



Purchasing Division

Invitation for Bid

IFB-4464-18-DH
2018 Waterline Replacement Project – Elm Avenue
(28 ¼ Road – 28 ¾ Road)

Responses Due:

February 6, 2018 prior to 3:30pm

Accepting Electronic Responses Only

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

<https://www.rockymountainbidsystem.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)

Purchasing Representative:

Duane Hoff, Senior Buyer

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

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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 for the **2018 Waterline Replacement Project – Elm Avenue**. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

IFB Questions:

Duane Hoff, Senior Buyer

970-244-1545

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- 1.2. **Mandatory Pre-Bid Meeting:** **Prospective bidders are required to attend the mandatory pre-bid meeting on January 29, 2018 at 10:00 am.** Meeting location will be in City Hall in the City Council Auditorium on the 1st floor. City Hall is located at 250 North 5th Street, Grand Junction, CO. This meeting also allows the Owner to know who is planning on submitting a bid for the project. 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. **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**)
- 1.5. **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.
- 1.6. **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.

- 1.7. **Exclusions:** No oral, telephonic, emailed, or facsimile bid will be considered
- 1.8. **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/> .
- 1.9. **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. Electronic copies may be obtained on a CD format at the Department of Public Works and Planning at City Hall.
- 1.10. **Definitions and Terms:** See Article I, Section 3 of the General Contract Conditions in the *Standard Contract Documents for Capital Improvements Construction*.
- 1.11. **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 Engineer of all conflicts, errors, ambiguities or discrepancies in or among the *Contract Documents*

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.

1.12. 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 response time.

1.13. 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.

- 1.14. **Taxes:** The Owner is exempt from State retail and Federal tax. The bid price must be net, exclusive of taxes.
- 1.15. **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.
- 1.16. **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.
- 1.17. **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.
- 1.18. **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.
- 1.19. **Public Disclosure Record:** If the bidder has knowledge of their employee(s) or sub-contractors having an immediate family relationship with a City/County 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/County.

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/County, shall constitute a contract equally binding between the City/County 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 in not less than triplicate by the Owner (City/County) and Contractor. City/County 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/County are, and shall remain, City/County 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. Offerors 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 Substantial Completion of the work or designated portions thereof is the date certified by the Owner when construction is sufficiently complete, 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 contract 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: CITY ONLY 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 readvertise, 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: CITY ONLY

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 **\$350.00** 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 substantially complete. In addition to the Work being substantially 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 Substantial or 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 completed. 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 Offers: The Owner reserves the right to:

- reject any and all Bids,
- waive any and all informalities,
- negotiate final terms with the Successful Bidder, 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 **2018 Waterline Replacement Project – Elm Avenue**. 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 2,570 LF of 8" dia. C-900 PVC and 240 LF of 6" dia. C-900 PVC between 28 ¼ Road and 28 ¾ Road. This project also includes fittings, valves, service connections, fire hydrants, appurtenances, landscape restoration, asphalt and concrete replacement related to the construction of the new waterlines.

3.3. SPECIAL CONDITIONS & PROVISIONS:

3.3.1 Mandatory Pre-Bid Meeting: Prospective bidders are required to attend the mandatory pre-bid meeting on January 29, 2018 at 10:00 am. Meeting location will be at City Hall in the City Council Auditorium, located on the first floor at 250 North 5th Street, Grand Junction, CO. This meeting allows the Owner to know who is planning on submitting a bid for the project. 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 Jr., Senior Buyer
City of Grand Junction
duaneh@gjcity.org

3.3.3 Project Manager: The Project Manager for the Project is Lee Cooper, Project Engineer, who can be reached at (970) 256-4155. 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 Utilities
Attn: Lee Cooper, Project Manager

2145 River Road
Grand Junction, CO 81505

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

3.3.5 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.

3.3.6 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.

3.3.7 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.

3.3.8 Time of Completion: The scheduled time of Completion for the Project is **61 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.

3.3.9 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.

Emergency work may be done without prior consent provided the Contractor notifies the Project Engineer prior to beginning the work.

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

3.3.11 Permits: The following permits are required for the Project and will be obtained by the City at no cost to the Contractor:
None

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 presence of ground water) For more information, contact the Colorado Department of Public Health and Environment: www.cdphe.state.co.us/wq/PermitsUnit/wqcdpmt.html Approximately 7 to 10 days is required for processing of the permit application. The Contractor should begin preparing the permit application immediately upon notice of award.

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

- AutoCAD drawings for survey stake-out
- Door hangers for the Contractor to distribute before scheduled water outages. The Contractor shall notify the Project Inspector and/or Project Engineer at least forty-eight (48) hours prior to any planned water outages. This way there is time to make the door hangers and get them distributed to the affected water customers.

3.3.13 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.

The Contractor will be responsible for notifying all businesses and / or residents located adjacent to the work. Door hanger notifications shall be distributed at least two (2) working days prior to the day the work is scheduled to begin.

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

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

3.3.16 Stockpiling Materials and Equipment: All stockpiling/storage shall be in accordance with General Contract Condition Section 51. When approved by the Project Engineer, the Contractor may stockpile and store materials and equipment within public right-of-way. The Contractor shall be responsible for obtaining written permission to use private property for storage of materials and equipment. Copies of the above-mentioned agreements shall be submitted to the Project Engineer prior to use of the property.

3.3.17 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 plan 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:

The Contractor shall only work on a quarter-mile section of Elm Avenue at a time when installing the new waterline. The asphalt patching operations can happen all at once when the new waterline has been installed between 28 ¼ Rd. and 28 ¾ Rd and after successful disinfection and pressure tests have been completed.

The Contractor will be allowed to close one quarter-mile section to thru traffic at a time in order to complete water line installation within that block. However, local residences will need to be allowed access to their respected properties during construction. All other daily traffic will need to be provided with a detour route in order to bypass the section of Elm Ave. under construction. The Contractor will be responsible for making sure each local resident located within the construction area has access to their property.

No personal driveway and/or access point to a property shall be left inaccessible at the end of each work day or over a weekend; and no construction equipment shall be parked in front of a driveway and/or access point during non-working hours. When a driveway and/or access point has to 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.

3.3.18 Traffic Detector Loops: Not applicable to Project.

3.3.18 Clean-Up: The Contractor shall clear the construction site of all trash and on-site waste daily, including scrap from construction materials. The costs for all clean-up work shall be considered incidental and will not be paid for separately.

3.3.19 Quality Control Testing: As part of the project, the Contractor shall provide Quality Control testing per the Quality Control (QC) and Quality Assurance (QA) section within the City of Grand Junction's Standard Specifications for Road and Bridge Construction. Table 1 provides the testing frequencies that need to be achieved. The Contractor shall provide test frequencies for Full-Time inspection. The testing agency shall meet the minimum requirements as stated in the Standard Specifications section. A submittal of qualified personnel shall be submitted at or before the preconstruction meeting. This submittal shall include all certifications held by the tester(s) assigned to the project. The following items will require QC testing:

- Backfill compaction – Backfill shall be placed in horizontal layers not to exceed 8-inches in loose lift thickness. If the Project Engineer allows the native material to be used for trench backfill, completion of a Proctor analysis will be required by the QC testing agency on the native backfill material.
- Aggregate Base Course (Class 6) – If necessary, completion of a Proctor analysis will be required by the QC testing agency.
- Concrete
- Hot Bituminous Pavement

Method of Measurement:

Testing for QC will not be measured, but will be paid for on a Lump Sum basis.

Basis of Payment:

<i>Pay Item</i>	<i>Pay Unit</i>
Quality Control Testing	Lump Sum

A report shall be generated by the testing firm that documents all tests including any re-tests results or failed tests. Included in the test reports shall be station locations of each test and the test results. All test results shall be presented to the Project Engineer prior to final payment and/or final acceptance of the project.

The City will perform and/or contract out the Quality Assurance (QA) testing for this project.

3.3.20 Schedule of Submittals: The Contractor, at a minimum, shall deliver these submittals at the pre-construction meeting:

- Construction schedule submitted at or prior to the pre-construction meeting and updated as necessary to reflect actual conditions.
- List of contacts for contractor and any subcontractors
- Hourly rate table for labor and equipment to be used on this project
- Traffic Control Plan(s) necessary to conduct the different phases of Work.
- Pipe
- Valves
- Fittings
- Bedding Gradation, Type A
- Aggregate Base course gradation, Proctor Curve (Class 6)
- Imported Trench Backfill, Gradation
- Tracing Wire and Splices to be used
- Water Valve Boxes

3.3.21 Uranium Mill Tailings: It is anticipated that radioactive mill tailings will not be encountered on this Project. However, the Contractor is required to provide a mill tailings removal cost (\$/CY) in their Bid in case mill tailings are encountered and need to be removed.

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. 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 shall coordinate with the utility companies any necessary relocation of utilities and schedule his work accordingly. See Project Special Provisions.

3.3.24 Construction Equipment Storage: At all times, unless permission has been granted to the Contractor; the Contractor's construction equipment and construction materials shall be stored within the Elm Avenue rights-of-way.

3.3.24 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.

Millings will not be required to be removed from the roadway and can remain in-place until excavation operations begin.

If temporary asphalt millings are necessary during any phase of the project, the City will provide the asphalt millings and/or work out a deal with the Contractor for asphalt millings owned by the Contractor.

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 Survey: The Contractor shall give the City survey crew a minimum of 72 hours' notice for all requested survey.

3.3.27 Work to be Performed by the City (Prior to Construction):

- Piping of open ditch
- Storm inlet relocation
- Shoulder widening
- Sign removal and relocation

3.3.28 Existing Concrete Sidewalks, Pans, Fillets, Curbs and Gutters: The existing sidewalks, pans, fillets, curb and gutters are in good serviceable condition. In some instances, the installation of the new water line will be adjacent to existing concrete. The Contractor will need to protect all of the concrete adjacent to the waterline replacement. If the concrete is damaged during the construction of the waterline, then the Contractor will be responsible for its replacement at no cost to the City. The Contractor, the City Project Inspector, and the City Project Engineer should walk and record any concrete that is deemed to be damaged before the waterline replacement is started in a construction area.

3.3.28 Stormwater Management Plan: Existing curbside storm drain inlet basins are located throughout the project and each inlet basin as shown on the construction plans shall receive stormwater protection in the form of a "Silt Sack." The inlet basin stormwater protection devices shall remain in place until the Contractor has completed the asphalt paving operations and the street has been swept clean. The Contractor shall also be responsible for maintaining the inlet basin protection device throughout construction and periodically inspecting the inlet basin protection device during construction. In addition, after every rainfall and/or snowmelt event the Contractor shall inspect all inlet basin protection devices on the project. The Contractor shall be responsible for either cleaning or replacing the inlet basin protection device when the capacity of the protection device has reached 50% of its full capacity. The Contractor shall take into account the associated maintenance cost in the specific pay item.

Street sweeping shall be periodically completed in the traffic lanes where excavated material was stockpiled, in the roadway gutters, and any other parts of the roadway where material from the construction site has been tracked by vehicles.

The Contractor shall keep on site gravel filter socks (gravel wattles) for placing around the base of excavated soil piles in the event of a rainstorm event. The Contractor will only be required to use the gravel filter socks when it is likely that a rainstorm event is going to occur. The Contractor should contact the NOAA National Weather Service Forecast Office in Grand Junction to obtain extended weather forecast information to help in deciding whether gravel filter socks will need to be used. The NOAA Forecast Office of Grand Junction can be reached at 970-243-7007. Gravel filter socks will be measured and paid for by the lineal foot as shown in the Bid Schedule.

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 water 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 shall 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.

3.4. SCOPE OF WORK & SPECIFICATIONS: See Statement of Work (Section 3), Standard Contract Documents for Capital Improvements Construction, Special Provisions, and Construction Plans.

3.5. Attachments:

Appendix A: Project Submittal Form

Appendix B: Special Provisions

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**
- **Bid Bond**
- **Bid Schedule**

3.7. IFB TENTATIVE TIME SCHEDULE:

Invitation for Bids available:

January 18, 2018

Mandatory Pre-Bid Meeting:	January 29, 2018
Inquiry deadline, no questions after this date:	February 1, 2018
Addendum Posted:	February 2, 2018
Submittal deadline for proposals (Bid Opening):	February 6, 2018
City Council Approval:	February 21, 2018
Notice of Award & Contract execution:	February 22, 2018
Bonding & Insurance Cert. due:	March 2, 2018
Preconstruction meeting:	March 2, 2018
Work begins:	March 5, 2018
Final Completion:	61 Calendar Days from Notice to Proceed

4. Contractor's Bid Form

Bid Date: _____

Project: IFB-4464-18-DH "2018 Waterline Replacement Project – Elm Avenue (28 ¼ Road – 28 ¾ Road)"

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.

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: _____

Bid Schedule: 2018 Waterline Replacement Project - Elm Avenue

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	108.2	Water Main (1-1/2") (HDPE) (Service Line) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	10.	Lin. Ft.	\$ _____	\$ _____
2	108.2	Water Main (2") (HDPE) (Service Line) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	10.	Lin. Ft.	\$ _____	\$ _____
3	108.2	Water Main (3") (Class 200 PSI) (ASTM D-2241) (Includes cost of connection to existing waterline using a Hymax Coupling)	25.	Lin. Ft.	\$ _____	\$ _____
4	108.2	Water Main (6") (C-900 PVC, DR-18) (Includes cost of connection to existing waterline / valve / fitting)	240.	Lin. Ft.	\$ _____	\$ _____
5	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of connection to existing waterline / valve / fitting)	2,570.	Lin. Ft.	\$ _____	\$ _____
6	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 133 lbs/ft ³)	750.	Ton	\$ _____	\$ _____
7	108.3	Gate Valve (3") (MJ)	1.	Each	\$ _____	\$ _____
8	108.3	Gate Valve (6") (MJ)	8.	Each	\$ _____	\$ _____
9	108.3	Gate Valve (8") (MJ)	4.	Each	\$ _____	\$ _____
10	108.3	Tee (6" x 6") (Swivel Tee)	1.	Each	\$ _____	\$ _____
11	108.3	Tee (8" x 3") (MJ)	1.	Each	\$ _____	\$ _____
12	108.3	Tee (8" x 6") (Swivel Tee)	7.	Each	\$ _____	\$ _____
13	108.3	Elbow (6" x 45-deg) (MJ)	8.	Each	\$ _____	\$ _____
14	108.3	Elbow (8" x 45-deg) (MJ) (Use as necessary due to a utility conflict)	2.	Each	\$ _____	\$ _____
15	108.3	Elbow (8" x 22.5-deg) (MJ)	2.	Each	\$ _____	\$ _____

