

Specifications and Contract Documents
Water System Rehabilitation & Upgrade Project
Contract 2 – Water Meter & Service Tubing Replacement

prepared for the

**Morton
Gap
Water
Works**



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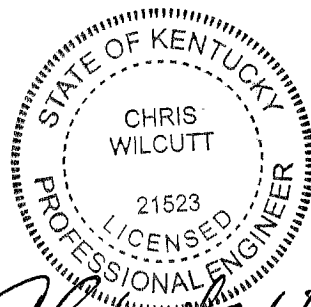
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1-24-20

City of Mortons Gap Water Works

WATER SYSTEM REHABILITATION & UPGRADE PROJECT Contract No. 2 – Water Meter & Service Tubing Replacement CONTRACT DOCUMENTS

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Contract Drawings

Contract Drawings consist of 1 sheets bound separately from this document

ADVERTISEMENT FOR BIDS

City of Mortons Gap
P.O. Box 367 - 131 Cross Street
Mortons Gap, KY 42440

**RE: Water System Rehabilitation & Upgrade Project
Contract 2 – Water Meter & Service Tubing Replacement**

The **City of Mortons Gap** will receive separate, sealed Proposals for their **Water System Rehabilitation & Upgrade Project: Contract 2 – Water Meter & Service Tubing Replacement** until **10:00 a.m. local time, Tuesday, April 14, 2020** at the Mortons Gap City Hall, 131 Cross Street, P.O. Box 367, Mortons Gap, Kentucky, 42440, at which time they will be publicly opened and read aloud.

The contract involves the replacement of all sizes of water meters, approximately 500 total, plus new tubing and accessories in the Mortons Gap Water System (Hopkins County). The individual water meters will be provided by the Owner, and the meters were purchased via separate contract as part of the project.

The Issuing Office for the Bidding Documents is: McGhee Engineering, Inc., at P.O. Box 267, 202 South Ewing Street, Guthrie, Kentucky 42234 or by calling (270) 483-9985. Perspective Bidders may examine the Bidding Documents at the Issuing Office on Mondays through Fridays between the hours of 8:30-4:30 pm, and may obtain copies of the Bidding Documents from the Issuing Office as described below. Plans must be ordered by visiting www.mcgheeengineering.com and clicking "**Bid Opportunities**". Plans will be sold with an option of Digital only OR Printed Set w/ Digital copy. Bids will be accepted only from registered contractors holding approved bid forms provided by the Issuing Office. Plan holders may be viewed at www.mcgheeengineering.com.

A **Pre-bid Conference** will be held at **2:00 P.m. local time, on Tuesday, March 31, 2020**, at the **Mortons Gap City Hall**, 131 Cross Street, Mortons Gap, KY 42440. Bidders are encouraged to attend and participate in the conference.

All bidders shall submit with their bid an acceptable bid bond or a certified check in the amount of five percent (5%) of the bid, payable to the Owner. The Owner reserves the right to waive any informalities or to reject any and all bids. No bidder may withdraw their bid after the date of the bid opening. The award of this project will be to the lowest, responsive, responsible bidder. The Bidder awarded the contract shall substantially complete this project within **120** calendar days. Liquidated damages will be assessed at **\$500** per calendar day. This project is funded with funds provided by Community Development Block Grant program plus the Kentucky Drinking Water State Revolving Fund (SRF) with federal funds provided by the Environmental Protection Agency. SRF requirements and provisions must be met by the Bidder and all subcontractors. Bidders must comply with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, and the Contract Work Hours Standard Act. Bidders must comply with the President's Executive Order No. 11246 as amended, which prohibits discrimination in employment regarding race, creed, color, sex or national origin. This project will be in compliance with Executive Order 11246 (Equal Employment Opportunity) as amended. Contractor/Subcontractor will comply with 41 CFR 60-4, in regard to affirmative action, to insure equal opportunity to females and minorities and will apply the time tables and goals set forth in 41 CFR 60-4. Bidder will make positive efforts to use small, minority, women owned and disadvantaged businesses. Procurement will be subject to DOW Procurement Guidance including the Davis-Bacon Act.

Preparation of Bid for CDBG Funded Project:

Each bid must be submitted on the prescribed form and accompanied by Certification of Bidder Regarding Equal Employment Opportunity, Form 950.1; Certification of Bidder (Contractor) Concerning Labor Standards and Prevailing Wage Requirements, Form 1421; & Certification of Bidder Regarding Section 3 and Segregated Facilities. All blank spaces for bid prices must be filled in, by ink or typewritten, in both words and figures, and the foregoing Certifications must be fully completed and executed when submitted. Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and Davis/Bacon Act prevailing minimum wages to be paid under contract, Section 3, Segregated Facility, Section 109, and E.O 11246 and Title VI. Minority bidders are encouraged to bid. Owner reserves the right to waive any informalities or to reject any or all bids.

Published by the authority of the City of Mortons Gap
Chris Phelps, Mayor

Dated: March 24, 2020

INSTRUCTIONS TO BIDDERS

A. These Instructions to Bidders establish requirements for Bidding and Award of Contract.

B. Table of Articles

Article 1 – Defined Terms

Article 2 – Copies of Bidding Documents

Article 3 – Qualifications of Bidders

Article 4 – Site and Other Areas; Existing Site Conditions; Examination of Site; Owner's Safety Program;
Other Work at the Site

Article 5 – Bidder's Representations

Article 6 – Pre-Bid Conference

Article 7 – Interpretations and Addenda

Article 8 – Bid Security

Article 9 – Contract Times

Article 10 – Liquidated Damages

Article 11 – Substitute and "Or-Equal" Items

Article 12 – Subcontractors, Suppliers, and Others

Article 13 – Preparation of Bid

Article 14 – Basis of Bid

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Article 16 – Modification and Withdrawal of Bid

Article 17 – Opening of Bids

Article 18 – Bids to Remain Subject to Acceptance

Article 19 – Evaluation of Bids and Award of Contract

Article 20 – Bonds and Insurance

Article 21 – Signing of Agreement

Article 22 – Retainage

Article 23 – Licenses, Fees & Taxes

Article 24 – Wage Rate Determination

Article 25 – Other Bid Requirements

Article 26 – Laws, Ordinances & Regulations

Article 27 – Insurance

Article 28 – Safety Standards & Accident Prevention

ARTICLE 1- DEFINED TERMS

Other terms used in the bidding documents and not defined elsewhere have the following meanings which are applicable to both the singular and plural thereof.

