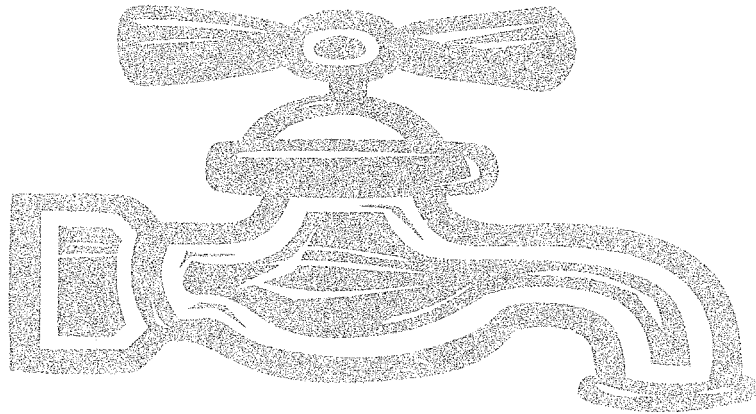


**DALLASTOWN-YOE WATER AUTHORITY
175 E BROAD ST, DALLASTOWN PA 17313**



**WATER SYSTEM
RULES AND REGULATIONS**

AS OF 3/2021

**DALLASTOWN-YOE WATER AUTHORITY
WATER SYSTEM**

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DISCLAIMER

The Rules and Regulations of the Dallastown-Yoe Water Authority (the "Authority") govern and control operation of the Authority's water system serviced by the Authority. These Rules and Regulations are a part of the contract with each consumer, and every consumer, by taking water service agrees to be bound hereby and by the rates adopted from time to time by the Authority.

These Rules and Regulations are not intended to conflict with any local, state, or federal legislation, and are intended to be in compliance with the Pennsylvania Municipality Authorities Act of 1945, Act of May 2, 1945, P.L. 382, 53 P.S. § 301, as amended. If any provision contained herein is held to be invalid, illegal or unenforceable, all other provisions shall nevertheless continue in full force and effect.

All applications, permits or waivers referenced in or required by these Rules and Regulations or by applicable federal, state or local laws or regulations are the sole responsibility of the consumer. These Rules and Regulations are not meant to supersede or replace any existing federal or state laws or regulations regarding public health and safety and all such laws and regulations will remain in full force and effect.

All references to gender in these Rules and Regulations are intended to be gender neutral and whenever used include the corresponding masculine, feminine or neuter forms.

WATER SYSTEM RULES AND REGULATIONS

I. SPECIAL REGULATIONS GOVERNING WATER SYSTEM

1. DEFINITIONS

Unless the context specifically indicates otherwise, the meaning of terms used in these Special Regulations Governing Water System shall be as follows:

Authority shall mean Dallastown-Yoe Water Authority, a municipality authority organized and existing under provisions of the Pennsylvania Municipality Authorities Act of 1945, approved May 2, 1945, P.L. 382, as amended and supplemented from time to time.

Consumer shall mean a person who is receiving or shall received water and/or sewer service.

House Connection shall mean the pipeline between the curb stop and the meter (including the curb box).

Multiple Dwelling shall mean any building in which more than one family is housed in separate dwelling units.

Owner shall mean any person having an interest, whether legal or equitable, sole or partial, in any property.

Person shall mean an individual, partnership, corporation, company, firm, association, society, trust governmental body or any agency, department or political subdivision thereof or any other group.

Premise having access to the Facilities of the Authority shall mean any premise of which any part abuts a highway, street, alley or public way in which the facilities of the Authority are located and which can be served by the facilities of the Authority.

Property shall mean a building under one roof, owned or leased by one party and occupied as one residence or business, a combination of buildings owned or leased by one party in one common enclosure and occupied by one family or business, or the one side of a double house having a solid vertical partition wall, or each family occupying part of a building occupied by more than one family even though some or all fixtures may be used in common, or each apartment, office or suite or offices and using in common one hall and or one or more means of entrance.

Service shall mean the supplying of water to a consumer at a property.

Service Line shall mean the pipe line connection between the curb stop and the street water main and includes the tap and corporation cock at the main, the curb stop and the curb box. Service line from water main to curb stop is responsibility of the Water Authority and from curb stop (including curb box) into dwelling is the responsibility of the property owner. Initial installation cost is the responsibility of the property owner from the main into the dwelling.

Utility Room means a room in which all water meters are installed that serve a multiple dwelling, mobile home court or multiple use units served by a single connection. Utility rooms shall be accessible to Authority personnel without having to enter or pass through any of the individual units.

Water Department shall mean the water department of the Authority.

Water Mains shall mean those water pipes in streets or within easement areas to which service water connections are made, and the water pipe lines connecting between them.

Water System shall mean the water works, water supply works and water distribution system facilities, appurtenances and property, real, personal and mixed, which were acquired by the Authority, together with all other appurtenant facilities and properties which the Authority has acquired or shall acquire, including all property, real, personal and mixed, rights, powers, franchises, easements, licenses, privileges, rights-of-way and any and all other property of interests in property of any nature, for use in connection with acquiring, constructing, operating and maintaining said water facilities and all additions, extensions, and improvements which hereafter from time to time, may be made thereto.

2. SPECIAL REGULATIONS GOVERNING WATER SYSTEM ADOPTED

This Authority hereby establishes and adopts the following Special Regulations Governing Water System as the rules and regulations which shall govern and control operation of the water system by the Authority and distribution and supply of water to consumer serviced by the Authority.

3. FILING, POSTING AND EFFECT OF RULES AND REGULATIONS

A copy of the Special Regulations Governing Water System is filed with the Authority Secretary or his duly authorized agents for inspection by any interested parties at any time during regularly scheduled office hours. These rules and regulations are a part of the contract with each customer, and every consumer, by taking water service, agrees to be bound hereby and by the rates adopted from time to time by the Authority.

4. APPLICATION FOR WATER SERVICE

- a) Before service is initiated, the owner of the property, or the owner and tenant if a tenant is to be billed directly, shall make written application for service on a form to be provided by the Authority. An agent making application on behalf of the owner shall provide the owner's name and clearly designate the firm or themselves as agent. Upon approval of such application by the Authority, which approval shall be indicate thereon, such application, together with these rules and regulations, shall become the service contract, and the applicant and the Authority shall thus become the contracting parties.
- b) A new application shall be executed in any instance involving a change in the contracting parties, or in the class or scope of service to be taken.
- c) Providing false information on an application shall be considered fraudulent conduct and shall render the contract voidable by the Authority at its sole discretion. Such

conduct shall also be considered a violation of these rules and regulations and shall be punishable in accordance with Section 33 hereof.

5. SERVICE PROVIDED BY THE AUTHORITY

- a) Water from the water system may be used for all residential, business, industrial, agricultural and public purposes. The Authority reserves the right to impose at any time such restrictions in the use of water as may become necessary due to accidents, breakdown or unavoidable emergencies or temporary cut-off of water to make necessary repairs, renewals or replacements. Every effort will be made to notify customers before service is interrupted.
- b) No deduction in water rates will be allowed for failure on the part of the Authority to supply water. The Authority accepts no responsibility for losses due to inability to supply water
- c) Every consumer, by the taking of water, understands and agrees that the Authority assumes no liability as an insurer of the property or person and that the Authority, by providing capacity or facility other than that ordinarily provided in normal operation. The Authority hereby declares and each and every consumer agrees that the Authority shall be free and exempt from any and all claims for injuries or damage to person and/or property by reason of fire, water or failure to supply water, pressure or capacity.

6. STAND READY SERVICE

Industrial consumers, who have their own water supply desiring a connection to Authority mains, for general supply in case of emergency or accident to their system, shall be charged accordingly for size and purpose of connection in accordance with metered water charges or private fire protection charges, which must be on a metered line.

7. DEPOSITS

- a) Deposits may be required from consumers taking service for a period of less than thirty (30) days in any amount equal to the estimated gross bill for such temporary period. Deposits may be required from all other consumers provided that in no instance may deposits be required in excess of the estimated gross bill for any single billing period plus one (1) month (the maximum period not to exceed four (4) months), with a minimum of fifty dollars (\$50.00).
- b) Deposits secured from consumers shall be returned to the depositor when he shall have paid undisputed bills for service over a period of twelve (12) consecutive months; and any such consumer, having secured the return of a deposit, shall not be required to make a new deposit unless the service has been discontinued for any reason.

8. PAYMENT OF BILLS

- a) Bills will be rendered and are payable on a regular basis, no less than quarterly for regular water service furnished in the preceding period. Final bills will be rendered upon the change of ownership or the discontinuance of service.
- b) Each bill shall be made out in the name of the consumer, who the Authority shall hold responsible for its payment. Presentation of a bill is merely an accommodation and non-presentation of a bill shall not be considered a waiver of payment or the rules with

respect to due date.

- c) If the ultimate consumer is not the owner of the premises served by the Authority, and such consumer fails to pay the bill for a period of ten (10) days following the due date, the Authority shall within twenty (20) additional days notify the owner and the consumer of the delinquency by first-class mail at the address of the owner provided to the Authority and the billing address of the consumer, respectively, and the owner shall be jointly and severally liable for full payment of the bill immediately at the applicable rate. The Authority may also take action to discontinue service to the consumer in accordance with paragraph (f) below. In such case, upon request of the Authority to cut-off metered service to the consumer and failure of the owner to do so shall subject the owner to a fifty dollar (\$50.00) penalty. In no case shall the owner be liable for any service provided to a consumer ninety (90) or more days after the consumer's delinquent bill first became due unless the Authority has been prevented by court order from terminating service to the consumer.
- d) Bills rendered for water service are due and payable at the net amount on or before the due date set forth on the bill. Bills paid after the due date is subject to the penalty stipulated on the bill. In the case of a contested water service bill, if payment is withheld beyond the due date and the dispute is settled by the Authority substantially in favor of the consumer, the consumer will be allowed ten (10) days from the date of the decision by the Authority to pay the bill at net and will be assessed the prescribed penalty thereafter.
- e) All bills shall be payable, upon presentation, at the business office of the Authority during its regular working hours or the offices designated on the bill. When bills are paid by mail, the date of the postmark will be considered the date of payment. The stipulated penalty will be applied on all bills not paid by the due date on the bill.
- f) Whenever any bill for water service rendered shall remain unpaid for a period in excess of ten (10) days after the due date, it shall be delinquent, and the Authority may, after five (5) days written notice discontinue water service, in which case water service will not be restored until the bill, together with a turn-on charge of fifty dollars (\$50.00) have been paid. Any customer desiring restoration of water service outside of normal working hours will be charged a minimum of three (3) hours overtime wages plus the turn-on fee plus the water bill.
- g) The charges stipulated in paragraph (f) shall be paid directly to the Authority Office in cash, certified check or money order only. PERSONAL CHECKS WILL NOT BE ACCEPTED FOR SUCH PAYMENT. CREDIT & DEBIT CARDS ARE NOT ACCEPTED
- h) When a customer pays by personal check and the check is returned due to non-sufficient funds, the customer will be charged an additional fee of \$50.00. The unpaid amount and the fee will be payable by CASH, CERTIFIED CHECK or MONEY ORDER only. After sufficient notice, the Authority reserves the right to specify that any future payments will be CASH, CERTIFIED CHECK or MONEY ORDER.

9. CHANGE IN OWNERSHIP OF SERVICE

- a) When the ownership of a property changes from one person to another, the previous owner shall notify the Authority in writing and in advance of the date of discontinuance of the service under his ownership. Should the owner fail to give such notice, he shall

be responsible for all charges up to and including the date the new owner makes application for service. The new owner shall make application for service in the same manner as for the new service.

- b) If the owner of a premise is not the consumer served by the Authority and there is a change in occupancy of such a premise, the owner shall within seventy-two (72) hours of a change in occupancy notify the Authority of such a change. If an owner fails to give the required notice he shall be assessed a penalty in the amount of one hundred dollars (\$100.00)

10. WATER CONNECTION AND SERVICE LINES

- a) The service line for each property abutting upon a street, alley or right-of-way in which there is a water main owned by the Authority, will be extended by the owner from water main to dwelling including curb box installation. Upon proper application by the property owner, such application shall be under exclusive control of the Authority. Following dedication and acceptance by the Authority, the Authority owns the service line and all maintenance and repairs shall be the responsibility of the Authority from main to curb box.
- b) The size, location, depth and type of construction of all such service lines, including the house connection from the curb stop to the meter, shall be as determined by the Authority. (see Exhibit A)
- c) For new construction it will be the responsibility of the home or property owner to pay full cost from the main to the meter. This cost will include the necessary excavation and permanent repair of the street should any such repairs be required. A deposit, as established by the Authority, will be paid prior to the beginning of work if being done by Authority personnel.
- d) When a request for installation of water service is received, the installation shall be done as soon as possible. At the time of installation the meter shall be installed in an accessible position for reading and service. The property owner is responsible, to have the accessible position for reading and service. The property owner is responsible; to have the piping installed to receive the meter connections and a tapping fee for each dwelling unit. All meters shall be sealed and should it be necessary to remove a meter for any reason, it shall be done by the Water Department. A service charge shall be paid for this service unless removal is required by the Department.
- e) It shall be unlawful for any person to turn off or on the water at a curb stop before first contacting the Water Department, and then only in case of extreme emergency. In all other instances, the Water Department shall turn a service on or off. The Authority may charge a fee for this service. Use of water thru a meter, but is not legally received with permission, is considered theft of services.
- f) It shall be unlawful for any unauthorized person to open or close the valves or stop cocks in any line up to and including the curb stop before a house connection. The owner of any property found to have a curb stop that has been turned on or off without the permission of the Water Department will be billed a fifty dollar (\$50.00) penalty for each occurrence.
- g) Where new connections are completed, no water service shall be initiated until the property has been metered. Curb stops will be left in the off position until the owner

has made application for water service, all fees have been paid and the meter has been installed. Any owner, builder, developer or plumbing contractor violating this regulation shall be charged a minimum of three hundred dollars (\$300.00) per occurrence.

- h) The use of un-metered water shall be prohibited.

11. MAINTENANCE AND OWNERSHIP OF HOUSE CONNECTION

- a) The property owner shall own the house connection and all maintenance and repairs of the house connection shall be the responsibility of the property owner (incl the curb box). Should a leak occur in the house connection, the owner shall take immediate steps to repair the leak. When the Authority notifies the owner of a leak in the house connection, the owner shall have ten (10) days from the date of notification to repair the leak. Upon failure to repair the leak within a reasonable time, the Authority shall cut off the supply of water until such repairs are made, and the owner has applied for service. The same penalty shall be provided as for cut-off due to nonpayment of bills, heretofore provided.
- b) Where an existing house connection is found to be leaking, in need of repair or being updated and the material used for construction does not meet present Authority specifications, the entire house connection must be replaced with materials meeting Authority specifications that are in force at the time of repair.
- c) No galvanized or lead service line is permitted in the water system. If a service line is in violation thereof, it will need to be replaced. Upon notice from the Authority of a violation, the owner shall immediately install a conforming service line and notify the Water Authority for an inspection of the repair and/or update. If the owner does not do so within 48 hours, then the Authority will discontinue service to the property.
- d) Where a service line and/or house connection is voluntarily abandoned by the property owner, the property owner shall be responsible to disconnect the abandoned service line at the corporation stop. This shall apply when the owner of the property desires to change the size of the service due to a change in use of the property, take water from another water supplier or source, or upgrade an existing, functioning house connection and/or service line with materials meeting the Authority specifications as may be in force at the time.
- e) Where new connections are made, material used for the connection from the main to the meter shall conform to the Authority specifications as may be in force at the time. A shut off valve shall be placed on the main side of the meter, a back flow prevention device, as approved by the Authority, and a shut off valve shall be placed on the discharge side of the meter. This is a requirement for all water connections, which also requires the inspection by Water Authority personnel with the cost to be bore by the owner. Where directed by the Water Department, a pressure regulator valve shall be installed. On existing house connections, these valves must be installed if and when the connection is renewed or repaired. (EXHIBIT D)
- f) No service will be installed in, over or through premises not owned by the property owner of the property to be served. Where these types of connections are preexisting the service line and/or house connection shall be brought into compliance with this regulation at the time of sale, change of use, or when renewed or replaced.