Bid Schedule: 2018 Waterline Replacement Project - Elm Avenue

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
16	108.3	Reducer (8" x 6") (MJ)	1.	Each	\$ _____	\$ _____
17	108.3	Fire Hydrant Assembly	6.	Each	\$ _____	\$ _____
18	108.3	6" Offset Fittings (D=18") (MJxMJ) (Use as necessary due to a utility conflict)	4.	Each	\$ _____	\$ _____
19	108.3	8" Offset Fittings (D=18") (MJxMJ) (Use as necessary due to a utility conflict)	4.	Each	\$ _____	\$ _____
20	108.4	3/4" Water Service Line (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)	220.	Lin. Ft.	\$ _____	\$ _____
21	108.4	1" Water Service Line (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)	25.	Lin. Ft.	\$ _____	\$ _____
22	108.4	Tapping Saddle (8" x 3/4")	44.	Each	\$ _____	\$ _____
23	108.4	Tapping Saddle (8" x 1")	5.	Each	\$ _____	\$ _____
24	108.4	Tapping Saddle (8" x 1-1/2")	1.	Each	\$ _____	\$ _____
25	108.4	Tapping Saddle (8" x 2")	1.	Each	\$ _____	\$ _____
26	108.4	Corporation Stop (3/4")	44.	Each	\$ _____	\$ _____
27	108.4	Corporation Stop (1")	5.	Each	\$ _____	\$ _____
28	108.4	Corporation Stop (1-1/2")	1.	Each	\$ _____	\$ _____
29	108.4	Corporation Stop (2")	1.	Each	\$ _____	\$ _____
30	108.4	Meter setter and meter pit (Install Only) (City Furnished)	4.	Each	\$ _____	\$ _____
31	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 138 lbs/ft ³)	300.	Ton	\$ _____	\$ _____

Bid Schedule: 2018 Waterline Replacement Project - Elm Avenue

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
32	202	Abandon Existing Water Valve (Close valve, remove top half of existing valve box, fill cavity to finished subgrade with flow-fill material)	6.	Each	\$ _____	\$ _____
33	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	7.	Each	\$ _____	\$ _____
34	202	Removal of Existing Fire Hydrant (Return Hydrant to City Water Dept.)	5.	Each	\$ _____	\$ _____
35	202	Removal of Existing Meter Pit	4.	Each	\$ _____	\$ _____
36	202	Removal of Existing Pipe (6" & 8" C.I. Pipe)	130.	Lin. Ft.	\$ _____	\$ _____
37	202	Removal of Existing Water Valve	3.	Each	\$ _____	\$ _____
38	202	Removal of Asphalt Mat (Planing) (2" Depth) (T-Top Section) (2' Wide) (Elm Avenue) (Per City Standard Detail GU-03)	1,000.	Sq. Yd.	\$ _____	\$ _____
39	202	Removal of Asphalt Mat (Planing) (4' Wide, Full Depth) (Per City Standard Detail GU-03)	1,500.	Sq. Yd.	\$ _____	\$ _____
40	202	Removal of Concrete (Includes but not limited to curb, gutter, sidewalk, driveway, slabs, V-pan, curb ramps, intersection corners, aprons, and landscape borders.)	540.	Sq. Ft.	\$ _____	\$ _____
41	203	Disposal of Radioactive Material (City Shops Location) (Mill Tailings are not anticipated to be found on Elm Ave.)	30.	Cu. Yd.	\$ _____	\$ _____
42	206	Structure Backfill (Flow-Fill) (As Required)	25.	Cu. Yd.	\$ _____	\$ _____
43	208	Concrete Washout Facility	1.	Lump Sum	---	\$ _____
44	208	Storm Drain Inlet Protection (Silt-Sack) (Includes Maintenance & Removal of Inlet Protection)	2.	Each	\$ _____	\$ _____

Bid Schedule: 2018 Waterline Replacement Project - Elm Avenue

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
45	210	Repair damage to unlocated irrigation lines, various sizes and materials (1" to 12" dia.)	4.	Each	\$ _____	\$ _____
46	210	Reset Landscape Appurtenance (Landscape Cobble Rock) (2837 Elm Ave.) (Match in Kind)	1.	Lump Sum	- - -	\$ _____
47	210	Reset Landscape Appurtenance (Wood Landscape Barrier) (2841 Elm Ave.)	1.	Lump Sum	- - -	\$ _____
48	210	Reset Ground Sign	1.	Each	\$ _____	\$ _____
49	210	Reset Fence (Wire Fence)	6.	Lin. Ft.	\$ _____	\$ _____
50	212	Sod (Includes 4" Thick of Topsoil placed prior to sod placement)	260.	Sq. Ft.	\$ _____	\$ _____
51	304	Aggregate Base Course (Class 6) (12" Thick)	1,500.	Sq. Yd.	\$ _____	\$ _____
52	304	Aggregate Base Course (Class 6) (4" Thick)(2' Wide)(Roadway Shoulder)	270.	Sq. Yd.	\$ _____	\$ _____
53	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR=75) (One 2" Lift) (Bottom Mat) (See City Standard Detail GU-03)	1,500.	Sq. Yd.	\$ _____	\$ _____
54	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX, PG 64-22) (GYR=75) (One 2" lift) (Top Mat) (Top Mat includes T-Top area) (See City Standard Detail GU-03)	2,200.	Sq. Yd.	\$ _____	\$ _____
55	401	Cold Mix Asphalt (4" Thick) (Temporary) (Use as necessary, as directed by Project Engineer)	50.	Sq. Yd.	\$ _____	\$ _____
56	407	Emulsified Asphalt (Tack Coat)	220.	Gallon	\$ _____	\$ _____
57	608	Concrete Curb, Gutter and Sidewalk (Match in Kind)	120.	Sq. Ft.	\$ _____	\$ _____
58	608	Concrete Drainage Pan (8" Thick) (See City Standard Detail C-12) (Includes #5 Rebar for Tie-Bars)	120.	Sq. Ft.	\$ _____	\$ _____

Bid Schedule: 2018 Waterline Replacement Project - Elm Avenue

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
59	608	Concrete Intersection Corner (Match in Kind)	160.	Sq. Ft.	\$ _____	\$ _____
60	608	Detectable Warning (Wet Set) (One Detectable Warning is 4 Sq. Ft.)	8.	Sq. Ft.	\$ _____	\$ _____
61	608	Cap Top Half of Sewer Pipe in concrete per Std. Detail GU-04 (20' long)	1.	Each	\$ _____	\$ _____
62	608	Encase Sewer Pipe in Concrete per Std. Detail GU-04 (20' long)	1.	Each	\$ _____	\$ _____
63	620	Portable Sanitary Facility	1.	Each	\$ _____	\$ _____
64	625	Construction Surveying	1.	Lump Sum	---	\$ _____
65	626	Mobilization	1.	Lump Sum	---	\$ _____
66	629	Survey Monumentation (Complete in Place) (As Needed)	2.	Each	\$ _____	\$ _____
67	630	Traffic Control Plan	1.	Lump Sum	---	\$ _____
68	630	Traffic Control (Complete in Place)	1.	Lump Sum	---	\$ _____
69	630	Flagging	40.	Hour	\$ _____	\$ _____
70	SC 3.3.21	Quality Control Testing	1.	Lump Sum	---	\$ _____
MCR		Minor Contract Revisions	---	---	---	\$ <u>30,000.00</u>

Bid Amount: \$ _____

Bid Amount:

dollars

Contractor Name:
Contractor Address:
Contractor Phone #:

Title: _____

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

<u>Name & 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: **2018 Waterline Replacement Project – Elm Avenue**

CONTRACTOR:

PROJECT ENGINEER: Lee Cooper

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
STREET CONSTRUCTION				
Base course gradation, Proctor curve (Class 6)				
Hot Mix Bituminous Pavement Mix Design (PG 64-22, 75 GYR.)				
Concrete Mix Design, CDOT Class D (4,500 psi)				
WATERLINE CONSTRUCTION				
Pipe – AWWA C-900 PVC, DR-18				
Pipe – HDPE Water Service Pipe				
Fittings – Elbows, Tees, Tapping Saddles, Corp. Stops, Crosses, Couplings, Curb Stops				
Valves - 3", 6", 8" Gate Valves				
Tracing Wire & Splices				
Service line – ¾" & 1" Copper Tubing				
Pipe Bedding Gradation (Type A)				
Granular Stabilization Material (Type B)				
Imported Trench Backfill (Class 3) Gradation, Procter Curve				
Valve Box				
Fire Hydrant Assembly				
Mechanical Joint Restraints				
EROSION CONTROL / STORMWATER MANAGEMENT				
Inlet Basin Protection				
Concrete Washout				
PERMITS, PLANS, OTHER				
Traffic Control Plan(s)				
Contractor's Construction Schedule				
CDPHE Dewatering Permit (If Necessary)				
Hourly Labor and Equipment Rate Tables				

APPENDIX B

Special Provisions

2018 Waterline Replacement Project – Elm Avenue

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 608 – CURBS, GUTTERS, SIDEWALKS, AND BIKEWAYS

Section 608 of the Standard Specifications is hereby revised for this project as follows:

Subsections 608.06, Basis of Payment shall include the following:

The Contract Unit Price for the various concrete items shall be full compensation for all equipment, labor, materials, and incidentals required for the complete installation. Incidental items include clearing; excavating to subgrade, subgrade compaction, cutting and removal of asphalt in areas where concrete will be installed; removal of existing concrete, disposal of excavated and removed materials; furnishing, placement and compaction of Aggregate Base Course; forming, furnishing and placement, finishing, curing and protection of the concrete; reinforcing steel and joint filler.

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:

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 waterline pipe. Refer to Section 108.13 for list of Incidental Construction items.

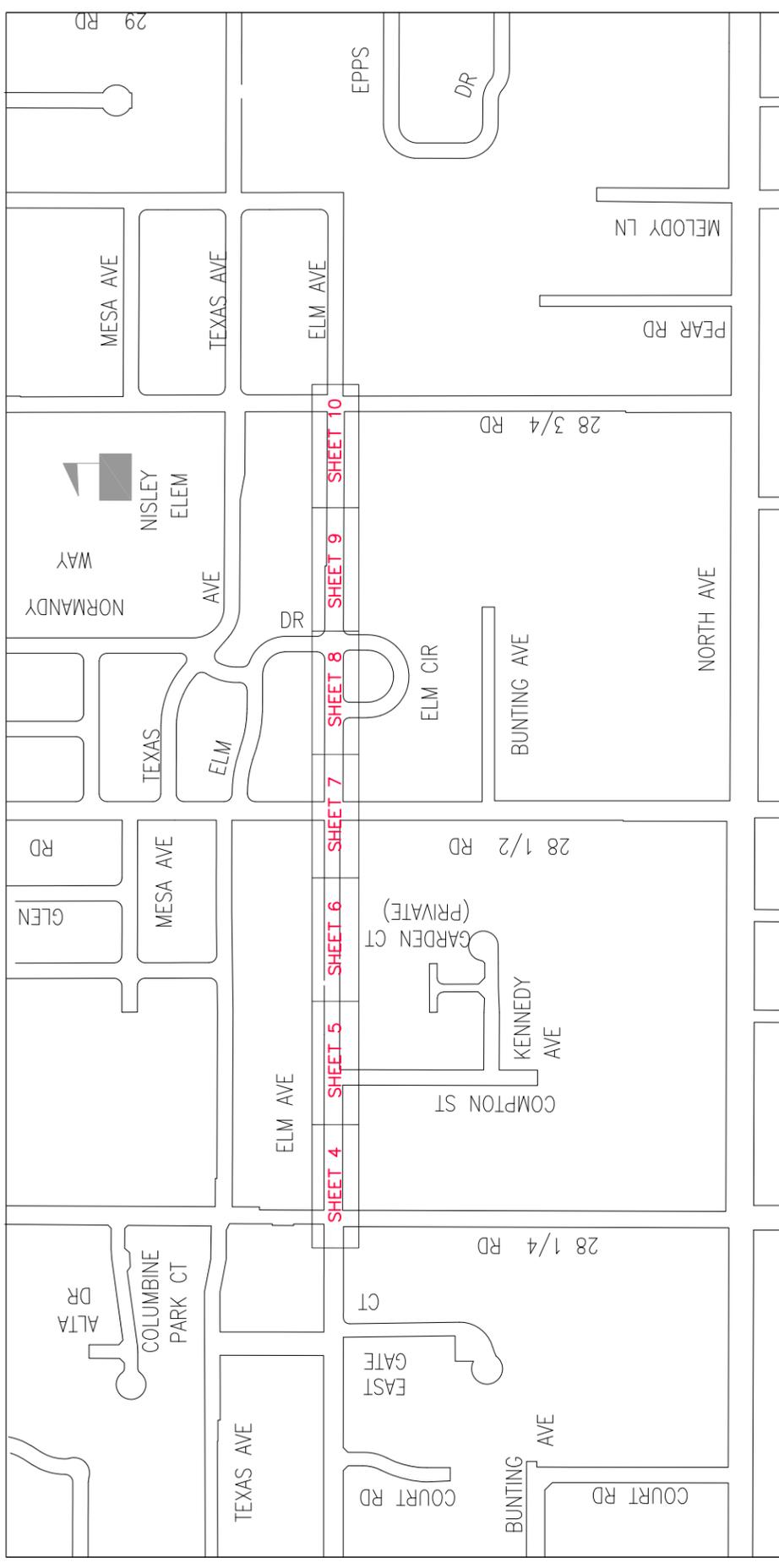
Subsection 103.16, Earth Backfill Material, shall include the following:

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, rocky or otherwise unsuitable for backfill as determined by the Engineer or his 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.

2018 WATERLINE REPLACEMENT PROJECT ELM AVE. - 28 1/4 RD. TO 28 3/4 RD.

JANUARY, 2018

- 1 Cover Sheet
- 2 Standard Abbreviations, Legend, And Symbols
- 3 Summary of Approximate Quantities
- 4-10 Water Line Plan and Profiles
- 11-14 City Standard Waterline Details



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

VICINITY MAP



UTILITIES AND AGENCIES									
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX	
GRAND JUNCTION, CITY OF	LEE COOPER	PROJECT ENGINEER	PROJECT ENGINEER	250 N. 5th STREET	250 N. 5th STREET	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022	
GRAND JUNCTION, CITY OF	LEE COOPER	PROJECT ENGINEER	SEWER AND WATER	250 N. 5th STREET	250 N. 5th STREET	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022	
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND		IRRIGATION	688 26 ROAD	688 26 ROAD	GRAND JCT., CO 81506	(970) 242-2762		
CHARTER	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803	
CENTURY LINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLUCHMANN AVE	2524 BLUCHMANN AVE	GRAND JCT., CO 81504	(970) 244-4311	(970) 240-4349	
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460		GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189	
XCEL	TILLMON MCSCHOLLER	UNIT MANAGER	GAS, ELECTRIC	2538 BLUCHMANN AVE	2538 BLUCHMANN AVE	GRAND JCT., CO 81506	(970) 244-2695	(970) 244-2661	



Know what's below.
Call before you dig.

