

INVITATION FOR BID

IFB NO. 20-106

EMERGENCY UTILITY REPAIRS FOR WATER, WASTEWATER AND STORMWATER

Bid Submission Deadline

Due Date: MAY 12, 2020

Time: 3:00PM

Bids shall be submitted to: bids@lakeworthbeachfl.gov

**Subject line: IFB 20-106, Emergency Utility Repairs for Water, Wastewater
and Stormwater**

FINANCIAL SERVICES
7 North Dixie Highway
Lake Worth Beach, FL 33360
TEL: 561-586-1654

**INVITATION FOR BID
IFB #20-106**

Emergency Utility Repairs for Water, Wastewater and Stormwater

The City of Lake Worth Beach is soliciting bids from responsible and experienced entities to provide repairs to the City's water utility infrastructure immediately after a hurricane, other disaster, or as needed by the City on an emergency basis. The objective of the Invitation for Bid ("IFB") and subsequent contracting activity is to secure the services of an experienced contractor(s) who is capable of efficiently repairing water infrastructure systems in a timely and cost-effective manner

This Invitation for Bid (IFB) may be downloaded at lakeworthbeachfl.bidsandtenders.net or www.lakeworthbeachfl.gov. All Bidders shall have a Bidding System Vendor account and be registered as a Plan Taker for this Bid opportunity, which will enable the Bidders to download the Bid Call Document, to receive Addenda email notifications and download all documents without the watermark "preview" on them.

To ensure receipt of the latest information and updates via email regarding this bid, or if a Bidder has obtained this Bid Document from a third party, the onus is on the Bidder to create a Bidding System Vendor account and be register as a Plan Taker for the bid opportunity. This IFB may also be acquired from the Financial Services Office by sending e-mail to **purchasing1@lakeworthbeachfl.gov**.

Time is of the essence and any bid received after **3:00 PM, May 12, 2020**, whether by e-mail or otherwise may be rejected by the City. Bids shall be e-mailed as an attachment in **PDF format maximum size of 15MG** to the secure e-mail address **bids@lakeworthbeachfl.gov**. Subject line shall list the IFB number, title, along with the date and hour bids are scheduled to be received. All persons or entities responding to the IFB (hereafter "Bidders") are responsible for ensuring that their bid is received by the City at its' designated e-mail address by the deadline indicated in the IFB. The Bidders may call the **City's secure e-mail administrator at 561-586-1654** to confirm the receipt of the e-mail from the Bidder. The City will in no way be responsible for delays caused by any occurrence. Bids shall not be submitted and will not be accepted in person, by mail, telephone, telegram, facsimile or any other City's e-mail address except **bids@lakeworthbeachfl.gov**. The time of receipt shall be determined by the time clock on the receiving e-mail.

All bids must be E-mailed to: bids@lakeworthbeachfl.gov

**SUBJECT LINE MUST BE IDENTIFIED AS BID # 20-106 Emergency Utility Repairs for Water,
Wastewater and Stormwater**

PUBLISH: April 15, 2020, Palm Beach Post, City of Lake Worth Beach website

IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater

SECTION 1 – SCOPE OF WORK AND TENTATIVE BID SCHEDULE

The City of Lake Worth Beach is soliciting bids from responsible and experienced entities to provide emergency repairs to the City’s water, wastewater and stormwater infrastructures in a timely and cost effective manner necessary as a result of a hurricane, other disaster, or as needed by the City on an emergency basis. As such, any subsequent contract executed as a result of this IFB may be funded, in whole or in part, by the Federal Emergency Management Agency (“FEMA”), or other Federal agencies. Bidders therefore agree that any work performed pursuant to this IFB and resulting contract will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives. A more detailed scope of work is attached and incorporated into to this IFB as **Exhibit “A”**.

All work shall be constructed in accordance with the City’s design specifications and standards and in accordance with this IFB, its exhibits and all issued addendum which are available on the City’s website at lakeworthbeachfl.bidsandtenders.net or www.lakeworthbeachfl.gov.

TENTATIVE BID SCHEDULE

Listed below are the tentative dates and times of the project and schedule by which the actions noted must be completed. If the City finds it necessary to change any of these dates and/or times, the change will be accomplished by addenda. All dates and times are subject to change at the City’s discretion.

<u>ACTION</u>	<u>COMPLETION DATE</u>
IFB Publication Date	April 15, 2020
Final Questions Due	April 30, 2020 by 4 p.m.
Bids Due	May 12, 2020 3 p.m.

SECTION 2 – SPECIAL TERMS

1. **Pre-Bid Conference.** There will be no pre-bid conference for this project.
2. **Time of Completion and Liquidated Damages.** The services to be performed under an awarded contract(s) shall commence on the date of a City issued Purchase Order and be fully completed within the time identified in the individual Purchase Order issued under the contract. See additional details in Scope of Work.

The resulting contract or Purchase Order will incorporate the following provision regarding liquidated damages:

The City and Contractor recognize that the timeframe for completing all work under this Contract is critical and time sensitive. The City will suffer financial loss if the Contractor fails to timely complete all work. In such event, the total amount of the City’s damages, will be difficult, if not impossible, to definitely ascertain and quantify. Should the Contractor fail to complete the work within the timeframe established in the Contract, the City shall be entitled to assess, as liquidated damages, for specific work/by specific amount as defined in contract documents but not as a penalty, for each calendar day thereafter until all work is

complete. The Contractor expressly waives and relinquish any right which it may have to seek to characterize the above noted liquidated damages as a penalty, which the parties agree represents a fair and reasonable estimate of the City's actual damages at the time of contracting if Contractor fails to complete the work within the required time period.

3. **Permits and Fees.** In accordance with the Public Bid Disclosure Act, the awarded bidder will be required to make payment to the City of Lake Worth Beach or other governmental entity with jurisdiction over the Project for any permits or licenses, impact, inspection or other fees for the projects under the resulting contract.

4. **Licenses.**

All bidders are required to maintain current, valid licenses relevant to offered supply or service at the time of bid submittal or its bid may be disqualified. Failure to submit all required licensing if/when requested may result in rejection of the bid. Each bidder shall have the following licenses at the time of bid submittal or its bid may be disqualified:

- State of Florida General Contractor's license
- State of Florida Division of Corporations

Each Bidder will also be required, at the time of contract execution, to have a business tax receipt or certificate of registration in accordance with the following:

- No person, contractor or subcontractor may conduct business within the City without a business tax receipt or certificate of registration.
- A contractor who holds a valid countywide contractor's license, in addition to a county business tax receipt shall register with the City.
- Any person engaging in any business, occupation or profession within the City without a permanent business location or branch office in the City, but holding a valid and currently effective business tax receipt issued by the county or another incorporated municipality, shall be issued a certificate of registration upon registering with the business tax official.

5. **Construction Bond.** Payment and Performance Bonds **will be required** for this IFB in accordance with section 225.05, Florida Statutes.

6. **Insurance.** Prior to execution of the resulting contract derived from this IFB, the awarded Bidder shall obtain and maintain in force at all times during the term of the resulting contract insurance coverage as required herein. All insurance policies shall be issued by companies authorized to do business under the laws of the State of Florida. The Certificates shall clearly indicate that the selected bidder has obtained insurance of the type, amount, and classification as required for strict compliance with this provision and that no material change or cancellation of the insurance shall be effective without thirty (30) days prior written notice to the City. Compliance with the foregoing requirements shall not relieve the selected bidder of its liability and obligations under the resulting contract.

- A. The selected Bidder shall maintain, during the life of the contract, commercial general liability, including public and contractual liability insurance in the amount of \$1,000,000.00 per occurrence (\$2,000,000.00 aggregate) to protect the bidder from claims for damages for bodily and personal injury, including wrongful death, as well as from claims of property damages which may arise from any operations or completed operations under the contract, whether such operations be by the bidder or by anyone directly or indirectly employed by or contracting with the bidder.
- B. The selected Bidder shall maintain general automobile liability insurance for owned and hired vehicles (optional / per case basis) of at least \$1,000,000 combined single limit.
- C. The selected Bidder shall carry Workers' Compensation Insurance and Employer's Liability Insurance for all employees as required by Florida Statutes.

All insurance, other than Workers' Compensation, to be maintained by the selected Bidder shall specifically include the CITY as an "Additional Insured" on a primary, non-contributing basis.

7. **Other Special Conditions:**

The terms and conditions of the resulting contract will be negotiated with successful Bidder, but will include, at a minimum, the terms laid out in **Exhibit B**, which are the provisions required to be included in contracts funded by federal grants, including FEMA Public Assistance. See 2 C.F.R. § 200.326 and applicable FEMA guidance.

SECTION 3 – MINIMUM QUALIFICATIONS

Each Bidder must meet the following minimum qualification requirements in order to be considered for award. A Bidder who fails to meet these requirements may be disqualified. All decisions on qualifications are within the City's sole discretion.

Each Bidder shall have a minimum of five (5) years' experience in emergency repair work or underground utility infrastructure projects including, but not limited to, pressure pipe install and repair from 2"-42", gravity storm and sanitary sewer pipe install from 8"-72" and concrete structure installation and repairs for water utility systems.

Complete Form B2 – Bidder's Qualifications Form

SECTION 4 - INSTRUCTIONS TO BIDDERS

1. HOW TO SUBMIT A BID:

a. **One (1) electronic copy** of the bid must be submitted as an e-mail attachment in **PDF format maximum size of 15 MB**. Subject line shall list the **IFB number, title, along with the date and hour bids are scheduled to be received.**

Bids MUST be e-mailed to the City's secure e-mail address:

bids@lakeworthbeachfl.gov

No responsibility shall be attached to the City for the premature opening of, or the failure to open a bid not properly e-mailed, e-mails without the attachments, e-mailed to different e-mail address than the one identified for bid submission, wrongly addressed and identified.

b. Time is of the essence and any bid received after the closing date and time indicated on the cover of this IFB, whether by mail or otherwise, shall be rejected. The time of receipt shall be determined by the time clock on the receiving e-mail. The City shall in no way be responsible for delays caused by any occurrence. All persons or entities responding to the IFB are responsible for ensuring that their bid is received by the City at its' designated e-mail address by the deadline indicated in the IFB. The bidders may call the City's secure e-mail administrator at **561-586-1654** to confirm the receipt of an e-mail from the Bidder.

c. Bids submitted by telephone, telegram facsimile or incorrect email address shall not be accepted.

d. Submission of a Bid implies a full understanding of this IFB. Any misunderstanding as to such terms by the Bidder will not relieve the Bidder from performance.

e. This IFB consists of this document along with all exhibits, addendum including all plans, drawings and/or technical specifications incorporated or attached to this IFB, all of which are incorporated herein by this reference.

2. THE BID PACKAGE. Each bid submitted in response to this IFB shall contain the following documents:

- B1 Bid Cover Sheet
- B2 Bidder's Minimum Qualifications
- B3 Bid
- B4 Schedule of Unit Prices/Additional price list if applicable
- B5 Substitution Sheet
- B6 Schedule of Subcontractors (with daily reporting format)
- B7 Contractor Verification

- B8 Reference List
- B9 Non-Collusion Affidavit
- B10 Drug Free Certification
- B11 Campaign Contribution Statement
- B12 Scrutinized Companies Certification
- B13 Federal Contract Provisions, Certification for Contracts, Grants, Loans, and Cooperative Agreements

AVOID BID REJECTION: Bids may be rejected for noncompliance to requirements after review by the Financial Services office. All bids must be submitted on the provided Bid forms and **signed by an officer authorized to bind the Bidder where applicable.**

3. **COMPLETION OF IFB SUBMISSION PACKAGE.**

- a. It is the responsibility of the Bidder to ensure that all pages are included. All Bidders are advised to closely examine this IFB.
- b. **All bids must be submitted on the provided Bid forms.** Bids submitted on Bidder's letterhead or quotation forms will not be accepted.
- c. Bid forms must be neatly written in ink or typed, and must be signed by an officer or employee having authority to bind the bidder (where a signature is required). **Failure to submit a duly signed bid may be cause for rejection of the bid.**

4. **ERRORS/ERASURES/CORRECTIONS**

- a. **Bids having erasures or corrections must be initialed by the Bidder.** If a correction is necessary, draw a single line through the entered figure and enter the corrected figure above it and initial the correction. Any illegible entries, pencil bids or corrections not initialed may not be accepted.
- b. In the event of mathematical extension error(s), the unit price will prevail and the bidder's total offer will be corrected accordingly. In the event of addition errors, the extended line item will prevail and the bidder's total will be corrected accordingly.
- c. Bidders shall not be allowed to modify their bids after the bid opening time and date. Bid files may be examined during normal working hours, after bid opening, by appointment only.
- d. By submitting a bid, the Bidder represents that it has taken all necessary steps to ascertain the nature and location of the work and that it has investigated and satisfied itself as to the general and local conditions which can affect the performance of the work, including: (i) conditions relating to access, egress, transportation, debris disposal, parking and storage of materials; (ii) availability of labor; and (iii) physical conditions at the site. Any failure by Bidder to take these steps will not relieve the Bidder from the responsibility for estimating properly the difficulty and cost of successfully performing the work without additional expense to City. Bidder hereby agrees that the material offered will meet all the requirements of the specifications in this solicitation unless deviations have been deemed acceptable by City. Request for exceptions must be submitted during the question and answer period of this Invitation for Bid as per instructions in Paragraph 6 of this document.

5. **BID PRICES.** All prices shall remain valid for ninety (90) days after the date of bid closing or other time stated in the Special Terms if any. Prices must be stated in the units specified on the Schedule of Unit Prices. Bidders may offer a cash discount for prompt payment; however, such discounts should not be considered in the unit price bid unless otherwise specified in special conditions.

6. **SUBSTITUTIONS.** If Bidder wishes to offer a substitution for a specified item of materials or equipment, the proposed substitution must be submitted **during the bidding questions and answers** process on the Substitution Sheet. An explanation must be made for each item in which the exception is taken, giving in detail the extent of the exception and the reason for which it is taken. Bids failing to comply with this requirement may be considered non-responsive. The City will be the sole judge of whether an alternative product is equivalent or superior to the listed product. The City reserves the right to waive immaterial variations in the specifications.

7. **SUBCONTRACTING.** If a Bidder intends to subcontract any portion of the work, the Schedule of Subcontractors form must be fully completed and submitted with the bid. The name, address, phone number and

extent of work and value of the work to be performed should be included for all sub-contractors. The City reserves the right to reject any bid if the bid names a subcontractor who has previously failed in the proper performance of an award, or failed to deliver on time contracts of a similar nature, or who is not in a position to perform under this award. The City reserves the right to inspect all facilities of any subcontractor in order to make a determination as to the foregoing.

8. **BID BONDS OR DEPOSITS.** **NOT APPLICABLE FOR THIS IFB.** Each bid must be accompanied by a bid bond or a deposit in a sum of not less than five percent (5%) of the total bid. Bid bonds and deposits amounting to less than one hundred dollars need not be submitted. Only the following types of bonds or deposits will be accepted:

1. Bid bond signed by a surety company authorized to do business in the State of Florida.
2. Cashier Check or bank draft of any national or state bank.
3. Certified check drawn on a financial institution acceptable to the City of Lake Worth Beach
4. U.S. Postal Money Order

All checks and orders must be made payable to the City of Lake Worth Beach. The City reserves the right to hold the bid security until a contract is properly executed and proof of the required insurance and bond(s) is provided. If any bidder presented with a contract fails to execute such contract with the City and/or provide the required insurance and/or bonds within ten (10) calendar days of receipt of the contract, the City shall be entitled to retain the deposit or enforce the bond. Bid deposits of unsuccessful bidders will be returned after execution of a contract and proof of the required insurance and bonds.

9. **CERTIFICATION AND LICENSES.** Each Bidder must include with its bid package a copy of all applicable certificates and licenses and a current Business Tax Receipt in the name of the Bidder submitting the Bid from the County in which the Bidder's principal place of business is located. If awarded the contract, any Bidder who is not required to have a Business License from the City will be required to obtain a Certificate of Registration from the City of Lake Worth Beach prior to contract execution.

10. **NO LOBBYING – CONE OF SILENCE.** In accordance with the Palm Beach County Lobbyist Registration Ordinance and Section 2-112(k) the City's procurement code, the City's procurement cone of silence will be in effect as of the due date for bids in response to this IFB. A complete copy of the City's procurement code is available on-line at municode.com under the City's code of ordinances (sections 2-111 – 2-117). All Bidders are highly encouraged to review the same. In summary, the cone of silence prohibits communication between certain City officials, employees and agents and any entity or person seeking to be awarded a contract (including their representatives, lobbyists and potential subcontractors). The cone of silence terminates at the time of award, rejection of all response or some other action by the City to end the selection process

11. **CONFLICT OF INTEREST AND ETHICS REQUIREMENTS.** This IFB is subject to the State of Florida Code of Ethics and the Palm Beach County Code of Ethics. Accordingly, there are prohibitions and limitations on the employment of City officials and employees and contractual relationships providing a benefit to the same. Bidders are highly encouraged to review both the Florida Code of Ethics and the Palm Beach County Code of Ethics in order to insure compliance with the same.

Further, any Bidder coming before the City Commission for an award of a contract and who has made an election campaign contribution in an amount that is more than one hundred dollars (\$100.00) to any elected official of the City Commission, who is a current sitting member of the Commission, must disclose such election campaign contribution, verbally and in writing, in their responsive proposal to this IFB. FAILURE TO INCLUDE THE CAMPAIGN CONTRIBUTION STATEMENT WILL CAUSE YOUR BID TO BE REJECTED.

12. **PUBLIC ENTITY CRIMES.** Pursuant to section 287.133, Florida Statutes, a person or affiliate who has been placed on the convicted vendor list maintained by the State of Florida may not submit a bid to the City for 36 months following the date of being placed on the convicted vendor list.

12.1 **SCRUTINIZED COMPANIES**

A. By submitting bid, each Bidder certifies that it and its subcontractors are not on the Scrutinized Companies that Boycott Israel List and are not engaged in the boycott of Israel. Pursuant to section 287.135, Florida Statutes, the City may immediately terminate a resulting contract at its sole option if the awarded Bidder or any of its subcontractors are found to have submitted a false certification; or if the awarded Bidder or any of its subcontractors, are placed on the Scrutinized Companies that Boycott Israel List or is engaged in the boycott of Israel during the

term of the resulting contract.

B. If this resulting contract is for one million dollars or more, the Bidder certifies through submission of a bid that it and its subcontractors are also not on the Scrutinized Companies with Activities in Sudan List, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaged in business operations in Cuba or Syria as identified in Section 287.135, Florida Statutes. Pursuant to Section 287.135, the City may immediately terminate the resulting contract at its sole option if the awarded Bidder, or any of its subcontractors are found to have submitted a false certification; or if the awarded Bidder or any of its subcontractors are placed on the Scrutinized Companies with Activities in Sudan List, or Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or are or have been engaged with business operations in Cuba or Syria during the term of the resulting contract.

C. The Bidder agrees to observe the above requirements for applicable subcontracts entered into for the performance of work under a resulting contract.

D. The Bidder agrees that the certifications in this section shall be effective and relied upon by the City for the term of a resulting contract, including any and all renewals.

E. The Bidder agrees that if it or any of its subcontractors' status changes in regards to any certification herein, the awarded Bidder shall immediately notify the City of the same.

F. As provided in Subsection 287.135(8), Florida Statutes, if federal law ceases to authorize the above-stated contracting prohibitions then they shall become inoperative.

13. **INQUIRIES AND ADDENDA.** Bidders shall notify the Procurement Division promptly of any error, omission, or inconsistency that may be discovered during examination of the Bid Documents and the proposed work site if applicable. Requests from Bidders for interpretation or clarification of the Bid Documents shall be submitted at **lakeworthbeachfl.bidsandtenders.net** or emailed to the Procurement Division of Financial Services and shall arrive no later than **April 30, 2020 by 4 p.m.** to: purchasing1@lakeworthbeachfl.gov.

Oral questions may be presented at a pre-bid conference if one is provided for in the Bid Documents. Interpretations, corrections, material substitution requests or changes, if any, to the Bid Documents shall be made by Addenda. Bidders shall not rely upon interpretations, corrections, and changes made in any other manner, including orally, at the pre-bid conference. Interpretations, corrections, and changes shall not be binding unless included in an Addenda. Any addenda or other modification to the IFB documents will be issued by the City prior to the date and time of Bid closing, as a written addenda distributed to all prospective bidders who have obtained the IFB directly from the City or its authorized representative. Such written addenda or modification shall be part of the Bid documents and shall be binding upon each Bidder. Each Bidder is required to acknowledge receipt of any and all addenda on the bid form. No Bidder may rely upon any oral or verbal modification or interpretation in preparing its bid. No interpretation of this IFB will be made for any bidder, except by written addendum. Questions or requests for clarification directed to any other member of the City staff may be grounds for rejection of the bid as being irregular.

14. **ACCEPTANCE; REJECTION; CANCELLATION.** In accordance with the City's procurement code, this IFB may be cancelled and may or may not be re-bid when determined to be in the best interests of the City. Any or all bids may be accepted or rejected in whole or in part, when determined to be in the best interests of the City. The City also reserves the right to reject the bid of any Bidder who has previously failed in the performance of an award or to deliver contracts of a similar nature on time or who is not in a position to perform properly under this award. The City reserves the right to investigate all bids, references and inspect all facilities of bidders. Any bid received without an authorized signature or after the submittal deadline may be rejected.

Any withdrawal or cancellation of this IFB, either before or after selection of a bidder, shall be without liability or obligation on the part of the City or its employees. Any action, selection or failure to select a successful bidder to this Invitation for Bid shall be without any liability or obligation of the part of the City or its employees.

The City reserves the right to waive any non-material irregularities and technicalities, except timeliness and signature requirements. If a bid is late or unsigned, the City reserves the right to investigate the matter further and make a determination as to the materiality of the matter. Additionally, bids may be considered irregular and may be rejected if the bid: 1) does not strictly conform to the requirements of this IFB; 2) is incomplete; 3) any Bid Form is altered; 4) contains additions not called for; 5) is conditional; 6) contains prices that are, in the opinion of the City, unbalanced either in excess or below the reasonable cost analysis values; and/or, 7) bids are in excess of the approved budget for the project.

15. **SELECTION OF BIDDER WITH WHOM TO CONTRACT.** It is intention of the City to award the resulting contract(s) to the lowest responsive and responsible Bidder(s) who provided the majority of lowest cost items. Additional resulting contract(s) may be awarded to the next lowest responsive and responsible Bidder(s).

To be considered responsive, Bidder's response to a bid shall substantially conform in all material respects to the requirements and criteria set forth in this IFB. This includes such aspects as following bid instructions for proper submittal, completing all necessary forms included with this IFB, providing information required by this IFB, and complying with all terms, conditions, qualifications and specification requirements as enumerated in this IFB. Except where specifically authorized in this IFB, a bid that deprives the City of the assurance that the contract will be entered into in accordance with its terms will be considered non-responsive.

To be considered responsible, Bidder shall have the capability in all respects to fully perform the requirements identified in this IFB. Bidder shall have the experience, capacity, facilities, equipment, credit, sufficient qualified personnel, and record of timely and acceptable past performance that will assure good faith performance for a city project or purchase. The term responsibility is not limited in its meaning to financial resources and ability. The City reserves the right to make the determination if Bidder is responsible by taking into consideration the Bidder's past performance on any contract involving similar work and/or services; the Bidder's skill and business judgment; the Bidder's experience and facilities for carrying out its responsibilities, timely completion and responding to complaints; and, any other relevant information which the City may obtain relating to the Bidder's experience, its proposed personnel's and subcontractor's ability to perform the solicited work and/or services.

The City is not obligated to accept the lowest bid and is not responsible for bid preparation costs. The City reserves the right to reject any or all bids, to waive minor irregularities in any bids or in the bidding procedure, and to accept any bid presented which is deemed to be in the best interest of the City.

16. POSTING OF AWARD TABULATIONS. The selected Bidder(s) will be notified in writing with intent to award a contract. Recommended awards will be available for review by interested parties at the Financial Services office.

17. CONTRACT. The City and successful Bidder(s) will be contractually bound only if and when a written contract between the parties is executed by the City. In the event a contract is not executed with the selected Bidder, the City reserves the right to select the next lowest, responsive and responsible Bidder based on the bid tabulation and to contract with said Bidder.

The terms and conditions of the resulting contract will be negotiated with successful Bidder, but will include, at a minimum, the terms laid out in **Exhibit B**, which are the provisions required to be included in contracts funded by federal grants, including FEMA Public Assistance. See 2 C.F.R. § 200.326 and applicable FEMA guidance.

The resulting non-exclusive contract(s) shall be for an initial term of 2 years with additional three (3) one (1) year renewal options unless earlier terminated in accordance with the terms of the resulting contract(s). It is intention of the City to award the contract to a Primary and Secondary contractor (or more) in order to achieve the best results for emergency services for the City.

Rates shall remain firm for the first two years of the resulting contract subject to terms and conditions to be negotiated on requests for consideration of a price adjustment after that term.

18. PROCUREMENT CODE. The City's Procurement Code, sections 2-111 to 2-119 of the City's Code of Ordinances, shall govern this IFB. If there are any inconsistencies between this IFB and the Procurement Code, the Procurement Code shall take precedence.

20. COSTS. All costs incurred by any party in responding to this IFB are the sole responsibility of the Bidder including any costs, fees or expenses associated with a protest.

21. PROTEST PROCEDURE. Please see section 2-115 of the City's Procurement Code for the procedure.

22. CITY IS DOCUMENT GATEKEEPER. This IFB is issued directly by the City and the City shall be the sole distributor of all addenda and/or revisions to these documents. It is the responsibility of the Bidder to confirm the legitimacy of procurement opportunities or notices directly with the Financial Services Office. The City is not responsible for any solicitations advertised by subscriptions, publications, websites (other than the City's) or other sources not connected with the City and the Bidder should not rely on such sources for information regarding any solicitation made by the City of Lake Worth Beach.

23. PROPERTY OF THE CITY. All materials submitted in response to this IFB become the property of the City. The City has the right to use any or all ideas presented in any response to this IFB, whether amended or not, and selection or rejection of a proposal does not affect this right. No variances to this provision shall be accepted.

24. DISCLOSURE AND DISCLAIMER. The information contained herein is provided solely for the convenience of the Bidders. It is the responsibility of each Bidder to assure itself that information contained herein is accurate and complete. Neither the City, nor its advisors provide any assurances as to the accuracy of any information in this IFB. Any reliance on the contents of this IFB regarding the project or scope of thereof, or on any oral communications with City representatives or advisors, shall be at each Bidder's own risk. Bidders should rely exclusively on their own investigations, interpretations and analyses in connection with this matter. This IFB is being provided by the City without any warranty or representation, express or implied, as to its content, accuracy or completeness and no Bidder or other party shall have recourse to the City if any information herein contained shall be inaccurate or incomplete. No warranty or representation is made by the City that any bid or proposal conforming with these requirements will be selected for consideration, negotiation or approval.

Any action taken by the City in response to bids submitted pursuant to this IFB or in making any award or failure or refusal to make any award pursuant to such bids or proposals, or in any cancellation of award, or in any withdrawal or cancellation of this IFB, either before or after issuance of an award, shall be without any liability or obligation on the part of the City, or their advisors.

Any recipient of this IFB who responds hereto fully acknowledges all the provisions of this Discloser and Disclaimer and agrees to be bound by the terms hereof. Any bid submitted pursuant to this IFB is at the sole risk and responsibility of the party submitting such a bid.

25. COMPLIANCE. All bids received in accordance with this IFB shall be subject to applicable Florida Statutes governing public records including without limitation Chapter 119, Florida Statutes.

26. OFFICE OF THE INSPECTOR GENERAL. In accordance with Palm Beach County ordinance number 2011-009, this IFB and resulting contract may be subject to investigation and/or audit by the Palm Beach County Inspector General. The Inspector General of Palm Beach County has the authority to investigate and audit matters relating to the negotiation and performance of this contract and in furtherance thereof may demand and obtain records and testimony from the contractor and its subcontractors and lower tier subcontractors. Each Bidder understands and agrees that in addition to all other remedies and consequences provided by law, the failure of the awarded Bidder(s) or its subcontractors or lower tier subcontractors to fully cooperate with the Inspector General when requested may be deemed by the municipality to be a material breach of the resulting contract(s) justifying its termination. Bidder should review Palm Beach County ordinance number 2011-009 in order to be aware of its rights and/or obligations under such ordinance and as applicable.

27. WARRANTY TERMS. Successful Bidder shall fully warrant all materials against poor and inferior quality or workmanship and provide standard manufacturer's warranty as applicable for no less than one (1) year.

28. DEFAULT, TERMINATION, LITIGATION, DEBARMENT, ETC. Bidders should provide a summary of any of Bidder's defaults, terminations, litigation, suspensions, and/or debarments against or which named the Bidder in the past five (5) years which is related to the goods and/or services sought in this IFB or that Bidder otherwise provides in the regular course of business. Debarments and suspensions should be reported regardless of their relation to the scope of work under this IFB. The summary shall state the nature of the default, termination, litigation, debarment and a brief description of the outcome or projected outcome, and the monetary amount involved. If none, state as such.

END OF SECTION 4 - INSTRUCTIONS TO BIDDERS

EXHIBIT "A"
DETAILED SCOPE OF WORK

The City of Lake Worth Beach is seeking bids from qualified and experienced contractors to provide repairs to the City's water distribution, wastewater collection and stormwater collection systems immediately after a hurricane, other disaster, or as needed by the City on an emergency basis. The objective of this IFB and subsequent contracting activity is to secure the services of an experienced contractor(s) who is capable of efficiently repairing aforementioned water systems in a timely and cost-effective manner. The awarded contractor(s) should be experienced and proficient in all phases of construction and repairs of water systems, including but not limited to: furnishing and installing various sizes of pipe for gravity sewer main and force main, water distribution lines and storm sewer mains; and concrete structures for the wastewater and storm water systems. Set up and monitoring of bypass pumping; dewatering systems; and restoration related to landscaping, asphalt and concrete work may also be required as needed. The awarded contractor(s) must be capable of assembling, directing, and managing a work force that can complete the repairs in the assigned number of days or less.

This is an acknowledgement that FEMA financial assistance may be used to fund the resulting contract for emergency services. The awarded contractor(s) shall perform all work in compliance with all applicable federal law, regulations, executive orders, FEMA policies, procedures, and directives in order to maximize recovery of reimbursable expenses. This shall include the provision of audit quality documentation as required by and acceptable to FEMA for all work accomplished. This includes compliance with any disaster management or monitoring services the City may have under contract.

The awarded contractor(s) may be required, at the City's discretion, to be under the direction of an agent of the City.

While intended to cover water, wastewater and stormwater repair needs in any major disaster scenario or other emergency, the primary focus is on the threat of hurricane damage to the City. The planning standards used for this project are based on the anticipated impacts of a named storm event or major flood impacting Palm Beach County, Florida.

The City envisions the need for multiple contracts to carry out the water utility systems work throughout the City in the event of a major disaster or other emergency. The awarded contractor(s) must have the experience and capability to manage a major workforce with multiple subcontractors and to cover the expenses associated with a major recovery operation prior to the initial City payment and between subsequent payments, as well as the capacity to provide the necessary insurance. The awarded contractor(s) must also have an established management team, an established network of resources to provide the necessary equipment and personnel to complete comprehensive water utility system repairs and demonstrable experience in major disaster recovery projects.