- g) Under no circumstances shall the potable water system of any property be connected to more than one water source or supply, except where an on site well exists, the well may be connected separately from the potable water system for the purpose of irrigation or other approved external uses. Once there is a connection to public service, disconnection will be prohibited.
- h) If a water main runs past an existing property, the owner must connect to the public Water system within 6 months of being notified by the Water Authority.
- i) If a water main is within 500' of new construction, the main must be extended to the furthestmost point and new construction must hook to public water.

12. SEPARATE CONNECTIONS

- a) Except as provided in paragraph (b) below, not more than one (1) building shall be served by each house connection on private property. A "building" for this purpose being any structure or part thereof intended for a single occupancy; and provided further that garages, stables, etc., on the rear of a lot, are under the same ownership as the main building on the lot, may be served by a single connection prior to the adoption of these rules and regulations, the single connection may be allowed at the option of the Authority, provided however, that a separate meter is installed for each dwelling.
- b) Any multiple dwellings, mobile home courts or multiple use units served by a single connection at the time of enactment of these rules and regulations, shall be permitted to continue with the single service connection, subject to the following:
 - i. In the case of a single service connection, the bill shall be calculated as follows: "Water Used" divided by "Units Served" equals "Gallons Per Unit"; "Cost of Gallons Per Unit" times "Units Served" equals the "Quarterly Bill". Any violation of Authority specifications and regulations, such as nonpayment of water bill, by the owner of the single service connection shall result in the owner being required to bring the property into compliance with Authority specifications and regulations then in effect.
 - ii. Any new service connection for multiple dwellings shall have a separate meter for each individual dwelling unit. Such multiple dwellings shall provide either (i) a utility room within which all meters and shutoffs are located, or (b) individual meters located in each unit, with individual shutoffs located outside the building. Mobile home courts shall be at the discretion of the Authority.
 - iii. In the event the owner of a multiple use or multiple, dwelling property being served by a single connection and meter desires to convert to individually metered units, such conversion shall be done in accordance with Authority specifications and regulations that are in effect at the time with respect to service lines, house connection sizes, and individual shut-offs located outside or individual meters located within a utility room.
 - iv. When two or more consumers are supplied through a single service, any violation of the rules and regulations of the Authority by either or any of said consumers shall be deemed a violation by all such consumers and the Authority may take such action as could be taken against a single consumer, except that such action shall not be taken against a non-violating consumer until given reasonable opportunity to attach his line to a separately controlled service

connection. The Authority may direct, at its discretion, the violating party install the separately controlled service connection for the non-violating consumer.

- c) A group of public, ecclesiastical, educational, charitable, club, farm or industrial buildings under one owner and on a single tract of ground, may be served by one connection, at the option of the Authority.
- d) Special service lines installed shall be installed at the cost of those requiring the service and, except for those used in approved fire systems, shall be provided with a water meter paid for by those requiring the service. The water meter shall be of the size, type and manufacture as the Authority determines suitable and shall be accessible to the Authority, but will be maintained by the property owner.

13. FROZEN WATER LINES

In the event that the water service to a property is frozen underground it is the responsibility of the property owner for thawing and/or repairing

14. METERS

- a) Except as provided in Section 12(d), the Authority will furnish and maintain a meter on each water connection provided, however, the connections used for fire service only may be installed without a meter and fire hydrants located on private property shall be on a metered line. The size, type, manufacture and location of the meter, and type of setting shall be such as the Authority shall determine suitable. Meters shall be located immediately inside the building along the interior wall nearest where the connection enters the foundation of the building. Where the building is constructed on a concrete slab, no house connection shall be permitted under the slab prior to the meter. In all such cases a meter pit will be required as well as a meter pit will be required for any property where the distance of the service line exceeds 100 feet. Touchpad or MXU location must be 2-3' off the ground for new dwellings.
- b) The meter for water service shall remain under the ownership of the Authority and will be maintained by the private party that is being serviced.
- c) During new construction, the developer/builder shall contact the Authority for meter installation when the piping is installed to accept the meter or the building is enclosed, whichever event occurs first. Thereafter a meter will be set and the developer/builder or person making application for service will be billed the appropriate meter rate. Unmetered use of water or piping installed without installation of a meter is considered theft of services. Failure to notify the Authority will be considered a violation of Section 10(g) of these regulations. IN NO case shall there be any unauthorized material used in the construction of any service line. All connections shall be copper, brass or stainless steel until all Water Authority requirements have been met. Authority Requirements = ball valve, meter, pressure reducing valve, dual check, ball valve. (Shark bites are NOT ALLOWED)
- d) A property owner, who desires to have a remote meter reading device or MXU installed on the outside of the building a minimum height of 2'-3' off the ground, will be given the opportunity to request such meter and recorder from the Authority. The installation must be made by Authority personnel, however, in the case of new construction; it shall

be done by the contractor. The remote reading device shall remain under the ownership of the Authority and will be maintained by the Authority, unless there is a malfunction for reasons other than natural.

- e) House connections shall be of one continuous length of copper tubing between the curb stop and meter. House connections in excess of one continuous length of copper tubing (not to exceed 100 feet), or where a joint is created, will require the installation of the water meter in a meter pit. In the case of an industrial plant, the meter shall be placed in a meter pit.
- f) Property owners shall be responsible for the protection of meters and remote reading devices from damage including but not limited to damage to hot water, vandalism or external causes, including freezing. Repairs to, or replacement of, meters and/or remote reading devices so damaged shall be at the expense of the property owner. It shall be the responsibility of the property owner to provide accessibility to the water meter and remote reading device. Property owners where meters and reading devices are found to be inaccessible shall be given written notice to have the obstruction removed within ten (10) days or face termination of water service. A turn-on fee of fifty dollars (\$50.00) will be charged to reinstate service.
- g) If, in the opinion of the Authority, it becomes necessary to install a remote meter reading device on a property, the owner, after written notice shall have ten (10) days to contact the Authority and make an appointment for Water Department personnel to install the device during normal working hours. Failure to contact the Authority may result in the termination of water service and a fifty dollar (\$50.00) turn-on fee will be charged to reinstate service.
- h) It shall be unlawful for any person not specifically authorized by the Authority to interfere with, remove, replace or tamper with the meter. Anyone tampering with the meter shall be billed five times the previous quarter, but in no case less than fifty dollars (\$50.00) in addition to penalties hereinafter provided.

15. METER PIT CONSTRUCTION AND MAINTENANCE

- a) When a meter pit is required, the construction and maintenance of the meter pit is the responsibility of the owner. Failure to properly maintain the meter pit may, after written notification from the Authority, result in the termination of water service until such time as the meter pit is repaired or replaced in accordance with the Authority's specifications at the time. In the event water service is terminated, a fifty dollar (\$50.00) turn-on fee will be charged to reinstate service.
- b) The meter pit location will be determined by the street right-of-way or water main right-of-way. The meter pit location will be within five (5') feet of the right-of-way line unless otherwise determined after an on-site conference between the applicant or his representative and the Authority representative.

16. TESTING METERS

- a) The Authority reserves the right to remove and test any meter at any time, and if such meter is found to be inaccurate, to substitute another meter of the same size in its place, either permanently or temporarily.
- b) In case of a disputed account involving the accuracy of the meter, such meter will be

tested by the Authority upon the written request and payment of deposit by consumer. In the event that the meter tested is found to have an error in registration greater than 2%, plus or minus, the cost of the test will be borne by the Authority and the deposit returned, and the bills will be adjusted accordingly. Should the meter be found to be correct or within the 2% tolerance, the deposit will be retained by the Authority.

17. BY PASSES

- a) No by-pass around the meter will be allowed under any condition.

18. CONNECTION OF OUTSIDE METERS

- a) No connection shall be made to any water service pipe between the water main and the meter.

19. STANDARD METHODS AND PROCEDURES FOR WATER MAIN

a) *Plan Submission and Approval.*

Any person desiring to construct a water main extension shall submit a signed Water Main Extension Agreement, along with an application fee, to the Authority. Forms for the Main Extension Agreement may be obtained from the Authority Office. All plans for water main extensions must be approved by the Authority before any construction may begin. The procedure to submit plans for approval will be as follows:

- i. Preliminary plans must be provided to the Authority Engineer, Manager and Superintendent (1 set to each) at least two (2) weeks prior to the Authority meeting where approval is desired. All plans for water main extensions must be submitted in accordance with the standards as described in APPENDIX A and must contain the notes as described in APPENDIX B.
- ii. After review by the Engineer, Manager and Superintendent, four sets of plans containing recommended changes, if any, and a signature block for Authority Members must be submitted along with four (4) copies of the subdivision plan and two (2) copies of plan profiles.

b) *Rights-of-Way.*

Water main extensions may only be constructed across permanent water easements or rights-of-way conveyed to the Authority. All permanent water easements or rights-of-way necessary for construction of a water main extension must be obtained before any construction may begin. Permanent water easements or rights-of-way will be of the nature and width prescribed by the Authority Engineer for the construction, maintenance, repair and placement of water lines and appurtenant facilities, including, but not limited to valves, valve boxes, manholes and service lines. Developer must also obtain any temporary easements necessary for the construction and installation of the water main extension.

c) *Financial Security.*

The Authority may require the developer to post financial security for construction of the water main extension. The Authority may allow any financial security so required to be included in financial security for other improvements posted to the municipality where the water main extension will be built, provided, however, the developer agrees

that the portion of the financial security posted for construction of the water main extension will not be reduced or released without prior approval of the Authority.

d) ***Rules Governing Construction of Water Main Extensions.***

- i. Water mains shall be constructed in compliance with all applicable regulations of the Authority in effect at the time of construction. The Authority may, at its discretion, require that mains shall be larger than six (6") inches to accommodate future extensions of the system.
- ii. No water main shall be placed in new streets until concrete curbing is in place. In new streets where no concrete curbing is to be constructed, water main installation shall not proceed until all storm sewer catch basins have been set to finished grade. If neither curbing nor catch basins are to be constructed, no water main shall be placed until approval of the Authority inspector has been obtained.
- iii. Where a water main extension is required, it shall be the responsibility of the property owner to extend the main to the furthest limit of the property. In the event that the water main extends past undeveloped or uncommitted property owned by parties other than the party making the extension, the Authority may, but shall not be required to, agree with the person making the extension that no intervening property shall be connected to the extension unless and until a connection charge in an amount specified by the Authority is first paid to the Authority, which charge shall be refunded to the person making the extension. Any change in ownership of property, in whole or in part, for which water has been allocated or approved and to which water mains and services have not been satisfactorily extended and accepted by the Authority, shall require application to the Authority by the new owner for extension of water main and service lines to said property
- iv. Only approved contractors or Water Department personnel shall install water main extension and then only in accordance with accepted design criteria and construction standards and other regulations of the Authority in effect at the time of installation.

e) ***Final Inspection and Dedication.***

- i. After completion of construction and installation, the developer will submit a signed Acceptance Agreement to the Authority. Upon approval of the Acceptance Agreement by the Authority, the water main extension and all appurtenances shall become the property of the Authority.
- ii. Within forty-five (45) days after acceptance of the water main extension by the Authority, the developer must provide the Authority with an "AS BUILT" drawing of the project, signed and sealed by a registered professional engineer.
- iii. Upon acceptance of the water main extension and submission of an acceptable "AS BUILT" drawing, the Authority shall allow the new water main extension to be placed into service
- iv. The Authority may, at its discretion, supply interim service through the water main extension if requested, provided, however, that no water service provided through a water main extension constructed hereunder shall be deemed permanent service until acceptance of the water main extension and submission

of an "AS BUILT" drawing as required in this subsection (e).

f) ***Costs.***

All application, permit, recording, engineering, inspection, legal and other Authority expenses incurred for the project are the responsibility of the developer.

g) ***Enforcement.***

A violation of any of the procedures in this Section 19 will result in cancellation of service and subject the developer and any contractor to the enforcement and penalty provisions of these rules and regulations. In the case of a phased development, service may be cancelled to all phases of the development, at the discretion of the Authority. A waiver by the Authority of any of the requirements of this Section 19 shall not be deemed a waiver of any other requirements described herein.

20. INSTALLATION OF WATER LINES

All water lines shall be installed in accordance with the detailed specifications and standards of the Authority in effect at the time of installation. All such specifications and standards of the Authority are incorporated herein by reference and made a part of these Rules and Regulations. Water mains or service lines that are buried underground for public or private that do not meet Ductile iron or copper, specifications **MUST** be approved by the Authority. All non metallic water mains and services **MUST** have a coated copper tracer wire for locating purposes.

21. BRACING WATER LINES

The Authority hereby adopts the following procedures as minimum requirements for bracing water mains and service lines which have been undercut:

- a) Bracing procedure as prescribed in EXHIBIT A for bracing perpendicular cuts under water mains.
- b) Bracing procedure as prescribed in EXHIBIT B for bracing parallel exposures or cuts under water mains.
- c) Bracing procedure as prescribed in EXHIBIT C for bracing exposed service lines.

22. CROSS CONNECTION

Under no circumstances shall the potable water system of any property be connected or cross-connected to more than one water source or supply, except where an on-site well exists, the well may be connected separately from the potable water system for the purpose of irrigating or other approved external uses.

23. ENTRY ON PRIVATE PROPERTY

Properly authorized and identified representatives of the Authority shall have full and free access to the consumer's property at all reasonable times for the purpose of reading meters, for

inspection and repairs, for removal of property of the Authority or for any other purpose incident to service.

24. CANCELLATION OF SERVICE

- a) Upon failure of any consumer or owner to comply with these rules and regulations, the Authority may shut off the supply of water at the curb stop or by removal of the meter

and capping of the line and turn-on rates shall apply in such cases. In the case of the owner not being the ultimate consumer, disconnection of the service must be in accordance with the "Utility Service Consumers & Tenants Act," 68 P.S. § 399.1*et seq.*

- b) Failure of any consumer in Yoe Borough or York Township to pay their sewer bills and also if the consumer is in the Dallastown-Yoe Water Authority System; the Dallastown-Yoe Water Authority may be requested by Yoe or York Township to terminate water service to those consumers that have delinquent sewer accounts. Dallastown-Yoe Water Authority will perform this service and collect a fifty dollar (\$50.00) turn on/off fee from the consumer and like fee from the municipality that is requesting this termination service. The fee from the municipality must be paid at the time a list is provided to Dallastown-Yoe Water Authority requesting termination of service for non-payment.

25. DAMAGE TO WATER SYSTEM

- a) It shall be unlawful for any person to uncover, tap, repair or interfere with any facilities of the water system without proper notification to, and authorization of, the Authority
- b) Hydrants owned and maintained by the Authority or a municipality, shall not be tampered with or obstructed in any way which would interfere with proper use.
- c) During construction of any private dwelling, building, street or during any excavation work, if a pipe line owned by the Authority should be uncovered, the Authority shall be notified immediately; the person so acting shall be responsible for any damage resulting from such work, either physical damage, or damage due to freezing of the pipe line. The Authority may also, at its sole discretion, bill such person at the prevailing rate for water released as a result of the damage.

26. FIRE PROTECTION SERVICE

- a) Fire hydrants for public fire protection service will be located, and maintained by the municipality.
- b) Private fire protection service will be provided by the Authority at the request and expense of the consumer which must be installed on a metered line; size of such fire protection service line shall be of a diameter as approved solely by the Authority; they shall be used only in case of fires.
- c) Public fire hydrants shall be used only for fire protection unless specifically permitted in writing by the municipality for a specific instance.

27. RESIDENTIAL SPRINKLER SYSTEMS.

The water system for the structure that may or may not require a sprinkler system to be shown as shown on the Diagram of Sprinkler Service Agreement attached hereto as Exhibit "J", and shall conform to the following requirements:

- a) The service line from the water main to the curb stop shall be a minimum of one inch in diameter. Connection of the same to the water main and the installation of the same shall be the responsibility of and shall be paid by the person or entity as required by these Regulations.
- b) The service line from the curb stop to the structure required to be serviced by a sprinkler system shall be a minimum of one inch in diameter.