1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and the Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.

- A. Bidder - The individual or entity who submits a Bid directly to OWNER.
- B. Issuing Office - The office from which the Bidding Documents are to be issued.
- C. Successful Bidder - The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.

2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assume any responsibility for errors or misinterpretation resulting from the use of incomplete sets of Bidding Documents.

2.03 OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualification to perform the Work, after submitting its Bid and within **10** days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:

- A. Evidence of Bidder's authority to do business in the state where the Project is located.
- B. Bidder's state or other contractor license number, if applicable.
- C. Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 - SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE;
OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:

- a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
- b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
- d. Technical Data contained in such reports and drawings.

- 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

- 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 7 of the General Conditions will apply.

- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.

- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER'S REPRESENTATION

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work,
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the

Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;

- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE

6.01 If warranted, a pre-Bid conference will be held at the time and location stated in the invitation or advertisement for bids. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents. Addenda will be mailed no later than **three days** prior to the day set for receiving Bids. Failure of any Bidder to receive any such Addendum or interpretation shall not relieve such Bidder from any obligations under the Bid as submitted. All Addenda so issued shall become part of the Contract Documents.

7.03 Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

7.04 Receipt of all addenda must be acknowledged in space provided in the Bid.

ARTICLE 8 - BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to OWNER in an amount of **five percent (5%)** of the Bidder's maximum Bid price and in the form of a certified check or a Bid Bond (EJCDC No. C-430, 2013 Edition) issued by a surety meeting the requirements of paragraphs 6.01 and 6.02 of the General Conditions.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 10 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 - CONTRACT TIMES

9.01 The number of days within which, or the dates by which the Work is to be substantially completed, and completed and ready for final payment, are set forth in the Agreement.

ARTICLE 10 - LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, for failure to timely attain Substantial Completion or completion of the Work in readiness for final payment are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE OR "OR-EQUAL" ITEMS

11.01 The Contract for the Work, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date of receipt of Bids in the case of a proposed substitute and 5 days prior in the case of a proposed "or equal". Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. Each such request shall include Manufacturer's Certification letter for compliance with AIS requirements and subsequent statutes mandating domestic preference, if applicable. Refer to Manufacturer's Certification Letter provided in these Contract Documents.

11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

11.03 If award is made, Contractor shall be allowed to submit proposed substitutes and "or equals" in accordance with the General Conditions.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 A list of subcontractors, suppliers, individuals, or entities shall be submitted along with the Bid at the Bid Opening to the OWNER.

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

12.03 CONTRACTOR shall not be required to employ any subcontractor, supplier, individual, or entity against whom CONTRACTOR has reasonable objection.

12.04 The CONTRACTOR shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.

ARTICLE 13 – PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents.

- A. All blanks on the Bid form must be typed or completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternative, adjustment unit price item, and unit price item listed therein.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown. The corporate seal shall be affixed and attested by the secretary or an assistant secretary.

13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.

13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.

13.05 A Bid by an individual shall show the Bidder's name and address for receiving notices.

13.06 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The joint venture's address for receiving notices shall be shown.

13.07 All names shall be typed or printed in ink below the signatures.

13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the number and dates of which must be filled in on the Bid form.

13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.10 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 - BASIS OF BID; COMPARISON OF BIDS

14.01 Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

14.02 The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

14.03 Discrepancies between the multiplication of units of Work and unit 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.

ARTICLE 15 - SUBMITTAL OF BID

15.01 Bid Form is to be completed and submitted with all the attachments as required.

15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to the location of the bid opening, as listed in the Advertisement.

15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BIDS

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the

Bidder.

16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.

16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 - OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for a period of **90 days**, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS & AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsive. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.

19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the responsive Bid perceived by the Owner as offering the greatest advantage to the Owner.

19.03 Evaluation of Bids

- A. In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternatives, unit prices, and other data as may be requested in the Bid form or prior to the Notice of Award.
- B. For the determination of the apparent low Bidder(s) when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

19.06 The Bid is subject to Kentucky Revised Statutes Section 45A.490 through 45A.494, which in general provides that a "resident bidder" of Kentucky is to be given a bidding preference over a "nonresident bidder" who is registered in a state that gives preference to its in-state resident bidders over a Kentucky resident bidder. The bidding preference is to be the same as that stipulated of the state of the "nonresident bidder." If the state of "nonresident bidder" provides no specific preference, then "resident" and "nonresident bidders" are to be treated the same when evaluating Bids.

ARTICLE 20 - BONDS AND INSURANCE

20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to performance and payment bonds and insurances. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment bonds and insurances.

20.02 All bonds required by the project shall be payable to the OWNER in an amount of one hundred percent of the Contractor's maximum Base Bid price.

ARTICLE 21 - SIGNING OF AGREEMENT

21.01 When the OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by a list of items and information required of the Successful Bidder for evaluation by the OWNER and funding agency, if applicable. Within **10** days thereafter, the successful Bidder shall deliver the full number of original copies of the items listed and the Notice must be acknowledged by the Successful Bidder within **10** days thereafter. After receipt of an acknowledged Notice of Award, a pre-construction meeting will be scheduled at which time the OWNER and Successful Bidder will execute the required number of Agreements and Notices to Proceed. After certification by the Local Counsel and any other required parties, the OWNER shall deliver one fully signed counterpart to the Successful Bidder along with a complete set of Drawings with appropriate identification. OWNER will furnish the Contract, up to three (3) sets of conforming Contract Documents, Technical Specifications and Plans free of charge. Additional sets may be obtained from the Engineer at commercial reproduction rates. The successful bidder shall commence work within ten (10) calendar days after receipt of written notice to proceed and shall progress therewith so that the work shall be completed in accordance with the terms of the Contract Documents within the time allowed after the date of the commencement of contract time.

21.02 This Contract is expected to be funded in part with funds provided by the Kentucky Drinking Water State Revolving Fund (SRF) as administered by the Kentucky Infrastructure Authority (KIA) and the Community Development Block Grant (CDBG). SRF & CDBG requirements and provisions must be met by the Bidder and all subcontractors.

21.03 Concurrence by KIA in the award of the Contract is required before the Contract is effective.

21.04 This procurement will be subject to Division of Water Procurement Guidance including the Davis-Bacon Act.

ARTICLE 22 - RETAINAGE

22.01 Prior to Substantial Completion, OWNER will retain an amount equal to 5% of each progress payment application. Amounts previously retained shall not be paid to the CONTRACTOR until

substantial completion of the Work. In no event shall the total Retainage be more than 5% of the value of the work satisfactorily completed.