DRAWING STATUS:
 PROGRESS
 FINAL CONSTRUCTION DRAWINGS
 ASBUILT

REVISION	DATE	DESCRIPTION

DRAWN BY JCS DATE 2017
 DESIGNED BY JCS DATE 2017
 CHECKED BY ALC DATE 2017
 APPROVED BY TGP DATE 2017

SCALES:	
PLAN & PROFILE	NA
HORIZONTAL	NA
VERTICAL	NA



PUBLIC WORKS
ENGINEERING DIVISION

COVER SHEET

1

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASD	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
BGR	BOTTOM CURB RETURN
BSWMP	BOTTOM STORM WATER MANAGEMENT PRACTICES
CA	CORRUGATED ALUMINUM PIPE
CH	CHORD
CADOT	COLORADO DEPARTMENT OF TRANSPORTATION
CDOT	CAST IRON
CI	CURB, GUTTER & SIDEWALK
C	CENTER LINE
C&G	CORRUGATED METAL PIPE
CP	CLEAN OUT
CO	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
COMB	CONCRETE
CONC	CITY SURVEY MONUMENT
CSM	CORRUGATED STEEL PIPE
CSP	COPPER
CU	CULVERT
DI	DUCTILE IRON
D	DRAINAGE BASIN BOUNDARY
E	ELECTRICAL
EG	END CURB RETURN
ECR	EDGE OF GUTTER
EG	ELEVATION
EL	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FRONT OF CURB
FG	FRONT OF GUTTER
FE	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
F0	FAR SIDE
FTG	FOOTING
G	GAS
GB	GAS BREAK
GM	GAS METER
GW	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LINEAR CURVE
LE	LINEAR FEET
LF	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
N/A	NOT APPLICABLE
N/A	NOT IN CONTRACT
NIC	NO ONE PERSON
NOP	NON-REINFORCED CONCRETE PIPE
NRCP	NEAR SIDE
NS	NOT TO SCALE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHPT	OVERHEAD TELEPHONE
POC	POINT OF CURVATURE
POC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PT	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RH	RIGHT OF WAY
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SD	STANDARD
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
TM	TELEPHONE
T	TANGENT
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
TV	TYPICAL
UU	UNDERGROUND UTILITIES
U	UTILITY
VCP	VERTICAL CURVATURE
VPC	VERTICAL POINT OF CURVATURE
VPC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER

REVISION	DATE	DATE	DATE
△	2017	2017	2017
△	2017	2017	2017
△	2017	2017	2017
△	2017	2017	2017

SCALE:	PLAN & PROFILE
0	NA

SCALE:	PLAN & PROFILE
0	NA

SCALE:	PLAN & PROFILE
0	NA

CITY OF Grand Junction
COLORADO

PUBLIC WORKS ENGINEERING DIVISION

CITY OF GRAND JUNCTION STANDARD ABBREVIATIONS, LEGEND, AND SYMBOLS

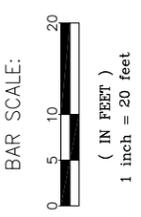
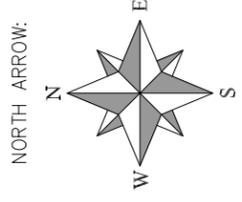
SYMBOLS

⊙	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 (TV)
⊙	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

▬	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)
▬	8" PVC SANITARY SEWER
▬	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)

▬	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 (BARBED WIRE)
▬	FENCE (CHAIN LINK)
▬	FENCE (IRON)
▬	FENCE (PLASTIC)
▬	FENCE (TEMPORARY CONSTRUCTION)
▬	FENCE (WOOD)
▬	FENCE (WOVEN WIRE)
▬	GUARD RAIL
▬	HATCHING: ASPHALT REMOVAL
▬	HATCHING: CONCRETE REMOVAL
▬	HATCHING: 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)
▬	8" PVC SANITARY SEWER
▬	ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE
▬	RAIL ROAD
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▬	STRIPING (CONTINUOUS WHITE)
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▬	UTILITY LINE (STORM SEWER, PERFORATED)
▬	UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION)
▬	UTILITY LINE (TELEPHONE)
▬	UTILITY LINE (WATER)



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 (1-1/2") (HDPE) (Service Line) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	10	Lin. Ft.	23	108.4	Tapping Saddle (8" x 1")	5	Each	46	210	Reset Landscape Appurtenance (Landscape Cobble Rock) (2837 Elm Ave.) (Match in Kind)	1	Lump Sum
2	108.2	Water Main (2") (HDPE) (Service Line) (If lead service line is encountered, water service shall be replaced to meter) (Includes cost of connection to existing pipe)	10	Lin. Ft.	24	108.4	Tapping Saddle (8" x 1-1/2")	1	Each	47	210	Reset Landscape Appurtenance (Wood Landscape Barrier) (2841 Elm Ave.)	1	Lump Sum
3	108.2	Water Main (3") (Class 200 PSI) (ASTM D-2241) (Includes cost of connection to existing waterline using a Hymax Coupling)	25	Lin. Ft.	25	108.4	Corporation Stop (2")	1	Each	48	210	Reset Ground Sign	1	Each
4	108.2	Water Main (6") (C-900 PVC, DR-18) (Includes cost of connection to existing waterline / valve / fitting)	240	Lin. Ft.	26	108.4	Corporation Stop (3/4")	44	Each	49	210	Reset Fence (Wire Fence)	6	Lin. Ft.
5	108.2	Water Main (8") (C-900 PVC, DR-18) (Includes cost of connection to existing waterline / valve / fitting)	2,570	Lin. Ft.	27	108.4	Corporation Stop (1")	5	Each	50	212	Sod (Includes 4" Thick of Topsoil placed prior to sod placement)	260	Sq. Ft.
6	108.2	Imported Trench Backfill (Class 3) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 133 lbs/ft ³)	750	Ton	28	108.4	Corporation Stop (1-1/2")	1	Each	51	304	Aggregate Base Course (Class 6) (12" Thick)	1,500	Sq. Yd.
7	108.3	Gate Valve (3") (MJ)	1	Each	29	108.4	Corporation Stop (2")	1	Each	52	304	Aggregate Base Course (Class 6) (4" Thick)(2' Wide)(Roadway Shoulder)	270	Sq. Yd.
8	108.3	Gate Valve (6") (MJ)	8	Each	30	108.4	Meter setter and meter pit (Install Only) (City Furnished)	4	Each	53	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX PG 64-22) (GYR=75) (One 2" Lift) (Bottom Mat) (Top Mat includes T-Top area) (See City Standard Detail GU-03)	1,500	Sq. Yd.
9	108.3	Gate Valve (6") (MJ)	4	Each	31	108.7	Granular Stabilization Material (Type B) (Crushed Rock) (Includes haul and disposal of unsuitable excavated material) (Assumed Unit Weight = 138 lbs/ft ³)	300	Ton	54	401	Hot Bituminous Pavement (Patching) (2" Thick) (Grading SX PG 64-22) (GYR=75) (One 2" Lift) (Top Mat) (Top Mat includes T-Top area) (See City Standard Detail GU-03)	2,200	Sq. Yd.
10	108.3	Tee (6" x 6") (Swivel Tee)	1	Each	32	202	Abandon Existing Water Valve (Close valve, remove top half of existing valve box, fill cavity to finished subgrade with flow-fill material)	6	Each	55	401	Cold Mix Asphalt (4" Thick) (Temporary) (Use as necessary, as directed by Project Engineer)	50	Sq. Yd.
11	108.3	Tee (8" x 3") (MJ)	1	Each	33	202	Abandon Pipe (Abandon pipe by plugging ends with concrete)	7	Each	56	407	Emulsified Asphalt (Tack Coat)	220	Gallon
12	108.3	Tee (8" x 6") (Swivel Tee)	7	Each	34	202	Removal of Existing Fire Hydrant (Return Hydrant to City Water Dept.)	5	Each	57	608	Concrete Curb, Gutter and Sidewalk (Match in Kind)	120	Sq. Ft.
13	108.3	Elbow (6" x 45-deg) (MJ)	8	Each	35	202	Removal of Existing Meter Pit	4	Each	58	608	Concrete Drainage Pan (8" Thick) (See City Standard Detail C-12) (Includes #5 Rebar for Tie-Bars)	120	Sq. Ft.
14	108.3	Elbow (8" x 45-deg) (MJ) (Use as necessary due to a utility conflict)	2	Each	36	202	Removal of Existing Pipe (6" & 8" C.I. Pipe)	130	Lin. Ft.	59	608	Concrete Intersection Corner (Match in Kind)	160	Sq. Ft.
15	108.3	Elbow (8" x 22.5-deg) (MJ)	2	Each	37	202	Removal of Existing Water Valve	3	Each	60	608	Detectable Warning (Wet Set) (One Detectable Warning is 4 Sq. Ft.)	8	Sq. Ft.
16	108.3	Reducer (8" x 6") (MJ)	1	Each	38	202	Removal of Asphalt Mat (Planning) (2" Depth) (T-Top Section) (2' Wide) (Elm Avenue) (Per City Standard Detail GU-03)	1,500	Sq. Yd.	61	608	Cap Top Half of Sewer Pipe in concrete per Std. Detail GU-04 (20' long)	1	Each
17	108.3	Fire Hydrant Assembly	6	Each	39	202	Removal of Asphalt Mat (Planning) (4" Wide, Full Depth) (Per City Standard Detail GU-03)	1,500	Sq. Yd.	62	608	Encase Sewer Pipe in Concrete per Std. Detail GU-04 (20' long)	1	Each
18	108.3	6" Offset Fittings (D=18") (MJxMJ) (Use as necessary due to a utility conflict)	4	Each	40	202	Removal of Concrete (Includes but not limited to curb, gutter, sidewalk, driveway, slabs, V-pan, curb ramps, intersection corners, aprons, and landscape borders.)	540	Sq. Ft.	63	620	Portable Sanitary Facility	1	Each
19	108.3	8" Offset Fittings (D=18") (MJxMJ) (Use as necessary due to a utility conflict)	4	Each	41	203	Disposal of Radioactive Material (City Shops Location) (Mill Tailings are not anticipated to be found on Elm Ave.)	30	Cu. Yd.	64	625	Construction Surveying	1	Lump Sum
20	108.4	3/4" Water Service Line (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)	220	Lin. Ft.	42	206	Structure Backfill (Flow-Fill) (As Required)	25	Cu. Yd.	65	626	Mobilization	1	Lump Sum
21	108.4	1" Water Service Line (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)	25	Lin. Ft.	43	208	Concrete Washout Facility	1	Lump Sum	66	629	Survey Monumentation (Complete in Place) (As Needed)	2	Each
22	108.4	Tapping Saddle (8" x 3/4")	44	Each	44	208	Storm Drain Inlet Protection (Silt-Sack) (Includes Maintenance & Removal of Inlet Protection)	2	Each	67	630	Traffic Control Plan	1	Lump Sum
					45	210	Repair damage to unlocated irrigation lines, various sizes and materials (1" to 12" dia.)	4	Each	68	630	Traffic Control (Complete in Place)	1	Lump Sum
										69	630	Flagging	40	Hour
										70	SC	Quality Control Testing	1	Lump Sum
											3.3.21			

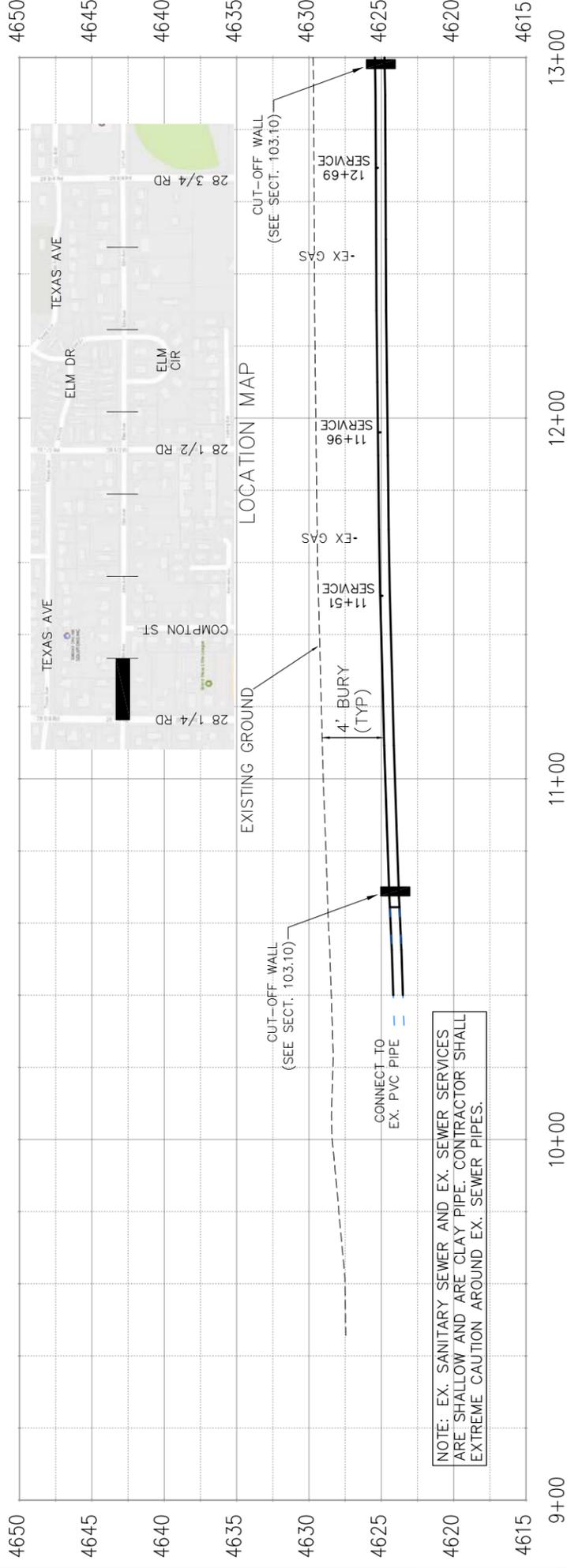
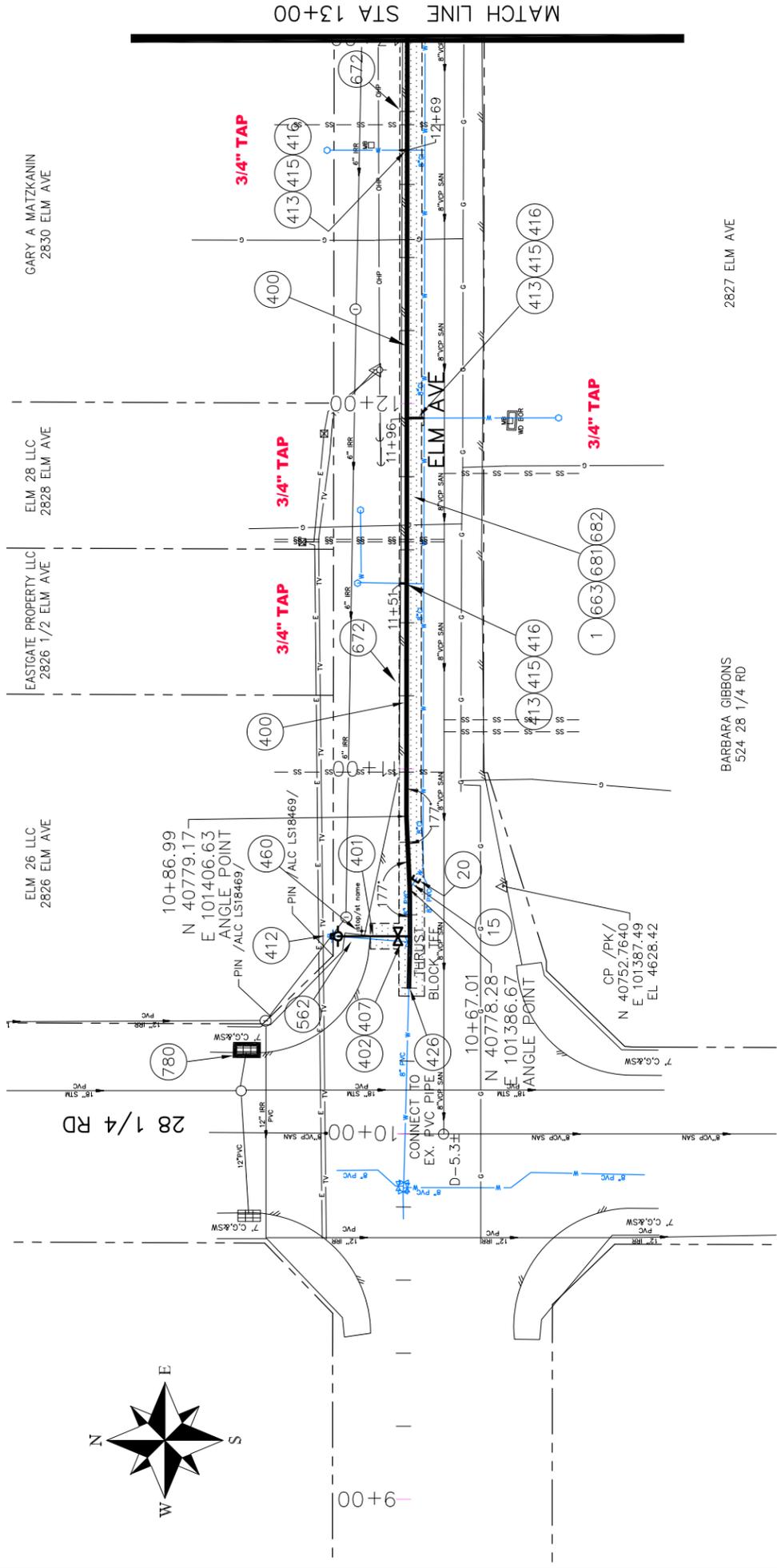
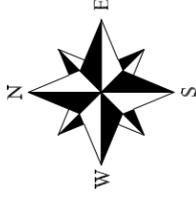
REVISION <input type="checkbox"/> _____ REVISION <input type="checkbox"/> _____ REVISION <input type="checkbox"/> _____ REVISION <input type="checkbox"/> _____	DESCRIPTION _____ _____ _____ _____	DATE _____ _____ _____ _____	SCALE: PLAN & PROFILE HORIZONTAL 0 NA 0 NA VERTICAL 0 NA 0 NA	DRAWN BY JCS DATE 2017 DESIGNED BY JCS DATE 2017 CHECKED BY ALC DATE 2017 APPROVED BY TOP DATE 2017
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PUBLIC WORKS
ENGINEERING DIVISION