- c) The service line shall be split by a T connection before the water meter. If the water meter is located inside the structure, then the said T connection shall be inside the structure. If the water meter is located in a meter pit, then the said T connection may also be made in that pit. A domestic water service and a separate sprinkler system service shall continue from the said T connection as follows:
- i. Following the said T connection, the domestic water service line shall be a minimum of three-quarter inch in diameter and shall be connected to a shutoff valve before its connection with the water meter.
 - ii. From the point of said T connection, the sprinkler system service line shall be a minimum of one inch diameter K copper. From the said T connection, there shall be connected to the sprinkler system service line, before the first sprinkler head, the following items in the following order: a pressure gauge; a flow sensor, as further stated below; and a flush, drain, test connection. The sprinkler system and its installation shall be in accordance with the current International Residential Code. There shall be no shutoff valve installed in or for the sprinkler system service line, except for the curb stop. The sprinkler system and all fixtures of the sprinkler system shall be constructed of materials suitable for potable water system.
 - iii. A flow sensor shall be installed in the sprinkler system service line before the flush, drain, test connection and before the first sprinkler head in the approximate location show on the Diagram of Sprinkler Service Arrangement attached as Exhibit "J" to these Regulations. The power for the flow sensor shall be by a hardwired connection. The flow sensor shall be attached to the hardwired internal alarm, which alarm shall be automatically activated at any time water flows through the flow sensor. The alarm shall be audible from the furthest point in the structure from the alarm.
 - iv. Only water from the Dallastown-Yoe Water Authority may be used in or for the sprinkler system in any structure within the service area of the Authority.
 - v. If the water supply to a structure may or may not require a sprinkler system is shut off by the Authority in accordance with these regulations or due to a water leak, the same will terminate the supply of water to the sprinkler system for said structure during the term of that shut off. In such situations, the owner of said structure, by applying for water service to be provided by the Authority to and for this structure, does hereby release and discharge the Dallastown-Yoe Water Authority, its officers, directors, employees and agents from any and all actions, claims, demands, damages and loses of any nature arising from or related to the aforesaid circumstance.

28. SPECIAL CONTRACTS

When, in the opinion of the Authority, the rates, rules and regulations do not apply to a particular consumer, the Authority reserves the right to make a special contract, if it is in the best interest of the Authority.

29. ENFORCEMENT

Proper officers of the Authority are hereby authorized and directed to do all the things and take all actions necessary and proper to enforce the provisions hereof in the manner permitted by law. All tapping fees, assessments, and rates charged hereunder, including all penalties, interest, costs, fines, charges, expenses and fees, including reasonable attorney fees, shall be enforceable as a municipal lien against property in accordance with the "Municipal Claims and Tax Lien Act," 53 P.S. §7101 *et seq.*

30. EFFECTIVE DATE AND APPLICABILITY

These rules and regulations shall become effective upon the adoption thereof by the Authority and shall be applicable to all consumers and owners serviced or to be serviced by the Authority.

31. RIGHTS RESERVED BY THE AUTHORITY

The Authority reserves the right to repeal, amend or modify these rules and regulations, or any part hereof in such manner and at such times as, in the opinion of the Authority, shall be necessary or desirable. The Authority may from time to time establish fees and charges not otherwise provided for in these rules and regulations.

32. CONSTRUCTION AND SEVERABILITY

In the event any provisions, section, sentence, clause or part hereof, shall be held to be invalid, such invalidity shall not effect or impair any remaining provision, section, sentence, clause or part thereof, it being the intention of the Authority that such remainder shall be and shall remain in full force and effect.

33 PENALTIES

Any person who violates the provisions of these rules and regulations shall, in a summary proceeding before a District Magistrate and conviction thereof, be sentenced to pay a fine of not less than \$50.00 or more than \$1,000.00 per offense, plus costs of prosecuting (including attorney fees) and in default of payment of such fine and costs, to undergo imprisonment for not less than five (5) days or more than ninety (90) days. For purposes of this section, a continuing violation shall be considered a separate offence for each day during which the violation continues.

SECTION II
WATER MAINS AND APPURTENANCES

Section II Water Mains

1) Scope

The work covered by this specification consists in furnishing all plants, labor, equipment, appliances and material, and in performing all operations in connection with the furnishing and installation of water mains, service lines, fittings, thrust blocks, valves, valve boxes, hydrants, corporation stops, curb stops, tests and sterilization, complete, in accordance with the specifications, applicable drawings and contract documents.

2) Materials

a) *Standard Specifications and Quality*

Wherever the specifications, tests, standards, or recommendations of a nationally recognized testing laboratory, professional society, or industrial association are referred to, the latest applicable specification, test, standard or recommendation shall be met. For brevity, the words "conforming to", "specification", "designation", and "latest" are omitted hereafter, and society or association names are abbreviated by use of initials only.

Where no specification is given, materials shall be new, of the best grade and quality and shall be subject to the approval of the Borough.

b) *Ductile Iron Pipe*

Ductile iron pipe shall conform to ANSI Specification A.21.51 (AWWA C151) and , unless specifically modified by the Borough, the following conditions shall apply:

- i) Minimum Size: 6 inch
- ii) Standard Thickness Class 52
- iii) Depth of Cover 3 ½ Ft

c) *Fittings*

Fittings shall conform to ANSI/AWWA Specifications CI10

d) *Joints/Wedges*

Joints for ductile iron pipe, valves, fittings, and hydrants shall conform to ANSI Specification A21.11 (AWWA C111) (Mechanical Joint or Rubber Gasket Push-On Joint).

Bell and spigot joints encountered in making connections to existing work or as approved by the Engineer shall be packed with an approved material.

e) *Standard Bituminous Outside Coating*

The standard outside coating for all ductile iron or cast iron pipe and fittings shall be bituminous coating of either coal tar or asphalt base approximately one mil thick. The standard coating shall be applied to the outside of all pipe and fittings.

f) *Standard Cement Mortar Lining*

Unless otherwise specified, all cast iron or ductile iron pipe shall be supplied with a cement mortar lining meeting the requirements of ANSI Specification A21.4 (AWWA C104).

g) *Cement, Stone, Concrete and Masonry*

- i) Portland Cement – shall conform to ASTM C-150, Type 1. Where specifically authorized or required, High Early Strength (Type 3) shall be used.
- ii) Sand – Shall be cleaned, sharp and free from loam or other impurities, conforming to ASTM C-144.
- iii) Stone:
 - (1) For concrete, shall conform to ASTM C-33

- (2) For pipe bedding, shall be clean, hard limestone or gravel, free from dust, meeting size and grading requirements for PA DOT not to exceed ¾" stone
 - (3) For backfill or temporary pavement repairs, shall be run-of-the-bank gravel or limestone crusher-waste, meeting size and grading requirements for PA DOT No. 2RC aggregate.
 - iv) Concrete – shall be either certified transit-mixed concrete having a 28 day compressive strength of 2000 psi or, if site-mixed, shall consist of one (1) part Portland Cement, two (2) parts sand, and three (3) parts stone, by volume. This concrete specification does not apply to items of precast manufacture.
 - v) Mixing Water – for cement and concrete shall be clean and of potable quality.
 - vi) Reinforcing steel – shall be deformed, either intermediate billet ASTM A615, hard rail ASTM A616(d) or hard, axle-grade steel ASTM A617(d). Metal shall be clean and free from rust, scale or coatings.
- h) **Gate Valves**
 Gate valves shall be standard hand-operated, inside-screw, cast iron body, bronze mounted gate valves. Unless otherwise specified, valves shall open as the wrench-nut is turned left (counter-clockwise) and body ends shall be mechanical joint. Gate valves shall conform to AWWA Specification C-500 "Gate Valves for Ordinary Water Service".
- i) **Valve Boxes**
 Valve boxes shall be of cast iron, complete with cover, and shall be furnished with screw type adjustment and with flared base. Minimum thickness of metal shall be 3/16 inch. The word "WATER" shall be cast in the cover. Boxes shall be of such length as will be adapted, without full extension, to depth of cover of 3-1/2 feet over the pipe at the valve location. Lid must meet final grade.
- j) **Blow Off**
 Blow should be a minimum distance of 5' between valve and Blow Off and not to exceed 10'
- k) **Fire Hydrant**
 Hydrants shall conform to AWWA Specification C502 and shall be of "breakaway" design. The hydrants shall have a six (6) inch mechanical joint inlet connection, two 2 ½ inch hose connections and one 4 ½ inch pumper connection. Threads for the 2 ½ inch hose connections shall be that of "York" thread, and for the pumper connection shall be National Standard thread. The hydrant shall be designed for a depth of cover over the connecting pipe of 3 ½ feet, and shall have a main valve opening of not less than five inches. Hydrants shall be painted two coats of yellow exterior enamel. The hydrant shall be operated counter-clockwise to open, unless otherwise specified.
- l) **Copper Tubing**
 Copper tubing shall conform to Federal Specification WW-T-799, Type K, annealed. Joints shall be effected by means of flared type union of cast brass; no sweated joints will be permitted. Service size shall be ¾", unless otherwise determined by the Authority. Compression fittings of Mueller design or equivalent.
- m) **Corporation Stops**
 Corporation stops shall be of the sizes required and shall have standard (Mueller) thread on the inlet end, and flared-type or compression connection for Type "K" copper services pipe on the outlet end.

n) ***Curb Stops***

Curb stops shall be of the sizes required, and shall have flared-type or compression connections for Type "K" copper service pipe on both inlet and outlet. Lid must meet final grade.

o) ***Meter Pits***

Meter pits shall be either pre-cast, or constructed of solid concrete block or poured concrete. Inside measurements shall be a minimum of three (4) feet square, with a depth of four (4) feet. Walls shall be a minimum of six (6) inches thick. Meter pits shall be bedded on four (4) inches of gravel, over undisturbed earth or alternate construction (see Exhibit E). Access lid shall be constructed of aluminum, shall be hinged, and shall be insulated to protect against freezing. (Exhibit E); meter pits other than residential shall be reviewed and approved on an individual basis.

p) ***Tapping Sleeves***

Mechanical joint tapping sleeves shall be Mueller No. H-615 or approved equal, 200 psi working pressure, with proper size gaskets for the measured outside diameter of the pipe to be tapped. No saddle-type tapping sleeves will be permitted.

q) ***Service Clamps***

For 1 ½" and larger taps, ductile iron or bronze service clamps as manufactured by Mueller Company (or approved equal) shall be used.

3) **Excavation and Trenching**

- a) ***Alignment and Grade.*** Alignment will be established in relation to the edge of existing highway, the location of existing piping and other pertinent factors. The Authority reserves the right to make changes in the proposed alignment of mains and the locations of valves and fittings.

The grade of the main will be established in relation to existing grade, at a minimum depth of cover of 3'-6' to the top of the main. Depth in excess of this minimum may be necessary to clear existing drainage structures or other existing utilities.

- b) ***Excavation.*** All excavations, unless otherwise approved by the Authority, shall be made by open cut. Side walls of trenches shall be kept as nearly vertical as possible and shall be adequately sheeted and braced. Trenches shall be excavated true in line so that a clear space not less than six (6) inches in width is provided on each side of the bell, or at the pipe joint, but the trench width measured at the top of the pipe shall not exceed the width given for the applicable nominal pipe diameter in the following table:

Nominal Pipe Diameter (Inches)	Maximum Trench Width (Inches)
Less than 2	12
2 through 8	24
10	27
12	30

If the maximum trench width above is exceeded for any reason without the written permission of the Authority, the Contractor shall install at his own expense such concrete cradle or other bedding as may be specified by the Authority to support the additional load on the pipe. Care shall be taken in trench excavation so that proper bedding as specified in Paragraph D-2 can be accomplished.

- c) **Excavation through Quicksand or Yielding Material.** When quicksand or yielding material is encountered, the Contractor shall drive either tight tongue and groove wooden sheet piling or steel sheet piling to a depth which will effectively cut off the flow of and provide safe conditions for work in the trenches. The trench shall then be dewatered by pumping, by well points, or by other methods. Excavation and construction shall follow as rapidly as possible thereafter. To secure a satisfactory foundation, either a concrete cradle or crushed stone bedding as hereinafter described, shall be provided where specified by the Engineer.
- d) **Rock Excavation.** Rock to be excavated shall be fully taken out at least twenty-five (25) feet in advance of the laying of pipe. Rock shall be removed to provide a clearance of at least six (6) inches below and on each side of all pipe and fittings.

4) **Installation**

a) **General.**

Pipes shall be laid true to design lines and grades and shall be properly bedded. The interior of all pipes and fittings shall be kept clean of foreign matter during laying operations. Under no circumstances shall pipe be laid in water, and pipe shall not be laid when trench conditions or the weather is unsuitable in the opinion of the Authority.

All pipe, fittings, valves and hydrants shall be carefully lowered into the trench piece by piece by means of a backhoe, ropes or other suitable tools or equipment, in such a manner as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.

b) **Bedding and Pipe Laying**

Extreme care should be taken in all pipe laying to provide proper support for the full length of the barrel of the pipe. Bell holes shall be dug to assure that the trench load is not being supported by the bells. Bedding shall be provided by one of the following methods:

- i) For vitrified clay, PVC, or cast iron pipe, mechanical excavation shall be carried to a point six (6) inches below invert grade, bell holes shall be dug as required, and the trench bottom carefully backfilled with granular material (1/2" stone; (6) inches below to minimum of 1' above)
- ii) For ductile iron pipe, mechanical excavation shall be carried to a point six (6) inches below invert grade, bell holes shall be dug as required, and the trench bottom carefully backfilled with AASHTO #8, so that when the pipe is laid to the proper invert grade, the granular backfill will provide circumferential support for the bottom one-half (1/2) of the barrel of the pipe. 1/2" stone, AASHTO #8 shall be carried to a point six (6) inches above the top of the pipe.

c) **Joints**

- i) If joints of the push up type are employed, the joint shall be assembled as recommended by the manufacturer so as to effect the joint's seal. Each joint shall include two brass wedges driven between bell and spigot to ensure electrical continuity.
- ii) Mechanical joints shall be installed in strict accordance with the recommendations of the pipe manufacturer. The cleaned bell and spigot ends and the gasket should be brushed with soapy water just prior to slipping the gasket over the spigot end and into the bell. The normal range of bolt torques to

be applied to standard cast iron bolts in a joints are:

<u>Size, Inches</u>	<u>Torque, Ft-lbs.</u>
5/8	40 - 60
3/4	60 - 90
1	70 - 100
1-1/4	90 - 120

The Contractor shall use a torque wrench to obtain the proper torque on all bolts. When tightening bolts, it is essential that the gland be brought up toward the pipe flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. This may be done by partially tightening the bottom bolt first, then the top bolt, next the bolts at either side and last, the remaining bolts. Repeat this cycle until all bolts are within the average range of torques.

- iii) When encountered in connections to existing mains, bell-and-spigot joints shall be made in accordance with the applicable portions of this specification and as required by AWWA C-600 – latest designation, “Installation of Cast-Iron Water Mains”.

Wherever it is necessary to deflect from a straight line, either in the vertical or horizontal plane, to avoid obstructions or to plumb valve stems, or where long-radius curves are permitted, the amount of deflection allowed shall not exceed the maximum specified in Table 1.

d) ***Trenching in Advance of Pipe Laying***

Trenches shall always be completed at least 25 feet in advance of pipe laying, except in quicksand where pipe laying shall follow as closely as the best interests of the work may require. However, the Contractor shall not have more than one hundred (100) feet of trench open at any one time, unless otherwise specifically permitted by the Authority.

e) ***Stream Crossing***

Where mains cross streams, or run within the stream bed, complete encasement with concrete is required. The concrete encasement shall completely surround the pipe with a minimum thickness of six (6) inches from the outside of the barrel of the pipe. Each length of pipe shall be firmly supported in two places only on timber wedges or pieces of brick having minimum dimensions. Concrete for cradles or encasement shall not be placed under water, and water shall not be permitted to rise upon it or flow over it for forty-eight (48) hours after placement.