The resulting contract(s) to be awarded under this IFB will be activated via purchase order only in the face of an emergency or immediately after an emergency as needed. As such, no compensation will accrue to the contractor(s) unless and until a purchase order is issued either in anticipation of an emergency or immediately after such emergency. Each purchase order will contain a price ceiling (not-to-exceed amount) that the awarded contractor(s) exceeds at its own risk.

The City does not guarantee an awarded contractor will be activated if awarded a contract.

In addition to using City forces and equipment, the City intends to award two (but reserves the right to execute more or less than two) repair contracts under this IFB for the purpose of having contractors immediately available and committed to assisting the City prior to or in the aftermath of an emergency. Each contractor awarded a repair contract will serve as a General Contractor for the purpose of water utility systems repair operations, and will be able to use his/her own resources and subcontractor

resources to meet the obligations of the contract and specific purchase order. It is anticipated that the awarded contractors will use both local and non-local subcontractors. Notwithstanding, the contractors must take all necessary affirmative steps to assure that small and minority businesses, women's business enterprises and labor surplus area firms are solicited and used when possible.

When a major disaster or emergency occurs or is imminent, the City intends to contact the highest ranked contractors awarded a repair contract under this IFB to advise them of the City's intent to utilize the contracts via purchase order.

When a major disaster or emergency occurs or is imminent, the City will initially send out an alert to the awarded contractors. This alert will serve to activate the lines of communication between the awarded contractor representatives and the City.

Specific purchase orders will be issued to select contractor(s) based on the best interest of the City. The City reserves the right to assign purchase orders to various contractor(s) based on awarded pricing submitted. The City does not guarantee a cradle to grave pricing arrangement but reserves the right to pick and choose awarded contractor(s) based on ranking.

The general concept of water utility systems repairs shall include pipe break repair, pipe collapse repair, sections of pipe replacement, cleaning and lining of existing mains, among other tasks. The CITY will prescribe the specific schedule to be used after ascertaining the scope and nature of the anticipated or disaster's or emergency's impacts.

The City reserves the right to utilize the awarded contractors for other repair work consistent with this Scope of Work even if the repair work is not an emergency. Said work will be awarded via Purchase Order in the City's sole discretion.

Reporting

The awarded contractor(s) shall submit a report to the City's Emergency Management Coordinator or designee by close of business each day of the term of an issued purchase order as requested or as required by FEMA or other grant funding. Each report shall contain, at a minimum, the following information:

1. Contractor's Name
2. Contract Number
3. Daily and cumulative hours for each piece of equipment, if appropriate
4. Daily and cumulative hours for personnel, by position, and tasks performed, if appropriate
5. Volumes of repairs handled

Failure to provide audit quality information by 5:00 p.m. of the following day of operation will subject contractor to non-payment in each instance at the sole discretion of the City.

Performance of Contractor

It is the intent of the awarded contract(s) to ensure that the awarded contractor(s) provides a quality level of service. To this end, all complaints received by the Emergency Management Coordinator or designee, and reported to the contractor(s) shall be promptly resolved pursuant to the provisions of the awarded contract(s).

The City's Emergency Management Coordinator or designee may levy administrative charges for the following infractions:

1. Inability to perform repairs due to awarded contractor(s) equipment or operational failures, liquidated damages of \$500 per day, for each day repair site must remain attended.

2. Failure to provide audit quality information by 5:00 p.m. of the following day of operation, liquidated damages of \$500 per day, for each day of failure to provide audit quality information.

The awarded contractor(s) may be immediately terminated and may not be paid for the following:

1. Starting repairs of any non-eligible, non-City approved areas.
2. Moving to another designated Work Area without prior City approval.
3. Failure to provide service in accordance to guidelines set forth by FEMA (or other grant provided) and the City.
4. Soliciting work from private citizens or others to be performed in the designated Service Area during the awarded contract term.

The City reserves the right to delete or amend any of the services as listed and described herein in negotiations with the selected contractor(s) or in specific purchase orders.

(B1)

BID PACKAGE COVER SHEET

IFB # 20-106 Project Title: Emergency Utility Repairs for Water, Wastewater and Stormwater

Bidder Name:

Enclose the following documents:

- _____ 1. Bid Package Cover Sheet (B1)
- _____ 2. Minimum Qualifications (B2)
- _____ 3. Bid (B3)
- _____ 4. Schedule of Unit Prices (B4)
- _____ 5. Substitution Sheet (B5) - If none, mark "none".
- _____ 6. Schedule of Sub-contractors (B6) - If none, mark "none".
- _____ 7. Contractor Verification (B7) - Check the license and insurance requirements to ensure that you will comply and attach copies of current licenses.
- _____ 8. Reference List (B8) (Must be submitted)
- _____ 9. Affidavit Of Prime Bidder re Non-collusion (B9) (Must be submitted)
- _____ 10. Drug Free Certification (B10) (Must be submitted)
- _____ 11. Campaign Contribution Statement (must be submitted) (B11)
- _____ 12. Scrutinized Companies Certification (B12) (Must be submitted)
- _____ 13. Addendums Acknowledgment (if any issued)
- _____ 14. Certification for Contracts, Grants, Loans, and Cooperative Agreements (Must be submitted)

THIS PAGE AND THE FOLLOWING PAGES ARE TO BE RETURNED WITH YOUR BID.

Bids shall be e-mailed as an attachment in PDF format maximum size of 15MG to the secure e-mail address:

bids@lakeworthbeachfl.gov

Subject line shall list the IFB number, title, along with the date and hour bids are scheduled to be received.

AVOID BID REJECTION:

All bids must be submitted on the provided Bid forms with each form completed and signed where requested. Signatures must be signed by a person authorized to bind the Bidder.

IFB # 20-106

Bidder's Minimum Qualifications

Each Bidder must provide three (3) similar projects or ongoing emergency repair contracts in the last five (5) years to satisfy the minimum qualifications requirements. Each Bidder shall have a minimum of five (5) years' experience in emergency repair work or underground utility infrastructure projects including, but not limited to, pressure pipe install and repair from 2"-42", gravity storm and sanitary sewer pipe install from 8"-72" and concrete structure installation and repairs for water utility systems.

The reference person must be someone who has personal knowledge of the Bidder's and its subcontractor's (if any) performance. The reference person must have been informed that they are being used as a reference so that the City may check references.

****Please also attach to this form a copy of the required license(s) to establish your minimum qualifications.**

Bidder's Name: _____

PROJECT **(FIRST PROJECT)**

Name of Project: _____

Project Location: _____

Description of Project: _____

Describe the project elements (type of project, road lanes, number of employees used on project, time frame for completion, etc.) completed by the Contractor, Sub-Contractors, and/or Suppliers:

Description of any Change Orders: _____

Contract Amount: _____

Project Start Date: _____

Project End Date: _____

Owner/Contact Name & Title: _____

Phone Number: _____

Fax Number: _____

Email Address: _____

PROJECT (SECOND PROJECT)

Name of Project: _____

Project Location: _____

Description of Project: _____

Describe the project construction elements (type of project, road lanes, number of employees used on project, time frame for completion, etc.) completed by the Contractor, Sub-Contractors, and/or Suppliers:

Description of any Change Orders: _____

Contract Amount: _____

Project Start Date: _____

Project End Date: _____

Owner/Contact Name: Title: _____

Phone Number: _____

Fax Number: _____

Email Address: _____

PROJECT (THIRD PROJECT)

Name of Project: _____

Project Location: _____

Description of Project: _____

Describe the project construction elements (type of project, road lanes, number of employees used on project, time frame for completion, etc.) completed by the Contractor, Sub-Contractors, and/or Suppliers:

Description of any Change Orders: _____

Contract Amount: _____

Project Start Date: _____

Project End Date: _____

Owner/Contact Name & Title: _____

Phone Number: _____

Fax Number: _____

Email Address: _____

Note: Bidders may use additional sheets with the same format to list other projects as proof of prior experience (for no more than five projects in total).

BID

IFB # 20 -106 Emergency Utility Repairs for Water, Wastewater and Stormwater

Bid of: _____

(Bidder Name)

Total Bid Amount: \$ _____ (total cumulative of all listed prices submitted in Schedule of Unit Prices)

(Write Dollar Figure Here)

Bidder agrees to furnish, unless otherwise provided, all implements, machinery, equipment, transportation, tools, materials, supplies, labor and other things necessary for the performance and completion of the work for the amount indicated in the Schedule of Unit Prices.

The undersigned Bidder hereby declares that:

1. This bid is made in good faith, without collusion or fraud and is fair and competitive in all respects.
2. Bidder has carefully and to his/her full satisfaction examined the IFB, the attached Scope of Work/ and all required forms, attached documents and requirements and Bidder has read all addenda issued.
3. Bidder has made a full examination of the site and is familiar with the site conditions that may impact its performance (if applicable).
4. Upon receipt of a Notice of Intent to Award the contract the Bidder shall: 1) commence obtaining a Performance and Payment Bond (if applicable), and Certificate(s) of Insurance and 2) commence obtaining a Certificate of Registration or Business License for engaging in business from the City, as such documents are required to commence the work.
5. Bidder understands that the contract time starts on the date of Notice to Proceed or issuance of the Purchase Order.
6. Bidder furthermore agrees that, in case of failure on his/her part to execute a Contract and provide all required documents within ten (10) calendar days of receipt of the Contract for execution, the offer to contract may be withdrawn and the check, bond, or other security accompanying his bid and the money payable thereon, shall become the property of the City, by forfeit as agreed liquidated damages.
7. The Bidder states that this bid is the only bid for this project in which Bidder is interested; and Bidder shall not be a sub-contractor or sub-subcontractor on this project.
9. Liquidated damages for delay are agreed to be as indicated in the IFB and Scope of Work.
10. Bidder shall be responsible for all permitting fees and utility service connection fees unless otherwise specifically provided in this IFB or in the resulting Contract.
11. All debris is to be legally disposed of at a licensed disposal site in accordance with city, state, and federal standards.
12. The City reserves the right to select and include one or more alternates in the Project and work.
13. The following officer, director or agent of the Bidder is also an employee of the City of Lake Worth Beach.

<i>Name</i>	<i>Address</i>
-------------	----------------

14. The following employee(s) of the City of Lake Worth Beach, either directly or indirectly owns, an interest of 10% or more of Bidder or its affiliates or subsidiaries:

<i>Name</i>	<i>Address</i>
-------------	----------------

15. Bidder and all affiliates, suppliers, subcontractor or consultants who will perform the Work have not been placed on the Public Entity Crimes convicted vendor list maintained by the State of Florida within the 36 months immediately preceding the date of this Bid.

16. Bidder acknowledges that ADDENDA NO(S). _____ have been RECEIVED and has included their provisions in their Bid.

17. By signing and submitting this Bid, Bidder represents that all Bid Forms are fully complete and accurate.

18. Bidder acknowledges that the Bid may be rejected if all Bid Forms are not fully complete, not accurate or if forms are not signed by properly authorized signatures where required.

Name of Firm: _____

HQ Address: _____ ST _____ Zip _____

Phone: (____) _____ Email: _____

FEIN: _____ State of Incorporation: _____

Print Name: _____ Title: _____

SIGNATURE: _____ Date: _____

Sales Office: _____ ST _____ Zip _____

Sales Contact Name: _____ Title: _____

Phone: (____) _____ Email: _____

Failure to fully complete and sign this Bid Form may result in rejection of the Bid.

IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater

SCHEDULE OF UNIT PRICES

In order to evaluate the bid submissions, each Bidder must identify the unit prices for the work set forth in the Scope of Work. In the event additional work is added to the contract by Change Order, the following unit prices will be utilized (as applicable). The bid will be awarded to the responsive and responsible bidder who provided majority of the lowest cost items.

Name of Bidder: _____

Address: _____ ST _____ Zip _____

Phone: (____) _____ Email: _____

Print Name: _____ Title: _____

SIGNATURE: _____ Date: _____

IFB# 20-106 SCHEDULE OF UNIT PRICES

	A	B	C	D	E	F	G	H	I	
1	Emergency Repairs									
2	ITEM	DESCRIPTION OF BID ITEM						UNIT	PRICE	
3	GENERAL CONDITIONS									
4										
5	GC-1	Emergency Mobilization/Demobilization Costs for Rear Easement repairs							LS	
6	GC-2	Emergency Mobilization/Demobilization Costs for Utility Right of Way repairs							LS	
7	GC-3	NON-Emergency Mobilization/Demobilization Costs for Rear Easement repairs							LS	
8	GC-4	NON-Emergency Mobilization/Demobilization Costs for Utility Right of Way repairs							LS	
9	GC-5	Record Drawing (less than 40 LF of Utility Work)							LS	
10	GC-6	Record Drawing (more than 40 LF of Utility Work)							LS	
11	GC-7	Construction Survey							LS	
12	GC-8	M.O.T. Residential Street							EA	
13	GC-9	M.O.T. City Arterial Roadway							EA	
14	GC-10	M.O.T. DOT Roadway							EA	
15	GC-11	Bacteriological Testing and Clearance of Water Mains (actual cost reimbursement by City)							ALLOWANCE	
16	GC-12	Density Tests (actual cost reimbursement by City)							---	
17	GC-13	Proctor Tests (actual cost reimbursement by City)							---	
18	GC-14	Florida Bearing Value Tests (actual cost reimbursement by City)							---	
19	GC-15	LBR Test (Load Bearing Ratio) (actual cost reimbursement by City)							---	
20	GC-16	Concrete 12" x 6" Cylinder Test (actual cost reimbursement by City)							---	
21	GC-17	Applicable Permits (actual cost reimbursement by City)							---	
22										
23	WASTEWATER									
24	WASTEWATER FORCEMAIN- includes all fittings, appurtenances, restraints and restoration for a complete installation									
25	F-1	Furnish & Install 4-Inch C-900 DR-18 PVC Sewer Main							LF	
26	F-2	Furnish & Install 4-Inch Class 350 DIP Sewer Main							LF	
27	F-3	Furnish & Install 6-Inch C-900 DR-18 PVC Sewer Main							LF	
28	F-4	Furnish & Install 6-Inch Class 350 DIP Sewer Main							LF	
29	F-5	Furnish & Install 8-Inch C-900 DR-18 PVC Sewer Main							LF	
30	F-6	Furnish & Install 8-Inch Class 350 DIP Sewer Main							LF	
31	F-7	Furnish & Install 10-Inch C-900 DR-18 PVC Sewer Main							LF	
32	F-8	Furnish & Install 10-Inch Class 350 DIP Sewer Main							LF	
33	F-9	Furnish & Install 12-Inch C-900 DR-18 PVC Sewer Main							LF	
34	F-10	Furnish & Install 12-Inch Class 350 DIP Sewer Main							LF	
35	F-11	Furnish & Install 16-Inch C-905 DR-18 PVC Sewer Main							LF	
36	F-12	Furnish & Install 16-Inch Class 350 DIP Sewer Main							LF	
37	F-13	Furnish & Install 18-Inch C-905 DR-18 PVC Sewer Main							LF	
38	F-14	Furnish & Install 18-Inch Class 350 DIP Sewer Main							LF	
39	F-15	Furnish & Install 20-Inch C-905 DR-18 PVC Sewer Main							LF	
40	F-16	Furnish & Install 20-Inch Class 350 DIP Sewer Main							LF	
41	F-17	Furnish & Install 24-Inch C-905 DR-18 PVC Sewer Main							LF	
42	F-18	Furnish & Install 24-Inch Class 350 DIP Sewer Main							LF	
43	F-19	Furnish & Install 30-Inch C-905 DR-21 PVC Sewer Main							LF	
44	F-20	Furnish & Install 30-Inch Class 350 DIP Sewer Main							LF	
45	F-21	Furnish & Install 36-Inch C-905 DR-21 PVC Sewer Main							LF	
46	F-22	Furnish & Install 36-Inch Class 350 DIP Sewer Main							LF	
47	F-23	Furnish & Install 42-Inch Class 350 DIP Sewer Main							LF	
48	GRAVITY SANITARY SEWER - includes all fittings, appurtenances, dewatering and restoration for a complete installation									
49	F-24	Furnish & Install 8-Inch SDR-26 PVC Sewer Main						4' - 8' Deep	LF	
50	F-25	Furnish & Install 8-Inch SDR-26 PVC Sewer Main						8' - 12' Deep	LF	
51	F-26	Furnish & Install 8-Inch DR-18 PVC Sewer Main						12' + Deep	LF	
52	F-27	Furnish & Install 8-Inch Class 350 DIP Sewer Main						4' - 8' Deep	LF	
53	F-28	Furnish & Install 8-Inch Class 350 DIP Sewer Main						8' - 12' Deep	LF	
54	F-29	Furnish & Install 10-Inch SDR-26 PVC Sewer Main						4' - 8' Deep	LF	
55	F-30	Furnish & Install 10-Inch SDR-26 PVC Sewer Main						8' - 12' Deep	LF	
56	F-31	Furnish & Install 10-Inch DR-18 PVC Sewer Main						12' + Deep	LF	
57	F-32	Furnish & Install 10-Inch Class 350 DIP Sewer Main						4' - 8' Deep	LF	
58	F-33	Furnish & Install 10-Inch Class 350 DIP Sewer Main						8' - 12' Deep	LF	
59	F-34	Furnish & Install 12-Inch SDR-26 PVC Sewer Main						4' - 8' Deep	LF	
60	F-35	Furnish & Install 12-Inch SDR-26 PVC Sewer Main						8' - 12' Deep	LF	
61	F-36	Furnish & Install 12-Inch DR-18 PVC Sewer Main						12' + Deep	LF	
62	F-37	Furnish & Install 12-Inch Class 350 DIP Sewer Main						4' - 8' Deep	LF	
63	F-38	Furnish & Install 12-Inch Class 350 DIP Sewer Main						8' - 12' Deep	LF	
64	F-39	Furnish & Install 15-Inch SDR-26 PVC Sewer Main						4' - 8' Deep	LF	
65	F-40	Furnish & Install 15-Inch SDR-26 PVC Sewer Main						8' - 12' Deep	LF	
66	F-41	Furnish & Install 15-Inch DR-18 PVC Sewer Main						12' + Deep	LF	
67	F-42	Furnish & Install 15-Inch Class 250 DIP Sewer Main						4' - 8' Deep	LF	
68	F-43	Furnish & Install 15-Inch Class 250 DIP Sewer Main						8' - 12' Deep	LF	
69	F-44	Furnish & Install 18-Inch PS 115 PVC Sewer Main						4' - 8' Deep	LF	
70	F-45	Furnish & Install 18-Inch PS 115 PVC Sewer Main						8' - 12' Deep	LF	
71	F-46	Furnish & Install 18-Inch DR-18 PVC Sewer Main						12' + Deep	LF	

IFB# 20-106 SCHEDULE OF UNIT PRICES

	A	B	C	D	E	F	G	H	I
72	F-47	Furnish & Install 18-Inch Class 250 DIP Sewer Main					4' - 8' Deep	LF	
73	F-48	Furnish & Install 18-Inch Class 250 DIP Sewer Main					8' - 12' Deep	LF	
74	F-49	Furnish & Install 21-Inch PS 115 PVC Sewer Main					4' - 8' Deep	LF	
75	F-50	Furnish & Install 21-Inch PS 115 PVC Sewer Main					8' - 12' Deep	LF	
76	F-51	Furnish & Install 21-Inch DR-18 PVC Sewer Main					12' + Deep	LF	
77	F-52	Furnish & Install 20-Inch Class 250 DIP Sewer Main					4' - 8' Deep	LF	
78	F-53	Furnish & Install 20-Inch Class 250 DIP Sewer Main					8' - 12' Deep	LF	
79	F-54	Furnish & Install 24-Inch PS 115 PVC Sewer Main					4' - 8' Deep	LF	
80	F-55	Furnish & Install 24-Inch PS 115 PVC Sewer Main					8' - 12' Deep	LF	
81	F-56	Furnish & Install 24-Inch DR-18 PVC Sewer Main					12' + Deep	LF	
82	F-57	Furnish & Install 24-Inch Class 250 DIP Sewer Main					4' - 8' Deep	LF	
83	F-58	Furnish & Install 24-Inch Class 250 DIP Sewer Main					8' - 12' Deep	LF	
84	F-59	Furnish & Install 30-Inch PS 115 PVC Sewer Main					4' - 8' Deep	LF	
85	F-60	Furnish & Install 30-Inch PS 115 PVC Sewer Main					8' - 12' Deep	LF	
86	F-61	Furnish & Install 30-Inch DR-18 PVC Sewer Main					12' + Deep	LF	
87	F-62	Furnish & Install 30-Inch Class 250 DIP Sewer Main					4' - 8' Deep	LF	
88	F-63	Furnish & Install 30-Inch Class 250 DIP Sewer Main					8' - 12' Deep	LF	
89	F-64	Furnish & Install 36-Inch PS 115 PVC Sewer Main					4' - 8' Deep	LF	
90	F-65	Furnish & Install 36-Inch PS 115 PVC Sewer Main					8' - 12' Deep	LF	
91	F-66	Furnish & Install 36-Inch DR-21 PVC Sewer Main					12' + Deep	LF	
92	F-67	Furnish & Install 36-Inch Class 250 DIP Sewer Main					4' - 8' Deep	LF	
93	F-68	Furnish & Install 36-Inch Class 250 DIP Sewer Main					8' - 12' Deep	LF	
94		Sanitary Sewer Lateral Clean-Out including cut-in wye and all appurtenances for complete installation							
95	F-69	Sanitary Sewer 6" Lateral & Clean-out (single)					<7' depth to main	EA	
96	F-70	Sanitary Sewer 6" Lateral & Clean-out (double)					<7' depth to main	EA	
97	F-71	Sanitary Sewer 6" Lateral & Clean-out (single)					>7' depth to main	EA	
98	F-72	Sanitary Sewer 6" Lateral & Clean-out (double)					>7' depth to main	EA	
99	F-73	Sanitary Sewer 8" Lateral & Clean-out (single)						EA	
100	F-74	Sanitary Sewer 8" Lateral & Clean-out (double)						EA	
101		Furnish & Install Gate Valve & Valve Box							
102	F-75	4" Gate Valve & Valve Box						EA	
103	F-76	6" Gate Valve & Valve Box						EA	
104	F-77	6" Plug Valve & Valve box						EA	
105	F-78	8" Plug Valve & Valve box						EA	
106	F-79	10" Plug Valve & Valve box						EA	
107	F-80	12" Plug Valve & Valve box						EA	
108	F-81	16" Plug Valve & Valve box						EA	
109	F-82	20" Plug Valve & Valve box						EA	
110		Furnish & Install Tapping Sleeve with Valve & Valve Box							
111	F-83	4"x 4" Tapping Sleeve w/Valve & Valve Box						EA	
112	F-84	6"x 4" Tapping Sleeve w/Valve & Valve Box						EA	
113	F-85	6"x 6" Tapping Sleeve w/Valve & Valve Box						EA	
114	F-86	8"x 4" Tapping Sleeve w/Valve & Valve Box						EA	
115	F-87	8"x 6" Tapping Sleeve w/Valve & Valve Box						EA	
116	F-88	8"x 8" Tapping Sleeve w/Valve & Valve Box						EA	
117	F-89	10" x 4" Tapping Sleeve w/Valve & Valve Box						EA	
118	F-90	10" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
119	F-91	10" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
120	F-92	10" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
121	F-93	12" x 4" Tapping Sleeve w/Valve & Valve Box						EA	
122	F-94	12" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
123	F-95	12" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
124	F-96	12" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
125	F-97	12" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
126	F-98	16" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
127	F-99	16" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
128	F-100	16" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
129	F-101	16" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
130	F-102	16" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
131	F-103	18" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
132	F-104	18" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
133	F-105	18" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
134	F-106	18" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
135	F-107	18" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
136	F-108	18" x 18" Tapping Sleeve w/Valve & Valve Box						EA	
137	F-109	20" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
138	F-110	20" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
139	F-111	20" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
140	F-112	20" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
141	F-113	20" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
142	F-114	20" x 20" Tapping Sleeve w/Valve & Valve Box						EA	

IFB# 20-106 SCHEDULE OF UNIT PRICES

	A	B	C	D	E	F	G	H	I
143	F-115	36" x 18" Tapping Sleeve w/Valve & Valve Box						EA	
144	F-116	36" x 24" Tapping Sleeve w/Valve & Valve Box						EA	
145	F-117	36" x 30" Tapping Sleeve w/Valve & Valve Box						EA	
146	F-118	Wastewater Force Main 2" Air Release Valve w/Manhole						EA	
147	F-119	Wastewater Force Main 2" or 3" Air/Vacuum Valve						EA	
148	F-120	Wastewater Force Main 2"x1", 2"x2", 2"x3" Combination Air Valve w/Manhole						EA	
149		Furnish & Install Line Stop inclusive of all appurtenances for a complete installation							
150	F-121	4" Insertion Line Stop						EA	
151	F-122	6" Insertion Line Stop						EA	
152	F-123	8" Insertion Line Stop						EA	
153	F-124	10" Insertion Line Stop						EA	
154	F-125	12" Insertion Line Stop						EA	
155	F-126	16" Insertion Line Stop						EA	
156	F-127	18" Insertion Line Stop						EA	
157	F-128	20" Insertion Line Stop						EA	
158	F-129	24" Insertion Line Stop						EA	
159	F-130	30" Insertion Line Stop						EA	
160	F-131	36" Insertion Line Stop						EA	
161		Furnish & Install new Standard Precast Concrete 48" diameter Manhole Structure to include Bench work and Ring and Cover including City approved coatings (inside							
162	F-132	0' - 4' FT Deep						EA	
163	F-133	4' - 6' FT Deep						EA	
164	F-134	6' - 8' FT Deep						EA	
165	F-135	8' - 10' FT Deep						EA	
166	F-136	10' - 12' FT Deep						EA	
167	F-137	12' - 14' FT Deep						EA	
168	F-138	14' - 16' FT Deep						EA	
169	F-139	16' - 20' FT Deep						EA	
170		MISCELLANEOUS							
171	F-140	Core drill exist manhole (Any size)						EA	
172	F-141	SANITARY CREW A - Includes a foreman, 3 experienced workers, layout, excavating, installing and backfilling equipment necessary for concrete, PVC, HDPE or metal pipe laying or repair up to 36" diameter. Material costs shall be included with invoice with maximum 15% markup.						HR	
173									
174		WATERMAIN**							
175		**Prices Quoted in the Water Main Section are Interchangeable with Raw Water Lines as needed							
176		WATERMAIN- includes all fittings, appurtenances, restraints and restoration for a complete installation. Includes testing: density, pressure and							
177	W-1	Furnish & Install 4-Inch C-900 DR-18 PVC Water Main						LF	
178	W-2	Furnish & Install 4-Inch Class 350 DIP Water Main						LF	
179	W-3	Furnish & Install 6-Inch C-900 DR-18 PVC Water Main						LF	
180	W-4	Furnish & Install 6-Inch Class 350 DIP Water Main						LF	
181	W-5	Furnish & Install 8-Inch C-900 DR-18 PVC Water Main						LF	
182	W-6	Furnish & Install 8-Inch Class 350 DIP Water Main						LF	
183	W-7	Furnish & Install 10-Inch C-900 DR-18 PVC Water Main						LF	
184	W-8	Furnish & Install 10-Inch Class 350 DIP Water Main						LF	
185	W-9	Furnish & Install 12-Inch C-900 DR-18 PVC Water Main						LF	
186	W-10	Furnish & Install 12-Inch Class 350 DIP Water Main						LF	
187	W-11	Furnish & Install 16-Inch C-905 DR-18 PVC Water Main						LF	
188	W-12	Furnish & Install 16-Inch Class 250 DIP Water Main						LF	
189	W-13	Furnish & Install 18-Inch C-905 DR-18 PVC Water Main						LF	
190	W-14	Furnish & Install 18-Inch Class 250 DIP Water Main						LF	
191	W-15	Furnish & Install 20-Inch C-905 DR-18 PVC Water Main						LF	
192	W-16	Furnish & Install 20-Inch Class 250 DIP Water Main						LF	
193	W-17	Furnish & Install 24-Inch C-905 DR-18 PVC Water Main						LF	
194	W-18	Furnish & Install 24-Inch Class 200 DIP Water Main						LF	
195	W-19	Furnish & Install 30-Inch C-905 DR-21 PVC Water Main						LF	
196	W-20	Furnish & Install 30-Inch Class 200 DIP Water Main						LF	
197	W-21	Furnish & Install 36-Inch C-905 DR-21 PVC Water Main						LF	
198	W-22	Furnish & Install 36-Inch Class 200 DIP Water Main						LF	
199		Furnish & Install Gate Valve & Valve Box							
200	W-23	4" Gate Valve & Valve Box						EA	
201	W-24	6" Gate Valve & Valve Box						EA	
202	W-25	8" Gate Valve & Valve Box						EA	
203	W-26	10" Gate Valve & Valve Box						EA	
204	W-27	12" Gate Valve & Valve Box						EA	
205	W-28	16" Gate Valve & Valve Box						EA	
206		Furnish & Install Butterfly Valve & Valve Box							
207	W-29	14" Butterfly Valve & Valve Box						EA	
208	W-30	16" Butterfly Valve & Valve Box						EA	
209	W-31	18" Butterfly Valve & Valve Box						EA	
210	W-32	20" Butterfly Valve & Valve Box						EA	
211	W-33	24" Butterfly Valve & Valve Box						EA	

IFB# 20-106 SCHEDULE OF UNIT PRICES

	A	B	C	D	E	F	G	H	I
212	W-34	30" Butterfly Valve & Valve Box						EA	
213	W-35	36" Butterfly Valve & Valve Box						EA	
214		Furnish & Install Tapping Sleeve with Valve & Valve Box							
215	W-36	4"x 4" Tapping Sleeve w/Valve & Valve Box						EA	
216	W-37	6"x 4" Tapping Sleeve w/Valve & Valve Box						EA	
217	W-38	6"x 6" Tapping Sleeve w/Valve & Valve Box						EA	
218	W-39	8"x 4" Tapping Sleeve w/Valve & Valve Box						EA	
219	W-40	8"x 6" Tapping Sleeve w/Valve & Valve Box						EA	
220	W-41	8"x 8" Tapping Sleeve w/Valve & Valve Box						EA	
221	W-42	10" x 4" Tapping Sleeve w/Valve & Valve Box						EA	
222	W-43	10" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
223	W-44	10" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
224	W-45	10" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
225	W-46	12" x 4" Tapping Sleeve w/Valve & Valve Box						EA	
226	W-47	12" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
227	W-48	12" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
228	W-49	12" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
229	W-50	12" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
230	W-51	16" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
231	W-52	16" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
232	W-53	16" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
233	W-54	16" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
234	W-55	16" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
235	W-56	18" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
236	W-57	18" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
237	W-58	18" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
238	W-59	18" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
239	W-60	18" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
240	W-61	18" x 18" Tapping Sleeve w/Valve & Valve Box						EA	
241	W-62	20" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
242	W-63	20" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
243	W-64	20" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
244	W-65	20" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
245	W-66	20" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
246	W-67	20" x 20" Tapping Sleeve w/Valve & Valve Box						EA	
247	W-68	24" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
248	W-69	24" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
249	W-70	24" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
250	W-71	24" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
251	W-72	24" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
252	W-73	24" x 20" Tapping Sleeve w/Valve & Valve Box						EA	
253	W-74	30" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
254	W-75	30" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
255	W-76	30" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
256	W-77	30" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
257	W-78	30" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
258	W-79	30" x 20" Tapping Sleeve w/Valve & Valve Box						EA	
259	W-80	36" x 6" Tapping Sleeve w/Valve & Valve Box						EA	
260	W-81	36" x 8" Tapping Sleeve w/Valve & Valve Box						EA	
261	W-82	36" x 10" Tapping Sleeve w/Valve & Valve Box						EA	
262	W-83	36" x 12" Tapping Sleeve w/Valve & Valve Box						EA	
263	W-84	36" x 16" Tapping Sleeve w/Valve & Valve Box						EA	
264	W-85	36" x 20" Tapping Sleeve w/Valve & Valve Box						EA	
265	W-86	36" x 24" Tapping Sleeve w/Valve & Valve Box						EA	
266	W-87	36" x 30" Tapping Sleeve w/Valve & Valve Box						EA	
267		Furnish & Install Line Stop includes all appurtenances for a complete installation							
268	W-88	4" Insertion Line Stop						EA	
269	W-89	6" Insertion Line Stop						EA	
270	W-90	8" Insertion Line Stop						EA	
271	W-91	10" Insertion Line Stop						EA	
272	W-92	12" Insertion Line Stop						EA	
273	W-93	16" Insertion Line Stop						EA	
274	W-94	18" Insertion Line Stop						EA	
275	W-95	20" Insertion Line Stop						EA	
276	W-96	36" Insertion Line Stop						EA	
277		Fire Hydrants, Sample Points, ARVs							
278	W-97	Fire Hydrant Assembly w/ 6" Gate Valve, restraints, etc.						EA	
279	W-98	Remove & Replace Fire Hydrant Assembly						EA	
280	W-99	Bollards for Fire Hydrant						LS	
281	W-100	Sample Points w/double strap saddle & corp stop						EA	
282	W-101	Sample Points on Fire Hydrants						EA	