Grand Junction
COLORADO

ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD
SUMMARY OF APPROXIMATE QUANTITIES

3



4650

4645

4640

4635

4630

4625

4620

4615

9+00

10+00

11+00

12+00

13+00

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
Δ			JCS	2017
Δ			JCS	2017
Δ			ALC	2017
Δ			TOP	2017

SCALE	PLAN & PROFILE
0' 10' 20'	0' 10' 20'
0' 2.5' 5'	0' 2.5' 5'



PUBLIC WORKS
ENGINEERING DIVISION

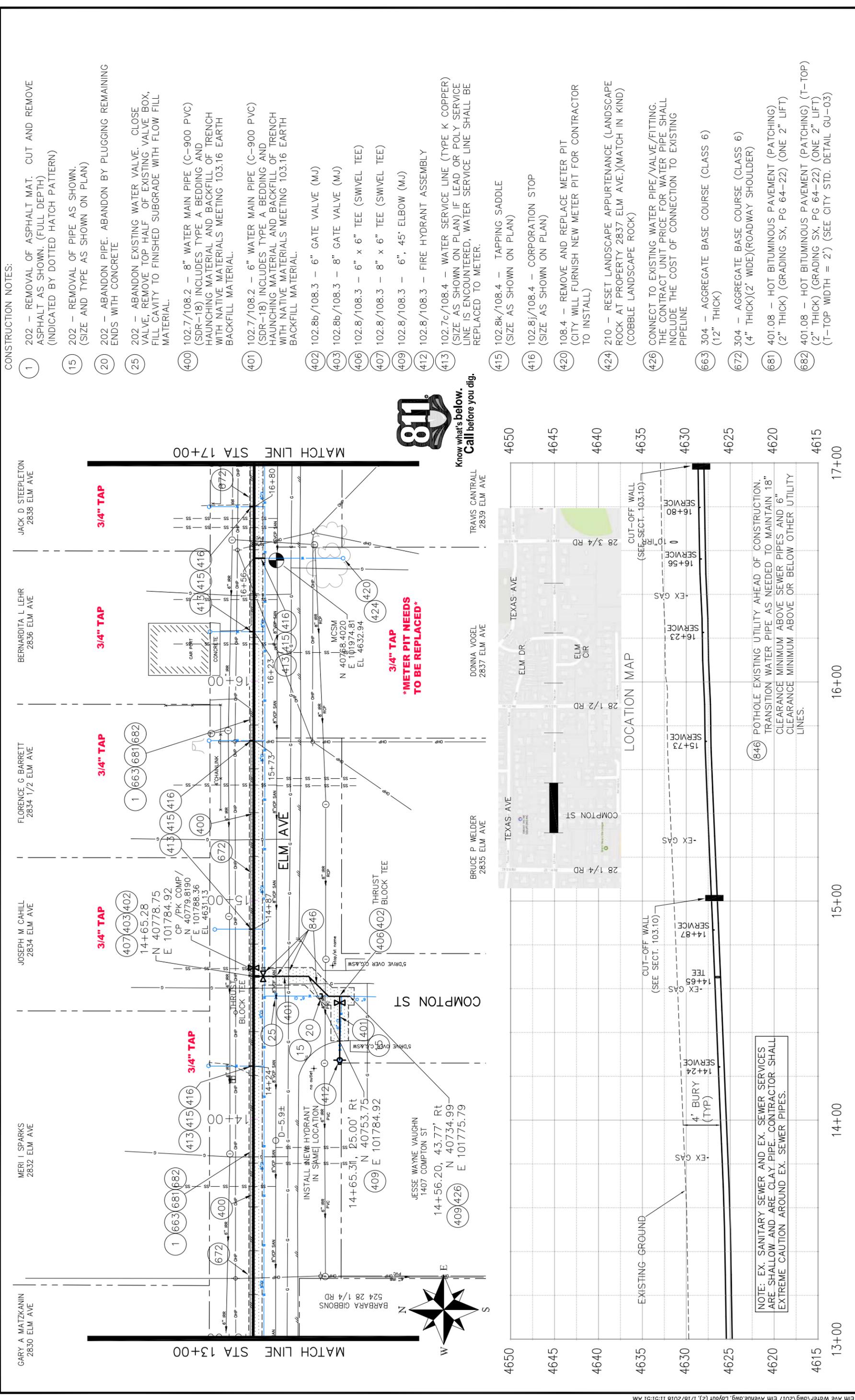
ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD

CONSTRUCTION NOTES:

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (FULL DEPTH) (INDICATED BY DOTTED HATCH PATTERN)
- 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- 20 ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- 400 102.7/108.2 - 8" WATER MAIN PIPE (C-900 PVC) (SDR-18) 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 - 6" WATER MAIN PIPE (C-900 PVC) (SDR-18) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 402 102.8B/108.3 - 6" GATE VALVE (MJ)
- 407 102.8/108.3 - 8" x 6" TEE (SWIVEL TEE)
- 412 102.8/108.3 - FIRE HYDRANT ASSEMBLY
- 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 LINE 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 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 460 210 - RESET GROUND SIGN (STOP SIGN)
- 562 608.06 - MONOLITHIC CURB, GUTTER AND SIDEWALK (MATCH IN KIND) (6' WIDE)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)(2' WIDE)(ROADWAY SHOULDER)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT)
- 682 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (T-TOP) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT) (T-TOP WIDTH = 2') (SEE CITY STD. DETAIL GU-03)
- 780 208 - STORM DRAIN INLET PROTECTION (SILT SACK) (INCLUDES MAINTENANCE AND REMOVAL OF DIRT AND DEBRIS)



Know what's below.
Call before you dig.



CONSTRUCTION NOTES:

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (FULL DEPTH) (INDICATED BY DOTTED 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
- 25 202 - ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- 400 102.7/108.2 - 8" WATER MAIN PIPE (C-900 PVC) (SDR-18) 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 - 6" WATER MAIN PIPE (C-900 PVC) (SDR-18) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 402 102.8b/108.3 - 6" GATE VALVE (MJ)
- 403 102.8b/108.3 - 8" GATE VALVE (MJ)
- 406 102.8/108.3 - 6" x 6" TEE (SWIVEL TEE)
- 407 102.8/108.3 - 8" x 6" TEE (SWIVEL TEE)
- 409 102.8/108.3 - 6", 45° ELBOW (MJ)
- 412 102.8/108.3 - FIRE HYDRANT ASSEMBLY
- 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 LINE 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)
- 420 108.4 - REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- 424 210 - RESET LANDSCAPE APPURTENANCE (LANDSCAPE ROCK AT PROPERTY 2837 ELM AVE.) (MATCH IN KIND) (COBBLE LANDSCAPE ROCK)
- 426 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)(2' WIDE)(ROADWAY SHOULDER)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT)
- 682 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (1-TOP) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT) (1-TOP WIDTH = 2') (SEE CITY STD. DETAIL GU-03)

METER PIT NEEDS TO BE REPLACED

NOTE: EX. SANITARY SEWER AND EX. SEWER SERVICES ARE SHALLOW AND ARE CLAY PIPE. CONTRACTOR SHALL EXTREME CAUTION AROUND EX. SEWER PIPES.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			JCS	2017
REVISION			DESIGNED BY	2017
REVISION			CHECKED BY	2017
REVISION			APPROVED BY	2017



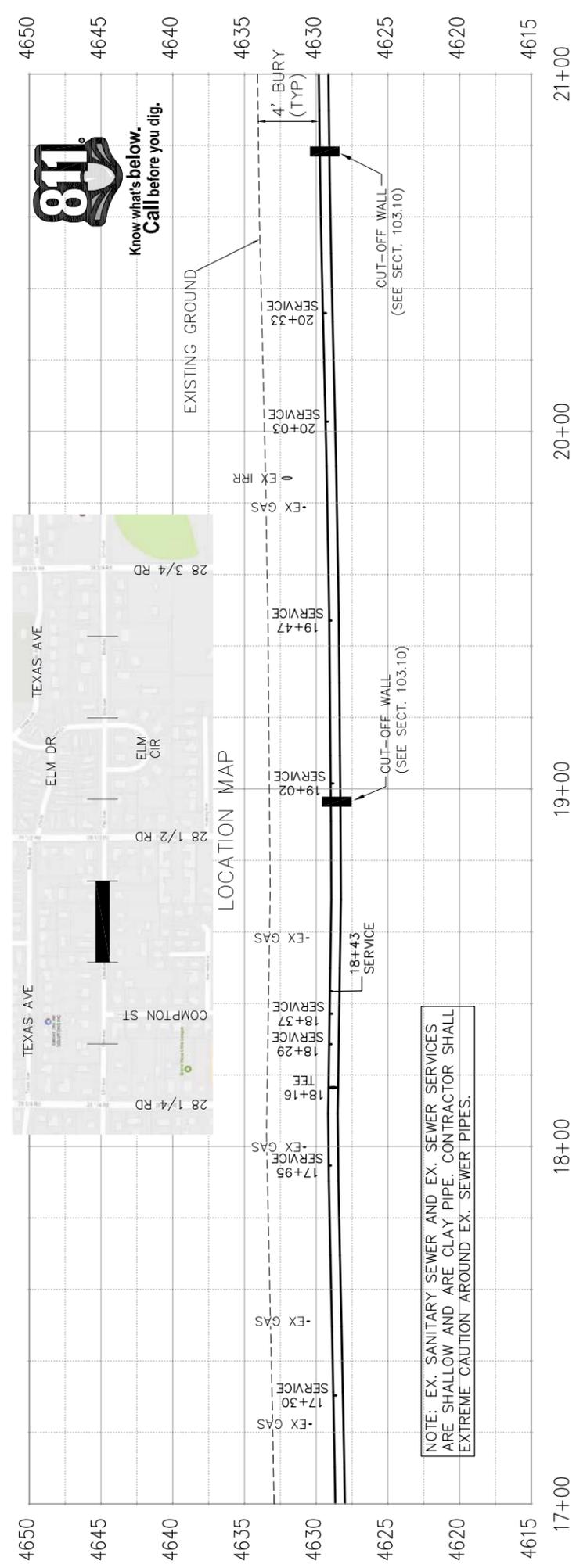
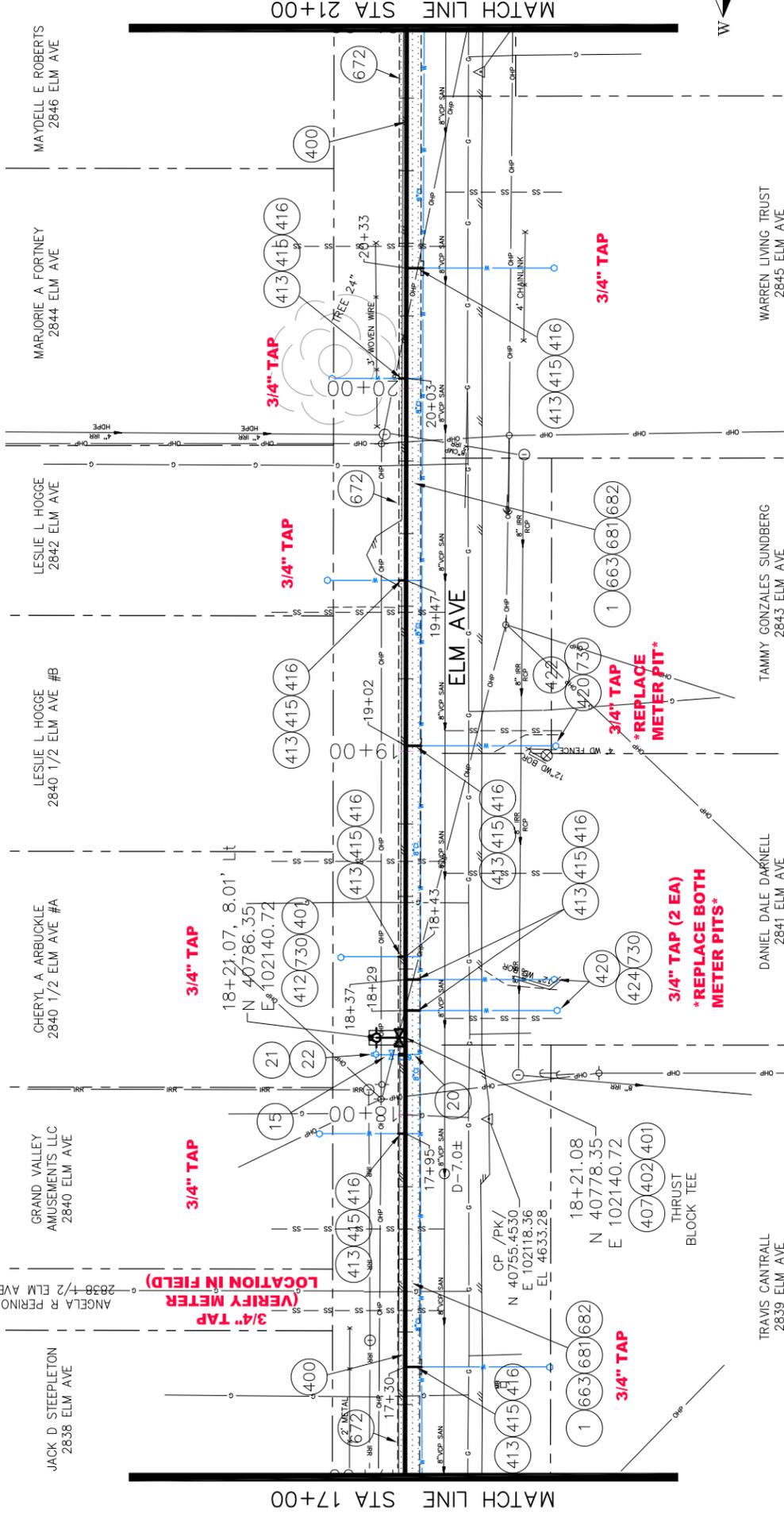
PUBLIC WORKS ENGINEERING DIVISION

ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD

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CONSTRUCTION NOTES:

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (FULL DEPTH) (INDICATED BY DOTTED HATCH PATTERN)
- 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
- 20 202 - ABANDON PIPE. ABANDON BY PLUGGING REMAINING END WITH CONCRETE.
- 21 202 - REMOVE EXISTING WATER VALVE.
- 22 202 - REMOVE EXISTING FIRE HYDRANT AND RETURN TO CITY SHOPS.
- 400 102.7/108.2 - 8" WATER MAIN PIPE (C-900 PVC) (SDR-18) 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 - 6" WATER MAIN PIPE (C-900 PVC) (SDR-18) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 402 102.8b/108.3 - 6" GATE VALVE (MJ)
- 403 102.8b/108.3 - 8" GATE VALVE (MJ)
- 407 102.8/108.3 - 8" x 6" TEE (SWIVEL TEE)
- 412 102.8/108.3 - FIRE HYDRANT ASSEMBLY
- 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 LINE 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)
- 420 108.4 - REMOVE AND REPLACE METER PIT (CITY WILL FURNISH NEW METER PIT FOR CONTRACTOR TO INSTALL)
- 422 210 - RESET FENCE (WIRE FENCE)
- 424 210 - RESET LANDSCAPE APPURTENANCE (WOOD LANDSCAPE BARRIER AND WASHED ROCK IN DRIVEWAY AT PROPERTY 2841 ELM AVE.)
- 426 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)(2' WIDE)(ROADWAY SHOULDER)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT)
- 682 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (T-TOP) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT) (T-TOP WIDTH = 2') (SEE CITY STD. DETAIL GU-03)
- 730 212 - RESOD AREA AS SHOWN (INCLUDES 4" THICK OF CLEAN TOPSOIL)



REVISION	DESCRIPTION	DATE

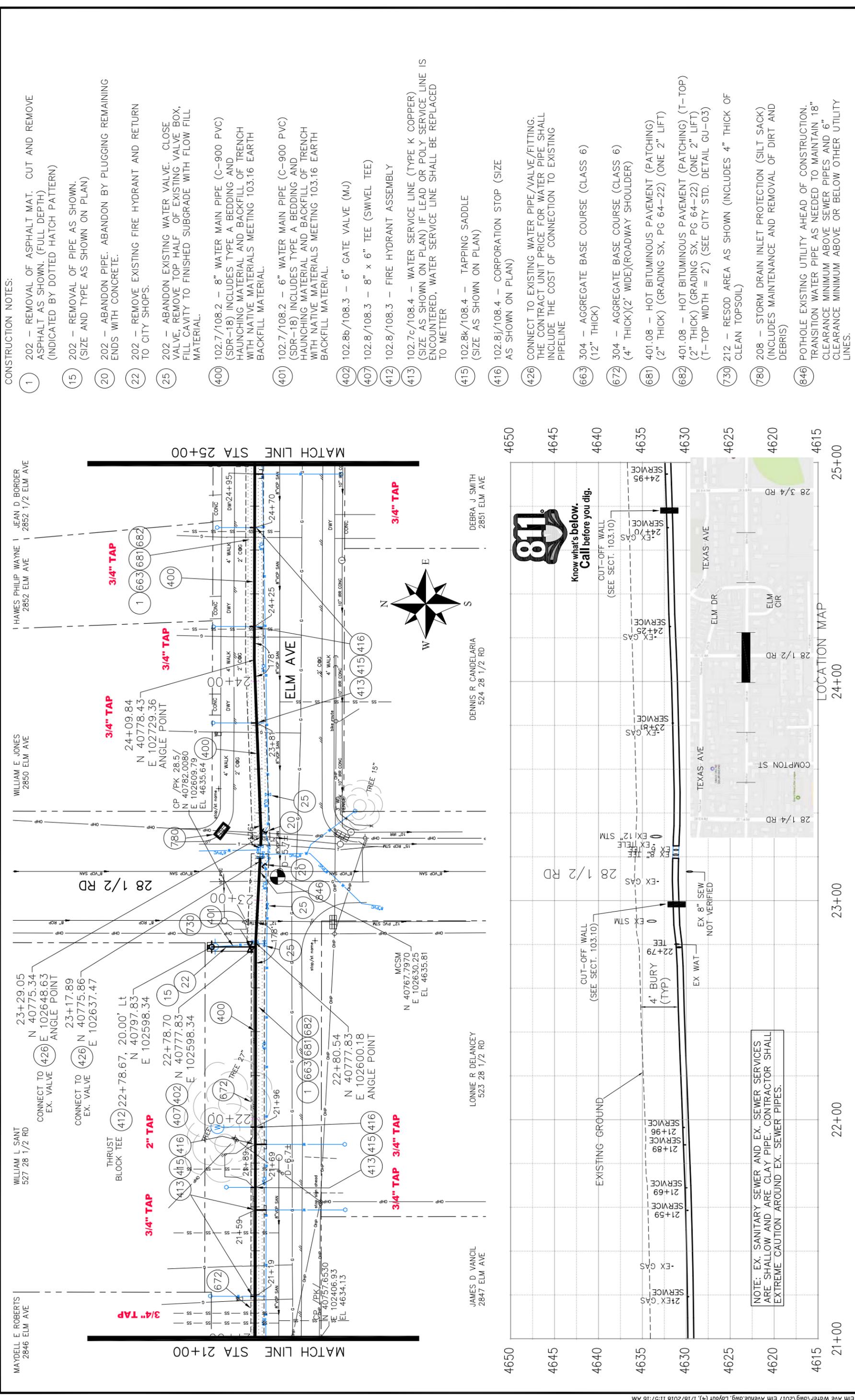
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DATE: 2017
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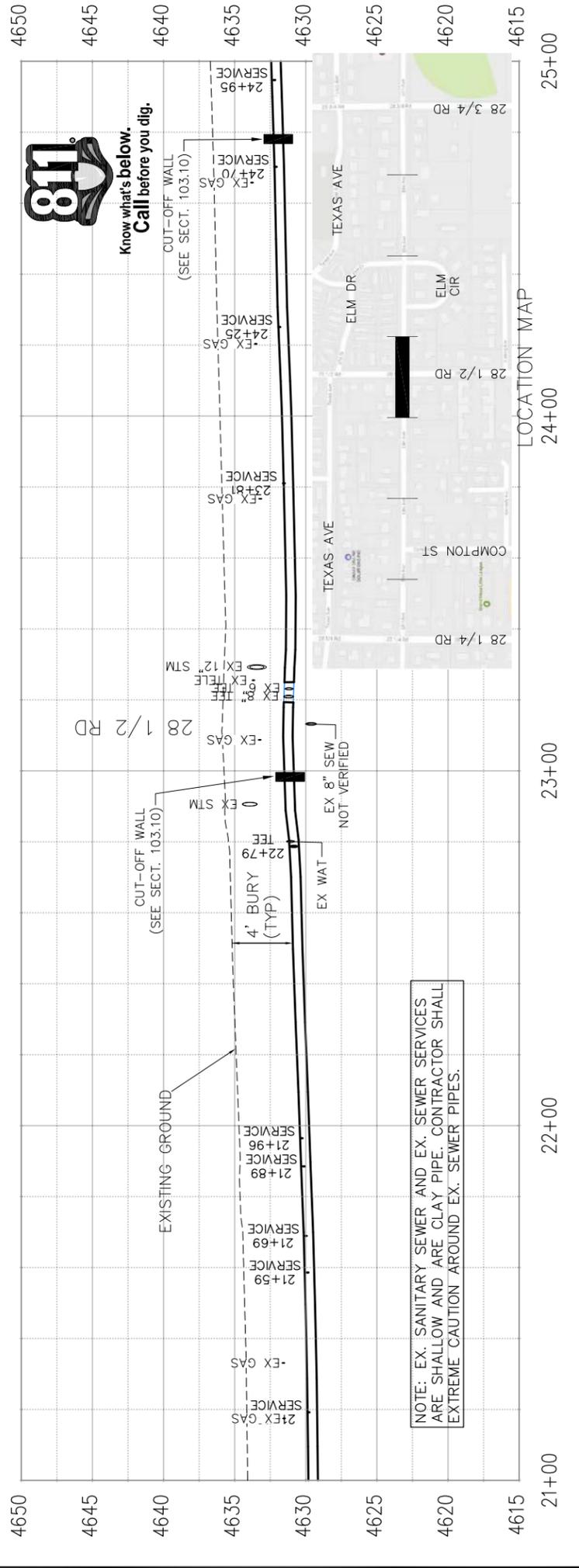
PUBLIC WORKS
 ENGINEERING DIVISION

ELM AVE. WATERLINE REPLACEMENT PROJECT
 28 1/4 TO 28 3/4 ROAD



CONSTRUCTION NOTES:

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (FULL DEPTH) (INDICATED BY DOTTED 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.
- 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.
- 400 102.7/108.2 - 8" WATER MAIN PIPE (C-900 PVC) (SDR-18) 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 - 6" WATER MAIN PIPE (C-900 PVC) (SDR-18) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 402 102.8b/108.3 - 6" GATE VALVE (MJ)
- 407 102.8/108.3 - 8" x 6" TEE (SWIVEL TEE)
- 412 102.8/108.3 - FIRE HYDRANT ASSEMBLY
- 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 LINE SHALL BE REPLACED TO METTER
- 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 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
- 672 304 - AGGREGATE BASE COURSE (CLASS 6) (4" THICK)(2' WIDE)(ROADWAY SHOULDER)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT)
- 682 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (T-TOP) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT) (T-TOP WIDTH = 2') (SEE CITY STD. DETAIL GU-03)
- 730 212 - RESOD AREA AS SHOWN (INCLUDES 4" THICK OF CLEAN TOPSOIL)
- 780 208 - STORM DRAIN INLET PROTECTION (SILT SACK) (INCLUDES MAINTENANCE AND REMOVAL OF DIRT AND DEBRIS)
- 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: EX. SANITARY SEWER AND EX. SEWER SERVICES ARE SHALLOW AND ARE CLAY PIPE. CONTRACTOR SHALL EXTREME CAUTION AROUND EX. SEWER PIPES.



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

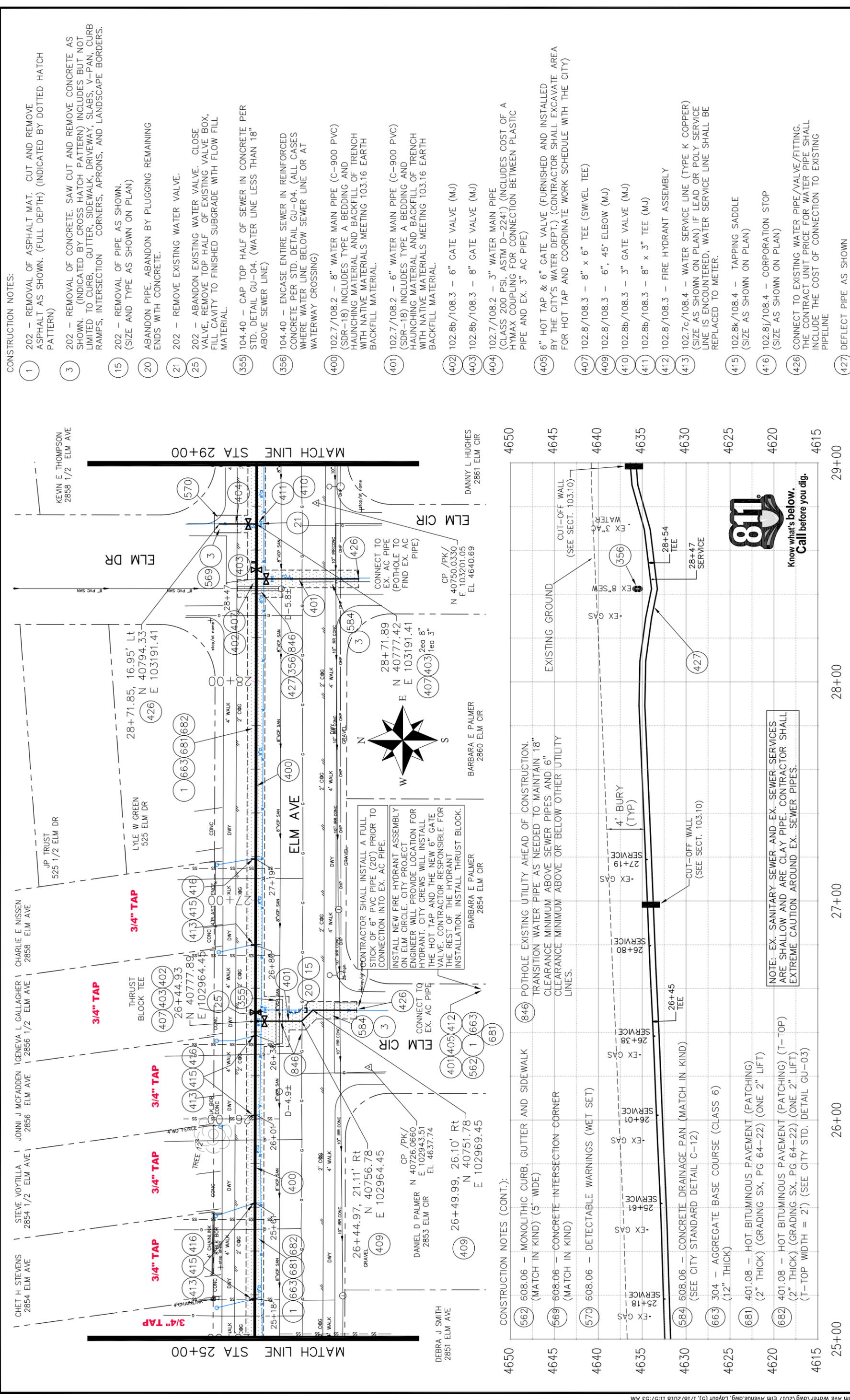
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DESIGNED BY	JCS	DATE	2017
CHECKED BY	ALC	DATE	2017
APPROVED BY	TCP	DATE	2017

PLAN & PROFILE	SCALE: 1" = 20'
HORIZONTAL	SCALE: 1" = 40'
VERTICAL	SCALE: 1" = 10'



PUBLIC WORKS ENGINEERING DIVISION

ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD



CONSTRUCTION NOTES:

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (FULL DEPTH) (INDICATED BY DOTTED 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 ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
- 21 202 - REMOVE EXISTING WATER VALVE.
- 25 202 - ABANDON EXISTING WATER VALVE. CLOSE VALVE, REMOVE TOP HALF OF EXISTING VALVE BOX, FILL CAVITY TO FINISHED SUBGRADE WITH FLOW FILL MATERIAL.
- 355 104.40 - CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)
- 356 104.40 - ENCASE ENTIRE SEWER IN REINFORCED CONCRETE PER STD. DETAIL GU-04. (ALL CASES WHERE WATER LINE BELOW SEWER LINE OR AT WATERWAY CROSSING)
- 400 102.7/108.2 - 8" WATER MAIN PIPE (C-900 PVC) (SDR-18) 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 - 6" WATER MAIN PIPE (C-900 PVC) (SDR-18) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 402 102.8b/108.3 - 6" GATE VALVE (MJ)
- 403 102.8b/108.3 - 8" GATE VALVE (MJ)
- 404 102.7/108.2 - 3" WATER MAIN PIPE (CLASS 200 PSI, ASTM D-2241) (INCLUDES COST OF A HYMAX COUPLING FOR CONNECTION BETWEEN PLASTIC PIPE AND EX. 3" AC PIPE)
- 405 6" HOT TAP & 6" GATE VALVE (FURNISHED AND INSTALLED BY THE CITY'S WATER DEPT.) (CONTRACTOR SHALL EXCAVATE AREA FOR HOT TAP AND COORDINATE WORK SCHEDULE WITH THE CITY)
- 407 102.8/108.3 - 8" x 6" TEE (SWIVEL TEE)
- 409 102.8/108.3 - 6", 45° ELBOW (MJ)
- 410 102.8b/108.3 - 3" GATE VALVE (MJ)
- 411 102.8b/108.3 - 8" x 3" TEE (MJ)
- 412 102.8/108.3 - FIRE HYDRANT ASSEMBLY
- 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 LINE 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 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
- 427 DEFLECT PIPE AS SHOWN



CONSTRUCTION NOTES (CONT.):

- 562 608.06 - MONOLITHIC CURB, GUTTER AND SIDEWALK (MATCH IN KIND)
- 569 608.06 - CONCRETE INTERSECTION CORNER (MATCH IN KIND)
- 570 608.06 - DETECTABLE WARNINGS (WET SET)
- 584 608.06 - CONCRETE DRAINAGE PAN (MATCH IN KIND) (SEE CITY STANDARD DETAIL C-12)
- 663 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
- 681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT)
- 682 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (T-TOP) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT) (T-TOP WIDTH = 2') (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.

