation for Bids**

## **Table of Contents**

Section 1	Instruction to Bidders
Section 2	General Contract Conditions
Section 3	Statement of Work
Section 4	Contractor's Bid Form
	Price Proposal/Bid Schedule Form
Appendix A	Project Submittal Form
Appendix B	Project Special Provisions
Appendix C	Geotechnical Soils Report
	Construction Drawings Attached

# **1. Instructions to Bidders**

- 1.1. Purpose:** The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required **2020 Waterline Replacement Project**. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

**IFB Questions:**

Duane Hoff, Senior Buyer

[duaneh@gjcity.org](mailto:duaneh@gjcity.org)

970-244-1545

The City would like to remind all Contractors, Sub-Contractors, Vendors, Suppliers, Manufacturers, Service Providers, etc. that (with the exception of Pre-Bid or Site Visit Meetings) all questions, inquiries, comments, or communication pertaining to any formal solicitation (whether process, specifications, scope, etc.) must be directed (in writing) to the Purchasing Agent assigned to the project, or Purchasing Division. Direct communication with the City assigned Project Managers/Engineers is not appropriate for public procurement, and may result in disqualification.

- 1.2. Recommended Pre-Bid Meeting:** **Prospective bidders are encouraged to attend a recommended pre-bid meeting on May 14<sup>th</sup> at 10:00 am.** Meeting location will be held at the Municipal Campus, outside of the City Engineering Department in the grass area, located at 333 West Ave., Building C, Grand Junction, CO. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).
- 1.3. The Owner:** The Owner is the City of Grand Junction, Colorado and is referred to throughout this Solicitation. The term Owner means the Owner or his authorized representative.
- 1.4. Procurement Process:** Procurement processes shall be governed by the most current version of the City of Grand Junction [Purchasing Policy and Procedure Manual](#).
- 1.5. Submission:** **Each bid shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (<https://www.rockymountainbidsystem.com/default.asp>).** *This site offers both “free” and “paying” registration options that allow for full access of the Owner’s documents and for electronic submission of proposals. (Note: “free” registration may take up to 24 hours to process. Please Plan accordingly.)* Please view our “**Electronic Vendor Registration Guide**” at <http://www.gjcity.org/business-and-economic-development/bids/> for details. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline. **800-835-4603**)
- 1.6. Modification and Withdrawal of Bids Before Opening.** Bids may be modified or withdrawn by an appropriate document stating such, duly executed and submitted to the place where Bids are to be submitted at any time prior to Bid Opening.



- 1.7. Printed Form for Price Bid:** All Price Bids must be made upon the Price Bid Schedule attached, and should give the amounts both in words and in figures, and must be signed and acknowledged by the bidder.

The Offeror shall specify a unit price in figures for each pay item for which a quantity is given and shall provide the products (in numbers) of the respective unit prices and quantities in the Extended Amount column. The total Bid price shall be equal to the sum of all extended amount prices. When an item in the Price Bid Schedule provides a choice to be made by the Offeror, Offeror's choice shall be indicated in accordance with the specifications for that particular item and thereafter no further choice shall be permitted.

Where the unit of a pay item is lump sum, the lump sum amount shall be shown in the "extended amount" column and included in the summation of the total Bid.

All blank spaces in the Price Bid Schedule must be properly filled out.

Bids by corporations must be executed in the corporate name by the president or vice president or other corporate office accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown below the signature.

Bids by partnerships must be executed in the partnership name and signed by a partner whose title must appear under the signature and the official address of the partnership must be shown below the signature.

All names must be typed or printed below the signature.

The Offeror's Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Contractor's Bid Form.

The contact information to which communications regarding the Bid are to be directed must be shown.

- 1.8. Exclusions:** No oral, telephonic, emailed, or facsimile bid will be considered
- 1.9. Contract Documents:** The complete IFB and bidder's response compose the Contract Documents. Copies of bid documents can be obtained from the City Purchasing website, <http://www.gjcity.org/business-and-economic-development/bids/> .
- 1.10. Additional Documents:** The July 2010 edition of the "City Standard Contract Documents for Capital Improvements Construction", Plans, Specifications and other Bid Documents are available for review or download on the Public Works & Planning/Engineering page at [www.gjcity.org](http://www.gjcity.org). Electronic copies may be obtained on a CD format at the Department of Public Works and Planning at City Hall.
- 1.11. Definitions and Terms:** See Article I, Section 3 of the General Contract Conditions in the *Standard Contract Documents for Capital Improvements Construction*.
- 1.12. Examination of Specifications:** Bidders shall thoroughly examine and be familiar with the project Statement of Work. The failure or omission of any Offeror to receive or

examine any form, addendum, or other document shall in no way relieve any Offeror from any obligation with respect to his bid. The submission of a bid shall be taken as evidence of compliance with this section. Prior to submitting a bid, each Offeror shall, at a minimum:

- a. Examine the *Contract Documents* thoroughly;
- b. Visit the site to familiarize themselves with local conditions that may in any manner affect cost, progress, or performance of the Work;
- c. Become familiar with federal, state, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress or performance of the Work;
- d. Study and carefully correlate Bidder's observations with the *Contract Documents*, and;
- e. Notify the Purchasing Agent of all conflicts, errors, ambiguities or discrepancies in or among the *Contract Documents* within the designated inquiry period.

On request, the Owner will provide each Offeror access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of a Bid. It shall be the Offeror's responsibility to make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (including without limitation, surface, subsurface and underground utilities) at or contiguous to the site or otherwise which may affect cost, progress or performance of the work and which the Offeror deems necessary to determine its Bid for performing the work in accordance with the time, price and other terms and conditions of the *Contract Documents*. Location of any excavation or boring made by Offeror shall be subject to prior approval of Owner and applicable agencies. Offeror shall fill all holes, restore all pavements to match the existing structural section and shall clean up and restore the site to its former condition upon completion of such exploration. The Owner reserves the right to require the Offeror to execute an access agreement with the Owner prior to accessing the site.

The lands upon which the Work is to be performed, rights of way, and access thereto, and other lands designated for use by Contractor in performing the Work, are identified on the Drawings.

Information and data reflected in the *Contract Documents* with respect to underground utilities at or contiguous to the site are based upon information and data furnished to the Owner and the Engineer by the owners of such underground utilities or others, and the Owner does not assume responsibility for the accuracy or completeness thereof, unless it is expressly provided otherwise in the *Contract Documents*.

By submission of a Bid, the Offeror shall be conclusively presumed to represent that the Offeror has complied with every requirement of these Instructions to Bidders, that the *Contract Documents* are not ambiguous and are sufficient in scope and detail to

indicate and convey understanding of all terms and conditions for performance of the Work.

- 1.13. Questions Regarding Statement of Work:** Any information relative to interpretation of Scope of Work or specifications shall be requested of the Purchasing Representative, in writing, in ample time, prior to the inquiry deadline.
- 1.14. Addenda & Interpretations:** If it becomes necessary to revise any part of this solicitation, a written addendum will be posted electronically on the City's website at <http://www.gjcity.org/business-and-economic-development/bids/>. The Owner is not bound by any oral representations, clarifications, or changes made in the written specifications by Owner, unless such clarification or change is provided in written addendum form from the City Purchasing Representative.
- 1.15. Taxes:** The Owner is exempt from State retail and Federal tax. The bid price must be net, exclusive of taxes.
- 1.16. Sales and Use Taxes:** The Contractor and all Subcontractors are required to obtain exemption certificates from the Colorado Department of Revenue for sales and use taxes in accordance with the provisions of the General Contract Conditions. Bids shall reflect this method of accounting for sales and use taxes on materials, fixtures and equipment.
- 1.17. Offers Binding 60 Days:** Unless additional time is required by the Owner, or otherwise specified, all formal offers submitted shall be binding for sixty (60) calendar days following opening date, unless the Bidder, upon request of the Purchasing Representative, agrees to an extension.
- 1.18. Exceptions and Substitutions:** Bidders taking exception to the specifications and/or scope of work shall do so at their own risk. The Owner reserves the right to accept or reject any or all substitutions or alternatives. When offering substitutions and/or alternatives, Bidder must state these exceptions in the section pertaining to that area. Exception/substitution, if accepted, must meet or exceed the stated intent and/or specifications and/or scope of work. The absence of such a list shall indicate that the Bidder has not taken exceptions, and if awarded a contract, shall hold the Bidder responsible to perform in strict accordance with the specifications and/or scope of work contained herein.
- 1.19. Collusion Clause:** Each bidder by submitting a bid certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all bids shall be rejected if there is evidence or reason for believing that collusion exists among bidders. The Owner may, or may not, accept future bids for the same services or commodities from participants in such collusion.
- 1.20. Disqualification of Bidders:** A Bid will not be accepted from, nor shall a Contract be awarded to, any person, firm, or corporation that is in arrears to the Owner, upon debt or contract, or that has defaulted, as surety or otherwise, upon any obligation to the Owner, or that is deemed irresponsible or unreliable.

Bidders may be required to submit satisfactory evidence that they are responsible, have a practical knowledge of the project bid upon and that they have the necessary financial and other resources to complete the proposed Work.

Either of the following reasons, without limitation, shall be considered sufficient to disqualify a Bidder and Bid:

- a. More than one Bid is submitted for the same Work from an individual, firm, or corporation under the same or different name; and
- b. Evidence of collusion among Bidders. Any participant in such collusion shall not receive recognition as a Bidder for any future work of the Owner until such participant has been reinstated as a qualified bidder.

**1.21. Public Disclosure Record:** If the bidder has knowledge of their employee(s) or sub-contractors having an immediate family relationship with a City employee or elected official, the bidder must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the City.

## **2. General Contract Conditions for Construction Projects**

**2.1. The Contract:** This Invitation for Bid, submitted documents, and any negotiations, when properly accepted by the City, shall constitute a contract equally binding between the City and Contractor. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The contract may be amended or modified with Change Orders, Field Orders, or Addendums.

**2.2. The Work:** The term Work includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.

**2.3. Execution, Correlation, Intent, and Interpretations:** The Contract Documents shall be signed by the Owner (City) and Contractor. City will provide the contract. By executing the contract, the Contractor represents that he/she has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by any one, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and other items necessary for the proper execution and completion of the scope of work as defined in the technical specifications and drawings contained herein. All drawings, specifications and copies furnished by the City are, and shall remain, City property. They are not to be used on any other project, and with the exception of one contract set for each party to the contract, are to be returned to the owner on request at the completion of the work.

- 2.4. The Owner:** The Owner is the City of Grand Junction, Colorado and is referred to throughout the Contract Documents. The term Owner means the Owner or his authorized representative. The Owner shall, at all times, have access to the work wherever it is in preparation and progress. The Contractor shall provide facilities for such access. The Owner will make periodic visits to the site to familiarize himself generally with the progress and quality of work and to determine, in general, if the work is proceeding in accordance with the contract documents. Based on such observations and the Contractor's Application for Payment, the Owner will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in the contract. The Owner will have authority to reject work which does not conform to the Contract documents. Whenever, in his reasonable opinion, he considers it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, he will have authority to require the Contractor to stop the work or any portion, or to require special inspection or testing of the work, whether or not such work can be then be fabricated, installed, or completed. The Owner will not be responsible for the acts or omissions of the Contractor, and sub-Contractor, or any of their agents or employees, or any other persons performing any of the work.
- 2.5. Contractor:** The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.
- 2.6. Sub-Contractors:** A sub-contractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term sub-contractor is referred to throughout the contract documents and means a sub-contractor or his authorized representative.
- 2.7. Award of Sub-Contractors & Other Contracts for Portions of the Work:** Contractor shall submit with their bid response to the Owner, in writing for acceptance, a list of the names of the sub-contractors or other persons or organizations proposed for such portions of the work as may be designated in the proposal requirements, or, if none is so designated, the names of the sub-contractors proposed for the principal portions of the work. Prior to the award of the contract, the Owner shall notify the successful Contractor in writing if, after due investigation, has reasonable objection to any person or organization on such list. If, prior to the award of the contract, the Owner has a reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization, the successful Contractor may, prior to the award, withdraw their proposal without forfeiture of proposal security. If the successful Contractor submits an acceptable substitute with an increase in the proposed price to cover the difference in cost occasioned by the substitution, the Owner may, at their discretion, accept the increased proposal or may disqualify the Contractor. If, after the award, the Owner refuses to accept any person or organization on such list, the Contractor shall submit an acceptable substitute and the contract sum shall be increased

or decreased by the difference in cost occasioned by such substitution and an appropriate Change Order shall be issued. However, no increase in the contract sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting a name with respect thereto prior to the award.

- 2.8. Quantities of Work and Unit Price:** Materials or quantities stated as unit price items in the Bid are supplied only to give an indication of the general scope of the Work, and are as such, estimates only. The Owner does not expressly or by implication agree that the actual amount of Work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit item of the Work without a change in the unit price except as set forth in Article VIII, Section 70 of the *General Contract Conditions*. The City also reserves the right to make changes in the Work (including the right to delete any bid item in its entirety or add additional bid items) as set forth in Article VIII, Sections 69 through 71 of the *General Contract Conditions*.
- 2.9. Substitutions:** The materials, products and equipment described in the *Solicitation Documents* shall be regarded as establishing a standard of required performance, function, dimension, appearance, or quality to be met by any proposed substitution. No substitution will be considered prior to receipt of Bids unless the Offeror submits a written request for approval to the City Purchasing Division at least ten (10) days prior to the date for receipt of Bids. Such requests for approval shall include the name of the material or equipment for which substitution is sought and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for evaluation, including samples if requested. The Offeror shall set forth changes in other materials, equipment, or other portions of the Work including changes of the work of other contracts, which incorporation of the proposed substitution would require to be included. The Owner's decision of approval or disapproval of a proposed substitution shall be final. If the Owner approves a proposed substitution before receipt of Bids, such approval will be set forth in an Addendum. Offeror's shall not rely upon approvals made in any other manner.
- 2.10. Supervision and Construction Procedures:** The Contractor shall supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the contract.
- 2.11. Warranty:** The Contractor warrants to the Owner that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards may be considered defective. If required by Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If within ten (10) days after written notice to the Contractor requesting such repairs or replacement, the Contractor should neglect to make or undertake with due diligence to the same, the City may make such repairs or replacements. All indirect and direct costs of such correction or removal or replacement shall be at the Contractor's expense. The Contractor will also bear the expenses of making good all work of others destroyed or damaged by the correction, removal or replacement of his defective work.

- 2.12. Permits, Fees, & Notices:** The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be adjusted by approximate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility and shall bear all costs attributable.
- 2.13. Responsibility for Those Performing the Work:** The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all sub-contractors, their agents and employees, and all other persons performing any of the work under a contract with the Contractor.
- 2.14. Use of the Site:** The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents, and shall not unreasonably encumber the site with any materials or equipment.
- 2.15. Cleanup:** The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of work he shall remove all his waste materials and rubbish from and about the project, as well as all his tools, construction equipment, machinery and surplus materials.
- 2.16. Insurance:** The Contractor shall secure and maintain such insurance policies as will provide the coverage and contain other provisions specified in the General Contract Conditions, or as modified in the Special Contract Conditions.

The Contractor shall file a copy of the policies or Certificates of Insurance acceptable to the City with the Engineer within ten (10) Calendar Days after issuance of the Notice of Award. These Certificates of Insurance shall contain a provision that coverage afforded under the policies shall not be canceled unless at least thirty (30) Calendar Days prior written notice has been given to the City.

- 2.17. Indemnification:** The Contractor shall defend, indemnify and save harmless the Owner, and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Contractor, or of any Contractor's agent, employee, sub-contractor or supplier in the execution of, or performance under, any contract which may result from proposal award. Contractor shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.
- 2.18. Miscellaneous Conditions: Material Availability:** Contractors must accept responsibility for verification of material availability, production schedules, and other pertinent data prior to submission of bid. It is the responsibility of the bidder to notify the Owner immediately if materials specified are discontinued, replaced, or not available for

an extended period of time. **OSHA Standards:** All bidders agree and warrant that services performed in response to this invitation shall conform to the standards declared by the US Department of Labor under the Occupational Safety and Health Act of 1970 (OSHA). In the event the services do not conform to OSHA standards, the Owner may require the services to be redone at no additional expense to the Owner.

- 2.19. Time:** Time is of the essence with respect to the time of completion of the Project and any other milestones or deadline which are part of the Contract. It will be necessary for each Bidder to satisfy the City of its ability to complete the Work within the Contract Time set forth in the Contract Documents. The Contract Time is the period of time allotted in the Contract Documents for completion of the work. The date of commencement of the work is the date established in a Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the Contract or such other date as may be established therein, or as established as entered on the Bid Form. The Date of Final Completion of the work is the date certified by the Owner when all construction, and all other work associated to include, but not be limited to: testing, QA/QC, receipt of required reports and/or forms, grant requirements (if applicable), punch list items, clean-up, receipt of drawings and/or as-builts, etc., is fully complete, and in accordance with the Contract Documents.
- 2.20. Progress & Completion:** The Contractor shall begin work on the date of commencement as defined in the Contract, and shall carry the work forward expeditiously with adequate forces and shall complete it within the contract time.
- 2.21. Payment & Completion:** The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents. Upon receipt of written notice that the work is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when he finds the work acceptable under the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided in the Contract Documents.
- 2.22. Bid Bond:** Each Bid shall as a guaranty of good faith on the part of the Bidder be accompanied by a Bid Guaranty consisting of: a certified or cashier's check drawn on an approved national bank or trust company in the state of Colorado, and made payable without condition to the City; or a **Bid Bond** written by an approved corporate surety in favor of the City. The amount of the Bid Guaranty shall not be less than 5% of the total Bid amount. Once a Bid is accepted and a Contract is awarded, the apparent successful bidder has ten calendar days to enter into a contractor in the form prescribed and to furnish the bonds with a legally responsible and approved surety. Failure to do so will result in forfeiture of the Bid Guaranty to the City as Liquidated Damages.

Each bidder shall guaranty its total bid price for a period of sixty (60) Calendar Days from the date of the bid opening.

- 2.23. Performance & Payment Bonds:** Contractor shall furnish a Performance and a Payment Bond, each in an amount at least equal to that specified for the contract amount as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These bonds shall remain in effect for the duration of the Warranty Period (as specified in the Special Conditions). Contractor shall also furnish



other bonds that may be required by the Special Conditions. All bonds shall be in the forms prescribed by the Contract Documents and be executed by such sureties as (1) are licensed to conduct business in the State of Colorado and (2) are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Accounts, U.S. Treasury Department. All bonds signed by an agent must be accompanied by a certified copy of the Authority Act. If the surety on any bond furnished by the Contractor is declared bankrupt, or becomes insolvent, or its rights to do business in Colorado are terminated, or it ceases to meet the requirements of clauses (1) and (2) of this section, Contractor shall within five (5) days thereafter substitute another bond and surety, both of which shall be acceptable to the City.

- 2.24. Retention:** The Owner will deduct money from the partial payments in amounts considered necessary to protect the interest of the Owner and will retain this money until after completion of the entire contract. The amount to be retained from partial payments will be five (5) percent of the value of the completed work, and not greater than five (5) percent of the amount of the Contract. When the retainage has reached five (5) percent of the amount of the Contract no further retainage will be made and this amount will be retained until such time as final payment is made.
- 2.25. Liquidated Damages for Failure to Enter Into Contract:** Should the Successful Bidder fail or refuse to enter into the Contract within ten Calendar Days from the issuance of the Notice of Award, the City shall be entitled to collect the amount of such Bidder's Bid Guaranty as Liquidated Damages, not as a penalty but in consideration of the mutual release by the City and the Successful Bidder of all claims arising from the City's issuance of the Notice of Award and the Successful Bidder's failure to enter into the Contract and the costs to award the Contract to any other Bidder, to re-advertise, or otherwise dispose of the Work as the City may determine best serves its interest.
- 2.26. Liquidated Damages for Failure to Meet Project Completion Schedule:** If the Contractor does not achieve Final Completion by the required date, whether by neglect, refusal or any other reason, the parties agree and stipulate that the Contractor shall pay liquidated damages to the City for each such day that final completion is late. As provided elsewhere, this provision does not apply for delays caused by the City. The date for Final Completion may be extended in writing by the Owner.

The Contractor agrees that as a part of the consideration for the City's awarding of this Contract liquidated damages in the daily amount of **\$750.00** is reasonable and necessary to pay for the actual damages resulting from such delay. The parties agree that the real costs and injury to the City for such delay include hard to quantify items such as: additional engineering, inspection and oversight by the City and its agents; additional contract administration; inability to apply the efforts of those employees to the other work of the City; perceived inefficiency of the City; citizens having to deal with the construction and the Work, rather than having the benefit of a completed Work, on time; inconvenience to the public; loss of reputation and community standing for the City during times when such things are very important and very difficult to maintain.

The Contractor must complete the Work and achieve final completion included under the Bid Schedule in the number of consecutive calendar days after the City gives its written Notice to Proceed. When the Contractor considers the entire Work ready for its intended use, Contractor shall certify in writing that the Work is fully complete. Final Completion date is the date by which the Contractor shall have fully completed all clean-up, and all items that were identified by the City in the inspection for final completion. Unless otherwise stated in the Special Conditions, for purposes of this liquidated damages clause, the Work shall not be finished and the Contract time shall continue to accrue until the City gives its written Final Acceptance.

If the Contractor shall fail to pay said liquidated damages promptly upon demand thereof after having failed to achieve Final Completion on time, the City shall first look to any retainage or other funds from which to pay said liquidated damages; if retainage or other liquid funds are not available to pay said liquidated damages amounts, the Surety on the Contractor's Performance Bond and Payment Bond shall pay such liquidated damages. In addition, the City may withhold all, or any part of, such liquidated damages from any payment otherwise due the Contractor.

Liquidated damages as provided do not include any sums to reimburse the City for extra costs which the City may become obligated to pay on other contracts which were delayed or extended because of the Contractor's failure to complete the Work within the Contract Time. Should the City incur additional costs because of delays or extensions to other contracts resulting from the Contractor's failure of timely performance, the Contractor agrees to pay these costs that the City incurs because of the Contractor's delay, and these payments are separate from and in addition to any liquidated damages.

The Contractor agrees that the City may use its own forces or hire other parties to obtain Final Completion of the work if the time of completion has elapsed and the Contractor is not diligently pursuing completion. In addition to the Liquidated Damages provided for, the Contractor agrees to reimburse the City for all expenses thus incurred.

- 2.27. Contingency/Force Account:** Contingency/Force Account work will be authorized by the Owner's Project Manager and is defined as minor expenses to cover miscellaneous or unforeseen expenses related to the project. The expenses are not included in the Drawings, Specifications, or Scope of Work and are necessary to accomplish the scope of this contract. Contingency/Force Account Authorization will be directed by the Owner through an approved form. Contingency/Force Account funds are the property of the Owner and any Contingency/Force Account funds, not required for project completion, shall remain the property of the Owner. Contractor is not entitled to any Contingency/Force Account funds, that are not authorized by Owner or Owner's Project Manager.
- 2.28. Protection of Persons & Property:** The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct

by the Contractor in the execution of the work, or in consequence of the non-execution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner.

- 2.29. Changes in the Work:** The Owner, without invalidating the contract, may order changes in the work within the general scope of the contract consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by Change Order and shall be executed under the applicable conditions of the contract documents. A Change Order is a written order to the Contractor signed by the Owner issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time. The contract sum and the contract time may be changed only by Change Order.
- 2.30. Claims for Additional Cost or Time:** If the Contractor wishes to make a claim for an increase in the contract sum or an extension in the contract time, he shall give the Owner written notice thereof within a reasonable time after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall precede in accordance with the regulations on safety. No such claim shall be valid unless so made. Any change in the contract sum or contract time resulting from such claim shall be authorized by Change Order.
- 2.31. Minor Changes in the Work:** The Owner shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents.
- 2.32. Field Orders:** The Owner may issue written Field Orders which interpret the Contract Documents in accordance with the specifications, or which order minor changes in the work in accordance with the agreement, without change in the contract sum or time. The Contractor shall carry out such Field Orders promptly.
- 2.33. Uncovering & Correction of Work:** The Contractor shall promptly correct all work rejected by the Owner as defective or as failing to conform to the contract documents whether observed before or after substantial completion and whether or not fabricated installed or competed. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Owner's additional services thereby made necessary. If within one (1) year after the date of completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the contract documents, any of the work found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discover of condition. All such defective or non-conforming work under the above paragraphs shall be removed from the site where necessary and the work shall be corrected to comply with the contract documents without cost to the Owner. The Contractor shall bear the cost of making good all work of separate Contractors destroyed or damaged by such removal or correction. If the Owner prefers to accept defective or

non-conforming work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the payment or contract sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

- 2.30. Amendment:** No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All amendments to the contract shall be made in writing by the Owner.
- 2.31. Assignment:** The Contractor shall not sell, assign, transfer or convey any contract resulting from this IFB, in whole or in part, without the prior written approval from the Owner.
- 2.32. Compliance with Laws:** Bids must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements.
- 2.33. Confidentiality:** All information disclosed by the Owner to the Contractor for the purpose of the work to be done or information that comes to the attention of the Contractor during the course of performing such work is to be kept strictly confidential.
- 2.34. Conflict of Interest:** No public official and/or City/County employee shall have interest in any contract resulting from this IFB.
- 2.35. Contract Termination:** This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of services; (3) acceptance of services or, (4) for convenience terminated by either party with a written *Notice of Cancellation* stating therein the reasons for such cancellation and the effective date of cancellation.
- 2.36. Employment Discrimination:** During the performance of any services per agreement with the Owner, the Contractor, by submitting a Bid, agrees to the following conditions:
  - 2.36.1.** The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap, or national origin except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Contractor. The Contractor agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
  - 2.36.2.** The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that such Contractor is an Equal Opportunity Employer.
  - 2.36.3.** Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

- 2.37. Affirmative Action:** In executing a Contract with the City, the Contractor agrees to comply with Affirmative Action and Equal Employment Opportunity regulations presented in the General Contract Conditions.
- 2.38. Immigration Reform and Control Act of 1986 and Immigration Compliance:** The Offeror certifies that it does not and will not during the performance of the contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, *et.seq.* (House Bill 06-1343).
- 2.39. Ethics:** The Contractor shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.
- 2.40. Failure to Deliver:** In the event of failure of the Contractor to deliver services in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.
- 2.41. Failure to Enforce:** Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.
- 2.42. Force Majeure:** The Contractor shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions, and acts of God beyond the control of the Contractor, unless otherwise specified in the contract.
- 2.43. Independent Contractor:** The Contractor shall be legally considered an Independent Contractor and neither the Contractor nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Contractor, its servants, or agents. The Owner shall not withhold from the contract payments to the Contractor any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Contractor. Further, the Owner shall not provide to the Contractor any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.
- 2.44. Nonconforming Terms and Conditions:** A bid that includes terms and conditions that do not conform to the terms and conditions of this Invitation for Bid is subject to rejection as non-responsive. The Owner reserves the right to permit the Contractor to withdraw nonconforming terms and conditions from its bid prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.

Items for non-responsiveness may include, but not be limited to:

- a. Submission of the Bid on forms other than those supplied by the City;

- b. Alteration, interlineation, erasure, or partial detachment of any part of the forms which are supplied herein;
- c. Inclusion of unauthorized additions conditional or alternate Bids or irregularities of any kind which may tend to make the Bid incomplete, indefinite, or ambiguous as to its meaning;
- d. Failure to acknowledge receipt of any or all issued Addenda;
- e. Failure to provide a unit price or a lump sum price, as appropriate, for each pay item listed except in the case of authorized alternative pay items;
- f. Failure to list the names of Subcontractors used in the Bid preparation as may be required in the Solicitation Documents;
- g. Submission of a Bid that, in the opinion of the Owner, is unbalanced so that each item does not reasonably carry its own proportion of cost or which contains inadequate or unreasonable prices for any item;
- h. Tying of the Bid with any other bid or contract; and
- i. Failure to calculate Bid prices as described herein.

**2.45. Evaluation of Bids and Offerors:** The Owner reserves the right to:

- reject any and all Bids,
- waive any and all informalities,
- take into account any prompt payment discounts offered by Bidder,
- negotiate final terms with the Successful Bidder,
- take into consideration past performance of previous awards/contracts with the Owner of any Contractor, Vendor, Firm, Supplier, or Service Provider in determining final award. and
- disregard any and all nonconforming, nonresponsive or conditional Bids.

Discrepancies between words and figures will be resolved in favor of words. Discrepancies between Unit Prices and Extended Prices will be resolved in favor of the Unit Prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. The corrected extensions and totals will be shown in the tabulation of Bids.

The Owner may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of Subcontractors and other persons and organizations must be submitted. Operating costs, maintenance considerations performance data, and guarantees of materials and equipment may also be considered by the Owner.

The Owner will conduct such investigations as deemed necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Offeror, proposed Subcontractors and other persons and organizations to do the Work in accordance with the *Contract Documents* to the City's satisfaction within the Contract Time.

The Offeror shall furnish the Owner all information and data requested by the Owner to determine the ability of the Offeror to perform the Work. The Owner reserves the right to reject the Bid if the evidence submitted by, or investigation of such Offeror fails to satisfy the Owner that such Offeror is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein.

By submitting a Bid, each Offeror authorizes the Owner to perform such investigation of the Offeror as the Owner deems necessary to establish the responsibility, qualifications and financial ability of the Offeror and, by its signature thereon, authorizes the Owner to obtain reference information concerning the Offeror and releases the party providing such information and the Owner from any and all liability to the Offeror as a result of such reference information so provided.

The Owner reserves the right to reject the Bid of any Offeror who does not pass any evaluation to the Owner's satisfaction.

If the Contract is to be awarded, it will be awarded to the Offeror who, by evaluation, the Owner determines will best meet the Owner's interests.

The Owner reserves the right to accept or reject the Work contained in any of the Price Bid Schedules or alternates, either in whole or in part.

**2.46. Award of Contract:** Unless otherwise indicated, a single award will be made for all the bid items in an individual bid schedule. In the event that the Work is contained in more than one Bid Schedule, the City may award Schedules individually or in combination. In the case of two Bid Schedules which are alternative to each other, only one of such alternative Schedules will be awarded. Within forty-five (45) Calendar Days of Bid Opening, the City will issue a Notice of Award to the Successful Bidder which will be accompanied by four (4) unsigned copies of the Contract and the Performance and Payment Bond forms. Within ten (10) Calendar Days thereafter, the Successful Bidder shall sign and deliver four (4) copies of the Contract, Performance Bond, Payment Bond and Certificates of Insurance to the City. Within ten (10) Calendar Days thereafter, the City will deliver two (2) fully executed counterparts of the Contract to the Contractor. No contract shall exist between the Successful Bidder and the City and the Successful Bidder shall have no rights at law or in equity until the Contract has been duly executed by the City.

The Successful Bidder's failure to sign and submit a Contract and other documents set forth in this Paragraph within the prescribed time shall be just cause of annulment of the award, and forfeiture of the Bid Guaranty. The award of Contract may then be made to the next qualified Bidder in the same manner as previously prescribed.

- 2.47. Ownership:** All plans, prints, designs, concepts, etc., shall become the property of the Owner.
- 2.48. Oral Statements:** No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this document and/or resulting agreement. All modifications to this request and any agreement must be made in writing by the Owner.
- 2.49. Patents/Copyrights:** The Contractor agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Contractor for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this IFB.
- 2.50. Remedies:** The Contractor and Owner agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.
- 2.51. Venue:** Any agreement as a result of responding to this IFB shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.
- 2.52. Expenses:** Expenses incurred in preparation, submission and presentation of this IFB are the responsibility of the company and cannot be charged to the Owner.
- 2.53. Sovereign Immunity:** The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.
- 2.54. Non-Appropriation of Funds:** The contractual obligation of the Owner under this contract is contingent upon the availability of appropriated funds from this fiscal year budget as approved by the City Council or Board of County Commissioners from this fiscal year only. State of Colorado Statutes prohibit obligation of public funds beyond the fiscal year for which the budget was approved. Anticipated expenditures/obligations beyond the end of the current Owner's fiscal year budget shall be subject to budget approval. Any contract will be subject to and must contain a governmental non-appropriation of funds clause.
- 2.55. Cooperative Purchasing:** Purchases as a result of this solicitation are primarily for the City/County. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide by the specifications, terms, conditions and pricings established in this Bid. The quantities furnished in this bid document are for only the City/County. It does not include quantities for any other jurisdiction. The City or County will be responsible only for the award for its jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office or use their purchasing card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The City/County accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by



participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.

- 2.56. Keep Jobs in Colorado Act:** Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a). If Contractor claims it is entitled to a waiver pursuant to C.R.S. §8-17-101(1), Contractor shall state that there is insufficient Colorado labor to perform the work such that compliance with Article 17 would create an undue burden that would substantially prevent a project from proceeding to completion, and shall include evidence demonstrating the insufficiency and undue burden in its response.

Unless expressly granted a waiver by the Owner pursuant to C.R.S. §8-17-101(1), Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a).

**2.56.1. "Public project" is defined as:**

- (a) any construction, alteration, repair, demolition, or improvement of any land, building, structure, facility, road, highway, bridge, or other public improvement suitable for and intended for use in the promotion of the public health, welfare, or safety and any maintenance programs for the upkeep of such projects
- (b) for which appropriate or expenditure of moneys may be reasonably expected to be \$500,000.00 or more in the aggregate for any fiscal year
- (c) except any project that receives federal moneys.

### **3. Statement of Work**

- 3.1. GENERAL:** The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required for the **2020 Waterline Replacement Project**. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

NOTE: The descriptions of the pay items listed in the Price Bid Schedule for this Project may not agree with those listed in the Standard Specifications. Payment for all Work performed, as required in the Contract Documents, will be in accordance with the items and units listed in the Price Bid Schedule.

The performance of the Work for this Project shall conform to the General Contract conditions presented in the City of Grand Junction's Standard Contract Documents for Capital Improvements Construction, revised July 2010, except as specifically modified or supplemented herein or on the Construction Drawings.

**3.2. PROJECT DESCRIPTION:** The Project generally consists of the installation of 1,575 LF of 20" dia. C-900 PVC, 1,282 LF of 18" dia. C-900 PVC, and 1,907 LF of 6" dia. C-900 PVC. This project also includes fittings, valves, service connections, fire hydrants, appurtenances, disinfection and pressure testing, landscape restoration, asphalt and concrete replacement related to the construction of the new waterlines.

**3.3. SPECIAL CONDITIONS & PROVISIONS:**

**3.3.1 Recommended Pre-Bid Meeting:** Prospective bidders are encouraged to attend a recommended pre-bid meeting on May 14<sup>th</sup> at 10:00 am. Meeting location will be held at the Municipal Campus, outside of the City Engineering Department in the grass area, located at 333 West Ave., Building C, Grand Junction, CO. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).

**3.3.2 QUESTIONS REGARDING SOLICIATION PROCESS/SCOPE OF WORK:**

Duane Hoff, Senior Buyer  
City of Grand Junction  
[duaneh@gjcity.org](mailto:duaneh@gjcity.org)  
970-244-1545

**3.3.2 Project Manager:** The Project Manager for the Project is John Eklund, Project Engineer, who can be reached at (970) 244-1558. During Construction, all notices, letters, submittals, and other communications directed to the City shall be addressed and mailed or delivered to:

City of Grand Junction  
Department of Public Works and Planning  
Attn: John Eklund, Project Manager  
333 West Ave., Building C  
Grand Junction, CO 81501

**3.3.3 Affirmative Action:** The Contractor is not required to submit a written Affirmative Action Program for the Project.

**3.3.4 Pricing:** Pricing shall be all inclusive to include but not be limited to: all labor, equipment, supplies, materials, freight (F.O.B. Destination – Freight Pre-paid and Allowed to each site), travel, mobilization costs, fuel, set-up and take down costs, and full-time inspection costs, and all other costs related to the successful completion of the project.

The Owner shall not pay nor be liable for any other additional costs including but not limited to: taxes, shipping charges, insurance, interest, penalties, termination payments, attorney fees, liquidated damages, etc.

**3.3.5 Freight/Shipping:** All freight/shipping shall be F.O.B. Destination – Freight Pre-Paid and Allowed to the project site(s), Grand Junction, CO.

Contractor must meet all federal, state, and local rules, regulations, and requirements for providing such services.

**3.3.6 Contract:** A binding contract shall consist of: (1) the IFB and any amendments thereto, (2) the bidder's response (bid) to the IFB, (3) clarification of the bid, if any, and (4) the City's Purchasing Department's acceptance of the bid by "Notice of Award" or by "Purchase Order". All Exhibits and Attachments included in the IFB shall be incorporated into the contract by reference.

A. The contract expresses the complete agreement of the parties and, performance shall be governed solely by the specifications and requirements contained therein.

B. Any change to the contract, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the bidder and the City Purchasing Division or by a modified Purchase Order prior to the effective date of such modification. The bidder expressly and explicitly understands and agrees that no other method and/or no other document, including acts and oral communications by or from any person, shall be used or construed as an amendment or modification to the contract.

**3.3.7 Time of Completion:** The scheduled time of Completion for the Project is **110 Calendar Days** from the starting date specified in the Notice to Proceed.

Completion is achieved when site cleanup and all punch list items (resulting from the final inspection) have been completed. Completion shall have the meaning set forth in Article I, Section 3 (Definitions and Terms) of the General Contract Conditions.

**3.3.8 Working Days and Hours:** The working days and hours shall be as stated in the General Contract Conditions, Section VI, or as mutually agreed upon in the preconstruction meeting with the following exception:

- All work shall be performed between the hours of 8:00 AM to 5:00 PM.
- Night and/or evening work may be required within CDOT roadway right-of-way per CDOT Special Use/Utility Permit requirements.
- If allowed by CDOT, the City would consider allowing weekend work within CDOT roadway right-of-way on Pitkin Ave. and Ute Ave. when traffic volumes are less.

**3.3.9 Licenses and Permits:** Contractor is responsible for obtaining all necessary licenses and permits required for Construction, at Contractor's expense. See Section 2.12. Contractor shall supply to Owner all copies of finalized permits.

**3.3.10 Permits:** The following permits are required for the Project and will be obtained by the City at no cost to the Contractor:

- CDOT Special Use/Utility Permit: Permit needed for the waterline crossings on Pitkin Ave. and Ute Ave.

The following permits are required for the Project and shall be obtained and paid for by the Contractor, with the costs included in the total bid price for the Project:

- **Colorado Department of Public Health and Environment Dewatering Permit:** (If necessary due to the presence of groundwater) For more information, contact the Colorado Dept. of Public Health and Environment: [www.cdphe.state.co.us/wq/PermitsUnit/wqcdpmt.html](http://www.cdphe.state.co.us/wq/PermitsUnit/wqcdpmt.html) Approximately 7 – 10 days is required for processing of the permit application. The Contractor should begin preparing the permit application immediately upon notice of award.

**3.3.11 City Furnished Materials:** The City will furnish the following materials for the Project:

- Door-hangers (as necessary)
- AutoCAD drawings for survey stake-out
- Variable message boards for upcoming construction locations

**3.3.12 Project Newsletters:** A newsletter for the Project will be prepared and distributed by the City. It will include general information about the Project including interruptions in utility services, street closures, parking restrictions, project schedule, and the names and telephone numbers of the contacts for the City and Contractor. The newsletter will be mailed approximately one week before the Contractor commences work.

During construction the Contractor will be responsible for notifying all businesses and/or residents located adjacent to the work about interruptions in water service. Door hanger notifications shall be distributed at least two (2) working days prior to the day the work is scheduled to begin. The City can make the door hangers for the contractor to distribute. The Contractor is responsible for notifying the City Project Manager at least one-week before the door hangers are to be hung on property doors.

**3.3.13 Project Sign:** Project signs, if any, will be furnished and installed by the City.

**3.3.14 Authorized Representatives of the City:** Those authorized to represent the City shall include Purchasing Agent, Engineers, and Inspectors employed by the City, only.

**3.3.15 Stockpiling Materials and Equipment:** All stockpiling/storage shall be in accordance with General Contract Condition Section 51.

**3.3.16 Traffic Control:** The Contractor shall provide and maintain traffic control in accordance with the approved Traffic Control Plan and the *Manual on Uniform Traffic Control Devices (MUTCD)*. The traffic control plans shall be presented to the Project Engineer at or prior to the pre-construction meeting for review and approval. The following requirements and limitations shall apply to the traffic control:

No personal driveway and/or access point to a property shall be left inaccessible at the end of each workday or over a weekend; and no construction equipment shall

be parked in front of a driveway and/or access point during Contractor's non-working hours. When a driveway and/or access point must be closed off due to construction activity, the Contractor shall provide advanced notification to the affected resident(s) at least two-days prior to closure and arrange an alternative access point to the property. Refer to General Contract Condition 26 – Maintenance of Access and Services.

Special conditions for traffic control:

1. All trenches shall be backfilled or protected at the end of each working day and access restored to all driveways. If trenches are left open at night, the trenches will be limited to 30 feet in length. The entire perimeter of the excavation shall be barricaded with construction equipment and/or temporary construction fence.
2. At all times during the project, the contractor must ensure access is available for the U.S. Postal Service, trash collection trucks, school buses, emergency vehicles, etc., per the General Contract Conditions.
3. The Contractor shall adhere to all traffic control requirements when working within City right-of-way and CDOT right-of-way.
4. Detours shall be provided when a section of road is closed to through traffic for waterline construction. Residents, employees, property owners shall have access to their respected properties during construction.

**3.3.17 Clean-Up:** The Contractor is responsible for cleaning up all loose materials that have been deposited or swept into gutters, and onto sidewalks and driveways as a result of sidewalk operations. The costs for all clean-up work shall be considered incidental and will not be paid for separately.

**3.3.18 Quality Control Testing:** It is the responsibility of the Contractor to provide Quality Control testing per Table 1 in the Quality Control (QC) and Quality Assurance (QA) section within the City of Grand Junction's Standard Specifications for Road and Bridge Construction, and per Table 101 within the Standard Specifications for the Construction of Underground Utilities. Table 1 and Table 101 provide the testing frequencies. The Contractor shall provide test frequencies for Full-Time inspection. The cost for QC testing will not be paid for separately but shall be included in the cost of the Project.

**3.3.19 Quality Assurance Testing:** The City will provide Quality Assurance (QA) testing on this project at the testing frequencies provided in Table 1 in the City of Grand Junction's Standard Specifications for Road and Bridge Construction, and per Table 101 within the Standard Specifications for the Construction of Underground Utilities. Table 1 and Table 101 provide the testing frequencies. The City will provide QA testing frequencies for Full-Time inspection. The City is contracted with a local Geotechnical testing consultant that will be performing the QA tests.

**3.3.20 Schedule of Submittals:** Contractor shall deliver these submittals at least two days prior to the pre-construction meeting:

- Traffic Control Plans
- Project Schedule
- Water Pipe – C900 PVC (6", 8", 12", 18", & 20")
- Restrained Water Pipe – 20" C900 PVC Certa-Lok pipe
- Fittings (elbows, tees, crosses, reducers)
- Valves (Gate Valves & Butterfly Valves)
- Bedding Gradation, Type A
- Aggregate Base Course gradation and Proctor Curve (Class 6 material)
- Tracing Wire and Splices to be used
- Water Valve Boxes
- Asphalt Mix Design
- Concrete Mix Design

**3.3.21 Uranium Mill Tailings:** It is anticipated that radioactive mill tailings can possibly be encountered on this Project. The location of radioactive mill tailings is unknown. A pay item for the removal and disposal of radioactive mill tailings has been provided. If mill tailings are encountered, the Contractor will be required to remove the tailings from the trench and haul the millings to the mill tailings disposal site at City Shops located at 333 West Ave. Consult with Project Engineer prior to removing and hauling to disposal site.

**3.3.22 Fugitive Petroleum or Other Contamination:** It is anticipated that soil contamination from fugitive petroleum or other contaminants will not be encountered with the Project.

**3.3.23 Excess Material:** All excess materials shall be disposed in accordance with General Contract Condition Section 50.

**3.3.24 Existing Utilities and Structures:** The location of existing utilities and structures shown on the Plans are approximate. Not all underground utilities were potholed. It is the responsibility of the Contractor to locate and protect all structures and utilities in accordance with General Contract Condition Section 37. The Contractor and the City shall coordinate with the utility companies any necessary relocation of utilities and schedule work accordingly. Conflicts between water and gas lines and/or communication/telephone utilities may be encountered. At such conflicts, the Contractor shall relocate the waterlines and/or work with the Utility owner on the relocation of the specific utility line(s). Payment for waterline relocations will be paid for using the Minor Contract Revision line item assigned to the Project.

If the Contractor discovers a conflict with an existing utility (either horizontal or vertical), the Contractor shall contact the Project Engineer and the utility owner immediately to assist in resolving the conflict.

**3.3.25 Incidental Items:** Any item of work not specifically identified or paid for directly, but which is necessary for the satisfactory completion of any paid items of work, will be considered as incidental to those items, and will be included in the cost of those items.

- 3.3.26 Existing Concrete Sidewalks, Pans, Fillets, Curbs and Gutters:** The existing sidewalks, pans, fillets, curb and gutter are in good serviceable condition. In most instances the installation of new sidewalk and pavement will be adjacent to existing concrete. The Contractor will need to protect all concrete adjacent to construction. If the concrete is damaged during construction the Contractor will be responsible for its replacement at no cost to the City. The Contractor, the City Project Inspector, and/or the City Project Manager will walk and record any concrete that is deemed to be damaged before construction has started.
- 3.3.27 ACI Concrete and Flatwork Finisher and Technician:** Hand finishing concrete will be permitted only when performed under the direct supervision of a craftsman holding the following certificate: ACI Concrete Flatwork Finisher and Technician (ACICFFT) or other Flatwork Finisher certification program approved by the City Engineering Manager.
- 3.3.28 Confined Space Entry:** The Contractor is responsible for providing any and all confined space entry safety equipment; including, but not limited to: air testing equipment, fresh air blowers, tripods, ladders, harnesses, and SCBA equipment. The Contractor's air monitoring devices shall be calibrated and certified. The cost for all confined space entry equipment shall be incidental to the project cost and will not be paid for separately.
- 3.3.29 Construction Dewatering:** All construction dewatering must meet the requirements specified in the CDPHE Dewatering Permit. Construction dewatering will be considered incidental and will not be measured and paid for separately.
- 3.3.30 Temporary Steel Plating:** If the Contractor chooses to use steel plates to protect an open trench section, the cost for supplying and securely placing the steel plates will not be paid for separately but shall be included in the cost of the Project.
- 3.3.31 Payment for Damage to Private Property beyond Easement Limits/ROW Limits:** Easement and Right-of-Way (ROW) lines are indicated on the Construction Plans. Any and all damage to improvements outside of easements and ROW, and/or outside the Construction Limit lines shall be repaired at the Contractor's expense. There will be no additional payment made for restoration of sod, landscaping, gravel, concrete or asphalt driveways, irrigation systems, decorative borders, fences, etc. beyond the property line or the construction easements as shown on the plan set.
- 3.3.32 Interruption of Utilities and Services:** The Contractor shall notify all property owners affected by the interruption of utilities and other services caused by his operation. Such notice shall be given at least 24 hours prior to the interruption. Notice shall be given for, but not limited to the interruption of domestic water, sanitary sewer, trash pickup, mail delivery and changes in access to the property.
- 3.3.33 Project Location Work Schedule:** The City would like this waterline project to be completed in the following order:
1. Complete the 18" waterline installation first along Pitkin Ave.

2. Complete the 20" waterline installation second along D Road and 12<sup>th</sup> Street.
3. Lastly, complete the Elm Ave. waterline installation.

The reason for completing the installation of the 18" waterline along Pitkin Ave. first is to provide redundancy to the waterline system while the Contractor is working on the 20" waterline system.

**3.3.34 Construction Surveying & "As-Built" Drawings:** In addition to Items I and II in the General Contract Conditions, Section 54, As-Built record information will be provided to, and approved by City staff prior to Final Acceptance of the Project. Information to be provided must be in electronic format (e.g. AutoCAD and/or survey files) along with a PDF set of As-Built drawings. As-Built electronic files must contain information suitable for the City to maintain Utility records to the standards set forth in the new Colorado 811 One Call/Subsurface Utility Law (effective August 8, 2018) and standards as described in the American Society of Civil Engineers (ASCE) Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data (ASCE 38-02).