22.02 Retainage shall be applicable to the Total Value of Work and Stored Materials less the Value of In-place OWNER Purchased Materials.

ARTICLE 23 – LICENSES, FEES, AND TAXES

23.01 The Bid shall include all taxes in effect at the time the Bid is submitted, unless specifically exempted in the Bidding Documents. No change will be allowed for taxes from which OWNER is exempt. Bidders who are uncertain as to what items are subject to tax, or who require further explanation or clarification, are requested to contact the State of Kentucky Revenue Cabinet.

23.02 Successful Bidder must comply with any City ordinances relating to Occupational License Fees, Business Licenses, payroll, and net profits taxes and any other ordinances which may apply to the project. Refer to the Supplementary Conditions SC-6.10 for additional information.

23.03 Successful Bidder must provide proof of having all such licenses or fees at or before the signing of the Contract.

ARTICLE 24 - WAGE RATE DETERMINATION

24.01 If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR 5.5(b) apply.

24.02 Federal Davis-Bacon wage rates do apply to this contract, and a copy of that determination has also been inserted as a part of the Bidding Documents. Bidders shall inspect the wage rate determination and shall incorporate its requirements into their Bid. **The awarded contractor shall be subject to employee interviews and submit payroll reports, at a sufficient interval, to demonstrate adherence to the wage rate requirements.**

ARTICLE 25 – OTHER BID REQUIREMENTS

25.01 Bidder shall complete the following documents attached to the Bid:

Statement of Experience

Certification of Bidder Regarding Equal Employment Opportunity (*CDBG – Form 950.1*)

Certification of Bidder (Contractor) Concerning Labor Standards & Prevailing Wage Requirements (*CDBG – Form 1421*)

Certification of Bidder Regarding Section 3 & Segregated Facilities (*CDBG*)

ARTICLE 26 – LAWS, ORDINANCES, AND REGULATIONS

26.01 Bidder must familiarize itself with all laws, ordinances, and regulations by federal, state, city, or other governmental agency, which by reason of being neglected or violated may affect the Work contemplated and must secure and pay the fee required for any permits which may be necessary unless such fees are otherwise indicated to be paid in the Bidding Documents.

26.02 Bidders must comply with Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, and the Contract Work Hours Standard Act.

26.03 Bidders must comply with the President's Executive Order No. 11246 as amended, which prohibits discrimination in employment regarding race, creed, color, sex or national origin.

26.04 This project will be in compliance with Executive Order 11246 (Equal Employment Opportunity) as amended.

26.05 The Contractor/Subcontractor will comply with 41CFR 60-4, in regard to affirmative action, to insure equal opportunity to females and minorities and will apply the time tables and goals set forth in 41 CFR 60-4.

26.06 Bidder will make positive efforts to use small, minority, women owned and disadvantaged businesses.

26.07 Bidder/Owner will comply to provisions for timely periodic payments and for limiting retainage (40 CFR 31.36).

ARTICLE 27 – INSURANCE

27.01 Before execution of Contract by OWNER, the successful Bidder shall furnish OWNER a certificate or certificates issued by or on behalf of insurers or a self-insurance program or group self insurance program, qualified to do business in the Commonwealth of Kentucky under KRS Chapter 304 or KRS Chapter 342, certifying that the successful Bidder complies with the Worker's Compensation laws of Kentucky and is insured or indemnified against public liability claims which may arise out of the performance of the Work under the proposed Contract.

ARTICLE 28 – SAFETY STANDARDS AND ACCIDENT PREVENTION

28.01 With respect to all work performed under this contract, the contractor shall:

Comply with the safety standards provision of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "Federal Register", Volume 36, No. 75, Saturday, April 17, 1971. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property. Maintain at his/her office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

BID FORM

Project Identification: City of Mortons Gap
Water System Rehabilitation & Upgrade Project

Contract Identification: Contract 2 – Water Meter & Service Tubing Replacement Project

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is Submitted to: City of Mortons Gap
PO Box 367
Mortons Gap, Kentucky 42440

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in the Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time as Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and

procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
- K. **The Bidder is aware that all salvageable brass components (i.e. setters, meters, etc) replaced by the project shall be delivered to the Owner. Coordination with the Owner for delivery of said components is the responsibility of the awarded bidder.**

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will compete the Work in accordance with the Contract Documents for the following prices:

Base Bid: Water Meter & Service Tubing Replacement (Meters provided by Owner)					
Item No.	Item	Quantity	Units	Unit Price	Total Price
001	Replacement & Reconnection of Near Side, 5/8"x3/4" Radio-Read Water Meter to existing water main & customer-side service line with new tubing (<i>up to 10 LF</i>), new box, new setter, & applicable fittings; in place & ready for use.	300	EA	\$ _____	\$ _____
002	Replacement & Reconnection of Far Side, 5/8"x3/4" Radio-Read Water Meter to existing water main & customer-side service line with new tubing (<i>up to 50 LF</i>) encased under roadway, new box, new setter & applicable fittings; in place & ready for use.	160	EA	\$ _____	\$ _____
003	Replacement & Reconnection of Far Side, 2" Radio-Read Water Meter to existing water main & customer-side service line with new 3/4" tubing (<i>up to 50 LF</i>) utilizing existing casing under roadway, new box, new setter & applicable fittings; in place & ready for use.	1	EA	\$ _____	\$ _____
004	Replacement of in-line master meter with new 3" Radio-Read Water Meter & replacement of meter box with new pre-cast traffic rated box & lid; including accessories & applicable fittings. In place & ready for use.	1	EA	\$ _____	\$ _____
005	Re-Connection to existing resident/commercial service line by a licensed plumber .	460	EA	\$ _____	\$ _____
006	Concrete Pavement Replacement & Backfill of affected service tubing and/or appurtenances' areas; in place, complete & ready for use.	500	SF	\$ _____	\$ _____
007	Asphalt Pavement Replacement & Backfill of affected service tubing and/or appurtenances' areas; in place, complete & ready for use.	500	SF	\$ _____	\$ _____

TOTAL AMOUNT OF BID

\$ _____

5.02 Unit prices have been computed in accordance with paragraph 11.03A of the General Conditions.

5.03 Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

5.04 **Bidder acknowledges that Bid Item No. 005 will require the use of a licensed plumber to make reconnections to an existing service line on the customer side of the OWNER's water meter. The Bidder intends to utilize:**

Plumber: _____

License#: _____

EJCDC® C-410, Bid Form for Construction Contracts.