IFB# 20-106 SCHEDULE OF UNIT PRICES

	A	B	C	D	E	F	G	H	I
283	W-102	2" Blowoff piping with box						EA	
284	W-103	Water Main 1" Combination Air Release Valve w/Manhole (pipes 4"-16")						EA	
285	W-104	Water Main 2" Combination Air Release Valve w/Manhole (pipes larger than 16")						EA	
286	Water Services								
287	W-105	Short Single service (1-2" Poly) (up to 10' long) includes meter box and all appurtenances except meter						EA	
288	W-106	Short Double Service (1-2" Poly) (up to 10' long) includes meter box and all appurtenances except meter						EA	
289	W-107	Short Service for Meter Bank (2" Poly) (up to 10' long) (includes up to 3 services)						EA	
290	W-108	Additional services on short service meter bank						EA	
291	W-109	Long Single Service (1-2" poly w/3" casings) (up to 50' Long)						EA	
292	W-110	Long Double Service (1-2" poly w/3" casings) (up to 50' Long)						EA	
293	W-111	Long Service for Meter Bank (2" Poly) (up to 50' long) (includes up to 3 services)						EA	
294	W-112	Additional services on long service meter bank						EA	
295	Abandonment								
296	W-113	Cut existing watermain and connect proposed watermain						EA	
297	W-114	Cut and plug existing watermain to be abandoned						EA	
298	W-115	Abandon & grout fill existing 4-6" watermain						LF	
299	W-116	Remove & dispose existing watermain						LF	
300	W-117	Remove & Dispose AC Water Main (actual cost reimbursement by City)						--	
301	Miscellaneous								
302	W-118	WATER CREW A - Includes a foreman, 3 experienced workers, layout, excavating, installing and backfilling equipment necessary for PVC, HDPE or metal pipe laying or repair up to 36" diameter. Material costs shall be included with invoice with maximum 15% markup.						HR	
303									
304	STORM WATER								
305	GRAVITY STORM SEWER - includes all fittings, appurtenances, dewatering and restoration for a complete installation								
306	S-1	Furnish & Install 12-Inch PVC Sewer Main				0' - 6' Deep		LF	
307	S-2	Furnish & Install 12-Inch PVC Sewer Main				6' - 8' Deep		LF	
308	S-3	Furnish & Install 12-Inch RCP Sewer Main				0' - 6' Deep		LF	
309	S-4	Furnish & Install 12-Inch RCP Sewer Main				6' - 8' Deep		LF	
310	S-5	Furnish & Install 12-Inch HDPE Sewer Main				0' - 6' Deep		LF	
311	S-6	Furnish & Install 12-Inch HDPE Sewer Main				6' - 8' Deep		LF	
312	S-7	Furnish & Install 15-Inch RCP Sewer Main				0' - 6' Deep		LF	
313	S-8	Furnish & Install 15-Inch RCP Sewer Main				6' - 8' Deep		LF	
314	S-9	Furnish & Install 18-Inch PVC Sewer Main				0' - 6' Deep		LF	
315	S-10	Furnish & Install 18-Inch PVC Sewer Main				6' - 8' Deep		LF	
316	S-11	Furnish & Install 18-Inch RCP Sewer Main				0' - 6' Deep		LF	
317	S-12	Furnish & Install 18-Inch RCP Sewer Main				6' - 8' Deep		LF	
318	S-13	Furnish & Install 18-Inch HDPE Sewer Main				0' - 6' Deep		LF	
319	S-14	Furnish & Install 18-Inch HDPE Sewer Main				6' - 8' Deep		LF	
320	S-15	Furnish & Install 24-Inch PVC Sewer Main				0' - 6' Deep		LF	
321	S-16	Furnish & Install 24-Inch PVC Sewer Main				6' - 8' Deep		LF	
322	S-17	Furnish & Install 24-Inch RCP Sewer Main				0' - 6' Deep		LF	
323	S-18	Furnish & Install 24-Inch RCP Sewer Main				6' - 8' Deep		LF	
324	S-19	Furnish & Install 24-Inch HDPE Sewer Main				0' - 6' Deep		LF	
325	S-20	Furnish & Install 24-Inch HDPE Sewer Main				6' - 8' Deep		LF	
326	S-21	Furnish & Install 30-Inch PVC Sewer Main				0' - 6' Deep		LF	
327	S-22	Furnish & Install 30-Inch PVC Sewer Main				6' - 8' Deep		LF	
328	S-23	Furnish & Install 30-Inch RCP Sewer Main				0' - 6' Deep		LF	
329	S-24	Furnish & Install 30-Inch RCP Sewer Main				6' - 8' Deep		LF	
330	S-25	Furnish & Install 30-Inch RCP Sewer Main				8' - 10' Deep		LF	
331	S-26	Furnish & Install 36-Inch PVC Sewer Main				0' - 6' Deep		LF	
332	S-27	Furnish & Install 36-Inch PVC Sewer Main				6' - 8' Deep		LF	
333	S-28	Furnish & Install 36-Inch RCP Sewer Main				0' - 6' Deep		LF	
334	S-29	Furnish & Install 36-Inch RCP Sewer Main				6' - 8' Deep		LF	
335	S-30	Furnish & Install 36-Inch RCP Sewer Main				8' - 10' Deep		LF	
336	S-31	Furnish & Install 42-Inch PVC Sewer Main				0' - 6' Deep		LF	
337	S-32	Furnish & Install 42-Inch PVC Sewer Main				6' - 8' Deep		LF	
338	S-33	Furnish & Install 42-Inch RCP Sewer Main				0' - 6' Deep		LF	
339	S-34	Furnish & Install 42-Inch RCP Sewer Main				6' - 8' Deep		LF	
340	S-35	Furnish & Install 42-Inch RCP Sewer Main				8' - 10' Deep		LF	
341	S-36	Furnish & Install 48-Inch RCP Sewer Main				0' - 6' Deep		LF	
342	S-37	Furnish & Install 48-Inch RCP Sewer Main				6' - 8' Deep		LF	
343	S-38	Furnish & Install 48-Inch RCP Sewer Main				8' - 10' Deep		LF	
344	S-39	Furnish & Install 48-Inch RCP Sewer Main				10' - 12' Deep		LF	
345	S-40	Furnish & Install 54-Inch RCP Sewer Main				0' - 6' Deep		LF	
346	S-41	Furnish & Install 54-Inch RCP Sewer Main				6' - 8' Deep		LF	
347	S-42	Furnish & Install 54-Inch RCP Sewer Main				8' - 10' Deep		LF	
348	S-43	Furnish & Install 54-Inch RCP Sewer Main				10' - 15' Deep		LF	
349	S-44	Furnish & Install 60-Inch RCP Sewer Main				0' - 6' Deep		LF	
350	S-45	Furnish & Install 60-Inch RCP Sewer Main				6' - 8' Deep		LF	
351	S-46	Furnish & Install 60-Inch RCP Sewer Main				8' - 10' Deep		LF	
352	S-47	Furnish & Install 60-Inch RCP Sewer Main				10' - 15' Deep		LF	

IFB# 20-106 SCHEDULE OF UNIT PRICES

	A	B	C	D	E	F	G	H	I	
353	S-48	Furnish & Install 66-Inch RCP Sewer Main					0' - 6' Deep	LF		
354	S-49	Furnish & Install 66-Inch RCP Sewer Main					6' - 8' Deep	LF		
355	S-50	Furnish & Install 66-Inch RCP Sewer Main					8' - 10' Deep	LF		
356	S-51	Furnish & Install 66-Inch RCP Sewer Main					10' - 15' Deep	LF		
357	S-52	Furnish & Install 72-Inch RCP Sewer Main					0' - 6' Deep	LF		
358	S-53	Furnish & Install 72-Inch RCP Sewer Main					6' - 8' Deep	LF		
359	S-54	Furnish & Install 72-Inch RCP Sewer Main					8' - 10' Deep	LF		
360	S-55	Furnish & Install 72-Inch RCP Sewer Main					10' - 15' Deep	LF		
361		Furnish & Install new Standard Precast Concrete 48" diameter Manhole Structure to include Bench and Ring and Cover including City approved coatings (inside and								
362	S-56	0' - 4' FT Deep						EA		
363	S-57	4' - 6' FT Deep						EA		
364	S-58	6' - 8' FT Deep						EA		
365	S-59	8' - 10' FT Deep						EA		
366	S-60	10' - 12' FT Deep						EA		
367	S-61	12' - 14' FT Deep						EA		
368	S-62	14' - 16' FT Deep						EA		
369	S-63	16' - 20' FT Deep						EA		
370		Outfall Check Valves - includes pipe cleaning and installation for complete system								
371	S-64	15" WAPRO Check Valve						EA		
372	S-65	18" WAPRO Check Valve						EA		
373	S-66	24" WAPRO Check Valve						EA		
374	S-67	36" WAPRO Check Valve						EA		
375	S-68	42" WAPRO Check Valve						EA		
376	S-69	48" WAPRO Check Valve						EA		
377	S-70	54" WAPRO Check Valve						EA		
378	S-71	60" WAPRO Check Valve						EA		
379	S-72	66" WAPRO Check Valve						EA		
380	S-73	72" WAPRO Check Valve						EA		
381		MISCELLANEOUS								
382	S-74	STORM CREW A - Includes a foreman, 3 experienced workers, layout, excavating, installing and backfilling equipment necessary for concrete, PVC, HDPE or metal pipe laying or repair up to 36" diameter. Material costs shall be included with invoice with maximum 15% markup.							HR	
383	S-75	STORM CREW B - Includes a foreman, 3 experienced workers, layout, excavating, installing and backfilling equipment necessary for concrete, PVC, HDPE or metal pipe laying or repair 36" to 72" diameter. Material costs shall be included with invoice with maximum 15% markup.							HR	
384										
385		RESTORATION								
386										
387	R-1	Removal and disposal of 6" thick concrete							SF	
388	R-2	Furnish & Install 4" Concrete without wire							SF	
389	R-3	Furnish & Install 6" Concrete without wire							SF	
390	R-4	Furnish & Install ADA compliant detectable surface							EA	
391	R-5	Furnish & Install FDOT Type "D" Curb - by hand							LF	
392	R-6	Furnish & Install FDOT Type "D" Curb - by machine							LF	
393	R-7	Furnish & Install FDOT Type "F" Curb - by hand							LF	
394	R-8	Furnish & Install FDOT Type "F" Curb - by machine							LF	
395	R-9	Furnish & Install FDOT Valley Gutter - by hand							LF	
396	R-10	Furnish & Install FDOT Valley Gutter - by machine							LF	
397	R-11	Furnish & Install Bahia Sod - up to 1000 SF							SF	
398	R-12	Furnish & Install Bahia Sod - over 1000 SF							SF	
399	R-13	Furnish & Install Floratam Sod - up to 1000 SF							SF	
400	R-14	Furnish & Install Floratam Sod - over 1000 SF							SF	
401	R-15	Furnish & Install FDOT seed & mulch mix							SY	
402	R-16	Furnish Operator, Water Truck and Irrigate Sod or Seed Mix							HR	
403	R-17	Removal and Disposal of Existing Asphalt Pavement							SY	
404	R-18	Mill Existing Pavement (3/4" - 1" avg)							SY	
405	R-19	Furnish and Install Asphalt Overlay, Type S-III (3/4" - 1" avg)							SY	
406	R-20	Furnish and Install 1-1/2" Type S-I Asphalt First Course							SY	
407	R-21	Furnish and Install 1" Type S-III Surface Course							SY	
408	R-22	Furnish and Install 1-1/2" SP-12.5 Asphalt First Course in FDOT/PBC Right of Way							SY	
409	R-23	Furnish and Install 1" Type FC-9.5 Asphalt Surface Course in FDOT/PBC Right of Way							SY	
410	R-24	FDOT Flowable Fill (Excavatable)							CY	
411	R-25	Leak Repairs (structures) - Grouting							GAL	
412	R-26	Ground Stabilization Grouting							CY	
413	R-27	6" Limerock/ Crushed Concrete Base, primed							SY	
414	R-28	8" Limerock/ Crushed Concrete Base, primed							SY	
415	R-29	12" Compacted Subgrade, 98% T-180							SY	
416	R-30	Adjust manhole ring and cover to grade							EA	
417	R-31	Adjust valve box to grade							EA	
418	R-32	Brick paver remove/replace (1 1/2" sand, 6" limerock base, 12" compacted subgrade)							SF	
419										
420		CURED-IN-PLACE PIPE LINING*								

IFB# 20-106 SCHEDULE OF UNIT PRICES

	A	B	C	D	E	F	G	H	I
421	*Cured-in-place lining prices shall be inclusive of pre-video, cleaning, post-video and anything else for a complete installation in gravity sanitary or storm sewer								
422	L-1	Furnish and install 6"-12" diameter CIPP sectional liner, up to 6-ft in length						EA	
423	L-2	Furnish and install 6"-12" diameter CIPP sectional liner, beyond 6-ft in length, all depths						LF	
424	L-3	Furnish and install 15"-18" diameter CIPP sectional liner, up to 6-ft in length						EA	
425	L-4	Furnish and install 15"-18" diameter CIPP sectional liner, beyond 6-ft in length, all depths						LF	
426	L-5	Furnish and install 21" diameter CIPP sectional liner, up to 6-ft in length						EA	
427	L-6	Furnish and install 21" diameter CIPP sectional liner, beyond 6-ft in length, all depths						LF	
428	L-7	Furnish and install 8" diameter CIPP liner				0-8' depth		LF	
429	L-8	Furnish and install 8" diameter CIPP liner				8-12' depth		LF	
430	L-9	Furnish and install 8" diameter CIPP liner				12'+ depth		LF	
431	L-10	Furnish and install 10" diameter CIPP liner				0-8' depth		LF	
432	L-11	Furnish and install 10" diameter CIPP liner				8-12' depth		LF	
433	L-12	Furnish and install 10" diameter CIPP liner				12'+ depth		LF	
434	L-13	Furnish and install 12" diameter CIPP liner				0-8' depth		LF	
435	L-14	Furnish and install 12" diameter CIPP liner				8-12' depth		LF	
436	L-15	Furnish and install 12" diameter CIPP liner				12'+ depth		LF	
437	L-16	Furnish and install 15" diameter CIPP liner				0-8' depth		LF	
438	L-17	Furnish and install 15" diameter CIPP liner				8-12' depth		LF	
439	L-18	Furnish and install 15" diameter CIPP liner				12'+ depth		LF	
440	L-19	Furnish and install 18" diameter CIPP liner				0-8' depth		LF	
441	L-20	Furnish and install 18" diameter CIPP liner				8-12' depth		LF	
442	L-21	Furnish and install 18" diameter CIPP liner				12'+ depth		LF	
443	L-22	Furnish and install 20-21" diameter CIPP liner				0-8' depth		LF	
444	L-23	Furnish and install 20-21" diameter CIPP liner				8-12' depth		LF	
445	L-24	Furnish and install 20-21" diameter CIPP liner				12'+ depth		LF	
446	L-25	Furnish and install 24" diameter CIPP liner				0-8' depth		LF	
447	L-26	Furnish and install 24" diameter CIPP liner				8-12' depth		LF	
448	L-27	Furnish and install 24" diameter CIPP liner				12'+ depth		LF	
449	L-28	Furnish and install 30" diameter CIPP liner				0-8' depth		LF	
450	L-29	Furnish and install 30" diameter CIPP liner				8-12' depth		LF	
451	L-30	Furnish and install 30" diameter CIPP liner				12'+ depth		LF	
452	L-31	Furnish and install 36" diameter CIPP liner				0-8' depth		LF	
453	L-32	Furnish and install 36" diameter CIPP liner				8-12' depth		LF	
454	L-33	Furnish and install 36" diameter CIPP liner				12'+ depth		LF	
455									
456	BY-PASS PUMP SET UP WITH BY-PASS PUMPING								
457									
458	BP-1	Bypass 4" Pump Including setup and monitoring						DAY	
459	BP-2	Bypass 6" Pump Including setup and monitoring						DAY	
460	BP-3	Bypass 8" Pump Including setup and monitoring						DAY	
461	BP-4	Bypass 10" Pump Including setup and monitoring						DAY	
462									
463	WELL POINT SYSTEM AND DE-WATERING								
464									
465	WP-1	Well Point system up to 50 points complete with pump and jetting equipment, and Monitoring						DAY	
466	WP-2	Well Point system with more than 50 points complete with pump and jetting equipment, and Monitoring						DAY	
467									
468	IMPORTED BACKFILL & REMOVAL OF IN-SITU MATERIAL								
469									
470	BF-1	Removal & Disposal of unsuitable in-situ material/soil						CY	
471	BF-2	Imported Backfill & Compaction						CY	
472									
473									
474									

IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater

Additional Price List

Bidders may at their own discretion provide pricing for additional goods or services offered if available. The additional price list shall not be taken into consideration in award process but may be considered in the case bidder is awarded the contract(s) and additional items may be required by the City.

Additional Services (include different type of equipment, services or labor): _____

Name of Bidder: _____

Address: _____ ST _____ Zip _____

Phone: (_____) _____ Email: _____

Print Name: _____ Title: _____

SIGNATURE: _____ **Date:** _____

IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater

SUBSTITUTION SHEET

This form must be completed if a Bidder proposes to deviate from any IFB requirements including, but not limited to, proposed material specifications, proposed method, construction schedule, or phasing plan.

**DESCRIPTION OR MAKE
BID ITEM NO. SPECIFIED**

**PROPOSED
SUBSTITUTION**

**IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater
(B6)**

SCHEDULE OF SUBCONTRACTORS

The following is a complete list of all sub-contractors utilized for this project(s):

1.	_____	_____
	(company name)	(type of work)
	_____	_____
	(address)	(tel. #)
	_____	_____
	(zip code)	(federal I.D. #)
2.	_____	_____
	(company name)	(type of work)
	_____	_____
	(address)	(tel. #)
	_____	_____
	(zip code)	(federal I.D. #)
3.	_____	_____
	(company name)	(type of work)
	_____	_____
	(address)	(tel. #)
	_____	_____
	(zip code)	(federal I.D. #)

Authorized Signature: _____

Note: The above schedule of subcontractors will become a part of the awarded contract documents. Changes made to the above schedule of subcontractors after the contract has been executed must be submitted in writing to the City for approval prior to that sub-contractor performing any work.

IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater

CONTRACTOR VERIFICATION FORM

PRIME BIDDER:

Name of Firm: _____

Address: _____

Telephone: () _____

Fax: () _____

Email: _____

CONTRACTOR OF RECORD:

Name: _____

Address: _____

Telephone: () _____

Email: _____

State License # _____ (ATTACH COPY)

County License # _____ (ATTACH COPY)

Type of License: _____

Unlimited _____ (yes/no)

If "NO", Limited to what trade? _____

Is the Licensee a full-time employee of Prime Bidder?

____ Yes ____ No

Will the Licensee be in responsible charge of the work performed and installed under this contract?

____ Yes ____ No

Failure to fully or accurately complete this form may be cause for rejection of the bid.

IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater

LIST OF REFERENCES

1. Owner's Name & Address: _____

Project: _____

Contact Person: _____

Telephone: () _____ Fax: () _____ E-Mail: _____

2. Owner's Name & Address: _____

Project: _____

Contact Person: _____

Telephone: () _____ Fax: () _____ E-Mail: _____

3. Owner's Name & Address: _____

Project: _____

Contact Person: _____

Telephone: () _____ Fax: () _____ E-Mail: _____

IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater

AFFIDAVIT OF PRIME BIDDER
Re Non-collusion and Public Entity Crime

State of _____ }
County of _____ }

_____, being first duly sworn, disposes and says that:
(Name)

1. I am the _____ of _____, the
(Title) (Name of Company)
Bidder that has submitted the attached bid;
2. I am fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham Bid in connection with the contract for which the attached bid has been submitted or to refrain from bidding in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Lake Worth Beach, or any person interested in the proposed Contract; and
5. The following Officer, director or agent of Bidder is also an employee of the City of Lake Worth Beach. _____ (if none, write "None").
6. The following employees of the City of Lake Worth Beach, own, directly or indirectly, an interest of 10% or more in Bidder firm or any of its affiliates or subsidiaries: _____ (if none, write "None").
7. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.
8. Neither the Bidder nor any officer, director, partner, shareholder, employee, member or agent, who is active in the management of Bidder, or any affiliate or subsidiary of Bidder has been convicted of a public entity crime or action regarding antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy or material misrepresentation with respect to any bid or contract for goods or services to be provided to any public entity, or has been listed on the state Convicted Vendor List, within thirty-six months prior to the date of Bidder's Bid.

(Signed) _____

(Print Name) _____

(Title) _____

The foregoing Affidavit of Bidder regarding Non-Collusion and Public Entity Crime was acknowledged before me

this _____ day of _____, 2018 by _____, who is _____
(title) of _____ and who is personally known to me or who has produced
_____ as identification.

Notary Public

(B10)

**IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater
DRUG FREE WORKPLACE CERTIFICATION**

The undersigned Bidder, in accordance with Florida Statute 287.087, hereby certifies that

_____ does:
(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violation of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under this bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities, or contractual services that are under bid, the employee will abide by the terms of the statement, and will notify the employer of any conviction of, or plea of guilty, or *nolo contendere* to any violation of Chapter 1893, or of any controlled substance law of the United States, or any State, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance, or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Bidders Authorized Signature

Print Name: _____

Date

IFB #20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater (B11)
CAMPAIGN CONTRIBUTION STATEMENT

This IFB is subject to Section 2-101 of the City of Lake Worth Beach Code of Ordinances regarding campaign contributions which provides:

Sec. 2-101. - Additional and supplemental disclosures requirements.

- (a) Any elected official of the City of Lake Worth Beach, who is a current sitting member of the city commission and has accepted an election campaign contribution in an amount that is more than one hundred dollars (\$100.00) from an individual or business entity having an interest in a matter before the city commission in which the city commission will take action, must publically disclose, both verbally and in writing, such contribution prior to any discussion or vote on the matter. The written disclosure must be submitted to the city clerk.
- (b) Any applicant coming before the city commission for an award of a contract with the city and who has made an election campaign contribution in an amount that is more than one hundred dollars (\$100.00) to any elected official of the city commission, who is a current sitting member of the commission, must disclose such election campaign contribution, verbally and in writing, during the application or bidding process and before the award of the contract.

Vendor to complete: Check which statement applies, fill in the requested information, if applicable, and sign below.

[] Neither the undersigned business nor any of its owners or officers contributed more than \$100.00 to the campaign of a sitting City Commission member. [If you checked this statement, you are done and may sign below.]

[] The undersigned business or one or more of its owners or officers contributed more than \$100.00 to the campaign of a sitting City Commission member. All such contributions are listed below and on the attached sheet of paper (if more room is needed). [If you checked this statement, please fill in the information requested below and sign below.]

- 1. _____ contributed a total of \$_____ to the campaign of City Commission member _____.
- 2. _____ contributed a total of \$_____ to the campaign of City Commission member _____.
- 3. _____ contributed a total of \$_____ to the campaign of City Commission member _____.
- 4. _____ contributed a total of \$_____ to the campaign of City Commission member _____.

Signature:

I hereby certify that the above statements are true and correct to the best of my knowledge and I understand that a false or inaccurate statement may result in the rejection of this bid/proposal/submittal or the immediate termination of any resulting agreement with the City of Lake Worth Beach.

By: _____

Print Name: _____

Print Title: _____

Print Name of Business: _____

Commissioner/Mayor to complete: Check which statement applies, fill in the requested information, if applicable, and sign below.

[] Neither the above referenced business nor any of its owners or officers contributed more than \$100.00 to my campaign. [If you checked this statement, you are done and may sign below.]

[] The above referenced business or one or more of its owners or officers contributed more than \$100.00 to my campaign. All such contributions are listed below and on the attached sheet of paper (if more room is needed). [If you checked this statement, please fill in the information requested below and sign below.]

_____ contributed a total of \$_____ to my campaign.
_____ contributed a total of \$_____ to my campaign.
_____ contributed a total of \$_____ to my campaign.
_____ contributed a total of \$_____ to my campaign.

Signature:

I hereby certify that the above statements are true and correct to the best of my knowledge and I understand that a false or inaccurate statement may result in the rejection of this bid/proposal/submittal or the immediate termination of any resulting agreement with the City of Lake Worth Beach.

By: _____

Print Name: _____

For City Clerk's Use Only.

THIS SECTION SHALL BE COMPLETED ONLY IF THERE IS A CAMPAIGN CONTRIBUTION LISTED ABOVE BY THE VENDOR OR COMMISSION MEMBER.

Applicable campaign contributions were disclosed in writing above, and prior to the award of the contract, the following statements were verbally made at the City Commission Meeting on the ____ day of _____, 201____.

Check all that apply.

_____ Commissioner/Mayor _____ verbally disclosed the campaign contribution(s) set forth above.

_____ Vendor, _____, verbally disclosed the campaign contribution(s) set forth above.

IFB # 20-106 Emergency Utility Repairs for Water, Wastewater and Stormwater (B12)

SCRUTINIZED COMPANIES CERTIFICATION FORM

By execution below, I, _____, on behalf of _____
(hereinafter, the "Contractor"), hereby swear or affirm to the following certifications:

The following certifications apply to all procurements:

1. The Contractor has reviewed section 215.4725, Florida Statutes, section 215.473, Florida Statutes and section 287.135, Florida Statutes, and understands the same.
2. The Contractor is not on the Scrutinized Companies that Boycott Israel List nor is the Contractor engaged in a boycott of Israel.
3. If awarded a contract, the Contractor agrees to require these certifications for applicable subcontracts entered into for the performance of work/services under this procurement.
4. If awarded a contract, the Contractor agrees that the certifications in this section shall be effective and relied upon by the City for the entire term of the contract, including any and all renewals.

If the contract awarded hereunder is for one million dollars or more, the following additional certifications apply:

1. The Contractor is not on the Scrutinized Companies with Activities in Sudan List.
2. The Contractor is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.
3. The Contractor is not engaged in business operations in Cuba or Syria.
5. If awarded a contract, the Contractor agrees to require these certifications for applicable subcontracts entered into for the performance of work/services under this procurement.
6. If awarded a contract, the Contractor agrees that the certifications in this section shall be effective and relied upon by the City for the entire term of the contract, including any and all renewals.

CONTRACTOR:

By: _____
 Name: _____
 Title: _____
 Date: _____

STATE OF FLORIDA
 COUNTY OF _____

The foregoing instrument was sworn to (or affirmed) and subscribed before this _____ day of _____, 20____, by _____, who is the _____ of _____, who is personally known to me or who has produced _____ as identification.

NOTARY PUBLIC
 Printed Name of Notary _____
 My Commission expires: _____

Exhibit "B"

Federal Contract Provisions

The Contractor hereby agrees that the following terms, at a minimum, will be incorporated into any subsequent contract resulting from this IFB:

Equal Employment Opportunity. During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The

contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract. The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

Compliance with the Contract Work Hours and Safety Standards Act.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) Withholding for unpaid wages and liquidated damages. FEMA, the State of Florida, or the CITY shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

Clean Air Act.

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The contractor agrees to report each violation to the City, and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

Federal Water Pollution Control Act.

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The contractor agrees to report each violation to the CITY and understands and agrees that the CITY will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

Suspension and Debarment.

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification, as laid out in Exhibit I, is a material representation of fact relied upon by the City. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the State of Florida or the City, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Byrd Anti-Lobbying Amendment.,

Contractors who apply or bid for an award of \$100,000 or more shall file the required certification as laid out in Exhibit J. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

Procurement of Recovered materials.

- (i) In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
- Competitively within a timeframe providing for compliance with the contract performance schedule;
 - Meeting contract performance requirements; or
 - At a reasonable price.
- (ii) Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.
- (iii) The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

Access to Records.

- (1) The Contractor agrees to provide the State of Florida, the CITY, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
- (2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- (3) The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.
- (4) In compliance with the Disaster Recovery Act of 2018, the CITY and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

DHS Seal, Logo, and Flags. The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

Compliance with Federal Law, Regulations, and Executive Orders. By signing this agreement, The CONTRACTOR acknowledges that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives.

No Obligation by Federal Government. The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.

Program Fraud and False or Fraudulent Statements or Related Acts. The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.

Affirmative Steps. Required Affirmative Steps

If the Contractor intends to subcontract any portion of the work covered by this Contract, the Contractor must take all necessary affirmative steps to assure that small and minority businesses, women's business

enterprises and labor surplus area firms are solicited and used when possible. Affirmative steps must include:

- (1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and
- (5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

Exhibit "C"

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS - LOWER-TIER COVERED TRANSACTIONS

This Addendum is a covered transaction for purposes of the debarment and suspension regulations implementing Executive Order 12549, *Debarment and Suspension* (1986) and Executive Order 12689, *Debarment and Suspension* (1989) at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension). As such, Engineer is required to confirm that none of the Contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

INSTRUCTIONS FOR CERTIFICATION

- 1) By signing this Addendum, the Contractor, also sometimes referred to herein as a prospective primary participant, is providing the certification set out below.
- 2) The inability of a contractor to provide the certification required below will not necessarily result in denial of participation in the covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the City's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
- 3) The certification in this clause is a material representation of fact upon which reliance was placed when the City determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the City, the City may terminate this transaction for cause or default.
- 4) The prospective primary participant shall provide immediate written notice to the City if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- 5) The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal* and *voluntarily excluded*, as used in this certification, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549.
- 6) The prospective primary participant agrees by signing the Addendum that it shall not knowingly enter into any lower tier covered transactions with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible or voluntarily excluded from participation in this covered transaction. If it is later determined that the prospective primary participant knowingly entered into such a transaction, in addition to other remedies available to the City, the City may terminate this transaction for cause or default.
- 7) The prospective primary participant further agrees by signing this Addendum that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier

Covered Transaction,” as available through the United States Department of Homeland Security, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

- 8) A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the List of Parties Excluded from Federal Procurement and Non-procurement Programs.
- 9) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

Certification for Contracts, Grants, Loans, and Cooperative Agreements (B13)

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor _____ certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date



**APPROVED PRODUCTS LIST (1/2017)
CERTIFICATION AND CONCURRENCY STATEMENT**

Project Name: _____

Concurrency of Contractor: _____
Signature Date

Firm

Concurrency from the EOR
(Engineer of Record): _____
Signature Date

The execution of this document acknowledges that I (We), the above signed, have reviewed this Approved Products List (APL) in entirety, initialed all error corrections to the APL, and concur that the materials and products listed are acceptable and appropriate for the project noted above. As the engineer-of-record and/or contractor, I (We), the above signed, shall provide written notification to the City of Lake Worth for any material listed in the APL to which I object being implemented/ installed in the project noted above.