Electronic information for As-Built records shall include, but is not limited to, verification of all horizontal and vertical changes in pipe alignments, elbows, tees, manholes, valves, control structures, service taps, service pipe (horizontal and vertical deflections to ROW line, meter pits, or clean-outs, whichever is closer), beginning and ending of slip-lined segments, tie-in or connection to existing infrastructure, etc. Distance between As-Built data points along pipe alignment is dependent on the amount of deflection used to install the pipe in the field. There must be sufficient point data to create a plan and profile of all infrastructure accurate to within eighteen inches (18") of the physical structures anywhere along the project.

The cost for surveying all fittings, both sewer and water, shall be incidental to the project cost and will not be paid for separately.

**3.3.35 Asphalt Removal and Temporary Asphalt Millings:** Asphalt pavement shall be removed per the City's Standard Detail GU-03 using the "T" Top method. The pavement joints/edges from the milling process shall be located either at the edge and/or the center of the traffic lane. No pavement joints shall fall in the location of vehicle wheel paths. All asphalt pavements shown in the construction drawings to be removed shall be removed by milling (planning) the full-depth of existing asphalt.

The asphalt millings can be left in place and do not need to be removed prior to trench excavation. Asphalt millings left in place shall be wheel compacted by the Contractor prior to allowing traffic to drive on the asphalt millings. The Contractor shall maintain the asphalt millings in the areas that will remain open to traffic before trench excavation operations begin.

**3.3.36 UPRR Railroad Contact:** The local contact for the Union Pacific Railroad (UPRR) is Justin Cordova at 970-628-6019. The Contractor shall provide at least one-weeks advance notice to Justin prior to working near the railroad tracks with the new waterline installation. This waterline project is not working within the UPRR right-of-



way, but as a courtesy to the UPRR and Justin, the Contractor shall notify the railroad of working near the railroad right-of-way.

**3.3.37 Traffic Detector Loops:** The intersection of 12<sup>th</sup> Street and Ute Ave. is a signalized intersection. This intersection has no active detection loops.

**3.4. SCOPE OF WORK:** The Project generally consists of the installation of 1,575 LF of 20” dia. C-900 PVC, 1,282 LF of 18” dia. C-900 PVC, and 1,907 LF of 6” dia. C-900 PVC. This project also includes fittings, valves, service connections, fire hydrants, appurtenances, disinfection and pressure testing, landscape restoration, asphalt and concrete replacement related to the construction of the new waterlines.

**3.5. Attachments:**

- Appendix A: Project Submittal Form
- Appendix B: Project Special Provisions
- Appendix C: Geotechnical Soils Report
- Construction Plans

**3.6. Contractor Bid Documents:** For Contractor’s convenience, the following is a list of forms/items to be submitted with the Contractor’s bid response. However, should a form/item not be listed in this section, but required in the solicitation documents, it is the Contractor’s responsibility to ensure all forms/items are submitted.

- **Contractor’s Bid Form**
- **Price Bid Schedule**

**3.7. IFB TENTATIVE TIME SCHEDULE:**

Invitation for Bids available:	May 6, 2020
Recommended Pre-Bid Meeting:	May 14, 2020
Inquiry deadline, no questions after this date:	May 19, 2020
Addendum Posted:	May 21, 2020
Submittal deadline for proposals (Bid Opening):	May 28, 2020
City Council Approval:	June 17, 2020
Notice of Award & Contract execution:	June 18, 2020
Bonding & Insurance Cert. due:	June 30, 2020
Preconstruction meeting:	June 30, 2020
Work begins no later than:	Receipt of Notice to Proceed
Final Completion:	110 Calendar Days from Notice to Proceed
City Recognized Holidays:	Labor Day

## 4. Contractor's Bid Form

**Bid Date:** \_\_\_\_\_

**Project:** IFB-4798-20-DH "2020 Waterline Replacement Project"

**Bidding Company:** \_\_\_\_\_

**Name of Authorized Agent:** \_\_\_\_\_

**Email** \_\_\_\_\_

**Telephone** \_\_\_\_\_ **Address** \_\_\_\_\_

**City** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip** \_\_\_\_\_

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

Prices in the bid proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this bid proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a bid proposal for the purpose of restricting competition.
- The individual signing this bid proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of \_\_\_\_\_ percent of the net dollar will be offered to the Owner if the invoice is paid within \_\_\_\_\_ days after the receipt of the invoice. The Owner reserves the right to take into account any such discounts when determining the bid award.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: \_\_\_\_\_.

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.

*By signing below, the Undersigned agree to comply with all terms and conditions contained herein.*

**Company:** \_\_\_\_\_

**Authorized Signature:** \_\_\_\_\_

**Title:** \_\_\_\_\_

## Bid Schedule: 2020 Waterline Replacement Project

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	108.2	Water Main (6") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	1,907.	Lin. Ft.	₹ _____	₹ _____
2	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	98.	Lin. Ft.	₹ _____	₹ _____
3	108.2	Water Main (12") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	58.	Lin. Ft.	₹ _____	₹ _____
4	108.2	Water Main (18") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,282.	Lin. Ft.	₹ _____	₹ _____
5	108.2	Water Main (20") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,380.	Lin. Ft.	₹ _____	₹ _____
6	108.2	Water Main (20") (Restrained C-900 PVC, DR-25) (Certa-Lok Restrained Joint, Coupled or Approved Equal) (Sta. 34+00 - 35+95)	195.	Lin. Ft.	₹ _____	₹ _____
7	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed material unit weight = 133 lbs/ft <sup>3</sup> )	600.	Ton	₹ _____	₹ _____
8	108.3	Gate Valve (6")	17.	Each	₹ _____	₹ _____
9	108.3	Gate Valve (8")	5.	Each	₹ _____	₹ _____
10	108.3	Gate Valve (12")	1.	Each	₹ _____	₹ _____
11	108.3	Butterfly Valve (18")	3.	Each	₹ _____	₹ _____
12	108.3	Butterfly Valve (20")	2.	Each	₹ _____	₹ _____
13	108.3	Tee (6" x 6") MJ Swivel Tee (Epoxy Coated)	11.	Each	₹ _____	₹ _____
14	108.3	Tee (8" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	₹ _____	₹ _____
15	108.3	Tee (12" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	₹ _____	₹ _____
16	108.3	Tee (18" x 18") (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
17	108.3	Tee (20" x 8") MJ Swivel Tee (Epoxy Coated)	3.	Each	₹ _____	₹ _____
18	108.3	Tee (20" x 18") (MJ) (Epoxy Coated)	2.	Each	₹ _____	₹ _____
19	108.3	Elbow (6" x 45 deg) (MJ) (Epoxy Coated)	28.	Each	₹ _____	₹ _____

**Bid Schedule: 2020 Waterline Replacement Project**

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
20	108.3	Elbow (8" x 11.25 deg) (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
21	108.3	Elbow (8" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
22	108.3	Elbow (8" x 45 deg) (MJ) (Epoxy Coated)	8.	Each	₹ _____	₹ _____
23	108.3	Elbow (12" x 45 deg) (MJ) (Epoxy Coated)	2.	Each	₹ _____	₹ _____
24	108.3	Elbow (18" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
25	108.3	Elbow (18" x 45 deg) (MJ) (Epoxy Coated)	11.	Each	₹ _____	₹ _____
26	108.3	Elbow (20" x 11.25 deg) (MJ) (Epoxy Coated)	4.	Each	₹ _____	₹ _____
27	108.3	Elbow (20" x 45 deg) (MJ) (Epoxy Coated)	7.	Each	₹ _____	₹ _____
28	108.3	Reducer (20" x 12") (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
29	108.3	Cross Fitting (12" x 8") (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
30	108.3	End Cap/Plug (6") (Restrained) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (To be used on Elm Ave. to abandon existing fire hydrant at Sta. 8+20)	1.	Each	₹ _____	₹ _____
31	108.3	End Cap/Plug (18") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	1.	Each	₹ _____	₹ _____
32	108.3	End Cap/Plug (20") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	2.	Each	₹ _____	₹ _____
33	108.3	Fire Hydrant Assembly	5.	Each	₹ _____	₹ _____
34	108.3	8" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	₹ _____	₹ _____
35	108.3	20" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	₹ _____	₹ _____
36	108.4	Water Service Line (3/4") (Type K Copper) (If Lead or Poly service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	180.	Lin. Ft.	₹ _____	₹ _____

## Bid Schedule: 2020 Waterline Replacement Project

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
37	108.4	Water Service Line (1-1/2") (Type K Copper or HDPE 3408) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	150.	Lin. Ft.	\$ _____	\$ _____
38	108.4	Tapping Saddle (6" x 3/4")	36.	Each	\$ _____	\$ _____
39	108.4	Tapping Saddle (20" x 3/4")	1.	Each	\$ _____	\$ _____
40	108.4	Tapping Saddle (20" x 1-1/2")	1.	Each	\$ _____	\$ _____
41	108.4	Corporation Stop (3/4")	37.	Each	\$ _____	\$ _____
42	108.4	Corporation Stop (1-1/2")	1.	Each	\$ _____	\$ _____
43	108.4	Meter Setter and Meter Pit Installation (Install Only) (City Furnished Meter Pit) (Includes removal and disposal of existing meter pit)	6.	Each	\$ _____	\$ _____
44	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (18" Thick Min.) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 138 lbs/ft <sup>3</sup> )	75.	Ton	\$ _____	\$ _____
45	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	13.	Each	\$ _____	\$ _____
46	202	Abandon Existing Water Valve (Close valve, remove top half of existing valve box, fill cavity to finished subgrade with flow-fill material)	9.	Each	\$ _____	\$ _____
47	202	Remove Existing Fire Hydrant (Return Hydrant to City Shops)	4.	Each	\$ _____	\$ _____
48	202	Removal of Existing Pipe (Size & type as shown on plans)	307.	Lin. Ft.	\$ _____	\$ _____
49	202	Removal of Asphalt Mat (Full Depth)	1,328.	Sq. Yd.	\$ _____	\$ _____
50	202	Removal of Asphalt Mat (Planing) (2" Thick for T-Top Section)	704.	Sq. Yd.	\$ _____	\$ _____
51	202	Removal of Concrete (Includes, but not limited to, curb, gutter, sidewalk, driveway, slabs, V-pans, curb ramps, intersection corners, aprons, landscape borders, and concrete walls)	428.	Sq. Ft.	\$ _____	\$ _____
52	202	Removal of Sod	2,547.	Sq. Ft.	\$ _____	\$ _____

**Bid Schedule: 2020 Waterline Replacement Project**

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
53	203	Disposal of Radioactive Material (Dispose at City Shops, 333 West Ave.)	50.	Cu. Yd.	₹ _____	₹ _____
54	206	Structure Backfill (Flow-Fill)	180.	Cu. Yd.	₹ _____	₹ _____
55	208	Storm Drain Inlet Protection (Gravel Filter at Curb Inlet) (Includes Maintenance & Removal of Debris, & Removal of Inlet Protection)	7.	Each	₹ _____	₹ _____
56	208	Concrete Washout Facility	1.	Lump Sum	₹ _____	₹ _____
57	210	Reset Landscape Ground Cover (Match in Kind) (Contractor shall remove ground cover and underlying weed barrier as needed and stockpile materials. Contractor shall reset these materials and provide additional materials as needed)	560.	Sq. Ft.	₹ _____	₹ _____
58	210	Reset Landscape Borders (Concrete Pavers) (Property 1510 N. 18th Street)	1.	Lump Sum	₹ _____	₹ _____
59	210	Reset Landscape Rock (Reddish Rock) (Property 1505 N. 20th Street) (Match in Kind)	20.	Sq. Ft.	₹ _____	₹ _____
60	210	Reset Sprinkler System (Desert Vista Park) (Complete in Place) (Various Pipe Sizes) (Contractor shall repair all sprinkler pipe breaks whether PVC or HDPE pipe of any size within the sodded area of Desert Vista Park) (City Parks Dept. can be contacted ahead of time to get an idea of sprinkler system within the park)	1.	Lump Sum	₹ _____	₹ _____
61	210	Reset Fence (6' High Chain-Link w/ Barbed Wire Top) (12th St. and D Road intersection)	40.	Lin. Ft.	₹ _____	₹ _____
62	210	Reset Fence (4' High Barbed Wire Fence) (Along Pitkin Ave. near Sta. 10+00)	20.	Lin. Ft.	₹ _____	₹ _____
63	210	Reset Sign (Along Pitkin Ave. near Sta. 10+00)	3.	Each	₹ _____	₹ _____
64	212	Re-Sod Areas (Desert Vista Park and various other locations) (Includes 6" Thick Imported Topsoil placed prior to sod placement)	2,547.	Sq. Ft.	₹ _____	₹ _____
65	304	Aggregate Base Course (Class 6) (4" thick) (Shoulder Base)	491.	Sq. Yd.	₹ _____	₹ _____
66	304	Aggregate Base Course (Class 6) (15" thick)	1,238.	Sq. Yd.	₹ _____	₹ _____

## Bid Schedule: 2020 Waterline Replacement Project

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
67	401	Hot Bituminous Pavement (Patching) (3" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 3" Lift Bottom Mat)	490.	Sq. Yd.	\$ _____	\$ _____
68	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Top Mat) <b>(T-Top)</b>	2,018.	Sq. Yd.	\$ _____	\$ _____
69	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Lift Bottom Mat) <b>(Elm Ave.)</b>	838.	Sq. Yd.	\$ _____	\$ _____
70	407	Emulsified Asphalt (Tack Coat)	335.	Gallon	\$ _____	\$ _____
71	608	Concrete Curb and Gutter (2' Wide) (Match in Kind) (City Std. Detail C-05)	54.	Lin. Ft.	\$ _____	\$ _____
72	608	Concrete Curb, Gutter, & Sidewalk (6' Wide) (Match in Kind) (City Std. Detail C-02)	150.	Sq. Ft.	\$ _____	\$ _____
73	608	Concrete Drainage Pan (6' Wide x 8" Thick) (Match in Kind) (Includes #5 rebar tie-bars) (City Std. Detail C-12)	150.	Sq. Ft.	\$ _____	\$ _____
74	608	Cap Top Half of Sewer Pipe in Concrete per City Std. Detail GU-04 (If necessary)	1.	Each	\$ _____	\$ _____
75	620	Portable Sanitary Facility	2.	Each	\$ _____	\$ _____
76	625	Construction Surveying (Includes As-Built Drawings)	1.	Lump Sum	\$ _____	\$ _____
77	626	Mobilization	1.	Lump Sum	\$ _____	\$ _____
78	627	Pavement Marking Paint (Water Based) (Double Yellow Lines) (12th St. between Ute Ave. and Pitkin Ave., and D Road)	72.	Lin. Ft.	\$ _____	\$ _____
79	627	Pavement Marking Paint (Water Based) (Single Yellow Line) (Pitkin Ave.)	10.	Lin. Ft.	\$ _____	\$ _____
80	627	Pavement Marking Paint (Water Based) (Single White Line) (Pitkin Ave. & D Road)	40.	Lin. Ft.	\$ _____	\$ _____
81	627	Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line) (To be used at the Ute Ave. and 12th Street intersection)	62.	Sq. Ft.	\$ _____	\$ _____
82	629	Survey Monumentation (Complete in Place)	2.	Each	\$ _____	\$ _____
83	630	Traffic Control Plan	1.	Lump Sum	\$ _____	\$ _____

### Bid Schedule: 2020 Waterline Replacement Project

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
84	630	Traffic Control (Complete in Place)	1.	Lump Sum	\$ _____	\$ _____
85	630	Flagging	1,240.	Hour	\$ _____	\$ _____
MCR		Minor Contract Revisions	---	---	---	\$ 55,000.00
<b>Bid Amount:</b>						\$ _____

**Bid Amount:**

\_\_\_\_\_ dollars

<b>Contractor Name:</b>
<b>Contractor Address:</b>
<b>Contractor Phone #:</b>



The undersigned Bidder proposes to subcontract the following portion of Work:

<u>Name &amp; address of Sub-Contractor</u>	<u>Description of work to be performed</u>	<u>% of Contract</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The undersigned Bidder acknowledges the right of the City to reject any and all Bids submitted and to waive informalities and irregularities therein in the City's sole discretion.

By submission of the Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without collusion, consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

# **Appendix A**

## **Project Submittal Form**

## PROJECT SUBMITTAL FORM

PROJECT: **2020 Waterline Replacement Project**

CONTRACTOR:

PROJECT ENGINEER: John Eklund

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
<b>CONSTRUCTION</b>				
Pipe – Domestic Water Pipe (C-900 PVC) (6", 8", 12", 18", & 20")				
Pipe – Restrained Water Pipe (C-900 PVC Certa-Lok DR-25)				
Pipe – HDPE Water Service Pipe				
Service Line – Copper Tubing				
Valves – 6", 8", 12" Gate Valves				
Valves – 18" & 20" Butterfly Valves				
Tracing Wire & Splices				
Fittings – Elbows, Tees, Tapping Saddles, Corp. Stops, Crosses, Couplings, Curb Stops, Reducers				
Imported Trench Backfill (Class 3)				
Granular Stabilization Material (Type B)				
Water Valve Boxes				
Fire Hydrant Assembly				
Flow-Fill				
Pipe Bedding Gradation, Type A				
Aggregate Base Course, Class 6 (Include Proctor Curve Results)				
Concrete Mix Design, Class D				
Hot Bituminous Pavement Mix Design (PG 64-22, SX, Gyr. = 75)				
Concrete Washout Structure				
Inlet Basin Protection				
Construction Schedule				
Traffic Control Plan(s)				
CDPHE Dewatering Permit (If Necessary)				

# **Appendix B**

## **Project Special Provisions**

CITY OF GRAND JUNCTION  
DEPARTMENT OF PUBLIC WORKS AND UTILITIES  
ENGINEERING DIVISION

---

**2020 Waterline Replacement Project**

**SPECIAL PROVISIONS**

**GENERAL:**

The descriptions of the pay items listed in the Bid Schedule for this Project may not agree with those listed in the Standard Specifications. Payment for all Work performed, as required in the Contract Documents, will be in accordance with the items and units listed in the Bid Schedule.

**STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION:**

The *City of Grand Junction Standard Specifications for Road and Bridge Construction* are hereby modified or supplemented for this Project by the following modifications to *The Standard Specifications for Road and Bridge Construction*, State Department of Highways, Division of Highways, State of Colorado:

**SP-1 SECTION 208 – EROSION CONTROL**

Section 208 of the Standard Specifications is hereby revised for this project as follows:

Subsection 208.04 shall include the following:

If groundwater within the new water line trenches is encountered and requires dewatering, the dewatering pump shall have a filter sock attached to the end of the discharge hose. This will prevent sediment in the discharge water from entering into the City's storm drainage system. The contractor will be responsible for monitoring the levels of sediment within the filter sock and replacing the filter sock when it reaches 50% of its holding capacity. It will also be the responsibility of the contractor to obtain the Dewatering Permit from the Colorado Department of Public Health and Environment if necessary.

Any of the materials to be installed or used for the installation of the sewer line shall be stored within the construction area where the Contractor is working unless permission is granted to store materials elsewhere. Any glues and/or adhesives necessary shall be contained at all times within a spill proof and waterproof container when not being used.

All vehicle and equipment maintenance and fueling shall be performed in a designated area within the construction area that will not interfere with roadway traffic operations unless traffic control is provided. The fueling area shall exhibit Best Management Practices in order to minimize and/or eliminate the potential of fuel spillage. Any spillage of fuel onto the ground shall be immediately cleaned up and any contaminated soil disposed of properly at the Mesa County Landfill. Documentation of spills, leaks and overflows that result in the discharge of pollutants, including logging and reporting of the spill is required to the Water

Quality Control Division at their toll-free 24-hour environmental emergency spill reporting line – 1-877-518-5608.

The Contractor shall clear the site of all on-site waste daily, including scrap from construction materials.

Concrete trucks will be required to wash out in a portable concrete washout pool supplied by the Contractor or the concrete truck can wait to washout back at the concrete batching facility. The Contractor will be responsible for maintaining the washout pool. The washout pool shall be cleaned out and/or replaced when the washout pool reaches 50% of total capacity. The concrete washout pool needs to be dynamic and durable in its ability to be moved with the progress of construction.

The Contractor shall clear the site of all trash and litter daily. Portable toilets will be maintained (cleaned and emptied) by a local supplier.

### **SP-2 SECTION 420 – GEOSYNTHETICS**

Section 420 of the Standard Specification is hereby revised for this project as follows:

Subsection 420.02 in the City of Grand Junction’s Standard Specifications shall include the following:

The materials supplied for the “Geotextile (Non-Woven Separator for use with Type B Granular Stabilization Material)” shall be Contech C-60NW or Nilex NW60, or approved equal. Where specified by the Engineer, Geotextile shall be installed per Std. Detail GU-03.

### **SP-3 SECTION 601 – STRUCTURAL CONCRETE**

Section 601 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 601.02 from the City of Grand Junction Standard Specifications and replace with the following:

Concrete for construction of curbs, gutters, sidewalks, irrigation structures, curb ramps, driveway approaches, corner fillets, drainage pans, median cover, and trails shall be CDOT Class D concrete per the 2017 CDOT Standard Specifications for Road and Bridge Construction (Red Book).

- Minimum field compressive strength: 4,500 psi at 28 days
- Air Content: 6% +/- 1.5%
- Maximum water cement ratio: 0.45
- Maximum slump at delivery shall be 4-inches. In the event that the concrete slump from the first truck of the day exceeds 5-inches the load will be rejected. Subsequent batches shall be adjusted so that the slump at delivery does not exceed 4-inches.

**STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WATER LINES, SANITARY SEWERS, STORM DRAINS, UNDERDRAINS AND IRRIGATION SYSTEMS**

The City of Grand Junction *Standard Specifications for Construction of Water Lines, Sanitary Sewers, Storm Drains, Underdrains and Irrigation Systems* are hereby modified for this Project as follows:

**SP-4 SECTION 103 – REMOVALS, EXCAVATION, BACKFILLING AND RESTORATION**

Section 103 of the Standard Specifications is hereby revised for this project as follows:

Subsection 103.10, Cutoff Walls, shall include the following:

Payment for this work will not be measured or paid for separately and will be considered incidental to the installation of Water Pipe. Refer to Section 108.13 for list of Incidental Construction items.

Subsection 103.16, Earth Backfill Material, shall include the following:

Native material excavated on site shall be used for backfill on all pipelines and appurtenances above the bedding and haunching material unless the native material is too wet, soft, rocky or otherwise unsuitable for backfill as determined by the Engineer or their representative. In such case, imported trench backfill material, or other approved material, shall be used and paid for per ton of material supplied, placed and compacted. The Contractor will be required to salvage useable materials from the project excavations and mix the useable material with imported trench backfill prior to placing backfill in the trench. The contract price for "Imported Trench Backfill" shall include the disposal of the unsuitable material.

**SP-5 CLEARING AND GRUBBING**

Addition to Contract - Clarification:

Clearing and grubbing for this project shall be considered incidental to the cost of construction. Clearing and grubbing will not be paid for separately.

**SP-6 SECTION 103.3 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

Addition to Contract:

Section 103.3 of the Standard Specifications shall include the following:

The contractor shall provide temporary security fencing at locations where fencing has been removed to facilitate construction. Temporary security fencing shall be in place whenever work activities are not ongoing near or through the fenced area and at the end

of each working day. The temporary fencing shall be securely fastened to the existing fence with wire.

**Measurement and Payment:** Temporary security fencing shall not be measured or paid for separately but shall be incidental to the Reset Fence pay item.

## **SP-7 PROTECTION OF PROPERTY ADJACENT TO EASEMENTS**

Addition to Contract - Clarification:

The contractor shall be responsible for protecting surface or other features located adjacent to and outside any easement procured for this project. This includes pavement, gravel, fencing, structures, etc. located outside easements. Damage as a result of construction activity to objects as described above shall be repaired and/or replaced at the Contractors expense and shall not be the responsibility of the City.



# **Appendix C**

## **Geotechnical Soils Investigation**



**Huddleston-Berry**  
Engineering & Testing, LLC

2789 Riverside Parkway  
Grand Junction, Colorado 81501  
Phone: 970-255-8005  
Fax: 970-255-6818  
Info@huddlestonberry.com

March 21, 2019  
Project#00208-0095

City of Grand Junction  
333 West Avenue, Building C  
Grand Junction, Colorado 81501

Attention: Mr. Lee Cooper

Subject: Geotechnical Investigation  
2019 Water Line Replacements  
Grand Junction, Colorado

Dear Mr. Cooper,

At your request, Huddleston-Berry Engineering and Testing, LLC (HBET) conducted a subsurface exploration for the 2019 Water Line Replacements project. The scope of work included conducting geotechnical borings at five locations in Grand Junction, Colorado. The boring locations are shown on Figure 1. In addition, typed boring logs are included in Appendix A. The results of laboratory soil classification testing are included in Appendix B.

Boring B-1 was conducted on S. 12<sup>th</sup> Street, south of Pitkin Avenue. This boring encountered 4.0-inches of asphalt pavement above brown, moist, medium stiff lean clay to a depth of 10.0 feet. The clay was underlain by brown, moist, medium dense silty sand to the bottom of the boring. Groundwater was not encountered in B-1 at the time of the investigation.

Boring B-2 was conducted on S. 15<sup>th</sup> Street near the intersection with 4<sup>th</sup> Avenue. This boring encountered 4.0-inches of asphalt pavement above granular base course to a depth of approximately 2.0 feet. Below the pavement materials, brown, moist, medium stiff lean clay extended to a depth of 10.0 feet. The clay was underlain by brown, moist to wet, dense to very dense sandy gravel and cobbles to the bottom of the boring. Groundwater was encountered in B-2 at a depth of 10.0 feet at the time of the investigation.

Boring B-3 was conducted on D Road, east of S. 10<sup>th</sup> Street. This boring encountered 6.0-inches of asphalt pavement above brown, moist, stiff to soft lean clay soils to a depth of 8.0 feet. The clay was underlain by brown, moist to wet, very loose to medium dense silty sand to the bottom of the boring. Groundwater was encountered in B-3 at a depth of 8.5 feet at the time of the investigation.

Boring B-4 was conducted on S. 9<sup>th</sup> Street near the intersection with Winters Avenue. This boring encountered 5.0-inches of asphalt pavement above brown, moist to wet, stiff to very soft lean clay to a depth of 12.0 feet. The clay was underlain by brown, wet, dense sandy gravel and cobbles to the bottom of the boring. Groundwater was encountered in B-4 at a depth of 9.5 feet at the time of the investigation.

2019 Water  
#00208-0095  
03/21/19



Boring B-5 was conducted along Pitkin Avenue, near the S. 15<sup>th</sup> Street alignment. This boring encountered 1.0 foot of topsoil above brown, moist, soft to medium stiff lean clay to the bottom of the boring. Groundwater was not encountered in B-5 at the time of the investigation.

The blow counts (N-values) of the native clay soils encountered in the borings ranged from 1 to 12 blows-per-foot. The N-values of the native sand soils ranged from 17 to 21 blows-per-foot. The N-value of the native gravel and cobble soils was 41 blows-per-foot. The moisture contents in the soils ranged from 14 to 34%.

We are pleased to be of service to your project. Please contact us if you have any questions or comments regarding the contents of this report.

Respectfully Submitted:  
**Huddlestone-Berry Engineering and Testing, LLC**



Michael A. Berry, P.E.  
Vice President of Engineering

**FIGURES**

# Untitled Map

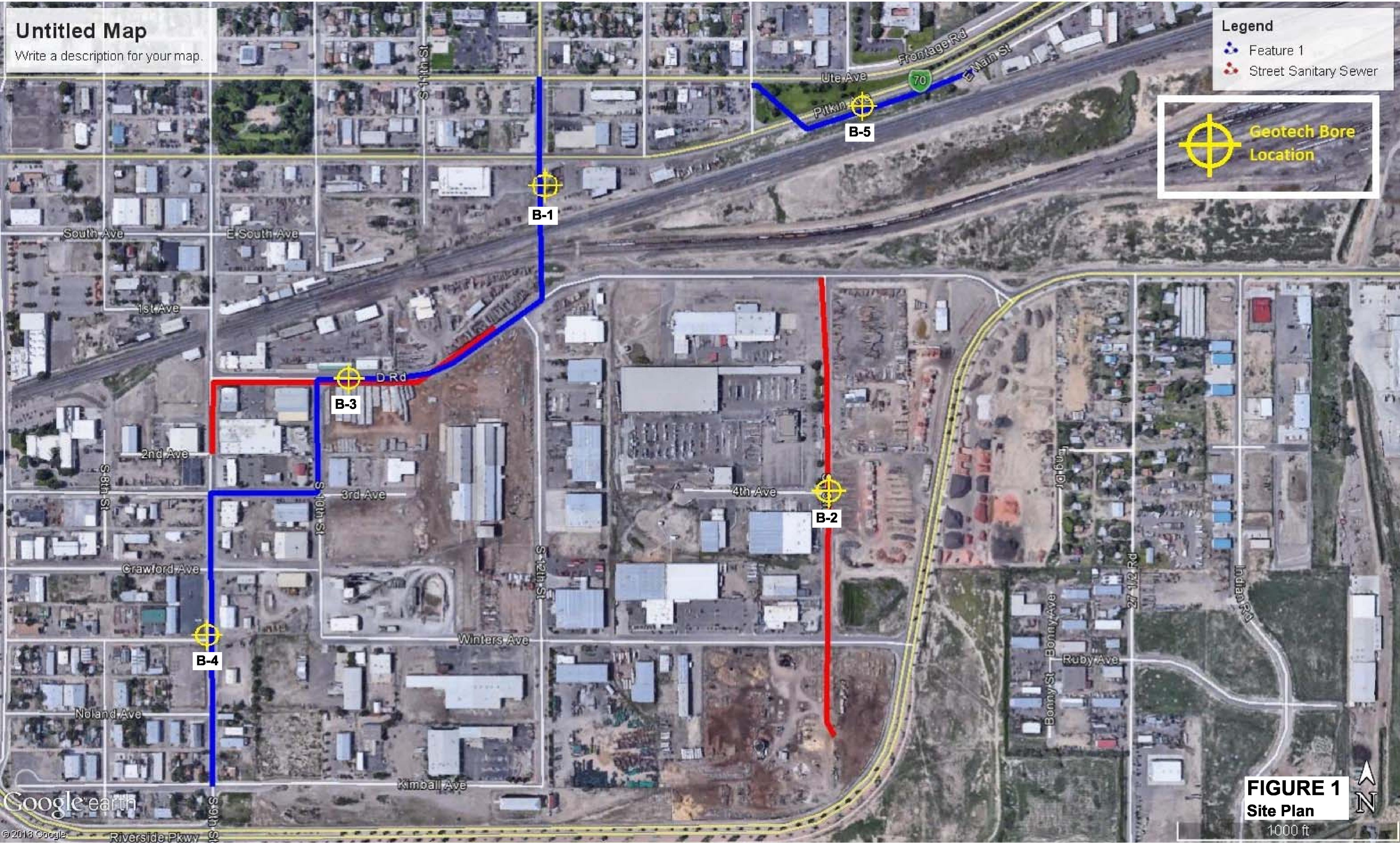
Write a description for your map.

**Legend**

- Feature 1
- Street Sanitary Sewer



**Geotech Bore Location**



**FIGURE 1**  
**Site Plan**

1000 ft



**APPENDIX A**  
**Typed Boring Logs**



Huddlestone-Berry Engineering & Testing, LLC  
 640 White Avenue, Unit B  
 Grand Junction, CO 81501  
 970-255-8005  
 970-255-6818

# BORING NUMBER B-1

PAGE 1 OF 1

<b>CLIENT</b> <u>City of Grand Junction</u>	<b>PROJECT NAME</b> <u>2019 Water Line</u>	
<b>PROJECT NUMBER</b> <u>00208-0095</u>	<b>PROJECT LOCATION</b> <u>Grand Junction, CO</u>	
<b>DATE STARTED</b> <u>2/5/19</u> <b>COMPLETED</b> <u>2/5/19</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>4-inches</u>	
<b>DRILLING CONTRACTOR</b> <u>S. McKracken</u>	<b>GROUND WATER LEVELS:</b>	
<b>DRILLING METHOD</b> <u>Simco 2000 Truck Rig</u>		<b>AT TIME OF DRILLING</b> <u>dry</u>
<b>LOGGED BY</b> <u>SD</u> <b>CHECKED BY</b> <u>MAB</u>		<b>AT END OF DRILLING</b> <u>dry</u>
<b>NOTES</b> _____	<b>AFTER DRILLING</b> <u>--</u>	

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		ASPHALT										
0.0 - 2.5		Lean CLAY (CL), brown, moist, medium stiff										
2.5			<del>SS 1</del>	89	3-3-4 (7)			20				
5.0												
7.5		*** Lab Classified SS2	<del>SS 2</del>	83	1-2-3 (5)			24	40	18	22	97
10.0		Silty SAND (sm), brown, moist, medium dense										
12.5			<del>SS 3</del>	100	2-6-15-14 (21)			19				
15.0		Bottom of hole at 15.0 feet.										

GEOTECH BH COLUMNS 00208-0095 2019 WATER.GPJ GINT US LAB.GDT 3/21/19



Huddlestone-Berry Engineering & Testing, LLC  
 640 White Avenue, Unit B  
 Grand Junction, CO 81501  
 970-255-8005  
 970-255-6818

# BORING NUMBER B-2

PAGE 1 OF 1

**CLIENT** City of Grand Junction **PROJECT NAME** 2019 Water Line

**PROJECT NUMBER** 00208-0095 **PROJECT LOCATION** Grand Junction, CO

**DATE STARTED** 2/5/19 **COMPLETED** 2/5/19 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 4-inches

**DRILLING CONTRACTOR** S. McKracken **GROUND WATER LEVELS:**

**DRILLING METHOD** Simco 2000 Truck Rig **▽ AT TIME OF DRILLING** 10.0 ft

**LOGGED BY** SD **CHECKED BY** MAB **▽ AT END OF DRILLING** 10.0 ft

**NOTES** \_\_\_\_\_ **AFTER DRILLING** --

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		ASPHALT										
		Granular BASE COURSE										
2.5		Lean CLAY (CL), brown, moist, medium stiff	SS 1	72	2-3-4 (7)			24				
7.5		*** Lab Classified SS2	SS 2	100	2-2-2 (4)			29	32	19	13	97
10.0		Sandy GRAVEL and COBBLES (gw), brown, moist to wet, dense to very dense										
15.0		Bottom of hole at 15.0 feet.										

GEOTECH BH COLUMNS 00208-0095 2019 WATER.GPJ GINT US LAB.GDT 3/21/19





Huddlestone-Berry Engineering & Testing, LLC  
 640 White Avenue, Unit B  
 Grand Junction, CO 81501  
 970-255-8005  
 970-255-6818

**BORING NUMBER B-3**

PAGE 1 OF 1

**CLIENT** City of Grand Junction **PROJECT NAME** 2019 Water Line  
**PROJECT NUMBER** 00208-0095 **PROJECT LOCATION** Grand Junction, CO  
**DATE STARTED** 2/5/19 **COMPLETED** 2/5/19 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 4-inches  
**DRILLING CONTRACTOR** S. McKracken **GROUND WATER LEVELS:**  
**DRILLING METHOD** Simco 2000 Truck Rig **▽ AT TIME OF DRILLING** 8.5 ft  
**LOGGED BY** SD **CHECKED BY** MAB **▽ AT END OF DRILLING** 8.5 ft  
**NOTES** \_\_\_\_\_ **AFTER DRILLING** --

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		ASPHALT										
0.0 - 2.5		Lean CLAY (CL), brown, moist, stiff to soft										
2.5		*** Lab Classified SS1	SS 1	83	3-5-5 (10)			21	46	20	26	96
2.5 - 7.5												
7.5		Silty SAND with trace Gravel (sm), brown, moist to wet, very loose to medium dense	SS 2	100	0-1-2 (3)			31				
7.5 - 12.5												
12.5			SS 3	100	6-11			17				
12.5 - 14.0		Bottom of hole at 14.0 feet.										

GEOTECH|BH COLUMNS 00208-0095 2019 WATER.GPJ GINT US LAB.GDT 3/21/19



Huddlestone-Berry Engineering & Testing, LLC  
 640 White Avenue, Unit B  
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 970-255-8005  
 970-255-6818

**BORING NUMBER B-4**

PAGE 1 OF 1

**CLIENT** City of Grand Junction **PROJECT NAME** 2019 Water Line  
**PROJECT NUMBER** 00208-0095 **PROJECT LOCATION** Grand Junction, CO  
**DATE STARTED** 2/5/19 **COMPLETED** 2/5/19 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 4-inches  
**DRILLING CONTRACTOR** S. McKracken **GROUND WATER LEVELS:**  
**DRILLING METHOD** Simco 2000 Truck Rig **▽ AT TIME OF DRILLING** 9.5 ft  
**LOGGED BY** SD **CHECKED BY** MAB **▽ AT END OF DRILLING** 9.5 ft  
**NOTES** \_\_\_\_\_ **AFTER DRILLING** --

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		ASPHALT										
2.5		Lean CLAY (CL), brown, moist to wet, stiff to very soft	SS 1	72	4-5-4 (9)			17				
7.5		*** Lab Classified SS2	SS 2	100	0-0-1 (1)			34	27	18	9	91
12.5		Sandy GRAVEL and COBBLES (gw), brown, wet, dense	SS 3	44	9-20-21 (41)			14				
Bottom of hole at 14.5 feet.												

GEO TECH BH COLUMNS 00208-0095 2019 WATER.GPJ GINT US LAB.GDT 3/21/19



Huddlestone-Berry Engineering & Testing, LLC  
 640 White Avenue, Unit B  
 Grand Junction, CO 81501  
 970-255-8005  
 970-255-6818

**BORING NUMBER B-5**

PAGE 1 OF 1

**CLIENT** City of Grand Junction **PROJECT NAME** 2019 Water Line  
**PROJECT NUMBER** 00208-0095 **PROJECT LOCATION** Grand Junction, CO  
**DATE STARTED** 3/5/19 **COMPLETED** 3/5/19 **GROUND ELEVATION** \_\_\_\_\_ **HOLE SIZE** 4-inches  
**DRILLING CONTRACTOR** S. McCracken **GROUND WATER LEVELS:**  
**DRILLING METHOD** Simco 2000 Truck Rig **AT TIME OF DRILLING** dry  
**LOGGED BY** SD **CHECKED BY** MAB **AT END OF DRILLING** dry  
**NOTES** \_\_\_\_\_ **AFTER DRILLING** --

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		Lean CLAY with Organics (TOPSOIL)										
2.5		Lean CLAY (CL), brown, moist, soft to medium stiff	SS 1	56	2-1-2 (3)			21				
7.5		*** Lab Classified SS2	SS 2	83	4-5-7 (12)			17	39	18	21	95
15.0		Bottom of hole at 15.0 feet.	SS 3	75	1-1-3-4 (4)			22				

GEO TECH BH COLUMNS 00208-0095 2019 WATER.GPJ GINT US LAB.GDT 3/21/19

**APPENDIX B**  
**Laboratory Testing Results**



Huddlestone-Berry Engineering & Testing, LLC  
 640 White Avenue, Unit B  
 Grand Junction, CO 81501  
 970-255-8005  
 970-255-6818

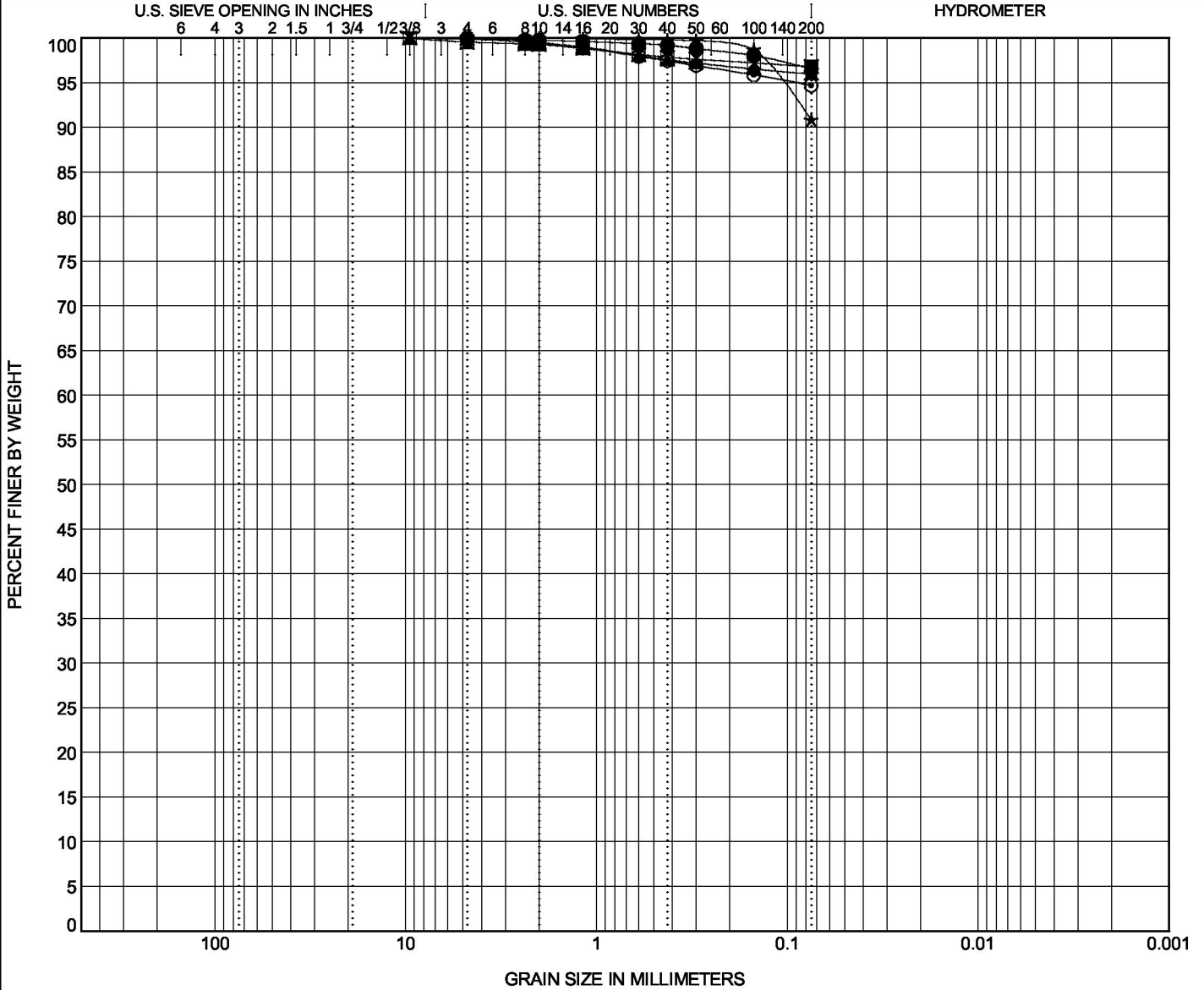
# GRAIN SIZE DISTRIBUTION

CLIENT City of Grand Junction

PROJECT NAME 2019 Water Line

PROJECT NUMBER 00208-0095

PROJECT LOCATION Grand Junction, CO



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● B-1, SS2 3/19	LEAN CLAY(CL)	40	18	22		
☒ B-2, SS2 3/19	LEAN CLAY(CL)	32	19	13		
▲ B-3, SS1 3/19	LEAN CLAY(CL)	46	20	26		
★ B-4, SS2 3/19	LEAN CLAY(CL)	27	18	9		
◎ B-5, SS2 3/19	LEAN CLAY(CL)	39	18	21		

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-1, SS2 3/19	4.75				0.0	3.4		96.6
☒ B-2, SS2 3/19	9.5				0.4	2.8		96.8
▲ B-3, SS1 3/19	9.5				0.1	3.9		96.0
★ B-4, SS2 3/19	2				0.0	9.1		90.9
◎ B-5, SS2 3/19	4.75				0.0	5.3		94.7

GRAIN SIZE 00208-0095 2019 WATER.GPJ GINT US LAB.GDT 3/21/19



Huddlestone-Berry Engineering & Testing, LLC  
 640 White Avenue, Unit B  
 Grand Junction, CO 81501  
 970-255-8005  
 970-255-6818

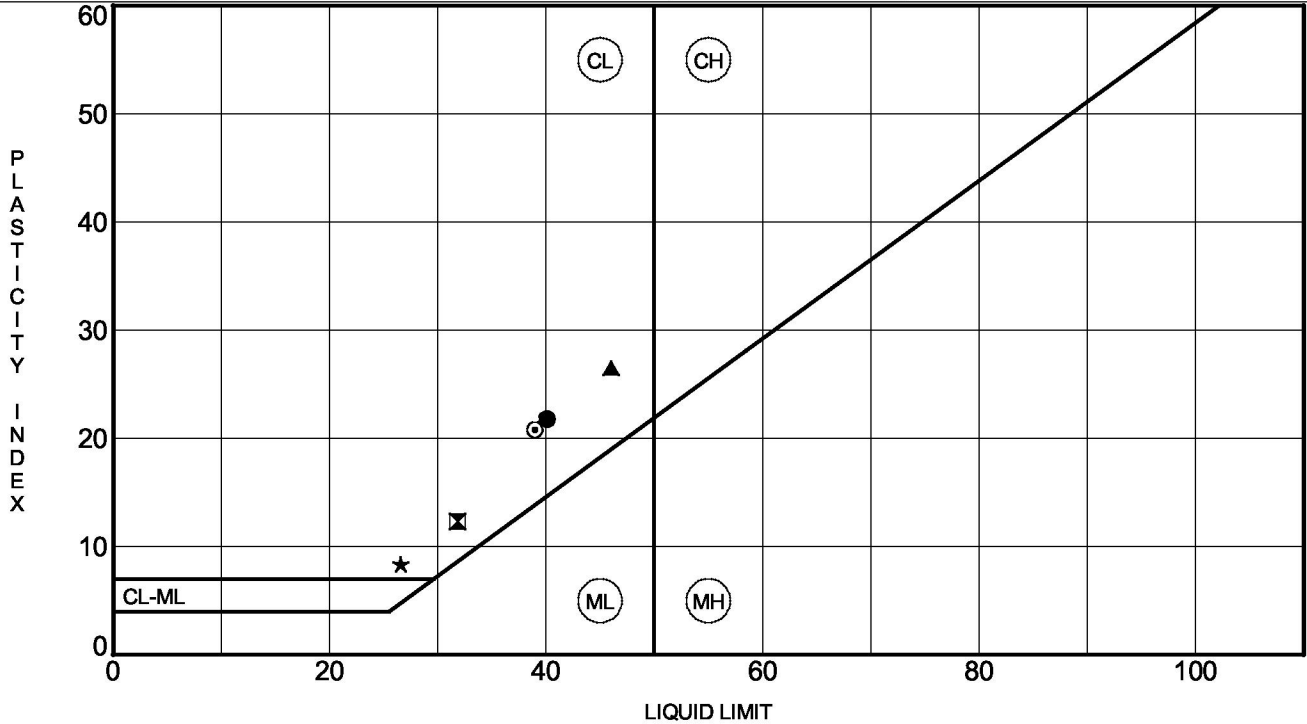
### ATTERBERG LIMITS' RESULTS

**CLIENT** City of Grand Junction

**PROJECT NAME** 2019 Water Line

**PROJECT NUMBER** 00208-0095

**PROJECT LOCATION** Grand Junction, CO



Specimen Identification	LL	PL	PI	#200	Classification
● B-1, SS2 3/5/2019	40	18	22	97	LEAN CLAY(CL)
⊠ B-2, SS2 3/5/2019	32	19	13	97	LEAN CLAY(CL)
▲ B-3, SS1 3/5/2019	46	20	26	96	LEAN CLAY(CL)
★ B-4, SS2 3/5/2019	27	18	9	91	LEAN CLAY(CL)
⊙ B-5, SS2 3/5/2019	39	18	21	95	LEAN CLAY(CL)