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- 5.05 SUPPLEMENTAL UNIT PRICES: The following Supplemental Unit Prices will apply in the event that additions to or deductions from the work required in the Bid are ordered. A single price shall be bid for each item. OWNER reserves the right to accept or reject these prices by inclusion in or omission from the Contract Documents to be executed after the award of the Contract.

Item	Type of Work	Unit	Supplemental Unit Price		
			(Words)		(Numbers)
1.	Unclassified undercut, where ordered by the Engineer.	CY	_____.	Dollars	\$_____.
2.	No. 57 aggregate refill, where ordered by the Engineer.	Ton	_____.	Dollars	\$_____.
3.	Class "B" concrete refill, where ordered by the Engineer	CY	_____.	Dollars	\$_____.
4.	Completely New service tap with ¾" brass saddle on existing 3" water main + removal & repair of old saddle and tap. Complete.	EA	_____.	Dollars	\$_____.
5.	Completely New service tap with ¾" brass saddle on existing 4" water main + removal & repair of old saddle and tap. Complete.	EA	_____.	Dollars	\$_____.
6.	Completely New service tap with ¾" brass saddle on existing 6" water main + removal & repair of old saddle and tap. Complete.	EA	_____.	Dollars	\$_____.
7.	Completely New service tap with ¾" brass saddle on existing 8" water main + removal & repair of old saddle and tap. Complete.	EA	_____.	Dollars	\$_____.
8.	¾" HDPE Water Service Tubing (Additional Tubing Footage > than lengths listed in Bid Item 001 or 002); as approved by Owner	LF	_____.	Dollars	\$_____.
9.	Isolated Gate Valve Addition on Existing 4" Line via Cut-in, including applicable fittings & piping, in place, complete & ready to use	EA	_____.	Dollars	\$_____.
10.	Isolated Gate Valve Addition on Existing 6" Line via Cut-in, including applicable fittings & piping, in place, complete & ready to use	EA	_____.	Dollars	\$_____.
11.	Isolated Gate Valve Addition on Existing 8" Line via Cut-in, including applicable fittings & piping, in place, complete & ready to use	EA	_____.	Dollars	\$_____.
12.	Isolated Valve Insertion on Existing 6" Waterline including surface repair, in place, complete & ready for use.	EA	_____.	Dollars	\$_____.
13.	Installation of New Hydrant on Existing Waterline via Line Size Tapping Sleeve x 6" Tapping Valve; in place & ready for use	EA	_____.	Dollars	\$_____.
14.	Installation of New Hydrant on Existing Waterline via Cut-in Tee x 6" Outlet/Gate Valve; in place & ready for use	EA	_____.	Dollars	\$_____.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are attached to and made a condition of the Bid:
- A. Required Bid security in the form of a Bid Bond (EJCDC No. C-430) or Certified Check (circle type of security provided);
 - B. Statement of Experience
 - C. Certification of Bidder Regarding Equal Employment Opportunity (*CDBG – Form 950.1*)
 - D. Certification of Bidder (Contractor) Concerning Labor Standards & Prevailing Wage Requirements (*CDBG – Form 1421*)
 - E. Certification of Bidder Regarding Section 3 & Segregated Facilities (*CDBG*)

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with the initial capital letters have the meaning indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

- 9.01 This Bid submitted by:

Submitted by:

_____ Signature	_____ Business
_____ Printed or Typed Name	_____ Bidder's Business Address
_____ Title	_____ City, State, Zip Code
_____ Employer's Tax ID No.	_____ Business Phone No.
	_____ Business Fax No.
_____ Business Email Address	_____ Cell Phone No.
	_____ Other Contact No.

- 9.02 Bid submitted on _____, 2020.

Seal (if required)

WATER MAIN MATERIALS

1.0 GENERAL

All materials to be incorporated in the project shall be first quality, new and undamaged material conforming to all applicable portions of these Specifications.

1.1 Patented or Proprietary Materials

This Solicitation specifies requested items. It is not the intention of this Solicitation to eliminate Manufacturers or Contractors of similar or equal equipment of the types specified. It should be noted, however, that these requested items are written around specific requirements and needs of the Owner.

The Contractor acknowledges to and for the benefit of the City of Mortons Gap ("Purchaser") and the Commonwealth of Kentucky (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

The Bidder/Contractor shall submit Manufacturers' Certification letter of compliance with American Iron & Steel Requirement.

If discrepancies or ambiguities are found in the plans, specifications, contract documents or in any communication to the contractor regarding specified materials not compliant with the American Iron and Steel requirement, the contractor shall immediately notify the Engineer in writing.

2.0 CONCRETE

2.1 Cement- Cement shall be Portland cement of a brand approved by the Utility's Engineer and shall conform to "Standard Specifications for Portland Cement", Type 1, ASTM Designation C150, latest revision. Cement shall be furnished in undamaged 94 pound, one cubic foot sacks, and shall show no evidence of lumping.

2.2 Concrete Fine Aggregate- Fine aggregate shall be clean, hard uncoated natural sand conforming to ASTM Designation C33, latest revision, "Standard Specifications for Concrete Aggregate".

- 2.3 Concrete Coarse Aggregate- Coarse aggregate shall consist of clean, hard, dense particles of stone or gravel conforming to ASTM Designation C33, latest revision, "Standard Specifications for Concrete Aggregate". Aggregate shall be well graded between 1-1/2" and #4 sieve sizes.
- 2.4 Water- Water used in mixing concrete shall be clean and free from organic matter, pollutants and other foreign materials.
- 2.5 Ready Mix Concrete- Ready-mix concrete shall be secured only from a source approved by the Utility's Engineer, and shall conform to ASTM Designation C94, latest revision, "Specifications for Ready-Mix Concrete". Before any concrete is delivered to the job site, the supplier must furnish a statement of the proportions of cement, fine aggregate and coarse aggregate to be used for each mix ordered, and must receive the Utility Engineer's approval of such proportions.
- 2.6 Class "A" Concrete- Class "A" concrete shall have a minimum compressive strength of 4000 pounds per square inch in 28 days and shall contain not less than 6 sacks of cement per cubic yard. Class A concrete shall be air-entrained.
- 2.7 Class "B" Concrete- Class "B" concrete shall have a minimum compressive strength of 2000 pounds per square inch in 28 days and shall contain no less than 4 sacks of cement per cubic yard.
- 2.8 Metal Reinforcing- Reinforcing bars shall be intermediate grade steel conforming to ASTM Designation A615, latest revision "Standard Specifications for Billet Steel Bars for Concrete Reinforcement". Bars shall be deformed with a cross sectional area at all points equal to that of plain bars of equal nominal size.