Individual product shop drawings will be required for all non-standard items. Products not listed in the APL, or APL listed products that defer in specification, shall be considered a non-standard product. Only lead-free Brass products shall be acceptable.

Utility Department:

APPROVED: _____
Signature Date

APPROVED AS NOTED: _____
Signature Date

*NOT APPROVED: _____
Signature Date

*Contractor to revise and resubmit by ____/____/____



WATER DISTRIBUTION

FIRE HYDRANTS:

- Mueller Super Centurion A-423, 5 1/4" Plugged Drain
- Clow Medallion 5 1/4" F-2545
- American Darling 5 1/4" B-84-B-5

HYDRANT COATINGS:

Hydrants shall have a factory applied top coat of Tnemec Series 66 Yellow

BACKFLOW PREVENTION:

• **BACKFLOW PREVENTORS (BFP) DOUBLE CHECK DETECTOR ASSEMBLIES**

- Ames/Watts 3000SS/774 DCDA
- Febco 856
- Wilkins 950 DA

Note: The "Double Check Detector Assemblies" or "Reduced Pressure Principle Backflow Detector Assemblies" which are included on the latest "List of Approved Backflow Prevention Assemblies" as published by the University of Southern California or American Society of Sanitary Engineering may be approved as equal by the Lake Worth Water Utility Department.

• **REDUCED PRESSURE ZONE (RPZ) DEVICE**

Up to 2 1/2":

3" and up:

- Wilkins 975XL
- Watts 009M2 or 3 QT
- Ames 4000SS
- Wilkins 375

Note: Reduced Pressure Principle Backflow Prevention Assemblies and DCDA combinations which are included in the on the latest "List of Approved Backflow Prevention Assemblies" as published by the University of Southern California or by the American Society of Sanitary Engineering (with field testing) may be approved as equal by the Lake Worth Water Utility Department.

WATER SERVICE & FITTINGS:

• **1", 1.5" and 2" HIGH DENSITY POLYETHYLENE (HDPE) TUBING – CTS, DR9 (Blue or blue striped)**

- ENDOT
- JM Eagle
- ADS
- IPEX



- STAINLESS STEEL STIFFENING INSERTS – For CTS tubing up to 2”

- | | | |
|---|---|---|
| <input type="checkbox"/> Ford 50 Series
(51, 52, 54, 55) | <input type="checkbox"/> Mueller 5287
(04, 05, 06, 07) | <input type="checkbox"/> AY McDonald
6133T
(3/4, 1, 1 1/2, 2) |
|---|---|---|

- 1”, 1.5” and 2” CORPORATION STOPS

- | | | |
|--|---|--|
| <input type="checkbox"/> Mueller
P-25008N | <input type="checkbox"/> AY-McDonald
74104B-22 | <input type="checkbox"/> Ford Meter
FB1000-4NL/FB1000-
6NL/ FB1000-7NL |
|--|---|--|

* When used in sanitary sewer applications no lead corporations is not a requirement

- CURB STOP FOR U BRANCH

- | | | |
|---|--|---|
| 5/8 x 3/4 x 3/4”: | 3/4”, 1”: | |
| <input type="checkbox"/> Mueller
H-14265 | <input type="checkbox"/> AY-McDonald
74604B | <input type="checkbox"/> Ford Meter
BA13-332W-NL
BA13-342W-NL
BA13-444W-NL |

- 1” ANGLE METER VALVE CURB STOP

- | | | |
|--|---|---|
| 5/8 x 3/4 x 1”, 1”: | 1 x 3/4 x 3/4”, 1”: | |
| <input type="checkbox"/> Mueller
B-24258N | <input type="checkbox"/> AY-McDonald
74602B-22 | <input type="checkbox"/> Ford Meter
BA43-342W-NL
BA43-444W-NL |

- 1”, 1.5”, & 2” STRAIGHT METER VALVE CURB STOP

- | | | |
|--|--|---|
| 5/8 x 3/4 x 1”, 1” | 1 x 3/4 x 3/4”, 1” | 1 1/2” x 1 1/2”F 2”x2”F |
| <input type="checkbox"/> Mueller
B-24350N | <input type="checkbox"/> AY-McDonald
76100MW-22 | <input type="checkbox"/> Ford Meter
B43-342W-NL
B43-444W-NL |
| <input type="checkbox"/> Mueller
B-24335N | | <input type="checkbox"/> Ford Meter
BF43-666W-NL
BF43-777W-NL |



- 1.5" & 2" ANGLE METER VALVE CURB STOP

1 1/2" & 2" Flanged

- | | | |
|--|---|---|
| <input type="checkbox"/> Mueller
B-24276N | <input type="checkbox"/> AY-McDonald
74602B-22 | <input type="checkbox"/> Ford Meter
BFA43-666W-NL
BFA43-777W-NL |
|--|---|---|

- 3/4" – 2" SERVICE FITTINGS

- | | | |
|--|--|--|
| <input type="checkbox"/> Mueller
P-15428N | <input type="checkbox"/> AY-McDonald
74753-22 | <input type="checkbox"/> Ford Meter
C84-XX-NL |
| <input type="checkbox"/> Mueller
P-15451N | <input type="checkbox"/> AY-McDonald
74754-22 | <input type="checkbox"/> Ford Meter
C14-XX-NL |
| <input type="checkbox"/> Mueller
P-15403N | <input type="checkbox"/> AY-McDonald
74758-22 | <input type="checkbox"/> Ford Meter
C44-XX-NL |

- DUAL WATER SERVICE U BRANCH

1 X 3/4 X 6.5":

1 X 3/4 X 6.5":

- | | | |
|--|--|---|
| <input type="checkbox"/> Mueller
H-15363N | <input type="checkbox"/> AY-McDonald
708T2M | <input type="checkbox"/> Ford Meter
U48-43-65-NL |
| | <input type="checkbox"/> AY-McDonald
708U2M | <input type="checkbox"/> Ford Meter
U18-43-65-NL |

- Y – BRANCH CONNECTIONS

1 1/2" X 1" x 1".

2" X 1" x 1".

- | | | |
|--|---|---|
| <input type="checkbox"/> Mueller
H-15343N
P-15343N | <input type="checkbox"/> AY-McDonald
708YSQQ | <input type="checkbox"/> Ford Meter
Y44-264-NL
Y44-274-NL
Y48-374-NL |
|--|---|---|

- METER COUPLING

5/8 X 3/4 X 3/4": 3/4 X 3/4 X 2 1/2":

- | | | |
|---|---|---|
| <input type="checkbox"/> Mueller
H-10890 | <input type="checkbox"/> AY-McDonald
74624 | <input type="checkbox"/> Ford Meter
C38-23-25-NL |
|---|---|---|



1”:

1 X 1 X 2.63”:

Mueller
H-10890

AY-McDonald
74624

Ford Meter
C38-24-35-NL

- DOUBLE STRAP SERVICE SADDLE FOR DIP - CC THREADS, STAINLESS STEEL STRAPS

1”, 1 ½”, 2”:

JCM
406

Romac
202BS

Ford Meter
202B – for CIP
202BSD – for DIP

* When used in sanitary sewer applications no lead is not a requirement

- DOUBLE STRAP SERVICE SADDLE FOR PVC – CC THREADS, STAINLESS STEEL STRAPS

1”, 1 ½”, 2”

Mueller
BR2W

JCM
404

Romac
202NS

Ford Meter
FCD202

* When used in sanitary sewer applications no lead is not a requirement

- METER BOX UP TO 2”

For 1 ½” & 2” Meter:

For ¾” or 1” Meter:

For Dual Meter: ¾” or 1”

Oldcastle Precast
N36 BOX with
Nicor Read-Rite
B36 HDR Lid

Oldcastle Precast
B12 Box with
Nicor Read-Rite
B12 HDR Lid

Oldcastle Precast
B24 Box with
Nicor Read-Rite
B24 HDR Lid

- METER FLANGE

2” only:

Mc Donald
610F

Ford Meter
CF31-77-NL

- BLOW OFF VALVE

2”

Ford
BLA18-777-TA-NL



VALVES/ TAPS:

- GATE VALVES (AWWA C509, C515)

4" to 16"

Resilient Wedge and Bi Directional Flow Only with 2" square operating nut - left open.
UL/FM required on shut-off RSGV for Double Detector check valve application only.
Max working Pressure of 200 psi; tested at 400 psi

Mueller 2362, 2361 American Darling 2500 Clow F-6100 Series

- BUTTERFLY VALVES (AWWA C504)

For use on 14" and larger Distribution Water Mains only. 24" and larger shall be class 200 valves

14" to 24"
150psi Rated

Mueller Lineal III American 1450, 150-B Pratt Goundhog DeZurik Class 150B

- TAPPING VALVES – AWWA C509, C515

American 2500 TM Mueller T-2362;T-2361 Clow F-6114

- VALVE BOX – Embossed with "WATER" for distribution mains, embossed with "SEWER" for force mains.

Tyler Union 6850 & 6855

- VALVE IDENTIFICATION TAGS – Utilized when valve box is located outside of asphalt area within a concrete walkway or concrete collars. 3" Brass Disc by 1/8" thick with theft proof anchor pin. Engraved with 1/4" to 3/8" capitalized lettering. Each valve will have the following minimum information on tag: valve size (ex. 6"), type of valve (ex. GV, BV, PV), and operation instructions (R-21) right 21 turns to close.

WAGCO Marker



- VALVE STEM EXTENSION – Carbon steel hot dip galvanized with centering ring and stainless steel set screw.

Custom Fab Trumbull Industries

- TAPPING SLEEVES – Ductile Iron with mechanical joints. For taps 4” and larger
4” to 24”

Mueller H-615 American Darling 2800C

- TAPPING SLEEVES – Stainless body with flange and MJ. Not for size on size taps
4” to 24” for outlets 4” to 8” 4” to 24”

JCM 432 Ford FTSS Mueller H-304SS

- TAPPING CROSS

Mueller H-715

- COMBINATION AIR RELEASE VALVES – 1” for pipes 4”-16”; 2” for pipes larger than 16”

Installations in vaults and/or manholes require inflow preventer – Valmatic FloodSafe

GA Industries Model 920 - With low psi orifice (75psi). Val-Matic 201C.2; 202C.2

WATER DISTRIBUTION PIPE MATERIALS:

- DUCTILE IRON PIPE (DIP)
Interior: Cement Line and Sealed per AWWA C-104/A21.5
Exterior: In ground placement, bituminous asphalt coating per AWWA C-104/A21.4, Color coded with blue strip.
Installations below water table: Polyethylene Encasement per AWWA C-105/A21.5
Toruseal or Flange-Tyte gaskets are required for flanged pipe.

MANUFACTURER:

American Griffin US Pipe McWayne Clow



PRESSURE CLASS:

- Class 350, sizes to be used on water mains: _____ (4" to 12")
- Class 250, sizes to be used on water mains: _____ (14" to 20")
- Class 200, sizes to be used on water mains: _____ (16" and up)
- Class 350, sizes to be used on FJ pipe: _____

- POLYVINYL CHLORIDE (PVC)

MANUFACTURER:

- JM Pipe CertainTeed NAPCO IPEX

CLASS:

- PVC C-900 DR 18, sizes to be used on water mains: _____ (4" to 12")
- PVC C-905, sizes to be used on water mains: _____ (over 12")
- (For C-905: up to 24" diameter use DR-18, up to 36" diameter use DR 21)

- MECHANICAL JOINT RESTRAINT – Ductile Iron Pipe

- EBAA Iron MegaLug 1100 Ford Uni-flange Series 1400 Star Pipe Products Series 3000 (up to 12")
- Sigma One-Lok SLDE

- MECHANICAL JOINT RESTRAINT – PVC Pipe

- EBAA Iron MegaLug 2000 Ford Uni-flange Series 1500 Star Pipe Products Series 4000 (up to 12")
- Sigma One-Lok SLCE

- BELL JOINT RESTRAINT – Ductile Iron Pipe

Rods and nuts shall be 304 stainless steel with nuts coated to prevent galling.

- EBAA Iron 1600 TD Series EBAA Iron 1100 HD Series EBAA Iron 1700 Series
- Sigma One-Lok SSLDH Series Sigma One-Lok SLDEH Series Ford Uni-flange 1450-X



- BELL JOINT RESTRAINT – PVC Pipe

Rods and nuts shall be 304 stainless steel with nuts coated to prevent galling.

- | | | |
|--|--|--|
| <input type="checkbox"/> EBAA Iron
1600 TD Series | <input type="checkbox"/> EBAA Iron
1600 HD Series | <input type="checkbox"/> EBAA Iron
1100 HV Series |
| <input type="checkbox"/> Sigma PV-Lok
PWH Series | <input type="checkbox"/> Sigma One-Lok
SLCEH Series | <input type="checkbox"/> Ford Uni-flange
1450-C |

- FLANGED ADAPTER

- | | |
|---|---|
| <input type="checkbox"/> EBAA Iron
2100 Megaflange | <input type="checkbox"/> Smith Blair
Type 912 (Stainless steel bolts and nuts) |
|---|---|

- DUCTILE IRON FITTINGS – Cast ductile iron fittings 4” through 24” shall be pressure rated at 350 psi. All 30” through 36” fittings shall be pressure rated to 250 psi. Flanged joint fittings shall be rated at 250 psi minimum.

- | | | | |
|--|---|---|----------------------------------|
| <input type="checkbox"/> Tyler/Union | <input type="checkbox"/> US Pipe | <input type="checkbox"/> American | <input type="checkbox"/> Griffin |
| <input type="checkbox"/> Union Foundry | <input type="checkbox"/> Star Pipe Products | <input type="checkbox"/> Sigma Products | |

- DETECTABLE MARKING TAPE FOR WATER MAINS – Reading “CAUTION WATER LINE BURIED BELOW”.

- | | | |
|---|---|---|
| <input type="checkbox"/> Empire Level MFG Corp
Magna Tec | <input type="checkbox"/> T. Christy Enter.
TA-TD-6-BPW | <input type="checkbox"/> Pro-Line
Safety
Products |
|---|---|---|

- TRACER WIRE - APWA Color Coded Blue, 12 AWG

- | | |
|--|--|
| <input type="checkbox"/> Copperhead 1245 EHS | <input type="checkbox"/> Pro-Line Products – HD-CCS PE45 |
|--|--|

- ROOT BARRIER SYSTEMS

- | | |
|--------------------------------------|--|
| <input type="checkbox"/> Bio-Barrier | <input type="checkbox"/> DeepRoot UB36-2, UB48-2 |
|--------------------------------------|--|

- AUTOMATIC FLUSHING DEVICE

- | |
|--|
| <input type="checkbox"/> Eclipse Model 9400 WC |
|--|



SEWER COLLECTION

MANHOLE RING AND COVER

- LOW TRAFFIC AREAS:

US Foundry No. 170E EU Cover US Foundry No. 750 NH Cover

- HIGH TRAFFIC AREAS – All hinged covers will be installed so that the lid is opened

Pamrex 24

- MANHOLE ADJUSTMENT RINGS – Existing manhole only, max 4” height adjustment

Manhole Systems MS-101 Andrews Metal Products, Inc. #2, #5 Neehan Enterprises R1979 Series

- MANHOLE RING ADJUSTMENT – New and Existing Manholes

(1) Brick chimney can be field installed with 2-5 courses of bricks. The finished surface must have a field applied corrosion barrier applied, see lining products below.

(2) Precast reinforced concrete rings (4000 psi) for field installation. The finished surface must have a field applied corrosion barrier system applied, see lining products below.

Tri-County U.S. Concrete Products U.S. Precast

MANHOLE TO PIPE ADAPTERS

- RIGID MANHOLE TO PVC ADAPTER – “Sand Collars”

Harco SDR 26 Double Bell/Double Gasket GPK-Fargo SDR 18

- FLEXIBLE MANHOLE TO PIPE CONNECTOR SLEEVES (Cast-in)

Press-Seal Gasket Corp Cast-a-Seal 12-08 manhole A-LOCK Products Inc Seal gasket for lower invert of drop

Cast-a-Seal For C900 and D.I. Pipe



- MANHOLE FLEXIBLE PIPE CONNECTOR SLEEVE – For use in structures with Cast-in liners and Cast-in “turn back”.

- Press-Seal Gasket Corp- PSX Direct Drive 12 M Boot (dbl ridge w/stainless bands) NPC Trelleborg Kor-n-Seal I 10B Series

LINING PRODUCTS CONCRETE STRUCTURES

- MANHOLE/ WETWELL LINER - For Existing Structures and Field Applied Systems

- Kerneos Sewpercoat Global Materials Refratta HAC 100 Mainstay System ML-72 micro silica, with DS-5 epoxy liner coat (new Structures require only DS-5 epoxy)
- Strong Seal High Performance Mix

- NEW STRUCTURES FOR CAST-IN SOLID LINER

- Agru SURE-GRIP Polypropylene Liner with 3M sealant tape 5354 and ADEKA P-201 Waterstop Agru SURE-GRIP HDPE Linear with 3M sealant tape 5354 and ADEKA P-201 Waterstop

- EXTERIOR COATING – Two Coats for application:

- PRO-TECH Coal Tar Epoxy Parts A & B

- JOINT SEAL FOR MANHOLES AND AIR RELEASE MANHOLES

- K.T. Snyder Company RAM-NEK, plastic gasket joint Madewell 806 Flexible Joint Seal

- MANHOLE INFLOW PREVENTOR

- L.F. Manufacturing Inc. RainGuard LFN-SV USSI Inflow Defender SV-1



VALVES

- AIR RELEASE VALVE (2") – For use on long horizontal pipe sections and located every 500 yards.

Val-Matic
VM-48AS

ARI
S-025

- AIR/ VACUUM VALVE (2", 3") – For use at lift stations, installed downstream of the pump's check valve

Val-Matic
VM-301ASV

ARI
K-020

- COMBINATION AIR VALVE (2" x 1"; 2" x 2"; 3" x 2") – For use at high points

Val-Matic
VM-49AS

ARI
D-025

GA Industries
941

- GATE VALVES - Resilient Wedge and Bi Directional Flow Only with 2" square operating nut - left open. Max working Pressure of 200 psi; tested at 400 psi
4" to 6"

Mueller
2362, 2361

American
Darling 2500

Clow
F-6100 Series

- ECCENTRIC PLUG VALVES – AWWA C-517 - Fusion Bonded Epoxy inside and outside, ductile iron body, nickel seat weld, ductile iron plug encapsulated with Buna-N rubber, bi-directional shutoff.

PRATT

DeZurik

Clow

- CHECK VALVES – Lever and Weight, Lever and Air Cushion, Level and Spring, full port, fusion body epoxy inside and outside, stainless steel body seat.

M&H
159-02

Mueller
2600-6-01

Clow
5382

American
50SC



SEWER PIPE MATERIALS

- DUCTILE IRON PIPE (DIP)
 - Interior: Protecto 401 Epoxy Lined
 - Exterior: In ground placement, bituminous asphalt coating per AWWA C-104/A21.4
 - Installations below water table: Polyethylene Encasement per AWWA C-105/A21.5
 - Toruseal or Flange-Tyte gaskets are required for flanged pipe.

Note: When DIP is utilized in wetwells and air release valve vaults the exterior of the pipe must be coated with an epoxy product that is approved by the water department.

MANUFACTURER:

- American Griffin US Pipe McWayne Clow

CLASS:

- Class 350, sizes to be used on force mains: _____ (4" to 18")
- Class 350, sizes to be used on gravity mains: _____ (6" to 12")
- Class 250, sizes to be used on force mains: _____ (over 18")
- Class 250, sizes to be used on gravity mains _____ (over 14")
- Class 350, sizes to be used on FJ pipe: _____

- POLYVINYL CHLORIDE (PVC) - GREEN

MANUFACTURERS: JM Pipe; CertainTeed; NAPCO; IPEX

CLASS:

- PVC C-900 DR-18, sizes to be used on force mains: _____ (4" to 12")
- PVC C-905, sizes to be used on force mains: _____ (over 12")
- (For C-905: up to 24" diameter use DR-18, up to 36" diameter use DR 21)

PVC SDR-26, sizes to be used on gravity mains: _____
Depth of pipe less than 12ft – Transition from SDR 26 to SDR 18 not permitted in run between manholes

PVC SDR-18, sizes to be used on gravity mains: _____
Depth of pipe greater than or equal to 12ft



GRAVITY SEWER MAIN FITTINGS

- GRAVITY SEWER FITTINGS

- IPEX Plastic Trends Vassallo Harrington Corp.

- COUPLINGS FOR USE ON EXISTING FACILITIES – Must have stiffening collars with stainless steel shear rings

- FERNCO, RC Series Mission Coupling, Flex Seal Series

- COUPLING FOR USE TO CHANGE PIPE TYPE – Required when installing DIP in a PVC run of main or lateral that is too close to another utility.

- Harrington Corp.
HARCO PVC to C900
or DIP bell to bell adapter Flow Control

- TAPS INTO EXISTING PIPE – Tie-in to an existing main that has been Insituformed or lined by another method

- Inserta Tee

- CLEANOUT CASTING

- U.S Foundry
No. 7621

PRESSURE PIPE MAIN FITTINGS

- FOR PRESSURE PIPE: *FITTINGS, ADAPTERS, RESTRAINT DEVICES, AND VALVE BOXES SEE APPROVED MANUFACTURES LIST IN WATER DISTRIBUTION.