The top of all water mains entering or crossing streams shall be at a sufficient depth below the natural bottom of the stream bed to protect the water main, but in no case shall the cover be less than 3 ½ feet.

Work in and adjacent to streams is subject to supervision and inspection by representatives of the Division of Dams and Encroachments and of the Pennsylvania Department of

Environmental Resources and shall be executed in accordance with the terms of any permit issued therefore.

f) ***Setting Fittings, Valves, and Hydrants***

Valves, fittings, plugs, and caps shall be set and jointed to pipe in the manner specified for cleaning, laying and jointing pipe.

All plugs, caps, tees, hydrants, and bends deflecting 22 ½ degrees or more shall be provided with tie rods reaction backing as specified below.

Valves shall be placed at the location shown in Exhibit VIII-1. Each valve shall be provided with a cast iron valve box. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the wrench nut of the valve, with the box cover flush with the surface of the finished pavement or such other level as may be directed.

All hydrants shall stand plumb and shall be set with the pumper nozzle at right angles to the curb. Hydrants shall be set with nozzles at least 12 inches above the ground, unless otherwise directed by the Borough. When placed behind the curb, the hydrant barrel shall be set so that no portion of the pumper or hose nozzle cap will be less than six inches nor more than 12 inches from the gutter face of the curb. A drainage pit two feet in diameter and three feet deep shall be excavated below each hydrant and filled with ¾" crushed stone under and around the elbow of the hydrant and to a level of six inches above the drain port.

TABLE 1
MAXIMUM DEFLECTION PER FULL LENGTH OF PIPE
Push-On Type Joint

Push-On Type Joint					Mechanical Joint Pipe													
Approx. Radius of Curve Prod. By					Approx. Radius of Curve Prod. By													
Pipe Dia.	Max. Deflec. Angle	Max. Deflection			Succession of Joints, Pipe Lengths of	Max. Deflec. Angle	Max. Deflection											
		12'	16'	18'			20'	12'	16'	18'	20'							
3"	5°	12"	17"	19"	21"	140'	185'	205'	230'	8°-18'	21"	28"	31"	--	85'	110'	125'	--
4"	5°	--	17"	19"	21"	--	185'	205'	230'	8°-18'	21"	28"	31"	--	85'	110'	125'	--
6"	5°	--	17"	19"	21"	--	185'	205'	230'	7°-7'	18"	24"	27"	--	100'	130'	145'	--
8"	5°	--	17"	19"	21"	--	185'	205'	230'	5°-21'	13"	18"	20"	--	130'	170'	195'	--
10"	5°	--	17"	19"	21"	--	185'	205'	230'	5°-21'	13"	18"	20"	--	130'	170'	195'	--
12"	5°	--	17"	19"	21"	--	185'	205'	230'	5°-21'	13"	18"	20"	22"	130'	170'	195'	220'

g) **Cutting Pipe**

The cutting of pipe for inserting valves, fittings or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe (or cement lining, when provided) and so as to leave a smooth end at right angles to the axis of the pipe.

Pipe shall be cut with an abrasive wheel, a rotary wheel cutter, a guillotine pipe saw, or a milling wheel saw. Upon completion of the cut, the outside edge of the cut pipe shall be beveled using a grinder or other approved method.

The flame cutting of pipe by means of an oxyacetylene torch shall not be allowed.

h) **Anchorage**

All hydrants, plugs, caps, tees, and bends deflecting 22 ½ degrees or more shall be provided with both reaction backing and tie rods.

Reaction backing shall consist of concrete or pre-cast solid concrete blocks of standard manufacture. Reaction backing shall be placed between solid (unexcavated) ground and the fitting to be anchored; the location shall be as shown in Exhibit VIII-2. The backing shall, unless otherwise shown or directed, be so placed that the pipe and fitting joints will be accessible for repair.

The rods shall consist of specially manufactured bolts, nuts, rods, and clamps specifically intended for application to water main joint restraint. Tie bolts shall be ¾" size, with a minimum tensile strength of 7,000 psi. A minimum of two ties per fitting shall be used.

5) **Hydrostatic Testing, Backfilling & Temporary Restoration**

a) **General**

All water mains which shall be connected to the distribution system of the Authority shall be tested in the following manner before they are connected to any existing water mains. This test shall be performed by the contractor employed to install the line and in the presence of representatives of the Authority. The contractor shall bear the cost of this test as part of his installation.

After the pipe has been laid and backfilled to the centerline of the pipe, all newly laid pipe or any valve section thereof shall be subjected to a hydrostatic pressure of at least 1/5 times the working pressure, at the point of testing, of the pipe. Test pressure shall not exceed twice the rated pressure of gate valves or hydrants within the test section.

If directed by the Authority the Contractor shall backfill the trench to grade before making the pressure test.

Where any section of a main is provided with poured concrete reaction backing, the hydrostatic pressure test shall not be made until at least five days have elapsed after the concrete reaction backing was installed. If high early-strength cement is used in the concrete, the hydrostatic pressure test shall not be made until at least two days have elapsed.

b) **Duration**

The duration of each pressure test shall be at least one hour.

c) ***Procedure***

Each valved section of pipe shall be slowly filled with water and the specified test pressures shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Authority. The pump, pipe connection, gauges, taps into the pipe and all necessary apparatus and assistance for conducting the tests shall be furnished by the Contractor.

Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, the Contractor shall install corporation stops at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, the corporation stops shall be closed and the test pressure applied. At the conclusion of the pressure test, the corporation stops shall be removed and plugged, or left in place at the discretion of the Authority.

All exposed pipe, fittings, valves, hydrants, and joints shall be examined carefully during the test. Any damaged or defective pipe, fittings, valves, or hydrants that are discovered following the pressure test shall be repaired or replaced with sound material and the test shall be repeated until it is satisfactory to the Authority.

d) ***Leakage Test***

A leakage test shall be conducted concurrently with the pressure test. The pump, pipe connection, gauges, taps into the pipe and all necessary apparatus and assistance for conducting the tests shall be furnished by the Contractor. The duration of each leakage test shall be two hours, and during the test the main shall be subjected to the pressure specified.

“Leakage” is the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within 5 psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water.

No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{ND \sqrt{P}}{7,400}$$

In which L is the allowable leakage, in gallons per hour; N is the number of joints in the length of the pipeline tested; D is the nominal diameter of the pipe, in inches; and P is the average test pressure during the leakage test, in pounds per square inch gauge.

When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gal/hr. /in. of nominal valve size shall be allowed.

No pipe installation will be accepted until the leakage is less than the number of gallons per hour as determined by the above formula. Should any test of pipe laid disclosed leakage greater than that specified, the Contractor shall, at his own expense, locate and repair the defective portions of the installation until the leakage is within the specified allowance.

All visible leaks are to be repaired regardless of the amount of leakage.

e) ***Backfilling and Temporary Restoration***

- i) *In cart-ways of existing Borough/Township streets and State Highways.* Material obtained in trench excavation in the cart-ways of existing Borough/Township streets and State Highways shall **not** be utilized for backfill. Granular material shall be used to bed the pipe. ½" stone bedding, Pa. Dot 2RC, to backfill the pipe within two (2) inches of the road surface. Temporary repaving of the existing macadam surface shall consist of 2" thick "cold patch" applied and rolled prior to opening to traffic. Temporary paving repairs shall be maintained and repaired or replaced as needed until such time as permanent paving restoration is made.
- ii) *In cart-way of new streets.* Pipe shall be backfilled to a point at least one foot above the top of the pipe ½" bedding. Backfill from this point to sub-grade shall be Pa. Dot 2RC material.
- iii) *In areas outside of existing streets.* Material obtained in trench excavation may be used for backfill. Water main shall have ½' stone bedding, (6) inches below and 1' above. Material shall be placed in layers not to exceed 4" and thoroughly compacted using mechanical tampers. Special care shall be taken to ensure adequate compaction under the haunches and along the sides of the pipe: puddling or jetting may be considered if test demonstrations indicate that compaction requirements can be met.
- iv) *Concrete sidewalk area.* Sidewalk areas shall be temporarily replaced with not less than two (2) inches of crusher waste raked and leveled to provide safe access to properties served.

f) ***Cleaning Up***

Immediately after completing backfilling and temporary pavement repairs, all surplus or discarded materials, excess excavation, tools, rubbish and equipment shall be removed from the site by the Contractor. Paved surfaces shall be hand broom cleaned of all mud and dust, and if necessary, washed down with water. During the six (6) month period of temporary paving maintenance, the Contractor shall diligently maintain the site in a clean condition, re-brooming when necessary to keep dust and dirt from his work to a minimum.

g) ***Maintenance of Temporary Restoration***

Temporary paving shall be maintained by the Contractor at his own expense so that the normal flow of traffic is not impeded, and public safety is adequately protected for a period not to exceed six (6) months, or until the owner causes final repairs to be made, whichever is sooner. Any chuck holes, depressions, or unevenness shall promptly be corrected by the Contractor by the placing of additional crushed stone or screenings, and the grading and rolling thereof. Any mud or soft, spongy spots which may develop shall be removed and replaced with crushed stone, and the street surface shall at all times be kept clean of mud, earth or excess screening. Excessive dust conditions shall be controlled by the application of dust oil or calcium chloride as required.

The Contractor shall be required to reseed and maintain grass along the water main construction.

6) Disinfection

a) *General.*

Before being placed in service, all new water distribution systems and repaired portions of, or extensions to, existing systems shall be chlorinated. The basic procedure comprises: preventing contaminating materials from entering the water mains during construction or repair and removing (by flushing) materials that may have entered the water main; disinfecting any residual contamination that may remain; and determining the bacteriologic quality by laboratory test after disinfection.

b) *Preliminary Flushing.*

Prior to chlorination, the main shall be flushed as thoroughly as possible with the water pressure and outlets available. Flushing shall be done after the pressure test is made. If no hydrant is installed at the end of the main, a tap shall be provided large enough to effect a velocity in the main of at least 2.5 fps. The rate of flow required to produce this velocity in pipes of various diameters is shown in the following tables:

TABLE 2
REQUIRED OPENINGS TO FLUSH PIPELINES*
(40 psi RESIDUAL PRESSURE)

Pipe Size (in.)	Flow Required to Produce 2.5 fps Velocity		Hydrant Outlet Nozzles		
	(gpm)	Orifice Size (In.)	Number	Size	(in.)
4	100	15/16	1	2-1/2	
6	220	1-3/8	1	2-1/2	
8	390	1-7/8	1	2-1/2	
10	610	2-5/16	1	2-1/2	
12	880	2-13/16	1	2-1/2	

All hydrants on the lines shall be thoroughly flushed and carefully inspected after flushing to see that the entire valve operating mechanism of each hydrant is in good condition and that small stones or other foreign material is not lodged therein.

No site for flushing should be chosen unless it has been determined that drainage is adequate at that site.

c) *Form of Chlorine for Disinfection.*

The form of chlorine used in the disinfecting solutions shall be either liquid chlorine (gas at atmospheric pressure), or sodium hypochlorite solutions.

- i) Liquid Chlorine – shall be used only when suitable equipment is available and only under the direct supervision of a person familiar with the physiological, chemical and physical properties of this element and who is properly trained and equipped to handle any emergency that may arise.

Introduction of chlorine-gas directly from the supply cylinder shall not be permitted. The equipment shall consist of a solution feed chlorinator in combination with a booster pump for injecting the chlorine/gas/water mixture

into the main to be disinfected. Direct feed chlorinators are not permitted.

- ii) Sodium hypochlorite is supplied in strengths from 5.25 to 16 percent available. It is packaged in liquid form. The chlorine-water solution is prepared by adding hypochlorite to water.

The hypochlorite solutions shall be applied to the water main with a gasoline or electrically-powered chemical feed pump designed for feeding chlorine solutions. For small applications the solutions may be fed with a hand pump, for example, a hydraulic test pump. Feed lines shall be of such material and strength as to withstand safely the maximum pressures that may be created by the pumps. All connections shall be checked for tightness before the hypochlorite solution is applied to the main.

d) ***Method of Application.***

The preferred point of application of the chlorinating agent shall be at the beginning of the pipeline extension or any valved section of it and through a corporation stop inserted by the Contractor in the top of the newly laid pipe. In a new system, application of chlorine may be made advantageously at a pumping station, elevated tank, standpipe or reservoir.

Water from the existing distribution system or other approved sources of supply shall be made to flow at a constant, measured rate into the newly laid pipeline. The water shall receive a dose of chlorine, also fed at a constant, measured rate. The two rates shall be proportioned so that the chlorine concentration in the water in the pipe is maintained at a minimum of 50 mg/l available chlorine.

During the application of the chlorine, valves shall be manipulated to prevent the treatment dosage from flowing back into the line supplying the water. Chlorine application shall not cease until the entire main is filled with the chlorine solution. The chlorinated water shall be retained in the main for at least 24 hours during which time all valves and hydrants in the section treated shall be operated in order to disinfect the appurtenances. At the end of this 24 hour period, the treated water shall contain no less than 25 mg/l chlorine throughout the length of the main.

e) ***Final Flushing.***

After the applicable retention period, the heavily chlorinated water shall be flushed from the main until the chlorine concentration in the water leaving the main is no higher than 3 mg/l or less than 1 mg/l. Chlorine residual determination shall be made in accordance with the procedures described in the current edition of Standard Methods and AWWA M12-Simplified Procedures for Water Examination, to ascertain that the heavily chlorinated water has been removed from the pipeline.

f) ***Bacteriologic Tests.***

After final flushing, and before the water main is placed in service, at least two samples be collected at least 24 hours apart from the end of the line and tested for bacteriologic quality and shall show the absence of coliform organisms. Samples for bacteriologic analysis shall be collected in sterile bottles treated with sodium thiosulphate. No hose or fire hydrant shall be used in collection of samples. A suggested sampling tap consists of a standard corporation stop installed in the main with a copper tube gooseneck assembly. After samples have been

collected the gooseneck assembly may be removed, and retained for future use.

If the initial disinfection fails to produce satisfactory samples, disinfection shall be repeated until satisfactory samples have been obtained. The table method cannot be used in these subsequent disinfections. When the samples are satisfactory, the main may be placed in service.

g) ***Disinfection After Cutting Into or Repairing Existing Mains.***

The following procedures shall apply when existing mains are wholly or partially dewatered. Leaks or breaks that are repaired with clamping devices while the mains remain full of water under pressure require no disinfection.

- i) *Trench "Treatment."* When an existing line is open, either by accident or by design, the trench shall be "treated" to minimize the likelihood of contamination of the main by trench water. Liberal quantities of hypochlorite shall be applied to open trench areas. Tablets are preferred in such a situation because they dissolve slowly and continue to release hypochlorite as water is pumped from the excavation.
- ii) *Main Disinfection.* The interior of all pipe and fittings used in making the repair (particularly couplings and tapping sleeves) shall be swabbed with a five (5) percent hypochlorite solution before they are installed. Bacteriologic samples shall be taken after repairs to provide a record by which the effectiveness of the procedures used can be determined. If the direction of flow is unknown, samples shall be taken on each side of the main break.

7) **Permanent Surface Restoration**

a) ***Flexible Base Pavements.***

Permanent surface restoration within the cartway of existing streets shall consist of excavation to a depth of eight (8") inches below finished grade over the trench, and a width sufficient to provide a one (1') foot wide bearing on undisturbed sub-grade on each side of the trench. The sides of this excavation shall be neatly cut with a masonry saw, and shall be vertical throughout their complete eight (8") inch depth. Upon completion of the cut back and on a properly prepared sub-base, the Contractor shall construct a six (6") thick, when compressed, superpave surface course. All edges shall be sealed.

Construction shall be in accordance with the PA DOT Form 408 Specifications, latest revision. In no case shall permanent paving repairs be made in less than 60 days after completion of temporary repairs.

b) ***Restoration of Plain or Reinforced Cement Concrete Pavements.***

Prior to replacement of the base, one foot from each edge of the trench shall be sawed or cut, in a neat straight line, to a depth of at least three (3") inches, and the detached material shall be removed. Drilling shall not be permitted where sawing or cutting is required.