3.0 CRUSHED STONE

Crushed stone for pipe bedding and/or backfill shall meet the quality requirements of ASTM D692 and the grading requirements referenced on the plans.

4.0 WATER PIPE

4.1 PVC Water Pipe (if applicable)

PVC pipe for water shall be manufactured in accordance with ASTM D2241 and have NSF approval. The pipe shall be Class 200 polyvinyl chloride plastic (PVC 1120) SDR-21. The following tests shall be run for each machine on each size and type of pipe being produced, as specified below:

Flattening Test: Once per shift in accordance with ASTM D2412. Upon completion of the test, the specimen shall not be split, cracked or broken.

Acetone Test (Extrusion Quality Test): Once per shift in accordance with ASTM D2152. There shall be not flaking, peeling, cracking, or visible deterioration on the inside or outside surface after completion of the tests.

Quick Burst Test: Once per 24 hours in accordance with ASTM 5199.

<u>SDR</u>	<u>Pressure Rating</u>	<u>Minimum Bursting Pressure, PSI</u>
21	200	800

Impact Tests: 6" and smaller, once each 2 hours in accordance with ASTM D2444.

Wall Thickness and Outside Dimensions Test: Once per hour in accordance with ASTM D2122.

Bell Dimensions Test: Once per hour in accordance with ASTM D3139.

If any specimen fails to meet any of the above mentioned tests, all pipe of that sized and type manufactured between the test period must be scrapped and a full set of tests rerun.

Furnish a certificate from the pipe manufacturer stating that he is fully competent to manufacture PVC pipe of uniform texture and strength and in full compliance with these specifications and further stating that the company has manufactured such pipe for a continuous period of at least ten years. In addition the manufacturer's equipment and quality control facilities must be adequate to ensure that each extrusion of pipe is uniform in texture, dimensions, and strength. Also furnish a certificate from the manufacturer certifying that the pipe furnished for this project meets the requirements of these Specifications.

All pipe shall be manufactured in the United States of America. All pipe for any one project shall be made by the same manufacturer.

The pipe shall be furnished in laying lengths of 20'. The Contractor's methods of storing and handling the pipe shall be approved by the Utility's Engineer. Pipe shall be fully supported as recommended by the manufacturer. Stringing pipe along the proposed route in excess of one day's work will not be allowed.

Certain information shall be marked on each piece of pipe. At the least, this shall consist of:

Nominal Size
Type of material
SDR or class
Manufacturer
NSF Seal of Approval

Pipe that fails to comply with the requirements set forth in these Specifications shall be rejected.

4.2 AWWA C900 PVC Water Pipe (if applicable)

AWWA C900 PVC pipe shall be manufactured from compounds conforming to PVC cell classification of 12454 as defined in ASTM D-1784. The pipe shall meet the requirements of the AWWA C-900-07 standard specification for polyvinyl chloride water distribution pipe. The integral bell joint system shall meet the requirements of ASTM D-5139 and utilize an elastomeric seal conforming to ASTM F-477. AWWA C-900 Pressure Pipe shall carry the NSF Standard 61, the Underwriters Laboratories Inc Standard 1285, and the Factory Mutual Research Water Distribution Pipe for Underground Fire Protection Service marks of acceptance.

The pipe shall be polyvinyl chloride plastic (PVC) DR-18. The following tests shall be run for each machine on each size and type of pipe being produced, as specified below:

Hydrostatic Proof Testing: Each standard and random length of C900 shall be tested to four times the pressure class of the pipe for a minimum of five seconds. The integral bell shall be tested with the pipe.

Quick Burst Test: Once per 24 hours in accordance with ASTM 5199.

<u>DR</u>	<u>Pressure Rating</u>	<u>Minimum Bursting Pressure, PSI</u>
18	235	755

Falling Weight Impact Tests: C900 pipe shall withstand an impact energy of 100 ft-lbs, per the requirements of UL 1285.

If any specimen fails to meet any of the above mentioned tests, all pipe of that sized and type manufactured between the test period must be scrapped and a full set of tests rerun.

Furnish a certificate from the pipe manufacturer stating that he is fully competent to manufacture AWWA C900 PVC pipe of uniform texture and strength and in full compliance with these specifications and further

stating that the company has manufactured such pipe for a continuous period of at least ten years. In addition the manufacturer's equipment and quality control facilities must be adequate to ensure that each extrusion of pipe is uniform in texture, dimensions, and strength. Also furnish a certificate from the manufacturer certifying that the pipe furnished for this project meets the requirements of these Specifications.

All pipe shall be manufactured in the United States of America. All pipe for any one project shall be made by the same manufacturer.

The pipe shall be furnished in laying lengths of 20'. The Contractor's methods of storing and handling the pipe shall be approved by the Engineer. Pipe shall be fully supported as recommended by the manufacturer. Stringing pipe along the proposed route in excess of one day's work will not be allowed.

Certain information shall be marked on each piece of pipe. At the least, this shall consist of:

Nominal Size
Type of material
DR or class
Manufacturer
NSF Seal of Approval

Pipe that fails to comply with the requirements set forth in these Specifications shall be rejected.

4.3 Ductile Iron Water Pipe (if applicable)

Ductile iron pipe shall meet the requirements of ANSI/AWWA C150/A21.50 and ANSI/AWWA C151/A21.51 and shall be NSF approved. All ductile iron pipe shall have a minimum pressure rating as specified on the Drawings. All ductile iron pipe shall be cement lined with an asphalt coating on the exterior of the line. In standard buried installation, ductile iron pipe shall be supplied with push-on type joints with SBR rubber, or other gasket material suitable for continuous service in a buried potable water pipeline. Pipe which will be exposed (e.g. above grade, or in vaults or buildings) shall have flanged joints. Pipe size, pressure class, NSF seal, and manufacturer's name shall be clearly marked on the exterior of each pipe joint.