***FITTINGS MUST HAVE - Protecto 401 Epoxy Interior Lining**

- CORE-IN CONNECTION TO MANHOLE

- PSI-Link Seal by GPT



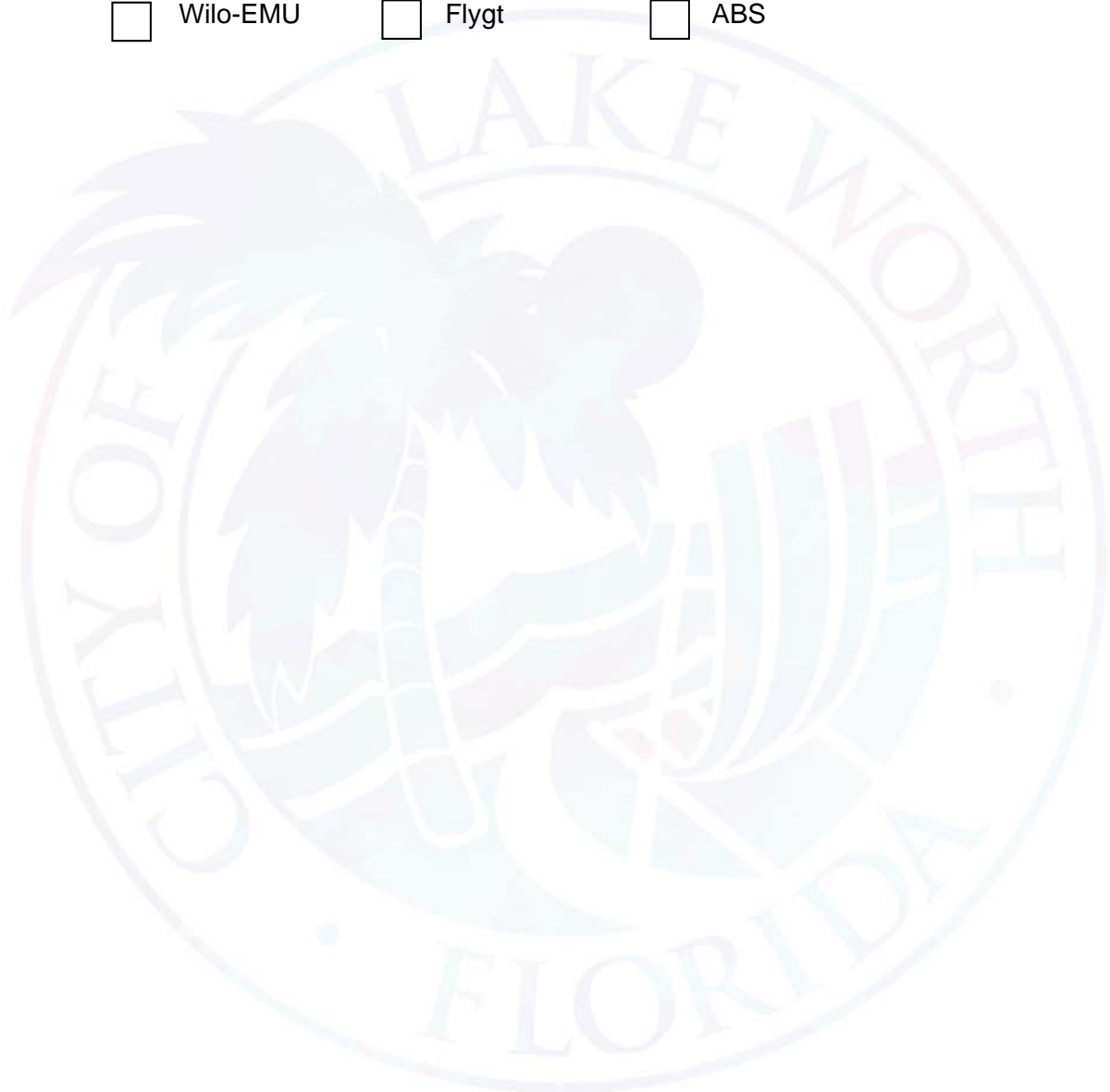
SANITARY SEWER PUMP STATIONS

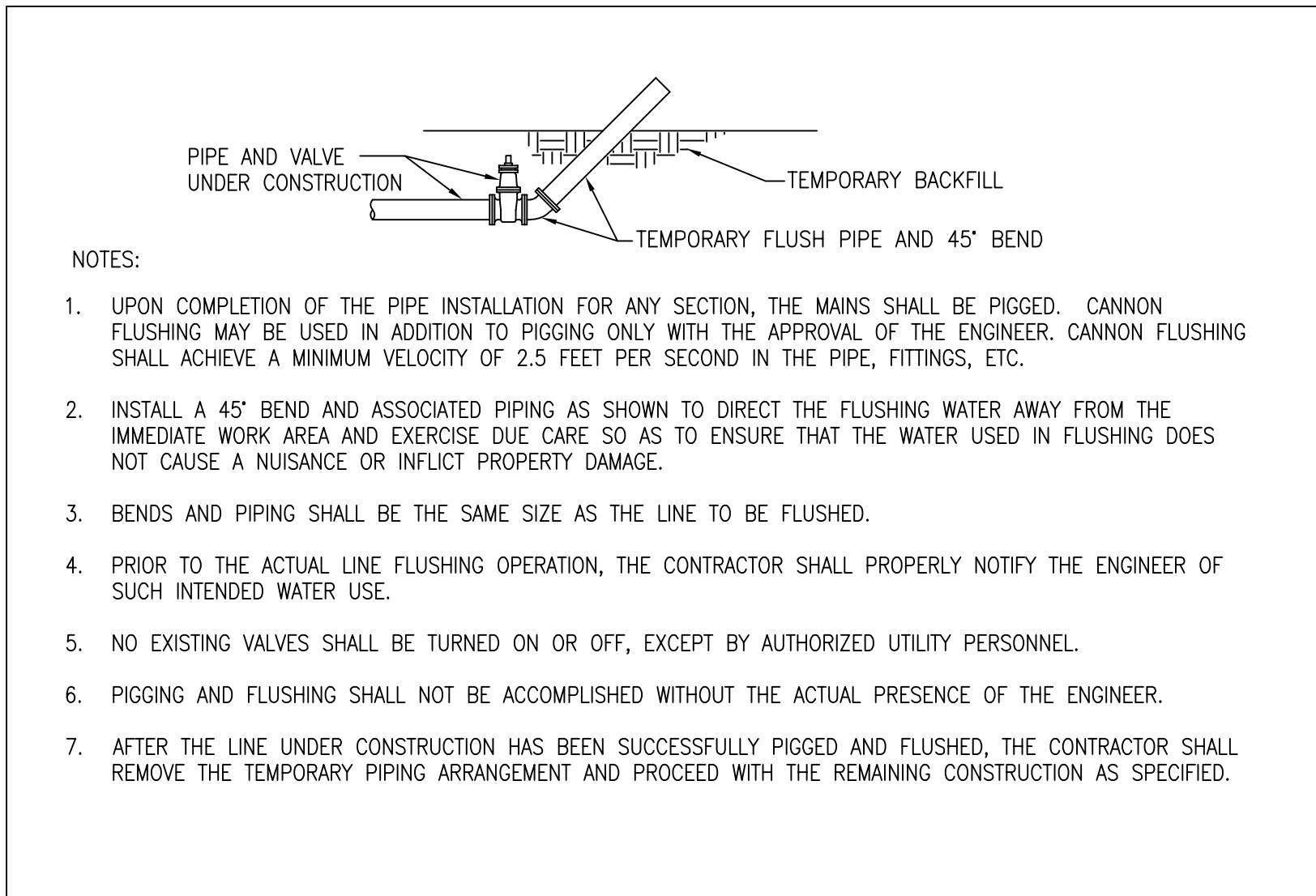
- SUBMERSIBLE PUMPS

Wilo-EMU

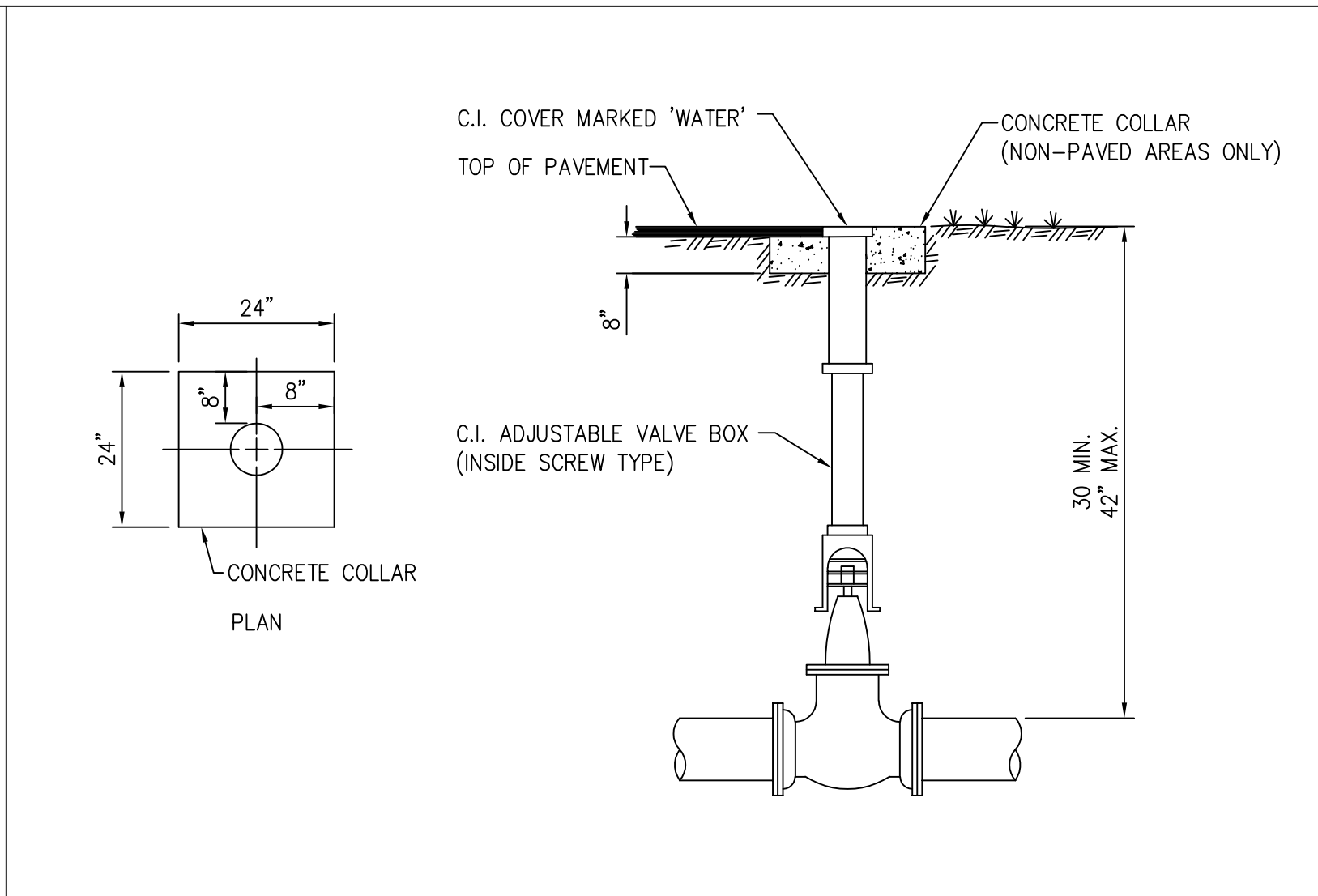
Flygt

ABS

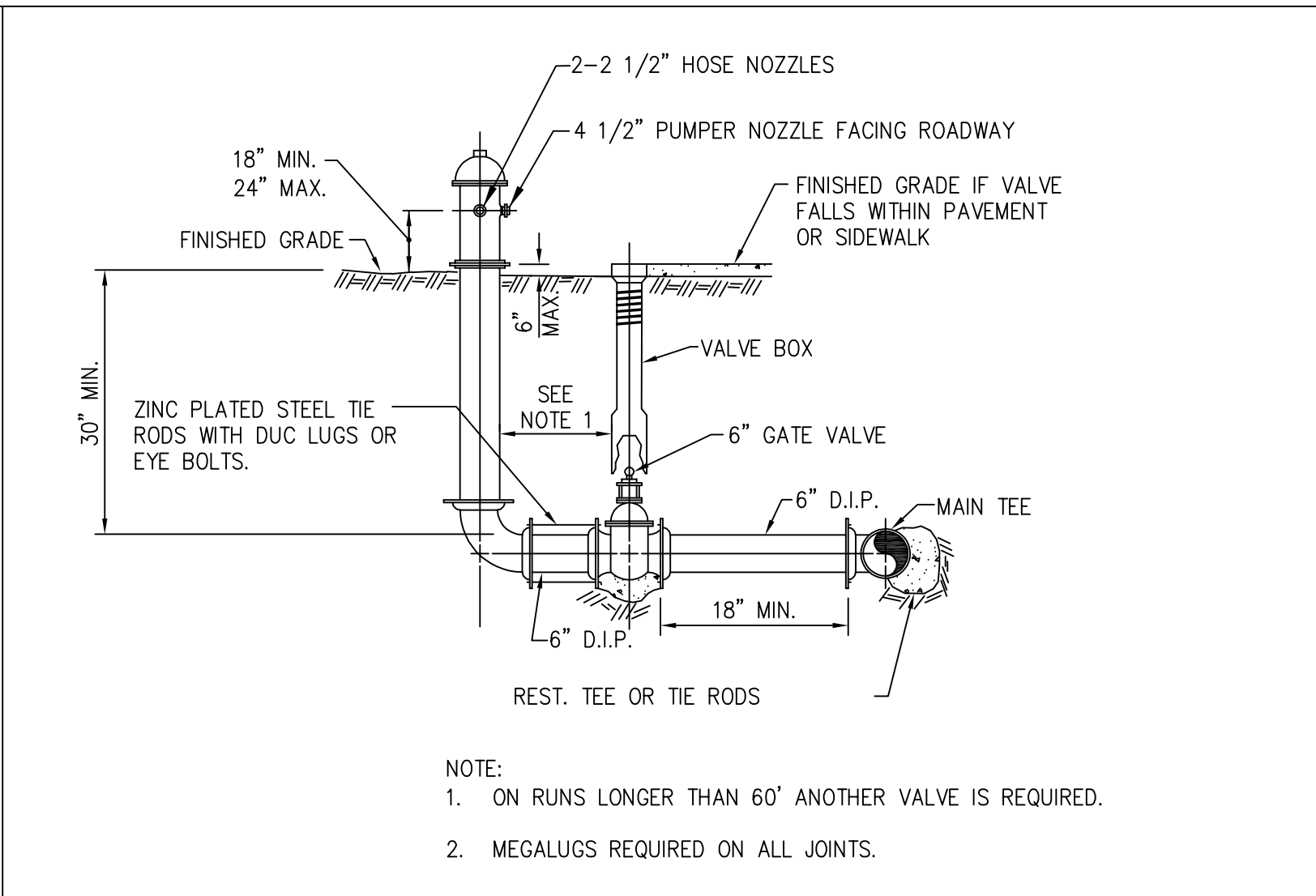




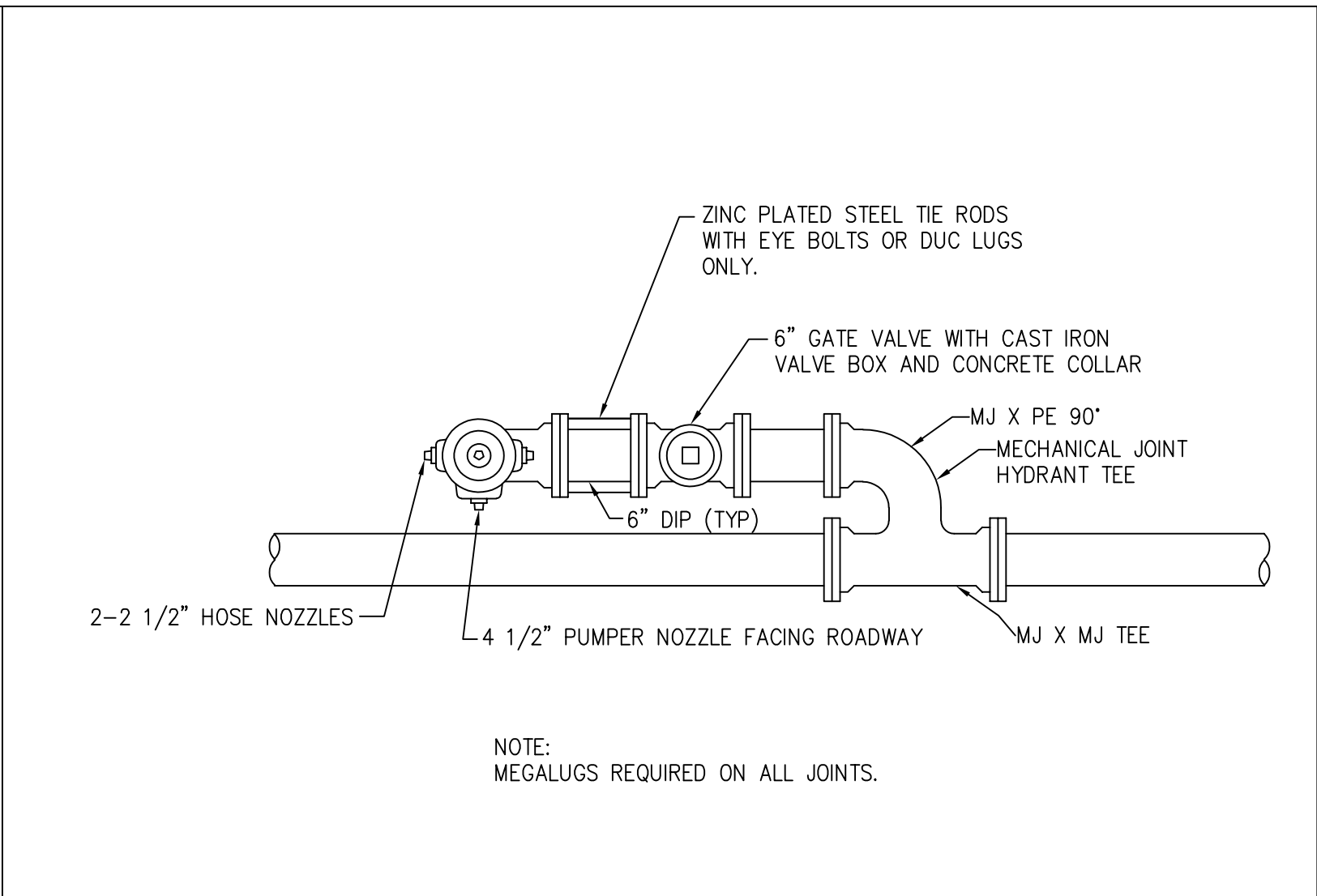
PIGGING AND CANNON FLUSHING 1



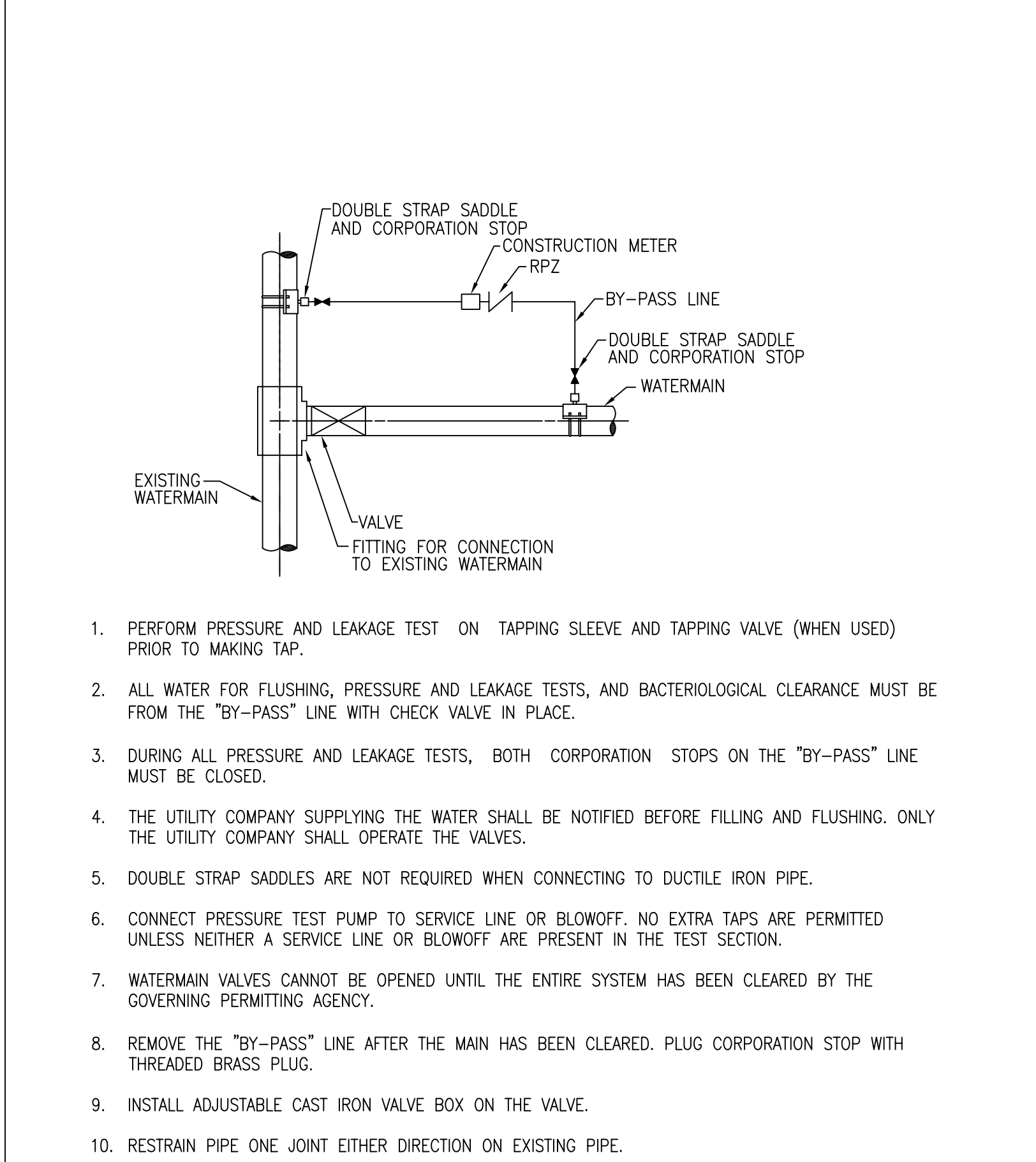
VALVE SETTING 2



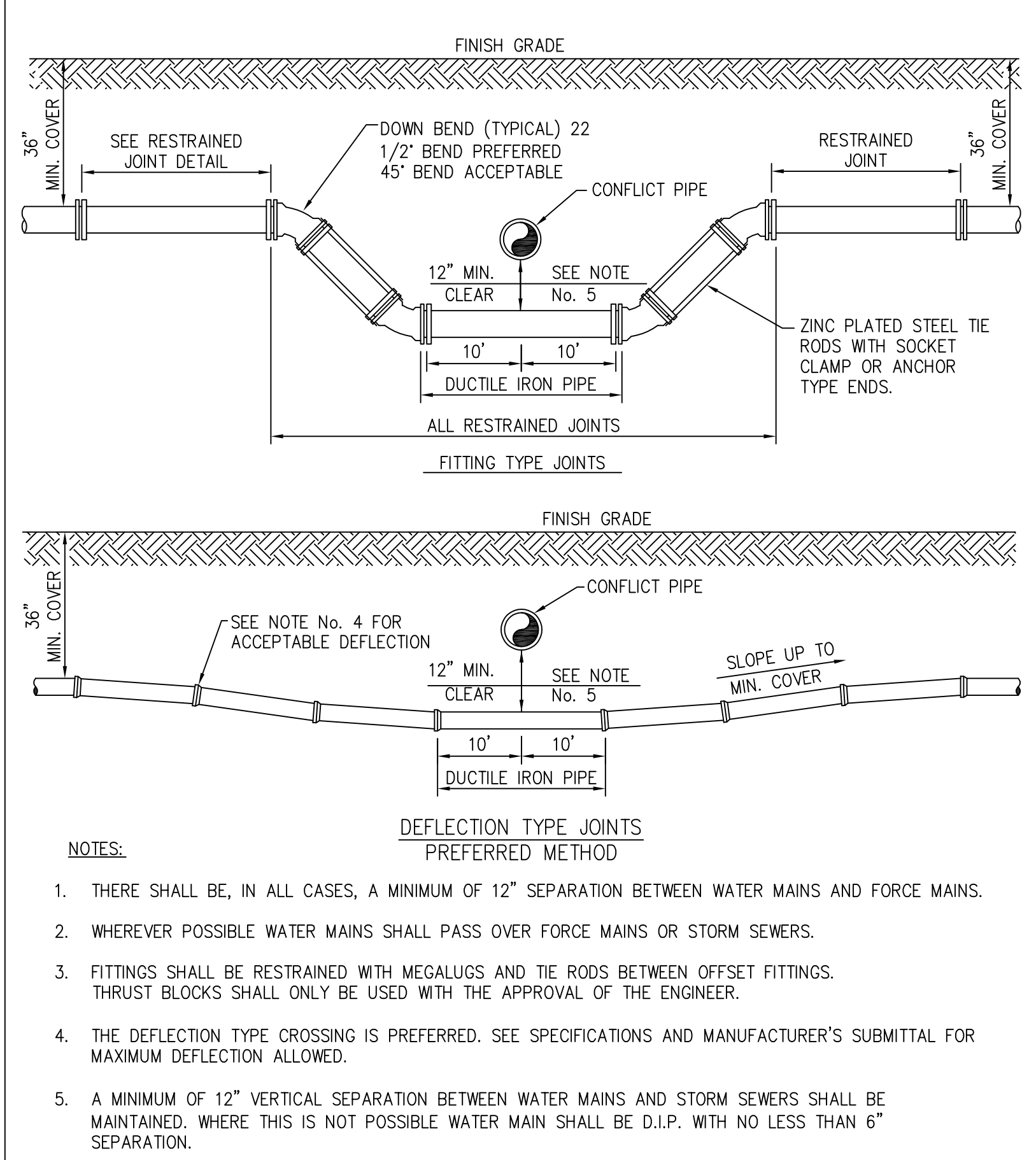
FIRE HYDRANT INSTALLATION 3



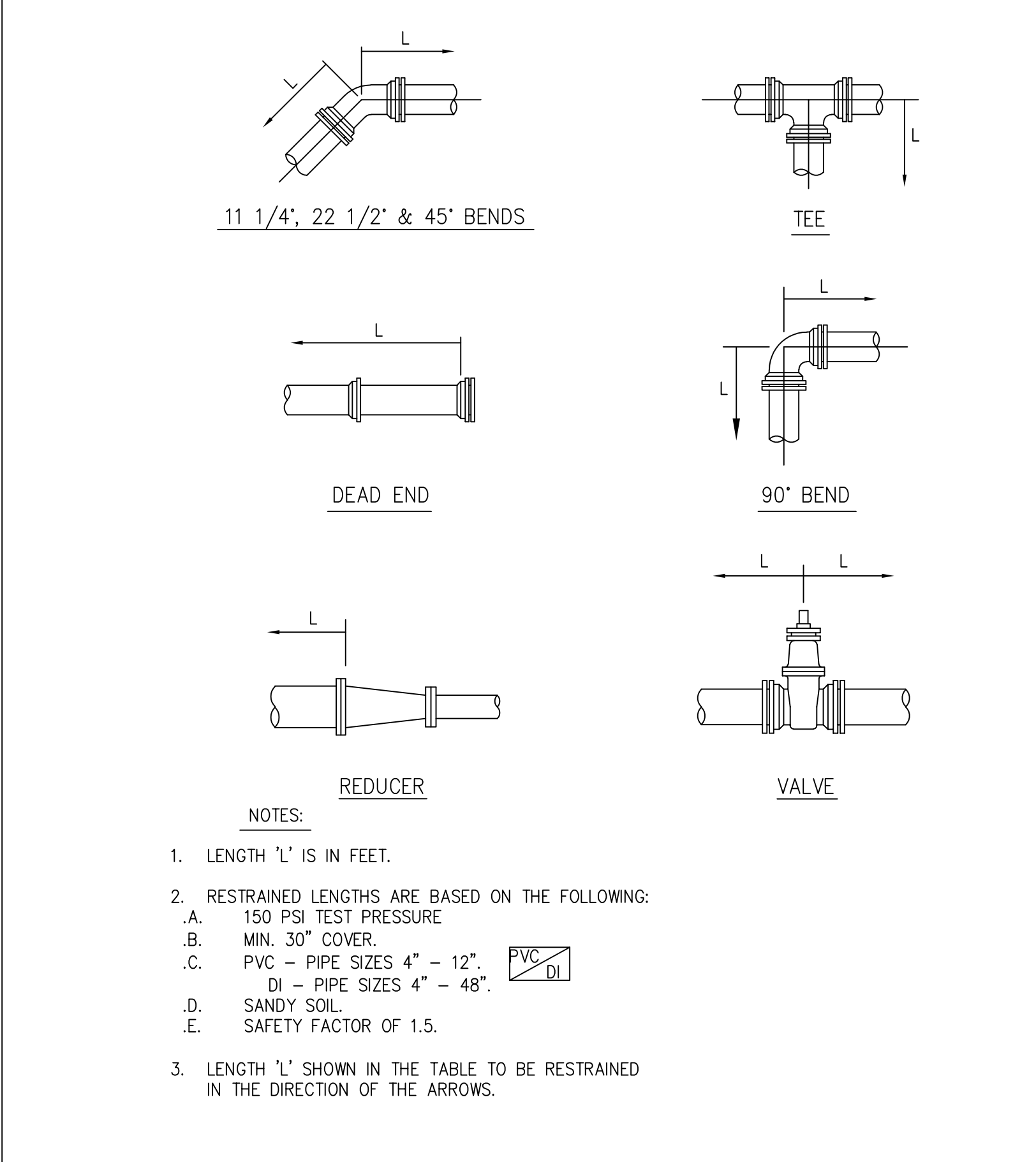
FIRE HYDRANT INSTALLATION PARALLEL TO WATERMAIN 4



TIE-IN JUMPER CONNECTION 5



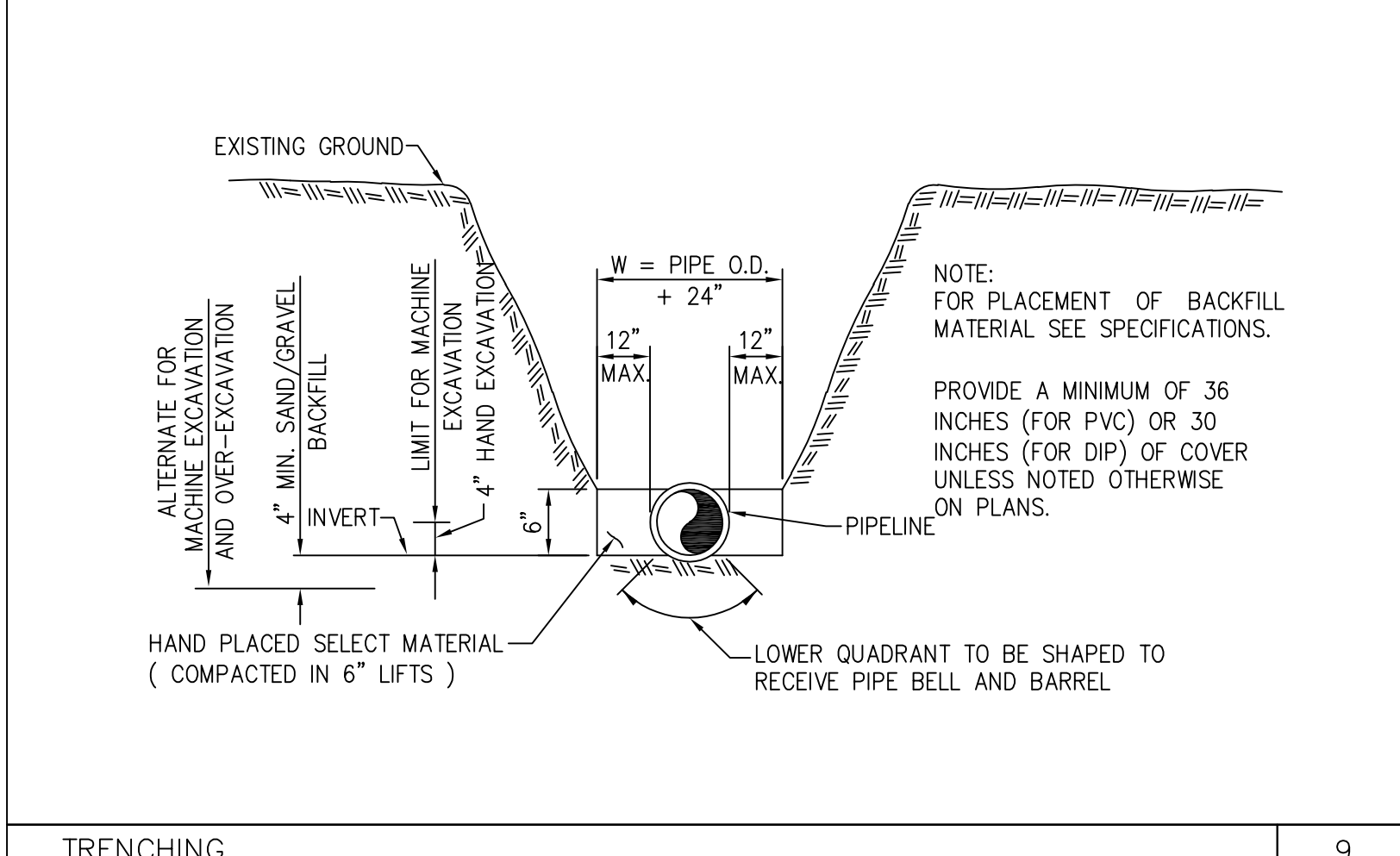
PRESSURE PIPE CONFLICT 6



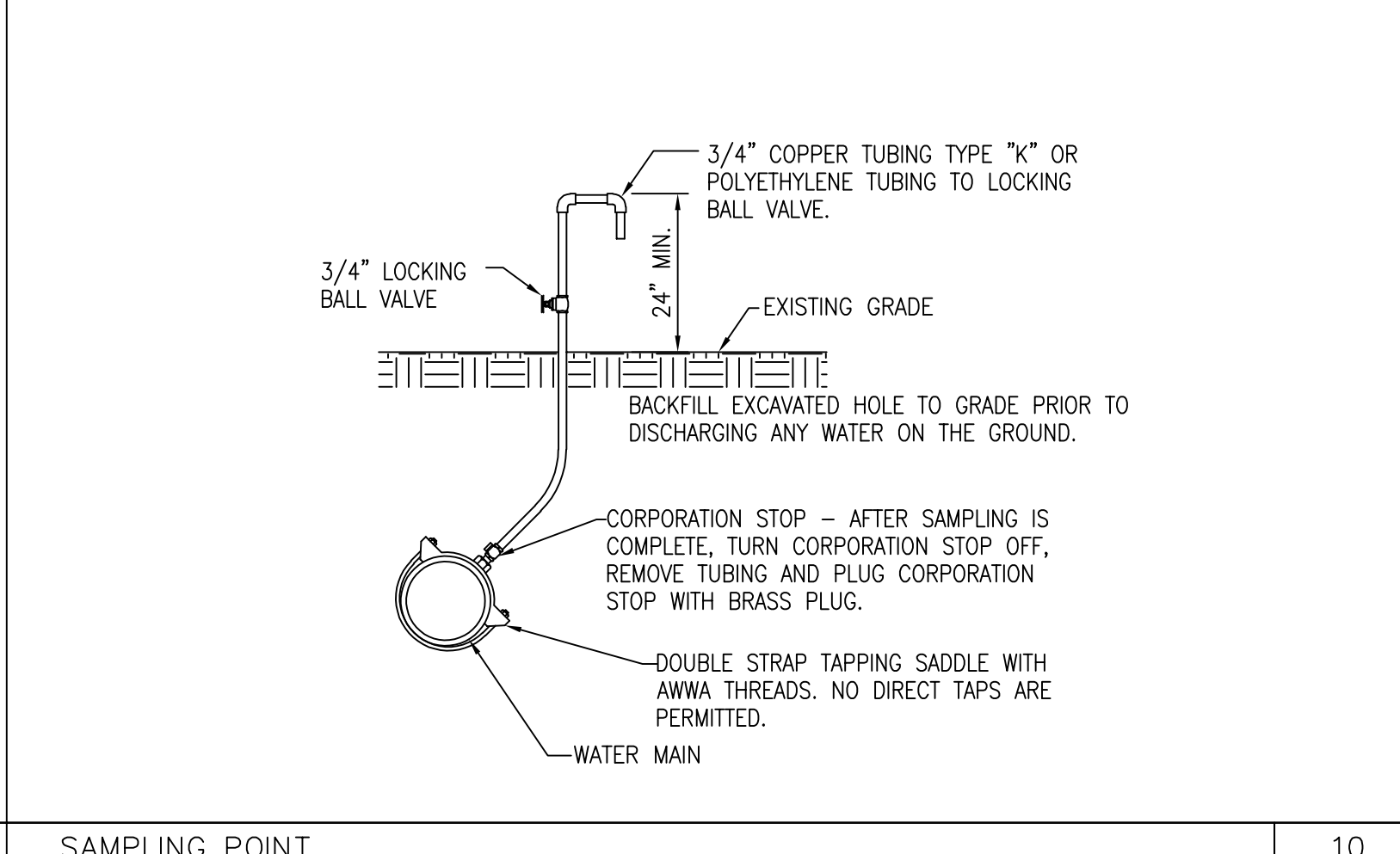
RESTRAINED PIPE JOINTS 7

FITTING TYPE	PIPE SIZE																
	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"			
90° HORIZ. BEND	17	24	31	38	45	52	60	68	76	84	92	100	108	116	124	132	
45° HORIZ. BEND	16	18	20	22	25	29	33	37	40	44	49	53	61	71	80	89	
22.5° HORIZ. BEND	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
11.25° HORIZ. BEND	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
45° VERT. OFFSET	19	27	35	43	51	59	67	75	83	91	99	107	115	123	131	139	
UPPER BEND	5	7	9	11	13	15	17	19	21	23	27	32	37	41	46	51	
LOWER BEND	4	6	8	10	12	14	16	18	20	22	25	29	33	37	41	46	
22.5° VERT. OFFSET	9	13	17	21	25	29	33	37	41	46	51	56	61	66	71	76	
UPPER BEND	2	3	4	5	6	7	8	9	10	11	13	15	17	19	21	23	
LOWER BEND	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
11.25° VERT. OFFSET	5	8	11	14	17	20	23	26	29	32	35	38	41	44	47	50	
UPPER BEND	1	2	2	3	3	3	3	4	4	5	5	6	7	8	8	9	
LOWER BEND	1	2	2	3	3	3	3	4	4	5	5	6	7	8	8	9	
DEAD END AND INLINE VALVE	46	65	85	105	125	145	165	185	205	225	245	265	285	305	325	345	
TEE (BRANCH RESTRAINT)	4"x	21	30	41	52	63	74	85	96	107	117	128	138	148	158	168	
	6"x	-	39	51	63	75	87	99	111	123	135	147	159	171	183	195	
	8"x	-	-	59	73	87	101	115	129	143	157	171	185	199	213	227	
	10"x	-	-	-	79	95	111	127	143	159	175	191	207	223	239	255	
	12"x	-	-	-	-	99	117	135	153	171	189	207	225	243	261	279	
	14"x	-	-	-	-	-	119	139	159	179	199	219	239	259	279	299	
	16"x	-	-	-	-	-	-	139	161	183	205	227	249	271	293	315	
	18"x	-	-	-	-	-	-	-	159	183	207	231	255	279	303	327	
REDUCER (LARGER PIPE RESTRAINT)	20"x	-	-	-	-	-	-	-	179	205	231	257	283	309	335	361	
	24"x	-	-	-	-	-	-	-	-	219	247	275	303	331	359	387	
	30"x	-	-	-	-	-	-	-	-	-	279	309	339	369	399	429	
	36"x	-	-	-	-	-	-	-	-	-	-	339	371	403	435	467	
	42"x	-	-	-	-	-	-	-	-	-	-	-	399	433	467	501	
	48"x	-	-	-	-	-	-	-	-	-	-	-	-	459	495	531	
	6"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	209
	8"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