ATTERBERG LIMITS 00208-0095 2019 WATER.GPJ GINT US LAB.GDT 3/21/19

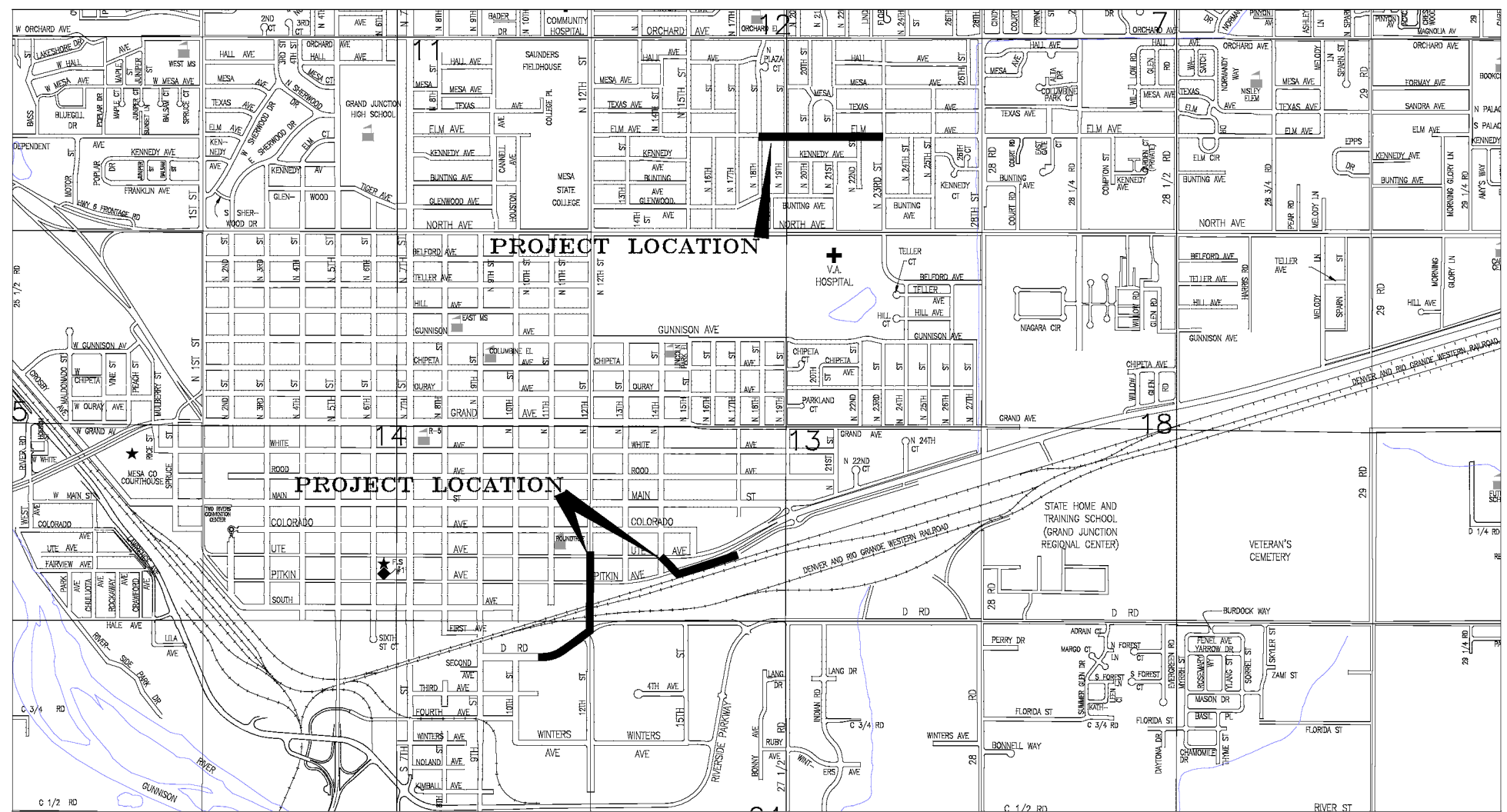
# CITY OF GRAND JUNCTION


## 2020 WATERLINE REPLACEMENT PROJECT

### MAY 2020

SHEET INDEX

- 1 Cover Sheet
- 2 Standard Abbreviations, Legend, and Symbols
- 3 Summary of Approximate Quantities
- 4 Control Plan
- 5-7 Waterline Plans for Pitkin Ave from 14th to 17th
- 8-12 Waterline Plans for D Road and 12th
- 13-17 Waterline Plans for Elm Ave from 18th to 23rd





**811**  
Know what's below.  
Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

UTILITIES AND AGENCIES									
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX	
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	PROJECT ENGINEER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022	
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022	
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND	MANAGER	IRRIGATION	688 26 RD	688 26 RD	GRAND JCT., CO 81506	(970) 242-2762		
SPECTRUM	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803	
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244-4311	(970) 240-4349	
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H 1/4 RD	GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189	
XCEL	STEVE PIBURN	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2664	(970) 244-2664	
XCEL	SARAH BARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2656	(970) 244-2656	

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
REVISION Δ REV 1			JCS	2020	
REVISION Δ REV 2			JCS	2020	
REVISION Δ REV 3			ALC	2020	
REVISION Δ REV 4			JCP	2020	



**PUBLIC WORKS  
ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
COVER — 1**

### ABBREVIATIONS

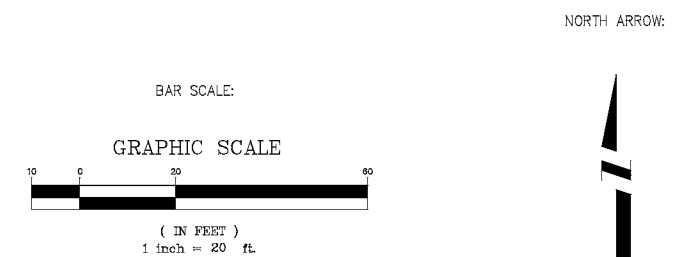
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C, G, & SW	CURB, GUTTER & SIDEWALK
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSPI	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
FL	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
Δ	DELTA ANGLE

### LEGEND

BSWMP DRAINAGE BASIN BOUNDARY		PROPOSED CONCRETE CURB AND GUTTER	
BSWMP ANCHORED STRAW BALES		PROPOSED CONCRETE CURB, GUTTER, & SIDEWALK	
BSWMP SILT FENCE		PROPOSED CONCRETE SIDEWALK	
BUILDING		PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN)	
CONCRETE CURB AND GUTTER		ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE	
CONCRETE CURB, GUTTER, & SIDEWALK		RAIL ROAD	
CONCRETE DITCH		RETAINING WALL	
CONCRETE SIDEWALK		STRIPING (CONTINUOUS WHITE)	
CULVERT		STRIPING (DASHED WHITE)	
EARTH DITCH		STRIPING (CONTINUOUS YELLOW)	
EDGE OF GRAVEL		STRIPING (DASHED YELLOW)	
EDGE OF PAVEMENT		TOP OF SLOPE	
FENCE (HT & MATL NOTED)		TOE OF SLOPE	
GUARD RAIL		CONTOUR LINES (SHOWN BETWEEN TOP & TOE)	
HATCHING: INDICATES ASPHALT REMOVAL		TRAFFIC DETECTOR LOOP	
HATCHING: INDICATES CONCRETE REMOVAL		UTILITY LINE (ABANDON) (THIS CASE A WATER LINE)	
HATCHING: INDICATES CLASS 6 AREA		UTILITY LINE (CABLE TV)	
HATCHING: INDICATES STAGING AREA		UTILITY LINE (ELECTRIC)	
LINE (CENTER OF IMPROVEMENTS)		UTILITY LINE (FIBER OPTIC)	
LINE (CITY LIMITS)		UTILITY LINE (GAS)	
LINE (CONTROL)		UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER)	
LINE (EASEMENT)		UTILITY LINE (OVERHEAD POWER)	
LINE (MONUMENT/SECTION)		UTILITY LINE (OVERHEAD TELEPHONE)	
LINE (PROPERTY)		UTILITY LINE (SANITARY SEWER)	
LINE (RIGHT OF WAY)		UTILITY LINE (SANITARY SEWER FORCE MAIN)	
MATCH LINE		UTILITY LINE (SANITARY SEWER SERVICE)	
PIPE (IRRIGATION)		UTILITY LINE (STORM SEWER)	
PIPE (SIPHON)		UTILITY LINE (STORM SEWER, PERFORATED)	
		UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION)	
		UTILITY LINE (TELEPHONE)	
		UTILITY LINE (WATER)	

### SYMBOLS

BENCH MARK	
CATCH BASIN	
CLEAN OUT	
CURB STOP	
FIRE HYDRANT	
GUY WIRE ANCHOR	
HEADGATE	
IRRIGATION PUMP	
MAILBOX	
MANHOLE (ELECTRIC)	
MANHOLE (GAS)	
MANHOLE (SANITARY/STORM)	
MANHOLE (TELEPHONE)	
MANHOLE (WATER)	
METER (GAS)	
METER (WATER)	
PEDESTAL (TELEPHONE)	
PEDESTAL (TV)	
PROPERTY PIN	
PULL BOX	
REDUCER FITTING	
SIGN OR POST (SIGN TYPE NOTED)	
SPRINKLER HEAD	
STREET LIGHT	
SURVEY MONUMENT (CITY)	
SURVEY MONUMENT (TYPE NOTED)	
TEST HOLE	
TRAFFIC PAINT MARKING	
TRAFFIC SIGNAL POLE AND MAST ARM	
UTILITY POLE	
VALVE (GAS)	
VALVE (IRRIGATION)	
VALVE (WATER)	
VEGETATION (HEDGE OR BUSH)	
VEGETATION (TREE STUMP)	
VEGETATION (TREE) (CALIPER SIZE NOTED)	
WATER HYDRANT	
WEIR	
YARD LIGHT	



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
REVISION Δ REV 1			JCS	2020	
REVISION Δ REV 2			JCS	2020	
REVISION Δ REV 3			ALC	2020	
REVISION Δ REV 4			JCP	2020	



PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
STANDARD ABBREVIATIONS LEGEND AND SYMBOLS — 1



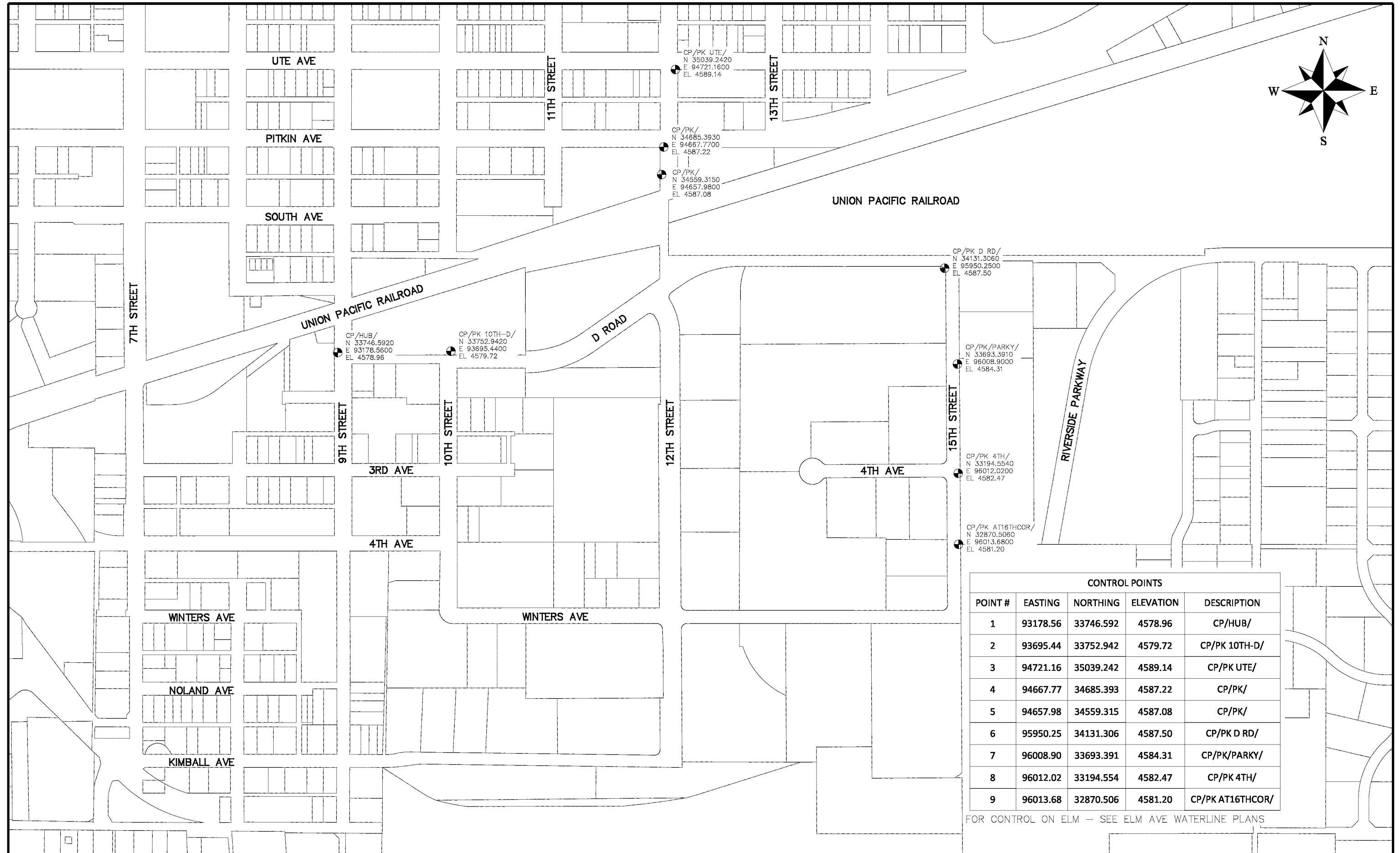
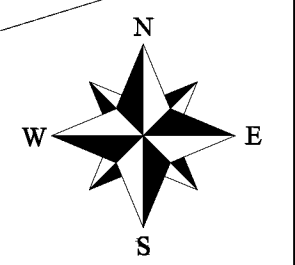
Item No.	CDOT, City Ref.	Description	Quantity	Units	Item No.	CDOT, City Ref.	Description	Quantity	Units	Item No.	CDOT, City Ref.	Description	Quantity	Units	Item No.	CDOT, City Ref.	Description	Quantity	Units
1	108.2	Water Main (6") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	1,907.	Lin. Ft.	28	108.3	Reducer (20" x 12") (MJ) (Epoxy Coated)	1.	Each	47	202	Remove Existing Fire Hydrant (Return Hydrant to City Shops)	4.	Each	66	304	Aggregate Base Course (Class 6) (15" thick)	1,238.	Sq. Yd.
					29	108.3	Cross Fitting (12" x 8") (MJ) (Epoxy Coated)	1.	Each	48	202	Removal of Existing Pipe (Size & type as shown on plans)	307.	Lin. Ft.	67	401	Hot Bituminous Pavement (Patching) (3" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 3" Lift Bottom Mat)	490.	Sq. Yd.
2	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	98.	Lin. Ft.	30	108.3	End Cap/Plug (6") (Restrained) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (To be used on Elm Ave. to abandon existing fire hydrant at Sta. 8+20)	1.	Each	49	202	Removal of Asphalt Mat (Full Depth)	1,328.	Sq. Yd.	68	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Top Mat) (T-Top)	2,018.	Sq. Yd.
3	108.2	Water Main (12") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	58.	Lin. Ft.	31	108.3	End Cap/Plug (18") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	1.	Each	50	202	Removal of Asphalt Mat (Planing) (2" Thick for T-Top Section)	704.	Sq. Yd.	69	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Lift Bottom Mat) (Elm Ave.)	838.	Sq. Yd.
4	108.2	Water Main (18") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,282.	Lin. Ft.	32	108.3	End Cap/Plug (20") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	2.	Each	51	202	Removal of Concrete (Includes, but not limited to, curb, gutter, sidewalk, driveway, slabs, V-pans, curb ramps, intersection corners, aprons, landscape borders, and concrete walls)	428.	Sq. Ft.	70	407	Emulsified Asphalt (Tack Coat)	335.	Gallon
5	108.2	Water Main (20") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,380.	Lin. Ft.	33	108.3	Fire Hydrant Assembly	5.	Each	52	202	Removal of Sod	2,547.	Sq. Ft.	71	608	Concrete Curb and Gutter (2' Wide) (Match in Kind) (City Std. Detail C-05)	54.	Lin. Ft.
6	108.2	Water Main (20") (Restrained C-900 PVC, DR-25) (Certa-Lok Restrained Joint, Coupled or Approved Equal) (Sta. 34+00 - 35+95)	195.	Lin. Ft.	34	108.3	8" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	53	203	Disposal of Radioactive Material (Dispose at City Shops, 333 West Ave.)	50.	Cu. Yd.	72	608	Concrete Curb, Gutter, & Sidewalk (6' Wide) (Match in Kind) (City Std. Detail C-02)	150.	Sq. Ft.
7	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed material unit weight = 133 lbs/ft <sup>3</sup> )	600.	Ton	35	108.3	20" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	54	206	Structure Backfill (Flow-Fill)	180.	Cu. Yd.	73	608	Concrete Drainage Pan (6' Wide x 8" Thick) (Match in Kind) (Includes #5 rebar tie-bars) (City Std. Detail C-12)	150.	Sq. Ft.
8	108.3	Gate Valve (6")	17.	Each	36	108.4	Water Service Line (3/4") (Type K Copper) (If Lead or Poly service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	180.	Lin. Ft.	55	208	Storm Drain Inlet Protection (Gravel Filter at Curb Inlet) (Includes Maintenance & Removal of Debris, & Removal of Inlet Protection)	7.	Each	74	608	Cap Top Half of Sewer Pipe in Concrete per City Std. Detail GU-04 (If necessary)	1.	Each
9	108.3	Gate Valve (8")	5.	Each	37	108.4	Water Service Line (1-1/2") (Type K Copper or HDPE 3408) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	150.	Lin. Ft.	56	208	Concrete Washout Facility	1.	Lump Sum	75	620	Portable Sanitary Facility	2.	Each
10	108.3	Gate Valve (12")	1.	Each	38	108.4	Tapping Saddle (6" x 3/4")	36.	Each	57	210	Reset Landscape Ground Cover (Match in Kind) (Contractor shall remove ground cover and underlying weed barrier as needed and stockpile materials. Contractor shall reset these materials and provide additional materials as needed)	560.	Sq. Ft.	76	625	Construction Surveying (Includes As-Built Drawings)	1.	Lump Sum
11	108.3	Butterfly Valve (18")	3.	Each	39	108.4	Tapping Saddle (20" x 3/4")	1.	Each	58	210	Reset Landscape Borders (Concrete Pavers) (Property 1510 N. 18th Street)	1.	Lump Sum	77	626	Mobilization	1.	Lump Sum
12	108.3	Butterfly Valve (20")	2.	Each	40	108.4	Tapping Saddle (20" x 1-1/2")	1.	Each	59	210	Reset Landscape Rock (Reddish Rock) (Property 1505 N. 20th Street) (Match in Kind)	20.	Sq. Ft.	78	627	Pavement Marking Paint (Water Based) (Double Yellow Lines) (12th St. between Ute Ave. and Pitkin Ave., and D Road)	72.	Lin. Ft.
13	108.3	Tee (6" x 6") MJ Swivel Tee (Epoxy Coated)	11.	Each	41	108.4	Corporation Stop (3/4")	37.	Each	60	210	Reset Sprinkler System (Desert Vista Park) (Complete in Place) (Various Pipe Sizes) (Contractor shall repair all sprinkler pipe breaks whether PVC or HDPE pipe of any size within the sodded area of Desert Vista Park) (City Parks Dept. can be contacted ahead of time to get an idea of sprinkler system within the park)	1.	Lump Sum	79	627	Pavement Marking Paint (Water Based) (Single Yellow Line) (Pitkin Ave.)	10.	Lin. Ft.
14	108.3	Tee (8" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	42	108.4	Corporation Stop (1-1/2")	1.	Each	61	210	Reset Fence (6' High Chain-Link w/ Barbed Wire Top) (12th St. and D Road intersection)	40.	Lin. Ft.	80	627	Pavement Marking Paint (Water Based) (Single White Line) (Pitkin Ave. & D Road)	40.	Lin. Ft.
15	108.3	Tee (12" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	43	108.4	Meter Setter and Meter Pit Installation (Install Only) (City Furnished Meter Pit) (Includes removal and disposal of existing meter pit)	6.	Each	62	210	Reset Fence (4' High Barbed Wire Fence) (Along Pitkin Ave. near Sta. 10+00)	20.	Lin. Ft.	81	627	Prefomed Thermoplastic Pavement Marking (Xwalk-Stop Line) (To be used at the Ute Ave. and 12th Street intersection)	62.	Sq. Ft.
16	108.3	Tee (18" x 18") (MJ) (Epoxy Coated)	1.	Each	44	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (18" Thick Min.) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 138 lbs/ft <sup>3</sup> )	75.	Ton	63	210	Reset Sign (Along Pitkin Ave. near Sta. 10+00)	3.	Each	82	629	Survey Monumentation (Complete in Place)	2.	Each
17	108.3	Tee (20" x 8") MJ Swivel Tee (Epoxy Coated)	3.	Each	45	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	13.	Each	64	212	Re-Sod Areas (Desert Vista Park and various other locations) (Includes 6" Thick Imported Topsoil placed prior to sod placement)	2,547.	Sq. Ft.	83	630	Traffic Control Plan	1.	Lump Sum
18	108.3	Tee (20" x 18") (MJ) (Epoxy Coated)	2.	Each	46	202	Abandon Existing Water Valve (Close valve, remove top half of existing valve box, fill cavity to finished subgrade with flow-fill material)	9.	Each	65	304	Aggregate Base Course (Class 6) (4" thick) (Shoulder Base)	491.	Sq. Yd.	84	630	Traffic Control (Complete in Place)	1.	Lump Sum
19	108.3	Elbow (6" x 45 deg) (MJ) (Epoxy Coated)	28.	Each											85	630	Flagging	1,240.	Hour
20	108.3	Elbow (8" x 11.25 deg) (MJ) (Epoxy Coated)	1.	Each											MCR		Minor Contract Revisions	---	---
21	108.3	Elbow (8" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each															
22	108.3	Elbow (8" x 45 deg) (MJ) (Epoxy Coated)	8.	Each															
23	108.3	Elbow (12" x 45 deg) (MJ) (Epoxy Coated)	2.	Each															
24	108.3	Elbow (18" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each															
25	108.3	Elbow (18" x 45 deg) (MJ) (Epoxy Coated)	11.	Each															
26	108.3	Elbow (20" x 11.25 deg) (MJ) (Epoxy Coated)	4.	Each															
27	108.3	Elbow (20" x 45 deg) (MJ) (Epoxy Coated)	7.	Each															

REVISION $\Delta$ REV 1	DESCRIPTION	DATE	DRAWN BY DJM	DATE 2020	SCALE
REVISION $\Delta$ REV 2			DESIGNED BY LC	DATE 2020	
REVISION $\Delta$ REV 3			CHECKED BY LC	DATE 2020	
REVISION $\Delta$ REV 4			APPROVED BY LC	DATE 2020	



PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
SUMMARY OF QUANTITIES



CONTROL POINTS				
POINT #	EASTING	NORTHING	ELEVATION	DESCRIPTION
1	93178.56	33746.592	4578.96	CP/HUB/
2	93695.44	33752.942	4579.72	CP/PK 10TH-D/
3	94721.16	35039.242	4589.14	CP/PK UTE/
4	94667.77	34685.393	4587.22	CP/PK/
5	94657.98	34559.315	4587.08	CP/PK/
6	95950.25	34131.306	4587.50	CP/PK D RD/
7	96008.90	33693.391	4584.31	CP/PK/PARKY/
8	96012.02	33194.554	4582.47	CP/PK 4TH/
9	96013.68	32870.506	4581.20	CP/PK AT16THCOR/

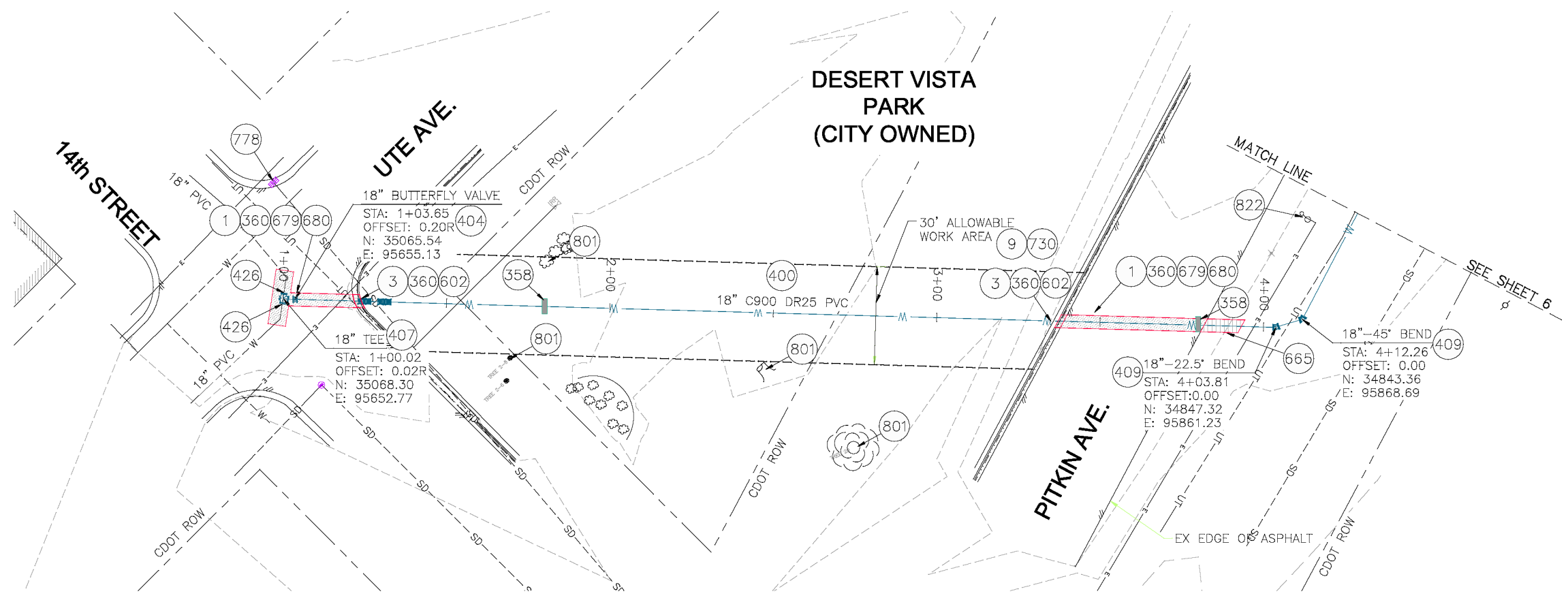
FOR CONTROL ON ELM - SEE ELM AVE WATERLINE PLANS

REVISION $\Delta$ REV 1	DESCRIPTION	DATE	DRAWN BY DJM	DATE 4/2020	SCALE 0 100 200 400 HORIZONTAL
REVISION $\Delta$ REV 2			DESIGNED BY LC	DATE 4/2020	
REVISION $\Delta$ REV 3			CHECKED BY LC	DATE 4/2020	
REVISION $\Delta$ REV 4			APPROVED BY LC	DATE 4/2020	

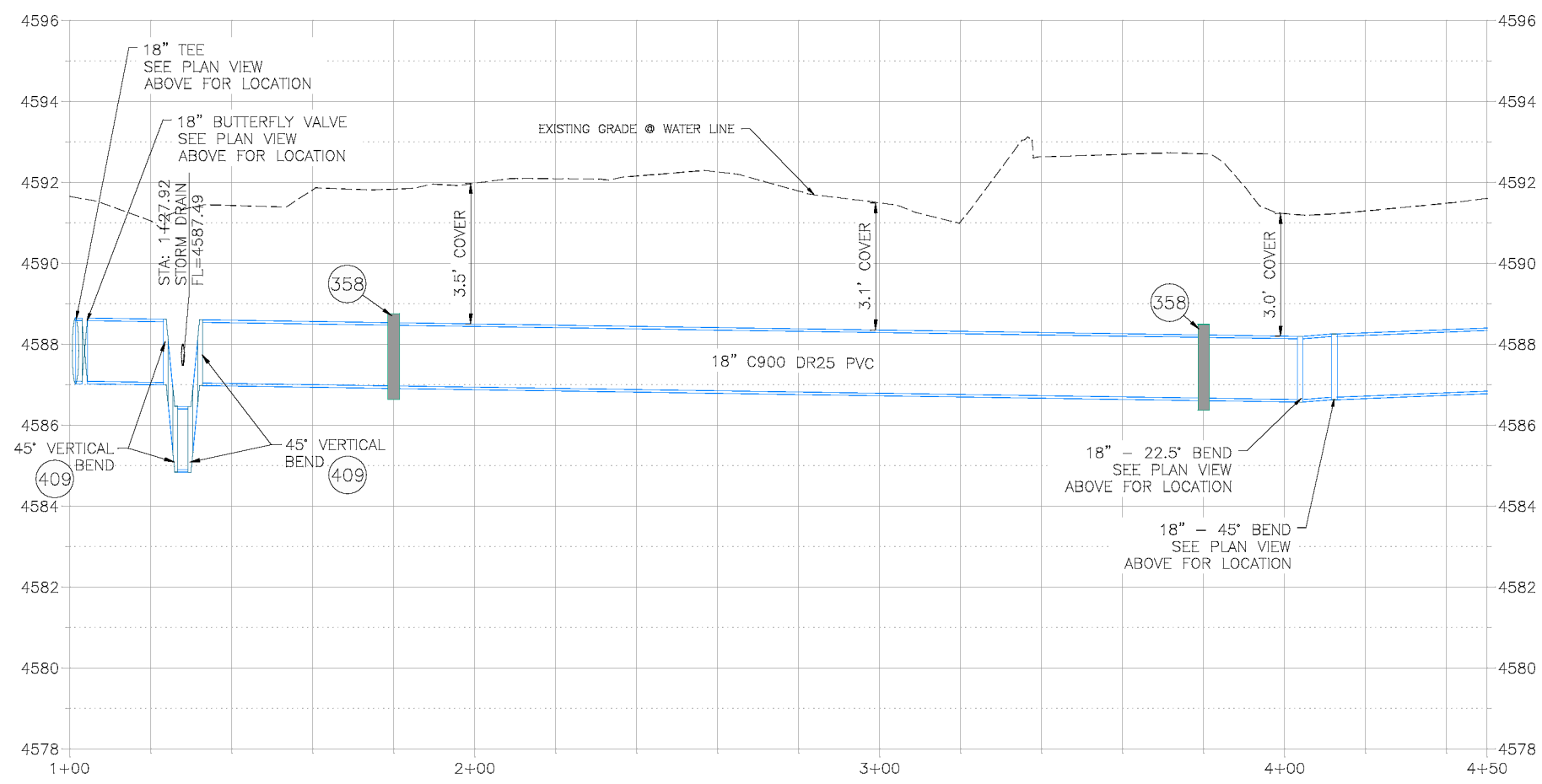


**PUBLIC WORKS  
ENGINEERING DIVISION**  
PROJECT NO. 301-F0005

**2020 WATERLINE REPLACEMENT PROJECT  
PROJECT CONTROL MAP**



- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 9 202 - REMOVAL OF SOD.
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 360 206 - STRUCTURE BACKFILL (FLOW-FILL) (WATERLINE TRENCH SHALL BE BACKFILLED WITHIN CDOT SPEC FLOW-FILL WITHIN CDOT RIGHT-OF-WAY)
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- 404 102.8a/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 - TEE (SIZE AS SHOWN) (EPOXY COATED)
- 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 602 608.06 - CONCRETE CURB AND GUTTER (MATCH IN KIND) (2' WIDE)
- 665 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK) (SHOULDER BASE)
- 679 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 3" LIFT BOTTOM MAT)
- 680 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- 730 212 - RESOD AREA AS SHOWN (INCLUDES 6" OF TOPSOIL)
- 778 208 - STORM DRAIN INLET PROTECTION (GRAVEL FILTER AT CURB INLET) (AS SHOWN AND PER DETAIL)
- 801 PROTECT TREE
- 822 PROTECT LIGHT POLE



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.

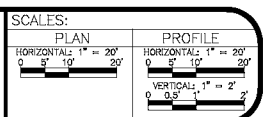


Know what's below.  
Call before you dig.

**CALL 2 BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR  
EXCAVATE FOR THE MARKING OF  
UNDERGROUND MEMBER UTILITIES**

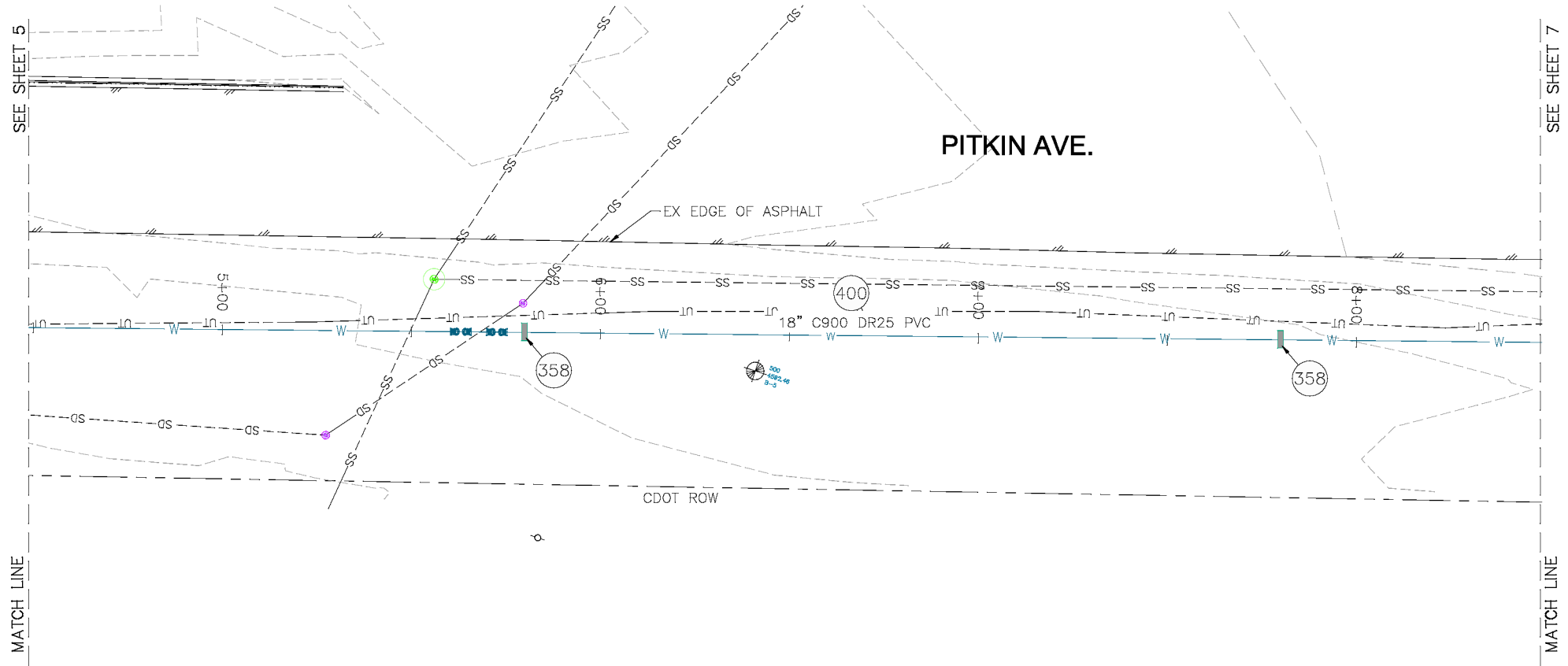
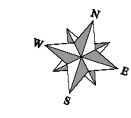
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 Date Created: 4/2/2020 N:\LANDPROJ\2020 WATERLINE REPLACEMENT\0005\960CAD\DWG\ROAD\911-028\_C-201X-PITKIN.DWG

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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2			LC	4/2020
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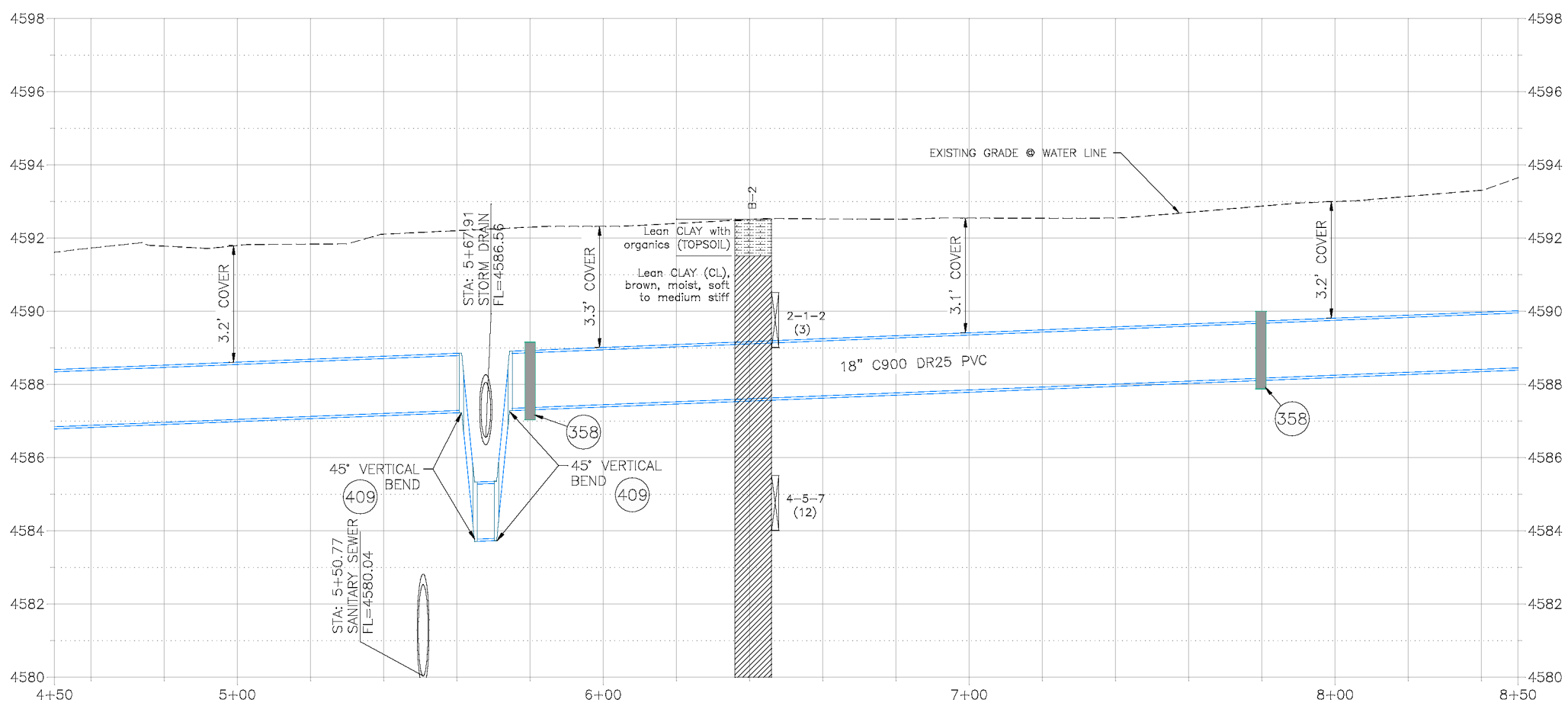


PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - PITKIN AVE  
PLAN AND PROFILE 1+00 TO 4+50



- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 409 102.8/108.3 - ELBOW (SIZE AN ANGLE AS SHOWN) (EPOXY COATED)



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



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**CALL 2 BUSINESS DAYS IN ADVANCE  
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UNDERGROUND MEMBER UTILITIES**

Plot Date: 04/20/2020 12:38 PM Plotted By: Dan Massey  
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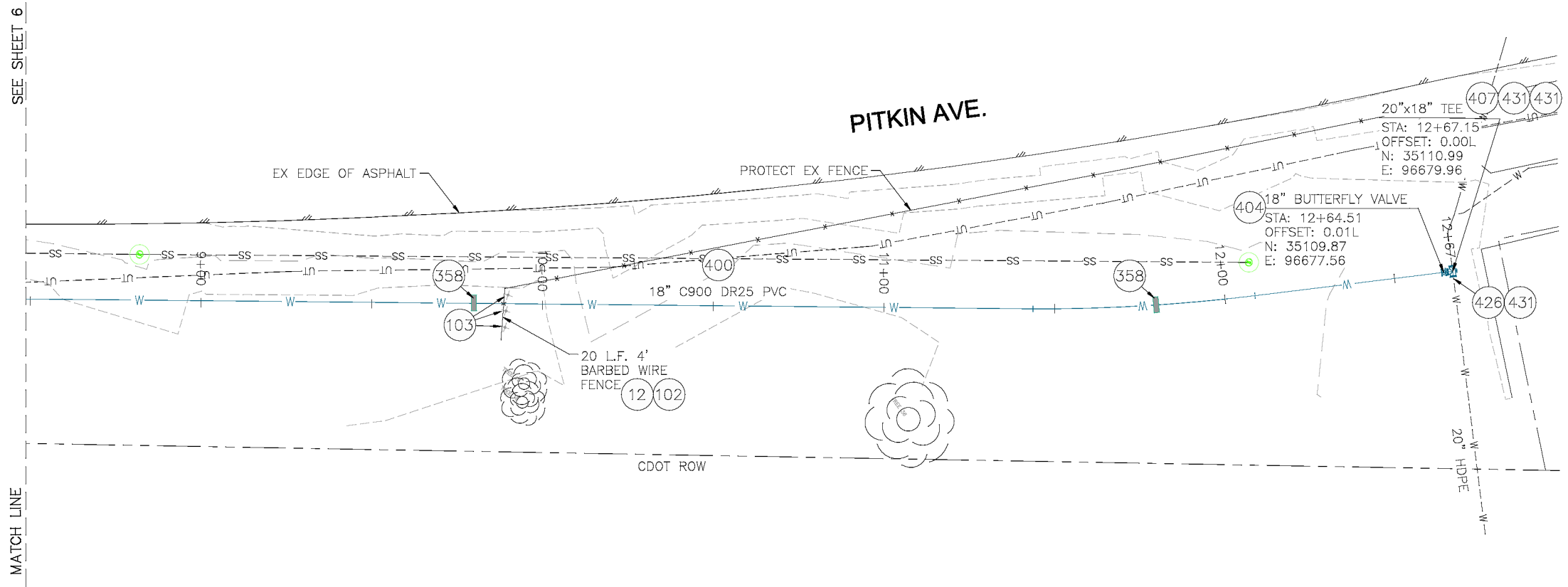
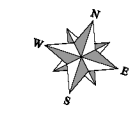
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REVISION			DJM	4/20/20
REVISION			LC	4/20/20
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REVISION			LC	4/20/20

SCALES:	
PLAN	1" = 20'
PROFILE	1" = 20'

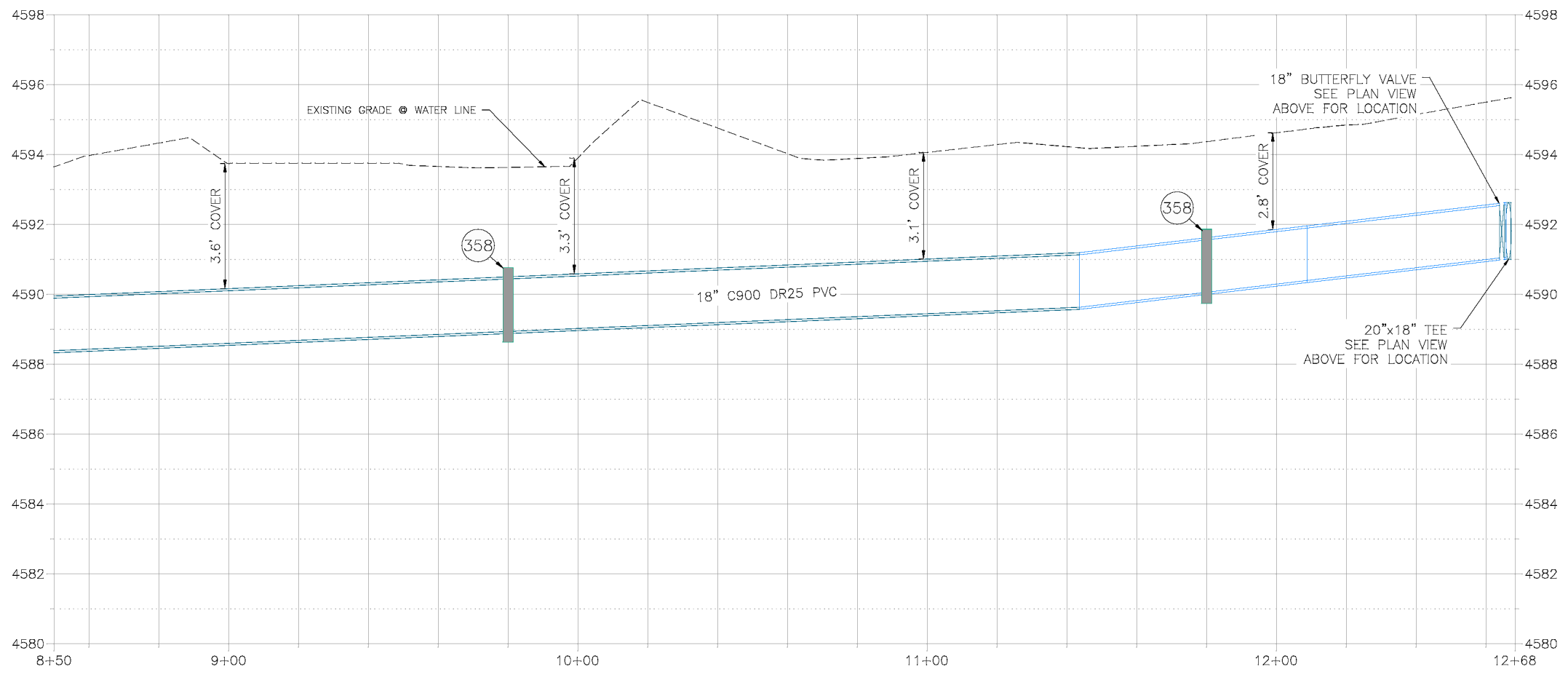


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ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - PITKIN AVE  
PLAN AND PROFILE 4+50 TO 8+50**



- 12 202 - REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 102 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 103 210 - RESET SIGN
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- 404 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 - TEE (SIZE AS SHOWN) (EPOXY COATED)
- 426 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 431 102.8/108.3 - WELDED FLANGE OR HY-MAX SOLID SLEEVE RESTRAINED COUPLING WITH STIFFENER FOR CONNECTION TO HDPE



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



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UNDERGROUND MEMBER UTILITIES**