All ductile iron pipe shall have Underwriters Laboratories, Inc. approval and shall be approved by the National Sanitation Foundation for potable water use. All ductile iron pipe and fittings shall be manufactured in the United States. All pipe for any one project shall be made by the same manufacturer.

Restrained joint pipe and fittings shall meet all other requirements for ductile iron pipe and fittings set forth above, plus having a positive means of restraining the pipeline joint against separation due to internal pressure. All areas specifically designated for restrained ductile iron pipe (i.e. bends, steep slopes or bores) shall be done utilizing regular ductile iron pipe equipped with restraining gaskets. The gaskets shall be equivalent to the American Fast-Grip restrained joint gaskets product.

5.0 FITTINGS (if applicable)

All fittings shall be cast gray iron or ductile iron, cement lined, bituminous coated, manufactured in accordance with AWWA/ANSI Standards A21.10 and A21.11, latest revision, unless otherwise indicated or directed. Minimum pressure rating shall be 250 psi. Unless indicated otherwise on the Drawings, mechanical joint fittings shall be used.

6.0 RESILIENT SEAT GATE VALVES (if applicable)

Gate valves shall be iron body, resilient rubber seat type valves with non-rising stems. Three inch and smaller valves may be bronze body. Resilient seat gate valves shall have a bronze stem nut cast integrally with the cast iron valve disc. The valve shall be capable of being installed and operated in either direction and shall be furnished with mechanical joint ends. Valves shall be suitable for installation in an approximately vertical position in buried pipe lines. Stem seal shall consist of O-ring seals. All valves shall open to the left (counter-clockwise), and shall be provided with 2" square operating nut. All

underground gate valves which have nuts deeper than 30' below the valve box top shall have extended stems with nuts located within one foot of the valve box cap.

Valves shall be for working pressures up to 250 psi and shall be equal to latest specifications of AWWA C-509 in all respects. Valves shall be equal to American Flow 2500 or Mueller A-2360. All components shall be manufactured in the United States of America.

7.0 PRESSURE REDUCING VALVES

Individual pressure reducing valves (where presently utilized at a respective location) shall be replaced with a brass body, direct operating valve with screwed connections, suitable for reducing a varying upstream pressure to an adjustable, constant downstream pressure. Pressure reducing valves shall be designed for potable water use, lead free, and shall be Watts ¾" N-250 PRV or approved equal.

8.0 TAPPING SLEEVES AND VALVES (if applicable)

Tapping sleeves shall consist of a mechanical joint tapping sleeve equal to Ford FAST (for PVC tapped pipe). Tapping valves shall conform to all applicable specifications for resilient seat gate valves. All components shall be manufactured in the United States of America.

9.0 VALVE BOX FRAMES AND COVERS (if applicable)

Valves box frames and covers shall be made of heavy cast iron and shall meet the requirements of ASTM A-48, class 30, and shall be three-piece, 5 1/4" diameter barrel, screw type construction.

All casting shall be made accurately to the required dimensions and shall be sound, smooth, clear and free of blemished or other defects. Defective castings which have been plugged or otherwise treated to remedy defects shall be rejected. Contact surfaces of frames and covers are to be machined so that they rest securely in the frames without rocking. The cover shall be in contact with the frame for the entire perimeter.

The valve box frames and covers shall be Tyler Union 6870 Series or approved equal. The Cover shall be marked "Water".

10.0 SERVICE CLAMPS AND CORPORATION STOPS

New service clamps, where needed, shall be used for all new taps made to the water line, and the service clamps and accessories shall be lead free. Service clamps shall be all bronze construction with neoprene gasket, equal to Ford S70 Series. Corporation stops shall include a quick nut assembly, the corporation stop shall be Ford F1000-3G-NL Grip Joint or approved equal and the pack joint coupling shall be Ford C44-33-G-NL or approved equal. Swivels and Inserts or Stiffeners shall be equipped to the corporation stops for added protection of the water service tubing with the use of compression fittings. Swivels shall be Ford L 104-33S for CTS plastic.

11.0 STEEL CASING PIPE (if applicable)

Where noted on the Drawings or required by these Specifications, roadway crossings shall be made utilizing carrier pipe within a casing pipe. Sizes of carrier pipe and casing pipe shall be as noted on the Drawings.

Casing joints shall be of fully welded, leak proof construction. The steel casing pipe shall have a minimum yield strength of 35,000 psi and shall have the minimum wall thickness of 0.25 inches for 12" nominal diameter and smaller pipe. Casing pipe larger than 12" shall have a wall thickness corresponding to ASTM standards for Standard Weight steel pipe. Steel casing pipe shall be coal tar protected according to AWWA Standard C203-91 and C209-20. Pipe shall be welded according to AWWA Standard C206-91 unless otherwise specified.

12.0 PIPELINE DETECTION WIRE

Pipeline detection wire shall be No. 12 solid copper insulated wire. The wire shall be attached to the top of the installed pipe with duct tape prior to backfilling, and the detection wire shall be spliced to seal out moisture. The splicing kit shall be or equal to 3M direct Bury Splice Kit (DBY). Completed sections of detection wire shall be periodically checked for continuity by the Contractor. The Contractor is responsible for the continuity of the wire sections, and shall take measures during construction to insure a working final product. If, upon completion of the continuity test, a section of wire fails, the Contractor shall make corrective measures and the test will be repeated until satisfactory results are obtained.

Precast concrete valve rings, with an embedded copper locator pin, will serve as a wire terminal point for testing and locating.

13.0 WATER SERVICE TUBING

Service line pipe shall be high-density polyethylene tubing "copper tube size" equal to Driscopipe, suitable for 200 psi working pressure. Detection wire as described above shall be attached to all far side service tubing connections. The wire shall begin at the meter box and terminate at the corporation stop with a water tight wire cap. The water service tubing shall be equipped with inserts or stiffeners to protect the tubing when utilizing compression fittings.

Service lines, where applicable, from the water meter to the customer reconnection point shall be ¾-inch Schedule 40 PVC pipe with solvent weld joints (glued), suitable for a minimum of 200 psi working pressure.

14.0 LARGE FIRE HYDRANT (if applicable)

Large Fire Hydrants, where specified, shall be 4" nominal diameter with 4 1/2" NST outlet. Hydrants shall be Mueller A-423 or approved equal. All components shall be manufactured in the United States of America.