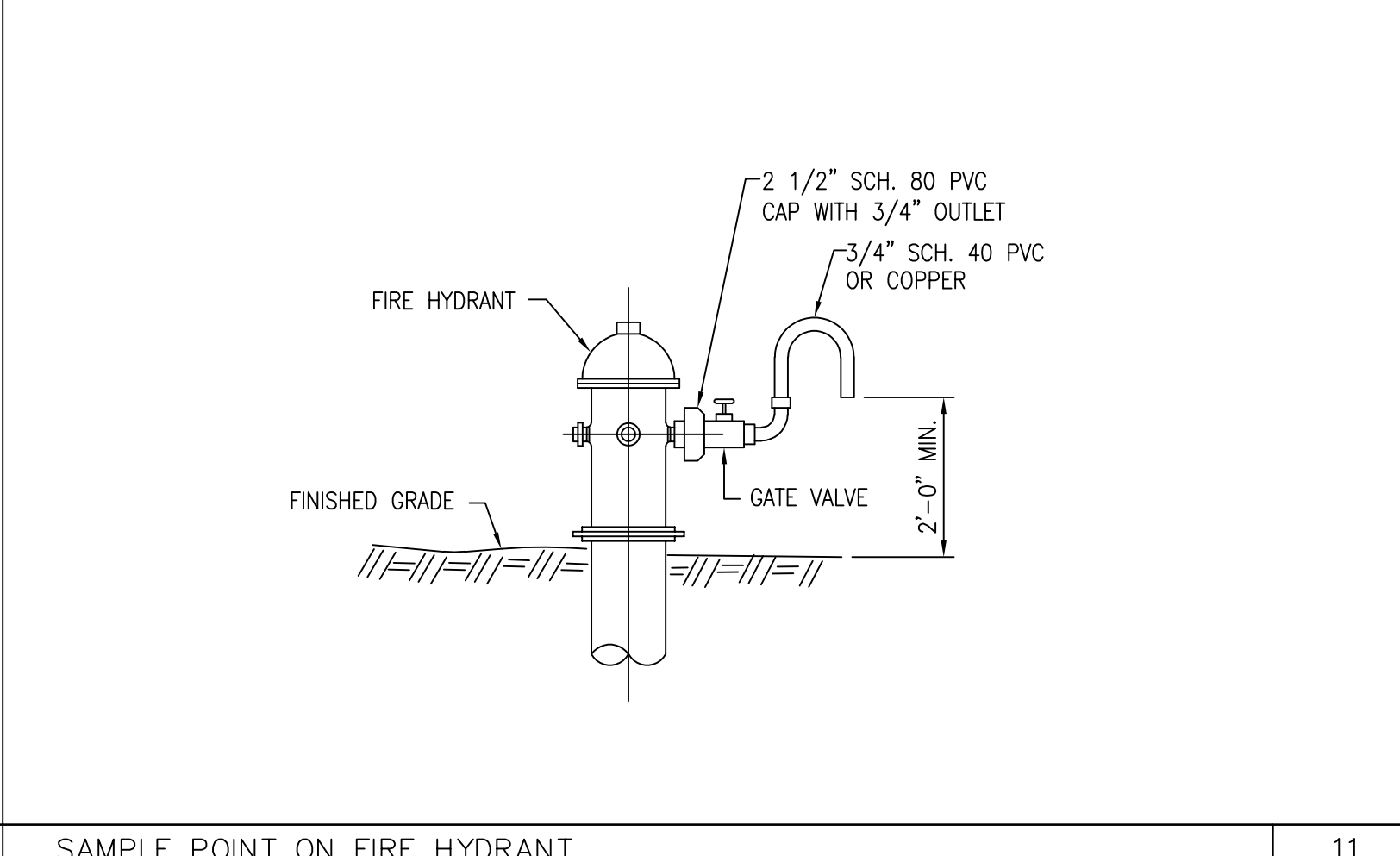
MECHANICAL THRUST RESTRAINT - MINIMUM PIPE LENGTHS 8



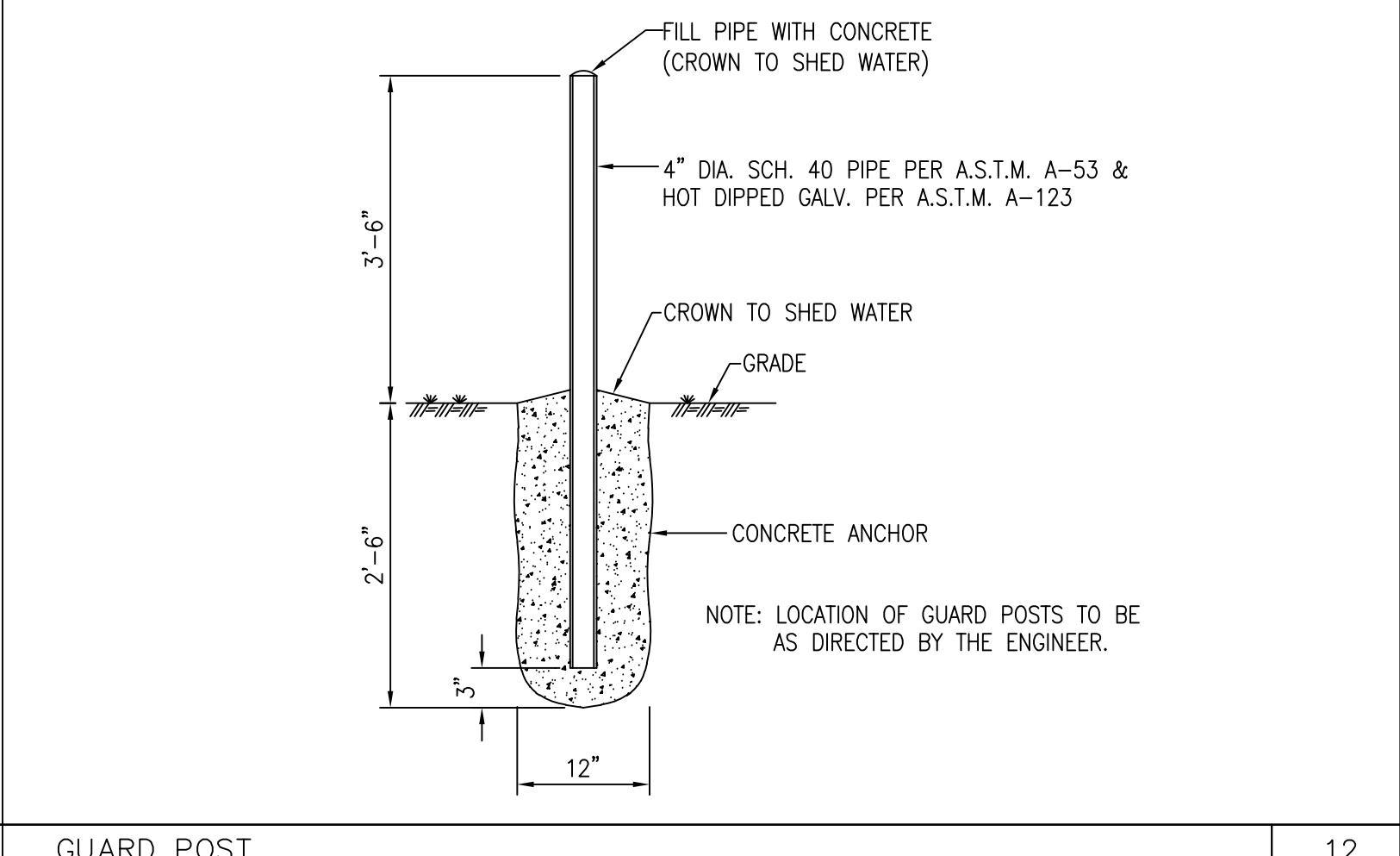
TRENCHING 9



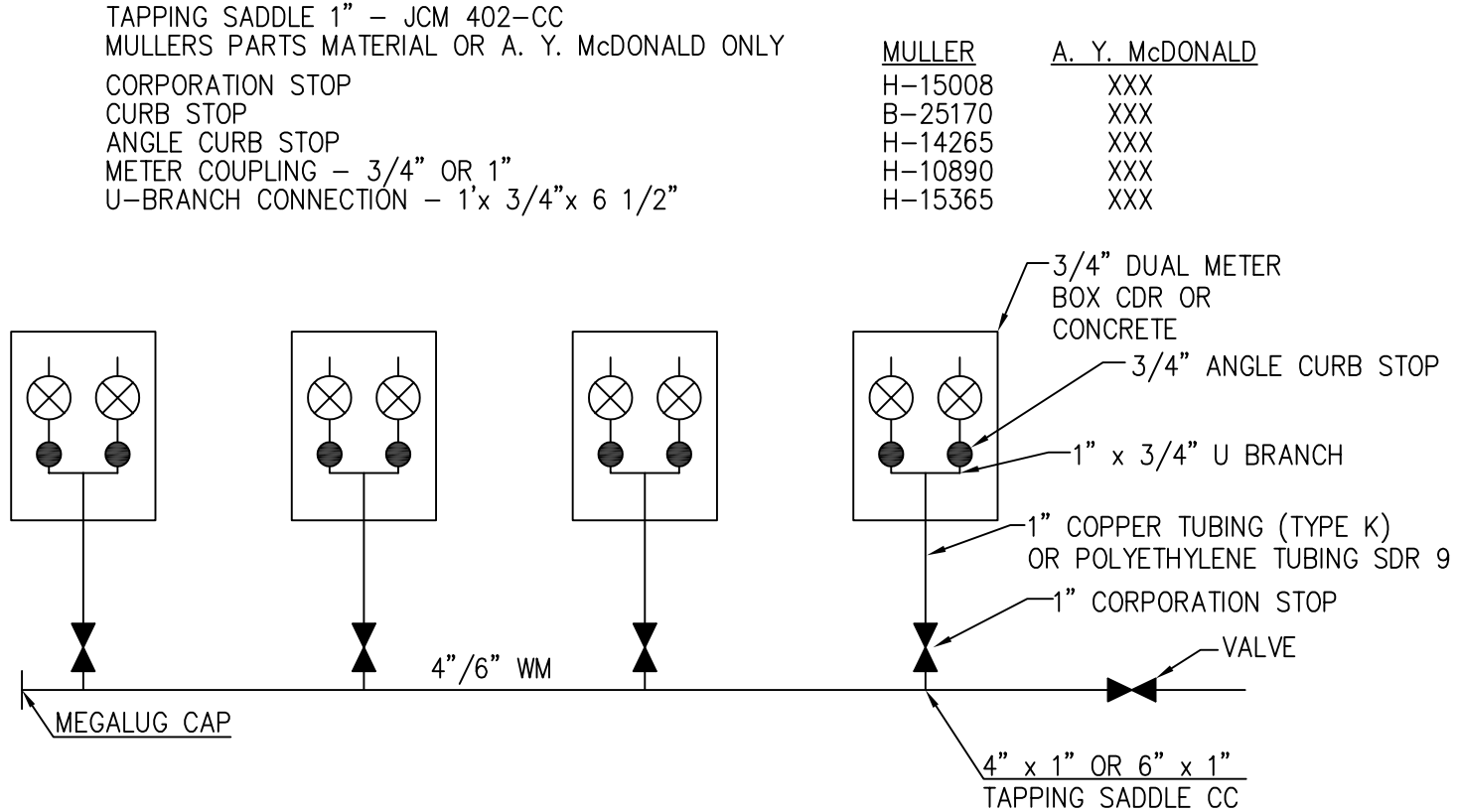
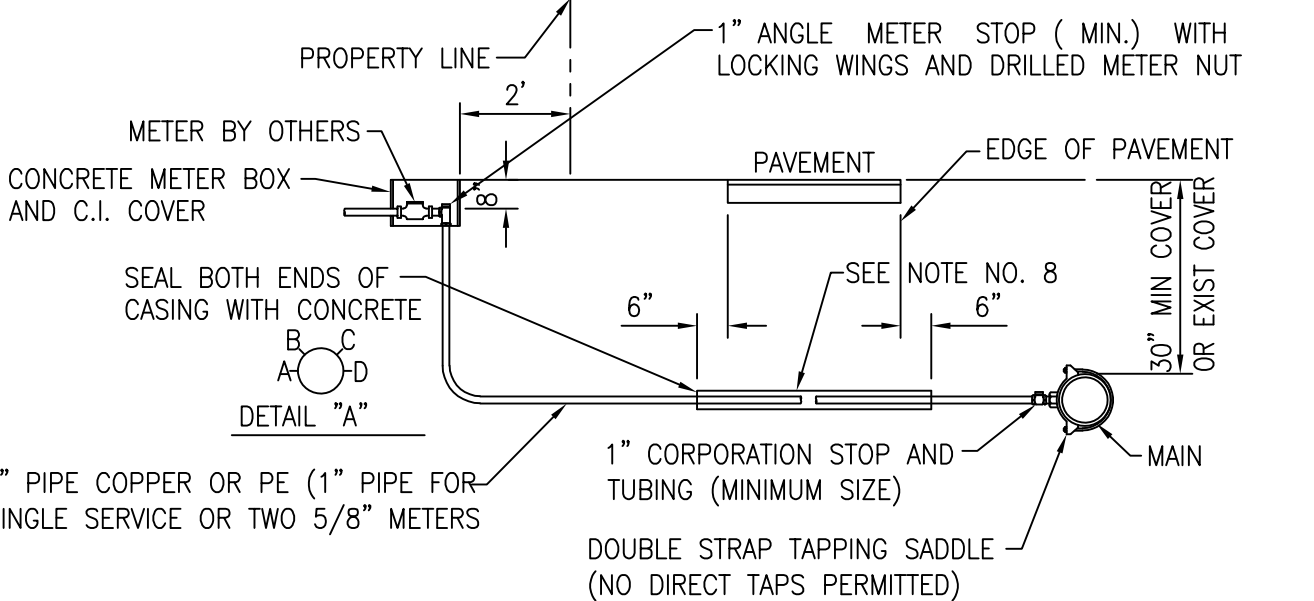
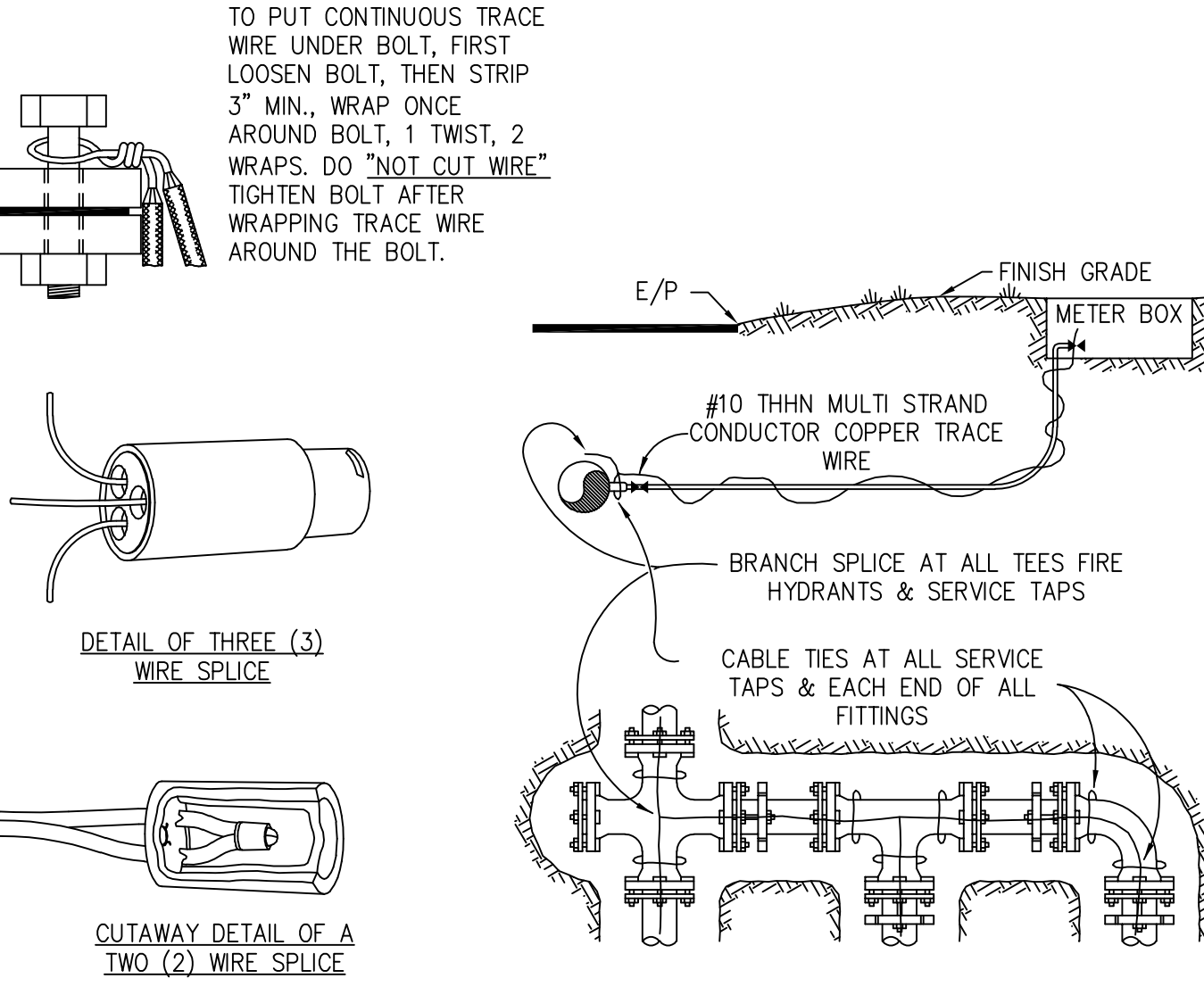
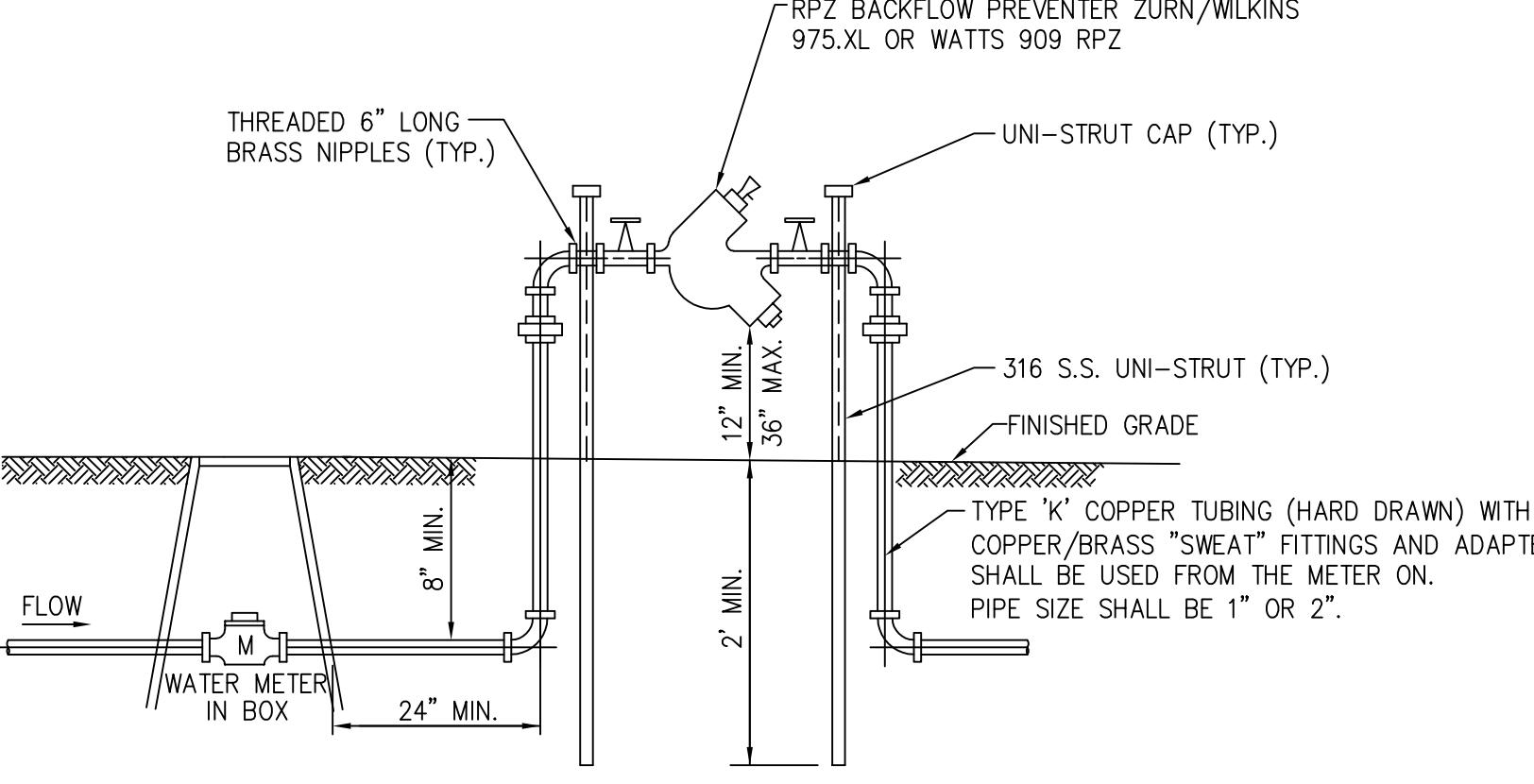
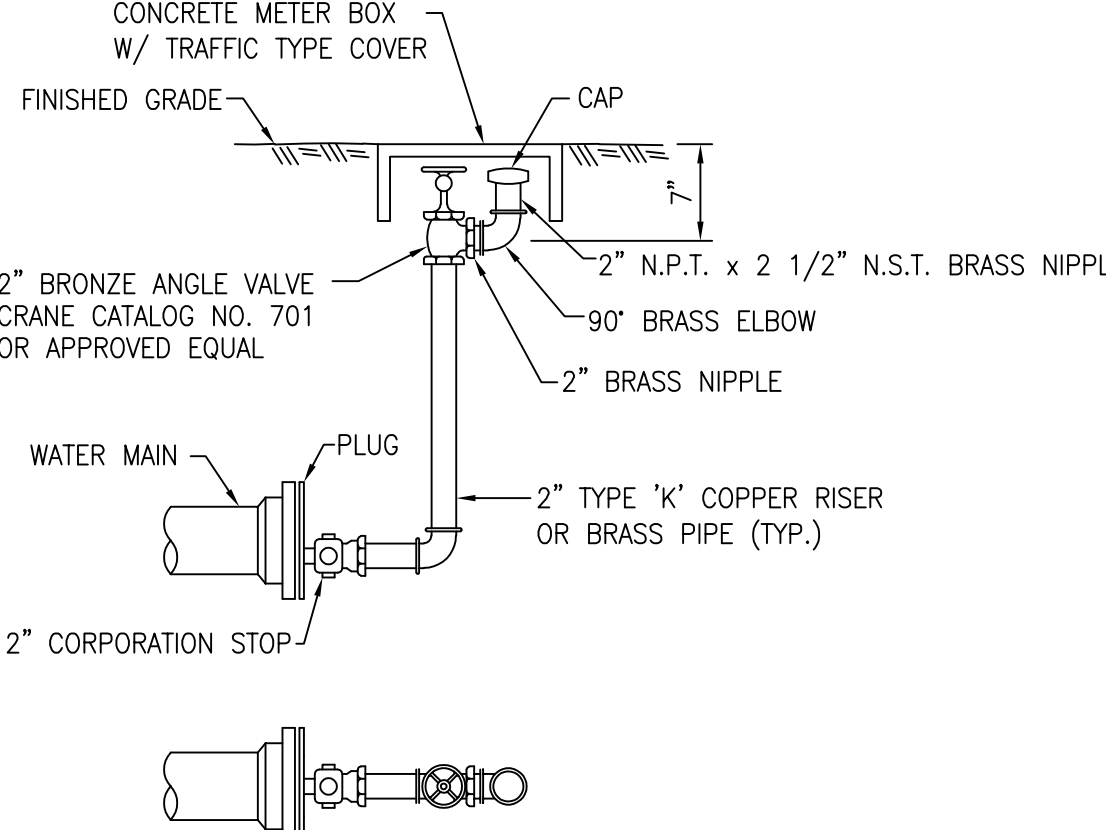
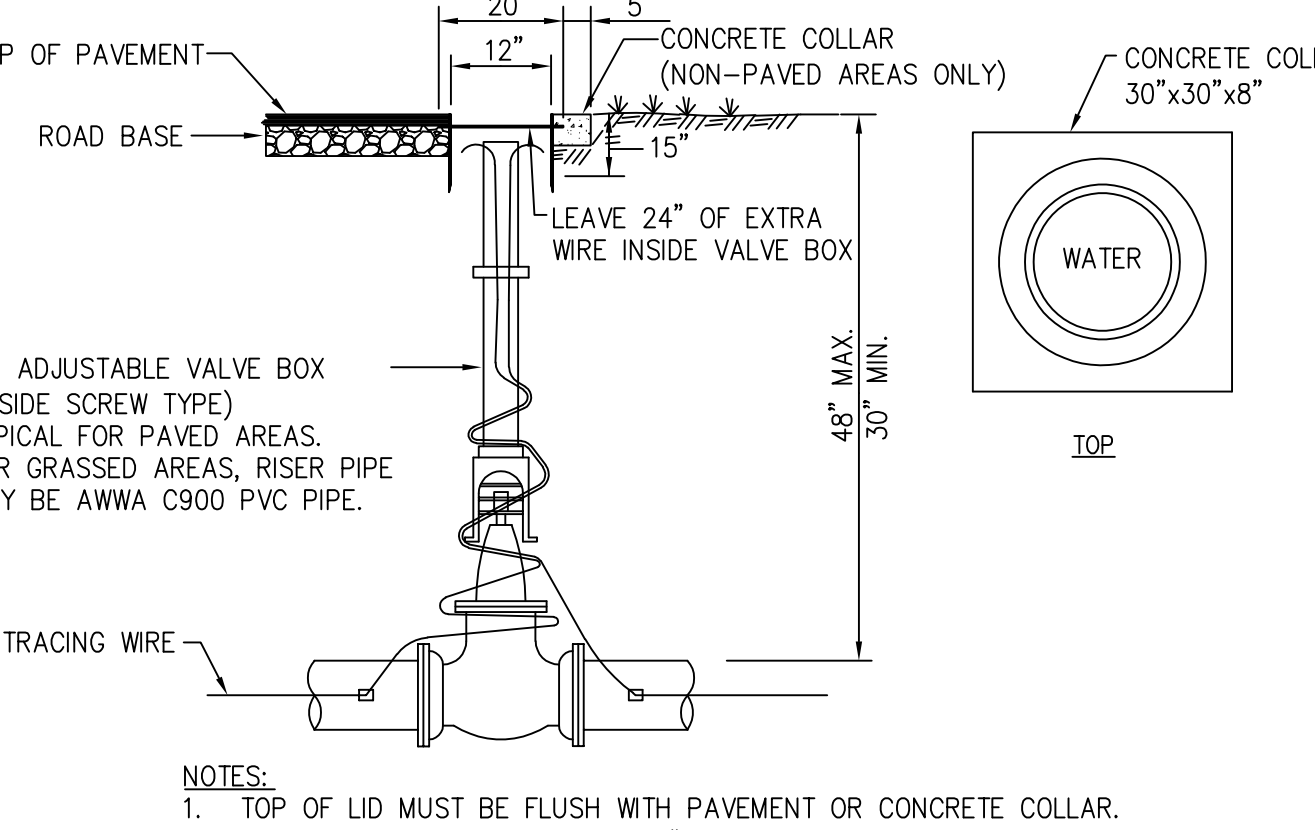
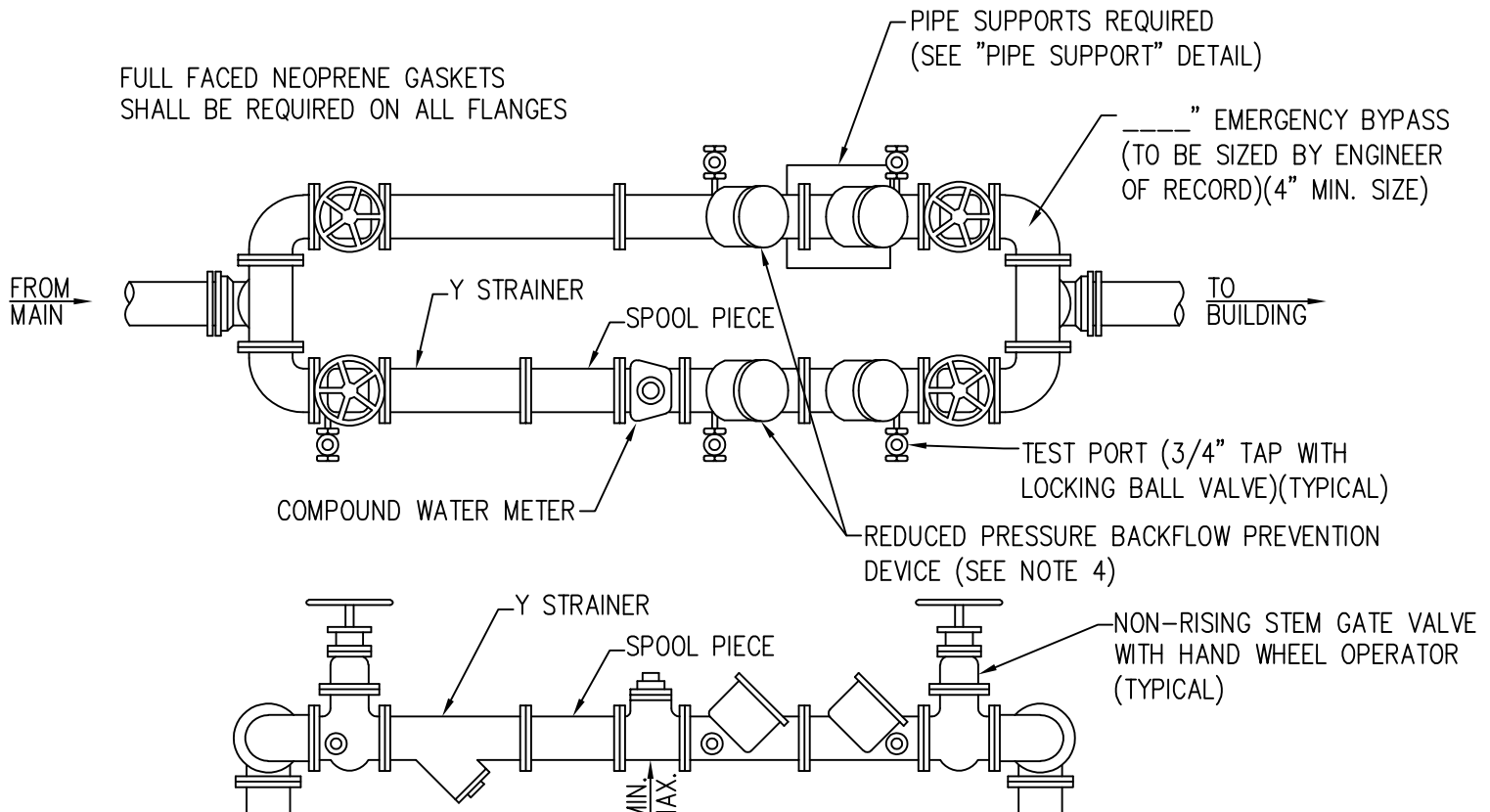
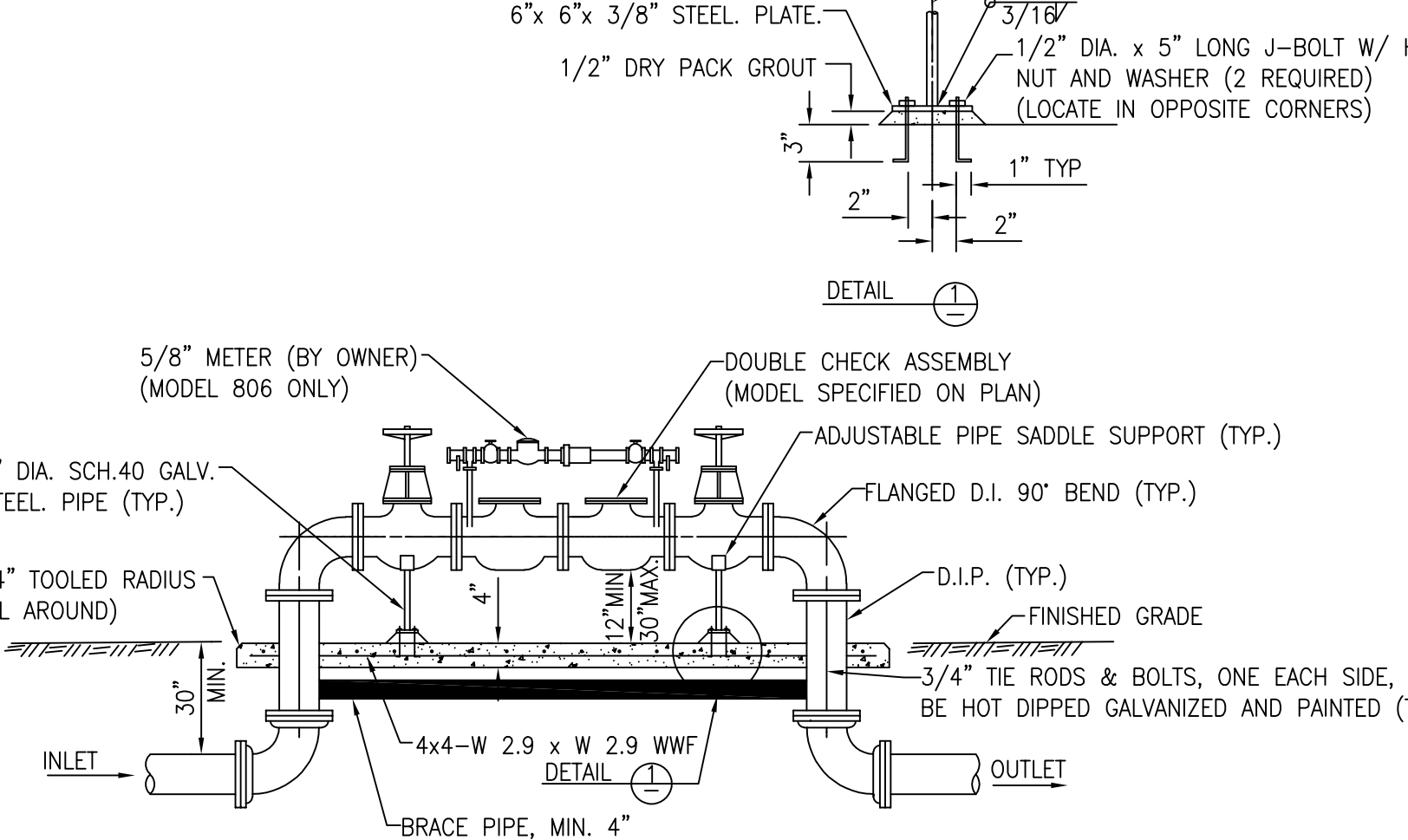
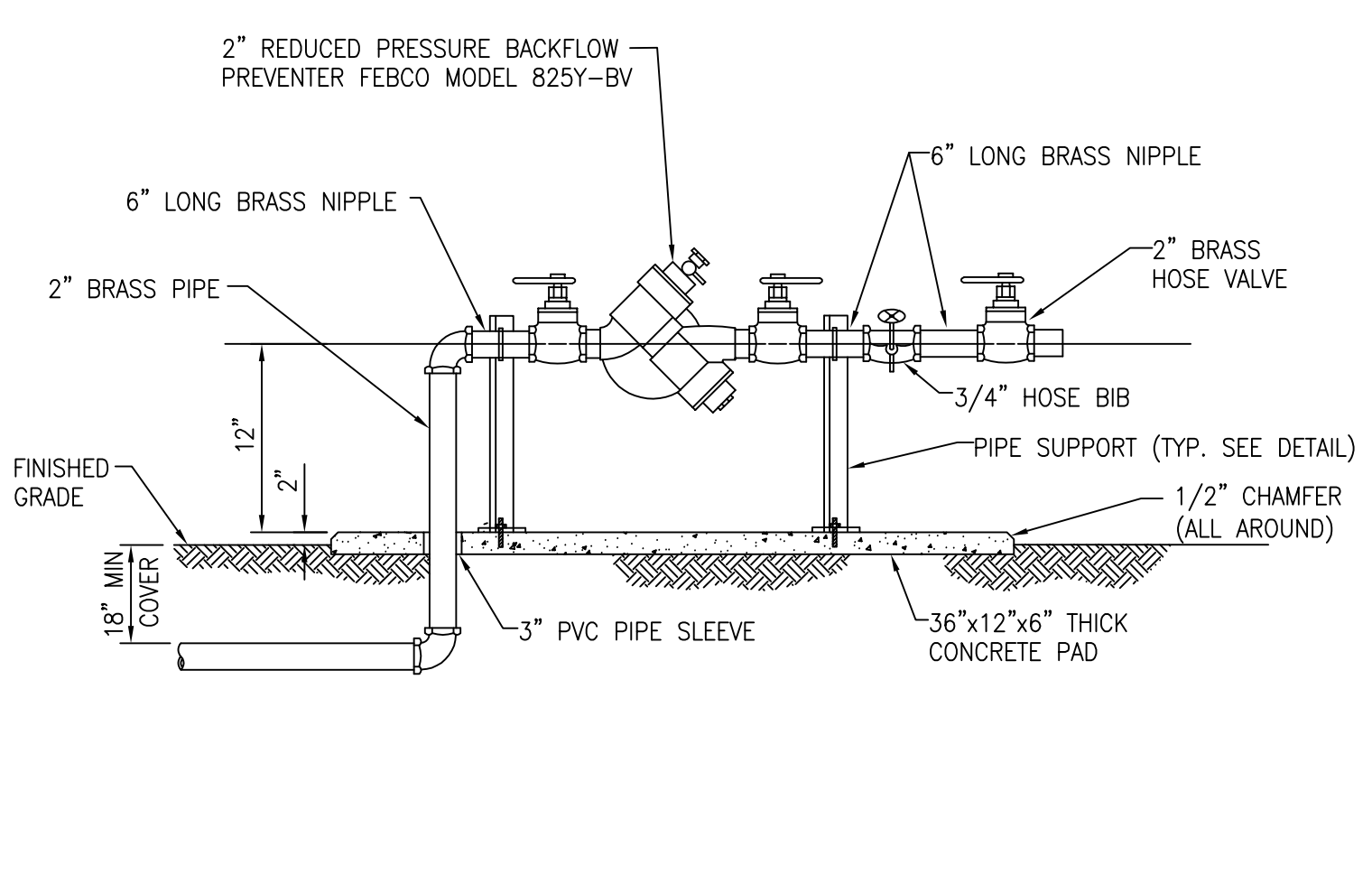
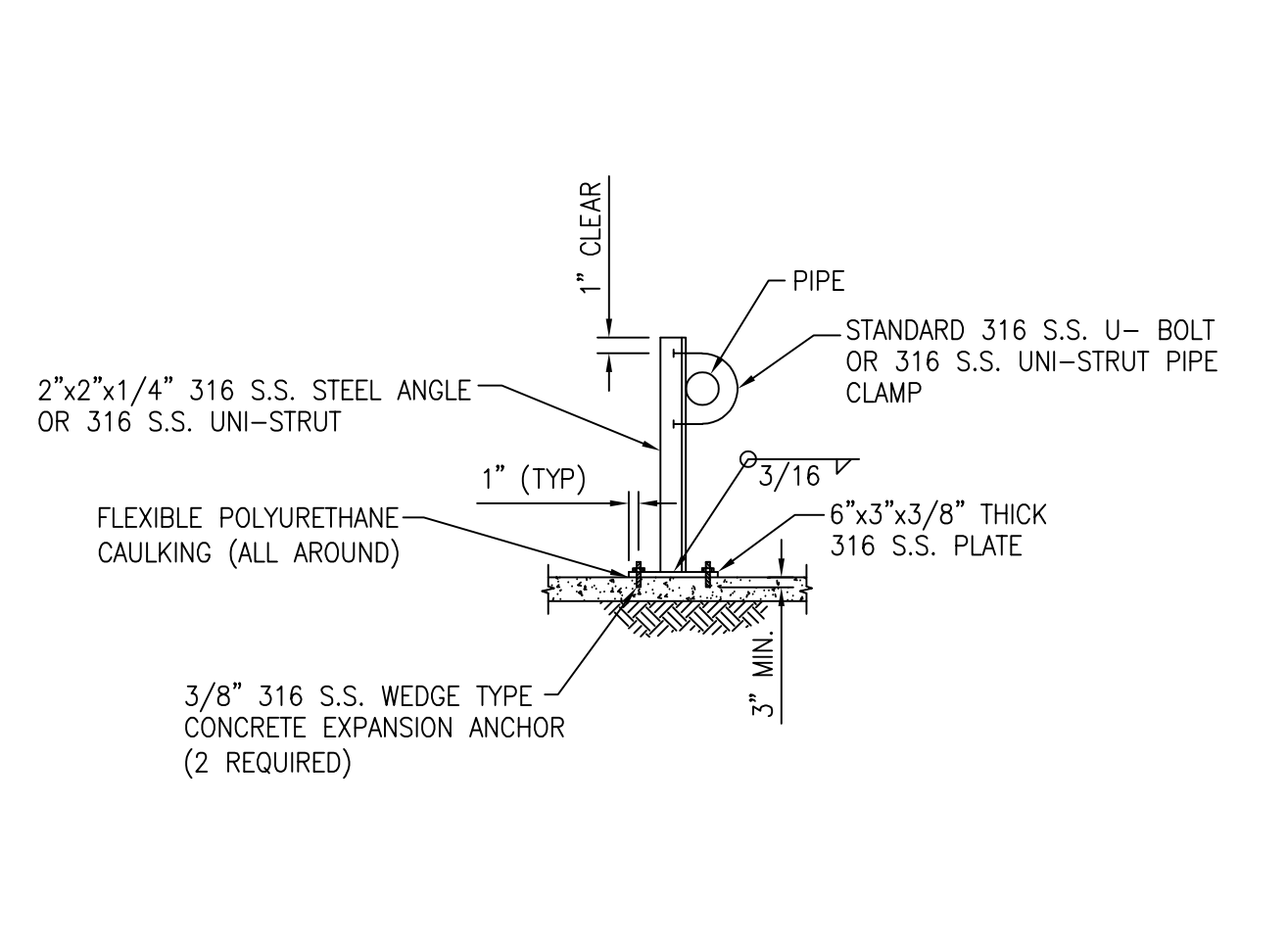
SAMPLING POINT 10



