AUB-01-08
Forms/Drawings/Specifications
For Division of Water

A G R E E M E N T
WATER AND SEWER LINES

THIS AGREEMENT, made and entered into this the _____ day of _____ 20__, by and between _____ hereinafter called the "Developer", and Athens Utilities Board with offices at 100 New Englewood Road, Athens, Tennessee, hereinafter called the "Board".

The "Developer" does hereby convey to Athens Utilities Board, Division of Water and Wastewater, Athens, Tennessee, the following amount of pipe, fittings, and appurtenances installed within the property known as _____, located on _____in McMinn County, Athens, Tennessee.

WATER LINE: (indicate material, DI, PVC, HDPE, etc.)

_____ L.F. _____ Inch _____ Pipe
_____ L.F. _____ Inch _____ Pipe
_____ Each ____ Inch Gate Valves
_____ Each ____ Inch Valve W/Box

SEWER LINE:

(indicate material, DI, PVC, HDPE, etc.)
_____ L.F. _____ Inch _____Pipe

THIS AGREEMENT, also includes a 20 foot easement extending 10 feet each side of said lines to the "Board" for the purpose of performing maintenance of said line.

The Athens Utilities Board, Division of Water and Wastewater, hereby agrees to accept said line into its system, and will be responsible for future maintenance of said line.

CUSTOMER	ATHENS UTILITIES BOARD
BY:_____	BY:_____
DATE:_____	DATE:_____
WITNESS:	WITNESS:
BY:_____	BY:_____
DATE:_____	DATE:_____

CONVEYANCE AGREEMENT

This Conveyance Agreement is executed as of the _____ day of _____, 20__, by and between _____ ("Developer") and ATHENS UTILITIES BOARD, municipal corporation with offices at 100 New Englewood Road, Athens, TN ("Board").

WITNESSETH:

WHEREAS, Developer does herein convey to Board the following amount of personal properties and/or fixtures, which have been placed and installed within the property, known as _____.

NOW, THEREFORE, for and in consideration of the premises set forth herein and other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Developer does hereby convey unto Board all personal property and fixtures set forth on Exhibit A hereto.

2. Developer does hereby convey unto Board an easement extending 10 feet each side of the water line where the water lines are not within existing public right of way for the purpose of performing maintenance of the water line herein conveyed.

3. Board hereby accepts the water lines into its system and does hereby accept the personal properties and fixtures set forth on Exhibit A.

4. Board shall be responsible for any future maintenance of the water line and system and does hereby accept the same as conveyed.

EXECUTED into this _____ day of _____, 20__.

ATHENS UTILITIES BOARD

BY:_____
Eric T. Newberry, General Manager

WITNESS:_____ Dated this _____ day of _____, 20__

DEVELOPER
BY:_____
Its:_____

WITNESS:_____ Dated this _____ day of _____, 20__.

Water Service Warning
Creating a Closed System

All meter services are installed with a customer cutoff valve and a dual check valve. The customer cutoff valve is for the owner/members use in the event the owner/member wishes to shut off their own water. The dual check valve prevents water from flowing backwards into the water main. This causes owner/members to have a closed system. In the event that an owner/member does not have a pop off valve on his/her water heater(s), the presence of a closed system could cause danger to the customer. Athens Utilities Board is NOT liable for any damages caused at an owner/member's property due to the owner/member's closed system. Customer cutoff valves are the responsibility of the owner/member to maintain and/or replace in the event of malfunction.

ACCT# _____

OWNER/MEMBER _____

Athens Utilities Board
Agreement for Water Service

Availability Charges:

I understand that I will be charged a monthly service availability charge and any applicable taxes for a minimum period of three years, regardless of whether I connect my house to AUB's water meter.

Service Address:

_____

Customer Signature: _____Date:

_____

Cross Connections:

A cross connection is an actual or potential link between AUB's water system and another water source of unknown quality. Once water purchased from AUB passes through your meter, it becomes a "source of unknown quality." If it is possible that your use of AUB's water (example: for an irrigation system, to water livestock, to perform dental work, etc.) could impact the water quality in AUB's system, an AUB-approved backflow prevention device must be installed. Additionally, if you used a well prior to signing up for water service from AUB, then the well must be completely disconnected from your home plumbing before we will serve you water.