NOTE: EX. SANITARY SEWER AND EX. SEWER SERVICES ARE SHALLOW AND ARE CLAY PIPE. CONTRACTOR SHALL EXTREME CAUTION AROUND EX. SEWER PIPES.

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

REVISION	DATE	DRAWN BY	JCS	DATE	2017
REVISION	DATE	DESIGNED BY	JCS	DATE	2017
REVISION	DATE	CHECKED BY	ALC	DATE	2017
REVISION	DATE	APPROVED BY	TCP	DATE	2017

SCALES: PLAN & PROFILE 1" = 20' HORIZONTAL 1" = 2.5' VERTICAL

CITY OF **Grand Junction** COLORADO

PUBLIC WORKS ENGINEERING DIVISION

ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD

8

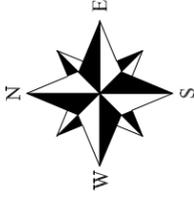
ROLAND P REED
2868 ELM AVE

WILLIAM A CHRISTENSEN
2870 ELM AVE

BILLIE JEAN VERDEJA
2874 ELM AVE

CONNIE SANCHEZ
525 28 3/4 RD

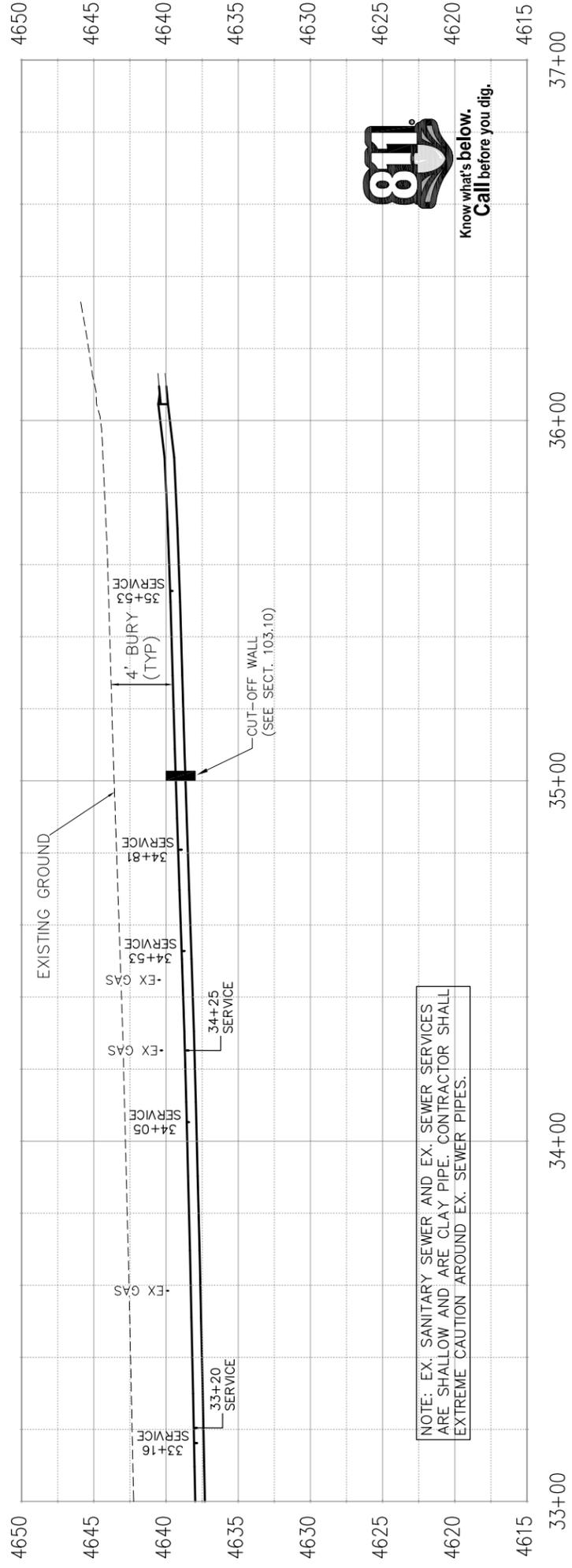
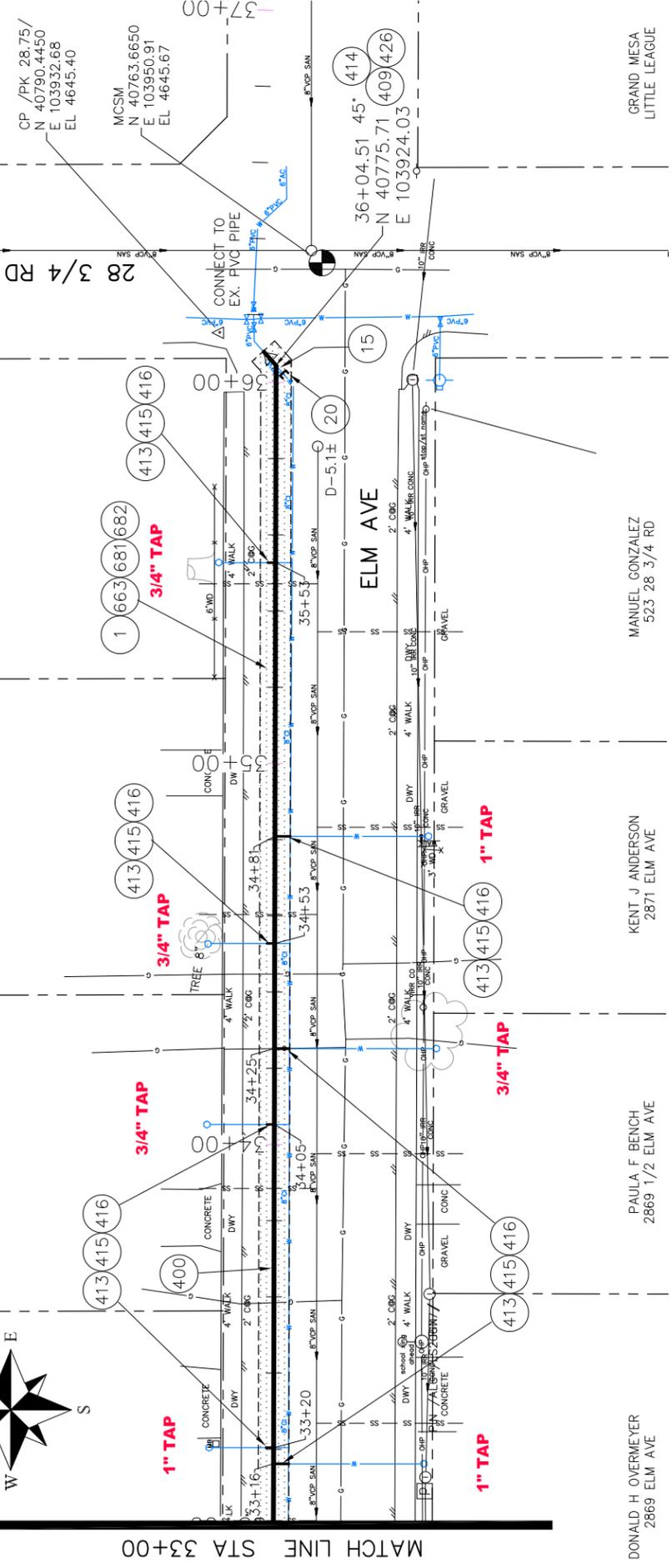
MICHAEL BOCCONCELLI
2880 ELM AVE



MATCH LINE STA 33+00

28 3/4 RD

ELM AVE



NOTE: EX. SANITARY SEWER AND EX. SEWER SERVICES ARE SHALLOW AND ARE CLAY PIPE. CONTRACTOR SHALL EXTREME CAUTION AROUND EX. SEWER PIPES.



CONSTRUCTION NOTES:

- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (FULL DEPTH) (INDICATED BY DOTTED HATCH PATTERN)
15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
20 ABANDON PIPE. ABANDON BY PLUGGING REMAINING ENDS WITH CONCRETE.
400 102.7/108.2 - 8" WATER MAIN PIPE (C-900 PVC) (SDR-18) 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 - 6" WATER MAIN PIPE (C-900 PVC) (SDR-18) 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 - 8", 45' ELBOW (MJ)
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 LINE SHALL BE REPLACED TO METER.
414 102.8/108.3 - 8" x 6" REDUCER (MJ)
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 CONNECT TO EXISTING WATER PIPE/VALVE/FITTING. THE CONTRACT UNIT PRICE FOR WATER PIPE SHALL INCLUDE THE COST OF CONNECTION TO EXISTING PIPELINE
663 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
681 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT)
682 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (1-TOP) (2" THICK) (GRADING SX, PG 64-22) (ONE 2" LIFT) (1-TOP WIDTH = 2') (SEE CITY STD. DETAIL GU-03)



LOCATION MAP

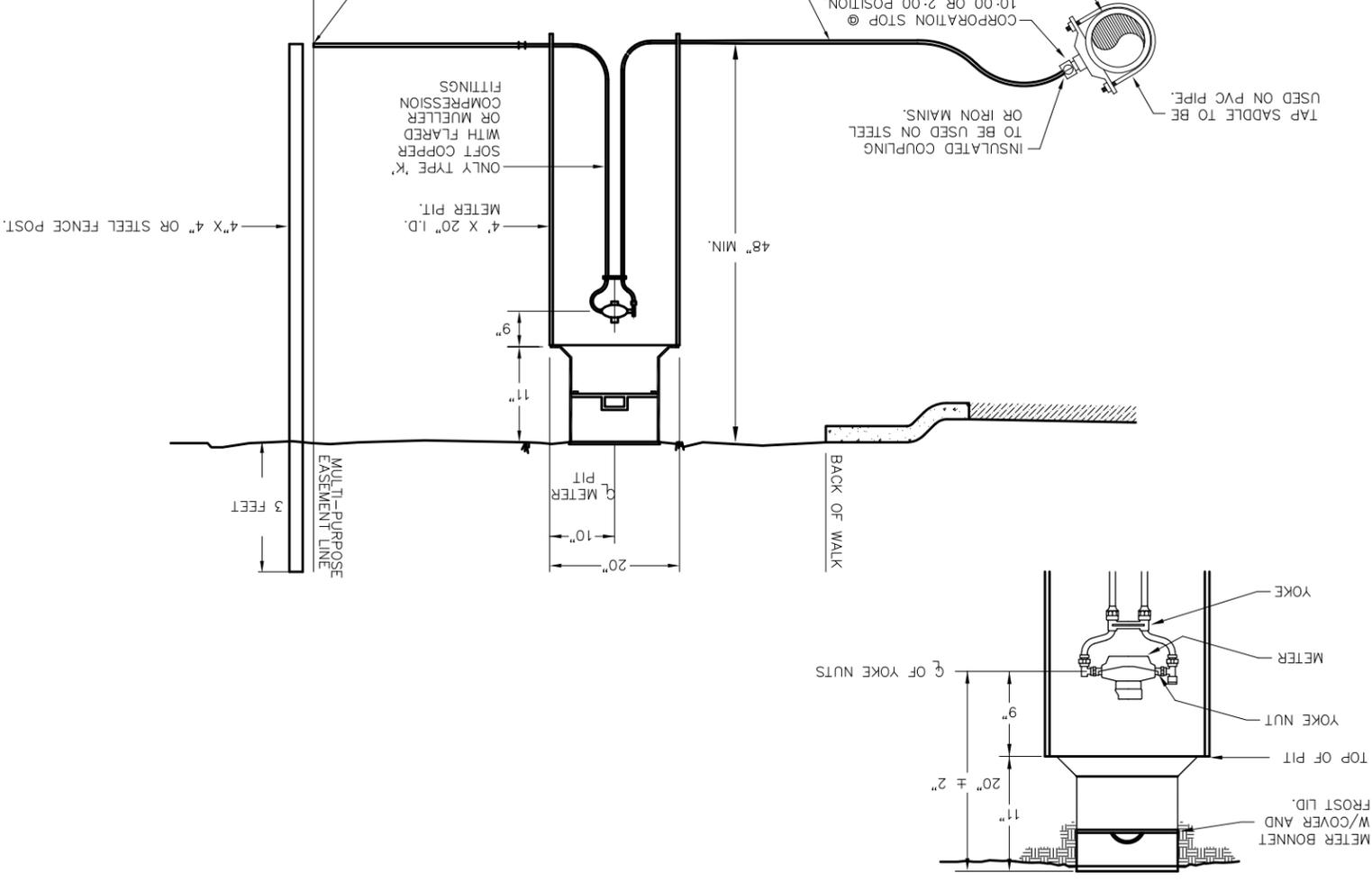
Table with columns: REVISION, DESCRIPTION, DATE. Includes a scale bar and drawing metadata.



PUBLIC WORKS ENGINEERING DIVISION

ELM AVE. WATERLINE REPLACEMENT PROJECT 28 1/4 TO 28 3/4 ROAD

PLUG WATER SERVICE & CONDUIT AT EASEMENT LINE. PLUMBING CONTRACTOR TO COMPLETE SERVICE TO RESIDENCE. NO PVC MALE ADAPTERS ALLOWED. MARK WITH 4" X 4" OR STEEL FENCE POST PAINTED BLUE. POST SHALL BE BURIED SO THAT 3 FEET EXTENDS ABOVE GRADE.