The replacement base shall consist of high early strength concrete equal in depth to the original concrete pavement. On existing reinforced cement concrete pavements, reinforcing steel and expansion tie bolts shall be placed in accordance with PA DOT standards.

The surface shall be restored as follows: The surface shall be cured in accordance with PA DOT Form 408. After surface corrections, have been completed and just before the concrete becomes non-plastic, the surface shall be given a textured finish. Surface restoration of a cement concrete pavement which has a bituminous surface shall be done in accordance with paragraph (a) above.

Concrete Sidewalks.

All concrete sidewalks shall be replaced in accordance with Section VII herein.

The Borough may require the removal of additional sidewalk in order to produce a more satisfactory repair. The removal and/or cut-back of concrete sidewalks shall only be done by sawing with a masonry saw, and sidewalk replacement shall follow a neat, straight line in joining old work.

c) *Surface Restoration of Unpaved Areas.*

Unpaved areas shall be restored at the Contractor's sole expense to a condition equal to that prior to the commencement of the work. Earth, crushed stone driveways, roadways, streets, and highway shoulders shall be considered to be permanently restored by the placement of the four (4) to six (6) inches of crushed stone or stone screenings, as required for temporary repaving under Paragraph E-4; provided, however, that the Contractor shall be responsible for and shall continue to maintain the same throughout the one (1) year guarantee period of the Contract, grading, shaping, rolling, and replacing crushed stone as may be required to properly maintain the surface.

8) Service Lines

- a) No service line shall be laid over rock that could cause damage to the copper tubing. Should the ditch be uneven or contain sharp rocks, the service line shall be laid on a bed of sand or #2 RC at least four (4) inches deep. If ground to be backfilled contains large or sharp rocks the line should be covered by six (6) inches of sand or #2 RC. No service line shall be laid through ground containing ashes or cinders nor across ground containing refuse without having at least ten (10) inches of sand completely surrounding the tubing.
- b) All service lines which run from the main line to any personal property shall be type "K" soft copper tubing. This line shall extend to the water meter.
- c) Each service line shall be provided with a corporation stop at the water main and a curb stop at the curb or immediately inside the sidewalk. A curb box shall be placed directly over the curb stop in such a manner as to make access to the stop and finish flush with the ground or pavement as the case may be. Curb boxes placed in a newly constructed or reconstructed sidewalk shall be placed so that the lid is flush with the walk and free from concrete to provide ready access to the curb stop.

9) Meter Pit Construction and Maintenance

- a) The measurements (inside) must be a minimum of three (3) feet square and the depth is to be four (4) feet.
- b) The construction is to be block wall or poured concrete wall of six (6) inches in thickness and the bottom of the pit is to be bedded with four (4) inches of gravel, on top of earth (undisturbed). The meter pit can be prefabricated pit in lieu of a constructed one.

- c) The lid should be steel or aluminum and hinged; since wood deteriorates rapidly. The lid must be insulated on the under part to protect against freezing. Prefabricated pits have their lids fitted.
- d) The meter location will have to be determined according to the street right-of-way. This determination will be made after an on-the-site conference between the applicant or his representative and the Authority representative.
- e) Alternate – See Exhibit D

APPENDIX A
DESIGN PLAN STANDARDS
DALLASTOWN-YOE WATER AUTHORITY

I. Index or Key Map

- a. Maximum drawing size 24" x 36"
- b. Scale: Adjusted to meet maximum drawing size
- c. Details to be shown:
 - 1. Street layout with names
 - 2. Lot layout with numbers
 - 3. Existing water mains with pipe sizes
 - 4. Proposed water mains with pipe sizes
 - 5. Existing and proposed sanitary sewers
 - 6. Sanitary sewer and other utility easements
 - 7. Topography with 5' contour intervals
 - 8. Valve locations
 - 9. Hydrant locations
 - 10. Stormwater management facilities
 - 11. References to Plan and Profile indicated along streets
 - 12. PA DOT Legislative and traffic route numbers
 - 13. PA DOT Highway Stationing
 - 14. Accurate location map with North Arrow

II. Plan and Profiles

- a. Maximum drawing size: 24" x 36"
- b. Plan Scale: 1" = 50'
- c. Profile Scale: 1" = 50" Horizontal; 1" = 5' Vertical
- d. Profiles shall be shown on same drawing as plan portion
- e. Plan details to be shown:
 - 1. Same as index map, excluding topography
 - 2. Adjoining street numbers
 - 3. Match lines, if utilized
 - 4. Existing and proposed utilities with pipe sizes
 - 5. Storm drainage facilities with pipe sizes
 - 6. Pertinent physical features such as buildings, fences, driveways, etc.
- f. Profile details to be shown:
 - 1. Existing ground profile
 - 2. Finished grade profile
 - 3. Pipe size, pipe material and cover
 - 4. All utility and storm pipe crossings showing separation distances to sanitary sewers

III. Record Drawings (As Built)

- a. Final water main and valve location as constructed, including swing ties or dimensions from permanent reference points (i.e. curb lines, etc)
- b. The following information shall be shown for the end of all services:
 - 1. Length of service measured from the main
 - 2. Distance to closest property corner
 - 3. Swing ties referenced to at least two (2) permanent points

APPENDIX B

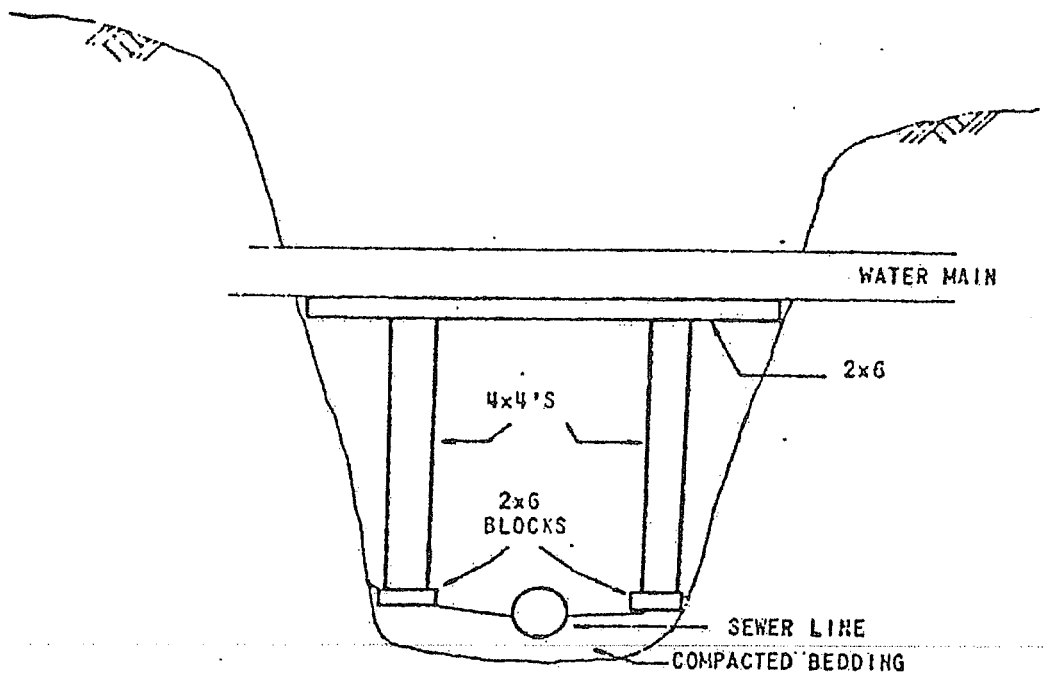
THE FOLLOWING NOTES MUST BE SHOWN ON ALL PLANS FOR WATER LINE EXTENTIONS

1. All water mains are to be cement lined ductile iron pipe, Class 52, with a minimum of two (2) brass wedges at every joint.
2. All PENN-DEP water supply regulations apply
3. Water lines shall be kept separated at a minimum of five (5') feet horizontally from any other utility, except sanitary sewer lines, the separation for which shall be in accordance with PENN-DEP regulations.
4. All water mains are to be laid on 6" of ½" stone AASHTO #8, and covered with 6" ½" stone AASHTO #8, as measured from the top of the bell.
5. All lines must be a depth of 42" to the top of the bell on mains or to the top of the service line.
6. Chlorine in the liquid form must be input to the new line at 50 parts per million and remain for 24 hours. This line shall be totally flushed to not more than three (3) parts per million.
7. All mains and services must be inspected by a representative of the Water Department prior to backfilling.
8. All mains are to be pressure tested with a representative of the Water Department present during testing.
9. All service connections shall be a minimum of ¾" K copper. There will be no sweat joints or connections permitted; all shall be flared or compression.
10. All curb and valve boxes shall be brought to finished grade.
11. Unless otherwise stated, the developer/installer/owner shall be responsible for costs incurred by the Authority for street or highway restoration, and the Authority will hire the contractor to complete such work.
12. The remaining rules and regulations for installation of water mains and service lines shall be adhered to.

ABOVE ACKNOWLEDGED this _____ day of _____, 200__.

WITNESS:

OWNER/DEVELOPER/INSTALLER



BRACING EXPOSED WATER MAINS

PERPENDICULAR CUTS

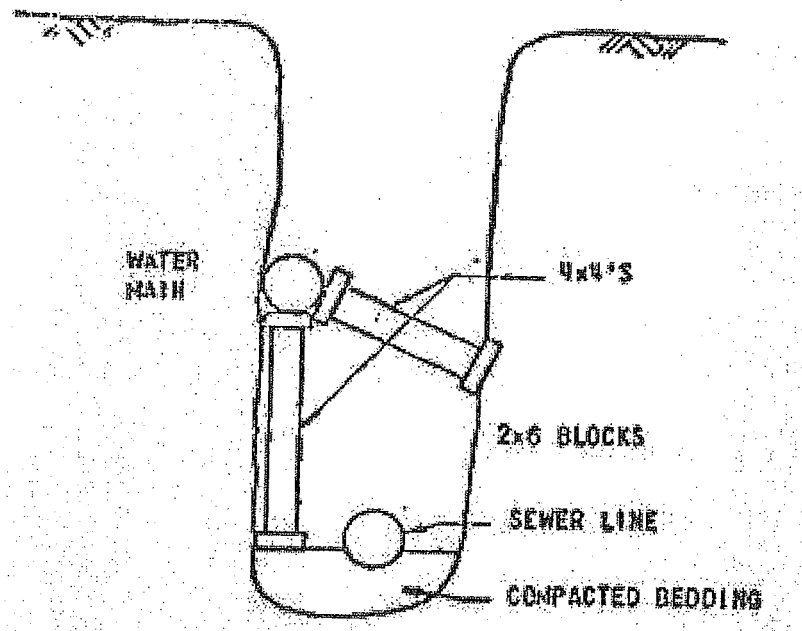
NOTES:

1. Undercut of all water main exposure requires 2x6 support full length, with 4x4 bracing both sides of trench or on 4 feet centers, to compacted bedding beneath.
2. 4x4's to rest on 2x6 blocks.
3. Bracing to be spiked together and left in place
4. Water Main must be a minimum of 42" deep from top of pipe
5. Sewer must be a minimum 5' separated horizontally or minimum of 18" below bottom of water service shelved on bedding as approved by inspector.



DALLASTOWN-YOE WATER AUTHORITY
CONSTRUCTION & MATERIAL SPECIFICATIONS
APRIL 1985

EXHIBIT "A"



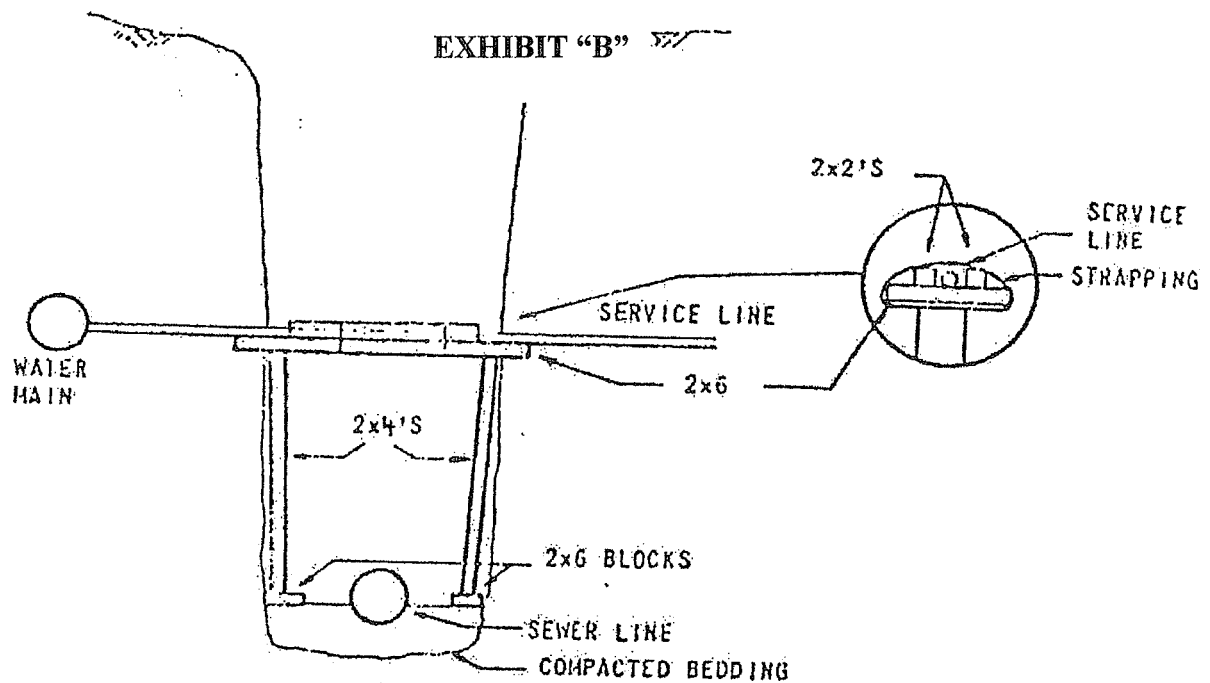
BRACING EXPOSED WATER MAINS
PARALLEL CUTS

NOTES:

1. Undercut of water main requires 4x4 bracing beneath main and 4x4 side bracing with 2x6 blocks both ends of the 4x4's
2. Slight main exposure with no undercut disturbance requires 4x4 side bracing only
3. Bracing to be spaced every 4 feet along exposed main.
4. Bracing to be spiked together and left in place.