Plot Date: 02/20/2020 12:38 PM Plotted By: Dan Massey  
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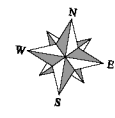
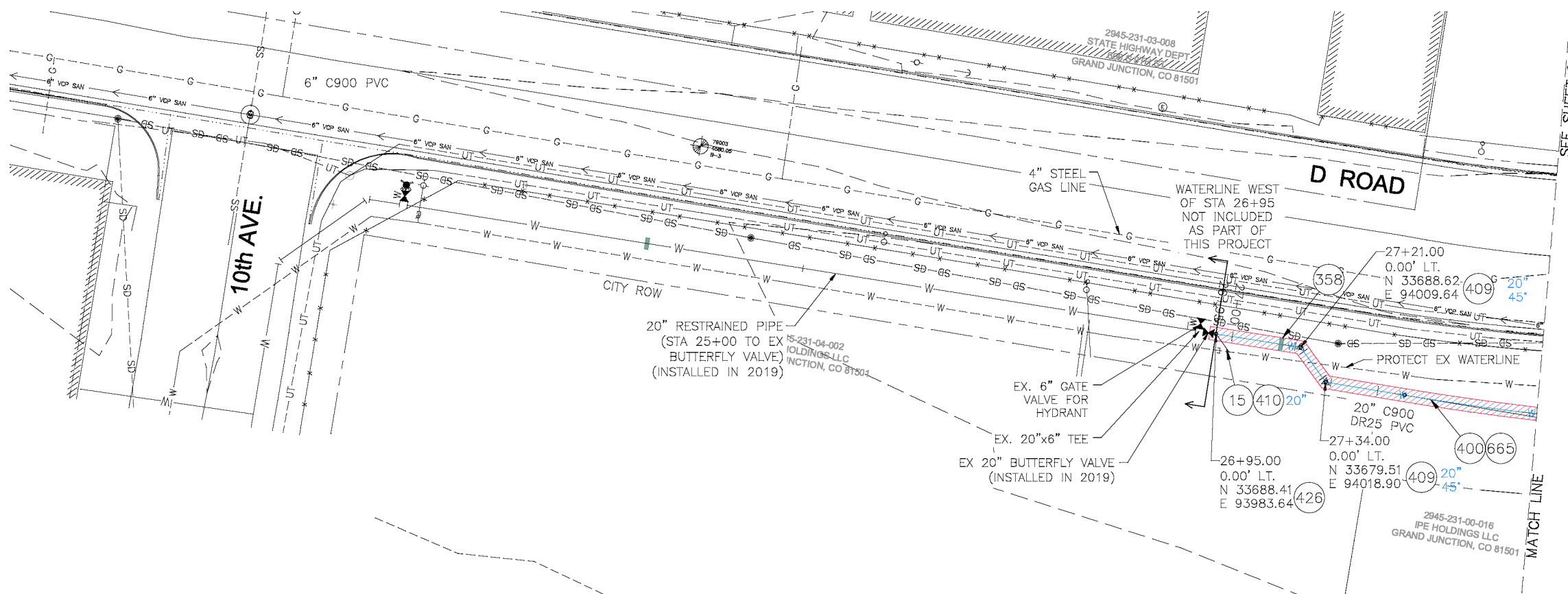
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REVISION			DJM	4/2020
REVISION			LC	4/2020
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REVISION			LC	4/2020

SCALES:	
PLAN	1" = 20'
PROFILE	1" = 2'

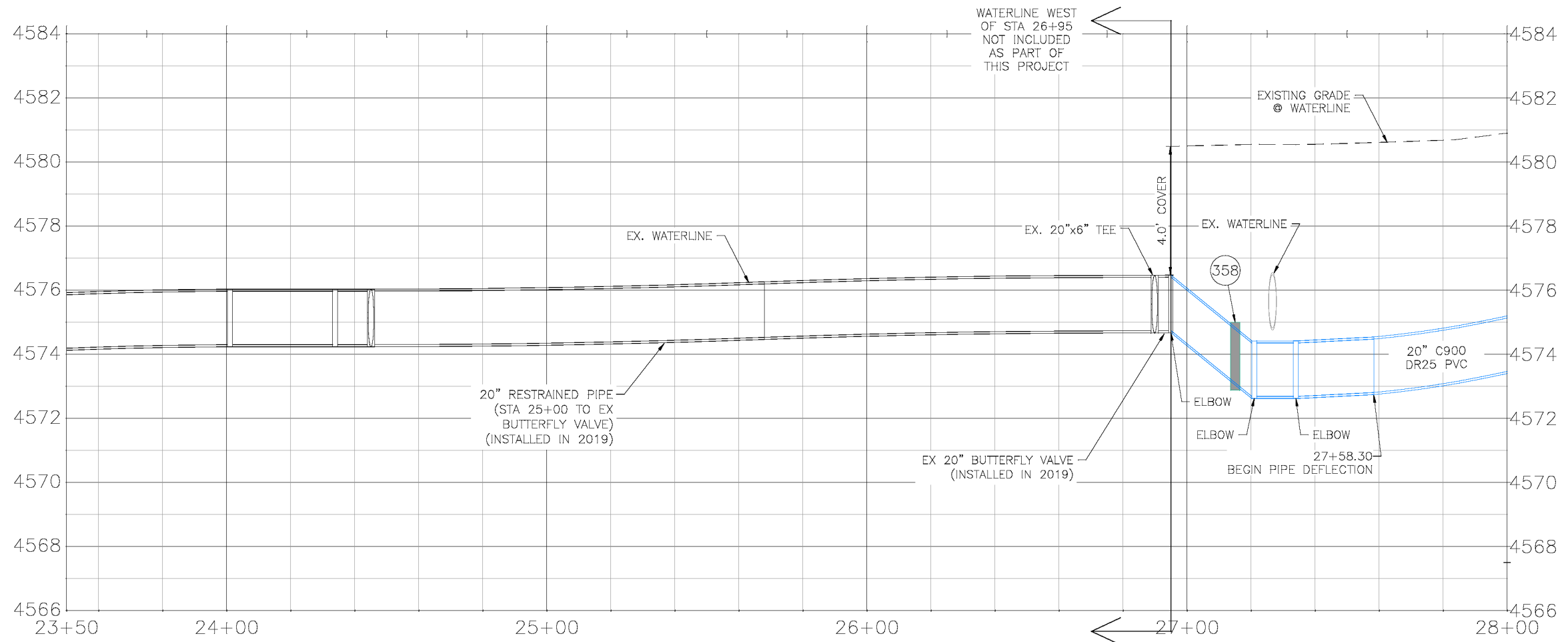


PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - PITKIN AVE  
PLAN AND PROFILE 8+50 TO 12+68



- (15) 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- (358) 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- (400) 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- (409) 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) EPOXY COATED
- (410) 102.8/108.3 - END CAP / PLUG (SIZE AS SHOWN) (INCLUDES THRUST BLOCK)
- (426) RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- (665) 304 - AGGREGATE BASE COURSE (CLASS 6) (4\"/>



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7g AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36\"/>



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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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REVISION			LC	4/2020
REVISION			LC	4/2020
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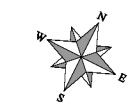
SCALES:	PLAN	PROFILE
HORIZONTAL:	1" = 20'	1" = 20'
VERTICAL:	1" = 2'	1" = 2'



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ENGINEERING DIVISION**

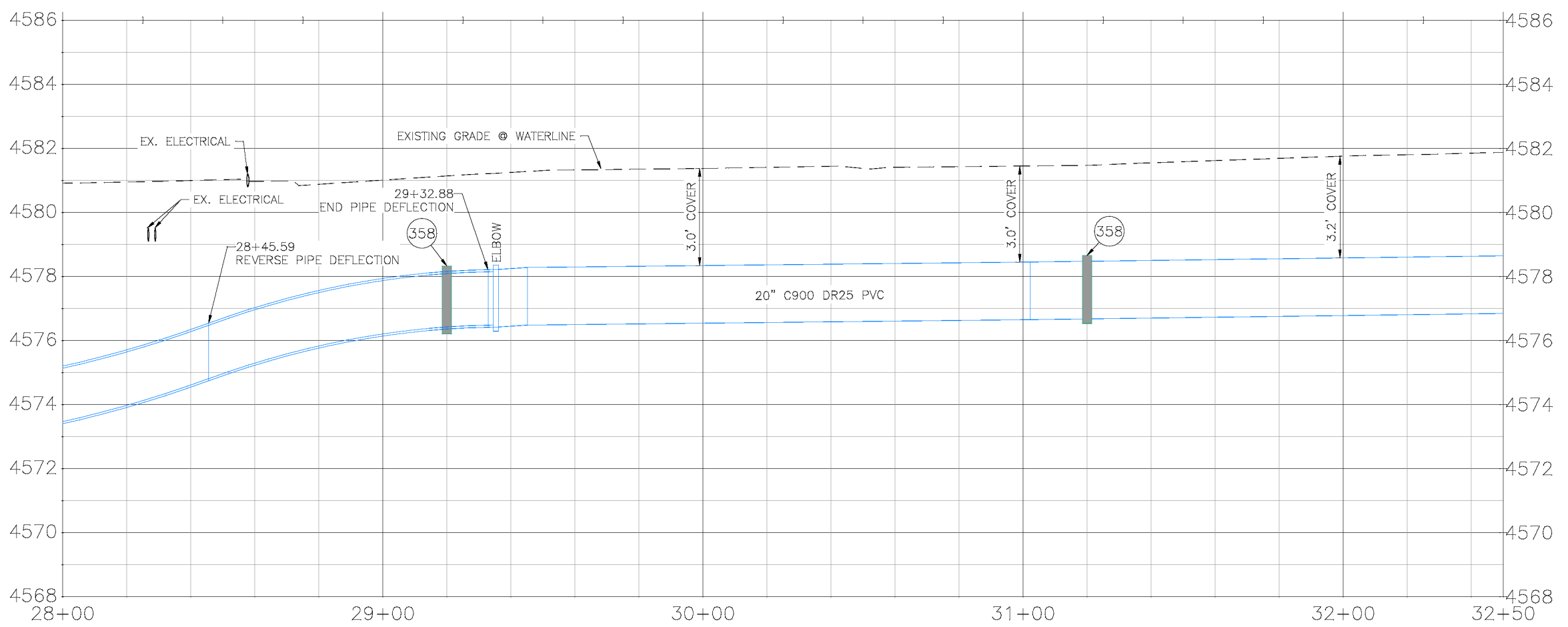
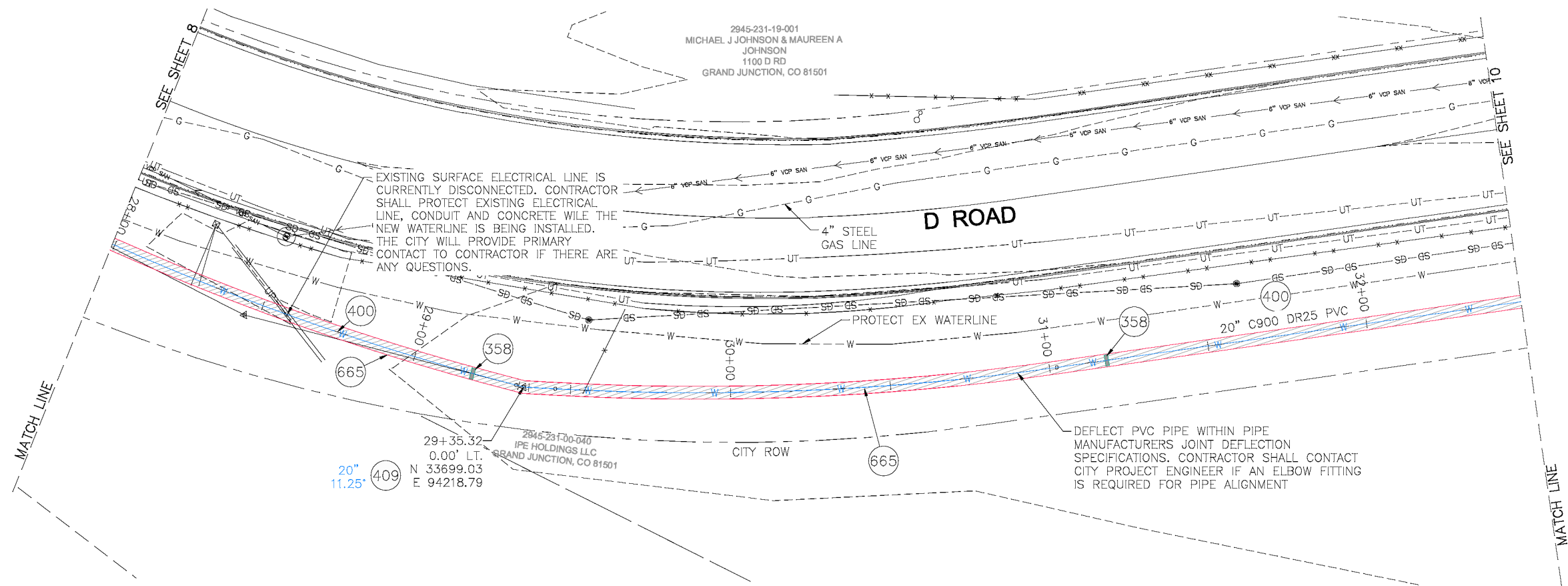
**2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - D ROAD  
PLAN AND PROFILE 26+95 TO 28+00**

2945-231-19-001  
MICHAEL J JOHNSON & MAUREEN A JOHNSON  
1100 D RD  
GRAND JUNCTION, CO 81501



PROJECT NO. 301-F000532

- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 665 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK) (WIDTH OF TRENCH SURFACE TREATMENT)



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7g AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



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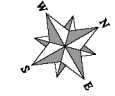
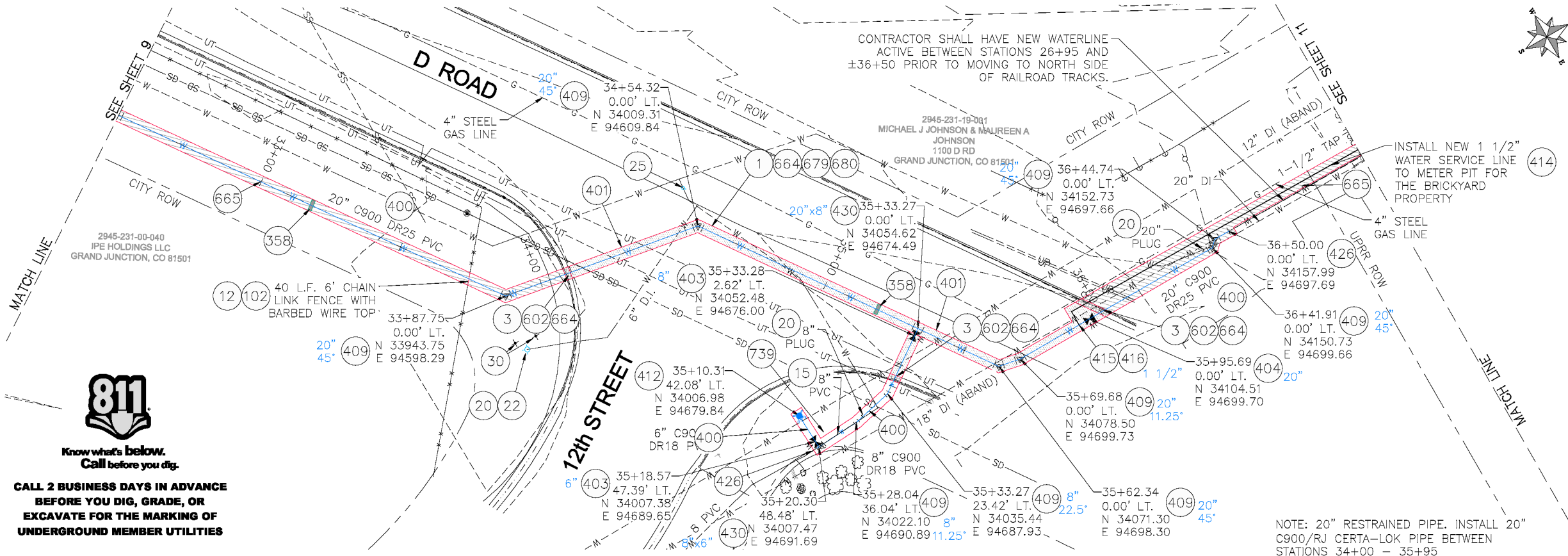
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4			LC	4/2020

SCALES:	
PLAN HORIZONTAL: 1" = 20' VERTICAL: 1" = 2'	PROFILE HORIZONTAL: 1" = 20' VERTICAL: 1" = 2'

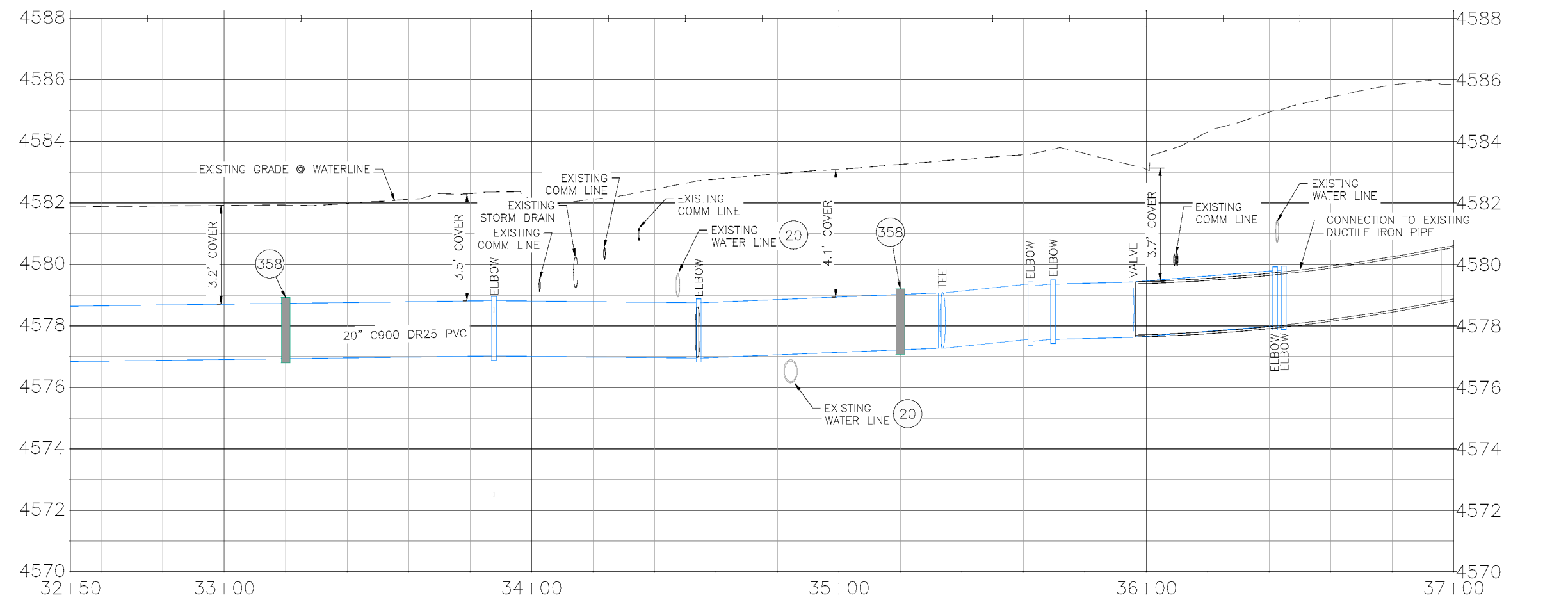


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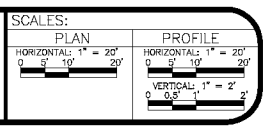
**2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE - D ROAD  
PLAN AND PROFILE 28+00 TO 32+50**



- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
  - 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS
  - 12 202 - REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOWN ON PLAN)
  - 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
  - 20 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
  - 22 202 - REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS.
  - 25 202 - ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW-FILL MATERIAL.
  - 30 202 - REMOVE BOLLARD
  - 102 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOWN ON PLAN)
  - 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
  - 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
  - 401 102.7/108.2 - WATER MAIN PIPE (20" C-900/RJ CERTA-LOK PIPE) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
  - 403 102.8b/108.3 - GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
  - 404 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
  - 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
  - 412 102.8a/108.3 - FIRE HYDRANT ASSEMBLY
  - 414 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER OR HDPE 3408 PIPE) (SIZE AS SHOWN ON PLAN) IF LEAD OF POLY SERVICE LINE IS ENCOUNTERED, WATER SERVICE SHALL BE REPLACED TO METER.
  - 415 102.8k/108.4 - TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
  - 416 102.8j/108.4 - CORPORATION STOP (SIZE AS SHOWN ON PLAN)
  - 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE.
  - 430 102.8/108.3 - MJ x SWIVEL TEE (SIZE AS SHOWN) (EPOXY COATED)
  - 602 608.06 - CONCRETE CURB AND GUTTER (MATCH IN KIND) (2' WIDE)
  - 664 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
  - 685 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK) (WIDTH OF TRENCH SURFACE TREATMENT)
  - 679 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 3" LIFT BOTTOM MAT)
  - 680 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
  - 739 610 - REMOVE AND PROTECT GROUND COVER MATERIAL (INCLUDES RESETTING ROCK GROUND COVER UPON COMPLETION OF WATER LINE)
- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			DJM	4/2020
2			LC	4/2020
3			LC	4/2020
4			LC	4/2020

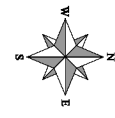
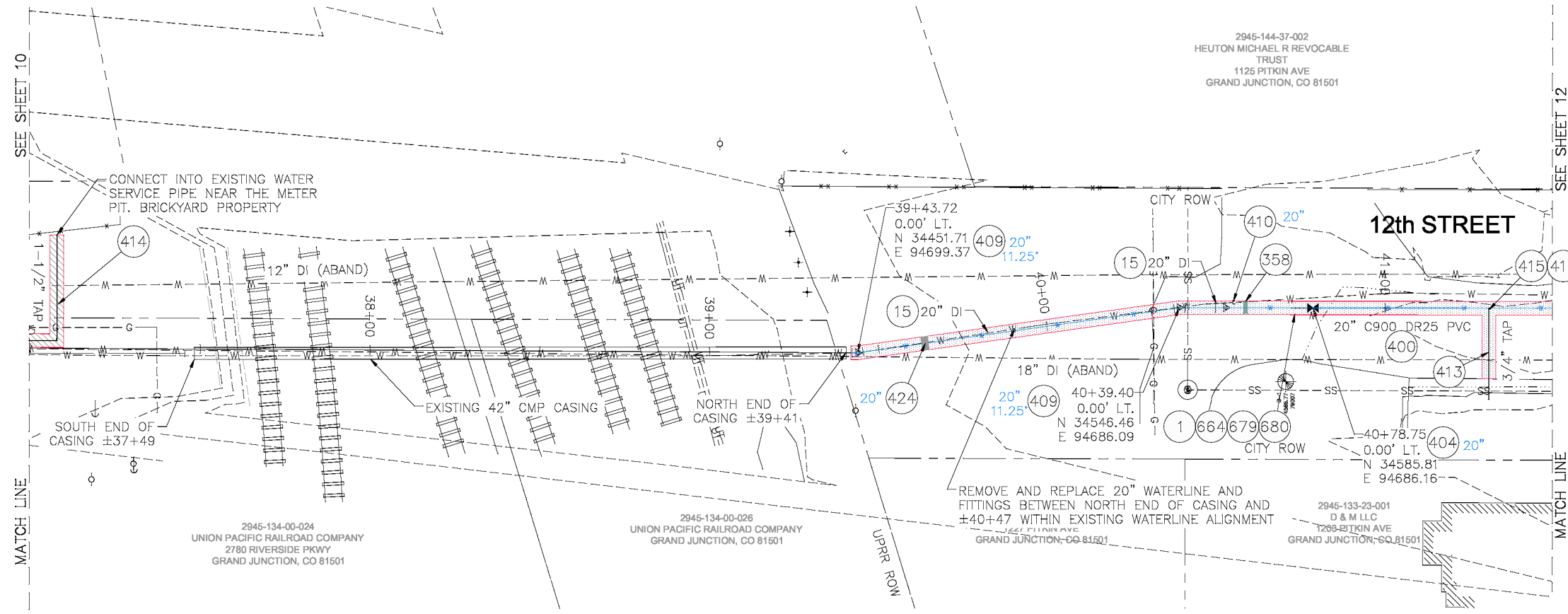


PUBLIC WORKS  
ENGINEERING DIVISION

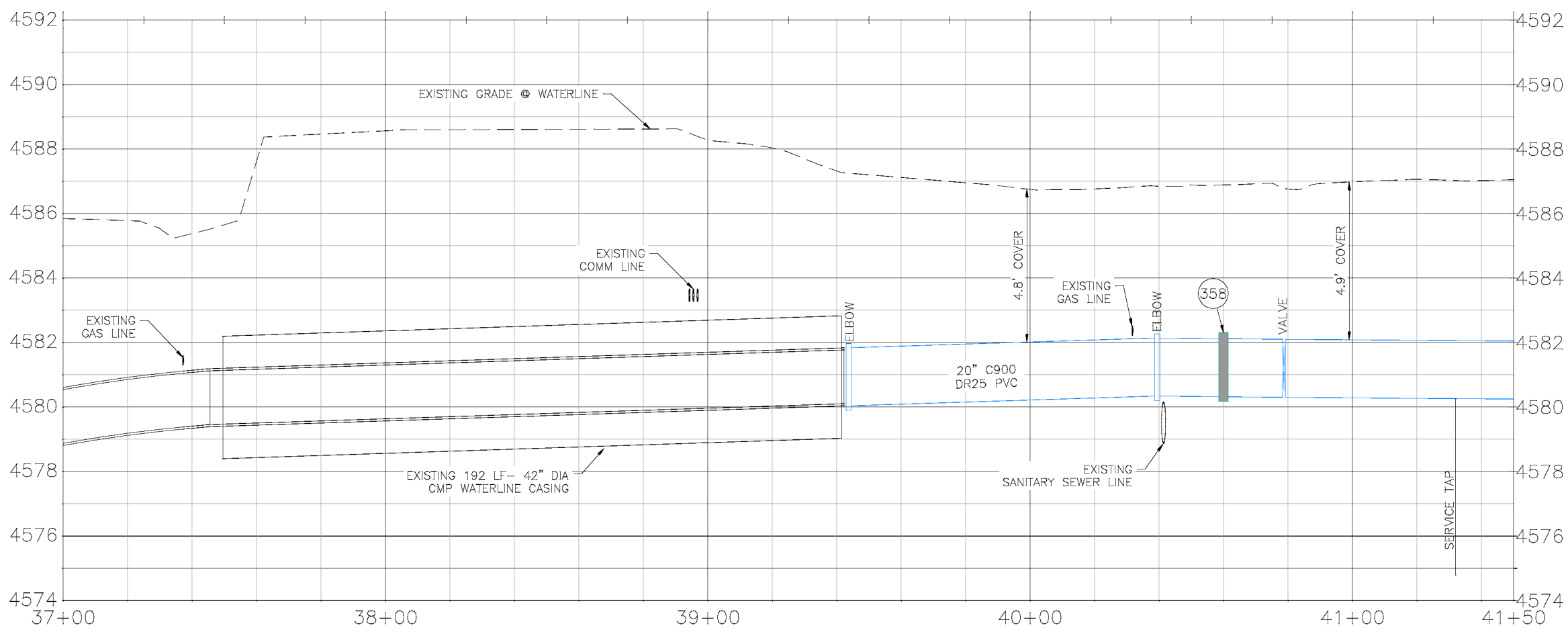
2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - D ROAD  
PLAN AND PROFILE 32+50 TO 37+00

Plot Date: 4/24/2020 2:38 PM Plotted By: Dan Meany  
 Date Created: 02/22/2020 N:\LANDPROJ\2020 WATERLINE REPLACEMENT\00060CAD\000ESIGN\RD\01-18-08\_C-201X-2000416.DWG





- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- 20 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 404 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
- 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 410 102.8/108.3 - END CAP / PLUG (SIZE AS SHOWN) (INCLUDES THRUST BLOCK)
- 413 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN) IF LEAD OR POLY SERVICE LINE IS ENCOUNTERED, WATER SERVICE SHALL BE REPLACED TO METER.
- 414 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER OR HDPE 3408 PIPE) (SIZE AS SHOWN ON PLAN) IF LEAD OF POLY SERVICE LINE IS ENCOUNTERED, WATER SERVICE SHALL BE REPLACED TO METER.
- 415 102.8k/108.4 - TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- 416 102.8j/108.4 - CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- 424 102.8/108.3 - 20" RESTRAINED COUPLING (EPOXY COATED) (INSTALL COUPLING ABOUT 20 FT NORTH OF THE 11.25° ELBOW).
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE.
- 664 304 - AGGREGATE BASE COURSE (CLASS B) (15" THICK)
- 679 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 3" LIFT BOTTOM MAT)
- 680 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)



NOTES:

- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
- 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
- CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
- CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



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**CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES**

Plot Date: 4/2/2020 12:40 PM Plotted By: Dan Massey  
 Date Created: 4/2/2020 11:40 AM Project: 301-F000532 WATERLINE REPLACEMENT 0005/96CAD/000/DESIGN/D ROAD/11-18-08 C-201X 2020/418.DWG

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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2			LC	4/2020
3			LC	4/2020
4			LC	4/2020

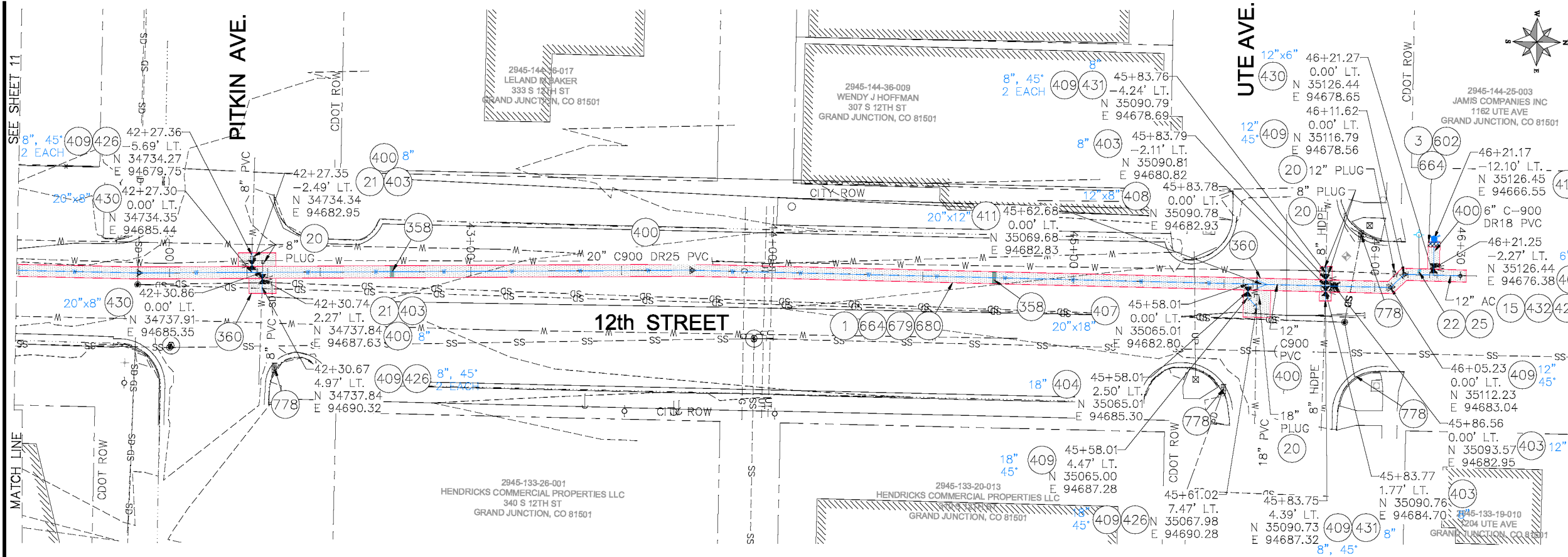
SCALES:

PLAN	1" = 20'
PROFILE	1" = 20'



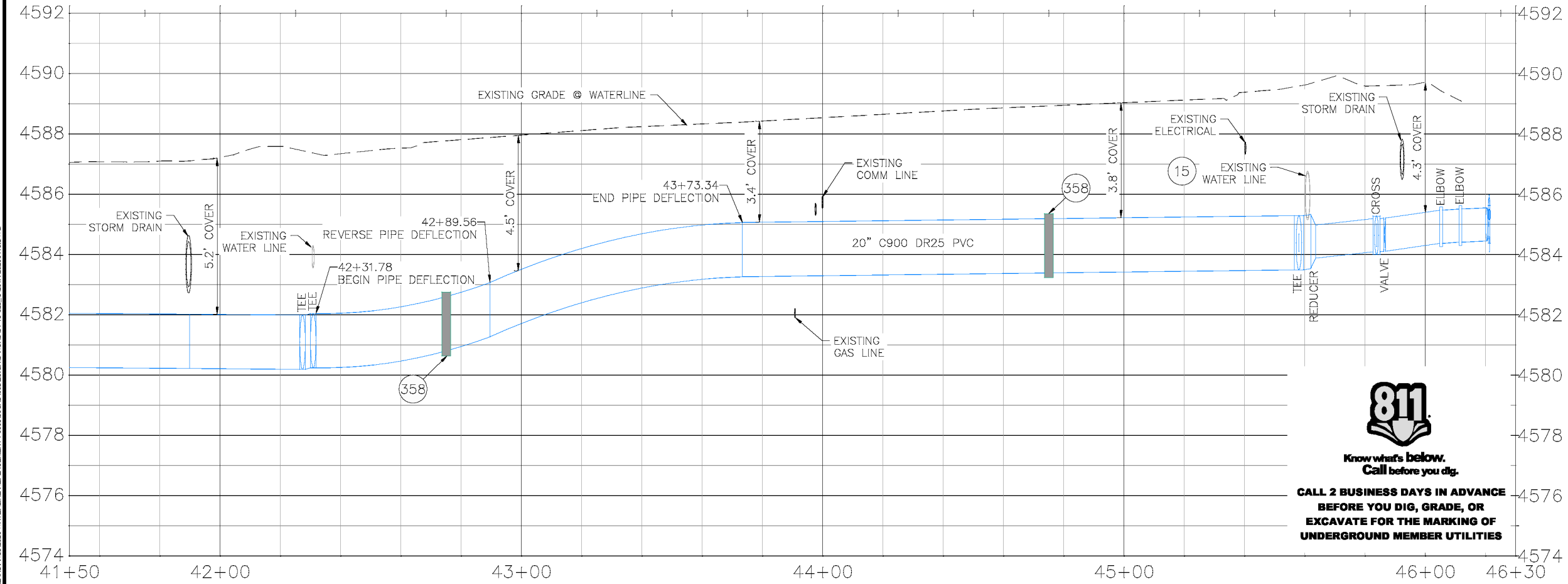
PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - D ROAD  
PLAN AND PROFILE 37+00 TO 41+50



PROJECT NO. 301-F000532

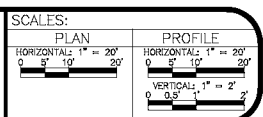
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- 20 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE
- 21 202 - REMOVE EXISTING WATER VALVE
- 22 202 - REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS
- 25 202 - ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 360 206 - STRUCTURE BACKFILL (FLOW-FILL) (WATERLINE TRENCH SHALL BE BACKFILLED WITHIN CDOT SPEC FLOW-FILL WITHIN CDOT RIGHT-OF-WAY).
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 403 102.8b/108.3 - GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
- 404 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 - TEE (SIZE AS SHOWN) (EPOXY COATED)
- 408 102.8/108.3 - CROSS (SIZE AS SHOWN) (EPOXY COATED)
- 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 411 102.8/108.3 - REDUCER (SIZE AS SHOWN) (EPOXY COATED)
- 412 102.8a/108.3 - FIRE HYDRANT ASSEMBLY
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 430 102.8/108.3 - MJ x SWIVEL TEE (SIZE AS SHOWN) (EPOXY COATED)
- 431 102.8/108.3 - WELDED FLANGE OR HY-MAX SOLID SLEEVE RESTRAINED COUPLING WITH STIFFENER FOR CONNECTION TO HDPE
- 432 102.8/108.3 - CONNECT TO EXISTING AC PIPE USING FULL 20'-FT STICK OF PVC PIPE
- 602 608.06 - CONCRETE CURB AND GUTTER (MATCH IN KIND) (2' WIDE)
- 664 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- 679 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 3" LIFT BOTTOM MAT)
- 680 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL CU-03)
- 778 208 - STORM DRAIN INLET PROTECTION (GRAVEL FILTER AT CURB INLET) (AS SHOWN AND PER DETAIL)



**811**  
Know what's below.  
Call before you dig.  
**CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES**

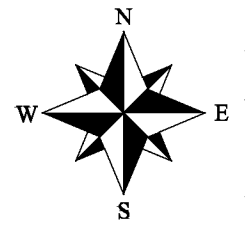
- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			DJM	4/2020
2			LC	4/2020
3			LC	4/2020
4			LC	4/2020



PUBLIC WORKS  
ENGINEERING DIVISION

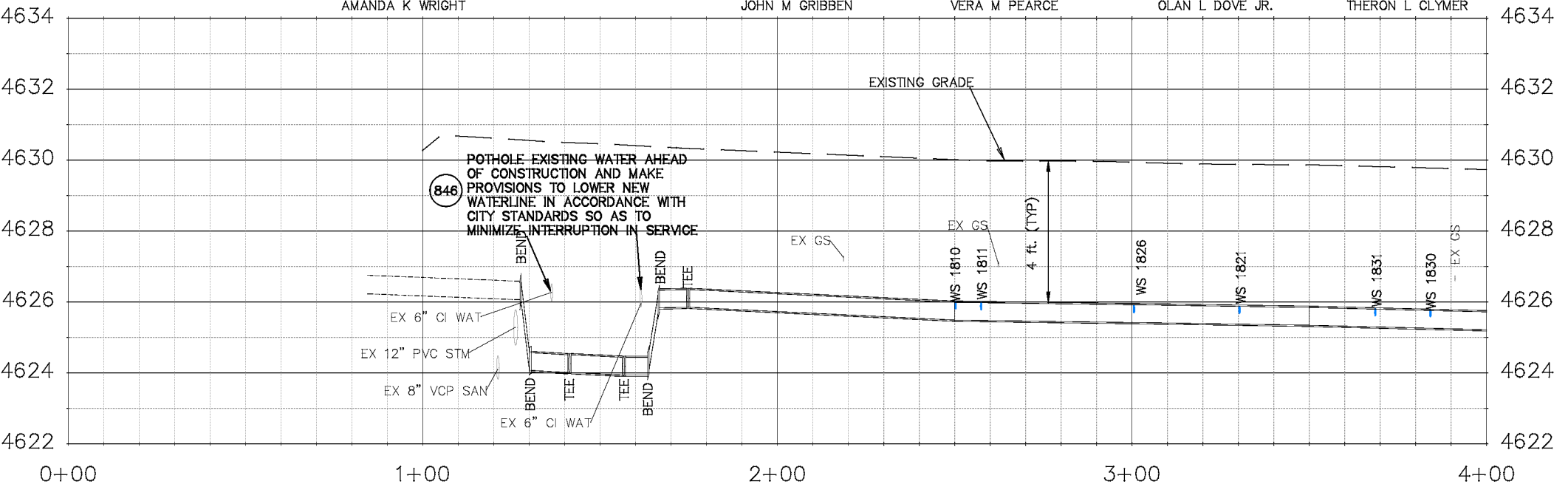
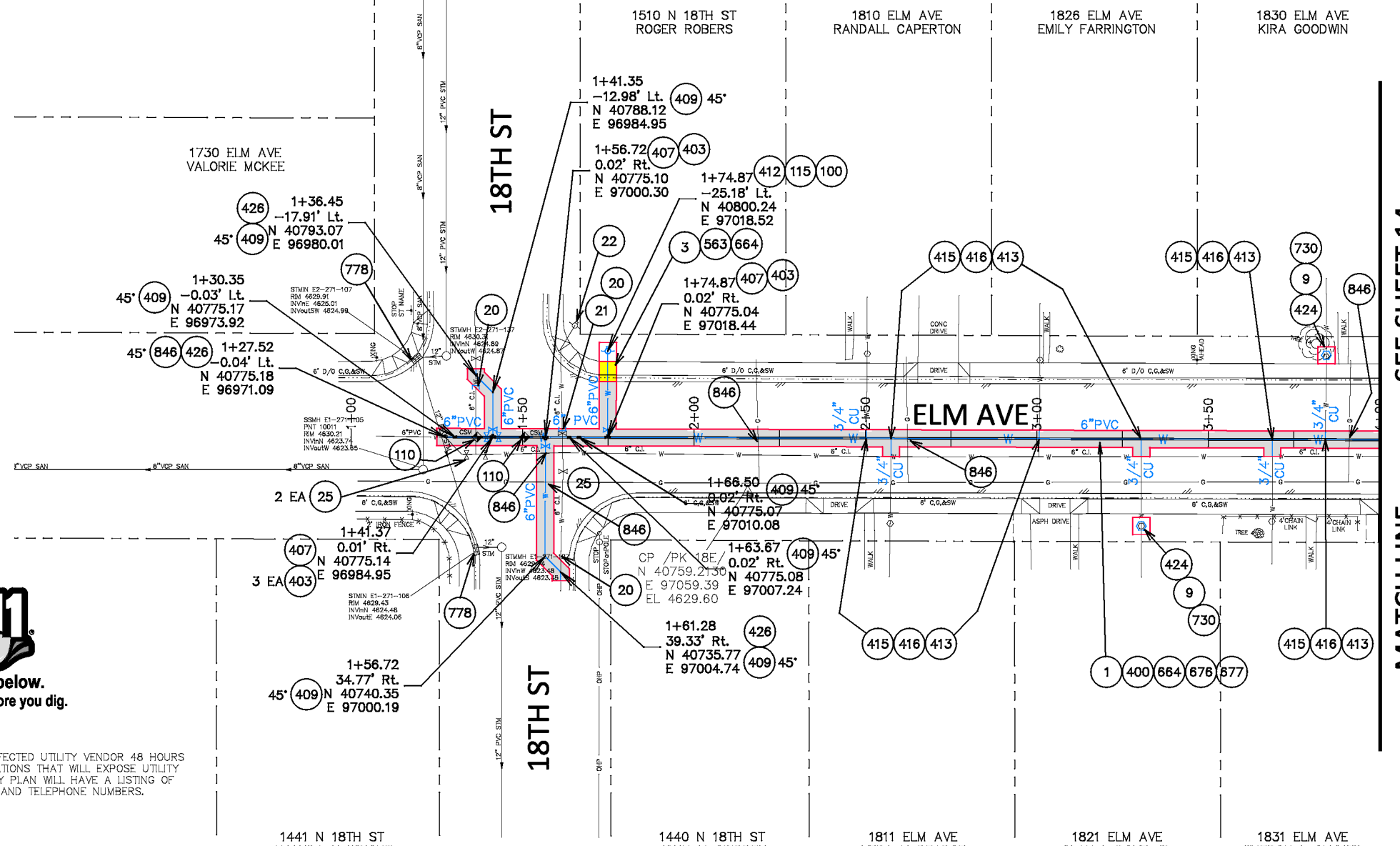
2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - D ROAD  
PLAN AND PROFILE 41+50 TO 46+30



**CONSTRUCTION NOTES**

- ① 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- ③ 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY YELLOW SHADING) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- ⑨ 202 - REMOVAL OF SOD
- ⑳ 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- ㉑ 202 - REMOVE EXISTING WATER VALVE.
- ㉒ 202 - REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS.
- ㉕ 202 - ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- ⑩① 210 - RESET LANDSCAPE GROUND COVER. CONTRACTOR SHALL REMOVE GROUND COVER AND ANY UNDERLYING WEED BARRIER AS NEEDED AND STOCKPILE MATERIALS. CONTRACTOR SHALL RESET THESE MATERIALS AND PROVIDE ADDITIONAL MATERIALS AS NEEDED TO RESTORE LANDSCAPING.
- ⑩⑩ 629 - REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.
- ⑩①⑤ 210 - RESET LANDSCAPE BORDERS (CONCRETE PAVERS)
- ④①① 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- ④①③ 102.8b/108.3 - GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
- ④①⑦ 102.8/108.3 - TEE (SIZE AS SHOWN) (EPOXY COATED)
- ④①⑨ 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- ④①② 102.8a/108.3 - FIRE HYDRANT ASSEMBLY
- ④①③ 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- ④①⑤ 102.8k/108.4 - TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- ④①⑥ 102.8j/108.4 - CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- ④②④ 102.8/108.4 - REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- ④②⑥ RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- ⑤⑥③ 608.06 - MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (6' WIDE)
- ⑥⑥④ 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- ⑥⑦⑥ 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
- ⑥⑦⑦ 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- ⑦③① 212 - RESOD AREA AS SHOWN (INCLUDES 6" OF TOPSOIL)
- ⑦⑦⑧ 208 - STORM DRAIN INLET PROTECTION (GRAVEL FILTER AT CURB INLET) (AS SHOWN AND PER DETAIL)
- ⑧④⑥ POT HOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.

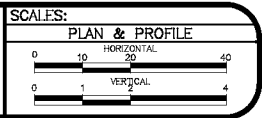
SEE SHEET 14  
MATCH LINE



NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

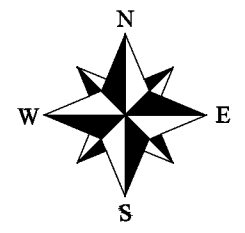
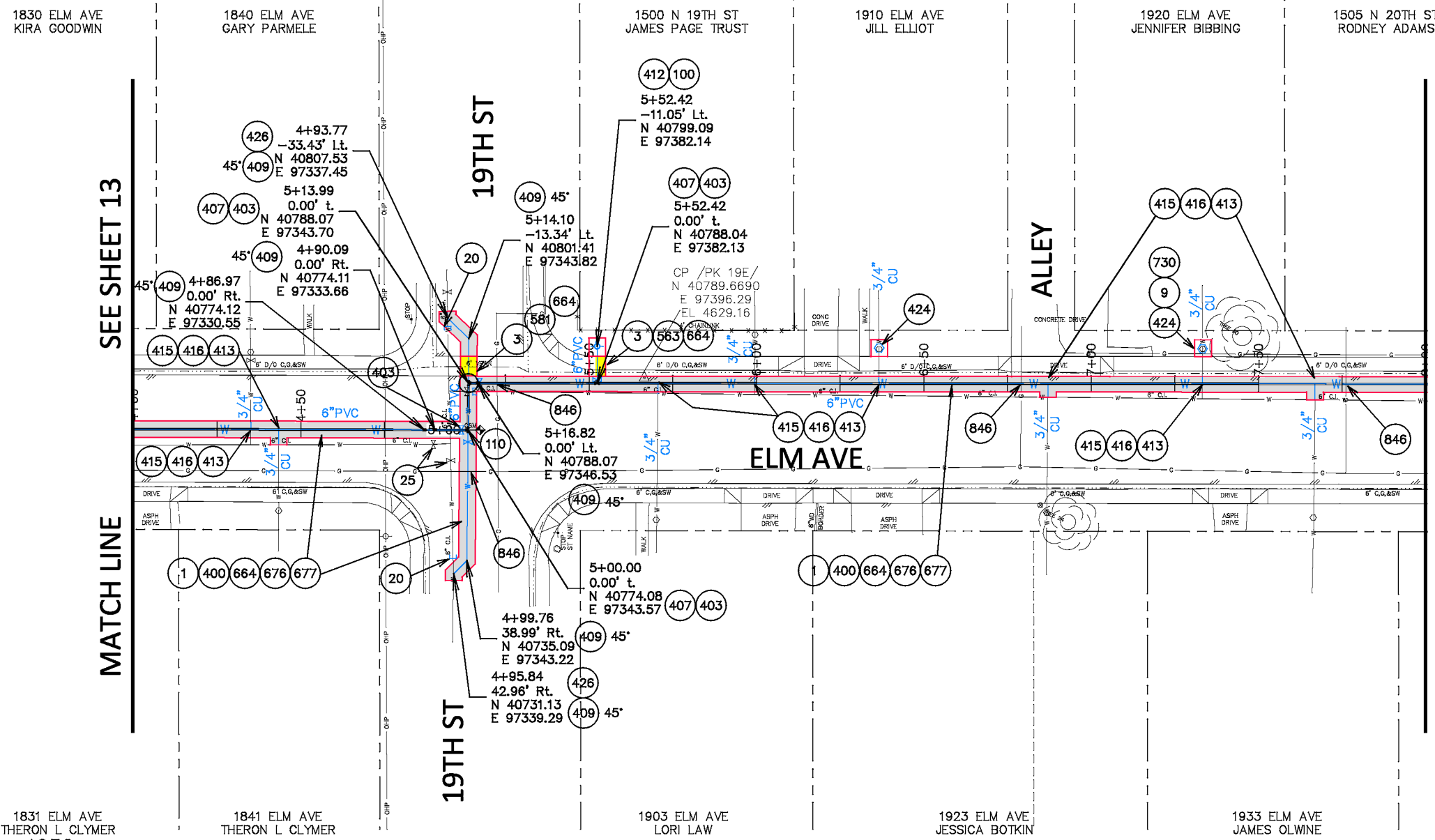
REVISION	DESCRIPTION	DATE
REV 1		
REV 2		
REV 3		
REV 4		

DRAWN BY JCS DATE 04/2020  
 DESIGNED BY JCS DATE 04/2020  
 CHECKED BY ALC DATE 04/2020  
 APPROVED BY TGP DATE 04/2020



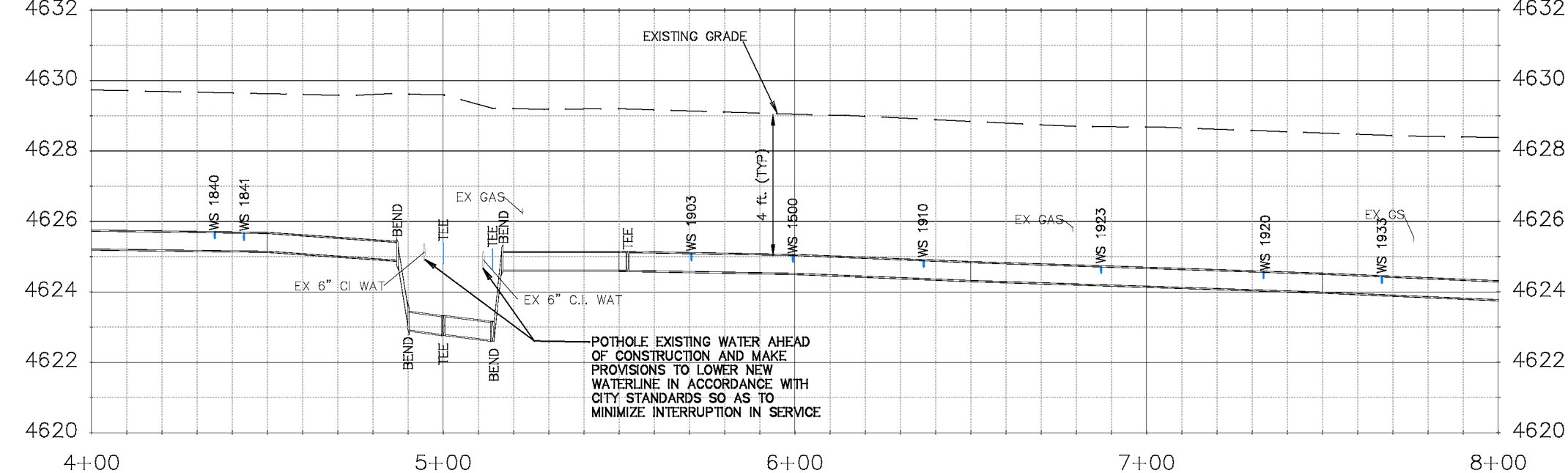
PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - ELM AVE  
PLAN AND PROFILE 0+00 TO 4+00



**CONSTRUCTION NOTES**

- 1 202 -- REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- 3 202 -- REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY YELLOW SHADING) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 9 202 -- REMOVAL OF SOD
- 20 202 -- ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- 25 202 -- ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- 100 210 -- RESET LANDSCAPE GROUND COVER. CONTRACTOR SHALL REMOVE GROUND COVER AND ANY UNDERLYING WEED BARRIER AS NEEDED AND STOCKPILE MATERIALS. CONTRACTOR SHALL RESET THESE MATERIALS AND PROVIDE ADDITIONAL MATERIALS AS NEEDED TO RESTORE LANDSCAPING.
- 110 629 -- REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.
- 400 102.7/108.2 -- WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 403 102.8b/108.3 -- GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 -- TEE (SIZE AS SHOWN) (EPOXY COATED)
- 409 102.8/108.3 -- ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 412 102.8a/108.3 -- FIRE HYDRANT ASSEMBLY
- 413 102.7c/108.4 -- WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- 415 102.8k/108.4 -- TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- 416 102.8j/108.4 -- CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- 424 102.8/108.4 -- REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE.
- 563 608.06 -- MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (6' WIDE)
- 581 608.06 -- CONCRETE DRAINAGE PAN (6' WIDE)
- 664 304 -- AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- 676 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
- 677 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- 730 212 -- RESOD AREA AS SHOWN (INCLUDES 6" OF TOPSOIL)
- 846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.



NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

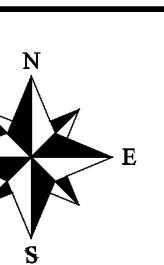
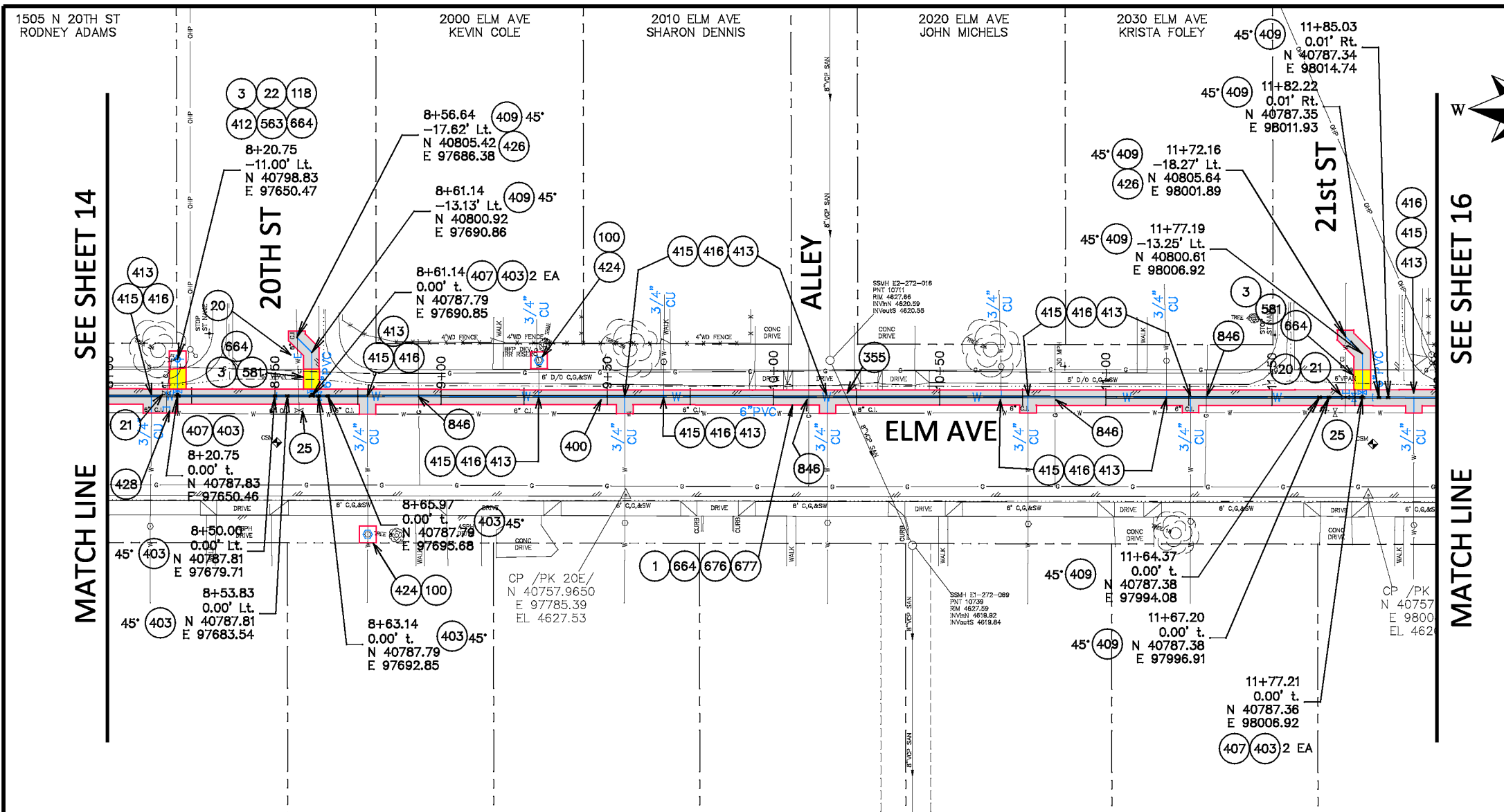
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION 1			JCS	04/2020
REVISION 2			JCS	04/2020
REVISION 3			ALC	04/2020
REVISION 4			TGP	04/2020

SCALE	PLAN & PROFILE
0" = 10'	HORIZONTAL
0" = 4'	VERTICAL



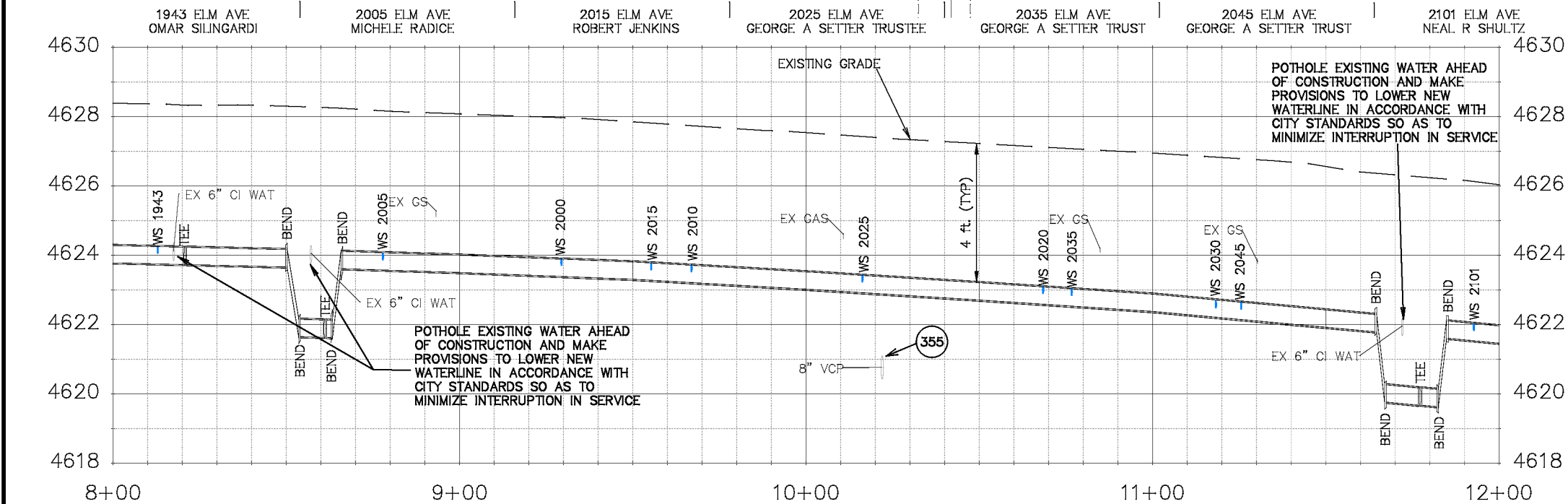
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**2020 WATERLINE REPLACEMENT PROJECT**  
**WATERLINE PLAN - ELM AVE**  
**PLAN AND PROFILE 4+00 TO 8+00**



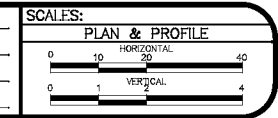
**CONSTRUCTION NOTES**

- 1 202 -- REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- 3 202 -- REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY YELLOW SHADING) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 20 202 -- ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- 21 202 -- REMOVE EXISTING WATER VALVE.
- 22 202 -- REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS.
- 25 202 -- ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- 100 210 -- RESET LANDSCAPE GROUND COVER. CONTRACTOR SHALL REMOVE GROUND COVER AND ANY UNDERLYING WEED BARRIER AS NEEDED AND STOCKPILE MATERIALS. CONTRACTOR SHALL RESET THESE MATERIALS AND PROVIDE ADDITIONAL MATERIALS AS NEEDED TO RESTORE LANDSCAPING
- 118 210 -- RESET LANDSCAPE ROCK (REDDISH ROCK) (PROPERTY 1505 N. 20TH STREET) (MATCH IN KIND)
- 355 104.40 -- CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATERLINE LESS THAN 18" ABOVE SEWER LINE)
- 400 102.7/108.2 -- WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 403 102.8b/108.3 -- GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 -- TEE (SIZE AS SHOWN) (EPOXY COATED)
- 409 102.8/108.3 -- ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 412 102.8a/108.3 -- FIRE HYDRANT ASSEMBLY
- 413 102.7c/108.4 -- WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- 415 102.8k/108.4 -- TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- 416 102.8j/108.4 -- CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- 424 102.8/108.4 -- REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 428 INSTALL RESTRAINED CAP ON WATERLINE SO EXISTING FIRE HYDRANT CAN BE REMOVED. EXISTING 6" PIPE SHOULD CAST IRON.
- 563 608.06 -- MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (6' WIDE)
- 581 608.06 -- CONCRETE DRAINAGE PAN (6' WIDE)
- 664 304 -- AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- 676 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
- 677 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- 846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.



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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION 1			JCS	04/2020
REVISION 2			JCS	04/2020
REVISION 3			ALC	04/2020
REVISION 4			TGP	04/2020



**PUBLIC WORKS ENGINEERING DIVISION**

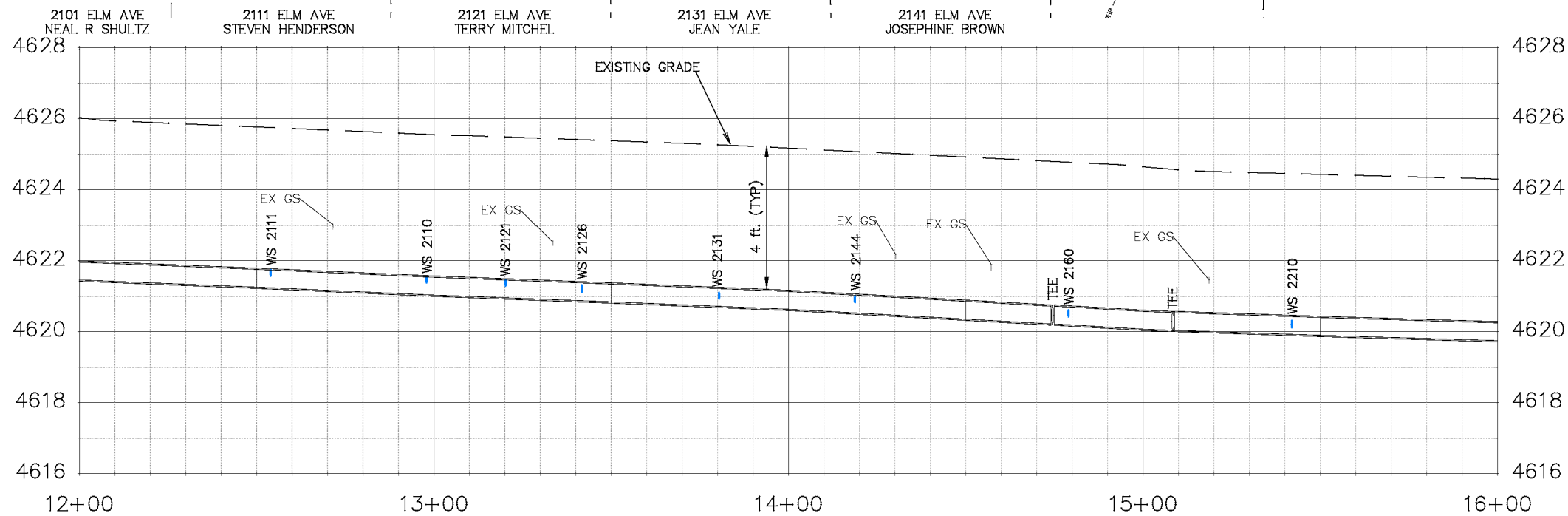
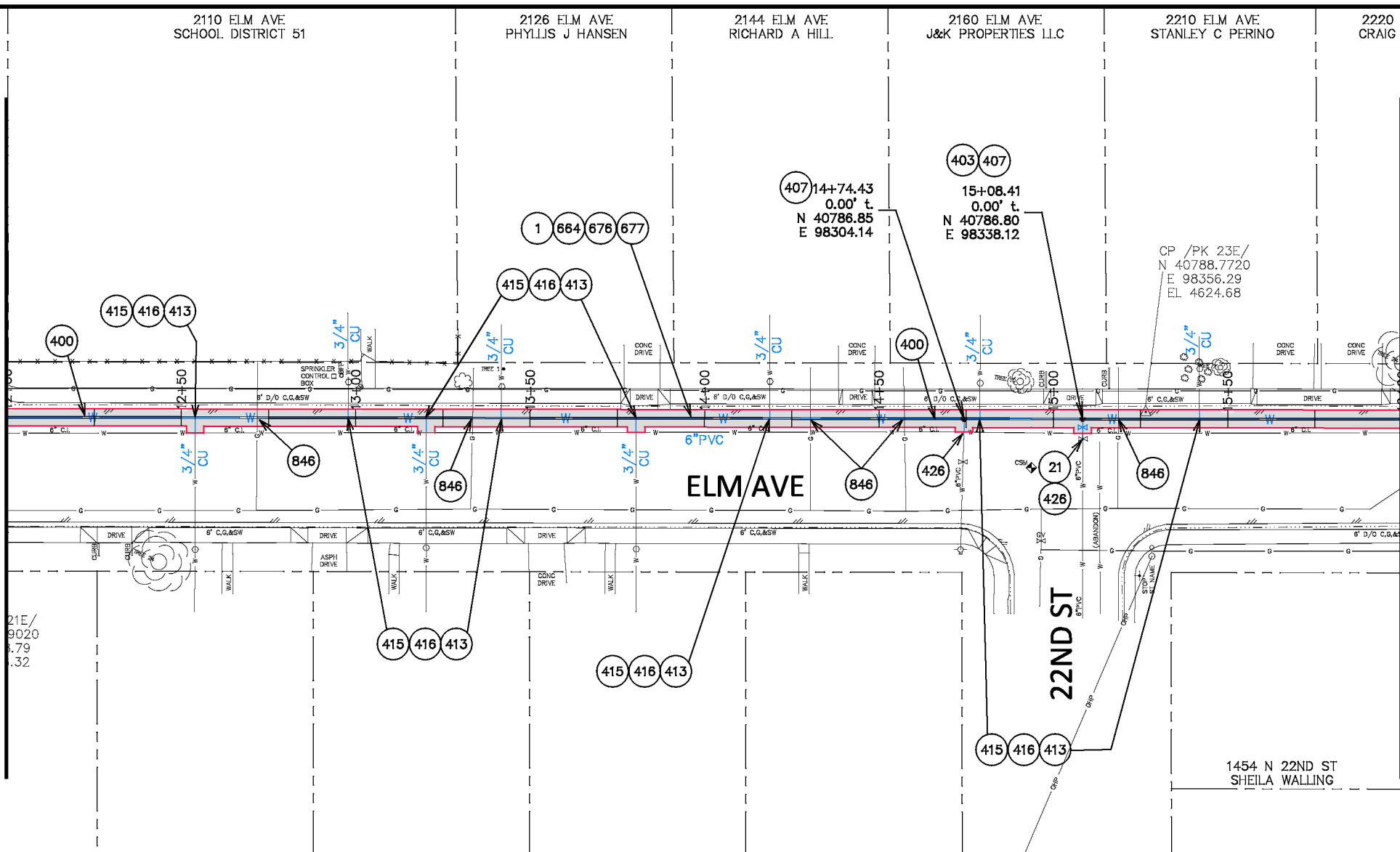
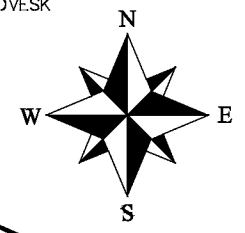
**2020 WATERLINE REPLACEMENT PROJECT**  
**WATERLINE PLAN - ELM AVE**  
**PLAN AND PROFILE 8+00 TO 12+00**

SEE SHEET 15  
MATCH LINE

SEE SHEET 17  
MATCH LINE

CONSTRUCTION NOTES

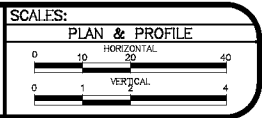
- ① 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- ②1 202 - REMOVE EXISTING WATER VALVE
- ④00 102.7/108.2 -- WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- ④03 102.8b/108.3 -- GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
- ④07 102.8/108.3 -- TEE (SIZE AS SHOWN) (EPOXY COATED)
- ④13 102.7c/108.4 -- WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- ④15 102.8k/108.4 -- TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- ④16 102.8j/108.4 -- CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- ④24 102.8/108.4 -- REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- ④26 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- ⑥84 304 -- AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- ⑥76 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
- ⑥77 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- ⑧46 POT HOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.



Know what's below.  
Call before you dig.

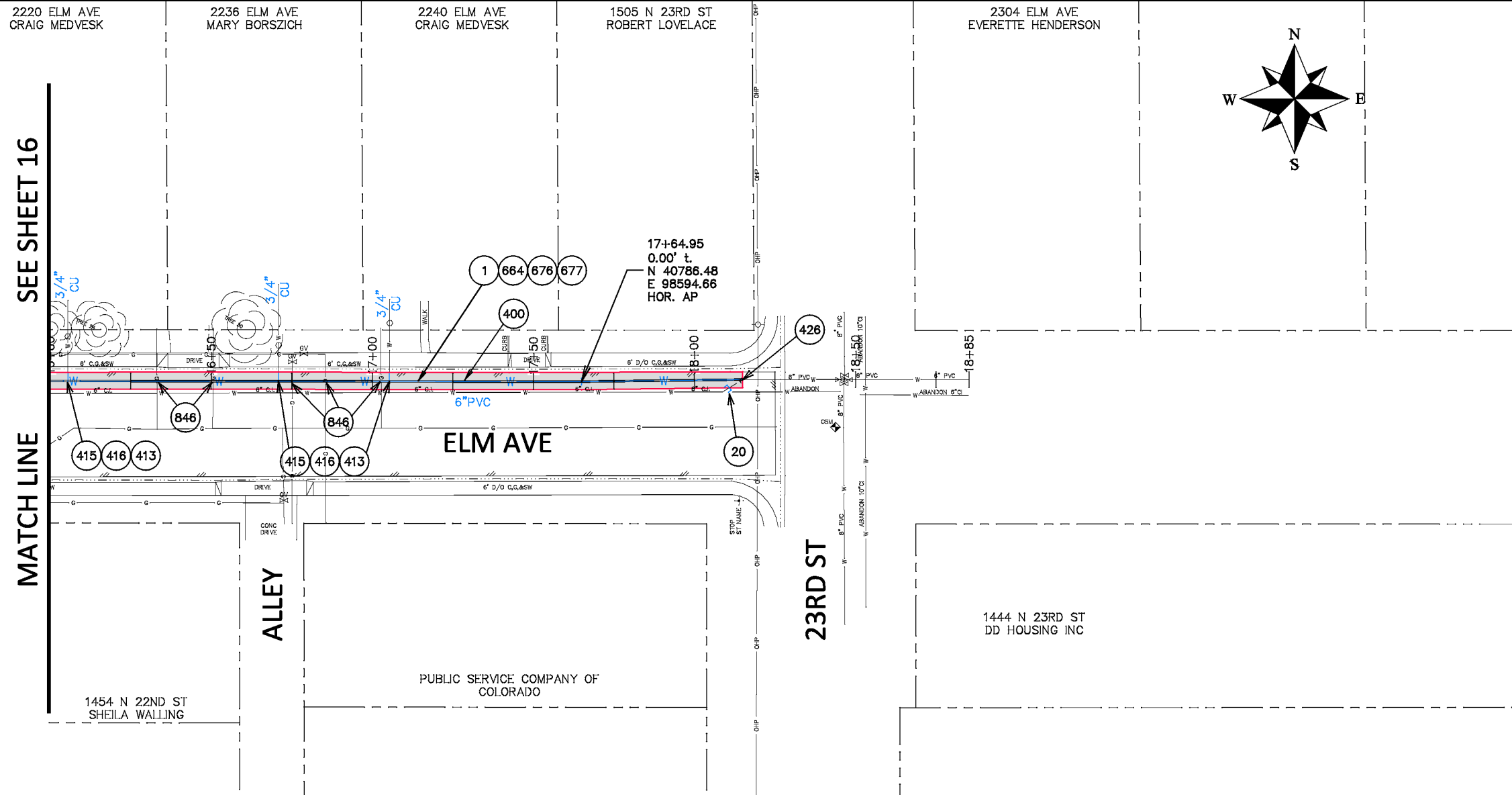
NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REV 1			JCS	04/2020
REV 2			JCS	04/2020
REV 3			ALC	04/2020
REV 4			TGP	04/2020



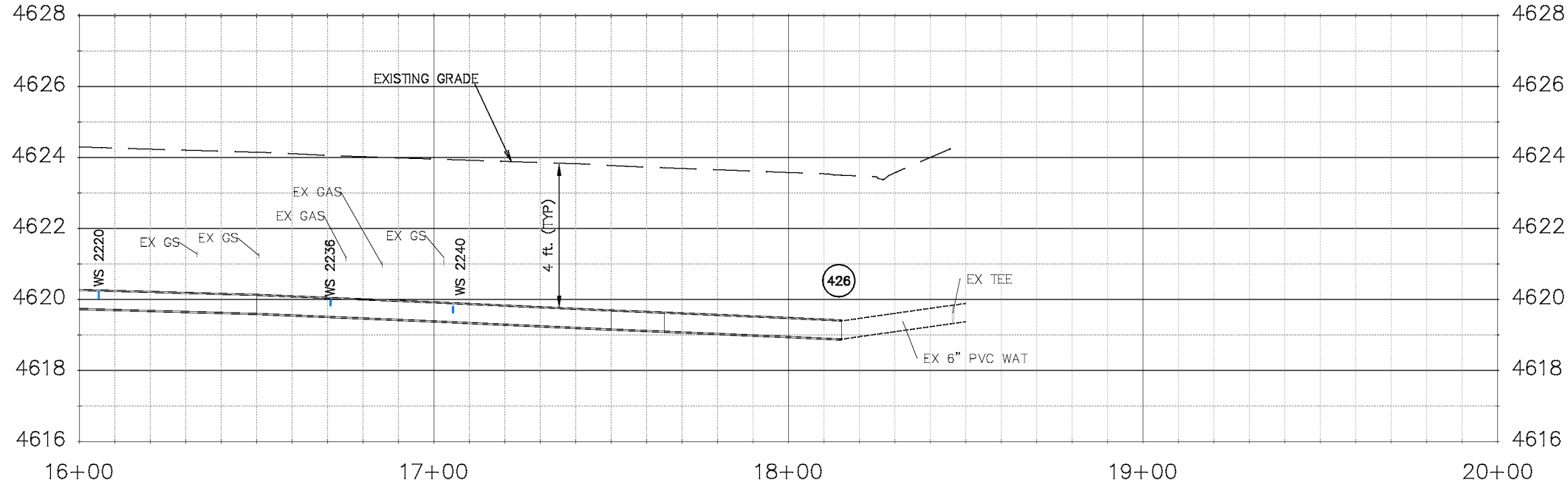
PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - ELM AVE  
PLAN AND PROFILE 12+00 TO 16+00



**CONSTRUCTION NOTES**

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- 20 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 413 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- 415 102.8k/108.4 - TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- 416 102.8j/108.4 - CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 664 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- 676 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
- 677 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- 846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.



NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION 1			JCS	04/2020
REVISION 2			JCS	04/2020
REVISION 3			ALC	04/2020
REVISION 4			TGP	04/2020

SCALES:  
 HORIZONTAL: 1" = 40'  
 VERTICAL: 1" = 4'

**PUBLIC WORKS ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
 WATERLINE PLAN - ELM AVE  
 PLAN AND PROFILE 16+00 TO 20+00**



Purchasing Division

## ADDENDUM NO. 1

**DATE:** May 21, 2020  
**FROM:** City of Grand Junction Purchasing Division  
**TO:** All Offerors  
**RE:** 2020 Waterline Replacement Project  
IFB-4798-20-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. Q. I'm reaching out to see if the City of Grand Junction will be considering horizontal directional drilling as a means of installation for the upcoming 2020 waterline replacement project?  
  
A. *No. The City won't be considering Horizontal Directional Drilling (HDD) for the 2020 Waterline Replacement Project. With all the fittings and valves, the City believes that HDD isn't the best installation method for this particular waterline project.*
  
2. Q. Would the City entertain the use of Sanexen Aqua Pipe trenchless repair for rehabilitating the existing waterlines instead of the traditional open trench and replace methods?  
  
A. *No. This particular waterline replacement project the City believes isn't a good candidate for the Sanexen Aqua Pipe trenchless repair method.*
  
3. Q. For the restrained couplings (note/item #426) are you wanting to use a Romac Alpha (or equal) on all connections, or use a MJ Solid Sleeve when it's PVC x PVC, and an Alpha when it's non-PVC?  
  
A. *For restrained couplings, the City will accept either Romac Alpha, Hymax, or Engineer approved equal restrained couplings. For pipe connections into existing AC water pipe, the Contractor will be required to use either Romac, Hymax, or Engineer approved equal couplings that are not restrained. In all cases, the couplings shall be epoxy coated.*
  
4. Q. Is there something special wanted for page #11, note #424...epoxy restrained coupling? How is it different than item/note #426?



A. *Construction note #424 on sheet #11 has been changed to be construction note #423 due to a conflict with number #424 being used on the Elm Ave. portion of this waterline project.*

*Construction note #423 on sheet #11 has been updated to call out a 20" dia. MJ Solid Sleeve Fitting (Epoxy Coated). The MJ fittings used shall be EBAA Iron MegaLug fittings or Engineer approved equal.*

5. Q. There is no "restrained" coupling made for AC pipe, would a standard Hymax (or equal) be acceptable? 1 needed for the 12" connection on page 12.

A. *For pipe connections into existing AC water pipe, the Contractor will be required to use either Romac, Hymax, or Engineer approved equal solid couplings that are not restrained. In all cases, the couplings shall be epoxy coated.*

6. Q. Item #36 – Is 180 feet of ¾" copper correct, that's less than 5-ft of pipe per service (37 – ¾" services)?

A. *The total quantity of ¾" copper service pipe has been increased to 230 lineal feet. The updated bid schedule is attached to this addendum.*

7. Q. I didn't see plans/specs attached in the plan service, and just wanted to make sure we could go off Grand Junction City Standard specs?

A. *Yes, the July 2010 edition of the "City Standard Contract Documents for Capital Improvements Construction" shall be used and referenced for this 2020 Waterline Replacement Project. The City Standard Specifications and other Bid Documents are available for review or download on the City Engineering page at [www.gjcity.org](http://www.gjcity.org)*

8. Q. Standard specs state: 104.3f – Installation of Butterfly Valves - "Unless otherwise approved by the City Utilities Engineer, each butterfly valve shall be installed in a vault. The diameter of the vault shall be as detailed on the plans." Can I assume this, and if so assume Flanged ends as well?

A. *The butterfly valves installed on this waterline project do not have to be installed in a vault. Also, the butterfly valves shall be MJ valves and used with EBAA Iron MegaLug restrained MJ fittings or Engineer approved equal.*

9. An updated Bid Schedule is attached to this Addendum. Contractors shall utilized this Addendum 1 Price Bid Schedule when submitting their bid response.

10. Updated waterline construction plans are attached to this Addendum. The changes to the construction plans include: Sheet #5 has a Tree Stump removal construction note added at Desert Vista Park, and Sheet #11 has been updated to include a revised construction note for the 20" MJ Solid Sleeve fitting.

11. Special Condition 3.3.16, Traffic Control, has been updated to include the following information for working in Ute Ave. and Pitkin Ave:

Special conditions for traffic control:

5. Due to the difficulties of providing detours while the Contractor is working in Ute Ave. and Pitkin Ave., the Contractor shall work both Ute Ave. and Pitkin Ave. within CDOT roadway right-of-way one half at a time. This will allow traffic in both Ute Ave. and Pitkin Ave. to be reduced to one-lane of travel while the Contractor installs the new waterline and backfills with flow-fill in the other half of the roadway. Once the flow-fill material cures and the cold-mix asphalt is placed and compacted, the Contractor can switch the traffic control and start installing the new waterline on the other half of the road. Detours will not be required while working in Ute Ave. and Pitkin Ave.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,



Duane Hoff Jr., Senior Buyer  
City of Grand Junction, Colorado

## Bid Schedule: 2020 Waterline Replacement Project

### ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	108.2	Water Main (6") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	1,907.	Lin. Ft.	₹ _____	₹ _____
2	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	98.	Lin. Ft.	₹ _____	₹ _____
3	108.2	Water Main (12") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	58.	Lin. Ft.	₹ _____	₹ _____
4	108.2	Water Main (18") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,282.	Lin. Ft.	₹ _____	₹ _____
5	108.2	Water Main (20") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,380.	Lin. Ft.	₹ _____	₹ _____
6	108.2	Water Main (20") (Restrained C-900 PVC, DR-25) (Certa-Lok Restrained Joint, Coupled or Approved Equal) (Sta. 34+00 - 35+95)	195.	Lin. Ft.	₹ _____	₹ _____
7	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed material unit weight = 133 lbs/ft <sup>3</sup> )	600.	Ton	₹ _____	₹ _____
8	108.3	Gate Valve (6") (MJ)	17.	Each	₹ _____	₹ _____
9	108.3	Gate Valve (8") (MJ)	5.	Each	₹ _____	₹ _____
10	108.3	Gate Valve (12") (MJ)	1.	Each	₹ _____	₹ _____
11	108.3	Butterfly Valve (18") (MJ)	3.	Each	₹ _____	₹ _____
12	108.3	Butterfly Valve (20") (MJ)	2.	Each	₹ _____	₹ _____
13	108.3	Tee (6" x 6") MJ Swivel Tee (Epoxy Coated)	11.	Each	₹ _____	₹ _____
14	108.3	Tee (8" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	₹ _____	₹ _____
15	108.3	Tee (12" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	₹ _____	₹ _____
16	108.3	Tee (18" x 18") (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
17	108.3	Tee (20" x 8") MJ Swivel Tee (Epoxy Coated)	3.	Each	₹ _____	₹ _____
18	108.3	Tee (20" x 18") (MJ) (Epoxy Coated)	2.	Each	₹ _____	₹ _____
19	108.3	Elbow (6" x 45 deg) (MJ) (Epoxy Coated)	28.	Each	₹ _____	₹ _____

## Bid Schedule: 2020 Waterline Replacement Project

### ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
20	108.3	Elbow (8" x 11.25 deg) (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
21	108.3	Elbow (8" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
22	108.3	Elbow (8" x 45 deg) (MJ) (Epoxy Coated)	8.	Each	₹ _____	₹ _____
23	108.3	Elbow (12" x 45 deg) (MJ) (Epoxy Coated)	2.	Each	₹ _____	₹ _____
24	108.3	Elbow (18" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
25	108.3	Elbow (18" x 45 deg) (MJ) (Epoxy Coated)	11.	Each	₹ _____	₹ _____
26	108.3	Elbow (20" x 11.25 deg) (MJ) (Epoxy Coated)	4.	Each	₹ _____	₹ _____
27	108.3	Elbow (20" x 45 deg) (MJ) (Epoxy Coated)	7.	Each	₹ _____	₹ _____
28	108.3	Reducer (20" x 12") (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
29	108.3	Cross Fitting (12" x 8") (MJ) (Epoxy Coated)	1.	Each	₹ _____	₹ _____
30	108.3	End Cap/Plug (6") (Restrained) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (To be used on Elm Ave. to abandon existing fire hydrant at Sta. 8+20)	1.	Each	₹ _____	₹ _____
31	108.3	End Cap/Plug (18") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	1.	Each	₹ _____	₹ _____
32	108.3	End Cap/Plug (20") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	2.	Each	₹ _____	₹ _____
33	108.3	Fire Hydrant Assembly	5.	Each	₹ _____	₹ _____
34	108.3	8" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	₹ _____	₹ _____
35	108.3	20" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	₹ _____	₹ _____
36	108.3	20" MJ Solid Sleeve (Epoxy Coated) (Sta 39+63) (Includes MegaLug MJ Restraint fittings or Approved Equal)	1.	Each	₹ _____	₹ _____

## Bid Schedule: 2020 Waterline Replacement Project

### ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
37	108.4	Water Service Line (3/4") (Type K Copper) (If Lead or Poly service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	230.	Lin. Ft.	\$ _____	\$ _____
38	108.4	Water Service Line (1-1/2") (Type K Copper or HDPE 3408) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	150.	Lin. Ft.	\$ _____	\$ _____
39	108.4	Tapping Saddle (6" x 3/4")	36.	Each	\$ _____	\$ _____
40	108.4	Tapping Saddle (20" x 3/4")	1.	Each	\$ _____	\$ _____
41	108.4	Tapping Saddle (20" x 1-1/2")	1.	Each	\$ _____	\$ _____
42	108.4	Corporation Stop (3/4")	37.	Each	\$ _____	\$ _____
43	108.4	Corporation Stop (1-1/2")	1.	Each	\$ _____	\$ _____
44	108.4	Meter Setter and Meter Pit Installation (Install Only) (City Furnished Meter Pit) (Includes removal and disposal of existing meter pit)	6.	Each	\$ _____	\$ _____
45	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (18" Thick Min.) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 138 lbs/ft <sup>3</sup> )	75.	Ton	\$ _____	\$ _____
46	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	13.	Each	\$ _____	\$ _____
47	202	Abandon Existing Water Valve (Close valve, remove top half of existing valve box, fill cavity to finished subgrade with flow-fill material)	9.	Each	\$ _____	\$ _____
48	202	Remove Existing Fire Hydrant (Return Hydrant to City Shops)	4.	Each	\$ _____	\$ _____
49	202	Removal of Existing Pipe (Size & type as shown on plans)	307.	Lin. Ft.	\$ _____	\$ _____
50	202	Removal of Asphalt Mat (Full Depth)	1,328.	Sq. Yd.	\$ _____	\$ _____
51	202	Removal of Asphalt Mat (Planing) (2" Thick for T-Top Section)	704.	Sq. Yd.	\$ _____	\$ _____

## Bid Schedule: 2020 Waterline Replacement Project

### ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
52	202	Removal of Concrete (Includes, but not limited to, curb, gutter, sidewalk, driveway, slabs, V-pans, curb ramps, intersection corners, aprons, landscape borders, and concrete walls)	428.	Sq. Ft.	\$ _____	\$ _____
53	202	Removal of Sod	2,547.	Sq. Ft.	\$ _____	\$ _____
54	202	Removal of Tree Stump (18" dia.) (In Desert Vista Park, there is an existing tree stump next to the proposed new waterline and the City would like for the Contractor to remove this stump)	1.	Each	\$ _____	\$ _____
55	203	Disposal of Radioactive Material (Dispose at City Shops, 333 West Ave.)	50.	Cu. Yd.	\$ _____	\$ _____
56	206	Structure Backfill (Flow-Fill)	180.	Cu. Yd.	\$ _____	\$ _____
57	208	Storm Drain Inlet Protection (Gravel Filter at Curb Inlet) (Includes Maintenance & Removal of Debris, & Removal of Inlet Protection)	7.	Each	\$ _____	\$ _____
58	208	Concrete Washout Facility	1.	Lump Sum	\$ _____	\$ _____
59	210	Reset Landscape Ground Cover (Match in Kind) (Contractor shall remove ground cover and underlying weed barrier as needed and stockpile materials. Contractor shall reset these materials and provide additional materials as needed)	560.	Sq. Ft.	\$ _____	\$ _____
60	210	Reset Landscape Borders (Concrete Pavers) (Property 1510 N. 18th Street)	1.	Lump Sum	\$ _____	\$ _____
61	210	Reset Landscape Rock (Reddish Rock) (Property 1505 N. 20th Street) (Match in Kind)	20.	Sq. Ft.	\$ _____	\$ _____
62	210	Reset Sprinkler System (Desert Vista Park) (Complete in Place) (Various Pipe Sizes) (Contractor shall repair all sprinkler pipe breaks whether PVC or HDPE pipe of any size within the sodded area of Desert Vista Park) (City Parks Dept. can be contacted ahead of time to get an idea of sprinkler system within the park)	1.	Lump Sum	\$ _____	\$ _____
63	210	Reset Fence (6' High Chain-Link w/ Barbed Wire Top) (12th St. and D Road intersection)	40.	Lin. Ft.	\$ _____	\$ _____
64	210	Reset Fence (4' High Barbed Wire Fence) (Along Pitkin Ave. near Sta. 10+00)	20.	Lin. Ft.	\$ _____	\$ _____

## Bid Schedule: 2020 Waterline Replacement Project

### ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
65	210	Reset Sign (Along Pitkin Ave. near Sta. 10+00)	3.	Each	₹ _____	₹ _____
66	212	Re-Sod Areas (Desert Vista Park and various other locations) (Includes 6" Thick Imported Topsoil placed prior to sod placement)	2,547.	Sq. Ft.	₹ _____	₹ _____
67	304	Aggregate Base Course (Class 6) (4" thick) (Shoulder Base)	491.	Sq. Yd.	₹ _____	₹ _____
68	304	Aggregate Base Course (Class 6) (15" thick)	1,238.	Sq. Yd.	₹ _____	₹ _____
69	401	Cold Mix Asphalt (Temporary Patching) (3" Thick) (To be used on Ute Ave. and Pitkin Ave. as a temporary surface until the Hot Bituminous Pavement can be laid) (To be placed on top of the cured flow-fill)	87.	Sq. Yd.	₹ _____	₹ _____
70	401	Hot Bituminous Pavement (Patching) (3 " Thick) (Grading SX, PG 64-22) (GYR.=75) (One 3" Lift Bottom Mat)	490.	Sq. Yd.	₹ _____	₹ _____
71	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Top Mat) <b>(T-Top)</b>	2,018.	Sq. Yd.	₹ _____	₹ _____
72	401	Hot Bituminous Pavement (Patching) (2 " Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Lift Bottom Mat) <b>(Elm Ave.)</b>	838.	Sq. Yd.	₹ _____	₹ _____
73	407	Emulsified Asphalt (Tack Coat)	335.	Gallon	₹ _____	₹ _____
74	608	Concrete Curb and Gutter (2' Wide) (Match in Kind) (City Std. Detail C-05)	54.	Lin. Ft.	₹ _____	₹ _____
75	608	Concrete Curb, Gutter, & Sidewalk (6' Wide) (Match in Kind) (City Std. Detail C-02)	150.	Sq. Ft.	₹ _____	₹ _____
76	608	Concrete Drainage Pan (6' Wide x 8" Thick) (Match in Kind) (Includes #5 rebar tie-bars) (City Std. Detail C-12)	150.	Sq. Ft.	₹ _____	₹ _____
77	608	Cap Top Half of Sewer Pipe in Concrete per City Std. Detail GU-04 (If necessary)	1.	Each	₹ _____	₹ _____
78	620	Portable Sanitary Facility	2.	Each	₹ _____	₹ _____
79	625	Construction Surveying (Includes As-Built Drawings)	1.	Lump Sum	₹ _____	₹ _____
80	626	Mobilization	1.	Lump Sum	₹ _____	₹ _____

## Bid Schedule: 2020 Waterline Replacement Project ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
81	627	Pavement Marking Paint (Water Based) (Double Yellow Lines) (12th St. between Ute Ave. and Pitkin Ave., and D Road)	72.	Lin. Ft.	\$ _____	\$ _____
82	627	Pavement Marking Paint (Water Based) (Single Yellow Line) (Pitkin Ave.)	10.	Lin. Ft.	\$ _____	\$ _____
83	627	Pavement Marking Paint (Water Based) (Single White Line) (Pitkin Ave. & D Road)	40.	Lin. Ft.	\$ _____	\$ _____
84	627	Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line) (To be used at the Ute Ave. and 12th Street intersection)	62.	Sq. Ft.	\$ _____	\$ _____
85	629	Survey Monumentation (Complete in Place)	2.	Each	\$ _____	\$ _____
86	630	Traffic Control Plan	1.	Lump Sum	\$ _____	\$ _____
87	630	Traffic Control (Complete in Place)	1.	Lump Sum	\$ _____	\$ _____
88	630	Flagging	1,240.	Hour	\$ _____	\$ _____
MCR		Minor Contract Revisions	---	---	---	<u>\$ 55,000.00</u>
<b>Bid Amount:</b>						<b>\$ _____</b>

**Bid Amount:**

**dollars**

<b>Contractor Name:</b>
<b>Contractor Address:</b>
<b>Contractor Phone #:</b>



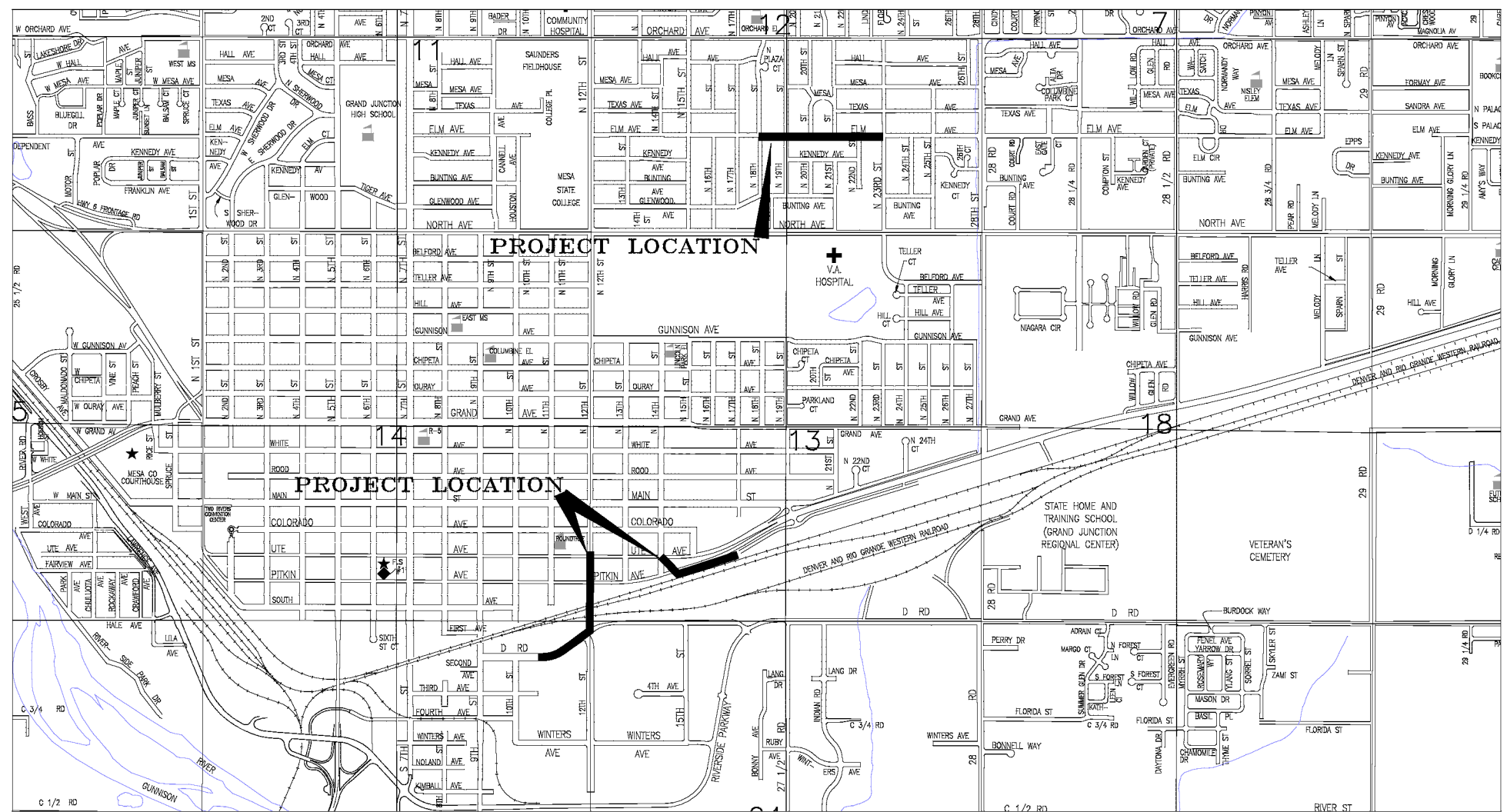
# CITY OF GRAND JUNCTION

## 2020 WATERLINE REPLACEMENT PROJECT

### MAY 2020

SHEET INDEX

- 1 Cover Sheet
- 2 Standard Abbreviations, Legend, and Symbols
- 3 Summary of Approximate Quantities
- 4 Control Plan
- 5-7 Waterline Plans for Pitkin Ave from 14th to 17th
- 8-12 Waterline Plans for D Road and 12th
- 13-17 Waterline Plans for Elm Ave from 18th to 23rd



NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

**811**  
Know what's below.  
Call before you dig.

UTILITIES AND AGENCIES									
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX	
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	PROJECT ENGINEER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022	
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022	
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND	MANAGER	IRRIGATION	688 26 RD	688 26 RD	GRAND JCT., CO 81506	(970) 242-2762		
SPECTRUM	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803	
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244-4311	(970) 240-4349	
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H 1/4 RD	GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189	
XCEL	STEVE PIBURN	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2664	(970) 244-2664	
XCEL	SARAH BARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2656	(970) 244-2656	

REVISION	DESCRIPTION	DATE
REVISION A	ADDENDUM #1 - REVISED SHEETS 5 & 11	05/20/20
REVISION B		
REVISION C		
REVISION D		

DRAWN BY	JCS	DATE	2020
DESIGNED BY	JCS	DATE	2020
CHECKED BY	ALC	DATE	2020
APPROVED BY	ICP	DATE	2020

SCALE



**PUBLIC WORKS  
ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
COVER - 1**

### ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C, G, & SW	CURB, GUTTER & SIDEWALK
CL	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSPI	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
FL	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
Δ	DELTA ANGLE


### LEGEND

BSWMP DRAINAGE BASIN BOUNDARY	
BSWMP ANCHORED STRAW BALES	
BSWMP SILT FENCE	
BUILDING	
CONCRETE CURB AND GUTTER	
CONCRETE CURB, GUTTER, & SIDEWALK	
CONCRETE DITCH	
CONCRETE SIDEWALK	
CULVERT	
EARTH DITCH	
EDGE OF GRAVEL	
EDGE OF PAVEMENT	
FENCE (HT & MATL NOTED)	
GUARD RAIL	
HATCHING: INDICATES ASPHALT REMOVAL	
HATCHING: INDICATES CONCRETE REMOVAL	
HATCHING: INDICATES CLASS 6 AREA	
HATCHING: INDICATES STAGING AREA	
LINE (CENTER OF IMPROVEMENTS)	
LINE (CITY LIMITS)	
LINE (CONTROL)	
LINE (EASEMENT)	
LINE (MONUMENT/SECTION)	
LINE (PROPERTY)	
LINE (RIGHT OF WAY)	
MATCH LINE	
PIPE (IRRIGATION)	
PIPE (SIPHON)	
PROPOSED CONCRETE CURB AND GUTTER	
PROPOSED CONCRETE CURB, GUTTER, & SIDEWALK	
PROPOSED CONCRETE SIDEWALK	
PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN)	
ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE	
RAIL ROAD	
RETAINING WALL	
STRIPING (CONTINUOUS WHITE)	
STRIPING (DASHED WHITE)	
STRIPING (CONTINUOUS YELLOW)	
STRIPING (DASHED YELLOW)	
TOP OF SLOPE	
CONTOUR LINES (SHOWN BETWEEN TOP & TOE)	
TOE OF SLOPE	
TRAFFIC DETECTOR LOOP	
UTILITY LINE (ABANDON) (THIS CASE A WATER LINE)	
UTILITY LINE (CABLE TV)	
UTILITY LINE (ELECTRIC)	
UTILITY LINE (FIBER OPTIC)	
UTILITY LINE (GAS)	
UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER)	
UTILITY LINE (OVERHEAD POWER)	
UTILITY LINE (OVERHEAD TELEPHONE)	
UTILITY LINE (SANITARY SEWER)	
UTILITY LINE (SANITARY SEWER FORCE MAIN)	
UTILITY LINE (SANITARY SEWER SERVICE)	
UTILITY LINE (STORM SEWER)	
UTILITY LINE (STORM SEWER, PERFORATED)	
UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION)	
UTILITY LINE (TELEPHONE)	
UTILITY LINE (WATER)	

### SYMBOLS


BENCH MARK	
CATCH BASIN	
CLEAN OUT	
CURB STOP	
FIRE HYDRANT	
GUY WIRE ANCHOR	
HEADGATE	
IRRIGATION PUMP	
MAILBOX	
MANHOLE (ELECTRIC)	
MANHOLE (GAS)	
MANHOLE (SANITARY/STORM)	
MANHOLE (TELEPHONE)	
MANHOLE (WATER)	
METER (GAS)	
METER (WATER)	
PEDESTAL (TELEPHONE)	
PEDESTAL (TV)	
PROPERTY PIN	
PULL BOX	
REDUCER FITTING	
SIGN OR POST (SIGN TYPE NOTED)	
SPRINKLER HEAD	
STREET LIGHT	
SURVEY MONUMENT (CITY)	
SURVEY MONUMENT (TYPE NOTED)	
TEST HOLE	
TRAFFIC PAINT MARKING	
TRAFFIC SIGNAL POLE AND MAST ARM	
UTILITY POLE	
VALVE (GAS)	
VALVE (IRRIGATION)	
VALVE (WATER)	
VEGETATION (HEDGE OR BUSH)	
VEGETATION (TREE STUMP)	
VEGETATION (TREE) (CALIPER SIZE NOTED)	
WATER HYDRANT	
WEIR	
YARD LIGHT	

NORTH ARROW:



BAR SCALE:

GRAPHIC SCALE



( IN FEET )  
1 inch = 20 ft.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
REVISION Δ REV 1			JCS	2020	
REVISION Δ REV 2			JCS	2020	
REVISION Δ REV 3			ALC	2020	
REVISION Δ REV 4			JCP	2020	



**PUBLIC WORKS  
ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
STANDARD ABBREVIATIONS LEGEND AND  
SYMBOLS — 1**

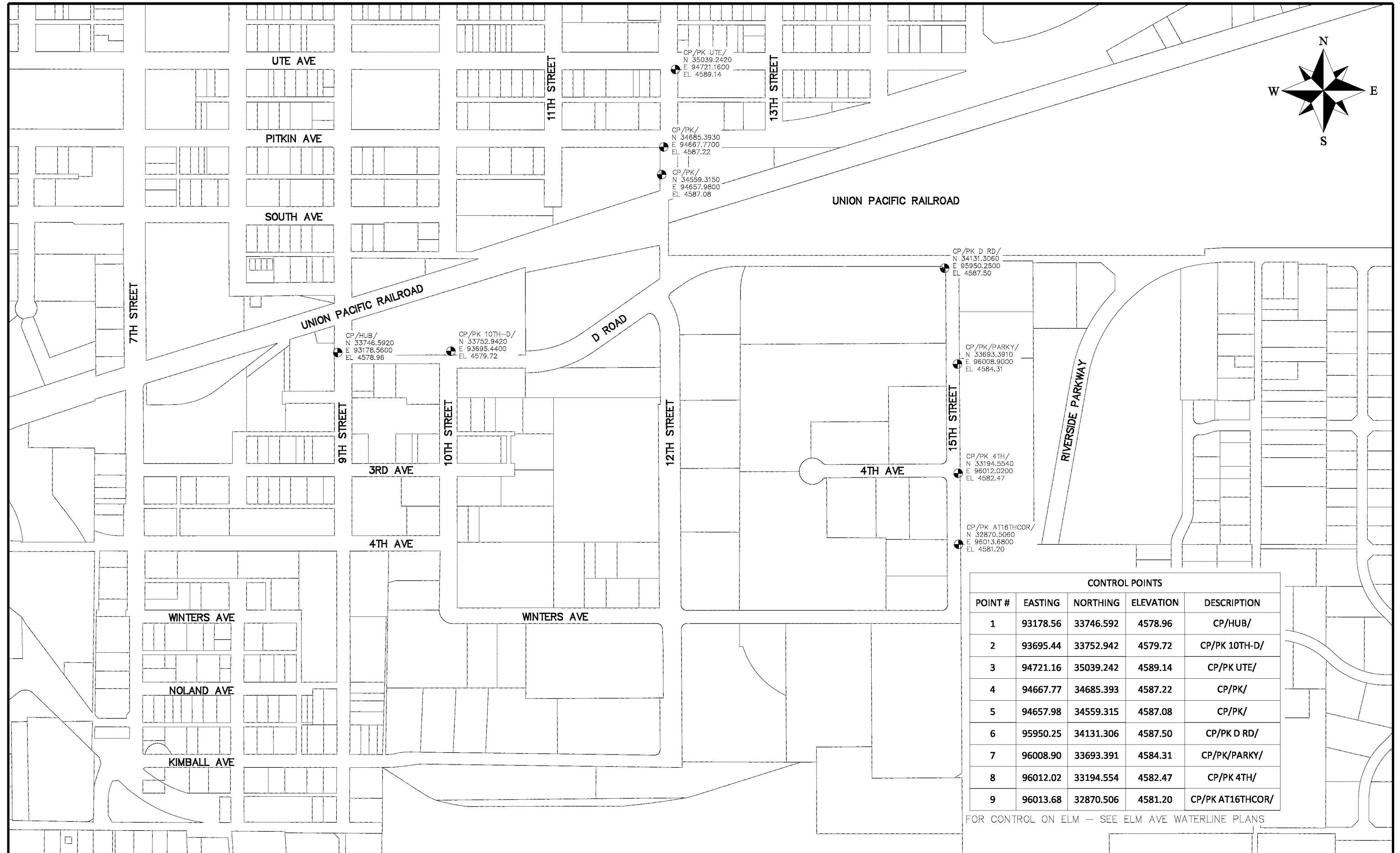
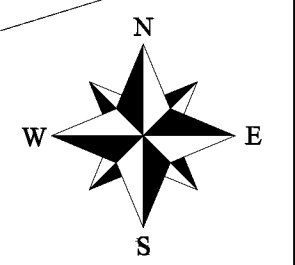
Item No.	CDOT, City Ref.	Description	Quantity	Units	Item No.	CDOT, City Ref.	Description	Quantity	Units	Item No.	CDOT, City Ref.	Description	Quantity	Units	Item No.	CDOT, City Ref.	Description	Quantity	Units
1	108.2	Water Main (6") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	1,907.	Lin. Ft.	28	108.3	Reducer (20" x 12") (MJ) (Epoxy Coated)	1.	Each	47	202	Remove Existing Fire Hydrant (Return Hydrant to City Shops)	4.	Each	66	304	Aggregate Base Course (Class 6) (15" thick)	1,238.	Sq. Yd.
					29	108.3	Cross Fitting (12" x 8") (MJ) (Epoxy Coated)	1.	Each	48	202	Removal of Existing Pipe (Size & type as shown on plans)	307.	Lin. Ft.	67	401	Hot Bituminous Pavement (Patching) (3" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 3" Lift Bottom Mat)	490.	Sq. Yd.
2	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	98.	Lin. Ft.	30	108.3	End Cap/Plug (6") (Restrained) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (To be used on Elm Ave. to abandon existing fire hydrant at Sta. 8+20)	1.	Each	49	202	Removal of Asphalt Mat (Full Depth)	1,328.	Sq. Yd.	68	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Top Mat) (T-Top)	2,018.	Sq. Yd.
3	108.2	Water Main (12") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	58.	Lin. Ft.	31	108.3	End Cap/Plug (18") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	1.	Each	50	202	Removal of Asphalt Mat (Planing) (2" Thick for T-Top Section)	704.	Sq. Yd.	69	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Lift Bottom Mat) (Elm Ave.)	838.	Sq. Yd.
4	108.2	Water Main (18") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,282.	Lin. Ft.	32	108.3	End Cap/Plug (20") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	2.	Each	51	202	Removal of Concrete (Includes, but not limited to, curb, gutter, sidewalk, driveway, slabs, V-pans, curb ramps, intersection corners, aprons, landscape borders, and concrete walls)	428.	Sq. Ft.	70	407	Emulsified Asphalt (Tack Coat)	335.	Gallon
5	108.2	Water Main (20") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,380.	Lin. Ft.	33	108.3	Fire Hydrant Assembly	5.	Each	52	202	Removal of Sod	2,547.	Sq. Ft.	71	608	Concrete Curb and Gutter (2' Wide) (Match in Kind) (City Std. Detail C-05)	54.	Lin. Ft.
6	108.2	Water Main (20") (Restrained C-900 PVC, DR-25) (Certa-Lok Restrained Joint, Coupled or Approved Equal) (Sta. 34+00 - 35+95)	195.	Lin. Ft.	34	108.3	8" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	53	203	Disposal of Radioactive Material (Dispose at City Shops, 333 West Ave.)	50.	Cu. Yd.	72	608	Concrete Curb, Gutter, & Sidewalk (6' Wide) (Match in Kind) (City Std. Detail C-02)	150.	Sq. Ft.
7	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed material unit weight = 133 lbs/ft <sup>3</sup> )	600.	Ton	35	108.3	20" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	54	206	Structure Backfill (Flow-Fill)	180.	Cu. Yd.	73	608	Concrete Drainage Pan (6' Wide x 8" Thick) (Match in Kind) (Includes #5 rebar tie-bars) (City Std. Detail C-12)	150.	Sq. Ft.
8	108.3	Gate Valve (6")	17.	Each	36	108.4	Water Service Line (3/4") (Type K Copper) (If Lead or Poly service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	180.	Lin. Ft.	55	208	Storm Drain Inlet Protection (Gravel Filter at Curb Inlet) (Includes Maintenance & Removal of Debris, & Removal of Inlet Protection)	7.	Each	74	608	Cap Top Half of Sewer Pipe in Concrete per City Std. Detail GU-04 (If necessary)	1.	Each
9	108.3	Gate Valve (8")	5.	Each	37	108.4	Water Service Line (1-1/2") (Type K Copper or HDPE 3408) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	150.	Lin. Ft.	56	208	Concrete Washout Facility	1.	Lump Sum	75	620	Portable Sanitary Facility	2.	Each
10	108.3	Gate Valve (12")	1.	Each	38	108.4	Tapping Saddle (6" x 3/4")	36.	Each	57	210	Reset Landscape Ground Cover (Match in Kind) (Contractor shall remove ground cover and underlying weed barrier as needed and stockpile materials. Contractor shall reset these materials and provide additional materials as needed)	560.	Sq. Ft.	76	625	Construction Surveying (Includes As-Built Drawings)	1.	Lump Sum
11	108.3	Butterfly Valve (18")	3.	Each	39	108.4	Tapping Saddle (20" x 3/4")	1.	Each	58	210	Reset Landscape Borders (Concrete Pavers) (Property 1510 N. 18th Street)	1.	Lump Sum	77	626	Mobilization	1.	Lump Sum
12	108.3	Butterfly Valve (20")	2.	Each	40	108.4	Tapping Saddle (20" x 1-1/2")	1.	Each	59	210	Reset Landscape Rock (Reddish Rock) (Property 1505 N. 20th Street) (Match in Kind)	20.	Sq. Ft.	78	627	Pavement Marking Paint (Water Based) (Double Yellow Lines) (12th St. between Ute Ave. and Pitkin Ave., and D Road)	72.	Lin. Ft.
13	108.3	Tee (6" x 6") MJ Swivel Tee (Epoxy Coated)	11.	Each	41	108.4	Corporation Stop (3/4")	37.	Each	60	210	Reset Sprinkler System (Desert Vista Park) (Complete in Place) (Various Pipe Sizes) (Contractor shall repair all sprinkler pipe breaks whether PVC or HDPE pipe of any size within the sodded area of Desert Vista Park) (City Parks Dept. can be contacted ahead of time to get an idea of sprinkler system within the park)	1.	Lump Sum	79	627	Pavement Marking Paint (Water Based) (Single Yellow Line) (Pitkin Ave.)	10.	Lin. Ft.
14	108.3	Tee (8" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	42	108.4	Corporation Stop (1-1/2")	1.	Each	61	210	Reset Fence (6' High Chain-Link w/ Barbed Wire Top) (12th St. and D Road intersection)	40.	Lin. Ft.	80	627	Pavement Marking Paint (Water Based) (Single White Line) (Pitkin Ave. & D Road)	40.	Lin. Ft.
15	108.3	Tee (12" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	43	108.4	Meter Setter and Meter Pit Installation (Install Only) (City Furnished Meter Pit) (Includes removal and disposal of existing meter pit)	6.	Each	62	210	Reset Fence (4' High Barbed Wire Fence) (Along Pitkin Ave. near Sta. 10+00)	20.	Lin. Ft.	81	627	Prefomed Thermoplastic Pavement Marking (Xwalk-Stop Line) (To be used at the Ute Ave. and 12th Street intersection)	62.	Sq. Ft.
16	108.3	Tee (18" x 18") (MJ) (Epoxy Coated)	1.	Each	44	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (18" Thick Min.) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 138 lbs/ft <sup>3</sup> )	75.	Ton	63	210	Reset Sign (Along Pitkin Ave. near Sta. 10+00)	3.	Each	82	629	Survey Monumentation (Complete in Place)	2.	Each
17	108.3	Tee (20" x 8") MJ Swivel Tee (Epoxy Coated)	3.	Each	45	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	13.	Each	64	212	Re-Sod Areas (Desert Vista Park and various other locations) (Includes 6" Thick Imported Topsoil placed prior to sod placement)	2,547.	Sq. Ft.	83	630	Traffic Control Plan	1.	Lump Sum
18	108.3	Tee (20" x 18") (MJ) (Epoxy Coated)	2.	Each	46	202	Abandon Existing Water Valve (Close valve, remove top half of existing valve box, fill cavity to finished subgrade with flow-fill material)	9.	Each	65	304	Aggregate Base Course (Class 6) (4" thick) (Shoulder Base)	491.	Sq. Yd.	84	630	Traffic Control (Complete in Place)	1.	Lump Sum
19	108.3	Elbow (6" x 45 deg) (MJ) (Epoxy Coated)	28.	Each											85	630	Flagging	1,240.	Hour
20	108.3	Elbow (8" x 11.25 deg) (MJ) (Epoxy Coated)	1.	Each											MCR		Minor Contract Revisions	---	---
21	108.3	Elbow (8" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each															
22	108.3	Elbow (8" x 45 deg) (MJ) (Epoxy Coated)	8.	Each															
23	108.3	Elbow (12" x 45 deg) (MJ) (Epoxy Coated)	2.	Each															
24	108.3	Elbow (18" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each															
25	108.3	Elbow (18" x 45 deg) (MJ) (Epoxy Coated)	11.	Each															
26	108.3	Elbow (20" x 11.25 deg) (MJ) (Epoxy Coated)	4.	Each															
27	108.3	Elbow (20" x 45 deg) (MJ) (Epoxy Coated)	7.	Each															

REVISION $\Delta$ REV 1	DESCRIPTION	DATE	DRAWN BY DJM	DATE 2020	SCALE
REVISION $\Delta$ REV 2			DESIGNED BY LC	DATE 2020	
REVISION $\Delta$ REV 3			CHECKED BY LC	DATE 2020	
REVISION $\Delta$ REV 4			APPROVED BY LC	DATE 2020	



PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
SUMMARY OF QUANTITIES



CONTROL POINTS				
POINT #	EASTING	NORTHING	ELEVATION	DESCRIPTION
1	93178.56	33746.592	4578.96	CP/HUB/
2	93695.44	33752.942	4579.72	CP/PK 10TH-D/
3	94721.16	35039.242	4589.14	CP/PK UTE/
4	94667.77	34685.393	4587.22	CP/PK/
5	94657.98	34559.315	4587.08	CP/PK/
6	95950.25	34131.306	4587.50	CP/PK D RD/
7	96008.90	33693.391	4584.31	CP/PK/PARKY/
8	96012.02	33194.554	4582.47	CP/PK 4TH/
9	96013.68	32870.506	4581.20	CP/PK AT16THCOR/

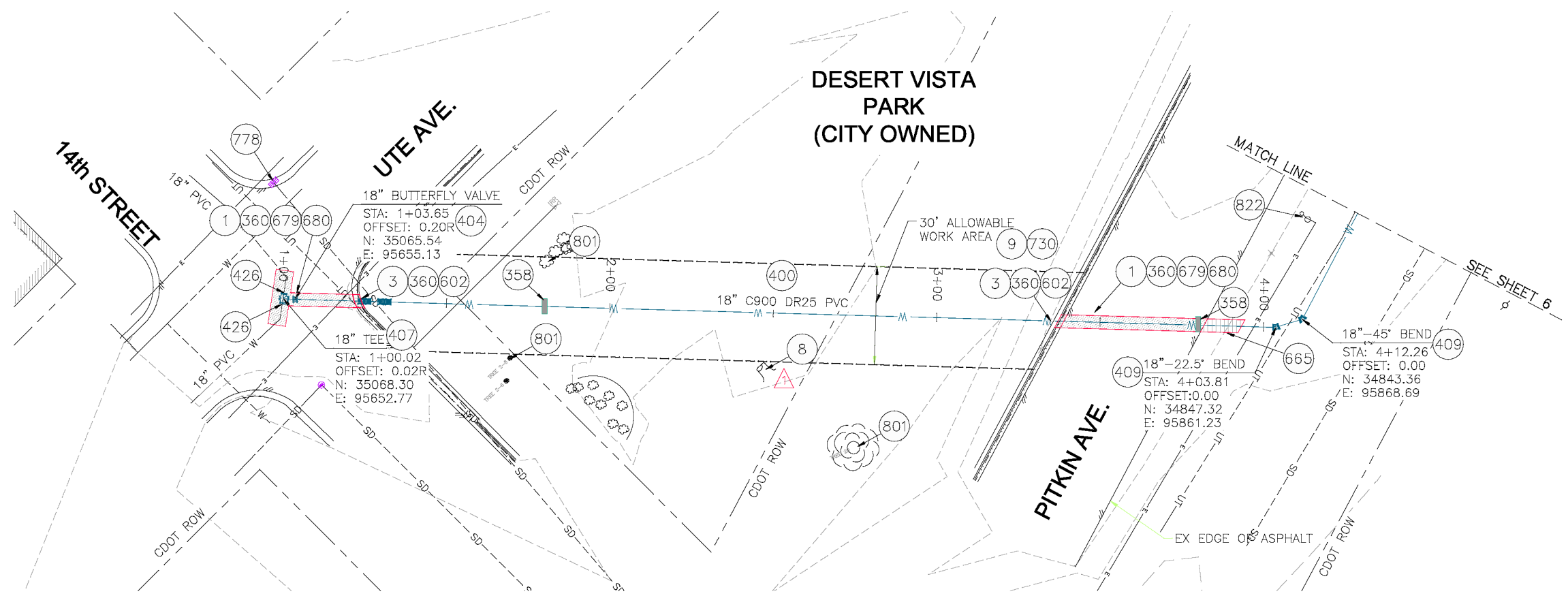
FOR CONTROL ON ELM - SEE ELM AVE WATERLINE PLANS

REVISION $\Delta$ REV 1	DESCRIPTION	DATE	DRAWN BY DJM	DATE 4/2020	SCALE 0 100 200 400 HORIZONTAL
REVISION $\Delta$ REV 2			DESIGNED BY LC	DATE 4/2020	
REVISION $\Delta$ REV 3			CHECKED BY LC	DATE 4/2020	
REVISION $\Delta$ REV 4			APPROVED BY LC	DATE 4/2020	

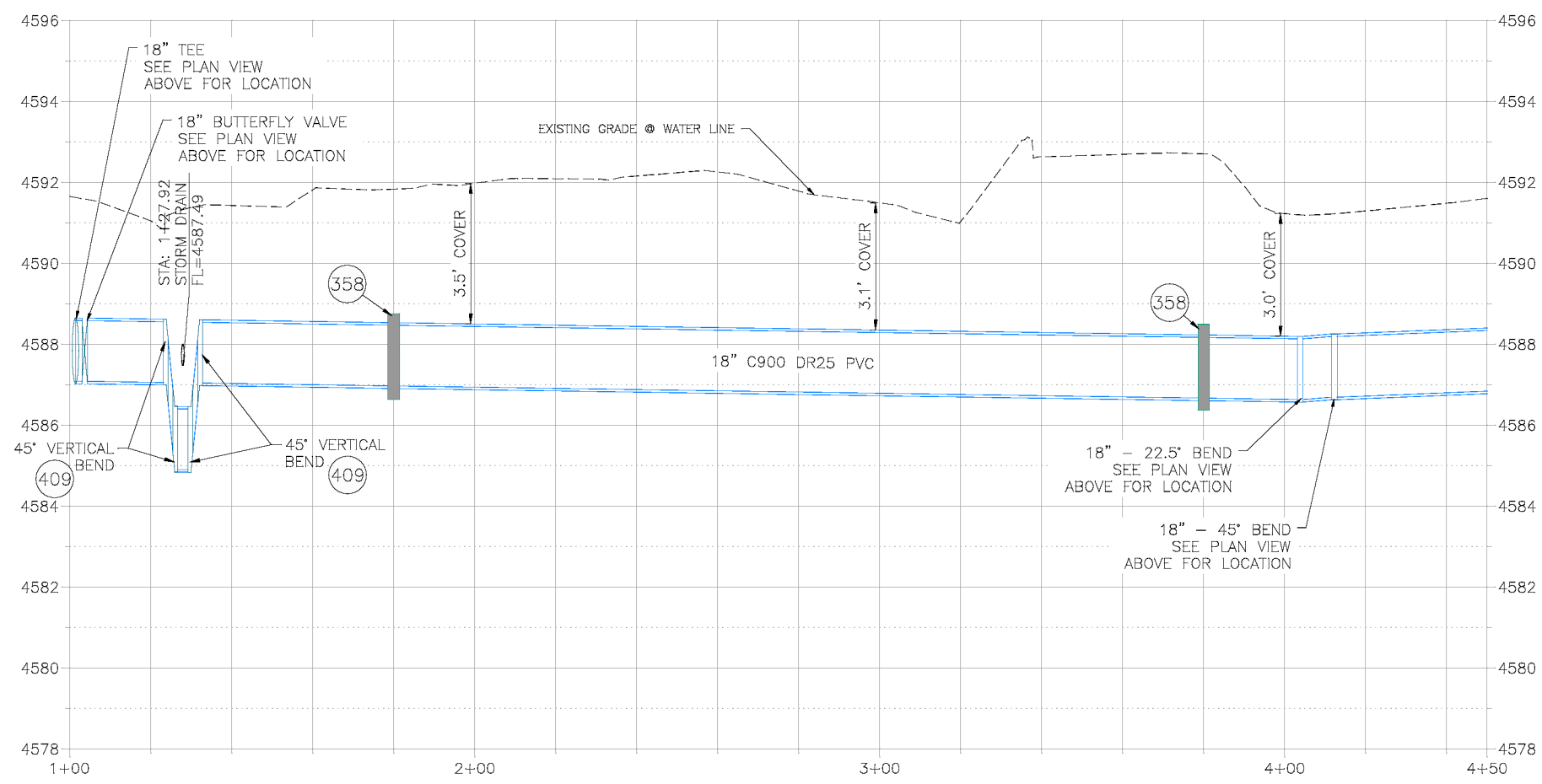


**PUBLIC WORKS  
ENGINEERING DIVISION**  
PROJECT NO. 301-F0005

**2020 WATERLINE REPLACEMENT PROJECT  
PROJECT CONTROL MAP**



- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 8 202 - REMOVAL OF TREE STUMP (18" DIA.)
- 9 202 - REMOVAL OF SOD.
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 360 206 - STRUCTURE BACKFILL (FLOW-FILL) (WATERLINE TRENCH SHALL BE BACKFILLED WITHIN CDOT SPEC FLOW-FILL WITHIN CDOT RIGHT-OF-WAY)
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 404 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 - TEE (SIZE AS SHOWN) (EPOXY COATED)
- 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 602 608.06 - CONCRETE CURB AND GUTTER (MATCH IN KIND) (2' WIDE)
- 665 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK) (SHOULDER BASE)
- 679 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 3" LIFT BOTTOM MAT)
- 680 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- 730 212 - RESOD AREA AS SHOWN (INCLUDES 6" OF TOPSOIL)
- 778 208 - STORM DRAIN INLET PROTECTION (GRAVEL FILTER AT CURB INLET) (AS SHOWN AND PER DETAIL)
- 801 PROTECT TREE
- 822 PROTECT LIGHT POLE



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.

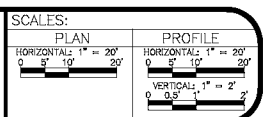


Know what's below.  
Call before you dig.

**CALL 2 BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR  
EXCAVATE FOR THE MARKING OF  
UNDERGROUND MEMBER UTILITIES**

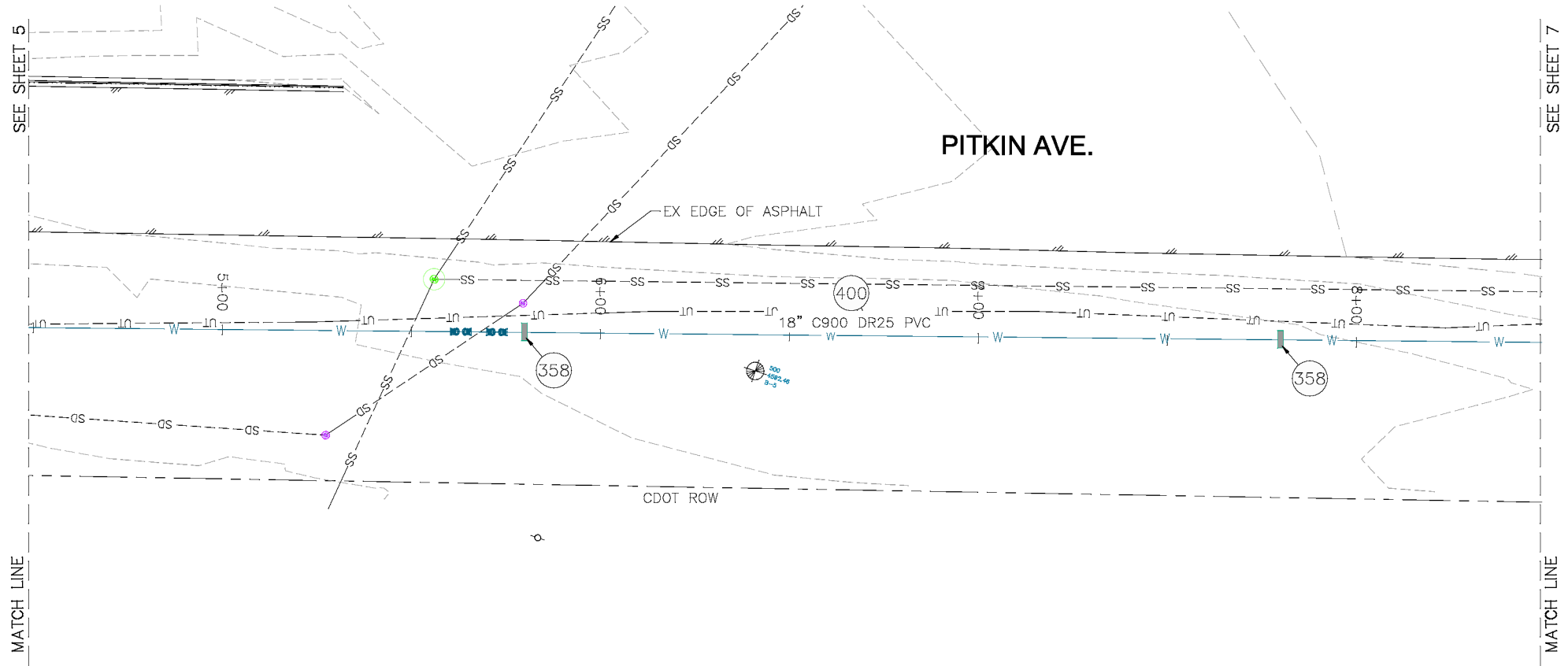
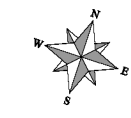
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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION 1	ADDENDUM #1 - UPDATED SHEET 5	05/20/20	DJM	4/2020
REVISION 2			LC	4/2020
REVISION 3			LC	4/2020
REVISION 4			LC	4/2020

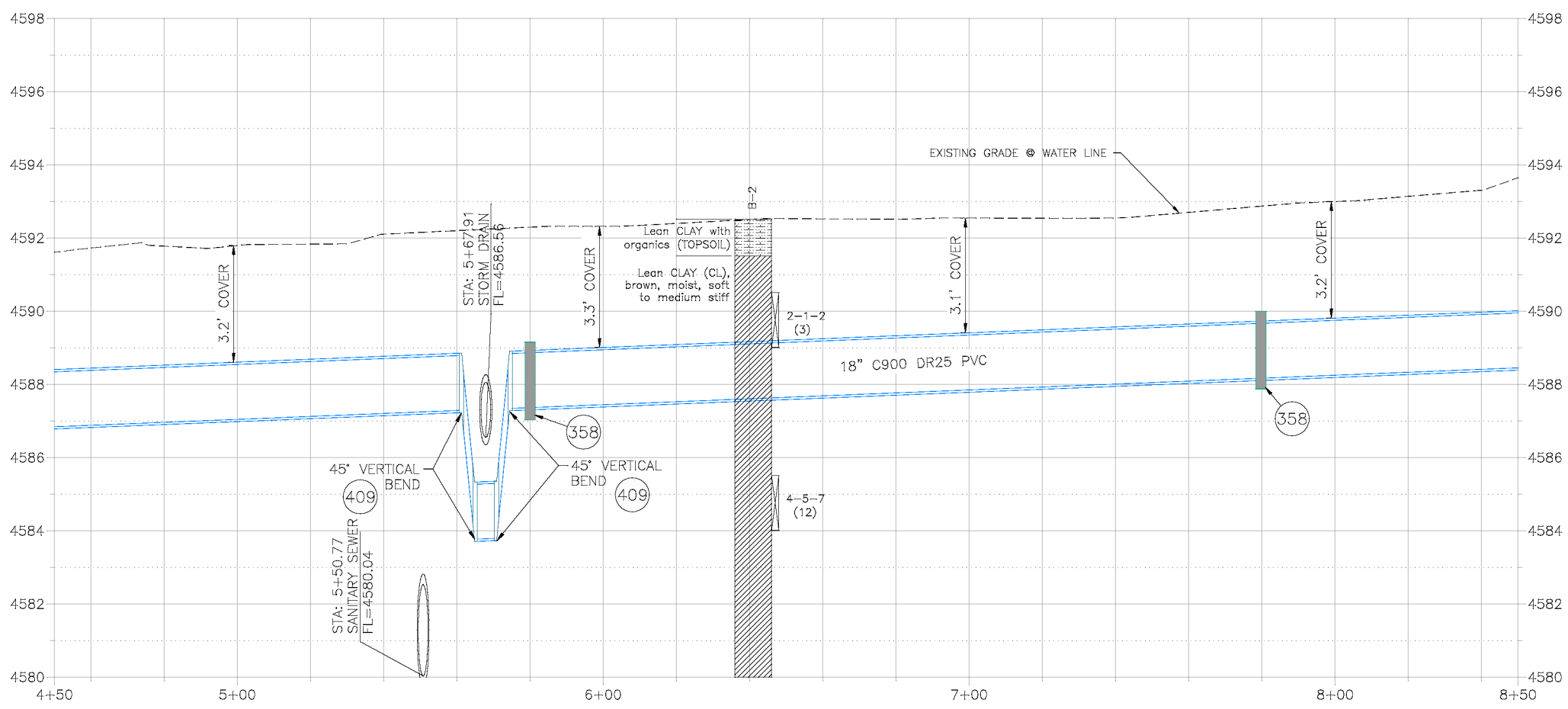


**PUBLIC WORKS  
ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - PITKIN AVE  
PLAN AND PROFILE 1+00 TO 4+50**



- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 409 102.8/108.3 - ELBOW (SIZE AN ANGLE AS SHOWN) (EPOXY COATED)



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



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**CALL 2 BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR  
EXCAVATE FOR THE MARKING OF  
UNDERGROUND MEMBER UTILITIES**

Per Date: 5/20/2020 8:55 AM Printed By: Dan Maloney Date Created: 02/22/2020 N:\LANDPROJ\2020 WATERLINE REPLACEMENT\0006\WATERLINE\DESIGN\ROAD\9118-08 C:\01\X\PITKIN.DWG

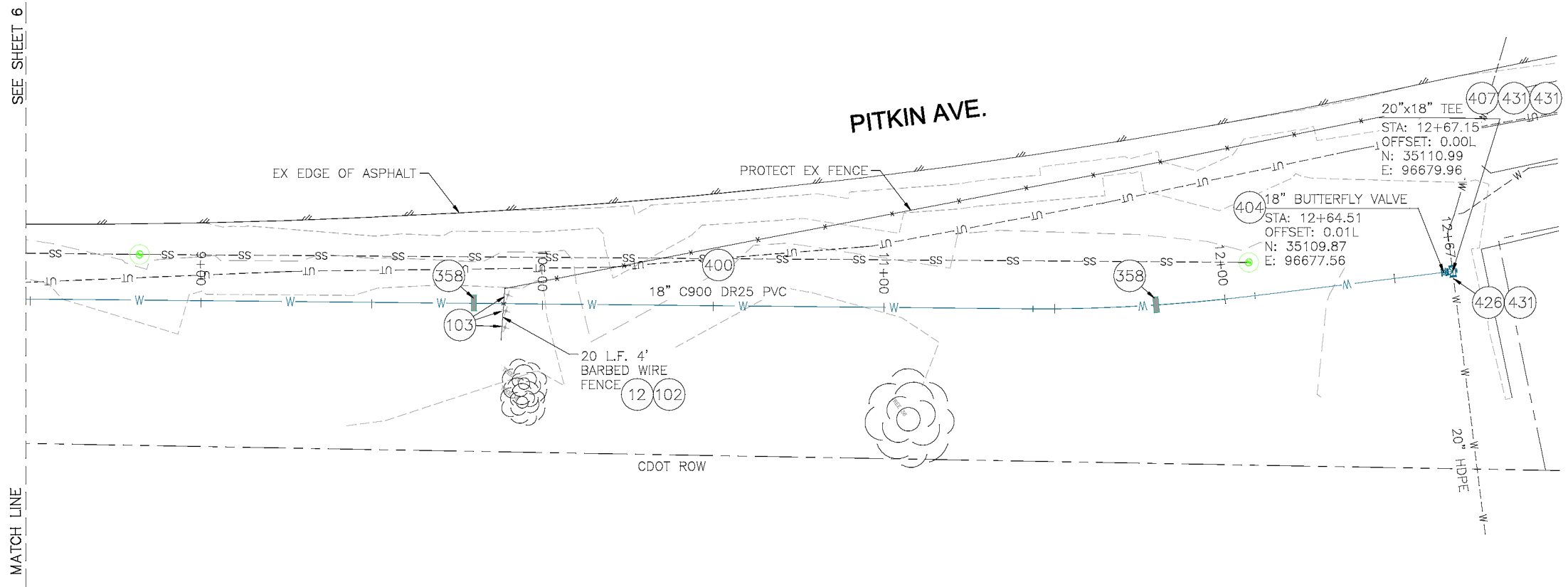
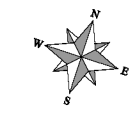
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			DJM	4/2020
2			LC	4/2020
3			LC	4/2020
4			LC	4/2020

SCALES:	
PLAN	1" = 20'
PROFILE	1" = 2'

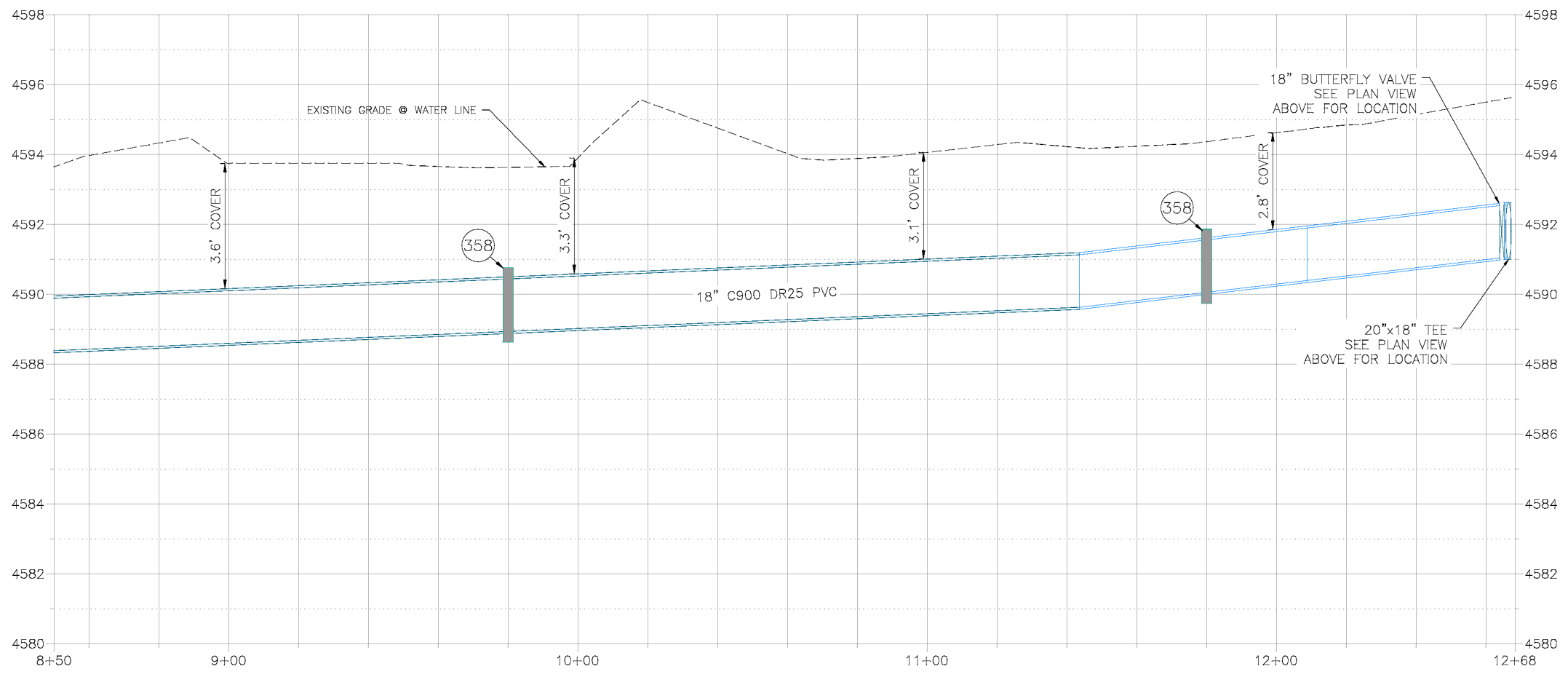


**PUBLIC WORKS  
ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - PITKIN AVE  
PLAN AND PROFILE 4+50 TO 8+50**



- 12 202 - REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 102 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOW ON PLAN)
- 103 210 - RESET SIGN
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- 404 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 - TEE (SIZE AS SHOWN) (EPOXY COATED)
- 426 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 431 102.8/108.3 - WELDED FLANGE OR HY-MAX SOLID SLEEVE RESTRAINED COUPLING WITH STIFFENER FOR CONNECTION TO HDPE



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



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UNDERGROUND MEMBER UTILITIES**

Per Date: 5/20/2020 8:55 AM Printed By: Dan Maloney  
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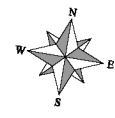
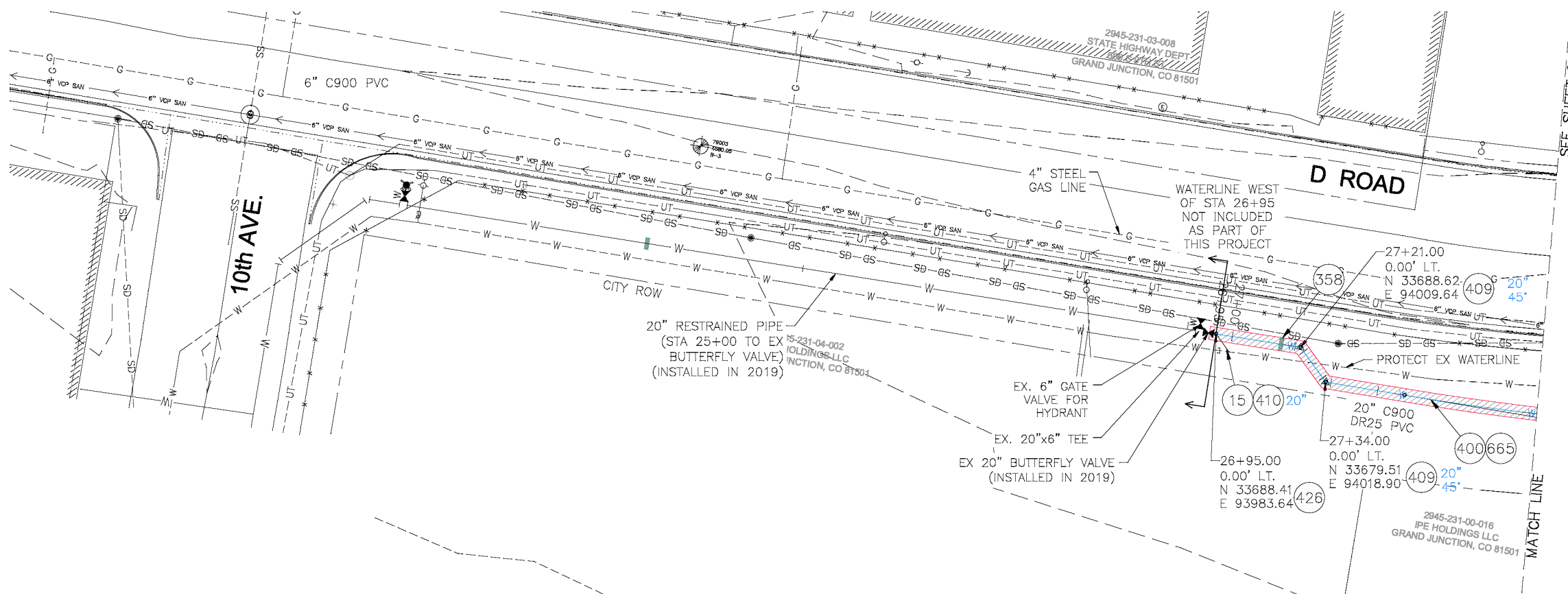
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			DJM	4/2020
REVISION			LC	4/2020
REVISION			LC	4/2020
REVISION			LC	4/2020

SCALES:	
PLAN	HORIZONTAL: 1" = 20'
PROFILE	HORIZONTAL: 1" = 20'
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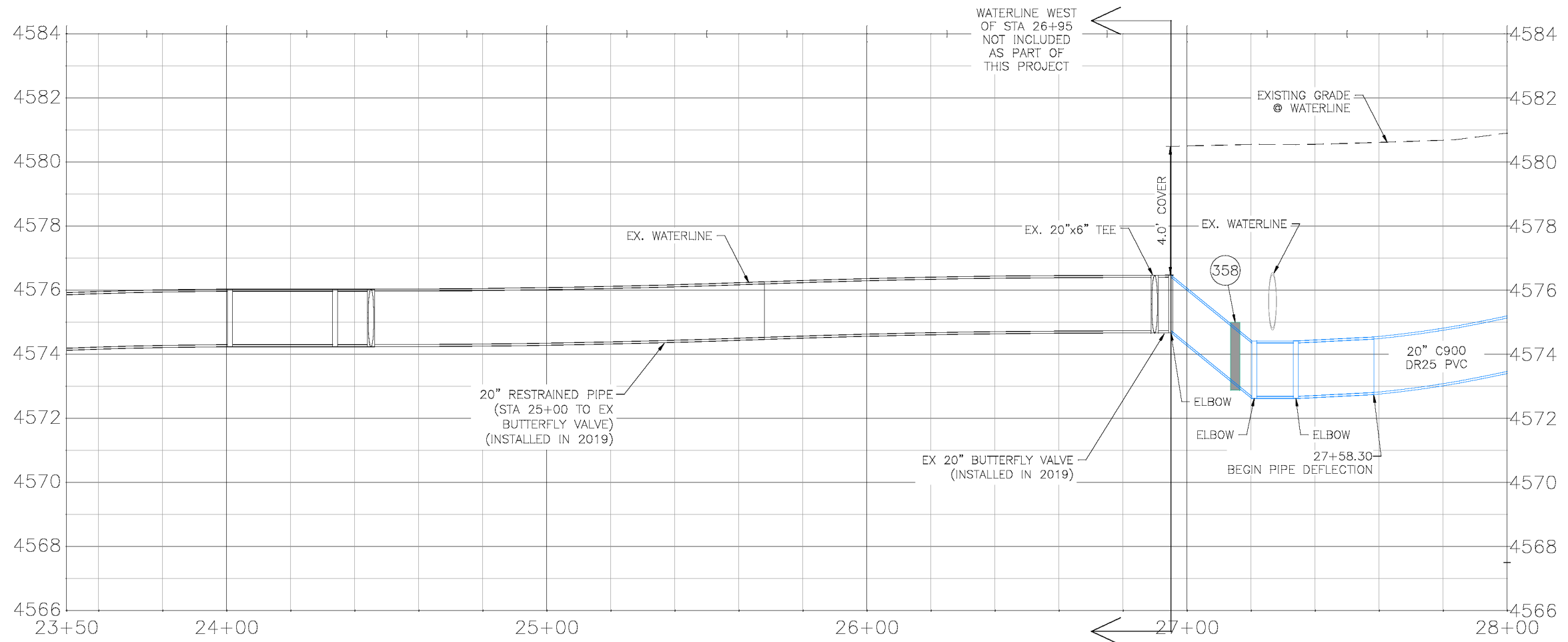


PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - PITKIN AVE  
PLAN AND PROFILE 8+50 TO 12+68



- (15) 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- (358) 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- (400) 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- (409) 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) EPOXY COATED
- (410) 102.8/108.3 - END CAP / PLUG (SIZE AS SHOWN) (INCLUDES THRUST BLOCK)
- (426) RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- (665) 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK) (WIDTH OF TRENCH SURFACE TREATMENT)



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7g AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			DJM	4/2020
2			LC	4/2020
3			LC	4/2020
4			LC	4/2020

SCALES:	
PLAN	HORIZONTAL: 1" = 20'
PROFILE	HORIZONTAL: 1" = 20'
	VERTICAL: 1" = 2'

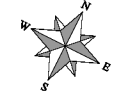


**PUBLIC WORKS  
ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - D ROAD  
PLAN AND PROFILE 26+95 TO 28+00**

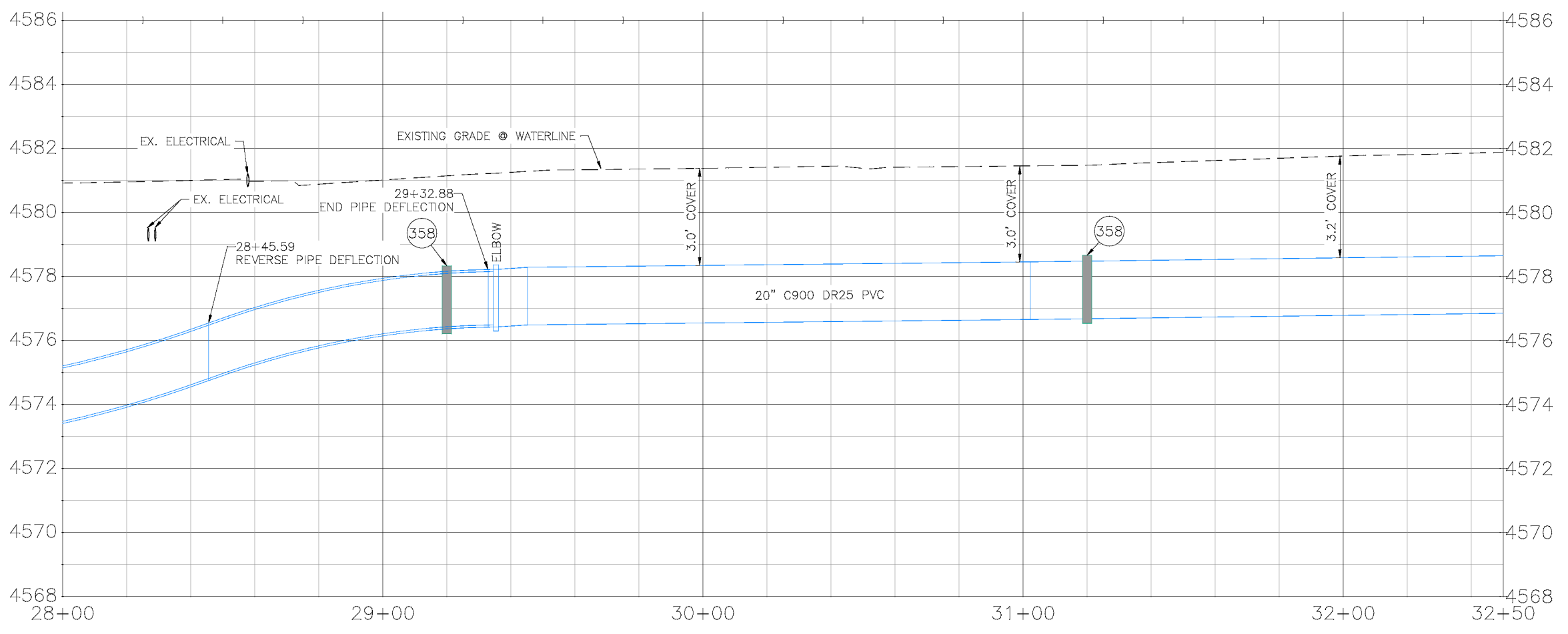
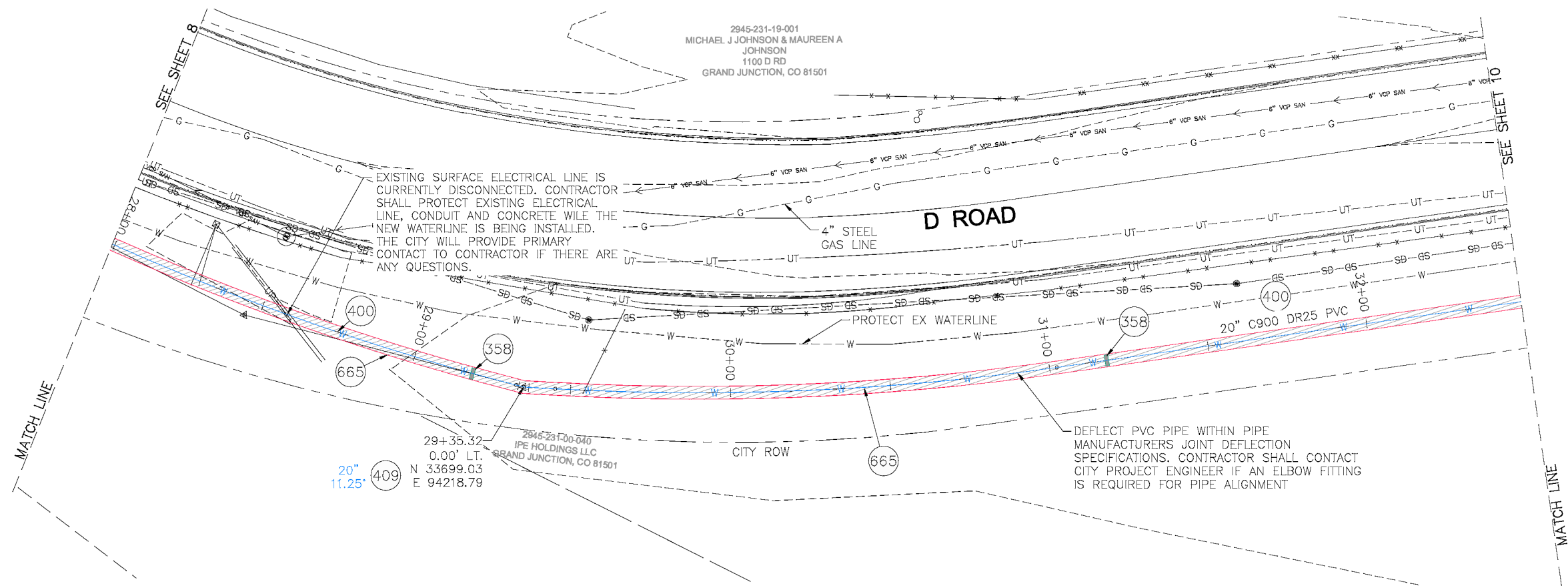


2945-231-19-001  
 MICHAEL J JOHNSON & MAUREEN A JOHNSON  
 1100 D RD  
 GRAND JUNCTION, CO 81501



PROJECT NO. 301-F000532

- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL
- 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 665 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK) (WIDTH OF TRENCH SURFACE TREATMENT)



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7g AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.



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Per Date: 5/20/2020 8:57 AM Plotted By: Dan Maloney  
 Date Created: 5/20/2020 N:\LANDPROJ\2020 WATERLINE REPLACEMENT\000\960\CAD\000\DESIGN\LD ROAD\91-18-028 C-201X 2020\18.DWG

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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2			LC	4/2020
3			LC	4/2020
4			LC	4/2020

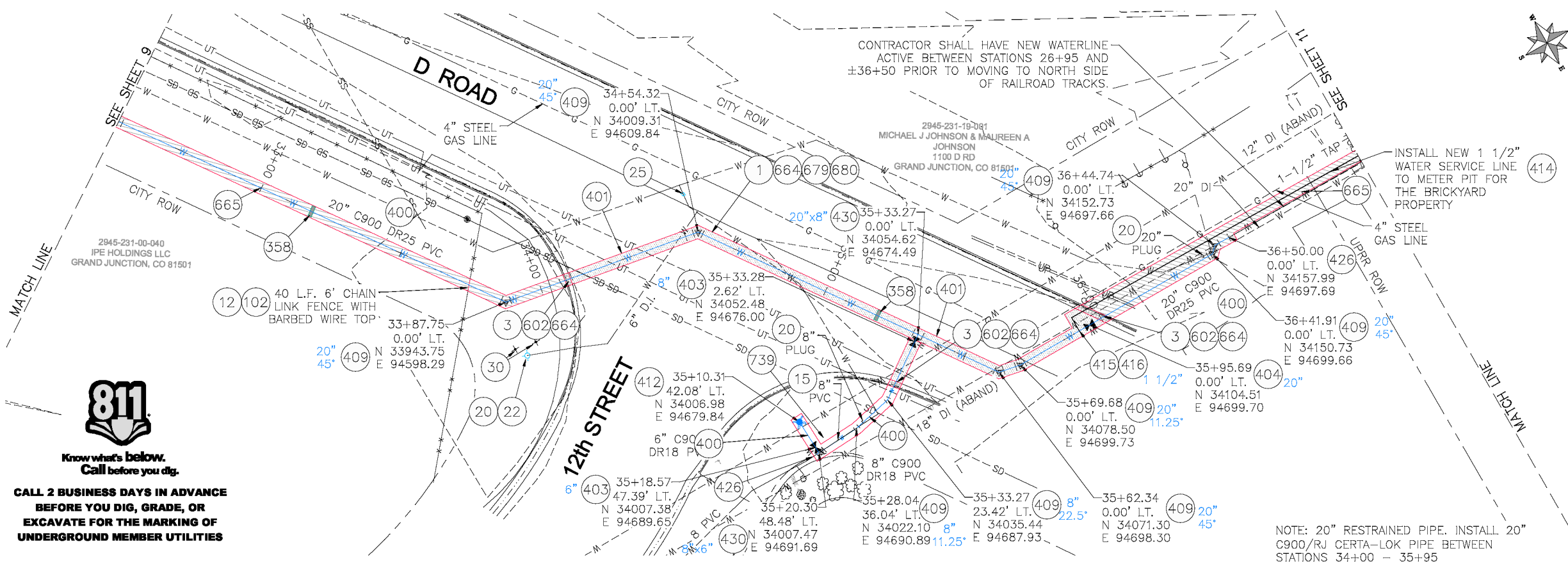
SCALES:

PLAN HORIZONTAL: 1" = 20' 0 5' 10' 20'	PROFILE HORIZONTAL: 1" = 20' 0 5' 10' 20' VERTICAL: 1" = 2' 0 0.5' 1' 2'
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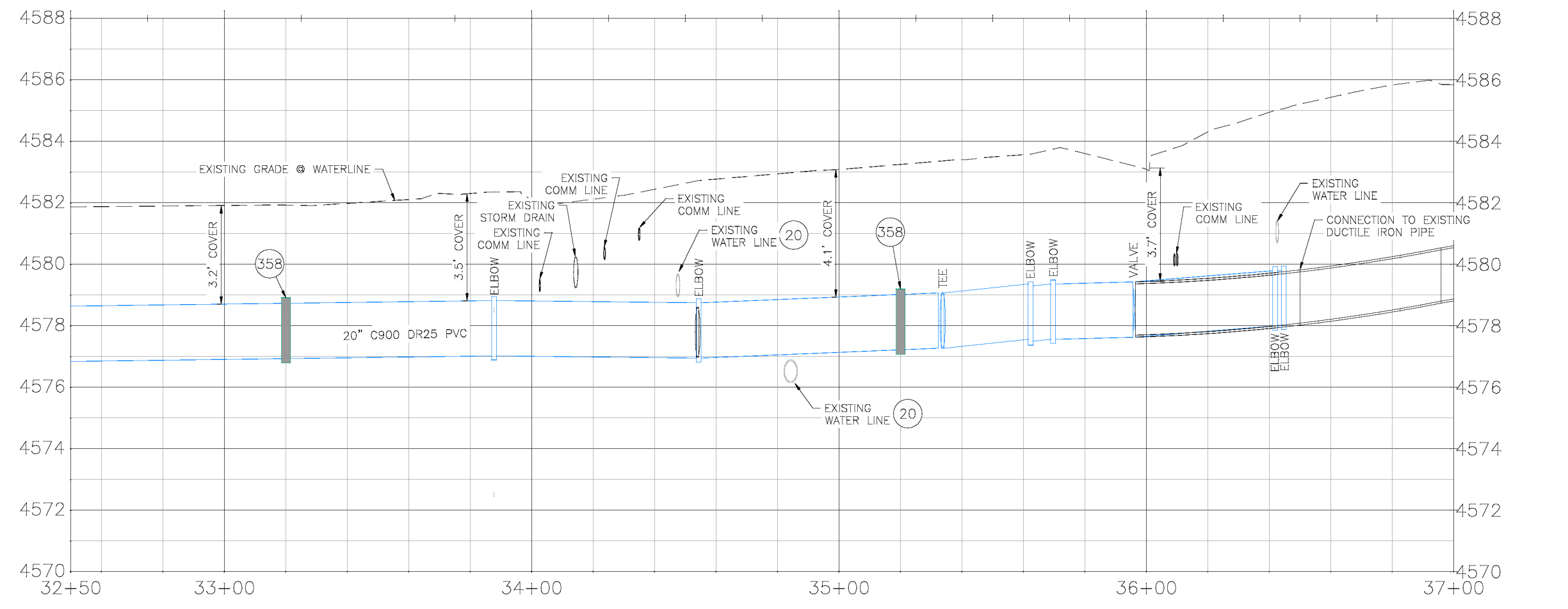


**PUBLIC WORKS  
 ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
 WATERLINE - D ROAD  
 PLAN AND PROFILE 28+00 TO 32+50**



- PROJECT NO. 301-F000532
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
  - 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS
  - 12 202 - REMOVAL OF FENCE AS SHOWN. (HEIGHT AND MATERIAL AS SHOWN ON PLAN)
  - 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
  - 20 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
  - 22 202 - REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS.
  - 25 202 - ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW-FILL MATERIAL.
  - 30 202 - REMOVE BOLLARD
  - 102 210 - RESET FENCE. (HEIGHT AND MATERIAL AS SHOWN ON PLAN)
  - 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
  - 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
  - 401 102.7/108.2 - WATER MAIN PIPE (20" C-900/RJ CERTA-LOK PIPE) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
  - 403 102.8b/108.3 - GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
  - 404 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
  - 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
  - 412 102.8a/108.3 - FIRE HYDRANT ASSEMBLY
  - 414 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER OR HDPE 3408 PIPE) (SIZE AS SHOWN ON PLAN) IF LEAD OF POLY SERVICE LINE IS ENCOUNTERED, WATER SERVICE SHALL BE REPLACED TO METER.
  - 415 102.8k/108.4 - TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
  - 416 102.8j/108.4 - CORPORATION STOP (SIZE AS SHOWN ON PLAN)
  - 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE.
  - 430 102.8/108.3 - MJ x SWIVEL TEE (SIZE AS SHOWN) (EPOXY COATED)
  - 602 608.06 - CONCRETE CURB AND GUTTER (MATCH IN KIND) (2' WIDE)
  - 664 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
  - 665 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK) (WIDTH OF TRENCH SURFACE TREATMENT)
  - 679 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 3" LIFT BOTTOM MAT)
  - 680 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
  - 739 610 - REMOVE AND PROTECT GROUND COVER MATERIAL (INCLUDES RESETTING ROCK GROUND COVER UPON COMPLETION OF WATER LINE)
- NOTE: 20" RESTRAINED PIPE. INSTALL 20" C900/RJ CERTA-LOK PIPE BETWEEN STATIONS 34+00 - 35+95



- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.

Per Date: 5/20/2020 8:58 AM Printed By: Dan Massey Date Created: 5/20/2020 N:\LANDPROJ\2020 WATERLINE REPLACEMENT\0005\60CAD\000\DESIGN\RD\9118-028 C:\01X\2020\0418.DWG

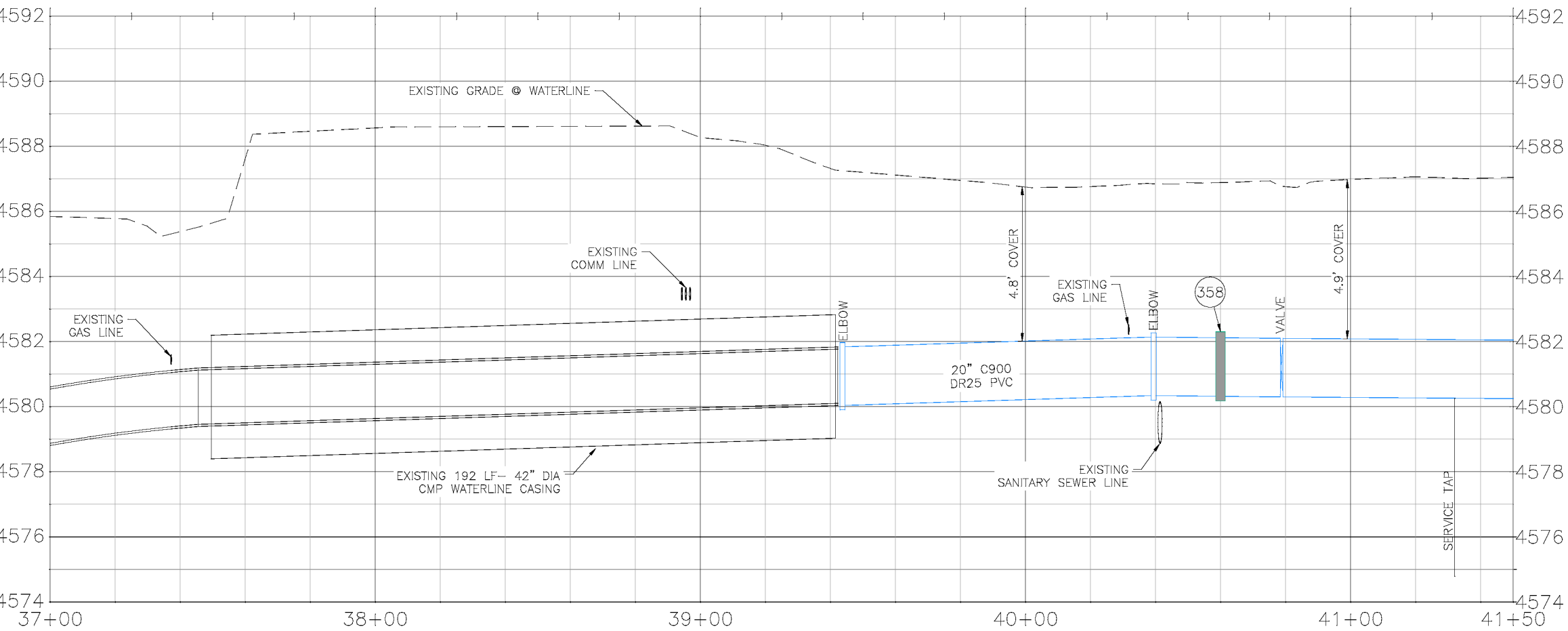
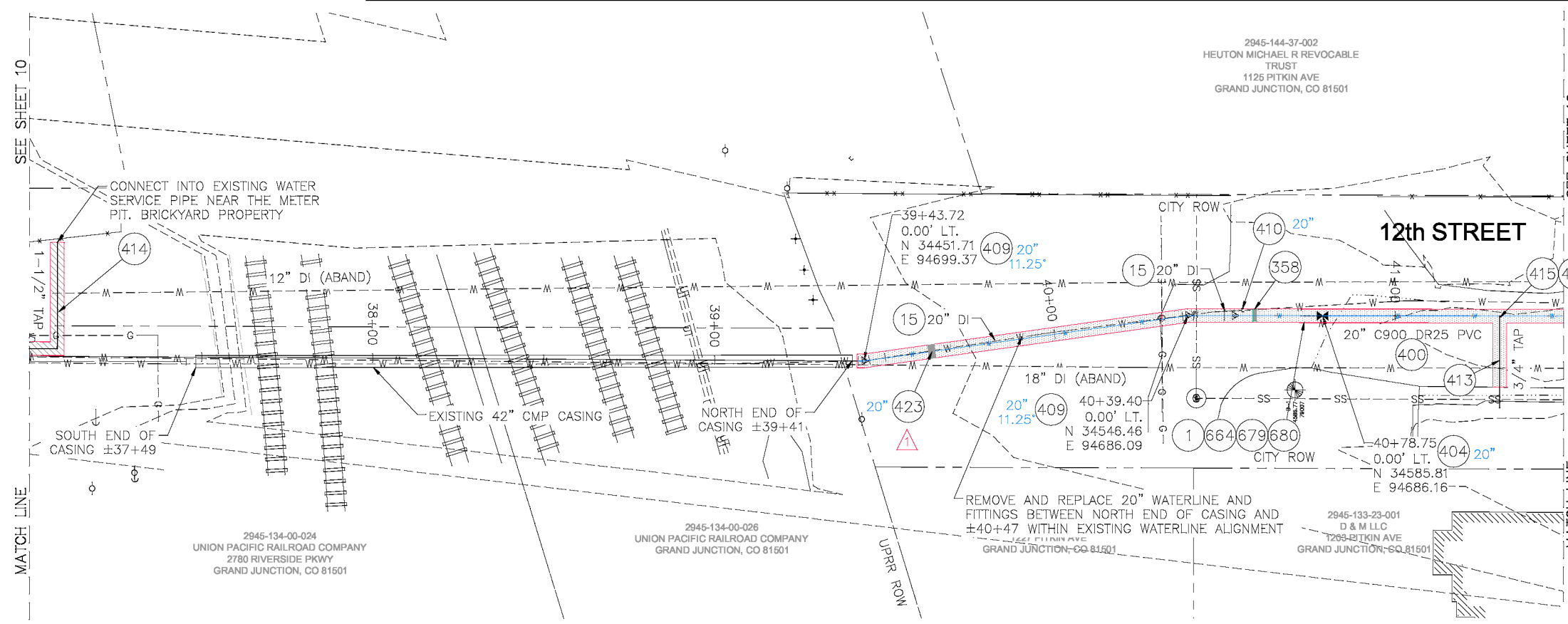
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
			DJM	4/2020
			LC	4/2020
			LC	4/2020
			LC	4/2020

SCALES:	
PLAN	HORIZONTAL: 1" = 20' VERTICAL: 1" = 2'
PROFILE	HORIZONTAL: 1" = 20' VERTICAL: 1" = 2'



PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - D ROAD  
PLAN AND PROFILE 32+50 TO 37+00



- PROJECT NO. 301-F000532
- ① 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
  - ⑮ 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
  - ⑳ 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
  - ③⑤⑧ 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
  - ④00 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
  - ④04 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
  - ④09 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
  - ④10 102.8/108.3 - END CAP / PLUG (SIZE AS SHOWN) (INCLUDES THRUST BLOCK)
  - ④13 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN) IF LEAD OR POLY SERVICE LINE IS ENCOUNTERED, WATER SERVICE SHALL BE REPLACED TO METER.
  - ④14 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER OR HDPE 3408 PIPE) (SIZE AS SHOWN ON PLAN) IF LEAD OF POLY SERVICE LINE IS ENCOUNTERED, WATER SERVICE SHALL BE REPLACED TO METER.
  - ④15 102.8k/108.4 - TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
  - ④16 102.8j/108.4 - CORPORATION STOP (SIZE AS SHOWN ON PLAN)
  - ④23 102.8/108.3 - 20" MJ SOLID SLEEVE (EPOXY COATED) (INCLUDES MJ FITTINGS THAT SHALL BE MEGALUG FITTINGS OR APPROVED EQUAL) (INSTALL SLEEVE ABOUT 20 FT NORTH OF THE 11.25' ELBOW)
  - ④26 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE.
  - ⑥64 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
  - ⑥79 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 3" LIFT BOTTOM MAT)
  - ⑥80 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- NOTES:
- ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.
  - 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.
  - CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.
  - CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.

Per Date: 5/20/2020 8:59 AM Plotted By: Dan Maloney  
 Date Created: 5/20/2020 N:\LANDPROC\2020 WATERLINE REPLACEMENT\0005\90CAD\000\DESIGN\ROAD\911-18-028\_C-201X\_2020\418.DWG

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION Δ	ADDENDUM #1 - REVISED SHEET 11	05/20/20	DJM	4/2020
REVISION Δ			LC	4/2020
REVISION Δ			LC	4/2020
REVISION Δ			LC	4/2020

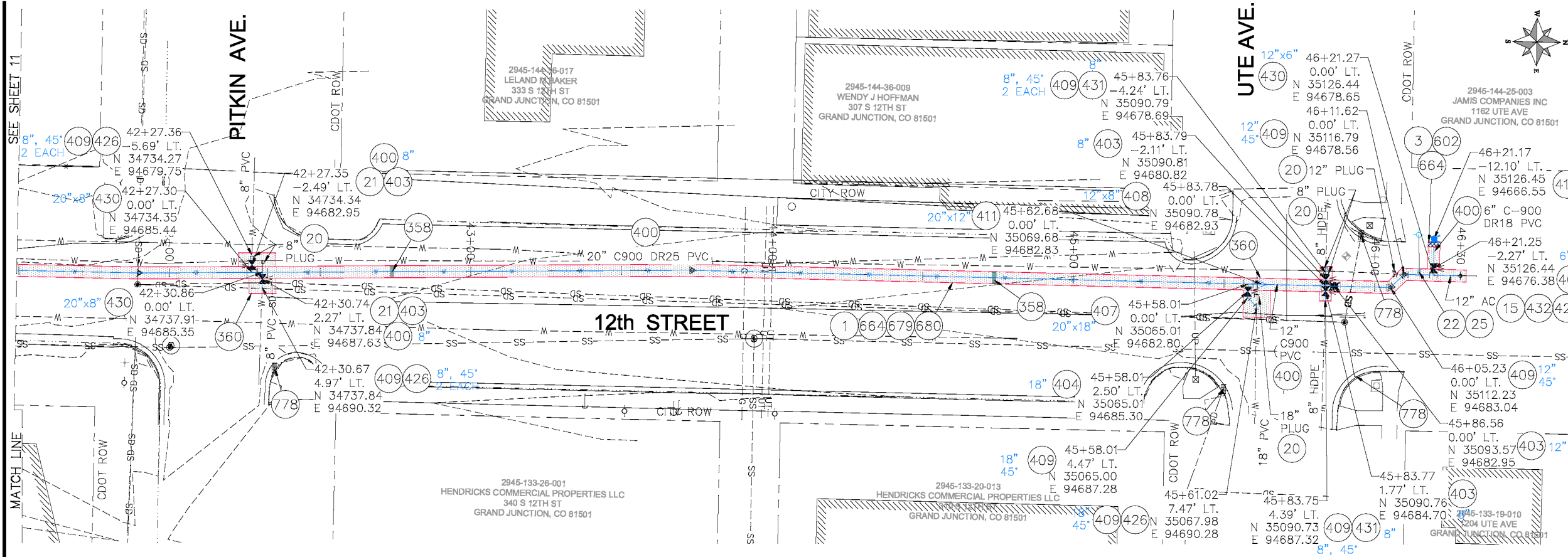
SCALES:

PLAN	1" = 20'
PROFILE	1" = 20'



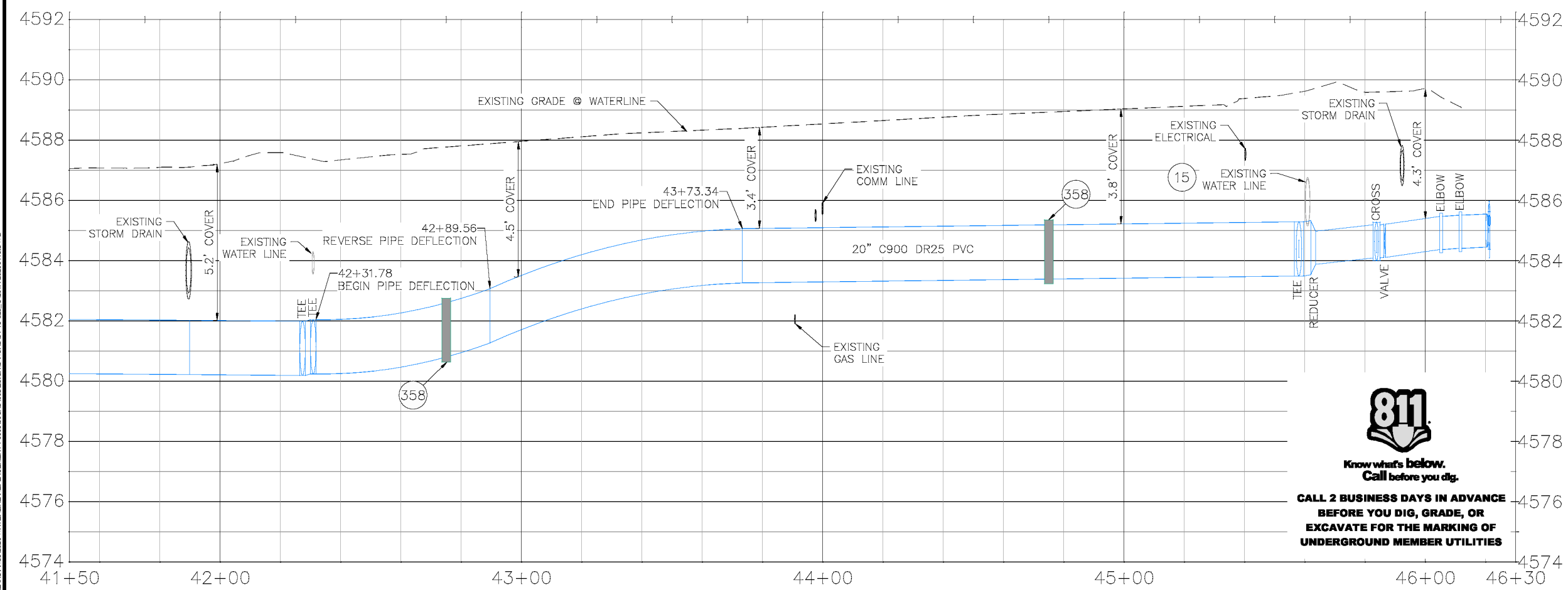
PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - D ROAD  
PLAN AND PROFILE 37+00 TO 41+50



PROJECT NO. 301-F000532

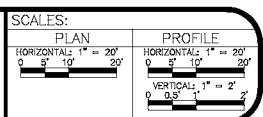
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
- 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- 20 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE
- 21 202 - REMOVE EXISTING WATER VALVE
- 22 202 - REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS
- 25 202 - ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- 358 103 - CLAY CUT-OFF WALL (INCIDENTAL TO WATERLINE INSTALLATION PAY ITEM)
- 360 206 - STRUCTURE BACKFILL (FLOW-FILL) (WATERLINE TRENCH SHALL BE BACKFILLED WITHIN CDOT SPEC FLOW-FILL WITHIN CDOT RIGHT-OF-WAY).
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 403 102.8b/108.3 - GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
- 404 102.8e/108.3 - BUTTERFLY VALVE (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 - TEE (SIZE AS SHOWN) (EPOXY COATED)
- 408 102.8/108.3 - CROSS (SIZE AS SHOWN) (EPOXY COATED)
- 409 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 411 102.8/108.3 - REDUCER (SIZE AS SHOWN) (EPOXY COATED)
- 412 102.8a/108.3 - FIRE HYDRANT ASSEMBLY
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 430 102.8/108.3 - MJ x SWIVEL TEE (SIZE AS SHOWN) (EPOXY COATED)
- 431 102.8/108.3 - WELDED FLANGE OR HY-MAX SOLID SLEEVE RESTRAINED COUPLING WITH STIFFENER FOR CONNECTION TO HDPE
- 432 102.8/108.3 - CONNECT TO EXISTING AC PIPE USING FULL 20'-FT STICK OF PVC PIPE
- 602 608.06 - CONCRETE CURB AND GUTTER (MATCH IN KIND) (2' WIDE)
- 664 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- 679 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (3" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 3" LIFT BOTTOM MAT)
- 680 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL CU-03)
- 778 208 - STORM DRAIN INLET PROTECTION (GRAVEL FILTER AT CURB INLET) (AS SHOWN AND PER DETAIL)



**811**  
Know what's below.  
Call before you dig.  
**CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES**

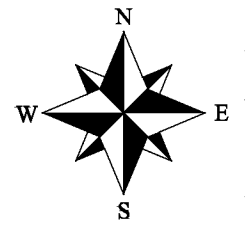
NOTES:  
 • ALL WATERLINE FITTINGS SHALL BE EPOXY COATED PER CITY STANDARD SPECIFICATION 102.7c AND WRAPPED WITH 8 MIL POLYETHYLENE AND TO INCLUDE THRUST BLOCK PER CITY STD DETAILS W-07 & W-08.  
 • 36" BURY DEPTH UNLESS OTHERWISE NOTED IN THE PROFILE.  
 • CONTRACTOR TO REFERENCE EBAA IRON RESTRAINT LENGTH CALCULATOR FOR DETERMINING PIPE RESTRAINT LENGTH.  
 • CONCRETE THRUSTBLOCKS SHALL BE INSTALL AT ELBOW AND TEE FITTINGS PER CITY STD. DETAIL W-07 AND W-08. THRUSTBLOCKS ARE INCIDENTAL TO THE PROJECT AND WILL NOT BE PAID FOR SEPARATELY.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			DJM	4/2020
2			LC	4/2020
3			LC	4/2020
4			LC	4/2020



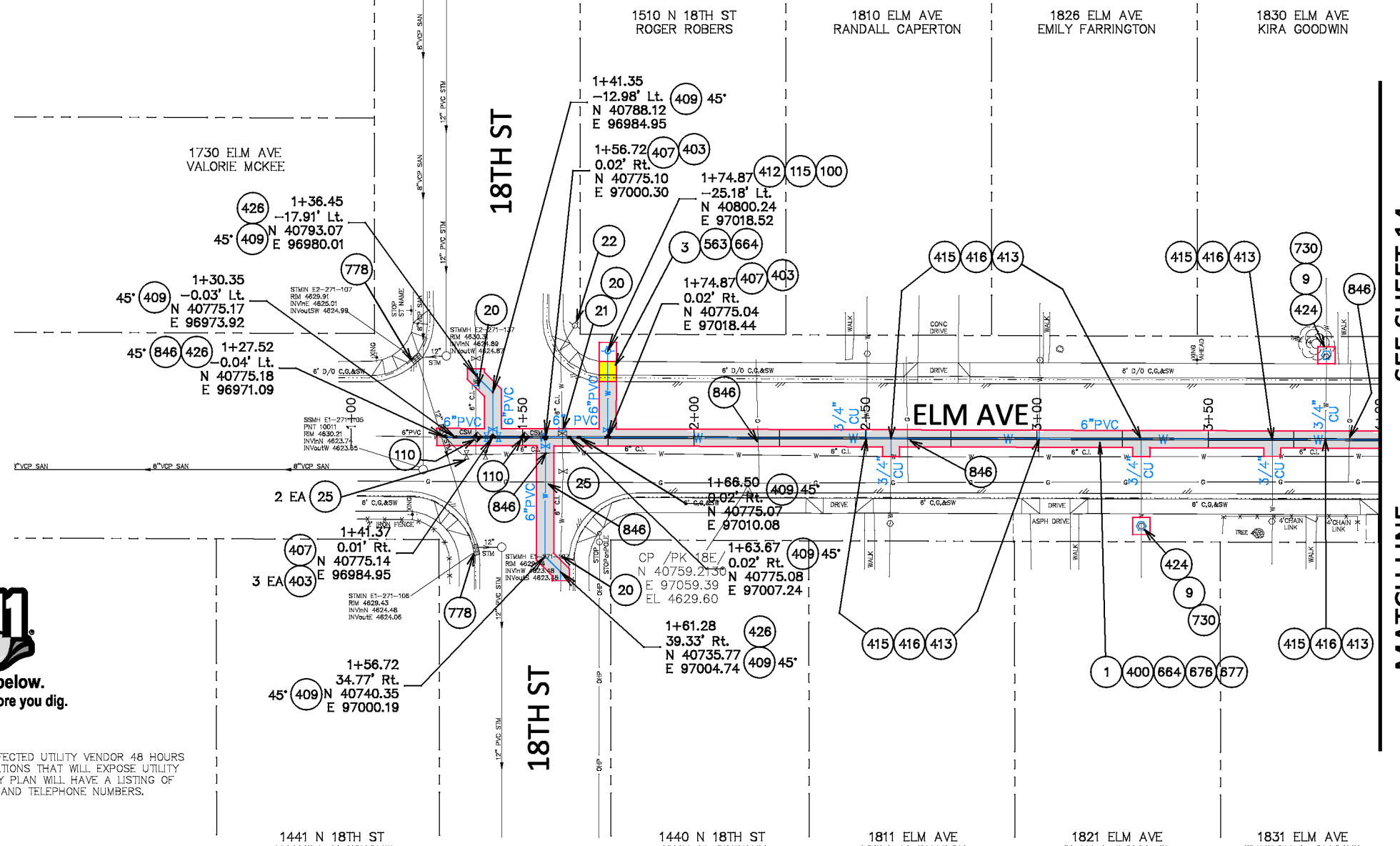
PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - D ROAD  
PLAN AND PROFILE 41+50 TO 46+30

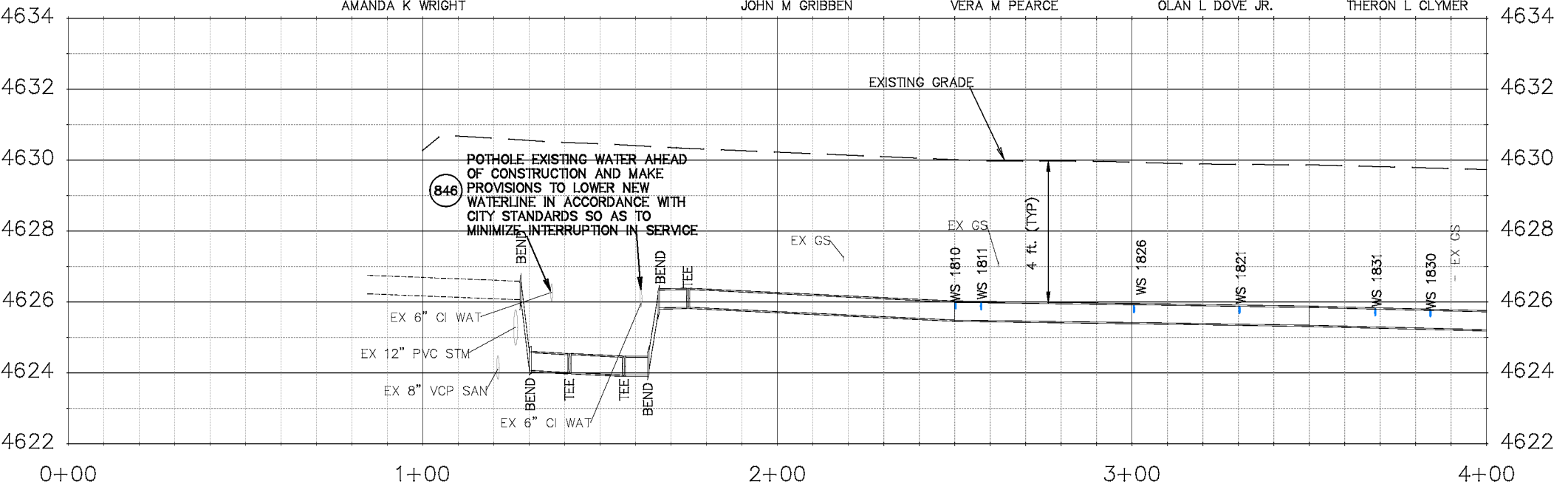


**CONSTRUCTION NOTES**

- ① 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- ③ 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY YELLOW SHADING) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- ⑨ 202 - REMOVAL OF SOD
- ⑳ 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- ㉑ 202 - REMOVE EXISTING WATER VALVE.
- ㉒ 202 - REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS.
- ㉕ 202 - ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- ①①① 210 - RESET LANDSCAPE GROUND COVER. CONTRACTOR SHALL REMOVE GROUND COVER AND ANY UNDERLYING WEED BARRIER AS NEEDED AND STOCKPILE MATERIALS. CONTRACTOR SHALL RESET THESE MATERIALS AND PROVIDE ADDITIONAL MATERIALS AS NEEDED TO RESTORE LANDSCAPING.
- ①①① 629 - REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.
- ①①⑤ 210 - RESET LANDSCAPE BORDERS (CONCRETE PAVERS)
- ④①① 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- ④①③ 102.8b/108.3 - GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
- ④①⑦ 102.8/108.3 - TEE (SIZE AS SHOWN) (EPOXY COATED)
- ④①⑨ 102.8/108.3 - ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- ④①② 102.8a/108.3 - FIRE HYDRANT ASSEMBLY
- ④①③ 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- ④①⑤ 102.8k/108.4 - TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- ④①⑥ 102.8j/108.4 - CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- ④②④ 102.8/108.4 - REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- ④②⑥ RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- ⑤⑥③ 608.06 - MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (6' WIDE)
- ⑥⑥④ 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- ⑥⑦⑥ 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
- ⑥⑦⑦ 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- ⑦③① 212 - RESOD AREA AS SHOWN (INCLUDES 6" OF TOPSOIL)
- ⑦⑦⑧ 208 - STORM DRAIN INLET PROTECTION (GRAVEL FILTER AT CURB INLET) (AS SHOWN AND PER DETAIL)
- ⑧④⑥ POT HOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.

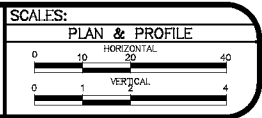


NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.



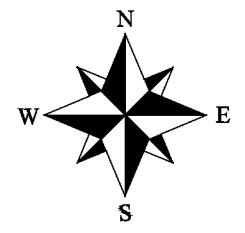
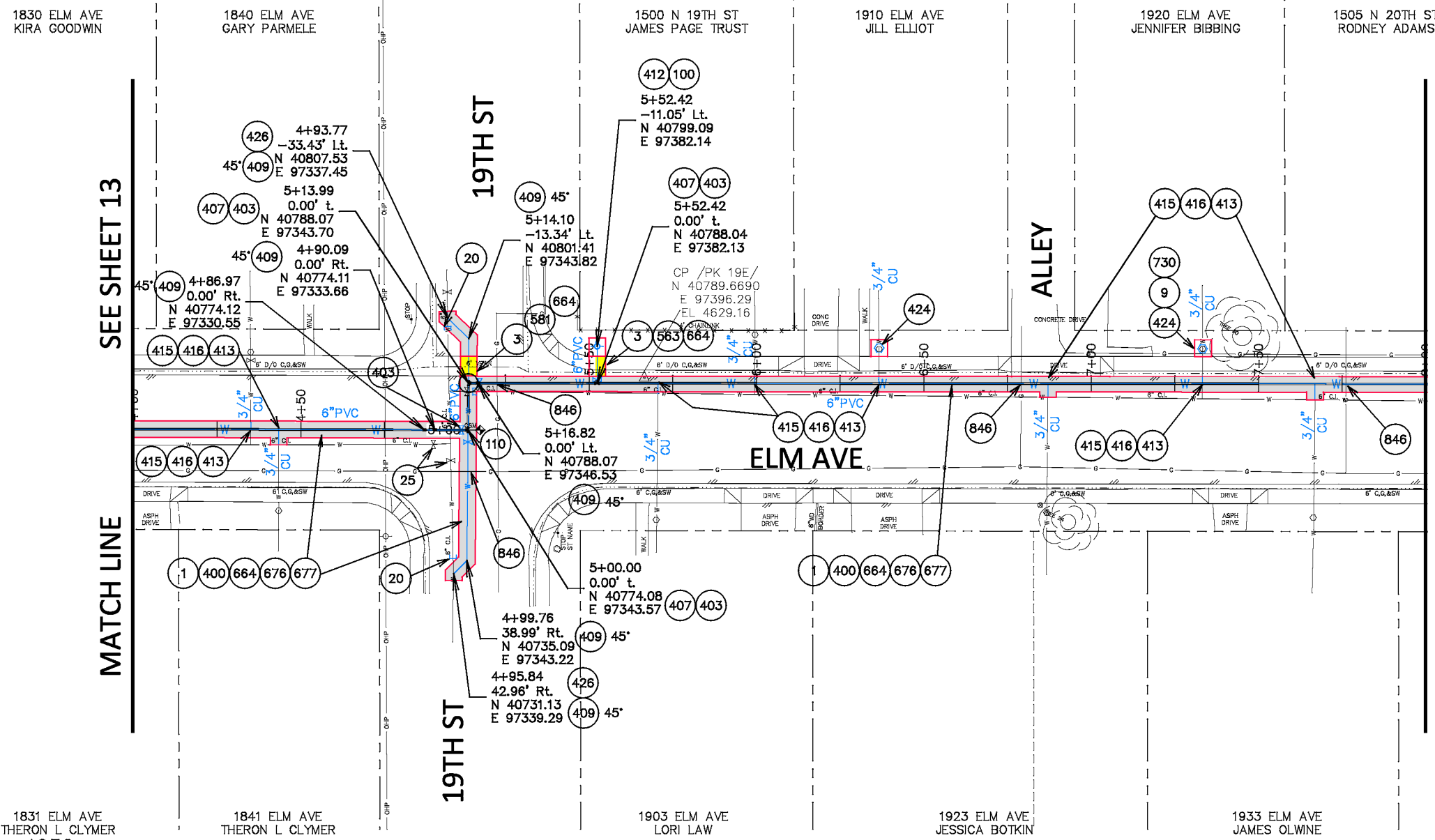
REVISION	DESCRIPTION	DATE
REV 1		
REV 2		
REV 3		
REV 4		

DRAWN BY JCS DATE 04/2020  
 DESIGNED BY JCS DATE 04/2020  
 CHECKED BY ALC DATE 04/2020  
 APPROVED BY JCP DATE 04/2020



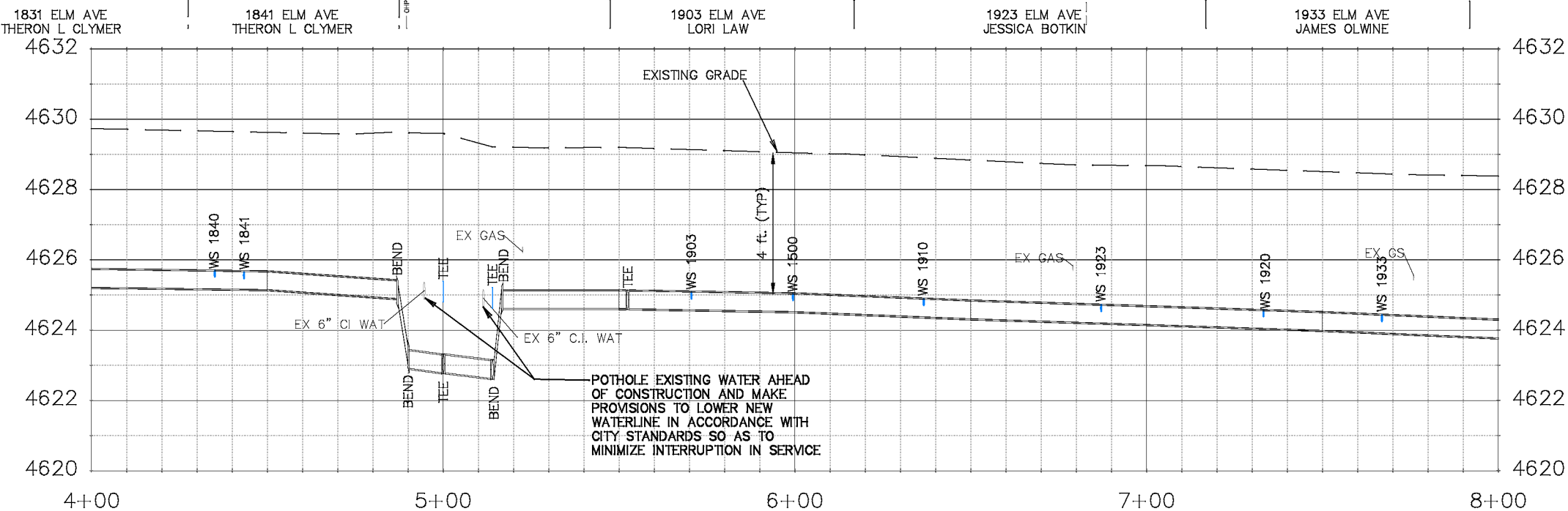
PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - ELM AVE  
PLAN AND PROFILE 0+00 TO 4+00



**CONSTRUCTION NOTES**

- 1 202 -- REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- 3 202 -- REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY YELLOW SHADING) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
- 9 202 -- REMOVAL OF SOD
- 20 202 -- ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- 25 202 -- ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- 100 210 -- RESET LANDSCAPE GROUND COVER. CONTRACTOR SHALL REMOVE GROUND COVER AND ANY UNDERLYING WEED BARRIER AS NEEDED AND STOCKPILE MATERIALS. CONTRACTOR SHALL RESET THESE MATERIALS AND PROVIDE ADDITIONAL MATERIALS AS NEEDED TO RESTORE LANDSCAPING.
- 110 629 -- REFERENCE AND RESET SURVEY MONUMENT. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR'S SURVEYOR MUST SUBMIT FIELD NOTES DETAILING THE PERMANENT REFERENCES PLACED FOR EACH MONUMENT IN DANGER OF LOSS DUE TO CONSTRUCTION.
- 400 102.7/108.2 -- WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 403 102.8b/108.3 -- GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
- 407 102.8/108.3 -- TEE (SIZE AS SHOWN) (EPOXY COATED)
- 409 102.8/108.3 -- ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
- 412 102.8a/108.3 -- FIRE HYDRANT ASSEMBLY
- 413 102.7c/108.4 -- WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- 415 102.8k/108.4 -- TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- 416 102.8j/108.4 -- CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- 424 102.8/108.4 -- REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE.
- 563 608.06 -- MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (6' WIDE)
- 581 608.06 -- CONCRETE DRAINAGE PAN (6' WIDE)
- 664 304 -- AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- 676 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
- 677 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- 730 212 -- RESOD AREA AS SHOWN (INCLUDES 6" OF TOPSOIL)
- 846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.



