

HYDRAULIC MODEL REPORT

KENT COUNTY
WATER AUTHORITY
WEST WARWICK, RHODE ISLAND

Civil
&**E**nvironmental
Engineering Partners, Inc.

Prepared By:

C&E Engineering Partners, Inc.
342 Park Avenue
Woonsocket, RI 02895

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1.0 Introduction

1.1 Authorization and Purpose

The development of a computerized hydraulic model of the Kent County Water Authority's Supply, Transmission and Distribution System was completed by C&E Engineering Partners, Inc. (C&E) under authorization of the Kent County Water Authority (KCWA). The need for this project stems from the KCWA's desire to develop an accurate and representative hydraulic model of the water system in order to evaluate overall water system performance and operational techniques and to replicate the hydraulic capabilities of system operation.

The purpose of the model development phase was to develop an accurate and calibrated hydraulic model of the major infrastructure facilities and pipelines of the water transmission and distribution system. This was accomplished utilizing a computer software program entitled "WaterCAD Version 6.5". This program is intended for the design and analysis of pressure flow pipe distribution systems such as municipal water systems. The computational methods employed in "WaterCAD" were developed at Haestad Methods, Waterbury, Connecticut.

1.2 Project Background

C&E was retained by the KCWA to develop an accurate, complete and representative hydraulic model of their water system, which would serve as a means to evaluate the overall system performance and operational techniques as well as replicate the hydraulic capabilities of system operation. The completed hydraulic model presented in this report is a "tool" that can be utilized in the future planning, current operation and maintenance, and emergency studies. Modifications to system facilities can also be evaluated using the model. Typical examples of model utilizations include:

- Future demand predictions on the existing system
- Investigating the sizing and routing of future pipelines
- Sizing and locating future pumping and storage facilities
- Determining the effects of improving pipelines (i.e. cleaning and lining pipes, replacing pipelines, etc.)
- Development of emergency operating procedures
- Investigation of source supply alternatives
- Removal of facilities from service for maintenance
- Evaluation of fire flow availability
- Analysis of interconnections with neighboring water systems
- Modifications of pressure zones

The completed model is also ready for use in an extended period (i.e. hour-by-hour) simulation process. This type of analysis simulates the hydraulic behavior of water system facilities over a selected period of time in sequential time increments. For

example, the system can be viewed over a 24-hour period in time steps of one-hour increments. Hydraulic behaviors include changing system demand and movement of water storage volumes. The extended period simulation is extremely useful for detailed hydraulic analysis including system component sizing and operational modes.

1.3 Overview of Study

The development of this hydraulic model consisted of investigation and research into the major hydraulic facilities, customer demands, and operating practices of the water system. The practices used in the development of this model include five major categories of activities that are further detailed within this report:

1. System operations
2. Demand zone allocation system
3. Junction node system
4. Pipeline system
5. Model calibration and simulation

Production and consumption data from the last four (4) years was reviewed in order to determine consumer demand and flow data that was most representative of the existing water system. The completed hydraulic model accurately depicts the Average Day, Maximum Day, and Peak Hour conditions of the KCWA supply and distribution system.

1.4 Acknowledgements

C&E wishes to acknowledge the information and assistance provided by the following individuals of the Kent County Water Authority during this project and without whose input the hydraulic modeling study could not have been accurately developed:

- Mr. Timothy Brown, P.E., General Manager and Chief Engineer
- Mr. John Duchesneau, Director of Technical Services
- Staff of the Water Department Billing Division

We would also like to extend special thanks to the following individuals that provided invaluable assistance and countless hours of effort in verifying the water distribution system pipeline configuration. The effort from these individuals served to provide an accurate representation of the water distribution system that was portrayed in the completed model.

- Mr. Rick Burns, Chief of Facilities
- Mr. Robert Austin, Chief of Systems

2.0 Existing Water System Description

2.1 General Service Area

The KCWA serves customers in the Towns of Coventry, East Greenwich, West Greenwich, and West Warwick and the City of Warwick. In addition, the KCWA serves customers in isolated areas of Cranston, North Kingston, and Scituate. There are approximately 26,000 service accounts (including residential, commercial/industrial, and governmental users) in these locales. Two primary sources of water supply for the KCWA system are wholesale interconnections through Providence Water and the City of Warwick (which also receives water from Providence Water) and groundwater from wellfields owned and operated by KCWA.

KCWA's existing piping system consists of approximately 377 miles of water main with pipe sizes ranging from 2-inches to 24-inches in diameter (exclusive of customer service connections). For purposes of the model, transmission mains are defined as water mains of 16-inches or greater in diameter.