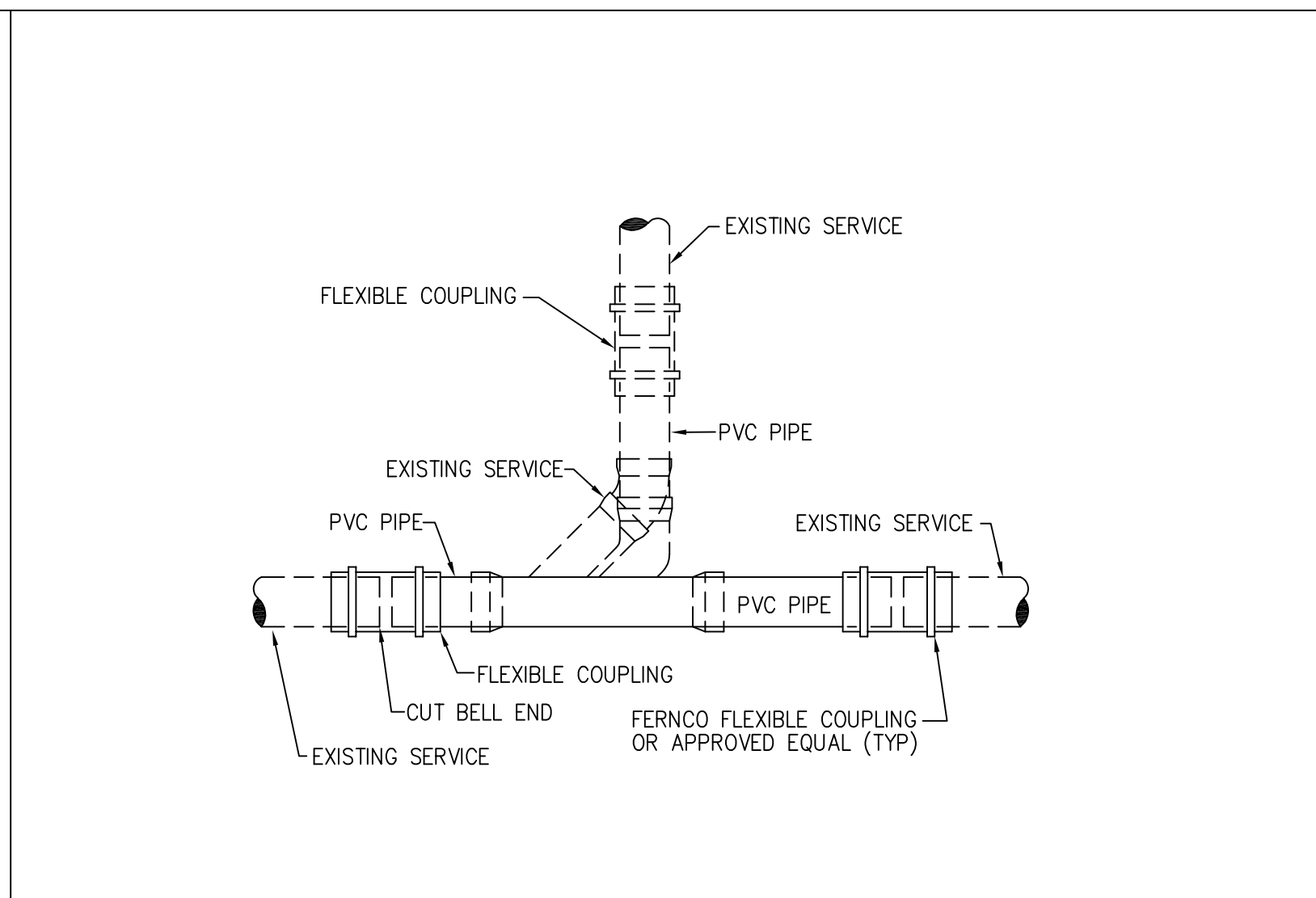
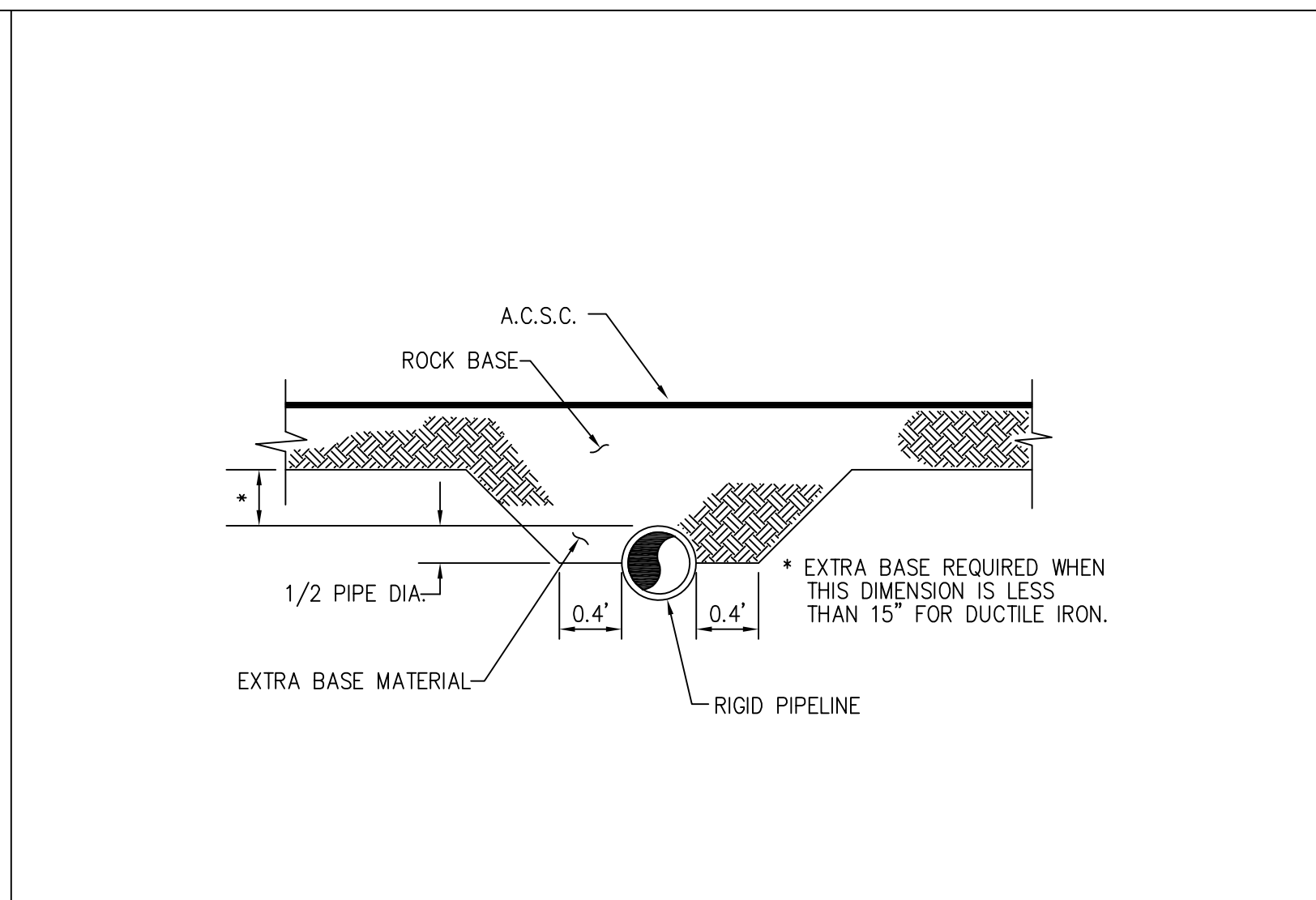
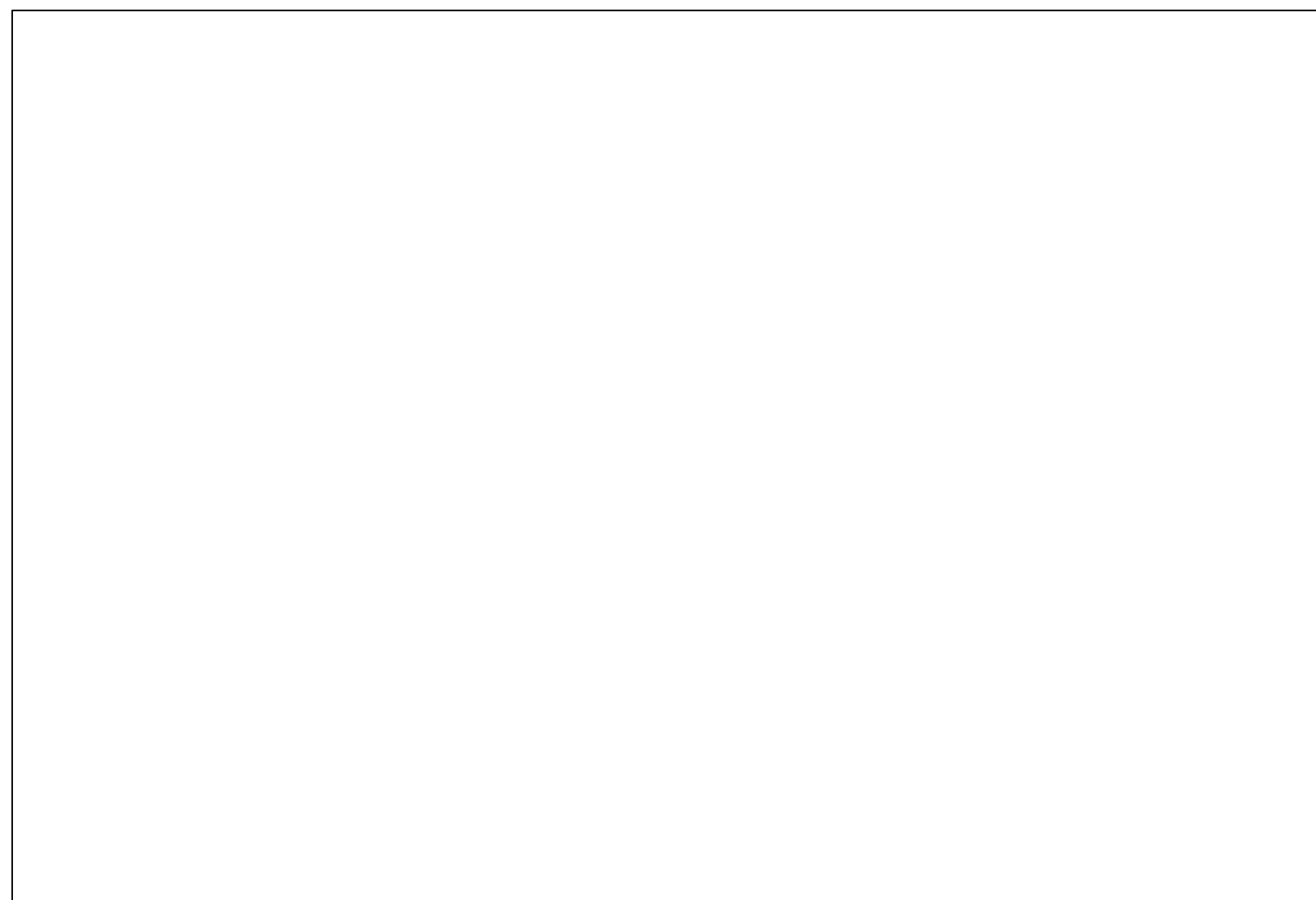
SAMPLE POINT ON FIRE HYDRANT 11



GUARD POST 12

<p>TAPPING SADDLE 1" - JCM 402-CC MULLERS PARTS MATERIAL OR A. Y. McDONALD ONLY</p> <p>CORPORATION STOP CURB STOP ANGLE CURB STOP METER COUPLING - 3/4" OR 1" U-BRANCH CONNECTION - 1' x 3/4" x 6 1/2"</p> <p>MULLER A. Y. McDONALD H-15008 XXX B-25170 XXX H-14265 XXX H-10890 XXX H-15365 XXX</p>  <p>3/4" DUAL METER BOX CDR OR CONCRETE 3/4" ANGLE CURB STOP 1" x 3/4" U BRANCH 1" COPPER TUBING (TYPE K) OR POLYETHYLENE TUBING SDR 9 1" CORPORATION STOP VALVE 4" x 1" OR 6" x 1" TAPPING SADDLE CC MEGALUG CAP 4" / 6" WM</p>	 <p>PROPERTY LINE METER BY OTHERS CONCRETE METER BOX AND C.I. COVER PAVEMENT EDGE OF PAVEMENT SEAL BOTH ENDS OF CASING WITH CONCRETE DETAIL "A" 1" PIPE COPPER OR PE (1" PIPE FOR SINGLE SERVICE OR TWO 5/8" METERS) 1" CORPORATION STOP AND TUBING (MINIMUM SIZE) DOUBLE STRAP TAPPING SADDLE (NO DIRECT TAPS PERMITTED) MAIN 30" MIN. COVER OR EXIST COVER</p> <p>NOTES:</p> <ol style="list-style-type: none"> SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18". OFFSET AND AT 45° FROM THE CENTERLINE (ON MAINS WITH GREATER THAN 30" OF COVER. SEE DETAIL "A"). WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISH GRADE. COPPER TUBING SHALL BE TYPE "K" WITH COMPRESSION FITTINGS. POLYETHYLENE TUBING SHALL BE SDR 9, COPPER SIZE TUBING. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL. COPPER SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO ANGLE METER STOP WITH NO FITTINGS IN BETWEEN. TAPPING SADDLES AND CORPORATION STOPS SHALL HAVE CC THREADS. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY. GALVANIZED CASING REQUIRED FOR JACK AND BORE IN MOST CASES, SCHEDULE 40 PVC MAY BE USED WITH THE APPROVAL OF THE ENGINEER. CASING SHOULD EXTEND SIX (6) FEET BEYOND EDGE OF PAVEMENT AND SIZED AS FOLLOWS A. 1" SERVICE USE 2" CASING B. 2" SERVICE USE 4" CASING METER BOX TO BE SET TWO FEET BEHIND PROPERTY LINE AND TWO FEET INSIDE SIDE PROPERTY LINE ON EITHER SIDE OF PROPERTY. PIPING LAYOUT SHOWN IS TYPICAL FOR 2" SERVICE. 	<p>TO PUT CONTINUOUS TRACE WIRE UNDER BOLT, FIRST LOOSEN BOLT, THEN STRIP 3" MIN., WRAP ONCE AROUND BOLT, 1 TWIST, 2 WRAPS, DO "NOT CUT WIRE". TIGHTEN BOLT AFTER WRAPPING TRACE WIRE AROUND THE BOLT.</p>  <p>DETAIL OF THREE (3) WIRE SPLICE CUTAWAY DETAIL OF A TWO (2) WIRE SPLICE</p> <p>NOTES:</p> <ol style="list-style-type: none"> TRACE WIRE IS REQUIRED ON ALL NON METALLIC PIPE. INCLUDE ALL COST OF MATERIAL & LABOR IN PRICE OF PIPE. CONTRACTOR IS RESPONSIBLE FOR CONTINUITY OF ALL TRACE WIRE. WIRE SPLICE CONNECTORS SHALL BE DRY-CON DIRECT BURY LUG BY KING INNOVATIONS, DS-500 DRI-SPLICE BY SPEARS OR DIRECT BURY PRODUCTS BY 3M 	<p>HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATERMANS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES AND ON SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.</p> <ol style="list-style-type: none"> NEW OR RELOCATED UNDERGROUND WATERMANS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED SEWER, STORMWATER FORCEMAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 2-610, F.A.C. NEW OR RELOCATED UNDERGROUND WATERMANS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER. NEW OR RELOCATED UNDERGROUND WATERMANS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCEMAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMANS AND GRAVITY TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATERMAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER. NEW OR RELOCATED UNDERGROUND WATERMANS SHALL BE LAID TO PROVIDE A MINIMUM HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED ON SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM AS DEFINED IN SECTION 391.006(2), F.S. AND RULE 64E-6.002, F.A.C. <p>VERTICAL SEPARATION BETWEEN UNDERGROUND WATERMANS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCEMANS, AND RECLAIMED WATER PIPELINES.</p> <ol style="list-style-type: none"> NEW OR RELOCATED UNDERGROUND WATERMANS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM TYPE SANITARY OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATERMAIN IS AT LEAST SIX INCHES, AND PREFERABLY TWELVE INCHES ABOVE, OR AT LEAST TWELVE INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATERMAIN ABOVE THE OTHER PIPELINE. NEW OR RELOCATED UNDERGROUND WATERMANS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPE LINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATERMAIN IS AT LEAST TWELVE INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATERMAIN ABOVE THE OTHER PIPELINE. AT THE UTILITY CROSSING DESCRIBED IN PARAGRAPH 1 AND 2 ABOVE, ONE FULL LENGTH OF WATERMAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATERMAIN JOINTS SHALL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATERMAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM TYPE SANITARY SEWER, STORM SEWERS, STORMWATER FORCEMANS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCEMANS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
<p>MULTIPLE WATER SERVICES 1</p>	<p>WATER SERVICE FOR 1" OR 2" PIPE 2</p>	<p>TRACE WIRE 3</p>	<p>WATER AND SEWER SEPARATION CRITERIA 4</p>
 <p>RPZ BACKFLOW PREVENTER ZURN/MILKINS 975.XL OR WATTS 909 RPZ THREADED 6" LONG BRASS NIPPLES (TYP.) UNI-STRUT CAP (TYP.) 316 S.S. UNI-STRUT (TYP.) FINISHED GRADE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS "SWEAT" FITTINGS AND ADAPTERS SHALL BE USED FROM THE METER ON. PIPE SIZE SHALL BE 1" OR 2". WATER METER IN BOX 24" MIN. 6" MIN. 12" MIN. 36" MAX. 2" MIN.</p> <p>NOTE: PROVIDE GUARD SHACK STEEL ENCLOSURE WITH GREEN VINYL COATING FOR PROTECTION.</p>	 <p>CONCRETE METER BOX W/ TRAFFIC TYPE COVER FINISHED GRADE CAP 2" BRONZE ANGLE VALVE CRANE CATALOG NO. 701 OR APPROVED EQUAL WATER MAIN PLUG 2" CORPORATION STOP 2" N.P.T. x 2 1/2" N.S.T. BRASS NIPPLE 90° BRASS ELBOW 2" BRASS NIPPLE 2" TYPE "K" COPPER RISER OR BRASS PIPE (TYP.)</p> <p>NOTES:</p> <ol style="list-style-type: none"> GALVANIZED PIPING AND FITTINGS SHALL NOT BE USED ON TEMPORARY OR PERMANENT BLOWOFFS. MEGALUG RESTRAINED JOINTS REQUIRED ON WATERMAIN. 	 <p>TOP OF PAVEMENT ROAD BASE CONCRETE COLLAR (NON-PAVED AREAS ONLY) CONCRETE COLLAR 30"x30"x8" WATER TOP LEAVE 24" OF EXTRA WIRE INSIDE VALVE BOX 48" MAX. 30" MIN. C.I. ADJUSTABLE VALVE BOX (INSIDE SCREW TYPE) TYPICAL FOR PAVED AREAS. FOR GRASSED AREAS, RISER PIPE MAY BE AWWA C900 PVC PIPE. TRACING WIRE</p> <p>NOTES:</p> <ol style="list-style-type: none"> TOP OF LID MUST BE FLUSH WITH PAVEMENT OR CONCRETE COLLAR. WHEN VALVE IS DEEPER THAN 36" AN EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT TO 24" OF FINISHED GRADE. EXTENSION MUST BE SET SCREW TYPE AND ATTACHED TO OPERATING NUT. OUTSIDE BOX SHALL BE UNITED STATES FOUNDRY NO. 7630 WITH TYPE FD LID. LID SHALL BE CAST WITH THE WORDS: "WATER" OR "RAW WATER". USE NYLON CABLE TIES TO SECURE TRACE WIRE TO OUTSIDE OF VALVE EXTENSION AND CABLE TIE BEHIND EACH BELL. SEE NOTES ON DETAIL NO. 3, THIS SHEET. 	 <p>PIPE SUPPORTS REQUIRED (SEE "PIPE SUPPORT" DETAIL) EMERGENCY BYPASS (TO BE SIZED BY ENGINEER OF RECORD)(4" MIN. SIZE) FULL FACED NEOPRENE GASKETS SHALL BE REQUIRED ON ALL FLANGES FROM MAIN Y STRAINER SPOOL PIECE COMPOUND WATER METER TEST PORT (3/4" TAP WITH LOCKING BALL VALVE)(TYPICAL) REDUCED PRESSURE BACKFLOW PREVENTION DEVICE (SEE NOTE 4) NON-RISING STEM GATE VALVE WITH HAND WHEEL OPERATOR (TYPICAL) FINISH GRADE 18" MIN. 4" MIN. SIZE BRACE PIPE, MIN. 4" THIS DRAWING DEPICTS A GENERAL ASSEMBLY ONLY. THE ENGINEER OF RECORD SHALL COORDINATE THE SPECIFIC ASSEMBLY'S REQUIREMENTS WITH THE CITY OF LAKE WORTH.</p>
<p>BACKFLOW PREVENTION DEVICE - 3/4" TO 2" 5</p>	<p>2" TERMINAL BLOWOFF 6</p>	<p>VALVE SETTING 7</p>	<p>3" AND LARGER METER INSTALLATION AND BACKFLOW ASSEMBLY 12</p>
 <p>6" x 6" x 3/8" STEEL PLATE 1/2" DRY PACK GROUT 3/16" DIA. x 5" LONG J-BOLT W/ HEX NUT AND WASHER (2 REQUIRED) (LOCATE IN OPPOSITE CORNERS) 5/8" METER (BY OWNER) (MODEL 806 ONLY) DOUBLE CHECK ASSEMBLY (MODEL SPECIFIED ON PLAN) ADJUSTABLE PIPE SADDLE SUPPORT (TYP.) FLANGED D.I. 90° BEND (TYP.) D.I.P. (TYP.) FINISHED GRADE 3/4" TIE RODS & BOLTS, ONE EACH SIDE, TO BE HOT DIPPED GALVANIZED AND PAINTED (TYP.) BRACE PIPE, MIN. 4" INLET OUTLET 4x4-W 2.9 x W 2.9 WWF 1/4" TOOLED RADIUS (ALL AROUND) 3" DIA. SCH.40 GALV. STEEL PIPE (TYP.) 1" TYP. 2" 2"</p>	 <p>2" REDUCED PRESSURE BACKFLOW PREVENTER FEBCO MODEL 825Y-BV 6" LONG BRASS NIPPLE 6" LONG BRASS NIPPLE 2" BRASS HOSE VALVE 2" BRASS PIPE 3/4" HOSE BIB PIPE SUPPORT (TYP. SEE DETAIL) 1/2" CHAMFER (ALL AROUND) 36"x12"x6" THICK CONCRETE PAD 3" PVC PIPE SLEEVE 18" MIN. COVER FINISHED GRADE 2"</p>	 <p>2"x2"x1/4" 316 S.S. STEEL ANGLE OR 316 S.S. UNI-STRUT PIPE CLAMP 1" CLEAR PIPE STANDARD 316 S.S. U- BOLT OR 316 S.S. UNI-STRUT PIPE CLAMP 1" (TYP.) 3/16" 6"x3"x3/8" THICK 316 S.S. PLATE 3" MIN. 3/8" 316 S.S. WEDGE TYPE CONCRETE EXPANSION ANCHOR (2 REQUIRED) FLEXIBLE POLYURETHANE CAULKING (ALL AROUND)</p>	<p>NOTES:</p> <ol style="list-style-type: none"> MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE. NO UNFLANGES PERMITTED. PAINT THE ABOVE GROUND ASSEMBLY IN ACCORDANCE WITH CONSTRUCTION STANDARD, AFTER MANUFACTURERS RECOMMENDED SURFACE PREP IS COMPLETED. DO NOT PAINT OVER NAME/SERIAL PLATE, STAINLESS STEEL OR BRASS FITTINGS. PROTECTIVE PIPE STANCHIONS ARE REQUIRED. APPROVED REDUCED PRESSURE BACKFLOW PREVENTER WITH SILICONE RUBBER SEAL RINGS OR DISKS: A. WILKENS MODEL 375 S, 4" TO 10" B. AMES MODEL 4000 SSSR, 4" TO 10" C. AMES MODEL 4000 SESR, 4" TO 10" D. AMES MODEL 4000 SSI, 4" TO 10" 3" METER REQUIRES 4" BACKFLOW ASSEMBLY AND PIPING. ALL TEST PORTS SHALL BE PLUGGED WITH BRASS PLUGS. PROVIDE SPOOL PIECES DIRECTLY IN FRONT OF METER. MINIMUM LENGTH TO BE THREE PIPE DIAMETERS. METER TO BE SUPPLIED BY CONTRACTOR. MODEL NUMBER TO BE DETERMINED BY CITY.
<p>DOUBLE CHECK VALVE ASSEMBLY 9</p>	<p>BACKFLOW PREVENTER WITH HOSE BIB 10</p>	<p>PIPE SUPPORT 11</p>	<p>3" AND LARGER METER INSTALLATION AND BACKFLOW ASSEMBLY 12</p>