DALLASTOWN-YOE WATER AUTHORITY
CONSTRUCTION & MATERIAL SPECIFICATIONS
APRIL 1985



BRACING EXPOSED WATER SERVICE

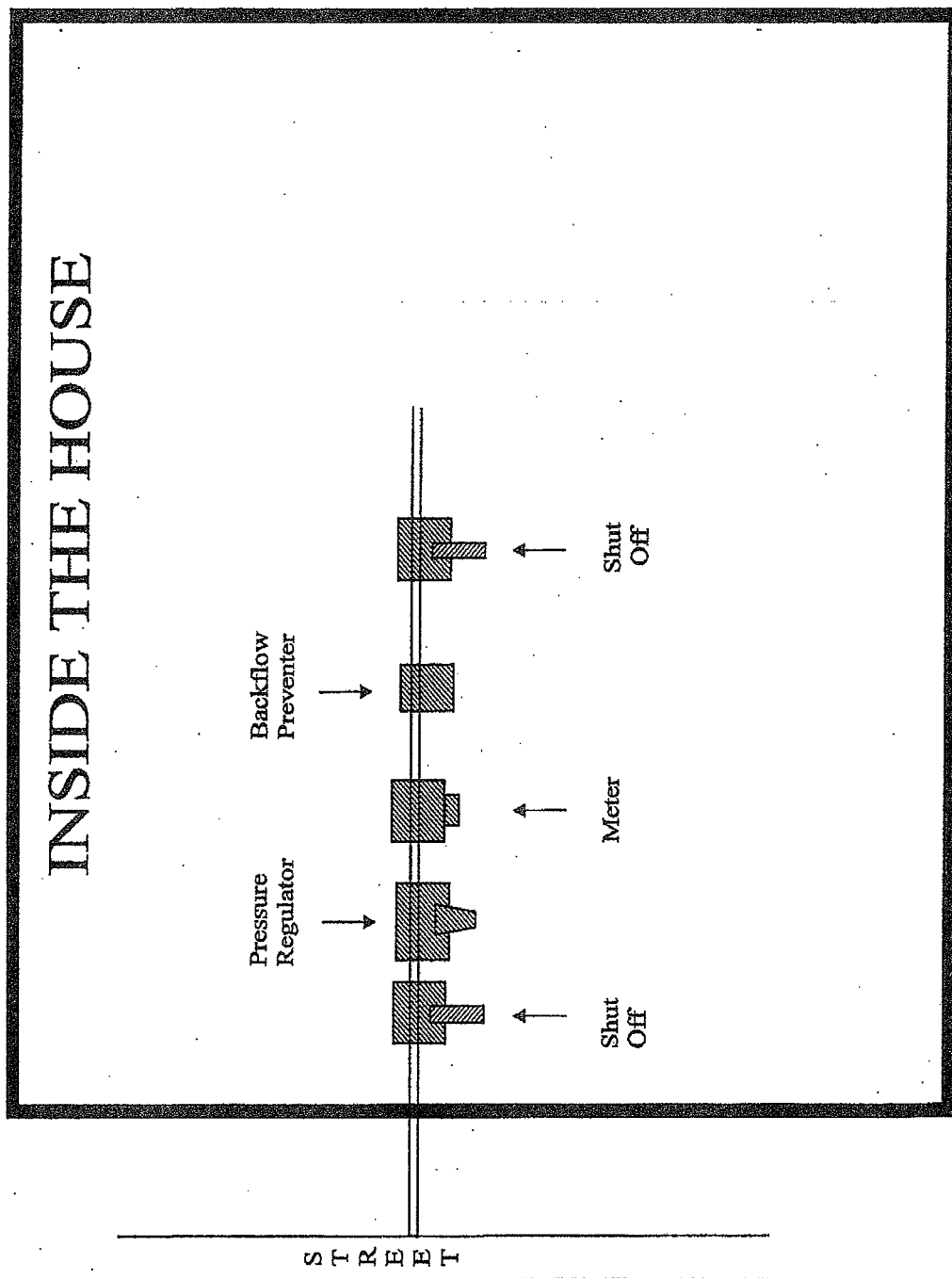
NOTES:

1. Bracing to be spiked together and left in place.



DALLASTOWN-YOE WATER AUTHORITY
CONSTRUCTION & MATERIAL SPECIFICATIONS
APRIL 1985

EXHIBIT "C"



Mueller/ McCullough Thermal-CoilTM Meter Box

Prevents water meter freezing and allows full meter access — the better alternative to basement setters in extreme climates



Patented

The Mueller/McCullough Thermal-Coil Meter Box makes it possible to read and maintain the meter even though it is set deep in the ground to resist freezing. In the Thermal-Coil Box, the meter is mounted on a platform that normally sets near the bottom of the box where the air is warmer. It can be easily raised to the surface. Coils of polybutylene pipe connect the meter to the service line and allow the platform to be raised.

For extremely cold climates, an optional closed cell insulating pad is available which traps the relatively warm air rising from the earth, keeping the air around the meter above freezing. The insulating property of the PVC box is higher than most other materials so frost bridging is also eliminated below the pad.

The best meter environment is in a Thermal-Coil Box

- Tough, rigid .30" minimum PVC shell maintains setter alignment during backfilling — thicker in larger diameter — resists frost bridging — white color reflects light and aids interior visibility
- Supports at top of box hold platform in raised position for maintenance
- Platform supported above bottom away from possible debris — support also reinforces shell
- No solder connections

Options to fit every application

- Round locking cast iron lid cannot fall in and damage meter
- 30"-96" depths
- 15" diameter for single or tandem meter (Regulator not included. Pricing for appropriate regulator available.)
- 18" diameter for single or tandem 1" meter; double 5/8", 5/8" x 3/4" and 3/4" meters.
- Aluminum bottom — excludes debris
- Inlet angle meter stop with lockwing
- Meter outlet fittings include angle meter stop with lockwing, quarter bend coupling or dual angle check valve
- Provision for remote reader cable
- Closed cell insulating pad
- Shell extension — 2"-12" in 1" increments

Shells available — notched or plain

- 15" diameter, 12"-36" depths
 - 18" diameter, 12"-48" depths
 - 21" diameter, 18"-48" depths
 - 24" diameter, 18"-48" depths
 - 27" diameter, 18"-48" depths
- Larger diameters available upon request.

Mueller/McCullough Thermal-Coil Meter Boxes are shipped fully assembled, ready for meter installation. Their lighter weight saves shipping costs and makes installation a one-man job in most cases. Every box is factory tested for 150 psi working pressure.

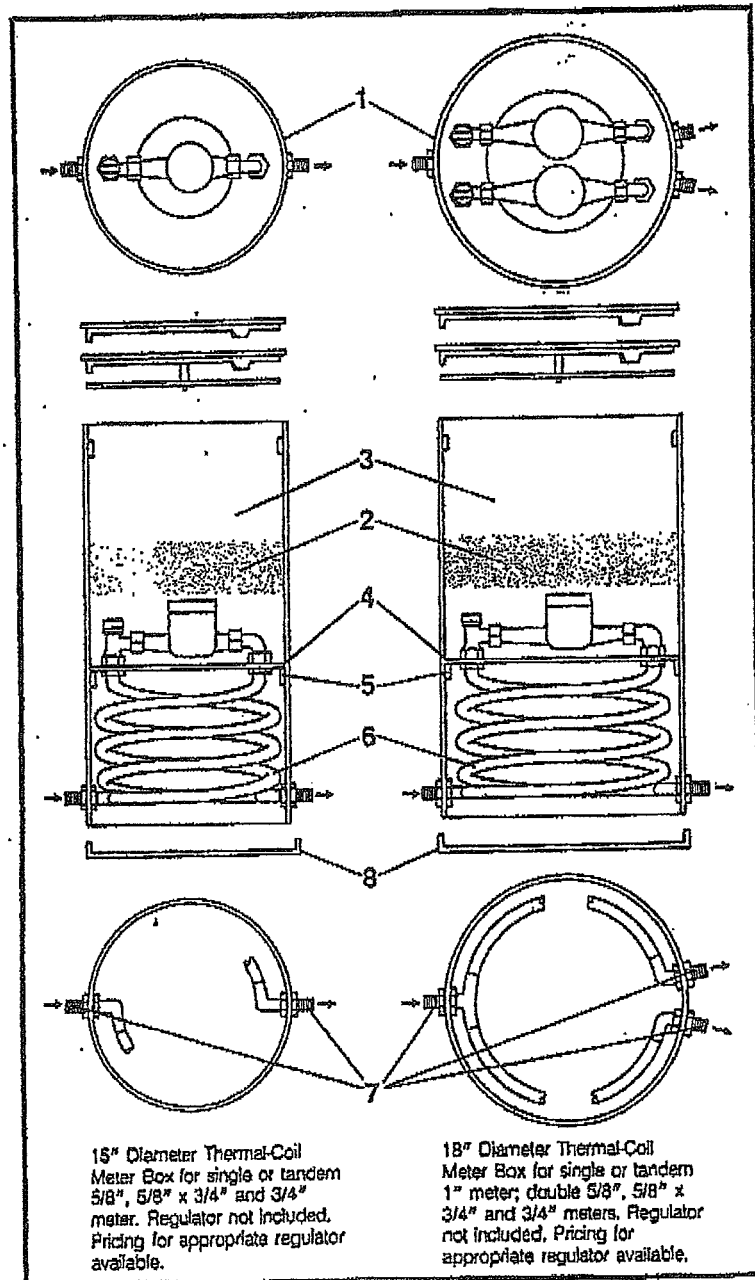
Mueller/McCullough Thermal-Coil™ Meter Box

EXHIBIT "D"

FEATURES

1. Rigid .30" minimum PVC material holds shape, resists frost bridging
2. Closed cell insulating pad optional
3. White color interior aids visibility
4. Setter anchored to movable platform, holds meter alignment
5. Platform support and reinforcing ring for rigidity
6. Large diameter polybutylene coil tubing — low friction loss — equivalent to rigid setter
7. Male I.P. inlet and outlet connections will accept a variety of Mueller service line fittings
8. Aluminum bottom optional

The full line of Mueller products is available from distributors and representatives across the country. For the source nearest you, contact your Mueller Sales Representative or the Decatur Service Center.

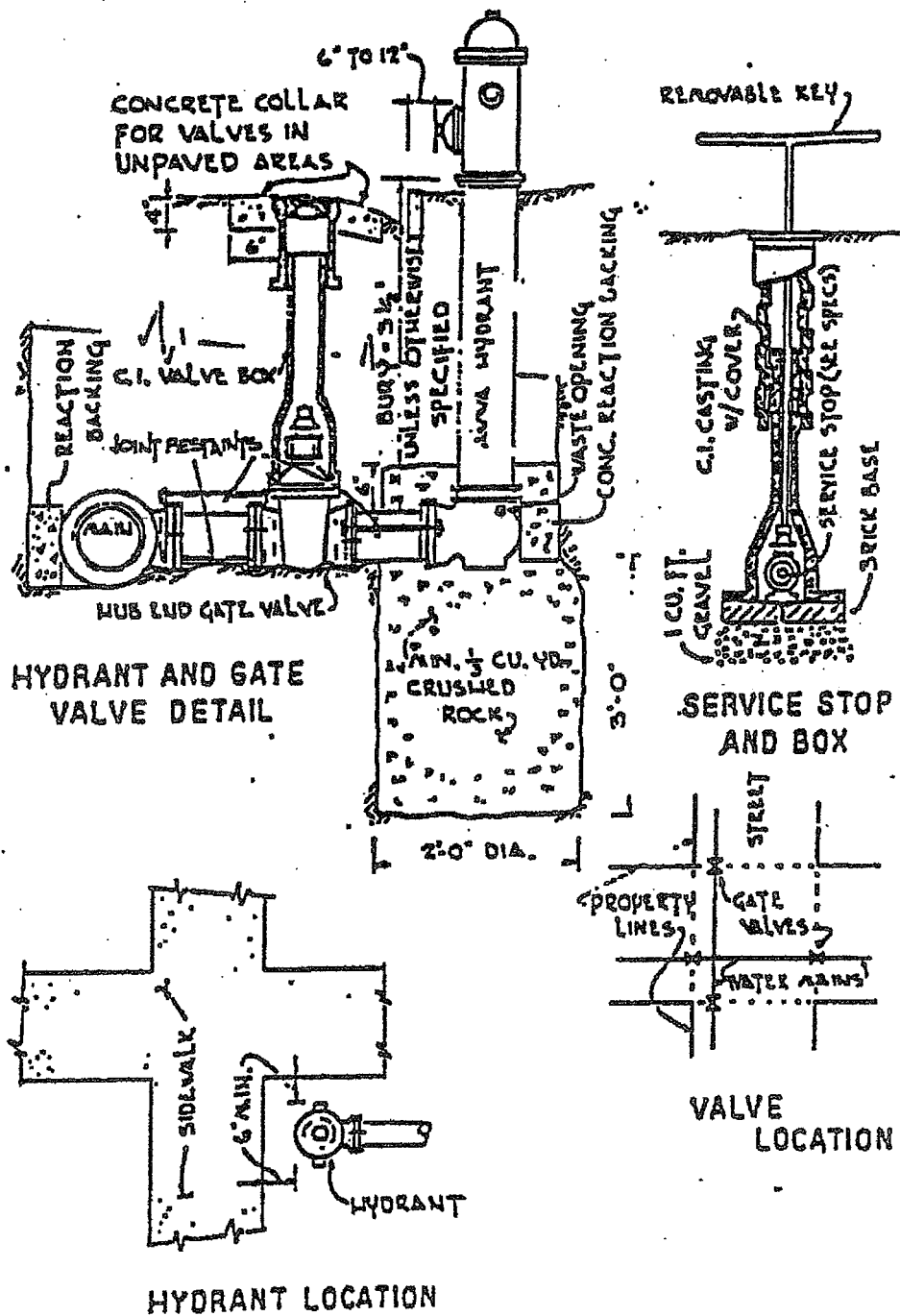


Mueller Co.

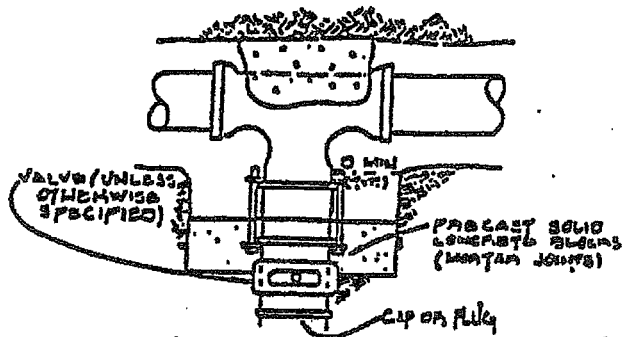
MAIN OFFICE—Decatur, IL (217) 423-4471
CANADA—Mueller Canada Inc., Milton Ontario (416) 678-0541



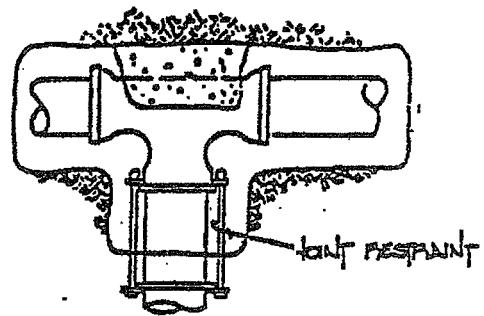
A Grinnell® COMPANY



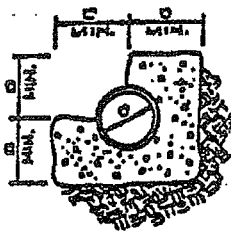
TYPICAL CONSTRUCTION DETAILS WATER MAINS & APPURTENANCES
FIG VIII-1



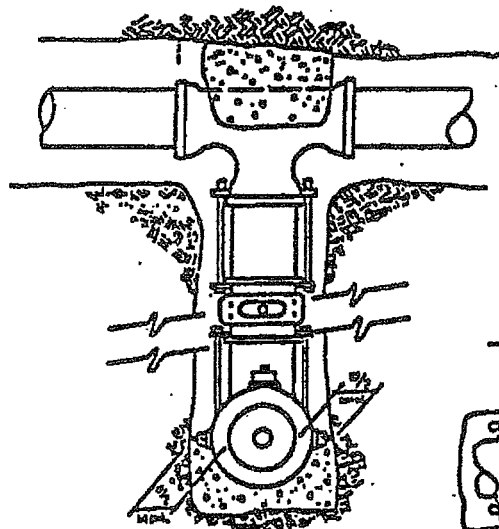
PLAN-CAPPED TEE
(CAPPED RUN OF
TEE SIMILAR)