1) Do you currently use a well for a water supply? Yes ☐ No ☐

2) Do you currently have or plan to install a swimming pool? Yes ☐ No ☐

3) Do you currently have or plan to install an irrigation system? Yes ☐ No ☐

4) Check any agricultural uses that apply. Livestock☐ Garden☐ Crops☐

5) If water is for business use, will it be for sanitary purposes only (bathrooms, sinks)? Yes ☐ No ☐

6) If no, please briefly describe the nature of your business and use of water:

_____

_____

_____

_____

_____

_____

Certification:

I, _____, understand and agree that any water well on this property shall remain totally segregated from the public water supply, and no unapproved or unauthorized cross connections, auxiliary intakes, bypasses, or interconnections with any type of irrigation systems or otherwise will be permitted without the proper cross connection control device and explicit approval of the Athens Utilities Board. I will allow AUB to conduct inspections when necessary to determine whether cross connections may exist on my property or for routine cross connection surveys.

Signed: _____ Date: _____

For AUB use:

Reduced Pressure Zone Backflow device required? Yes ☐ No ☐ Well verified as disconnected? Yes ☐ No ☐

Additional Comments:_____

_____

_____

Employee: _____ Date: _____

Athens Utilities Board

Design Data and Information for Water System Calculations

Reservoir/Tank Information

Tank/Reservoir	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
Full Elevation (feet)	1122.8	1122.8	1123	1122.8	1123.2
Bottom Elevation (feet)	1083.8	1080.8	1095	1083.8	1090.3
Hydraulic Design Elevation (feet)	1103.3	1101.8	1109	1103.3	1106.45
Capacity (gallons)	2,000,000	1,000,000	1,000,000	2,000,000	567,241

Total Capacity - 6,567,241 gallons
Theoretical Reservoir Design Elevation for System Calculations (Feeds from multiple reservoirs) - 1105 feet

Modeling and Design Software

Haestad Methods – WaterCAD and Cybernet

Methodology and Determination of Initial Input Parameters for Model

Perform calculations with software model utilizing Hazen-Williams equation for iterative solution.

Determine initial input parameters by one of the following methods:

(1) Theoretical - Calculate an equivalent length of pipe to nearest feed tank and model using design tank elevation (50 percent), or if there are multiple feeds use theoretical reservoir design elevation of 1105 feet consistent with Tennessee Department of Environment and Conservation (TDEC) Design Criteria
(2) Empirical - Where practicable (primarily single feed extensions), utilize actual main data and design reservoir elevation for existing mains.
(3) Empirical - Where practicable (mains with fire hydrants in close proximity to extension), utilize hydrant flow data for existing main and calculating a three-point “pump curve” for the system.

Validation of Design

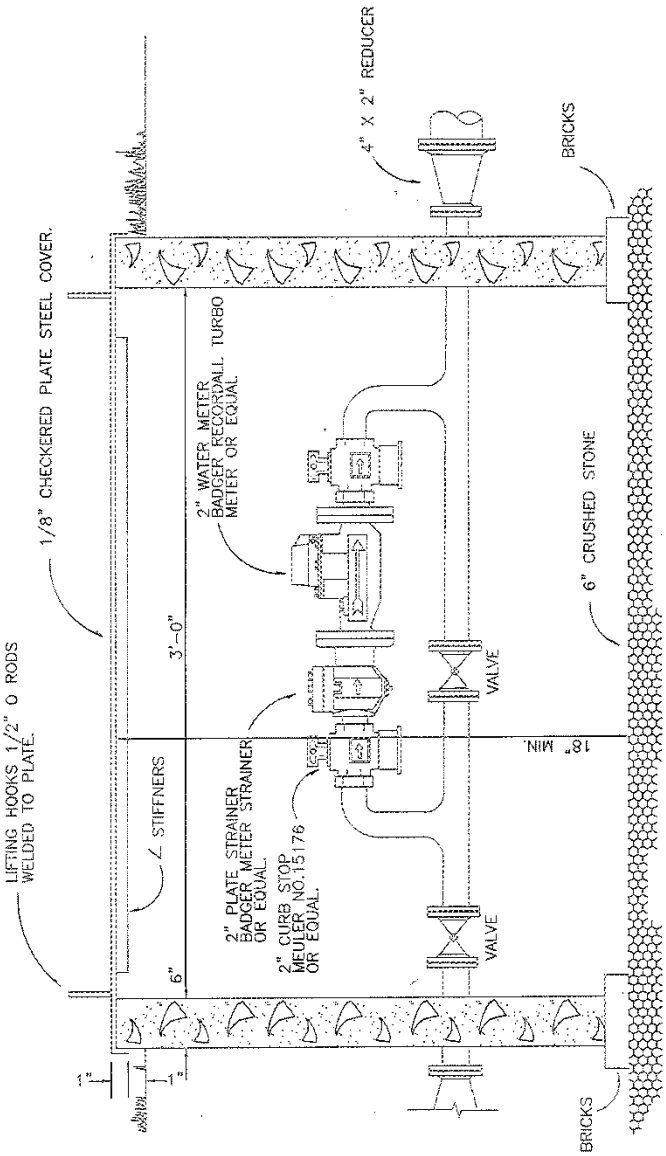
AUB utilizes conservative design assumptions and therefore final adjustments to the construction of the main may be made based upon empirical data (pressure, flow, and reservoir levels) collected in the field. At critical points in the system (potential low flow and pressure points) field data will be collected and compared against reservoir levels to determine actual termination points of mains. This data will be used to ensure that the system meets minimum TDEC requirements for flow and pressure per design criteria.