	1		2		3		4
	5		6		7		8
	9		10		11	<ol style="list-style-type: none"> 1. REINFORCING STEEL ON ALL CONCRETE STRUCTURES SHALL HAVE A MINIMUM COVER OF 3 INCHES. 2. BRICK COURSING ON MANHOLES SHALL BE PLASTERED WITH 1/2 INCH CEMENT MORTAR ON THE INSIDE AND OUTSIDE FACES. 3. THE DISTANCES AND CONTROLS SHOWN ON THE DRAWINGS REFER TO THE CENTERLINE OF THE MANHOLES. 4. COAT EXTERIOR AND INTERIOR SURFACES OF MANHOLES. PROVIDE A MINIMUM DRY FILM THICKNESS OF 16 MILS. APPLY IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. INTERIOR COATING SHALL BE FIELD APPLIED AFTER FINAL LAMPING AND REVIEW BY THE ENGINEER. 5. STEPS ARE REQUIRED IN MANHOLES GREATER THAN 3 FEET IN DEPTH. STEPS SHALL BE SPACED 16 INCHES ON CENTER AND SHALL BE POLYPROPYLENE PLASTIC COATED NO.3 AS MANUFACTURED BY MA INDUSTRIES, INC. OR EQUAL APPROVED BY THE ENGINEER. 6. PVC FORCE MAIN PIPE SHALL BE WRAPPED WITH WIRE FOR LOCATING PURPOSES. A 14 GAUGE, THIN INSULATED, SOLID COPPER WIRE SHALL BE LAID IN THE PIPE TRENCH CONTINUOUS FROM VALVE BOX TO VALVE BOX. WIRE SHALL BE WRAPPED TWO TIMES AROUND EACH JOINT OF PIPE AND EXTENDED INSIDE EACH VALVE BOX TO ENABLE LOCATION DEVICES TO BE ATTACHED WITHOUT DIGGING UP THE VALVE BOX. WIRE CONNECTIONS SHALL BE MADE WITH COMMERCIAL CONNECTORS AND SEALED AGAINST MOISTURE WITH SCOTCH E-Z SEAL NO.2200 ELECTRICAL INSULATING PAD WITH VINYL BACKING. 7. DROP CONNECTIONS ON MANHOLES ARE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED 2 FEET OR MORE ABOVE THE MAIN INVERT CHANNEL. 8. CAST IRON MANHOLE COVERS SHALL HAVE THE WORD 'SANITARY' CAST IN THEM IN RAISED LETTERS. 	12
MANHOLE BOTTOM FOR TWO OR MORE INFLUENT LINES	9	AIR RELEASE VALVE MANHOLE	10	CONCRETE COLLAR (REQUIRED WHEN MANHOLE IS OUT OF PAVEMENT)	11	GENERAL NOTES	12



TRENCHING 1

EXTRA BASE MATERIAL FOR SHALLOW PIPES IN ROADWAYS 2

PIPE SECTION REPLACEMENT 3

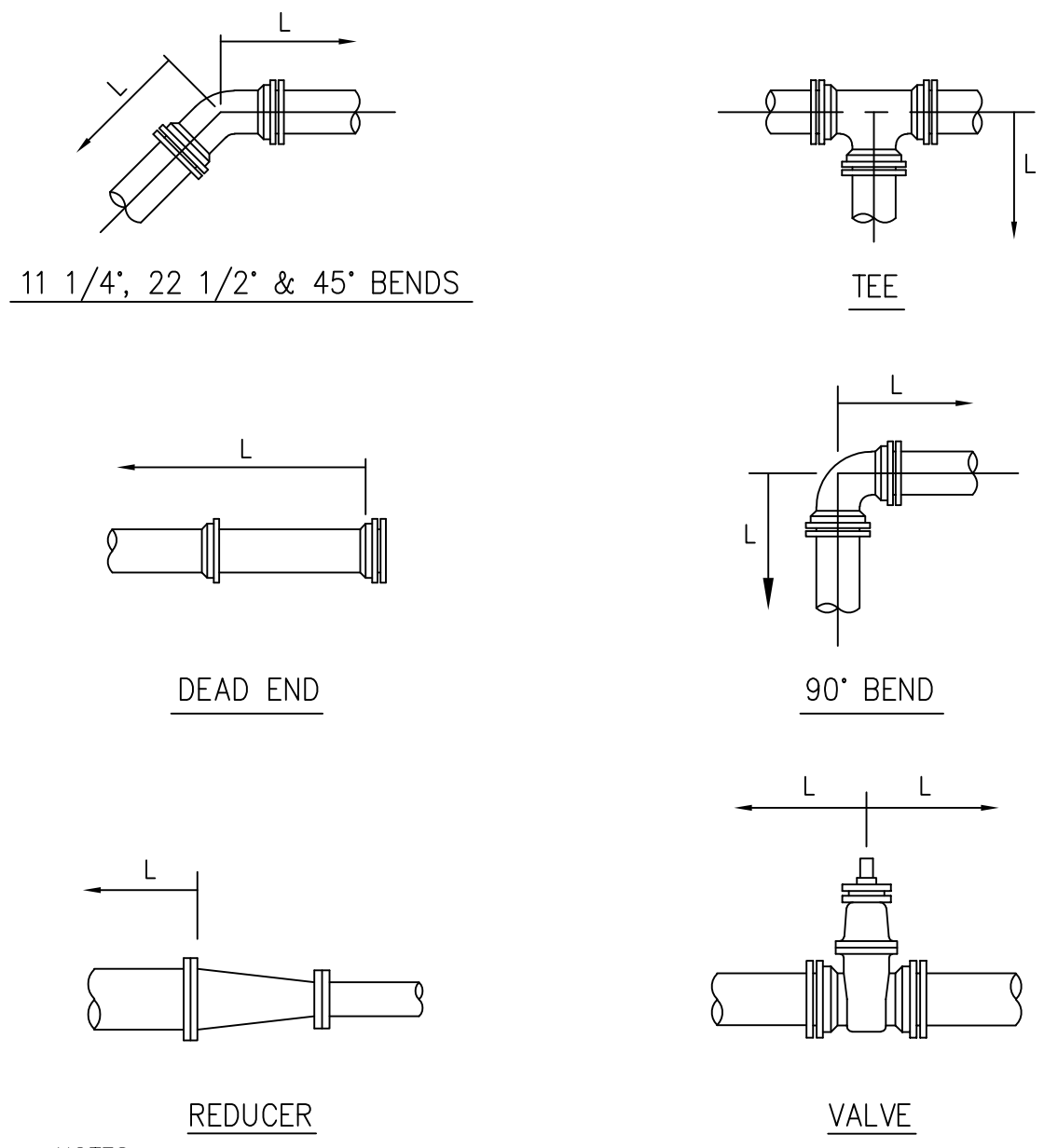
MARKER STAKE 4

HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATERMANS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES AND ON SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

- NEW OR RELOCATED UNDERGROUND WATERMANS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED SEWER, STORMWATER FORCEMAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 2-610, F.A.C.
- NEW OR RELOCATED UNDERGROUND WATERMANS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
- NEW OR RELOCATED UNDERGROUND WATERMANS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCEMAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMANS AND GRAVITY TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATERMAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
- NEW OR RELOCATED UNDERGROUND WATERMANS SHALL BE LAID TO PROVIDE A MINIMUM HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED ON SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM AS DEFINED IN SECTION 381.0065(2), F.S. AND RULE 64E-6.002, F.A.C.

VERTICAL SEPARATION BETWEEN UNDERGROUND WATERMANS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCEMANS, AND RECLAIMED WATER PIPELINES.

- NEW OR RELOCATED UNDERGROUND WATERMANS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM TYPE SANITARY OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATERMAIN IS AT LEAST SIX INCHES, AND PREFERABLY TWELVE INCHES ABOVE, OR AT LEAST TWELVE INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATERMAIN ABOVE THE OTHER PIPELINE.
- NEW OR RELOCATED UNDERGROUND WATERMANS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPE LINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATERMAIN IS AT LEAST TWELVE INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATERMAIN ABOVE THE OTHER PIPELINE.
- AT THE UTILITY CROSSING DESCRIBED IN PARAGRAPH 1 AND 2 ABOVE, ONE FULL LENGTH OF WATERMAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATERMAIN JOINTS SHALL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATERMAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM TYPE SANITARY SEWER, STORM SEWERS, STORMWATER FORCEMANS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCEMANS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.



- NOTES:
- LENGTH 'L' IS IN FEET.
 - RESTRAINED LENGTHS ARE BASED ON THE FOLLOWING:
 - 150 PSI TEST PRESSURE
 - MIN. 30" COVER.
 - PVC - PIPE SIZES 4" - 12".
DI - PIPE SIZES 4" - 48".
 - SANDY SOIL.
 - SAFETY FACTOR OF 1.5.
 - LENGTH 'L' SHOWN IN THE TABLE TO BE RESTRAINED IN THE DIRECTION OF THE ARROWS.

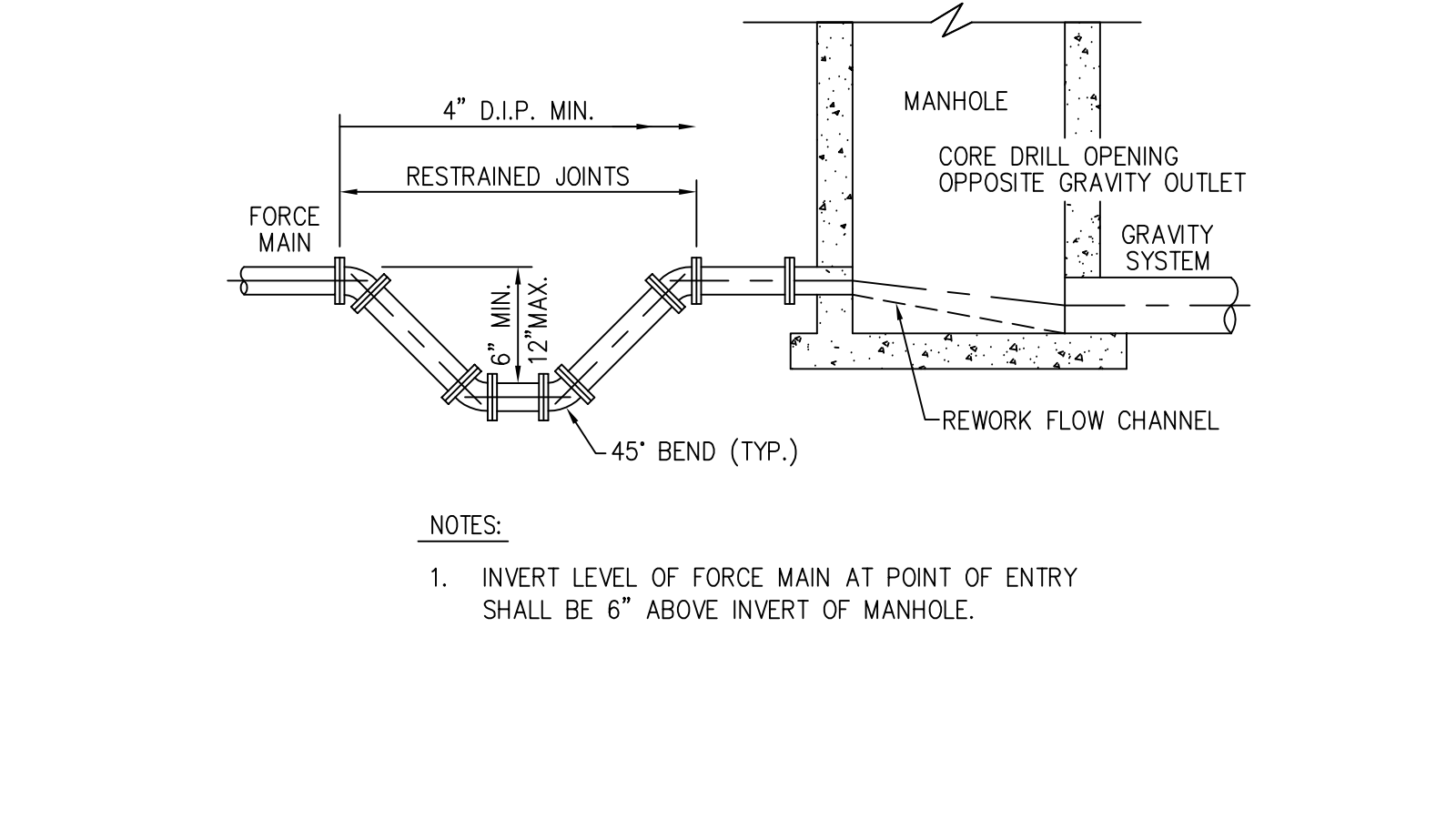
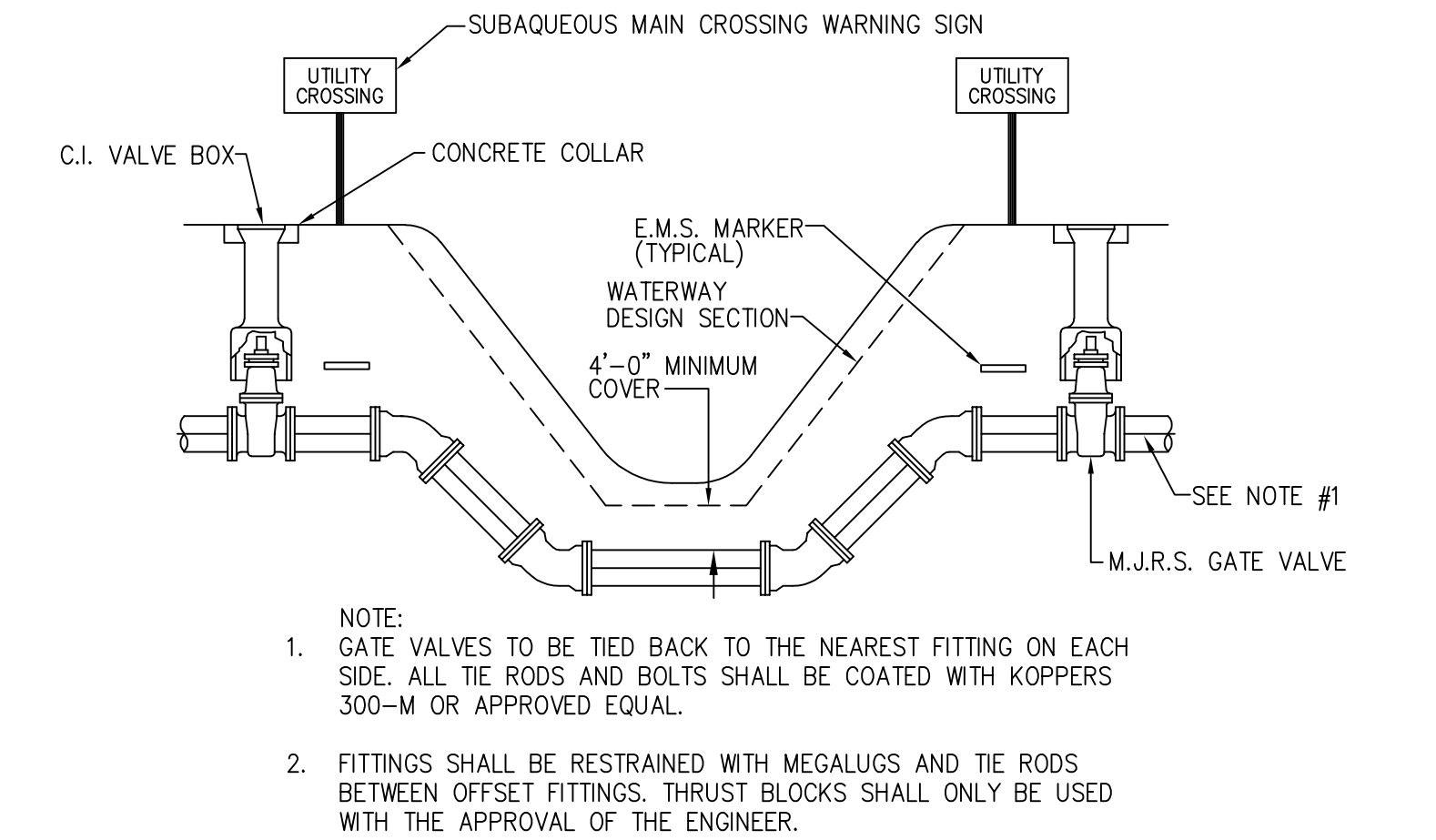
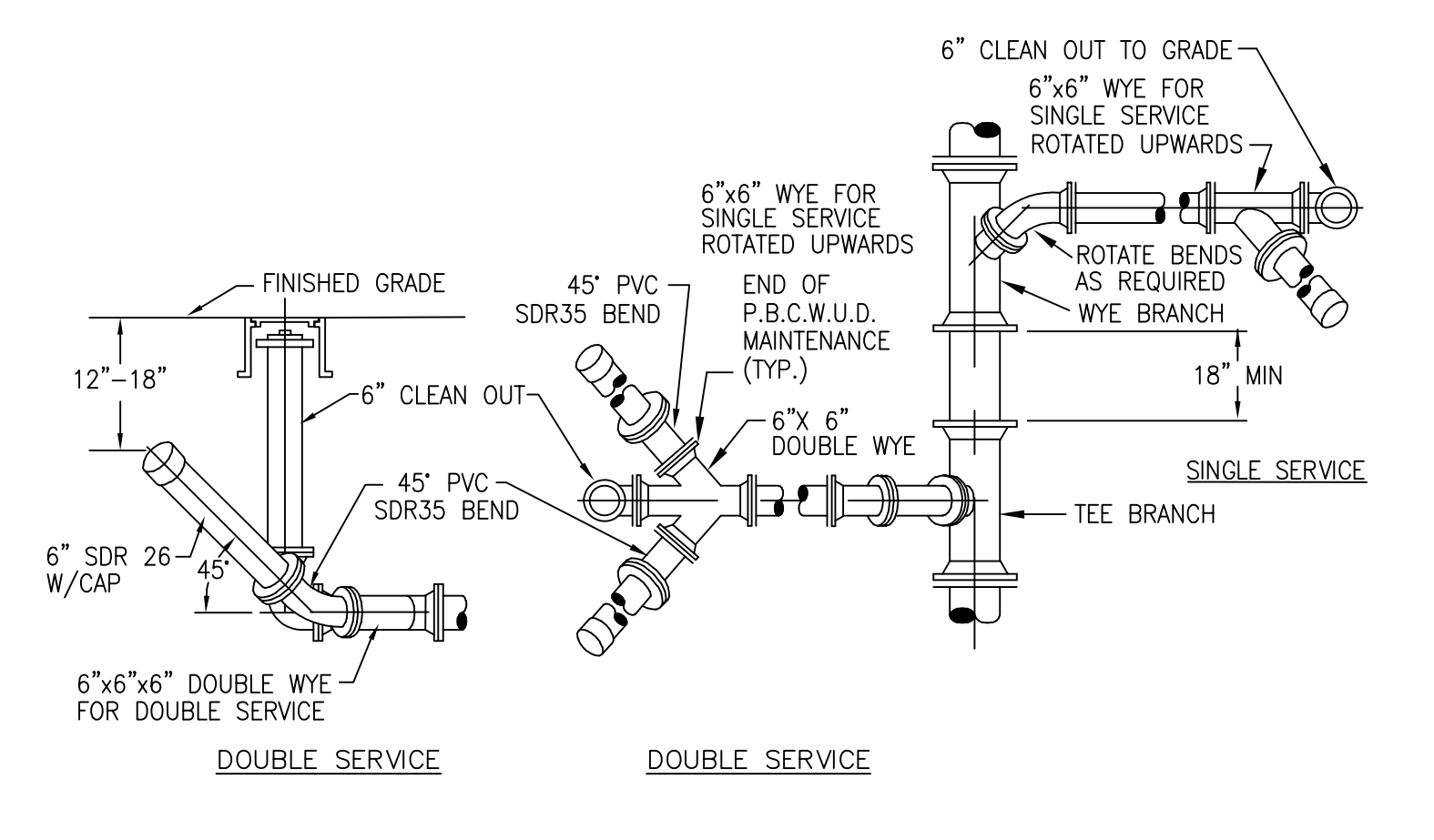
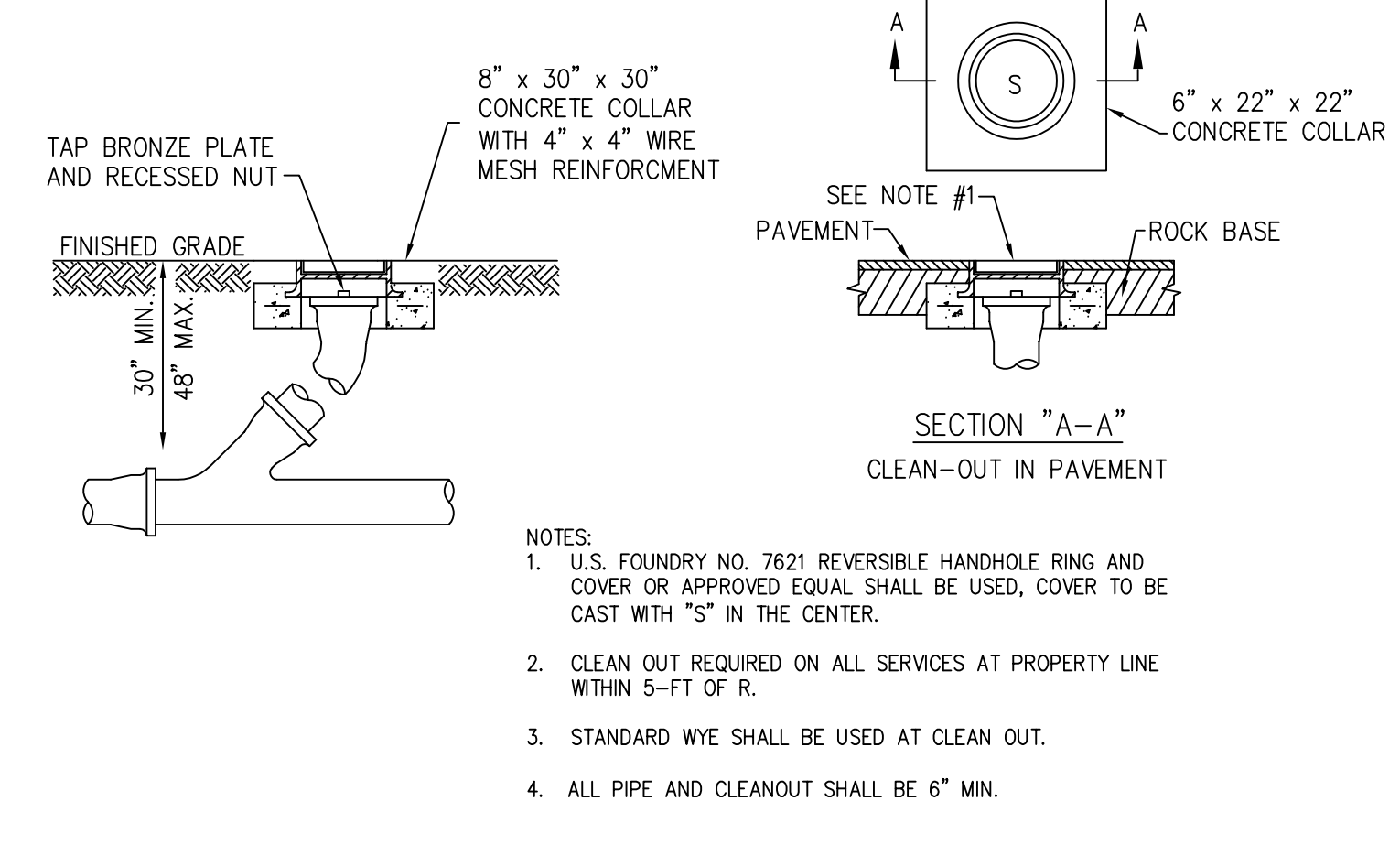
FITTING TYPE	PIPE SIZE															
	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"		
90° HORIZ. BEND	17	24	31	38	45	52	60	68	76	84	92	100	108	116		
45° HORIZ. BEND	16	18	20	22	25	29	33	37	40	44	48	52	56	60		
22.5° HORIZ. BEND	3	3	4	4	5	5	6	6	7	7	8	8	9	9		
11.25° HORIZ. BEND	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
45° VERT. OFFSET	19	27	35	42	50	58	66	74	82	90	98	106	114	122		
22.5° VERT. OFFSET	9	13	17	20	24	28	32	36	40	44	48	52	56	60		
11.25° VERT. OFFSET	5	7	9	11	13	15	17	19	21	23	27	31	35	39		
DEAD END AND IN-LINE VALVE	46	65	85	102	120	138	156	174	192	210	228	246	264	282		
TEE (BRANCH RESTRAINT)	4"x	21	28	35	42	49	56	63	70	77	84	91	98	105		
	6"x	39	50	61	72	83	94	105	116	127	138	149	160	171		
	8"x	59	75	91	107	123	139	155	171	187	203	219	235	251		
	10"x	79	100	121	142	163	184	205	226	247	268	289	310	331		
	12"x	99	125	151	177	203	229	255	281	307	333	359	385	411		
	14"x	119	150	181	212	243	274	305	336	367	398	429	460	491		
	16"x	139	175	211	247	283	319	355	391	427	463	499	535	571		
	18"x	159	200	236	272	308	344	380	416	452	488	524	560	596		
REDUCER (LARGER PIPE RESTRAINT)	4"x	21	28	35	42	49	56	63	70	77	84	91	98	105		
	6"x	39	50	61	72	83	94	105	116	127	138	149	160	171		
	8"x	59	75	91	107	123	139	155	171	187	203	219	235	251		
	10"x	79	100	121	142	163	184	205	226	247	268	289	310	331		
	12"x	99	125	151	177	203	229	255	281	307	333	359	385	411		
	14"x	119	150	181	212	243	274	305	336	367	398	429	460	491		
	16"x	139	175	211	247	283	319	355	391	427	463	499	535	571		
	18"x	159	200	236	272	308	344	380	416	452	488	524	560	596		

WATER AND SEWER SEPARATION CRITERIA 5

PRESSURE PIPE CONFLICT 6

RESTRAINED PIPE JOINTS 7

MECHANICAL THRUST RESTRAINT - MINIMUM PIPE LENGTHS 8



CLEAN OUT 9

TYPICAL WASTEWATER SERVICE CONNECTION 10

SUBAQUEOUS CROSSING 11

FORCE MAIN ENTERING MANHOLE 12

END OF IFB PACKAGE