**Know what's below.  
Call before you dig.**

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

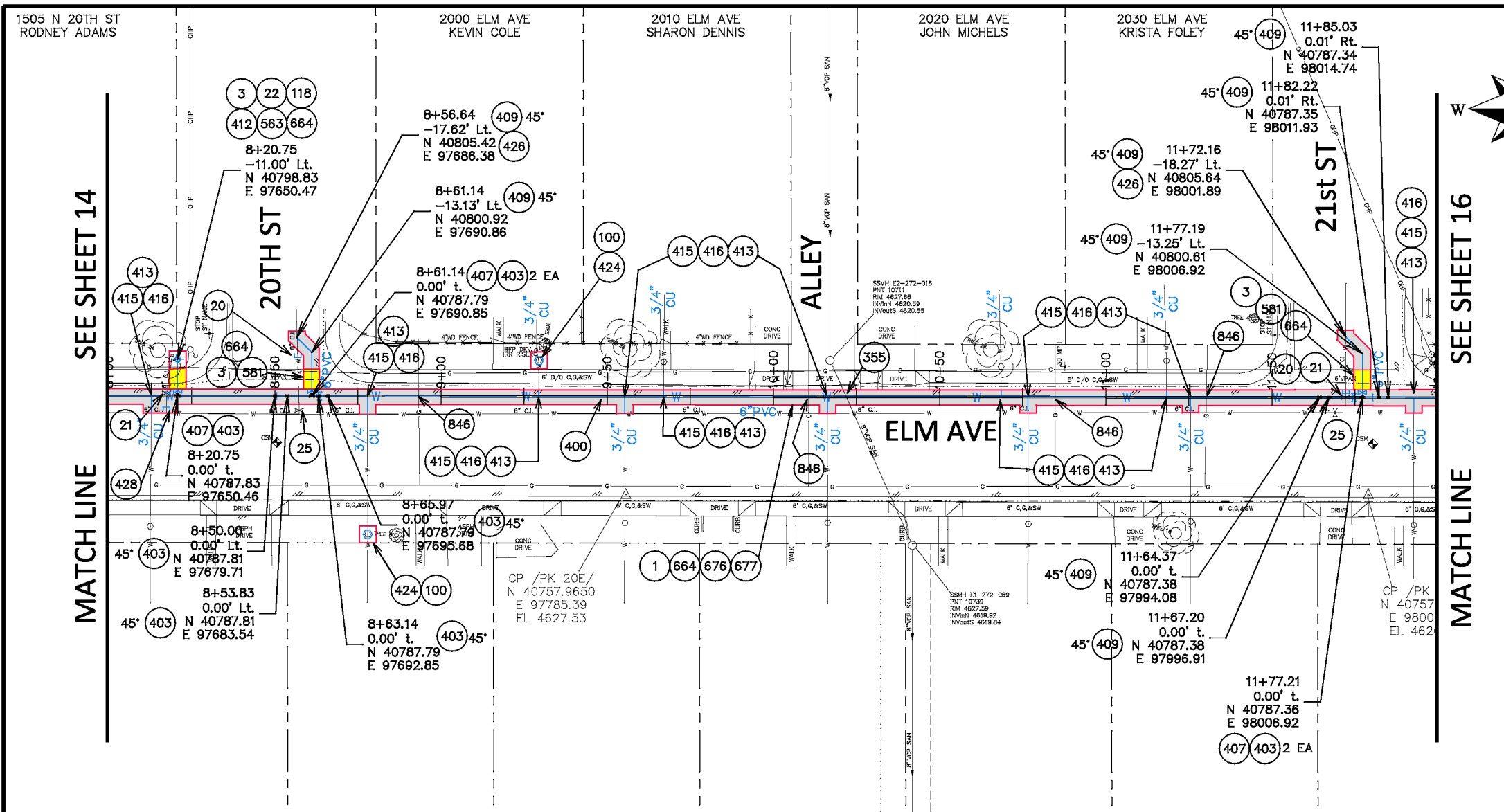
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION 1			JCS	04/2020
REVISION 2			JCS	04/2020
REVISION 3			ALC	04/2020
REVISION 4			TGP	04/2020

SCALE:	PLAN & PROFILE
0" = 10'	HORIZONTAL
0" = 4'	VERTICAL

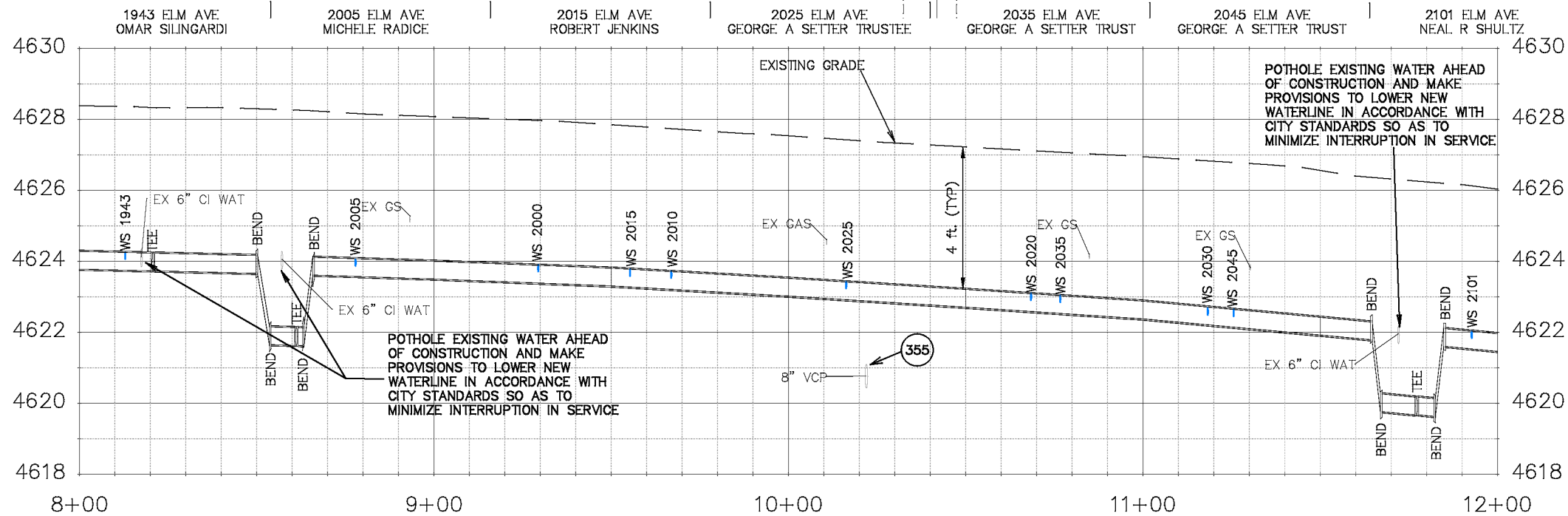


**PUBLIC WORKS  
ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - ELM AVE  
PLAN AND PROFILE 4+00 TO 8+00**



- ### CONSTRUCTION NOTES
- 202 -- REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
  - 202 -- REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY YELLOW SHADING) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
  - 202 -- ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
  - 202 -- REMOVE EXISTING WATER VALVE.
  - 202 -- REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS.
  - 202 -- ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
  - 210 -- RESET LANDSCAPE GROUND COVER. CONTRACTOR SHALL REMOVE GROUND COVER AND ANY UNDERLYING WEED BARRIER AS NEEDED AND STOCKPILE MATERIALS. CONTRACTOR SHALL RESET THESE MATERIALS AND PROVIDE ADDITIONAL MATERIALS AS NEEDED TO RESTORE LANDSCAPING
  - 210 -- RESET LANDSCAPE ROCK (REDDISH ROCK) (PROPERTY 1505 N. 20TH STREET) (MATCH IN KIND)
  - 104.40 -- CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATERLINE LESS THAN 18" ABOVE SEWER LINE)
  - 102.7/108.2 -- WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
  - 102.8b/108.3 -- GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
  - 102.8/108.3 -- TEE (SIZE AS SHOWN) (EPOXY COATED)
  - 102.8/108.3 -- ELBOW (SIZE AND ANGLE AS SHOWN) (EPOXY COATED)
  - 102.8a/108.3 -- FIRE HYDRANT ASSEMBLY
  - 102.7c/108.4 -- WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
  - 102.8k/108.4 -- TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
  - 102.8j/108.4 -- CORPORATION STOP (SIZE AS SHOWN ON PLAN)
  - 102.8/108.4 -- REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
  - RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
  - INSTALL RESTRAINED CAP ON WATERLINE SO EXISTING FIRE HYDRANT CAN BE REMOVED. EXISTING 6" PIPE SHOULD CAST IRON.
  - 608.06 -- MONOLITHIC DRIVE OVER CURB, GUTTER AND SIDEWALK (6' WIDE)
  - 608.06 -- CONCRETE DRAINAGE PAN (6' WIDE)
  - 304 -- AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
  - 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
  - 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
  - POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.



NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION 1			JCS	04/2020
REVISION 2			JCS	04/2020
REVISION 3			ALC	04/2020
REVISION 4			TCP	04/2020

SCALES:

HORIZONTAL	1" = 40'
VERTICAL	1" = 4'



PUBLIC WORKS  
ENGINEERING DIVISION

2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - ELM AVE  
PLAN AND PROFILE 8+00 TO 12+00

SEE SHEET 15

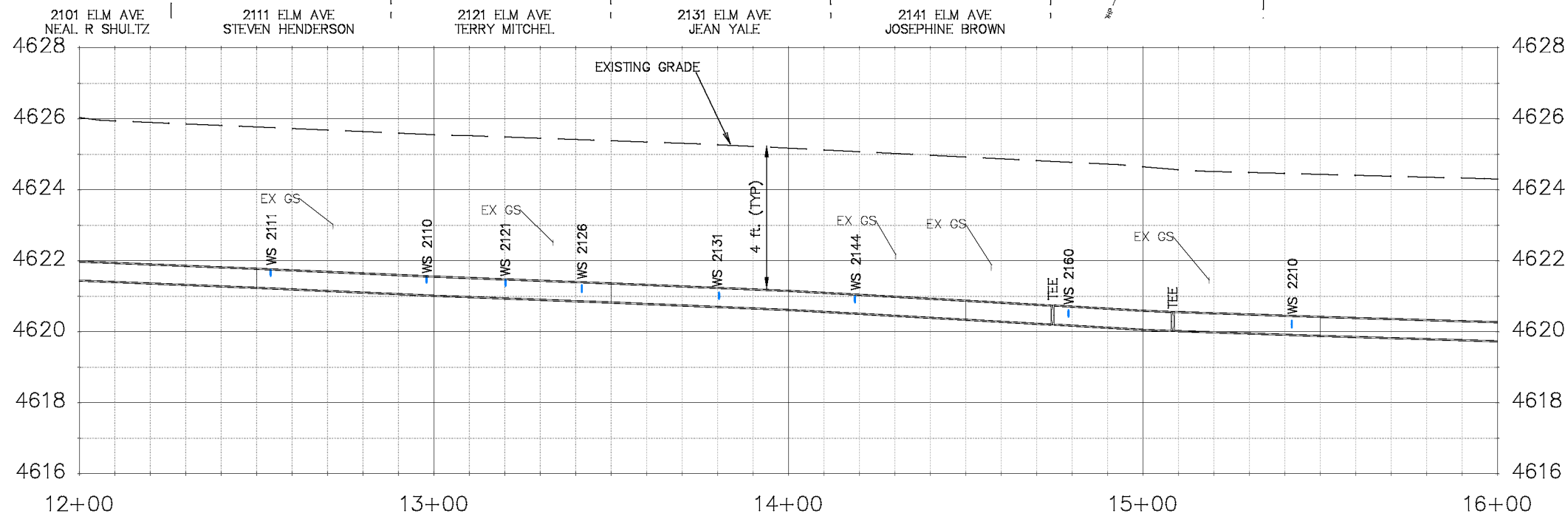
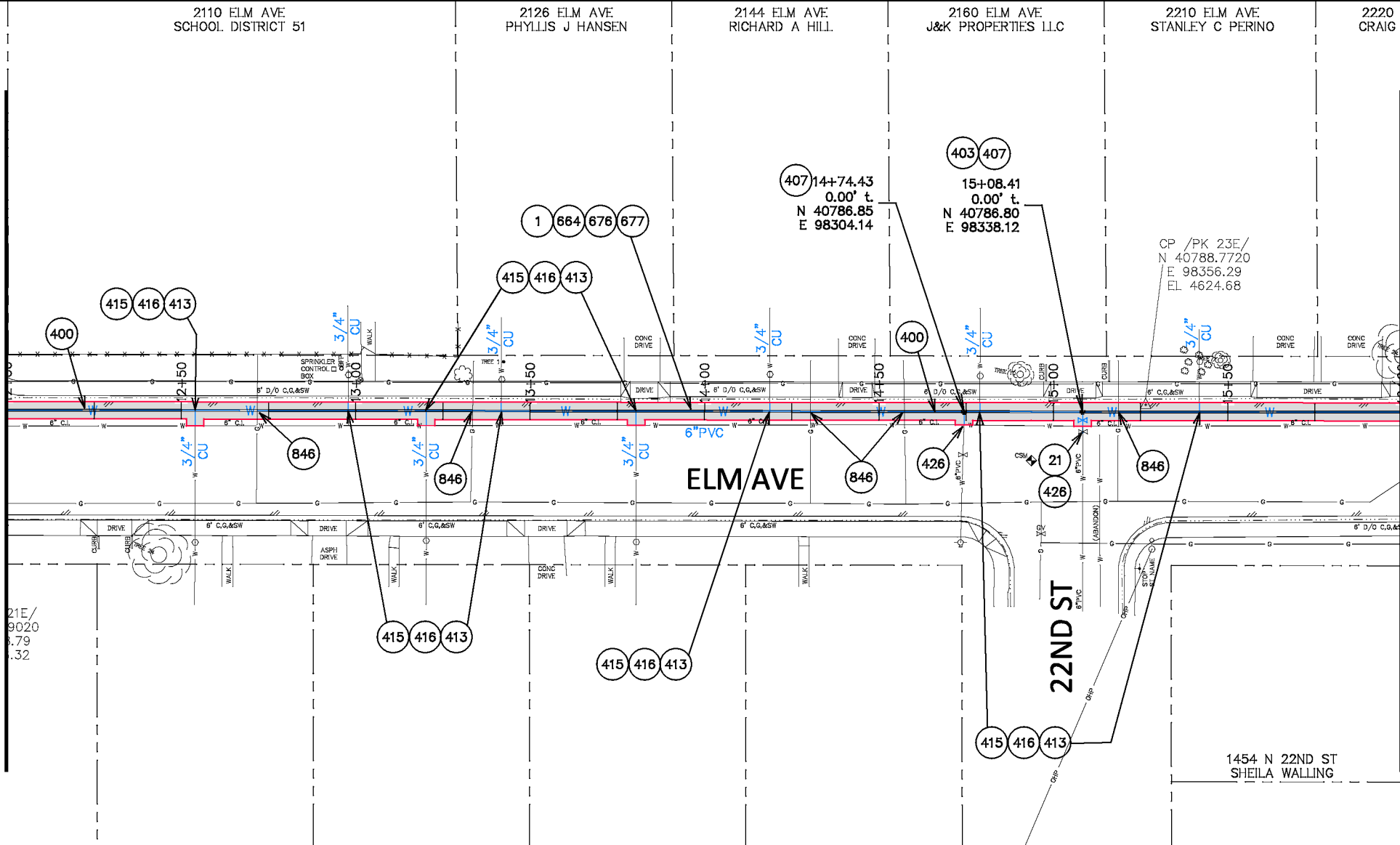
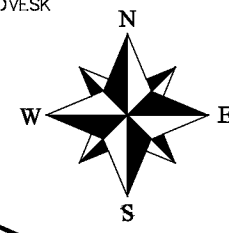
MATCH LINE

SEE SHEET 17

MATCH LINE

CONSTRUCTION NOTES

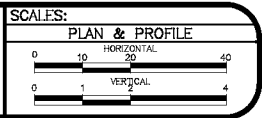
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- 21 202 - REMOVE EXISTING WATER VALVE
- 400 102.7/108.2 -- WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 403 102.8b/108.3 -- GATE VALVE. (SIZE AS SHOWN) (EPOXY COATED)
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- 413 102.7c/108.4 -- WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- 415 102.8k/108.4 -- TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- 416 102.8j/108.4 -- CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- 424 102.8/108.4 -- REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 664 304 -- AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- 676 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
- 677 401.08 -- HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT TOP MAT) (T-TOP PATCH) (SEE CITY STD. DETAIL GU-03)
- 846 POT HOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.



Know what's below.  
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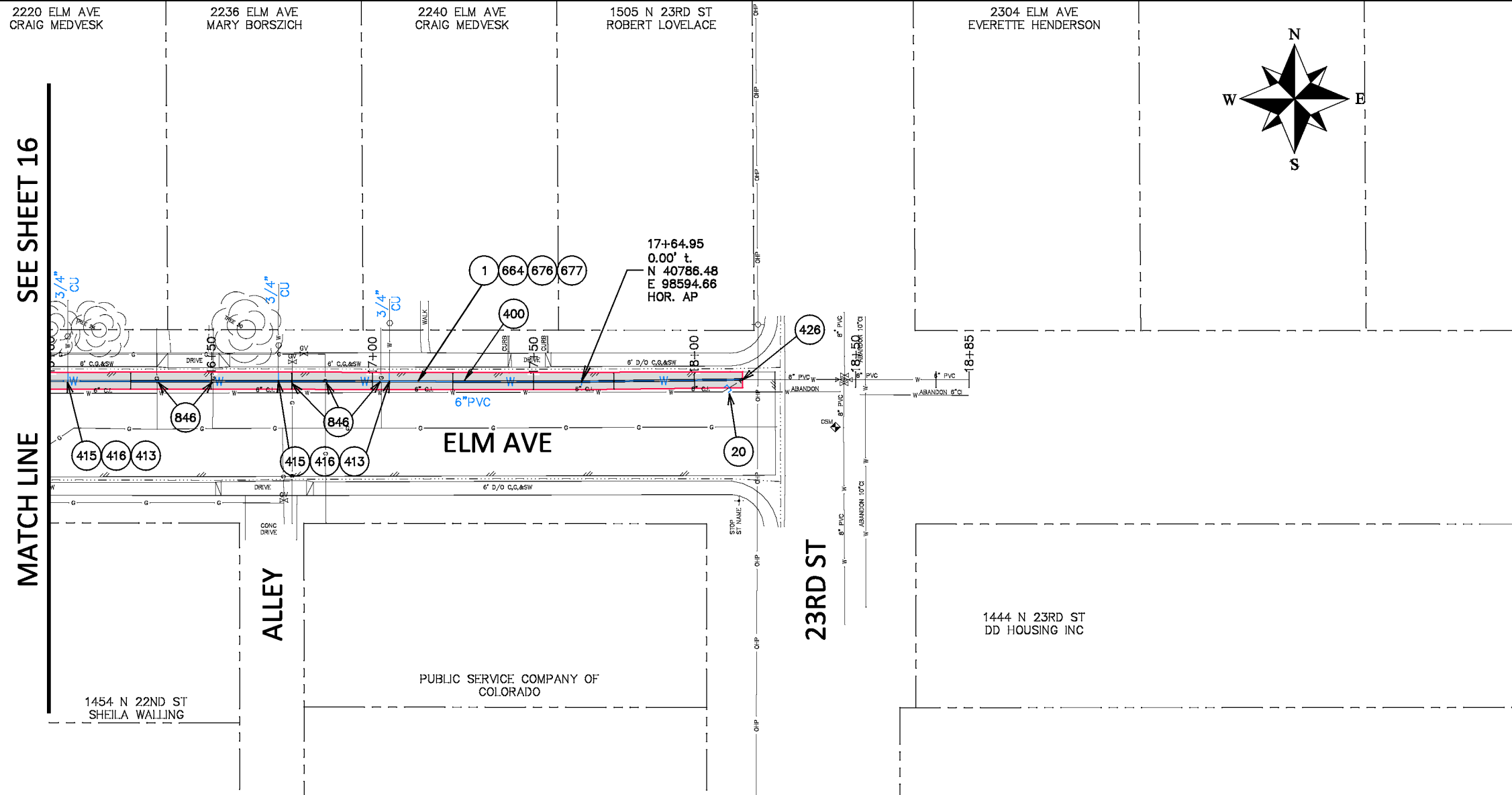
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REV 1			JCS	04/2020
REV 2			JCS	04/2020
REV 3			ALC	04/2020
REV 4			TGP	04/2020



PUBLIC WORKS  
ENGINEERING DIVISION

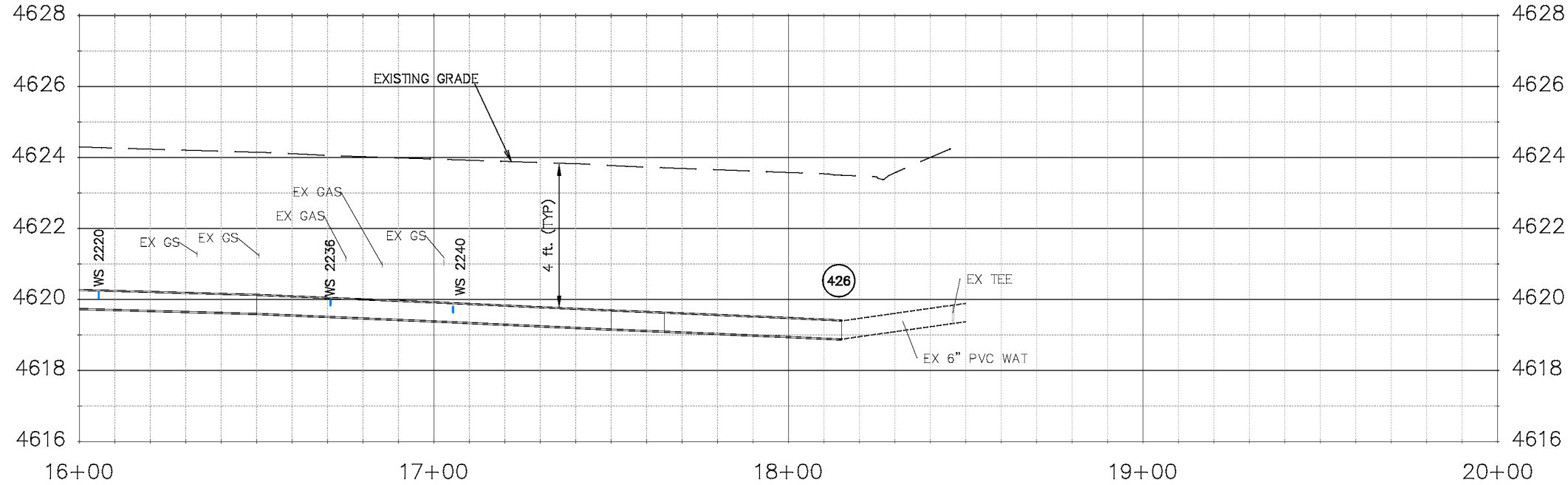
2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - ELM AVE  
PLAN AND PROFILE 12+00 TO 16+00





**CONSTRUCTION NOTES**

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY GREY SHADING)
- 20 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- 400 102.7/108.2 - WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 413 102.7c/108.4 - WATER SERVICE LINE (TYPE K COPPER) (SIZE AS SHOWN ON PLAN)
- 415 102.8k/108.4 - TAPPING SADDLE (SIZE AS SHOWN ON PLAN)
- 416 102.8j/108.4 - CORPORATION STOP (SIZE AS SHOWN ON PLAN)
- 426 RESTRAINED CONNECTION TO EXISTING WATER PIPE/VALVE/FITTING. THE UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 664 304 - AGGREGATE BASE COURSE (CLASS 6) (15" THICK)
- 676 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, BINDER GRADE PG 64-22, GYR=75) (ONE 2" LIFT)
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- 846 POTHOLE EXISTING UTILITY AHEAD OF CONSTRUCTION. TRANSITION WATER PIPE AS NEEDED TO MAINTAIN 18" CLEARANCE MINIMUM ABOVE SEWER PIPES AND 6" CLEARANCE MINIMUM ABOVE OR BELOW OTHER UTILITY LINES.



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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION 1			JCS	04/2020
REVISION 2			JCS	04/2020
REVISION 3			ALC	04/2020
REVISION 4			TGP	04/2020

SCALES:
PLAN & PROFILE
HORIZONTAL 1" = 40'
VERTICAL 1" = 4'



**PUBLIC WORKS ENGINEERING DIVISION**

**2020 WATERLINE REPLACEMENT PROJECT  
WATERLINE PLAN - ELM AVE  
PLAN AND PROFILE 16+00 TO 20+00**

### 4. Contractor's Bid Form

Bid Date: May 28, 2020

Project: IFB-4798-20-DH "2020 Waterline Replacement Project"

Bidding Company: K+S Construction, Inc

Name of Authorized Agent: KEVIN HOPKINS

Email: KEVIN@KDCONSTRUCTIONINC.COM

Telephone: 970-433-7535 Address: 507 Fruitvale Court #A

City: Grand Junction State: CO Zip: 81504

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

Prices in the bid proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this bid proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a bid proposal for the purpose of restricting competition.
- The individual signing this bid proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of .25 percent of the net dollar will be offered to the Owner if the invoice is paid within 15 days after the receipt of the invoice. The Owner reserves the right to take into account any such discounts when determining the bid award.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: #1

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.

By signing below, the Undersigned agree to comply with all terms and conditions contained herein.

Company: K+S Construction, Inc

Authorized Signature: [Signature]

Title: President

## Bid Schedule: 2020 Waterline Replacement Project ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	108.2	Water Main (6") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	1,907.	Lin. Ft.	<u>17.90</u>	<u>34135.30</u>
2	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	98.	Lin. Ft.	<u>44.10</u>	<u>4321.80</u>
3	108.2	Water Main (12") (C-900 PVC, DR-18) (Includes cost of restrained connection to existing pipe)	58.	Lin. Ft.	<u>61.90</u>	<u>3590.20</u>
4	108.2	Water Main (18") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,282.	Lin. Ft.	<u>42.20</u>	<u>54100.40</u>
5	108.2	Water Main (20") (C-900 PVC, DR-25) (Includes cost of restrained connection to existing pipe)	1,380.	Lin. Ft.	<u>51.55</u>	<u>71139.00</u>
6	108.2	Water Main (20") (Restrained C-900 PVC, DR-25) (Certa-Lok Restrained Joint, Coupled or Approved Equal) (Sta. 34+00 - 35+95)	195.	Lin. Ft.	<u>195.10</u>	<u>38044.50</u>
7	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed material unit weight = 133 lbs/ft <sup>3</sup> )	600.	Ton	<u>22.10</u>	<u>13260.00</u>
8	108.3	Gate Valve (6") (MJ)	17.	Each	<u>790.95</u>	<u>13446.15</u>
9	108.3	Gate Valve (8") (MJ)	5.	Each	<u>1222.30</u>	<u>6111.50</u>
10	108.3	Gate Valve (12") (MJ)	1.	Each	<u>2353.95</u>	<u>2353.95</u>
11	108.3	Butterfly Valve (18") (MJ)	3.	Each	<u>4196.20</u>	<u>12588.60</u>
12	108.3	Butterfly Valve (20") (MJ)	2.	Each	<u>4931.80</u>	<u>9863.60</u>
13	108.3	Tee (6" x 6") MJ Swivel Tee (Epoxy Coated)	11.	Each	<u>426.90</u>	<u>4695.90</u>
14	108.3	Tee (8" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	<u>588.40</u>	<u>588.40</u>
15	108.3	Tee (12" x 6") MJ Swivel Tee (Epoxy Coated)	1.	Each	<u>929.80</u>	<u>929.80</u>
16	108.3	Tee (18" x 18") (MJ) (Epoxy Coated)	1.	Each	<u>3135.30</u>	<u>3135.30</u>
17	108.3	Tee (20" x 8") MJ Swivel Tee (Epoxy Coated)	3.	Each	<u>2219.70</u>	<u>6659.10</u>
18	108.3	Tee (20" x 18") (MJ) (Epoxy Coated)	2.	Each	<u>3801.70</u>	<u>7603.40</u>
19	108.3	Elbow (6" x 45 deg) (MJ) (Epoxy Coated)	28.	Each	<u>306.50</u>	<u>8582.00</u>

**Bid Schedule: 2020 Waterline Replacement Project  
ADDENDUM #1**

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
20	108.3	Elbow (8" x 11.25 deg) (MJ) (Epoxy Coated)	1.	Each	<u>388.50</u>	<u>388.50</u>
21	108.3	Elbow (8" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each	<u>403.95</u>	<u>403.95</u>
22	108.3	Elbow (8" x 45 deg) (MJ) (Epoxy Coated)	8.	Each	<u>404.30</u>	<u>3234.40</u>
23	108.3	Elbow (12" x 45 deg) (MJ) (Epoxy Coated)	2.	Each	<u>869.25</u>	<u>1738.50</u>
24	108.3	Elbow (18" x 22.5 deg) (MJ) (Epoxy Coated)	1.	Each	<u>1813.75</u>	<u>1813.75</u>
25	108.3	Elbow (18" x 45 deg) (MJ) (Epoxy Coated)	11.	Each	<u>1822.30</u>	<u>20045.30</u>
26	108.3	Elbow (20" x 11.25 deg) (MJ) (Epoxy Coated)	4.	Each	<u>2031.60</u>	<u>8126.40</u>
27	108.3	Elbow (20" x 45 deg) (MJ) (Epoxy Coated)	7.	Each	<u>2056.60</u>	<u>14396.20</u>
28	108.3	Reducer (20" x 12") (MJ) (Epoxy Coated)	1.	Each	<u>1594.85</u>	<u>1594.85</u>
29	108.3	Cross Fitting (12" x 8") (MJ) (Epoxy Coated)	1.	Each	<u>1072.00</u>	<u>1072.00</u>
30	108.3	End Cap/Plug (6") (Restrained) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (To be used on Elm Ave. to abandon existing fire hydrant at Sta. 8+20)	1.	Each	<u>216.00</u>	<u>216.00</u>
31	108.3	End Cap/Plug (18") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	1.	Each	<u>1284.20</u>	<u>1284.20</u>
32	108.3	End Cap/Plug (20") (Restrained) (w/ 2" FIPT) (Includes Concrete Thurstblock per City Std Detail W-07 & W-08) (Can be used for pressure testing pipeline)	2.	Each	<u>1427.00</u>	<u>2854.00</u>
33	108.3	Fire Hydrant Assembly	5.	Each	<u>2609.70</u>	<u>13048.50</u>
34	108.3	8" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	<u>500.15</u>	<u>1000.30</u>
35	108.3	20" Welded Flange or Hy-Max Solid Sleeve Restrained Coupling with Stiffener for connection into existing HDPE pipe	2.	Each	<u>2075.65</u>	<u>4151.30</u>
36	108.3	20" MJ Solid Sleeve (Epoxy Coated) (Sta 39+63) (Includes MegaLug MJ Restraint fittings or Approved Equal)	1.	Each	<u>1862.50</u>	<u>1862.50</u>

## Bid Schedule: 2020 Waterline Replacement Project ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
37	108.4	Water Service Line (3/4") (Type K Copper) (If Lead or Poly service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	230.	Lin. Ft.	⋄ <u>15.30</u>	⋄ <u>3519.00</u>
38	108.4	Water Service Line (1-1/2") (Type K Copper or HDPE 3408) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	150.	Lin. Ft.	⋄ <u>11.65</u>	⋄ <u>1747.50</u>
39	108.4	Tapping Saddle (6" x 3/4")	36.	Each	⋄ <u>148.90</u>	⋄ <u>5360.40</u>
40	108.4	Tapping Saddle (20" x 3/4")	1.	Each	⋄ <u>475.55</u>	⋄ <u>475.55</u>
41	108.4	Tapping Saddle (20" x 1-1/2")	1.	Each	⋄ <u>497.30</u>	⋄ <u>497.30</u>
42	108.4	Corporation Stop (3/4")	37.	Each	⋄ <u>63.60</u>	⋄ <u>2353.20</u>
43	108.4	Corporation Stop (1-1/2")	1.	Each	⋄ <u>235.75</u>	⋄ <u>235.75</u>
44	108.4	Meter Setter and Meter Pit Installation (Install Only) (City Furnished Meter Pit) (Includes removal and disposal of existing meter pit)	6.	Each	⋄ <u>79.75</u>	⋄ <u>478.50</u>
45	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (18" Thick Min.) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 138 lbs/ft <sup>3</sup> )	75.	Ton	⋄ <u>41.30</u>	⋄ <u>3097.50</u>
46	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	13.	Each	⋄ <u>120.15</u>	⋄ <u>1561.95</u>
47	202	Abandon Existing Water Valve (Close valve, remove top half of existing valve box, fill cavity to finished subgrade with flow-fill material)	9.	Each	⋄ <u>117.30</u>	⋄ <u>1055.70</u>
48	202	Remove Existing Fire Hydrant (Return Hydrant to City Shops)	4.	Each	⋄ <u>220.00</u>	⋄ <u>880.00</u>
49	202	Removal of Existing Pipe (Size & type as shown on plans)	307.	Lin. Ft.	⋄ <u>2.75</u>	⋄ <u>844.25</u>
50	202	Removal of Asphalt Mat (Full Depth)	1,328.	Sq. Yd.	⋄ <u>11.25</u>	⋄ <u>14940.00</u>
51	202	Removal of Asphalt Mat (Planing) (2" Thick for T-Top Section)	704.	Sq. Yd.	⋄ <u>7.10</u>	⋄ <u>4998.40</u>

## Bid Schedule: 2020 Waterline Replacement Project ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
52	202	Removal of Concrete (Includes, but not limited to, curb, gutter, sidewalk, driveway, slabs, V-pans, curb ramps, intersection corners, aprons, landscape borders, and concrete walls)	428.	Sq. Ft.	\$ <u>4.00</u>	\$ <u>1712.00</u>
53	202	Removal of Sod	2,547.	Sq. Ft.	\$ <u>.60¢</u>	\$ <u>1528.20</u>
54	202	Removal of Tree Stump (18" dia.) (In Desert Vista Park, there is an existing tree stump next to the proposed new waterline and the City would like for the Contractor to remove this stump)	1.	Each	\$ <u>814.00</u>	\$ <u>814.00</u>
55	203	Disposal of Radioactive Material (Dispose at City Shops, 333 West Ave.)	50.	Cu. Yd.	\$ <u>14.00</u>	\$ <u>700.00</u>
56	206	Structure Backfill (Flow-Fill)	180.	Cu. Yd.	\$ <u>158.70</u>	\$ <u>28,566.00</u>
57	208	Storm Drain Inlet Protection (Gravel Filter at Curb Inlet) (Includes Maintenance & Removal of Debris, & Removal of Inlet Protection)	7.	Each	\$ <u>155.55</u>	\$ <u>1088.85</u>
58	208	Concrete Washout Facility	1.	Lump Sum	\$ <u>242.00</u>	\$ <u>242.00</u>
59	210	Reset Landscape Ground Cover (Match in Kind) (Contractor shall remove ground cover and underlying weed barrier as needed and stockpile materials. Contractor shall reset these materials and provide additional materials as needed)	560.	Sq. Ft.	\$ <u>2.20</u>	\$ <u>1232.00</u>
60	210	Reset Landscape Borders (Concrete Pavers) (Property 1510 N. 18th Street)	1.	Lump Sum	\$ <u>253.00</u>	\$ <u>253.00</u>
61	210	Reset Landscape Rock (Reddish Rock) (Property 1505 N. 20th Street) (Match in Kind)	20.	Sq. Ft.	\$ <u>11.30</u>	\$ <u>226.00</u>
62	210	Reset Sprinkler System (Desert Vista Park) (Complete in Place) (Various Pipe Sizes) (Contractor shall repair all sprinkler pipe breaks whether PVC or HDPE pipe of any size within the sodded area of Desert Vista Park) (City Parks Dept. can be contacted ahead of time to get an idea of sprinkler system within the park)	1.	Lump Sum	\$ <u>957.00</u>	\$ <u>957.00</u>
63	210	Reset Fence (6' High Chain-Link w/ Barbed Wire Top) (12th St. and D Road intersection)	40.	Lin. Ft.	\$ <u>41.55</u>	\$ <u>1662.00</u>
64	210	Reset Fence (4' High Barbed Wire Fence) (Along Pitkin Ave. near Sta. 10+00)	20.	Lin. Ft.	\$ <u>17.60</u>	\$ <u>352.00</u>

## Bid Schedule: 2020 Waterline Replacement Project ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
65	210	Reset Sign (Along Pitkin Ave. near Sta. 10+00)	3.	Each	\$ <u>24.00</u>	\$ <u>72.00</u>
66	212	Re-Sod Areas (Desert Vista Park and various other locations) (Includes 6" Thick Imported Topsoil placed prior to sod placement)	2,547.	Sq. Ft.	\$ <u>1.00</u>	\$ <u>2547.00</u>
67	304	Aggregate Base Course (Class 6) (4" thick) (Shoulder Base)	491.	Sq. Yd.	\$ <u>5.65</u>	\$ <u>2774.15</u>
68	304	Aggregate Base Course (Class 6) (15" thick)	1,238.	Sq. Yd.	\$ <u>19.30</u>	\$ <u>23,893.40</u>
69	401	Cold Mix Asphalt (Temporary Patching) (3" Thick) (To be used on Ute Ave. and Pitkin Ave. as a temporary surface until the Hot Bituminous Pavement can be laid) (To be placed on top of the cured flow-fill)	87.	Sq. Yd.	\$ <u>19.60</u>	\$ <u>1705.20</u>
70	401	Hot Bituminous Pavement (Patching) (3 " Thick) (Grading SX, PG 64-22) (GYR.=75) (One 3" Lift Bottom Mat)	490.	Sq. Yd.	\$ <u>19.95</u>	\$ <u>9775.50</u>
71	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Top Mat) (T-Top)	2,018.	Sq. Yd.	\$ <u>16.25</u>	\$ <u>32,792.50</u>
72	401	Hot Bituminous Pavement (Patching) (2 " Thick) (Grading SX, PG 64-22) (GYR.=75) (One 2" Lift Bottom Mat) (Elm Ave.)	838.	Sq. Yd.	\$ <u>16.25</u>	\$ <u>13617.50</u>
73	407	Emulsified Asphalt (Tack Coat)	335.	Gallon	\$ <u>4.25</u>	\$ <u>1423.75</u>
74	608	Concrete Curb and Gutter (2' Wide) (Match in Kind) (City Std. Detail C-05)	54.	Lin. Ft.	\$ <u>34.50</u>	\$ <u>1863.00</u>
75	608	Concrete Curb, Gutter, & Sidewalk (6' Wide) (Match in Kind) (City Std. Detail C-02)	150.	Sq. Ft.	\$ <u>12.90</u>	\$ <u>1935.00</u>
76	608	Concrete Drainage Pan (6' Wide x 8" Thick) (Match in Kind) (Includes #5 rebar tie-bars) (City Std. Detail C-12)	150.	Sq. Ft.	\$ <u>15.50</u>	\$ <u>2325.00</u>
77	608	Cap Top Half of Sewer Pipe in Concrete per City Std. Detail GU-04 (If necessary)	1.	Each	\$ <u>500.50</u>	\$ <u>500.50</u>
78	620	Portable Sanitary Facility	2.	Each	\$ <u>189.20</u>	\$ <u>378.40</u>
79	625	Construction Surveying (Includes As-Built Drawings)	1.	Lump Sum	\$ <u>7385.00</u>	\$ <u>7385.00</u>
80	626	Mobilization	1.	Lump Sum	\$ <u>20108.00</u>	\$ <u>20108.00</u>

## Bid Schedule: 2020 Waterline Replacement Project ADDENDUM #1

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
81	627	Pavement Marking Paint (Water Based) (Double Yellow Lines) (12th St. between Ute Ave. and Pitkin Ave., and D Road)	72.	Lin. Ft.	\$ <u>1.10</u>	\$ <u>79.20</u>
82	627	Pavement Marking Paint (Water Based) (Single Yellow Line) (Pitkin Ave.)	10.	Lin. Ft.	\$ <u>1.10</u>	\$ <u>11.00</u>
83	627	Pavement Marking Paint (Water Based) (Single White Line) (Pitkin Ave. & D Road)	40.	Lin. Ft.	\$ <u>1.10</u>	\$ <u>44.00</u>
84	627	Preformed Thermoplastic Pavement Marking (Xwalk-Stop Line) (To be used at the Ute Ave. and 12th Street intersection)	62.	Sq. Ft.	\$ <u>11.00</u>	\$ <u>682.00</u>
85	629	Survey Monumentation (Complete in Place)	2.	Each	\$ <u>412.50</u>	\$ <u>825.00</u>
86	630	Traffic Control Plan	1.	Lump Sum	\$ <u>412.50</u>	\$ <u>412.50</u>
87	630	Traffic Control (Complete in Place)	1.	Lump Sum	\$ <u>45127.00</u>	\$ <u>45127.00</u>
88	630	Flagging	1,240.	Hour	\$ <u>25.50</u>	\$ <u>31620.00</u>
MCR		Minor Contract Revisions	---	---	---	\$ <u>55,000.00</u>

**Bid Amount:**

**\$ 710,654.20**

**Bid Amount:**

*Seven hundred ten thousand six hundred fifty four dollars + twenty cents*

dollars

**Contractor Name:**

*K + D Construction, Inc*

**Contractor Address:**

*507 Fruitvale Court #A, Grand Jet CO 81504*

**Contractor Phone #:**

*970.433.7533*



The undersigned Bidder proposes to subcontract the following portion of Work:

Name & address of Sub-Contractor	Description of work to be performed	% of Contract
<u>Sierra Concrete</u>	<u>Concrete Placement</u>	<u>1%</u>
<u>CC Enterprises</u>	<u>Traffic Control</u>	<u>12%</u>
<u>Asphalt Specialists</u>	<u>Asphalt Placement</u>	<u>8%</u>
<u>High Desert</u>	<u>Survey</u>	<u>1%</u>

The undersigned Bidder acknowledges the right of the City to reject any and all Bids submitted and to waive informalities and irregularities therein in the City's sole discretion.

By submission of the Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without collusion, consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

### BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, K&D Construction, Inc.

648 North Terrace Drive, Grand Junction, CO 81507 as Principal, and

North American Specialty Insurance Company as Surety, are hereby

held and firmly bound unto City of Grand Junction as OWNER

in the penal sum of Five Percent (5%) of Total Amount Bid

\_\_\_\_\_ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this 28th day of May, 2020.

The Condition of the above obligation is such that whereas the Principal has submitted to \_\_\_\_\_

City of Grand Junction a certain BID, attached hereto

and hereby made a part hereof to enter into a contract in writing, for the \_\_\_\_\_

2020 Waterline Replacement Project

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

K&D Construction, Inc.

Principal

(L.S.)

By:



North American Specialty Insurance Company

Surety

By:

*Christina L. Townsend*

Attorney-in-Fact

Christina L. Townsend



IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

SWISS RE CORPORATE SOLUTIONS

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY
WESTPORT INSURANCE CORPORATION GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Kansas City, Missouri and Washington International Insurance Company a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Kansas City, Missouri, and Westport Insurance Corporation, organized under the laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri does hereby make, constitute and appoint:

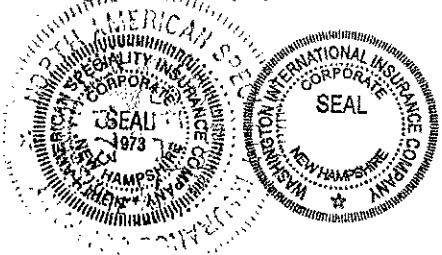
TIMOTHY J. BLANCHARD, TERRI L. REESE, VICKIE GOLBIC, ROBERT CHARLES TORRES, CHRISTINA L TOWNSEND, ASHLEY K. ANDERSON, MARY ANN EURICH, JENNIFER J. WALKER, BARBARA J. ARNOLD, RUTH ANNE LINDSAY, JESSICA JEAN RINI, NIKKI M. MOSBRUCKER, AND LYNN CHRISTINE BOSMAN JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of: ONE HUNDRED TWENTY FIVE MILLION (\$125,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on March 24, 2000 and Westport Insurance Corporation by written consent of its Executive Committee dated July 18, 2011.

"RESOLVED, that any two of the President, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By Steven P. Anderson, Senior Vice President of Washington International Insurance Company & Senior Vice President of North American Specialty Insurance Company & Senior Vice President of Westport Insurance Corporation
By Mike A. Ito, Senior Vice President of Washington International Insurance Company & Senior Vice President of North American Specialty Insurance Company & Senior Vice President of Westport Insurance Corporation



IN WITNESS WHEREOF, North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 2ND day of JANUARY, 20 19.

North American Specialty Insurance Company
Washington International Insurance Company
Westport Insurance Corporation

State of Illinois
County of Cook ss:

On this 2ND day of JANUARY, 20 19, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of

Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation and Michael A. Ito Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Vice President and Assistant Secretary of North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 28th day of May, 2020.

Jeffrey Goldberg