Technical and Material Specifications

(TDEC) – Division of Water Supply has approved Athens Utilities Board submittal of specifications for materials and drawings for typical installations.

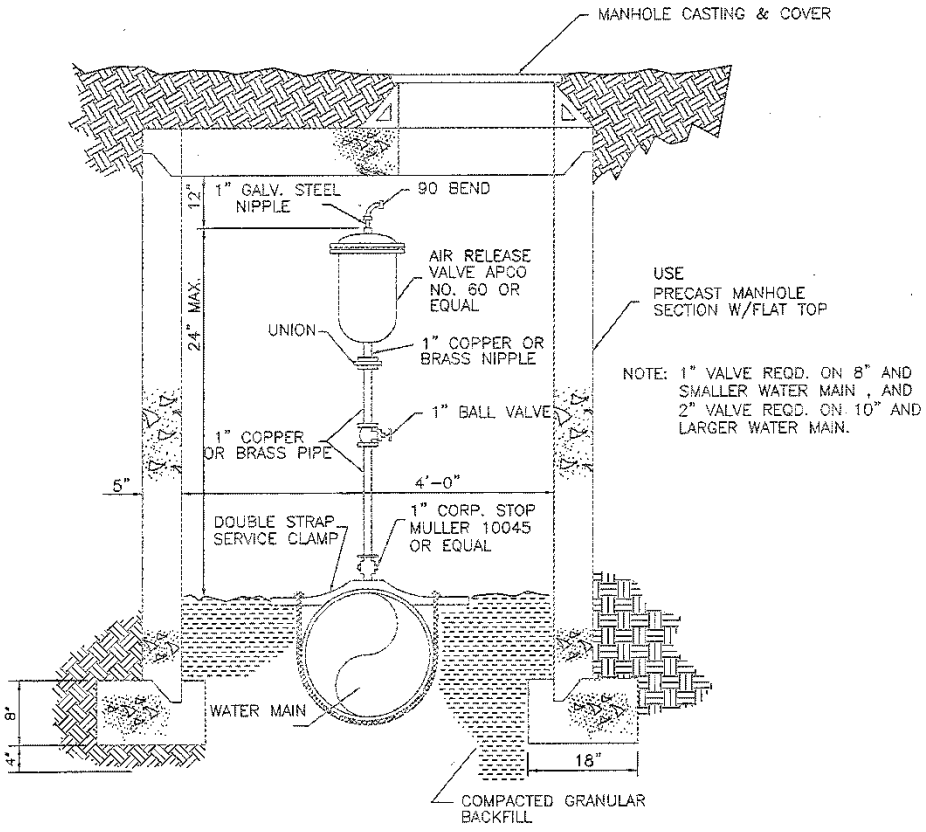
Regulatory and Guidance Documents

TDEC - Division of Water Supply, "Community Public Water Systems Design Criteria", 1997
TDEC – Division of Water Supply, Chapter 1200-5-1, "Public Water Systems", August 1999
AWWA Standards as referenced by TDEC or otherwise applicable