Elevations throughout the KCWA water system range from 15 feet Mean Sea Level (MSL) along coastal areas to 400 feet MSL in West Greenwich in the southwestern portion of the system. There are two (2) main transmission booster pump stations and three (3) system booster pump stations in the KCWA system. The transmission pump stations boost water from the wholesale interconnections into the system while the system booster pump stations increase pressure in localized areas with high elevations to prevent these areas from experiencing low pressure problems.

Based on historical data, the KCWA serves a residential population of approximately 60,000 people. A total of twenty three (23) of the largest water consumers (i.e. consumers that use upwards of several million gallons or greater per year) were identified and included in the model. A majority of the large users consist of residential entities (trailer parks, condominium associations, etc.), large industrial enterprises, hospitals, laundromats, etc.

2.2 Distribution Pipelines

As previously indicated, the KCWA transmission and distribution system consists of approximately 377 miles of piping. All of this piping has been incorporated into the hydraulic model pipeline database, exclusive of customer service connections. Pipe sizes range in diameter from 2-inches to 24-inches. Generally, the pipelines were installed between the 1880's to the present. A large portion of the pipes installed between 1880 and 1949 are unlined cast iron (CI). Asbestos cement (AC) or transite pipes were predominately installed between the late 1930's and 1970's. Polyvinyl chloride (PVC) pipes were generally installed from the late 1970's to the late 1980's while ductile iron (DI) pipes were installed between the late 1960's and the present.

Although a majority of the piping system consists of CI, AC, PVC, or DI, there are some pipelines of small diameter (less than 4-inches) made of materials such as copper and galvanized iron.

2.3 Pressure Zones

The KCWA water distribution system is divided into eight (8) pressure zones operating at varying hydraulic pressure gradients. Of these 8 pressure zones, three (3) service the majority of the KCWA service territory. These three (3) main pressure zones are the Low Service (334') Pressure Gradient, the High Service (500') Pressure Gradient, and the Intermediate High (430') Pressure Gradient. There are ten (10) water storage facilities maintaining the pressure gradients of the individual pressure service areas. Following is a brief description of each pressure zone, its primary method of operation and critical infrastructure components.

Low Service (334') Pressure Gradient – This zone is the primary pressure gradient of the KCWA water distribution system. It extends to the northern, southern, and western limits of the KCWA service area. The low service area is maintained at an approximate hydraulic grade of 334 feet MSL. There are six (6) water storage facilities operating within this pressure zone, which are supplied with water via groundwater sources and wholesale interconnections to Providence Water and the City of Warwick (also wholesaled through Providence Water). The major infrastructure facilities are as follows:

- Setian Lane (Crompton) Tank
- Seven Mile Road Underground Reservoirs* (Two Storage Reservoirs)
- Frenchtown Road Tank
- Tiogue Avenue Tank
- Wakefield Street Tank
- West Street Tank (currently offline)
- Mishnock Wells
- East Greenwich Well
- Spring Lake (Coventry) Well
- Clinton Avenue Pump Station (Providence Water wholesale interconnection)
- Bald Hill Road Pump Station (City of Warwick wholesale interconnection).

* These reservoirs are online however they tend to remain “locked up” due to the influence from Clinton Avenue Pump Station and Tiogue Tank. The reservoirs are manually operated (i.e. opened to the water system at minimum once per week).

This is the primary zone of the KCWA and serves to supply the majority of all source water to the system. Source water is generally boosted from this zone to supply the remaining pressure zones. This zone also extends geographically into the majority of the service territory of the KCWA.

The majority of the water supplied to this zone is from the Clinton Avenue Transmission Booster Pump Station facility. This facility rarely shuts down even during low flow periods at night. Currently, operation of the Clinton Avenue facility is controlled from the water level in the Tiogue water storage tank, which is set at an overflow elevation of 355 feet or approximately 21 (approximately 9 psi) feet above the 334' gradient. This tank is currently the control tank and is operated well below the overflow in order that the remainder of the system tanks can fluctuate. The Bald Hill Road Pump Station is manually controlled in response to water system demand(s).

In addition, the Seven Mile Road Reservoirs are normally kept full or "locked up" due to the pump station head pressure influence and the proximity of the reservoirs to the Clinton Avenue Pump Station and Tiogue Tank. The reservoirs do not fluctuate during operation of the Clinton Avenue Pump Station facility and must be manually operated (partially drained) weekly to maintain water quality.