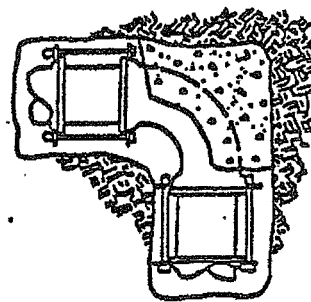
PLAN-TEE



SECTION

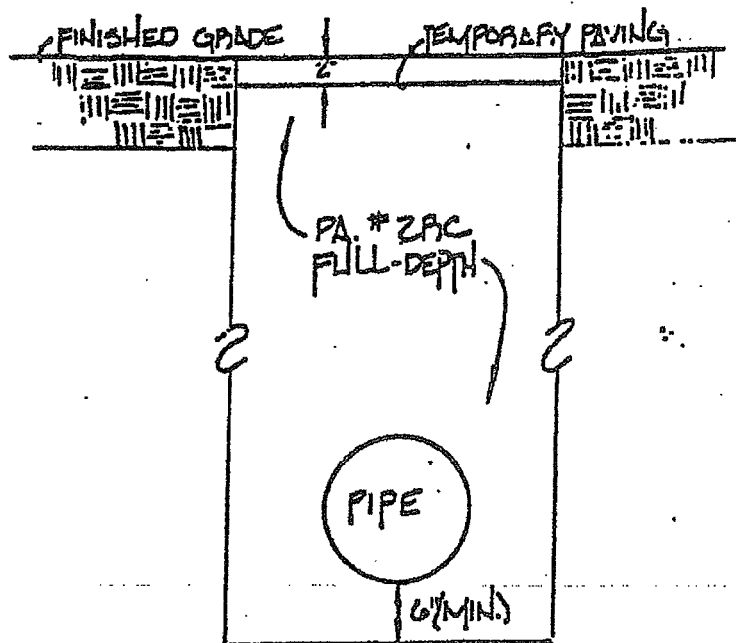


PLAN-HYDRANT

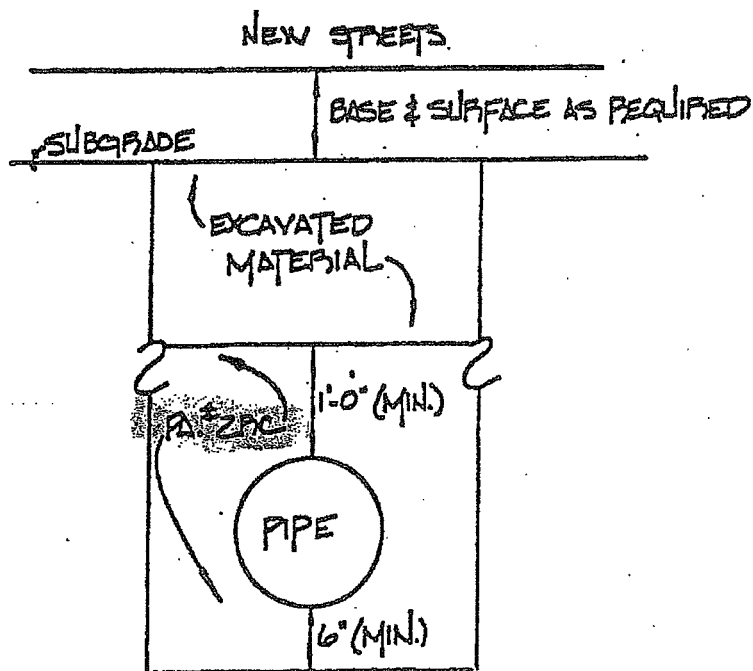


PLAN-90° BEND
(OTHER BENDS SIMILAR)

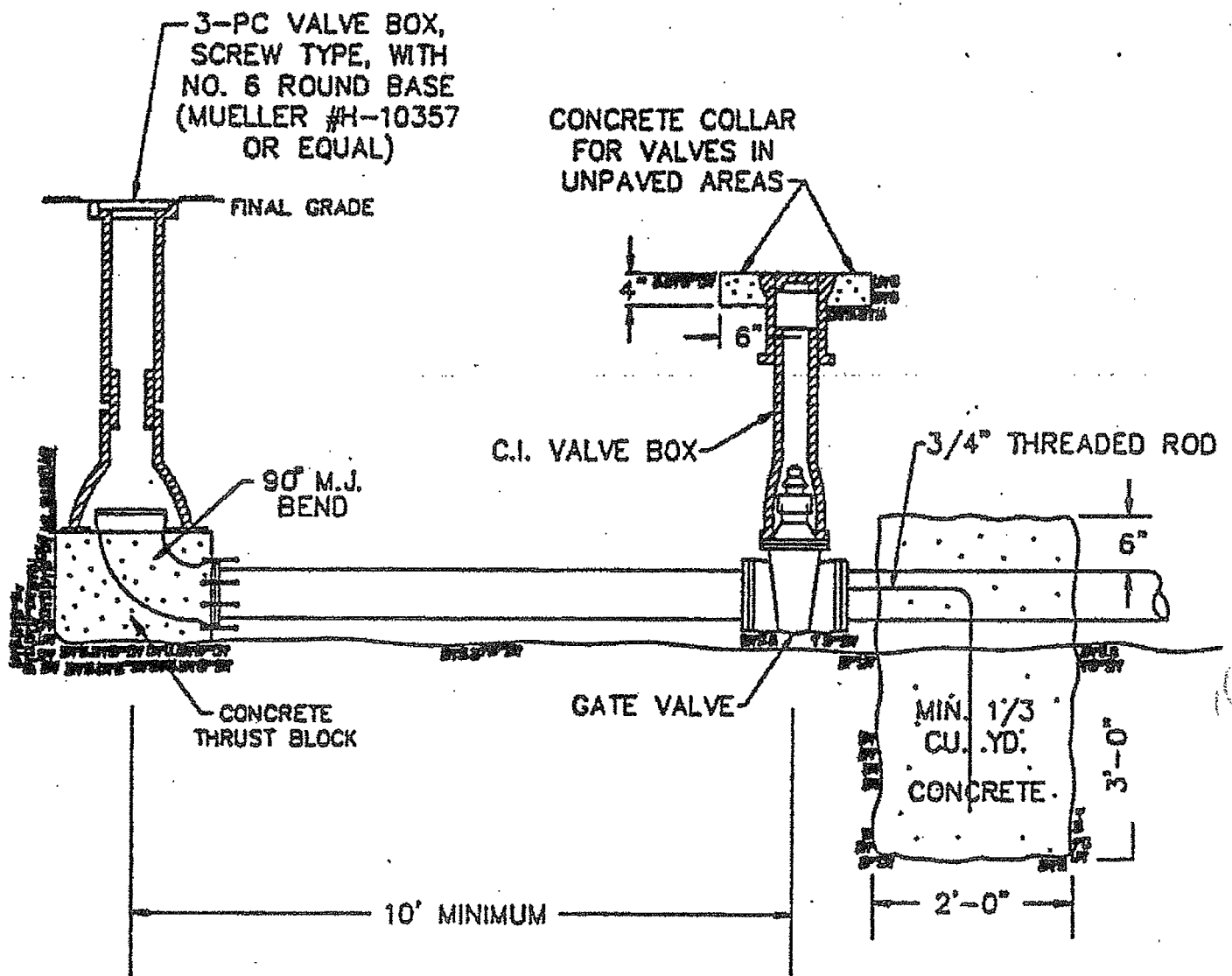
ANCHORAGE



EXISTING THOROUGH STREETS & STATE HIGHWAYS



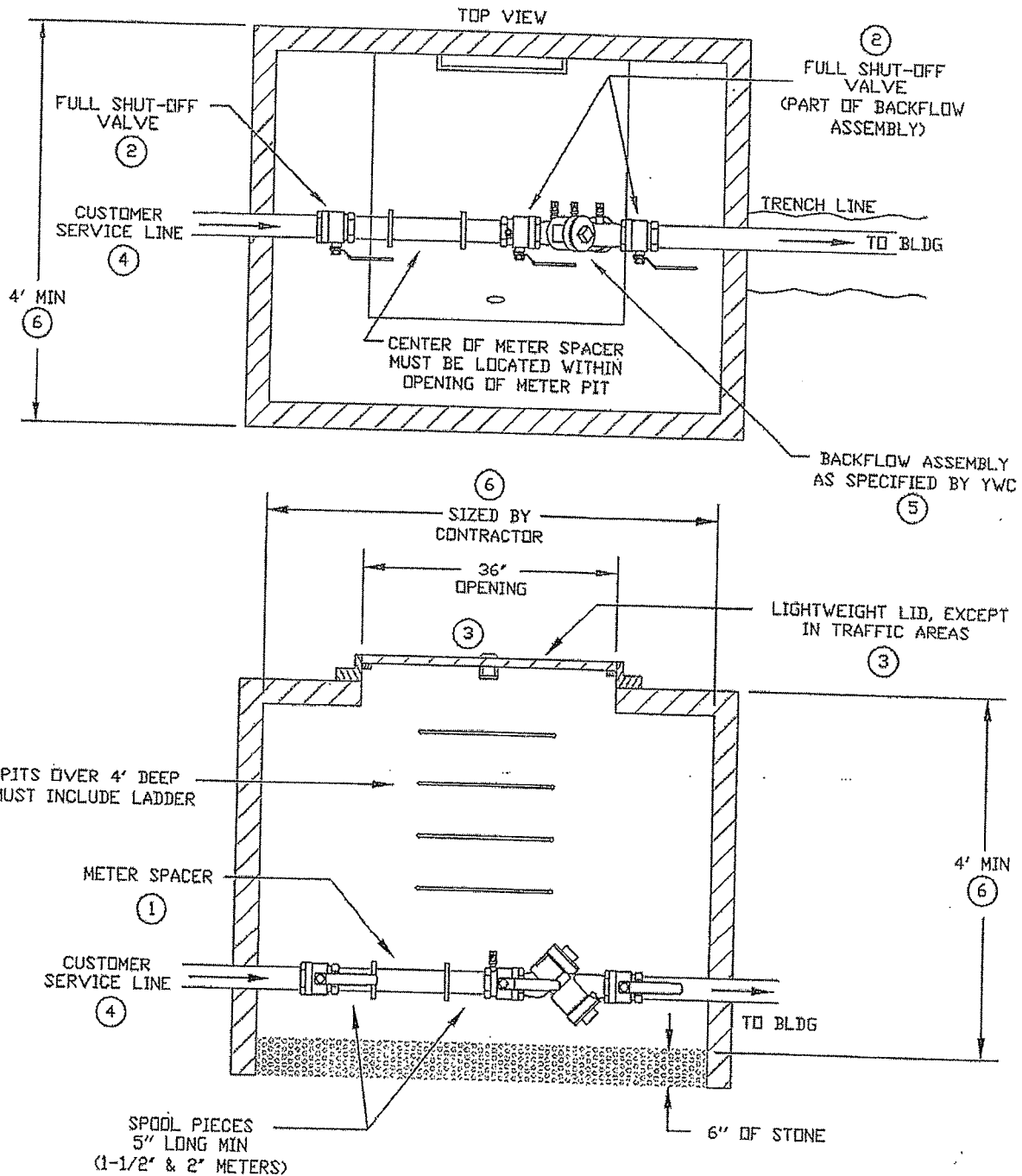
TRENCH BACKFILL & TEMPORARY STREET RESTORATION



WATER MAIN BLOWOFF DETAIL

EXHIBIT "H"

PIT MUST BE LOCATED WITHIN 10' OF **DYW** CURB STOP



METER SIZE

3/4" = 9"	1-1/2" = 13"
1" = 10-3/4"	2" = 17"

chdy\Meters\meterpits

- ① BACKFLOW ASSEMBLY, FULL SHUT-OFF VALVES (BALL VALVES) & SPOOL PIECES FURNISHED BY CUSTOMER.
- ② WHEN BACKFLOW ASSEMBLY IS LOCATED INSIDE BUILDING, FULL SHUT-OFF VALVES (BALL VALVES) SHALL BE PROVIDED ON BOTH SIDES OF THE METER. (BOCA P1506.1.2 & P1506.1.3)
- ③ CONCRETE LIDS ARE NOT ACCEPTABLE. ALL 3'x3' ALUMINUM LIGHT WEIGHT LIDS MUST HAVE HANDLE. TRAFFIC BEARING LIDS MUST HAVE A 1" OR LARGER HOLE TO USE PICK POINT FOR OPENING.
- ④ SERVICE LINE MATERIAL SHALL BE TYPE "K" COPPER. (REFERENCE THE *DYW* CUSTOMER SERVICE LINE REQUIREMENTS)
- ⑤ BACKFLOW ASSEMBLY SHOULD BE INSTALLED INSIDE THE BUILDING WHERE THE SERVICE ENTERS, WHEN THERE ARE NO CONNECTIONS BETWEEN THE BUILDING AND METER ASSEMBLY. CONTACT DISTRIBUTION SERVICES REPRESENTATIVE OR NEW SERVICE REPRESENTATIVE FOR BACKFLOW ASSEMBLY SPECIFICATIONS.
- ⑥ PIT SHALL BE SIZED BY CONTRACTOR LARGE ENOUGH TO HOUSE REQUIRED EQUIPMENT, HOWEVER THE PIT SHALL NEVER BE SMALLER THAN 4'x4'x4'.

NOTE

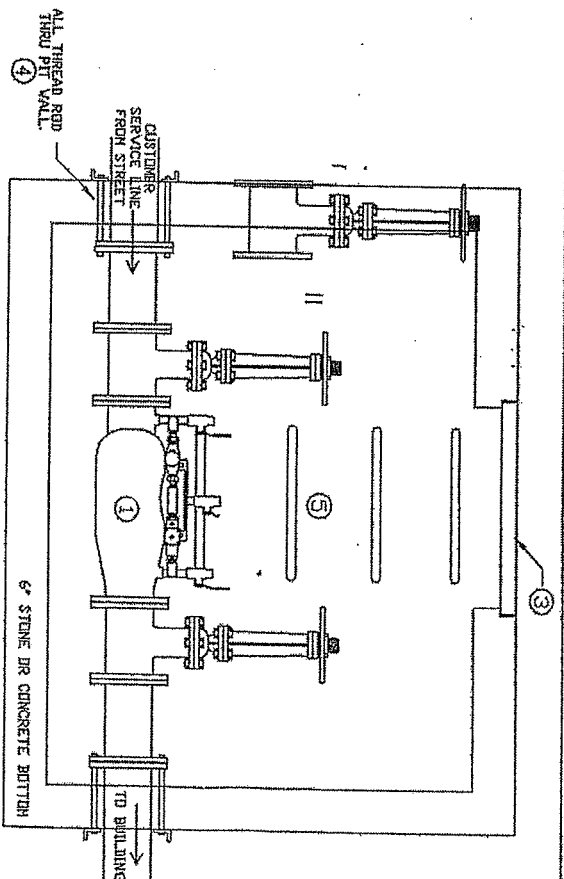
ANY CHANGES TO THESE REQUIREMENTS MUST BE APPROVED BY
THE
DISTRIBUTION SERVICE REPRESENTATIVE.

GENERAL NOTES:

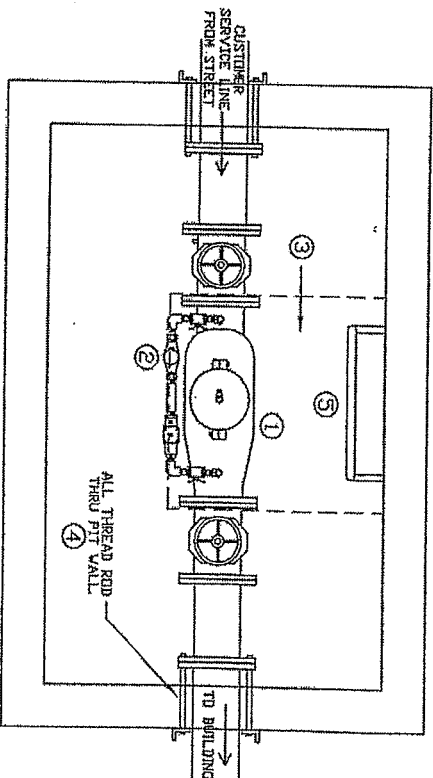
- ① BACKFLOW ASSEMBLY WITH GATE VALVES TO BE FURNISHED BY CUSTOMER. CONTACT DISTRIBUTION SERVICES REPRESENTATIVE.
- ③ ALL VAULT LIDS SHALL BE LIGHT-WEIGHT ALUMINUM, EXCEPT FOR VAULT LIDS IN TRAFFIC AREAS. LIGHT-WEIGHT LIDS (3'x3') ALUM. MUST HAVE HANDLE. TRAFFIC BEARING LIDS MUST HAVE A 1' OR LARGER PICK HOLE. ALL LIDS SHALL BE CENTERED OVER WATER METER AND LADDER.
- ④ RODS SHALL BE THE SAME SIZE AS THE BOLT HOLES IN THE NEAREST FLANGE, AND SHALL BE STAINLESS OR COATED TO REDUCE CORROSION.
- ⑤ LADDER RUNGS MUST BE INCLUDED.