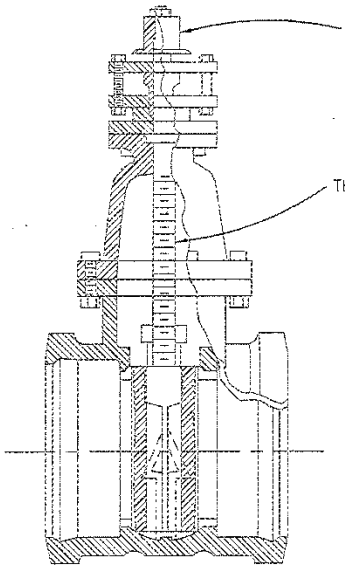
WATER METER VAULT ASSEMBLY

ATHENS UTILITIES BOARD CONSTRUCTION STANDARDS	REVISED:	WATER SERVICE ASSEMBLY 2" METER	DRAWING NO. AUB–WSA 2



AIR RELEASE VALVE ASSEMBLY

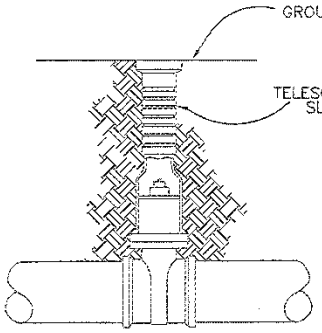
ATHENS UTILITIES BOARD CONSTRUCTION STANDARDS	REVISED:	AIR RELEASE VALVE ASSEMBLY	DRAWING NO. AUB–AR–VA 1



NOTE: SOILD WEDGE RESILIENT SEAT RUBBER GATE VALVE

GATE VALVE SECTION

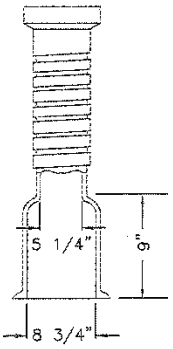
(CLOSED)
(M&H OR MUELLER)



VALVE & BOX INSTALLED

VALVE BOX LID

CAST IRON, TWO PIECE, SLIP TYPE



SLIP TYPE
VALVE BOX

ATHENS UTILITIES BOARD CONSTRUCTION STANDARDS	REVISED:	GATE VALVE & VALVE BOX	DRAWING NO. AUB-GV-VB 1

11-1/4° BEND						
SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	9"	11"	13"	16"	18"	30"
B	9"	9"	11"	13"	16"	18"	30"
C	8"	8"	10"	12"	14"	16"	15"
D	4"	4"	5"	6"	8"	9"	16"

TEE								
SIZE								
Main	2"-6"	8"-12"	8"-10"	12"	12"	12"	18"	
Branch	2"-6"	2"-6"	8"-10"	2"-6"	8"-10"	12"	16"-48"	
A	26"	26"	43"	26"	43"	52"	70"	
B	26"	26"	43"	26"	43"	52"	70"	
C	12"	12"	12"	12"	12"	12"	30"	
D	13"	13"	21"	13"	21"	26"	24"	

PLUG						
SIZE	2"	4"	6"	8"	10"	12"	18"
A	26"	26"	26"	34"	43"	52"	70"
B	26"	26"	26"	34"	43"	52"	70"
C	12"	12"	12"	12"	12"	12"	30"
D	11"	11"	11"	15"	22"	32"	32"

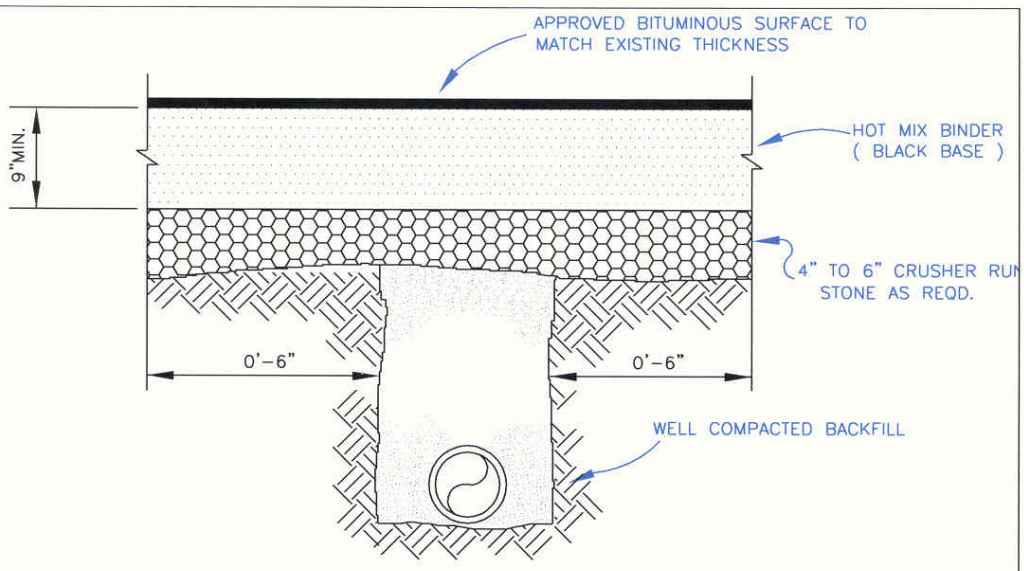
90° BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	16"	16"	26"	33"	40"	50"	70"
B	16"	16"	24"	33"	40"	50"	70"
C	9"	9"	12"	12"	15"	16"	22"
D	8"	8"	12"	16"	20"	25"	24"

45° BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	12"	12"	18"	24"	31"	37"	52"
B	12"	12"	18"	24"	31"	37"	52"
C	8"	8"	10"	12"	14"	16"	14"
D	6"	6"	9"	12"	15"	18"	18"

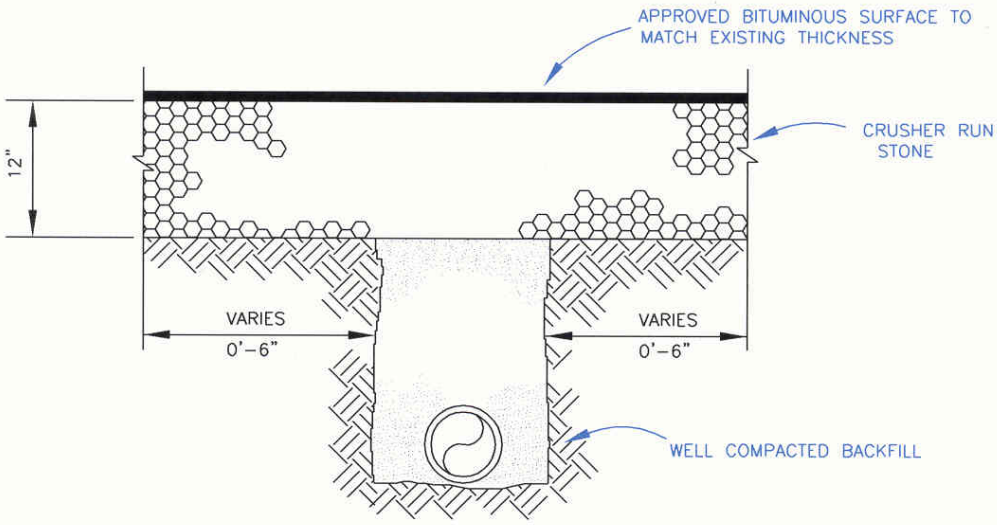
22-1/2° BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	9"	13"	18"	23"	26"	40"
B	9"	9"	13"	18"	23"	26"	40"
C	8"	8"	10"	12"	14"	16"	15"
D	4"	4"	6"	9"	11"	13"	16"