This zone is also supplied with groundwater from the three (3) wellfields. The Mishnock and Spring Lake (Coventry) wells are on normal hand off / on operation whereby operators manually turn these facilities on and off locally at the facility as demand on the system dictates the need to run the wells. Normally, at least one of these well stations is in operation at all times. The East Greenwich well is operated in level response with the Frenchtown Road storage tank.

In addition, there are near term improvement projects to increase the flow capacity of the Clinton Avenue facility as well as to isolate the Tiogue Tank from this pressure zone. The Clinton Avenue facility upgrade will also include new booster pumps to transfer water directly to the Read School House Road (RSHR) pressure zone. This will also include the addition of a new transmission main to the RSHR. The RSHR pressure zone will also be increased from 430 to 500 feet through the addition of a new storage tank with overflow elevation equal to 500 feet.

Intermediate High (430') Pressure Gradient – The intermediate high service area extends eastward from Read School House Road to Blackrock Road to the north of Route 117 in Coventry, Rhode Island. This pressure gradient is maintained at a hydraulic grade of 430 feet MSL. The Read School House Road Tank is the single, primary water storage facility operating within this pressure zone. Water is supplied to this area by hydraulically boosting the water from the 334 foot low pressure service area via the Knotty Oak Pump Station in order to fill the Read School House Road Tank. The Knotty Oak Pump Station is equipped with two (2) - 2.0 million gallon per day (MGD) pumps. Typically, one pump operates with the other as an in line backup. Operation of the pumps is rotated to promote even wear and reliability.

As indicated previously, this pressure zone will be increased to 500 feet through several capital improvements slated for the near future.

High Service (500') Pressure Gradient – This pressure zone is maintained at a hydraulic grade of approximately 500 feet MSL. The high service area provides service to the

southern portion of West Warwick, areas south and east of Tiogue Lake in Coventry, the northwest portions of West Greenwich, and the western half of East Greenwich.

The Technology Park Tank and the Carrs Pond Road Tank are operated within this pressure gradient. Water is supplied to this area via the Johnson Boulevard Pump Station. The Johnson Boulevard Pump Station, which contains one (1) - 1.7 MGD pump and two (2) - 3.3 MGD pumps can be set on level control with the Technology Park Tank or Carrs Pond Road Tank.

A new booster pump station facility at the intersection of Route 2 and J.P. Murphy Drive was recently placed into service. This facility was installed to help meet the increasing water demands from the Amgen industrial facility in this portion of the system. Another booster pump station located at the Setian Lane Tank Site will be placed into service upon completion of the project in June 2004. This will add an additional 2.0 MGD pumping capacity into the 500-foot (High Service) gradient.

Low Service Reduced (334') Pressure Gradient – The low service reduced pressure gradient services the low lying coastal areas of East Greenwich, Apponaug in Warwick, then extending south to the North Kingstown Town line, from Narragansett Bay to Love Lane in Warwick, and to South County Trail in East Greenwich.

There exist six (6) Pressure Reducing Valve stations controlling this pressure gradient that reduce water pressure from the low service area. These pressure reducing stations are in the following locations:

- Centerville Road
- Division Road
- Middle Road
- Cowesett Road
- Love Lane
- Post Road

Generally, these facilities are controlled by the pressure set point on the downstream side of the Pressure Reducing Valve. The facilities are intended to operate at a hydraulic grade in the range of 270 feet MSL. Each PRV station is equipped with a check design feature whereby if the pressure on the inlet side drops below the preset downstream pressure the PRV will permit reverse flow. This is installed primarily as a safety design feature.

Oaklawn (231') Pressure Gradient – The Oaklawn pressure gradient services the Oaklawn section of Cranston and the extreme northeastern portion of West Warwick. This pressure area receives water from Providence Water via the Oaklawn Avenue wholesale interconnection. A 12-inch master meter records the flow through the interconnection supplying this portion of the KCWA system. Water is then received at a hydraulic grade of approximately 231 feet MSL. A new master meter facility with a 10-

inch meter is currently being installed. There are no water storage facilities operating within the Oaklawn pressure gradient.

High Service (500') Reduced Pressure Gradient – The high service reduced pressure gradient services the extreme southwestern portion of West Greenwich as well as Wood Estates and Monroe Drive in Coventry. There are two (2) Pressure Reducing Valve stations that control this pressure gradient located on Mishnock Road and Helen Avenue. These pressure reducing stations reduce water from the high service area. Operation of these facilities is controlled by the pressure setting on the downstream pilot of the valve, which permits flow to be transferred to this location. The Mishnock Road PRV is set at an approximate hydraulic grade of 430 feet. The Helen Ave PRV is set at an approximate hydraulic grade of 435 feet.