15.0 WATER METERS AND SETTERS

All water meters for the project will be supplied to the Contractor by the Owner. The new radio-read meters (Kamstrup Meter w/ Ultrason Radio) were procured via a separate contract within the Project. Coordinate the supply of meters with the Owner throughout the project.

A. 5/8"x3/4" Meter Installations/Reinstallations:

The meter setter shall include a dual check valve, ball valve, and grip nut. The replacement setter shall be Ford VBHH-72-7W-41-33-NL or approved equal. In cases where a tandem setter is presently utilized, the setter shall be Ford TVBHH-72-7W-41-33-NL or approved equal. All meter setters shall be "copper tube size", and all setters and other specified components shall be lead free. For tandem setter installations, the Owner requires that the Idler Bar, or at least the 'S' bar, be included with the typical tandem meter yoke.

B. 2-inch Meter Installations/Reinstallations:

The meter setter shall include a dual check valve and ball valve for oval flange meter. The replacement setter shall be Ford VVBH-77-12B-11-77NL or approved equal. All meter setters shall be "copper tube size", and all setters and other specified components shall be lead free.

16.0 CASING END SEALS & SPACERS (if applicable)

Casing end seals shall be heavy-duty rubber seals (Model ESW) as manufactured by CCI Pipeline Systems or approved equal. Casing Spacers shall be of heavy-duty two-piece stainless steel as manufactured by CCI Pipeline Systems (Model CSS-center restrained) or approved equal.

17.0 METER BOXES

All water meter boxes in the distribution system will be replaced as a part of this project.

A. 5/8"x3/4" Meter Installations/Reinstallations:

Meter boxes for 5/8"x3/4" setters shall be 18" in diameter x 24" in depth with cast iron lids. Meter boxes shall be green, ribbed or approved equal. The round metal lids shall be 18" in diameter with outer ring and a flat center surface. The lids require a 2" hole predrilled to allow for the particular automated meter reading system to be installed, and the contractor shall provide and install an 'Itron 100W Thru Lid Install Kit' (Part #CFG-1300-004). Meter boxes shall be manufactured by Hancor or approved equal. The Lids shall be Vestal (model WM-18) or approved equal. All components shall be manufactured in the United States of America.

B. 2-inch Meter Installations/Reinstallations:

Meter boxes for 2-inch setters shall be 36"x36" Black & White poly box with a 36"x18" extension ring to accommodate an 18" diameter round metal lid. The top round metal lid shall be 18" in diameter with outer ring and a flat center surface. The lids require a 2" hole predrilled to allow for the particular automated meter reading system to be installed, and the contractor shall provide and install an 'Itron 100W Thru Lid Install Kit' (Part #CFG-1300-004). The Lids shall be Vestal (model WM-18) or approved equal. All components shall be manufactured in the United States of America.

C. 3-inch Meter Installations/Reinstallations:

Meter boxes for 3-inch inline master meter shall be a 48"x48"x48" precast vault with a drop in hatch where the angle frame of the hatch slips down in the inside perimeter of the vault allowing for easy removal and access. Both the vault and hatch shall be traffic rated. The bottomless vault should straddle the water main with doghouse openings for 3-inch pipe to easily slip over the existing water main without disassembly. The traffic-rated hatch should be 36"x36" at a minimum in size. The hatch requires a 2" hole predrilled to allow for the particular automated meter reading system installed, and the contractor shall provide and install an 'Itron 100W Thru Lid Install Kit' (Part #CFG-1300-004). The vault shall be iCast 4'W x 4'L x 4'H Meter Vault or approved vault.

18.0 PRECAST VALVE BOXES & OTHER ITEMS

Precast concrete valve rings shall be 24 inches in diameter and 4-inches thick. Each ring shall be equipped with an embedded copper locator test pin, which will serve as a detection wire terminal point for locating nonmetallic pipelines.

Precast concrete items shall meet all requirements of ASTM C478. All concrete used in precast items shall have a compressive strength of at least 4,500 psi at 28 days

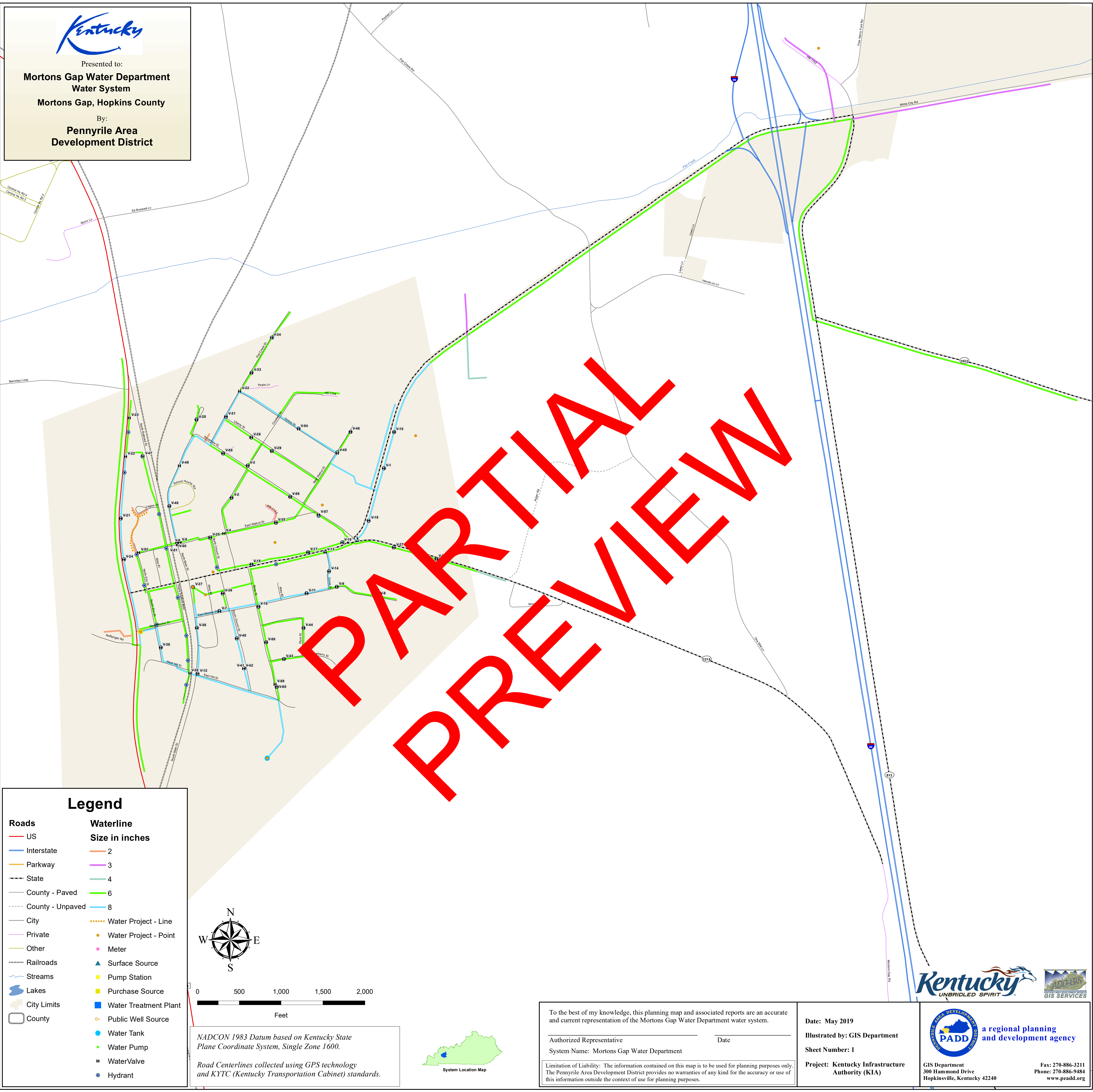
19.0 VALVE INSERTION (if applicable)