SPECIAL NOTE:

- ① ILLUSTRATED HERE ARE ALL OF THE REQUIRED VALVES, BACKFLOW PREVENTION DEVICES, PRESSURE REDUCING VALVE, ETC. DUE TO THE LARGE VARIATION IN EQUIPMENT LAYING LENGTH, THE METER PIT LENGTH MUST BE DETERMINED AFTER THE REQUIRED EQUIPMENT IS SELECTED. WIDTH MINIMUM 4' AND DEPTH MINIMUM 4'.
- ② ANY CHANGES TO THESE REQUIREMENTS MUST BE APPROVED BY THE SERVICE REPRESENTATIVE.



SIDE VIEW
METER AND BACKFLOW ASSEMBLIES



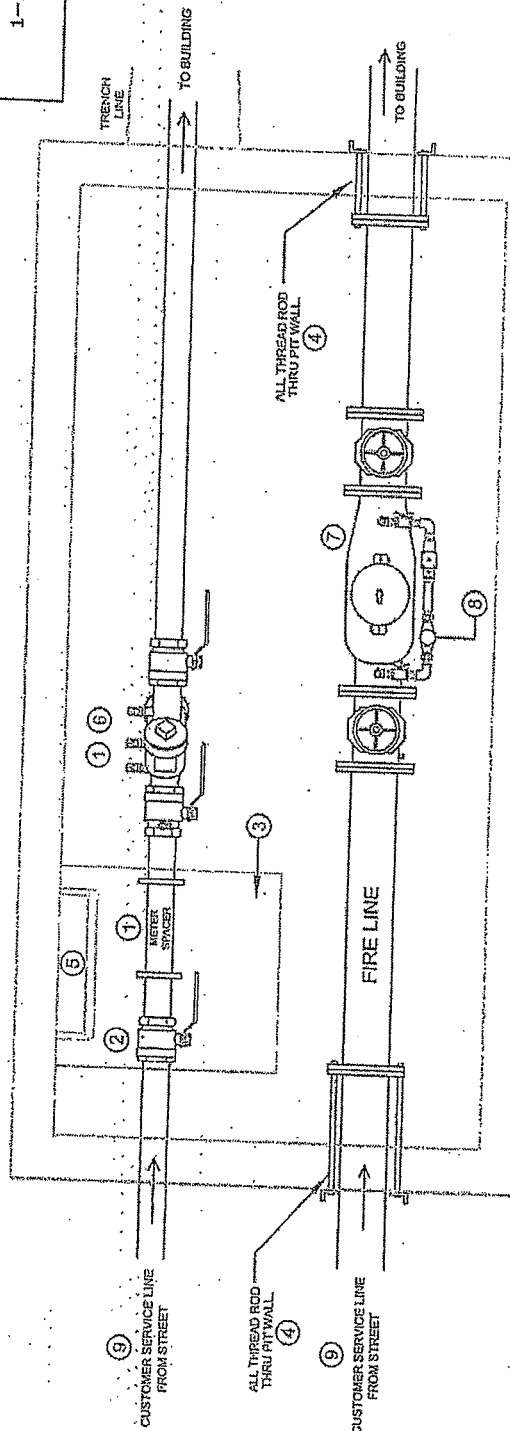
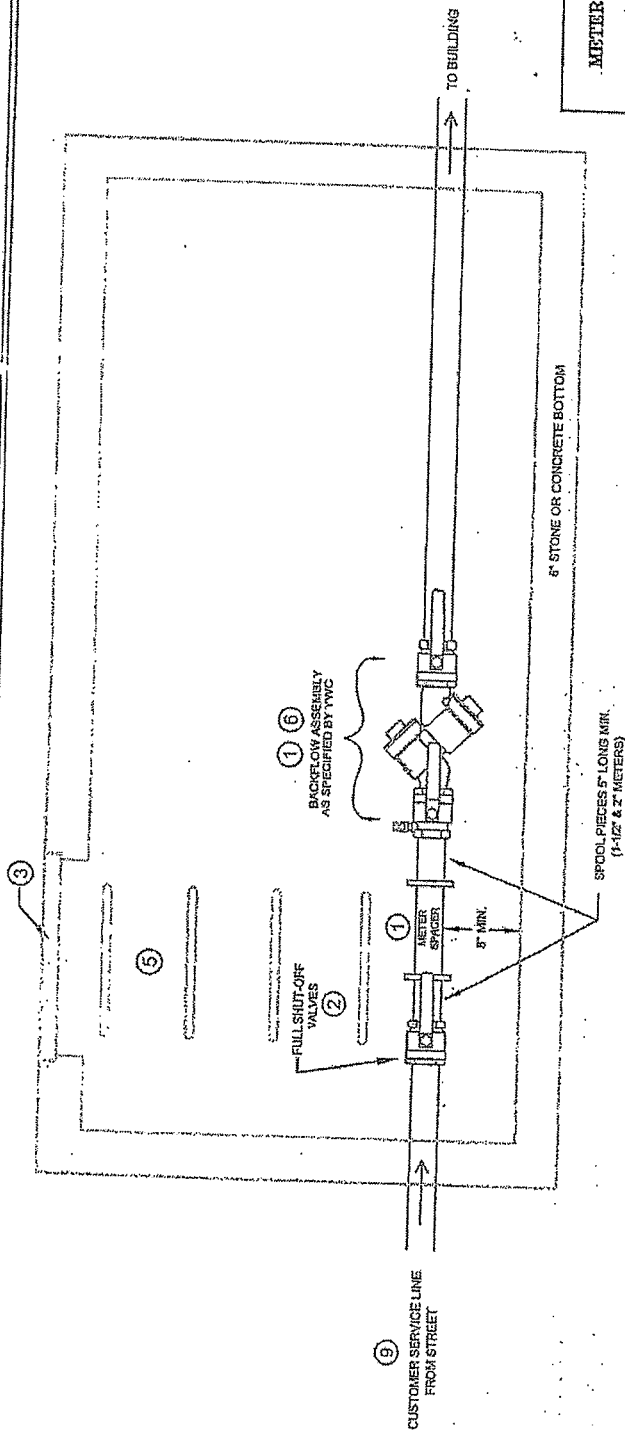
TOP VIEW
METER AND BACKFLOW ASSEMBLIES

PIT MUST BE LOCATED WITHIN 10' OF DW CURB STOP

PIT INSTALLATION OF FIRELINE
BACKFLOW PREVENTION ASSEMBLIES

ETER SIZE / LENGTH

TOP VIEW METER AND BACKFLOW ASSEMBLIES



PIT MUST BE LOCATED WITHIN 10' OF DW CURB STOP

SPECIAL NOTE:
ILLUSTRATED HERE ARE ALL OF THE REQUIRED VALVES, BACKFLOW
PREVENTION DEVICES, PRESSURE REDUCING VALVE, ETC. DUE TO
THE LARGE VARIATION IN EQUIPMENT LAYING LENGTH, THE METER PIT
LENGTH MUST BE DETERMINED AFTER THE REQUIRED EQUIPMENT IS
SELECTED. WIDTH MINIMUM 6' AND DEPTH MINIMUM 6'.

10 SCALE

PIT INSTALLATION OF 2" & SMALLER
METERED SERVICE LINE, FIRELINE AND
BACKFLOW PREVENTION ASSEMBLIES
(RADIO FREQUENCY)

REV. DATE:

DRAWN BY:

CHKD BY:

CP-8

PIT MUST BE LOCATED WITHIN 10' OF *DYW* CURB STOP

GENERAL NOTES:

1. BACKFLOW ASSEMBLY, PRV (WHEN NEEDED), FULL SHUT-OFF VALVES (BALL VALVES), AND SPOOL PIECES FURNISHED BY CUSTOMER. CONTACT DISTRIBUTION SERVICES REPRESENTATIVE FOR BACKFLOW ASSEMBLY REQUIRED.
2. WHEN BACKFLOW ASSEMBLY IS LOCATED INSIDE BUILDING, FULL SHUT-OFF VALVES (BALL VALVES) SHALL BE PROVIDED ON BOTH SIDES OF THE METER. (BOCA P1506.1.2 & P1506.1.3)
3. ALL VAULT LIDS SHALL BE LIGHT-WEIGHT ALUMINUM, EXCEPT FOR VAULT LIDS IN TRAFFIC AREAS. LIGHT-WEIGHT LIDS (3'x3' ALUM.) MUST HAVE HANDLE. TRAFFIC-BEARING LIDS MUST HAVE A 1" OR LARGER PICK HOLE. ALL LIDS SHALL BE CENTERED OVER WATER METER & LADDER.
4. RODS SHALL BE THE SAME SIZE AS THE BOLT HOLES IN THE NEAREST FLANGE AND SHALL BE STAINLESS OR COATED TO REDUCE CORROSION.
5. LADDER RUNGS MUST BE INCLUDED.
6. THE BACKFLOW ASSEMBLY SHOULD BE INSTALLED INSIDE THE BUILDING WHERE THE SERVICE LINE ENTERS, WHEN THERE ARE NO CONNECTIONS BETWEEN THE BUILDING AND THE METER.
7. DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTION ASSEMBLY.
9. REFER TO THE *DYW* CUSTOMER SERVICE LINE REQUIREMENTS.

SPECIAL NOTE:

ANY CHANGES TO THESE REQUIREMENTS MUST BE APPROVED BY THE *Dallas Town & Co* *Water Authority* OR DISTRIBUTION SERVICE REPRESENTATIVE.

SCALE

PIT INSTALLATION OF 2" & SMALLER
METERED SERVICE LINE, FIRELINE AND
BACKFLOW PREVENTION ASSEMBLIES
(RADIO FREQUENCY)

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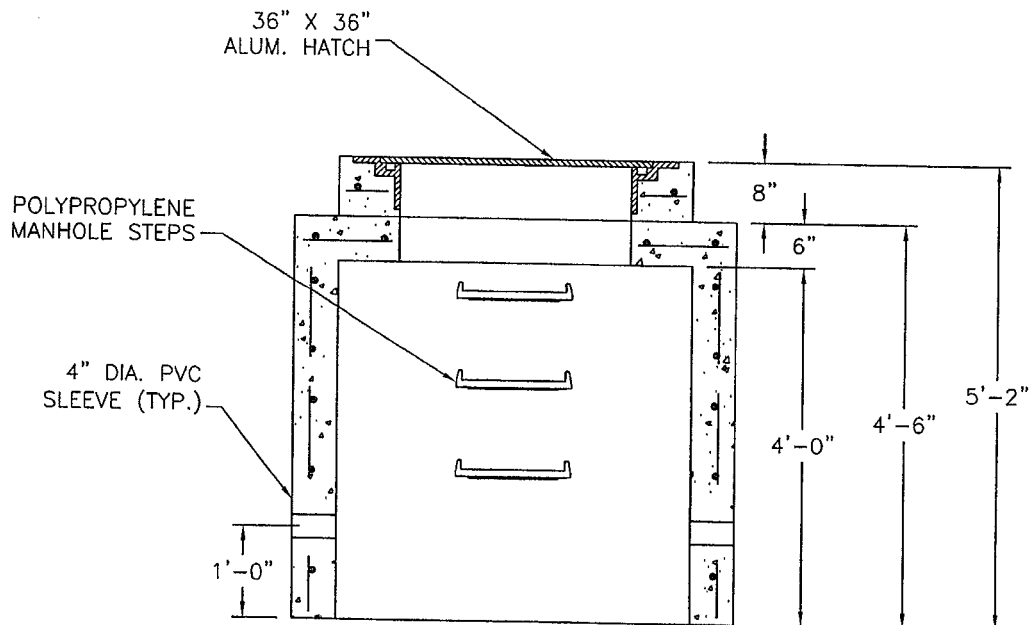
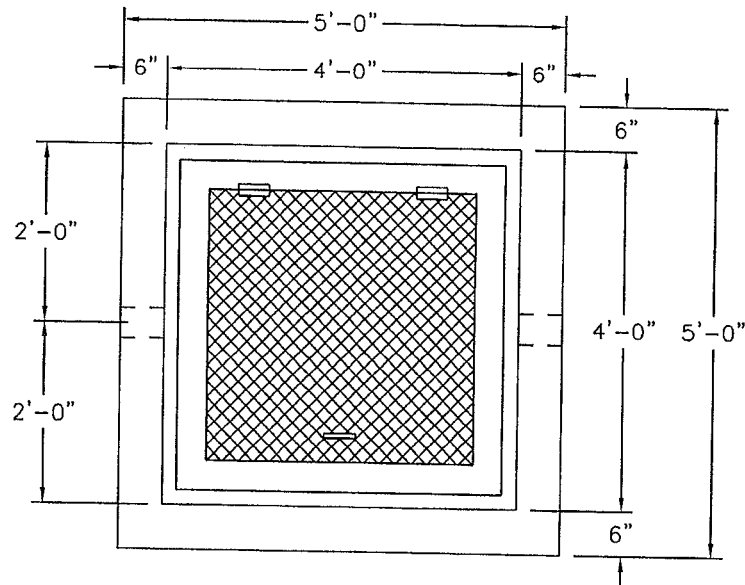
GUIDELINES AND REQUIREMENTS FOR
INSTALLATION OF CUSTOMER'S SERVICE LINE
TARIFF RULE 3.4

(DOES NOT APPLY TO CENTERS, APARTMENTS AND CONDOMINIUMS)
TARIFF RULE 4.4

1. Customer's service line is the connection facilities from The *DYW* curb stop into and in a customer's premises.
2. A meter pit is required when the distance between The *DYW* curb stop and the meter location exceeds 60 feet. Exception: For new installations of 3/4 inch and 1 inch services the meter pit may be installed for distances up to 100 feet provided an unjointed piece of "K" copper can be used. However, when this exception is used the service line must be inspected by a representative of The *DYW*. The customer or their contractor or representative must give 48 hours notice to *DYW* to schedule an inspection of the service line. Before the meter is installed and service is begun, The *DYW* reserves the right to require an uninspected, already buried service line to be re-excavated and uncovered to satisfy the required inspection.
3. All 3/4 inch through 2 inch services shall be one piece of unjointed "K" copper soft tubing, services 3 inches and larger shall be ductile iron.
4. Customer's service line 3/4 inch through 2 inch shall be connected to The *DYW* curb stop with a male by flare adapter *OR COMPRESSION*.
5. For protection against freezing, a depth of 48 inches is recommended with bedding and backfill material, rock free, any lesser depth will be at the customer's risk.
6. For convenience, the installer may operate *DYW* curb stop to test their service line for leaks. After the test is made, the curb stop must be turned off. Except for this exception. No one but *DYW* personnel shall operate the curb stop.
7. The above referred to inspections and approvals by the Company are for the sole protection of The *DYW* to assure the use of an unjointed customer service line and shall involve no responsibility or liability in any manner by The *DYW* for the adequacy, safety or satisfactory condition of the materials of installation of the service line and the maintenance, repair and replacement thereof, which responsibility and liability it is agreed by the customer shall be solely with the customer and the customer's plumber, installer and supplier.
8. If the Company's meter man, when he goes to install the meter, finds that the meter pit location, arrangement or other pertinent condition does not conform with the Company's required practices, he shall not set the meter but shall turn off the curb stop if it is on, remove the spacer and if possible, notify someone at the premises of the situation. Service cannot be turned on until the installation conforms with the Company's general specifications and usual practices.
9. Repeated failure by plumbers or other installers to comply with these requirements and tariff rules may result in loss of privilege to install meter.



MONARCH
MONARCH PRODUCTS COMPANY, INC.
YORK HAVEN, PA.



PRECAST WATER METER PIT
4' X 4' X 4' YORK WATER

YW-4X4STD