Warwick Tanks (232') Pressure Gradient – The Warwick Tanks pressure gradient is a localized service area that is fed from the transmission main (owned by the KCWA) to the Bald Hill Road Pump Station, which is located between the Warwick Tanks and Kent County Courthouse. This pressure zone is maintained at a hydraulic grade of approximately 232 feet MSL. The Warwick Tanks total 12.0 million gallons in storage capacity that supplies the water main to the Bald Hill Road Pump Station. This pressure gradient also provides service to a small number of KCWA customers along Bald Hill Road in Warwick.

Hope Road Booster Pressure Gradient – The Hope Road booster pressure gradient provides water to 18 residences located along Hope Road in Cranston. This area is serviced from the low service pressure gradient via a booster pump station located on Hope Road. No water storage facilities operate within this pressure zone. The booster pump station is designed to pump water from the 334 gradient to approximately 510 feet.

2.4 Sources of Supply

The KCWA maintains three (3) wellfields within its water supply system. A description of each groundwater supply source is provided below.

Mishnock Wells

The Mishnock Wells are located in Coventry, Rhode Island. The Mishnock Wellfield contains three wells with only one of the wells serving as an active production well (Mishnock Well No. 3). Mishnock Well No. 1 (350 gpm) currently serves as a stand by well for emergency purposes and Mishnock Well No. 2 has been abandoned and replaced by Mishnock Well No. 3. Mishnock Well No. 3 was installed in September 1999 and placed into service in March 2000. Eventually, Mishnock Well No. 1 will be replaced by an additional well (Mishnock Well No. 4) located in the same wellfield.

Mishnock Well No. 3 consists of a gravel-packed well, which was constructed in 1999 by R.E. Chapman. The well is a total depth of 67.5 feet with 10 feet of stainless steel screen. There is a 700 gallon per minute (GPM) submersible pump which is designed to operate at 168 feet total dynamic head (TDH) discharging into an 8-inch ductile iron main. The

well now operates in the range of 500 gpm. Pumping history indicates that Mishnock Well No. 3 produces an average of approximately 218 million gallons of water per year.

Spring Lake Well

The Spring Lake Well is 79 feet deep with 15 feet of screen. This facility consists of a gravel-packed well constructed in 1960 by R.E. Chapman. The Spring Lake Well contains a 1,350 GPM vertical turbine pump designed to operate at 200 feet TDH discharging into an 8-inch ductile iron main. In 1998, the Spring Lake Well was redeveloped and re-screened at a smaller diameter. Currently, the well facility has been reduced in capacity to approximately 300 gpm due to excessive drawdown in the well casing.

Pumping history for the Spring Lake Well indicates that it produces an average of approximately 85.6 million gallons of water per year.

East Greenwich Well

The East Greenwich Well was constructed in 1964 by R.E. Chapman. This well is 118 feet deep with 30 feet of screen. The East Greenwich Well is equipped with a 1,600 GPM vertical turbine pump with a rated capacity of 1,000 GPM at 407 feet TDH. The facility will produce 1,600 gpm when not restricted (i.e. wide open) but is typically throttled back to 1,100 gpm. This facility contains a diesel driven engine to provide stand by power to the well. The East Greenwich Well was redeveloped in 1995.

Pumping history for the East Greenwich Well indicates that it produces an average of approximately 226 million gallons of water per year.

2.5 Interconnections

The primary source of water supply for the KCWA is through wholesale interconnections through Providence Water and the City of Warwick (also indirectly through Providence Water). Following is a description of each wholesale interconnection.

Clinton Avenue Pump Station

The Clinton Avenue Pump Station, located in Scituate, Rhode Island, is the main source of water supply for the KCWA. This facility is fed via a 30-inch water main that is tied into Providence Water's 78-inch aqueduct. The pump station boosts water from the Providence system operating at a hydraulic grade of approximately 233 feet MSL to the KCWA's low service system, which operates at a hydraulic grade of 334 feet MSL. The Clinton Avenue Pump Station contains three 2,800 GPM (4.0 MGD) vertical turbine pumps and a 5,600 GPM (8.0 MGD) emergency backup pump. There is a 30-inch discharge main from the pump station, which diverges into a 20-inch and 16-inch transmission main outside the station on Clinton Avenue. The Tiogue Tank which is set at a higher overflow elevation than the remaining tanks in this zone forces the facility to operate at a somewhat higher TDH which reduces the output capacity minimally.