THRUST BLOCKING DIMENSIONS

ATHENS UTILITIES BOARD CONSTRUCTION STANDARDS	REVISED:	THRUST BLOCKING DIMENSIONS	DRAWING NO. AUB-TBD2

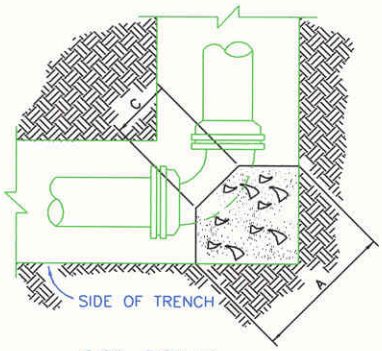


BITUMINOUS SURFACE
STATE HIGHWAY

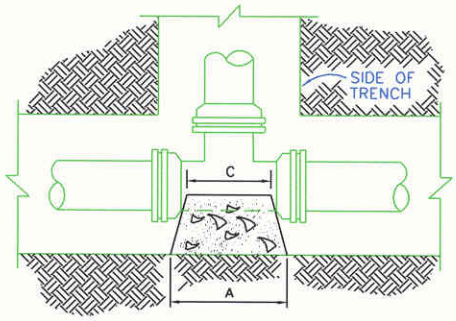


BITUMINOUS SURFACE
CITY STREET OR COUNTRY ROAD

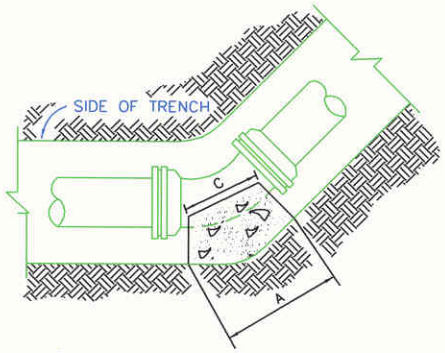
ATHENS UTILITIES BOARD CONSTRUCTION STANDARDS	REVISED:	PAVEMENT REPLACEMENT BACKFILL	DRAWING NO. AUB-PR-B 1



90° BEND



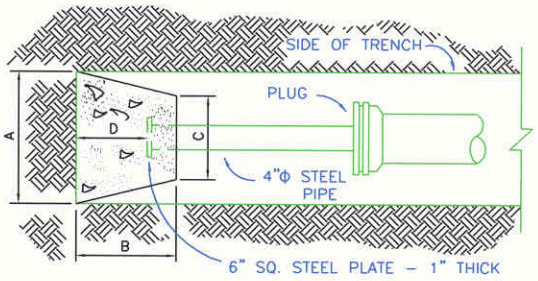
TEE



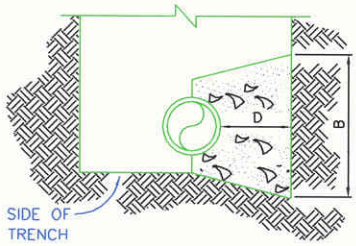
45° – 22 1/2° – 11 1/4° BENDS

NOTE: THRUST BLOCK TO BE POURED AGAINST UNDISTURBED EARTH.