Valve Insertion (4"-16") shall meet general specifications of AWWA C-509-09 Resilient Wedge Material and AWWA M44 Water Supply Practices. The valve and gate body shall be ductile iron (ASTM.A536-65-45-12) with EPDM gate rubber and stainless steel valve stem. Fasteners shall be of a cathodic protected material or stainless steel, and the coating shall be corrosion-protection E-coating casting. The design of the valve shall include a pressure rating of 250 PSI with a 360 degree rubber seal around the wedge. The valve turns shall match that of a normal resilient seat gate valve.

END OF SECTION 02-200



Presented to:
**Mortons Gap Water Department
Water System**
Mortons Gap, Hopkins County
By:
**Pennyrile Area
Development District**



Legend

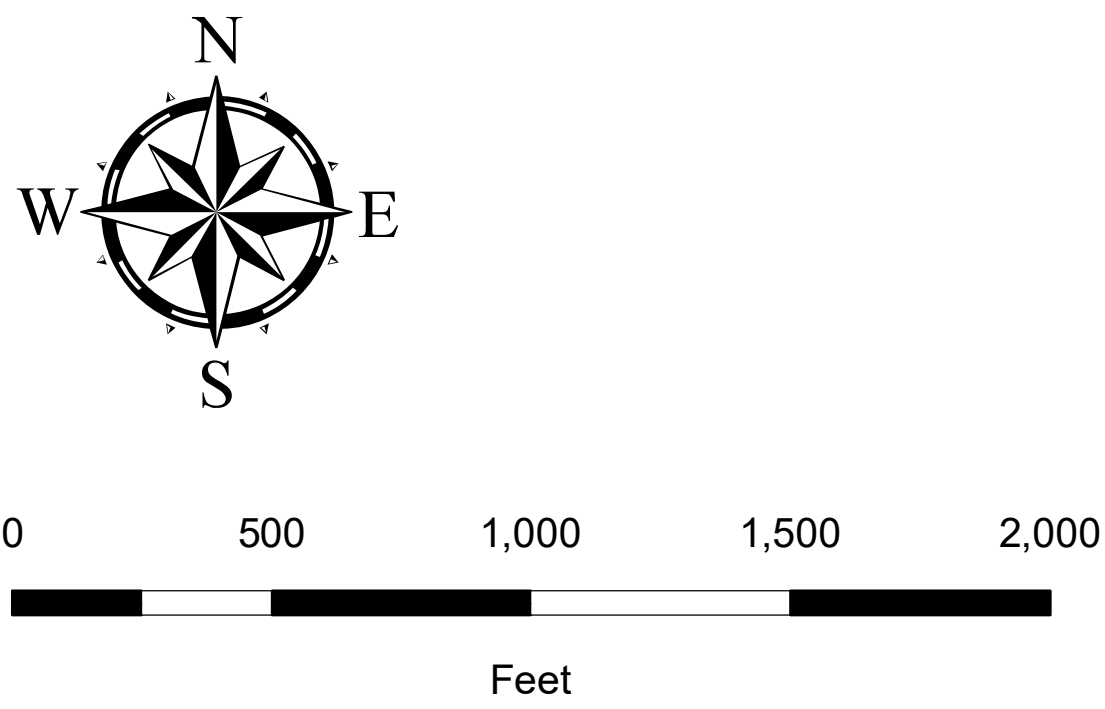
Roads

- US
- Interstate
- Parkway
- State
- County - Paved
- County - Unpaved
- City
- Private
- Other
- Railroads
- Streams
- Lakes
- City Limits
- County

Waterline
Size in inches

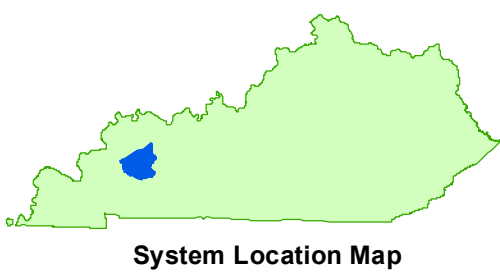
- 2
- 3
- 4
- 6
- 8

- Water Project - Line
- Water Project - Point
- Meter
- Surface Source
- Pump Station
- Purchase Source
- Water Treatment Plant
- Public Well Source
- Water Tank
- Water Pump
- WaterValve
- Hydrant



NADCON 1983 Datum based on Kentucky State Plane Coordinate System, Single Zone 1600.

Road Centerlines collected using GPS technology and KYTC (Kentucky Transportation Cabinet) standards.



To the best of my knowledge, this planning map and associated reports are an accurate and current representation of the Mortons Gap Water Department water system.

Authorized Representative

Date

System Name: Mortons Gap Water Department

Limitation of Liability: The information contained on this map is to be used for planning purposes only. The Pennyrile Area Development District provides no warranties of any kind for the accuracy or use of this information outside the context of use for planning purposes.

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Illustrated by: GIS Department

Sheet Number: 1

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