Pumping history for the Clinton Avenue Pump Station indicates that an average of approximately 2.47 billion gallons of water per year is produced by the facility. This accounts for approximately 70% of the total system demand for the KCWA system.

Oaklawn Avenue Interconnection

The Oaklawn Avenue interconnection is the second wholesale interconnection to Providence Water. It is located near the intersection of Oaklawn Avenue and Old Spring Road in Cranston, Rhode Island. Primarily, the Oaklawn Avenue interconnection services small portions of Cranston and West Warwick. There is a closed gate valve at the intersection of Providence Street and Wakefield Street in West Warwick isolating the interconnection from the KCWA's low service system. Water is supplied from the Oaklawn Avenue interconnection to the KCWA by gravity at a hydraulic grade of approximately 231 feet MSL.

Historic master meter records for the Oaklawn Avenue interconnection indicate that an average of approximately 130 million gallons of water per year is supplied to the KCWA.

Bald Hill Road Pump Station

The Bald Hill Road Pump Station boosts water from a hydraulic grade of 232 feet MSL to 334 feet MSL. This facility is located at the intersection of Bald Hill Road and Centerville Road in Warwick. The Bald Hill Road Pump Station is equipped with three (3) 2,400 GPM centrifugal pumps and one (1) 2,100 GPM centrifugal pump. The source of this water supply originates from the 102-inch aqueduct that feeds the 78-inch aqueduct that is owned and maintained by Providence Water.

The pumping history for one year (September 2001 to August 2002) indicates that an average of approximately 490 million gallons of water per year was supplied by the City of Warwick at the Bald Hill Road Pump Station interconnection.

Potowomut Interconnection (Wholesale)

The KCWA wholesales water to the City of Warwick via the Potowomut interconnection. The Potowomut interconnection is located on LaForge Road in Warwick. This interconnection services approximately 950 residents. Historical records from September 2001 to August 2002 for the Potowomut interconnection indicate that an average of approximately 76.1 million gallons of water per year are wholesaled by the KCWA to the City of Warwick.

2.6 Storage Facilities

The KCWA water supply system consists of ten (10) water storage facilities. The West Street Tank is currently offline. In addition, the Seven Mile Road Reservoirs (Fiskeville Tanks) are routinely isolated from the system due to hydraulics and their proximity to the Clinton Avenue Pumping Station facility. The storage facilities are described as follows:

NAME	TYPE	MATERIAL	YEAR CONSTRUCTED	VOLUME (GAL)	MAX ELEV. (FEET MSL)
Setian Lane / Crompton	Reservoir	Steel	Circa 1969	3,000,000	334
Seven Mile Rd. (No. 1 & No. 2)	Reservoir	Reinforced concrete	1944, 1960	1,500,000 (combined)	334
Frenchtown Rd.	Reservoir	Concrete	1977	1,500,000	334
Tiogue Ave.	Reservoir	Steel	1957	771,000	355
Wakefield St.	Reservoir	Concrete	1990	2,000,000	334
West St.	Reservoir	Steel	1956	1,000,000	334
Read School House Rd.	Reservoir	Steel	1973	1,500,000	430
Technology Park	Elevated Spheroid	Steel	1988	1,500,000	500
Carrs Pond Rd.	Reservoir	Concrete	2001	3,000,000	500

As previously indicated the KCWA has a capital improvement project scheduled for the Clinton Avenue Pump Station. This also includes efforts to increase the local carrying capacity of the water mains in this general area by pipeline replacements with larger mains. As a result of these improvements, the station will increase flow capacity and remove the Tiogue Avenue Tank as the control tank for the facility. A project is planned to localize the area in and around the Tiogue Tank such that the pressure gradient will be maintained with the actual overflow elevation of the Tiogue Tank.

Another, as yet undetermined, low service storage tank will then be utilized to control the operation of the Clinton Avenue facility. The upgrade of this facility will also include new booster pumps, which will be designed to boost water into the Read School House Road Pressure zone. This will also include increasing the hydraulic grade from 430 to 500 feet. This will also necessitate construction of a new water storage tank in the RSHR zone to accommodate this increase in hydraulic grade.

The Knotty Oak Pump Station will likely be obsolete or serve as an emergency backup as a result of these future improvements.

2.7 Pumping Facilities

The KCWA owns and operates three (3) system booster pump stations and two (2) transmission booster pump stations. Following is a brief description of each pumping facility.