WATER METER INSTALLATION / VERTICAL

DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING AND TECHNICAL SERVICES DIVISIONS CITY OF GRAND JUNCTION, COLORADO	STANDARD WATERLINE DETAIL	APPROVED: DN REV: FEB 2001 DRAWN: TCP/DPW	PAGE W-03
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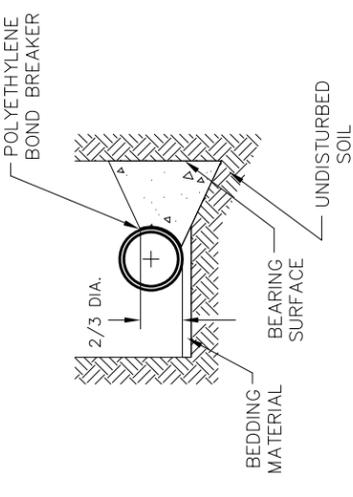
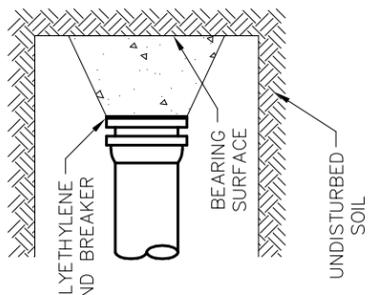
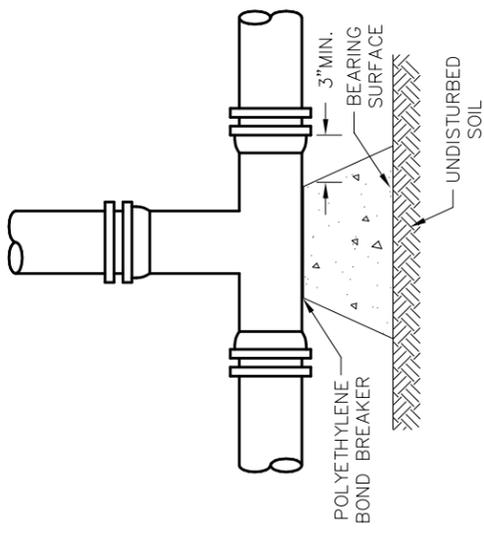
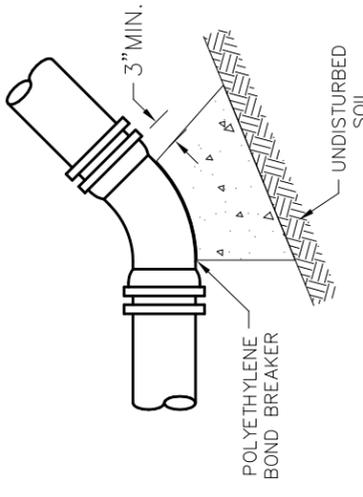
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Δ		DESIGNED BY	2017	2017
Δ		CHECKED BY	2017	2017
Δ		APPROVED BY	2017	2017

SCALES: PLAN & PROFILE: 1" = 10' HORIZONTAL, 1" = 2' VERTICAL



PUBLIC WORKS
ENGINEERING DIVISION

ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD
DETAILS



GENERAL NOTES:

1. All fittings to be wrapped with 8 mil polyethylene.
2. Pipe installed under conditions different from those normally encountered shall require thrust blocks designed for those particular conditions.
3. Thrust blocks on pipe larger than 12 inches diameter shall be designed for conditions existing at the installation site.
4. All thrust blocks to be 3000 p.s.i. concrete.
5. Mechanical restraints are to be installed in accordance with City Standards for Construction of Underground Utilities Section 104.3d.

THRUST BLOCK DETAILS

DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING AND TECHNICAL SERVICES DIVISIONS CITY OF GRAND JUNCTION, COLORADO	STANDARD WATERLINE DETAIL	APPROVED: DN DATE: MAY 2003 DRAWN: TCP/DPW	PAGE W-07
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BEARING AREAS (IN SQ. FT.)			TEES, DEAD ENDS, AND CROSS w DEAD END BRANCHES		
SIZE	BENDS				
	90°	45°	22 1/2°	11 1/2°	
3	1.0	0.6	0.3	0	0.7
4	1.8	1.0	0.5	0	1.3
6	4.0	2.2	1.1	0	2.8
8	7.1	3.8	2.0	1.0	5.0
10	11.1	6.0	3.0	1.5	7.8
12	16.0	8.6	4.4	2.2	11.3
14	21.7	11.8	6.0	3.0	15.4
15	25.0	13.5	7.0	3.5	17.6
16	28.4	15.3	8.0	4.0	20.0
18	36.0	19.4	10.0	5.0	25.4
20	44.2	24.0	12.2	6.1	31.4
21	49.0	26.5	13.5	6.8	34.6
22	54.0	29.0	14.8	7.4	38.0
24	64.0	34.5	17.7	8.8	45.0
30	100.0	54.0	27.6	13.8	71.0
36	144.0	78.0	40.0	20.0	102.0

NOTE: TEE SIZE IS BRANCH SIZE.

AREAS GIVEN IN TABLE ARE BASED UPON INTERNAL STATIC PRESSURE OF 100 P.S.I. AND SOIL BEARING CAPACITY OF 1,000 lbs. PER SQ. FT.

BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING TABULATED VALUES BY A CORRECTION FACTOR "F"

F = $\frac{\text{ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF lbs.}}{\text{ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF lbs.}}$

SOIL BEARING CAPACITIES SHALL BE DETERMINED BY THE ENGINEER

ALL WATER LINE PLANS SHALL CONTAIN THE FOLLOWING TABLE, WITH THE VALUES FILLED IN BY THE ENGINEER:

SOIL BEARING CAPACITY - _____ LBS/SQ. FT.
 TEST PRESSURE - _____ P.S.I.
 BEARING AREA MULTIPLIER (F) - _____

TABLE FOR CONCRETE THRUST BLOCKING

REVISION Δ	DATE	DRAWN BY	JCS	DATE	2017
REVISION Δ		DESIGNED BY	ALC	DATE	2017
REVISION Δ		CHECKED BY	ALC	DATE	2017
REVISION Δ		APPROVED BY	TCP	DATE	2017

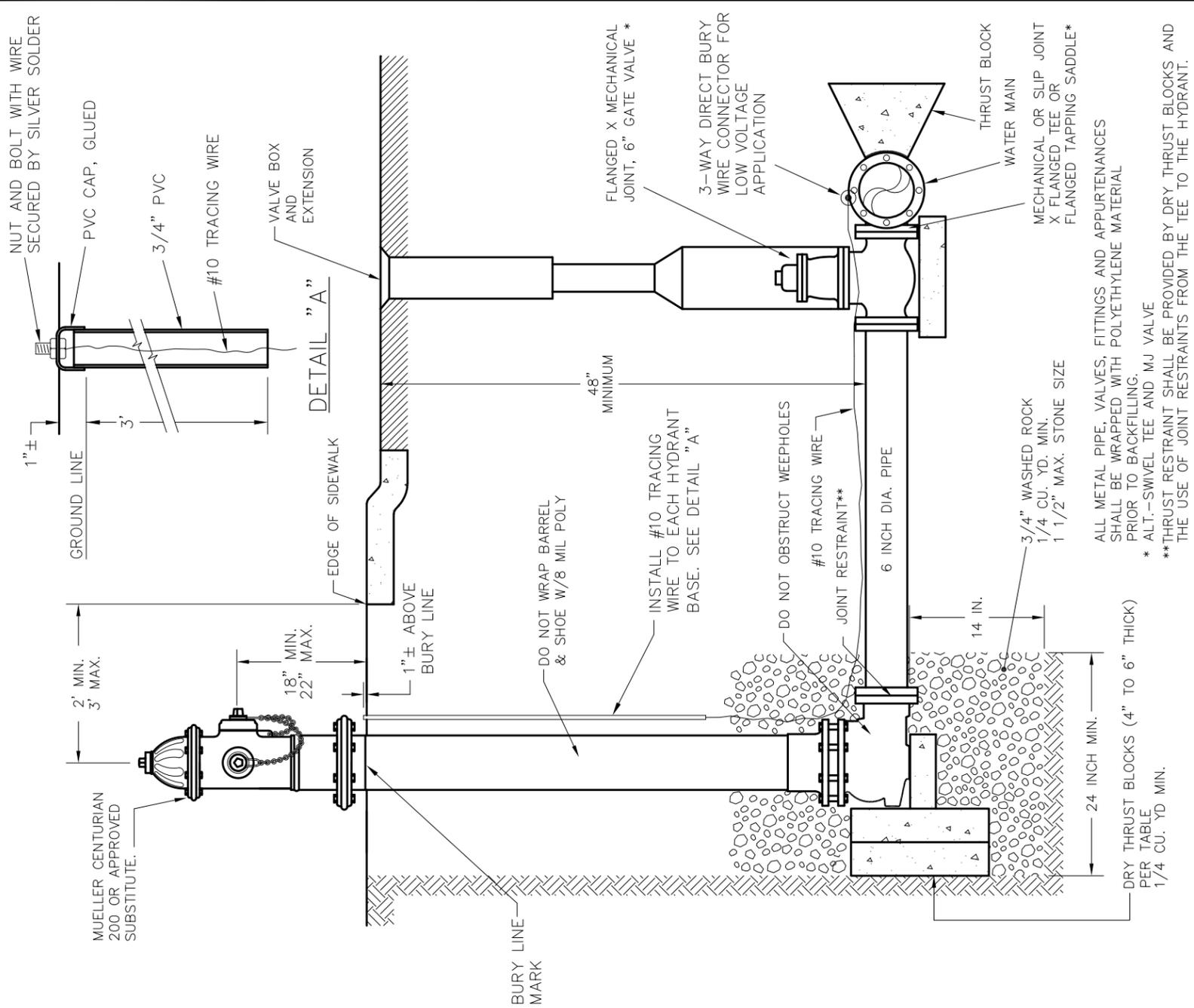
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SCALES: PLAN & PROFILE
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 0 25 50
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 0 10
 0 10



PUBLIC WORKS
ENGINEERING DIVISION

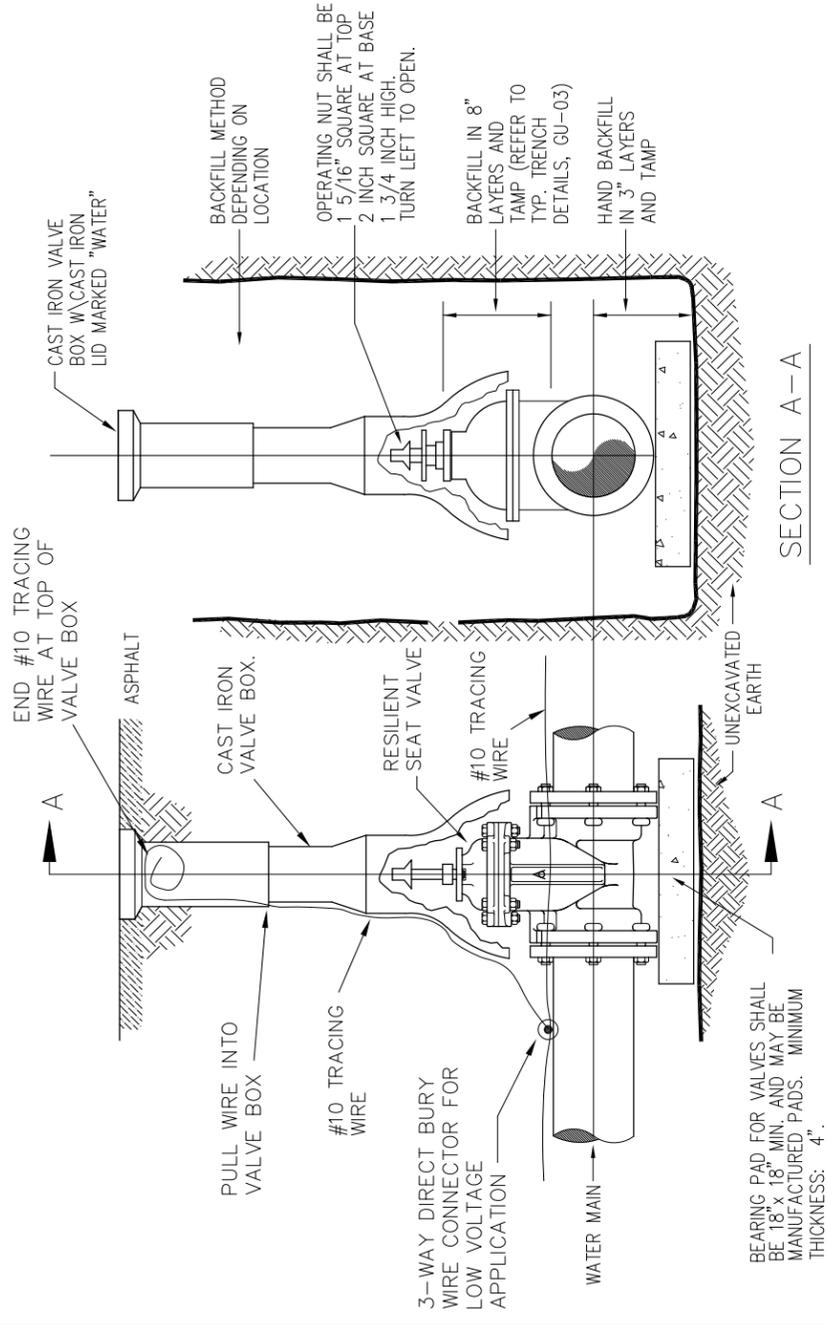
ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD
DETAILS



FIRE HYDRANT

DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING AND TECHNICAL SERVICES DIVISIONS CITY OF GRAND JUNCTION, COLORADO	STANDARD WATERLINE DETAIL	APPROVED: DN DATE: MAY 2003 DRAWN: TCP/DPW	PAGE W-09
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ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD
DETAILS



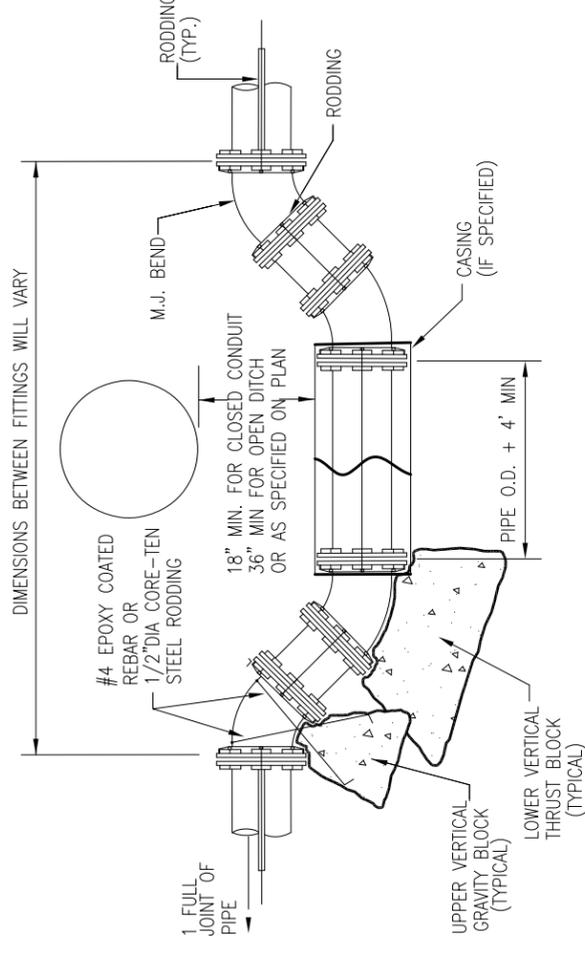
ALL VALVES TO BE RESILIENT SEAT, EPOXY COATED INSIDE AND OUT PER CITY OF GRAND JUNCTION AND AWWA SPECS.