SEE TBD2 FOR SIZE



PLUG

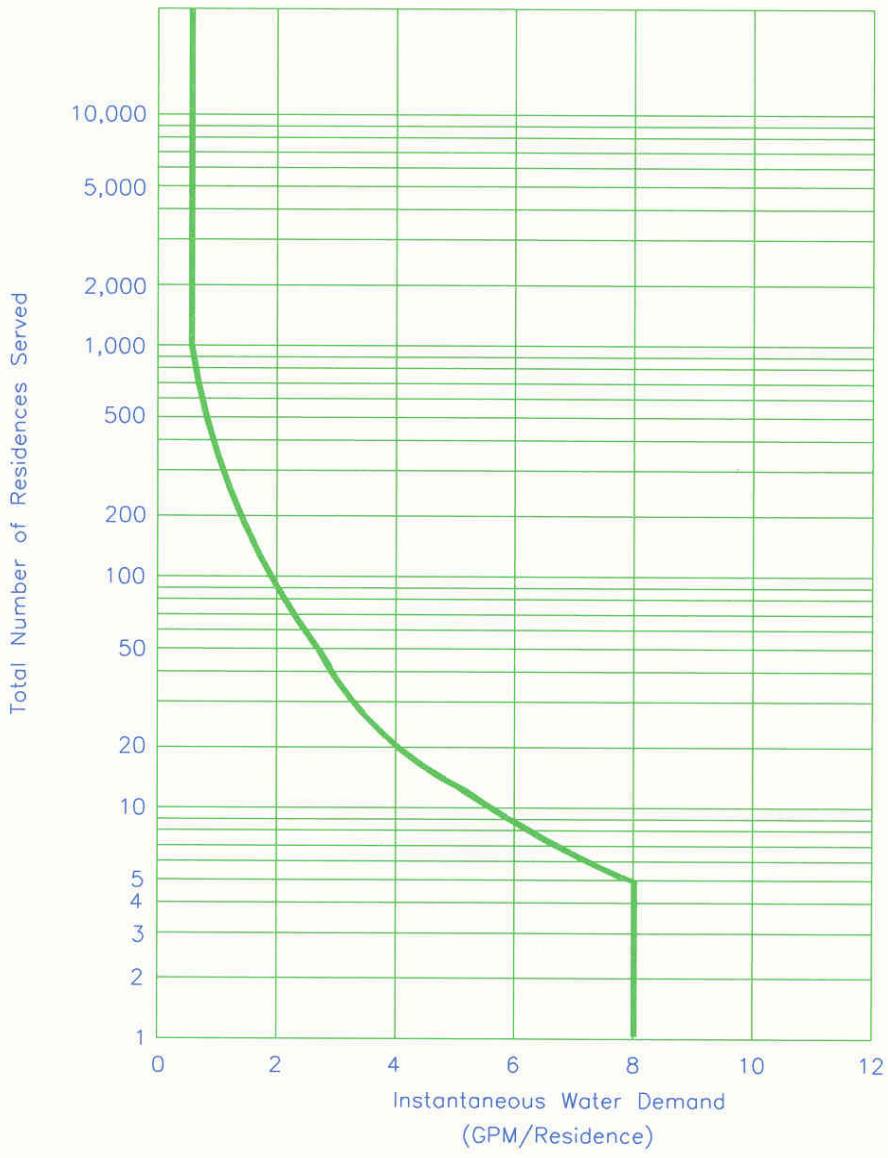


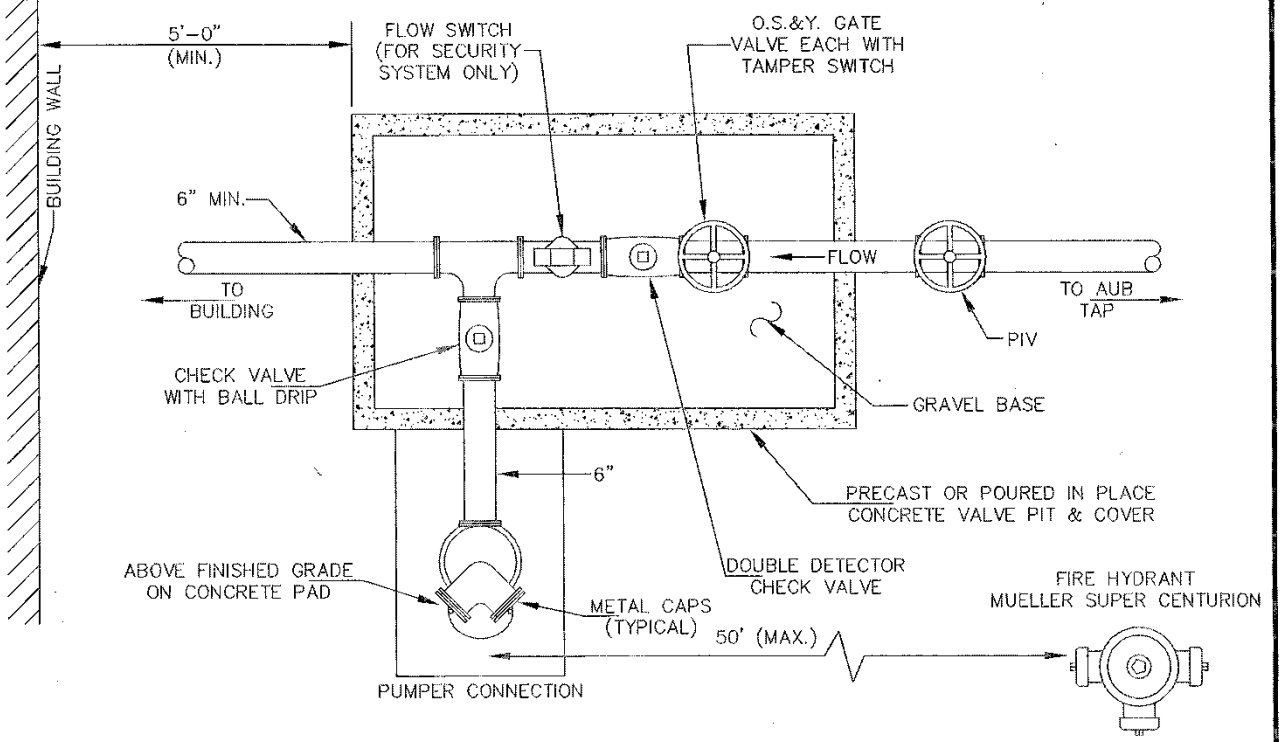
TYPICAL SECTION

ATHENS UTILITIES BOARD CONSTRUCTION STANDARDS	REVISED:	THRUST BLOCKING DETAILS	DRAWING NO.
			AUB–TBD 1

ILLUSTRATION 1

DESIGN CRITERIA





SPRINKLER SYSTEM VALVE PIT DETAIL

Note: Plans of Sprinkler System must be on file with Athens Utilities Board.

ATHENS UTILITIES BOARD
DIVISION OF WATER & WASTEWATER
ATHENS, TENNESSEE