ALL VALVE BOXES TO BE OF CAST IRON CONSTRUCTION, TWO PIECE SLIDE CASING ADJUSTABLE DESIGN PER CITY OF GRAND JUNCTION SPECS.

ALL VALVES TO BE 8 MIL POLY WRAPPED.

ALL PACKING BOLTS AND VALVE BONNET BOLTS SHALL BE STAINLESS STEEL. ALL BOLTS FOR MECHANICAL JOINTS SHALL BE COR-BLUE OR APPROVED EQUAL. ALL BOLTS FOR FLANGE CONNECTIONS SHALL BE STAINLESS STEEL BOLTS COATED WITH ANTI-SEIZE.

INSTALL TRACING WIRE IN THE SOUTHERLY MOST VALVE BOX IN EACH INTERSECTION AS SHOWN.



NOTES:

- 1) SIZING OF VERTICAL THRUST BLOCKS BY DESIGN ENGINEER.
- 2) WHEN RESTRAINING PIPE BY MEANS OF RODDING JOINTS, 3/4" TIE RODS, NUTS, AND WASHERS WILL BE USED AND ARE TO BE MADE OF "COR-TEN" STEEL AS PER A.S.T.M. A242. SEE TABLE 1 FOR # OF RODS REQUIRED.
- 3) ALL METALIC PIPE, FITTINGS, AND APPURTENANCES WILL BE WRAPPED IN 8 MIL POLYETHYLENE.
- 4) REQUIREMENTS FOR LARGER THAN 12" DIAMETER PIPE WILL BE DETERMINED ON A CASE BY CASE BASIS.

TABLE 1

Pipe Size	Minimum number of Tie Rods
12" and less	2

VALVE BOX ASSEMBLY

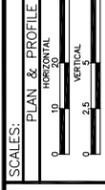
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

STANDARD WATERLINE
DETAIL

APPROVED: *DN*
DATE: *MAY 2003*
DRAWN: *TCP/DPW*

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REVISION Δ	DESIGNED BY JCS	DATE 2017	DATE 2017	DATE 2017
REVISION Δ	CHECKED BY ALC	DATE 2017	DATE 2017	DATE 2017
REVISION Δ	APPROVED BY TCP	DATE 2017	DATE 2017	DATE 2017



LOWERING FOR UTILITY CROSSING - 12" OR SMALLER WATERLINE

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

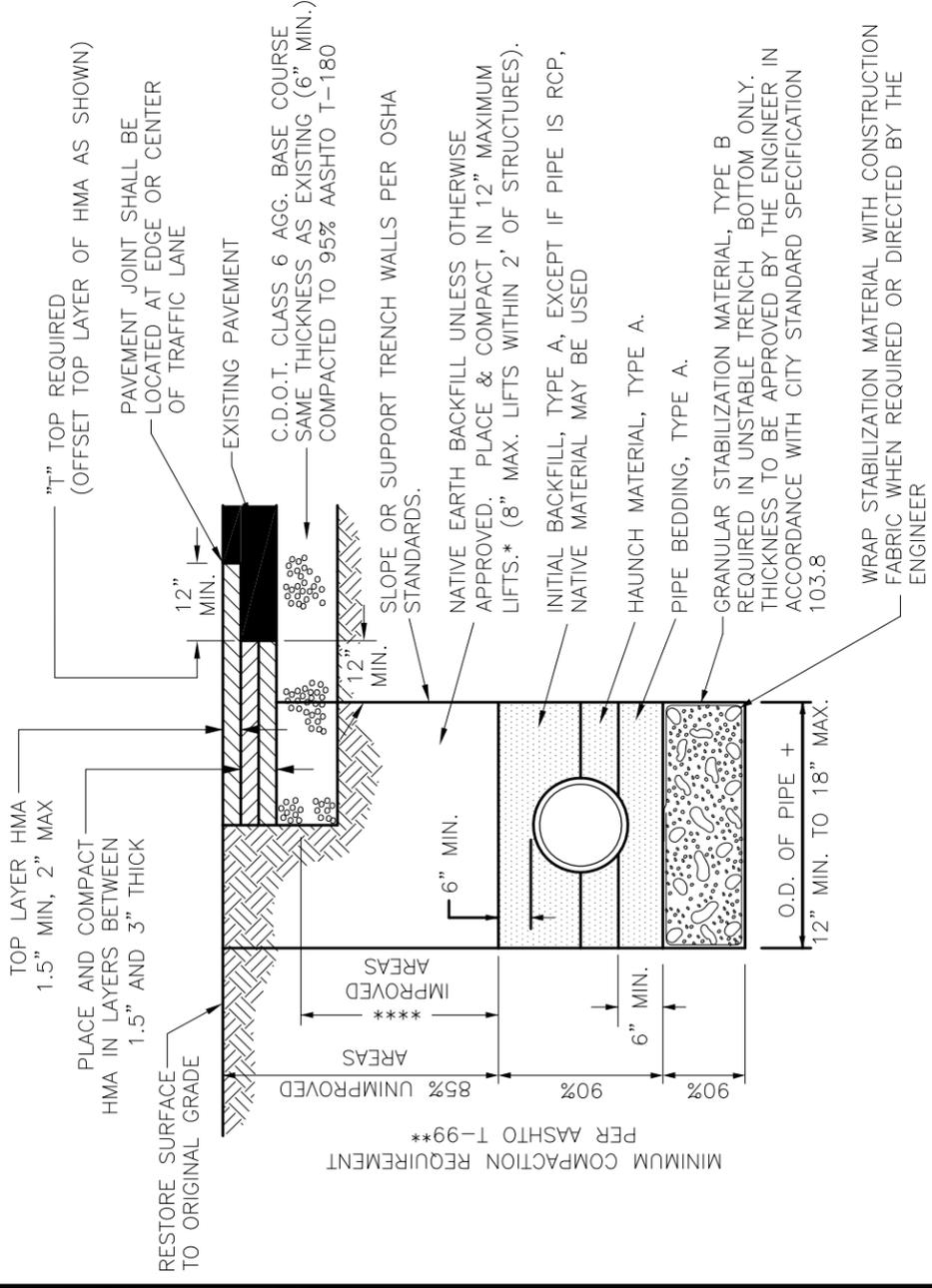
STANDARD WATERLINE
DETAIL

APPROVED: *DN*
DATE: *MAY 2003*
DRAWN: *TCP/DPW*

PAGE
W-12

**PUBLIC WORKS
ENGINEERING DIVISION**

**ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD
DETAILS**



SIEVE SIZE	MAXIMUM PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES	IMPORTED BACKFILL MATERIAL (USE ONLY WHERE SPECIFIED OR DIRECTED BY THE ENGINEER)
12 INCH	---	100
2 INCH	---	---
1 INCH	100	---
NO 4	---	---
NO 200	20 MAX ***	3% - 20% ***

* 24" COMPACTED BACKFILL REQUIRED OVER ALL PLASTIC PIPE PRIOR TO VEHICLE OR HEAVY EQUIPMENT LOADING.

** COMPACT PER AASHTO T-180 WHEN SPECIFIED, DIRECTED OR APPROVED BY THE ENGINEER.

*** PLASTIC INDEX (PI) SHALL NOT BE MORE THAN 7.

**** TRENCH BACKFILL UNDER ASPHALT OR CONCRETE PAVEMENT SHALL BE COMPACTED PER SECTION 103.14 AND TABLE 101 IN THE SSFUU (STANDARD SPECIFICATIONS FOR UNDERGROUND UTILITIES).

ALL BACKFILL MATERIAL SHALL BE UNIFORMLY ADJUSTED TO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT PRIOR TO PLACEMENT AND COMPACTION.

TYPICAL TRENCH DETAIL

DEPARTMENT OF PUBLIC WORKS AND PLANNING
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

APPROVED: DN
REVISED: FEB 2007
DRAWN: TLI

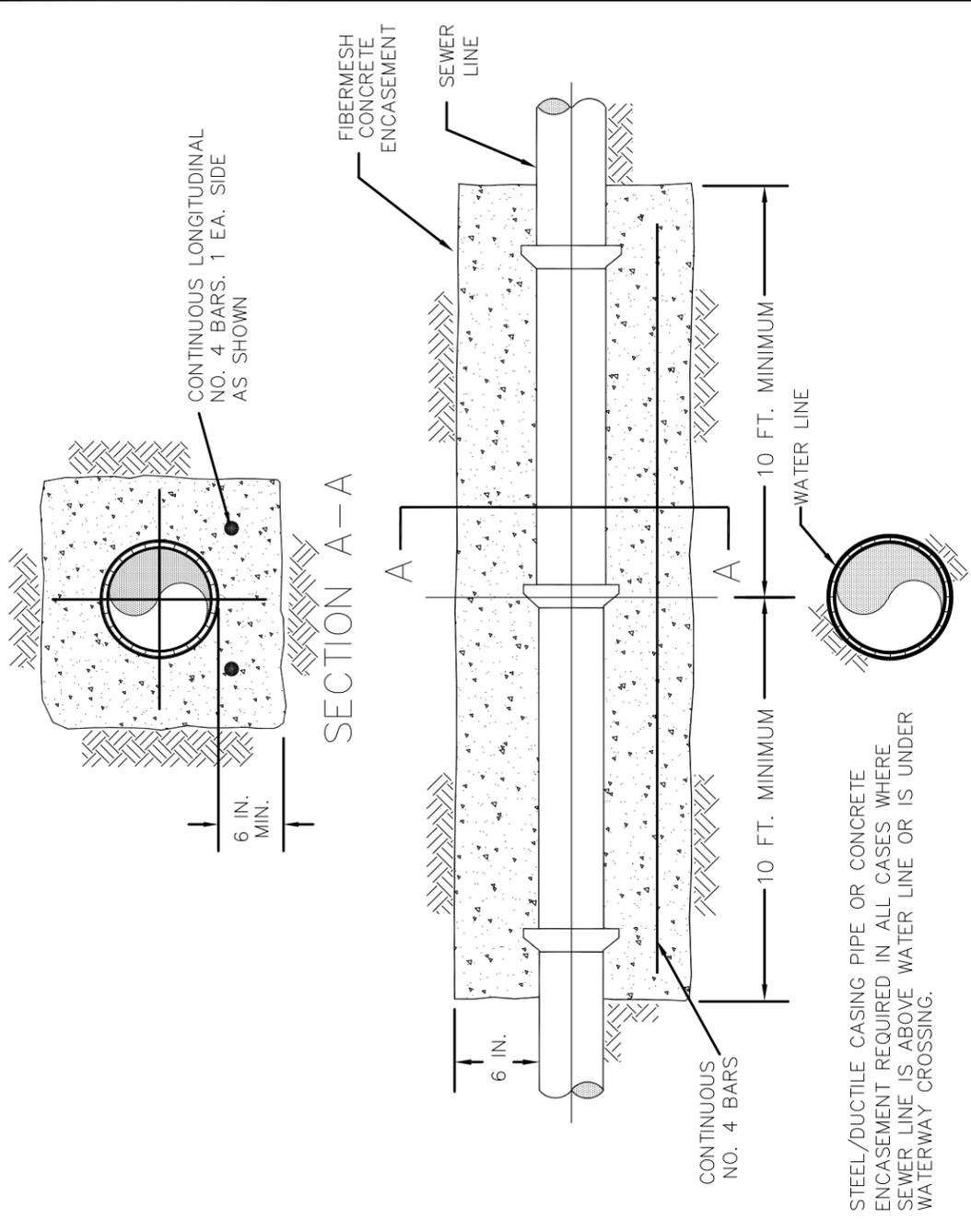
GENERAL UTILITY
DETAIL

PAGE
GU-03

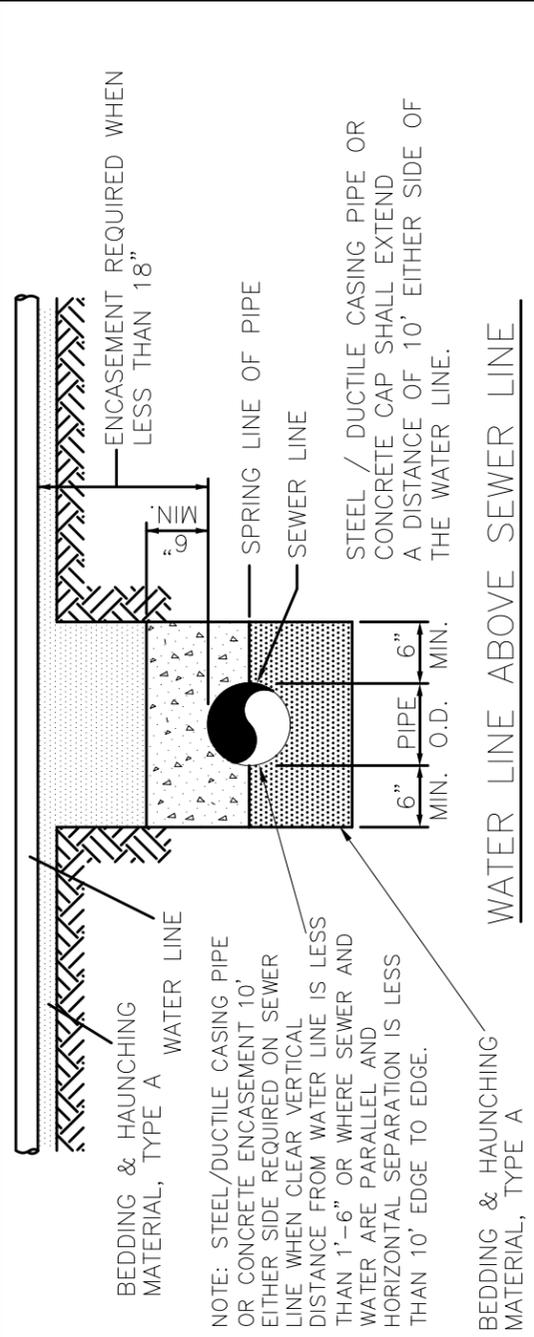
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DRAWN BY: JCS DATE 2017
DESIGNED BY: JCS DATE 2017
CHECKED BY: ALC DATE 2017
APPROVED BY: TCP DATE 2017

SCALES: PLAN & PROFILE
0 10 20
0 25 50
1" = 10' HORIZONTAL
1" = 2' VERTICAL



WATER LINE BELOW SEWER LINE



TYPICAL WATER AND SEWER LINE CROSSINGS

DEPARTMENT OF PUBLIC WORKS AND PLANNING
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

APPROVED: DN
DATE: FEB 2005
DRAWN: TCR/DPW

GENERAL UTILITY
DETAIL

PAGE
GU-04

**PUBLIC WORKS
ENGINEERING DIVISION**

**ELM AVE. WATERLINE REPLACEMENT PROJECT
28 1/4 TO 28 3/4 ROAD
DETAILS**

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