Knotty Oak Booster Pump Station (System Booster Pump Station)

The Knotty Oak Booster Pump Station is equipped with two (2) 1,300 GPM pumps and is also equipped with an emergency generator. This pumping facility boosts water from the low service zone to the Read School House Road high service zone.

Johnson Boulevard Booster Pump Station (System Booster Pump Station)

The Johnson Boulevard Booster Pump Station was constructed in order to supply the high service pressure gradient that includes the Technology Park, Arnold Road, Mishnock, and Wood Estates areas of Coventry, East Greenwich, West Warwick, and West Greenwich. This facility contains three vertical turbine pumps. There is one (1) 1,200 GPM pump operating at 175 feet TDH and two (2) 2,300 GPM pumps operating at 208 feet TDH. Emergency power is also provided at this booster pump station. Operation of this facility is controlled from the Technology Park tank.

Hope Road Booster Pump Station (System Booster Pump Station)

The Hope Road Booster Pump Station is equipped with two (2) pump and hydro pneumatic tank arrangements. No permanent stand by power is available at this facility however; the station is fitted with an auxiliary power connection (plug in receptacle for portable generator) for use with a portable generator system. The Hope Road Booster Pump Station was designed to support a customer base of 18 residences located along Hope Road in Cranston. This was extended to an additional home making 18 residences served by this pump station.

Clinton Avenue Pump Station (Transmission Booster Pump Station)

The Clinton Avenue Pump Station serves as the primary interconnection to Providence Water as well as a pump station that boosts water from the Providence Water system to the KCWA low service area. The pump station contains three (3) 2,800 GPM vertical turbine pumps and one (1) 5,600 GPM emergency backup pump.

Bald Hill Road Pump Station (Transmission Booster Pump Station)

The Bald Hill Road Pump Station is an interconnection with the City of Warwick. Water from this interconnection is also obtained from Providence Water. This facility transports water from the City of Warwick to the KCWA water system. The facility contains three (3) 2,400 GPM centrifugal pumps and one (1) 2,100 GPM centrifugal pump. The pump station also has an emergency generator that is capable of operating three pumps during a water supply emergency.

3.0 System Demand

3.1 Demand Allocation Zones

A proper allocation and accounting of consumer water system demands is crucial to the development of an accurate hydraulic model. The demand allocation zones are a method that applies the realistic distribution of consumer system demands to the hydraulic model database. The demand allocation zones correlate the water consumer demands in each portion of the service territory to a particular demand situation (i.e. average day, maximum day, and peak hour).

To establish and allocate the water demands, the service territory was divided into smaller sections referred to as demand allocation zones. The KCWA water distribution system consists of seven (7) cities and towns. In this hydraulic model, each city and town was designated and tracked as a particular demand allocation zone. The hydraulic model therefore contains seven (7) such demand allocation zones. The demand data from water meter records for each city and town was incorporated into each demand allocation zone. The following table depicts the designated demand allocation zones:

DEMAND ALLOCATION ZONE	TOWN
1	West Warwick
2	Warwick
3	West Greenwich
4	East Greenwich
5	Cranston
6	Scituate
7	Coventry

The KCWA provided consumer demand information for all the customer accounts in the water system. This information was provided in the form of consumption data totaling the metered use by each street in each city and town for four (4) years from 1999 to 2003. A typical billing cycle (year) for the KCWA begins on September 1 and ends on August 31. In addition, consumption data for the system's twenty (20) largest users was also provided for the similar four (4) year period.

For the purpose model development, the consumption data from the time period of September 1, 2001 to August 31, 2002 was utilized. This time period was selected for the model base year because of the completeness of the data and due to the fact that the consumer demands best represented the system's water consumption. The water consumption per demand zone was developed by utilizing the total consumption per street throughout the service territory and the total consumption per large user for the time period of September 1, 2001 through August 31, 2002. The following table depicts the breakdown of the consumption totals for the water demand zone allocation for the KCWA water supply system.

DEMAND ALLOCATION ZONE	TOWN / CITY	TOTAL ANNUAL USAGE (GAL)	AVG. DAY + UNMETERED (GPM)
1	West Warwick	888,064,047	1,850.69
2	Warwick	649,312,545	1,353.14
3	West Greenwich	116,041,287	241.83
4	East Greenwich	784,535,993	1,634.94
5	Cranston	100,122,538	208.65
6	Scituate	33,720,401	70.27
7	Coventry	860,640,176	1,793.54
TOTALS		3,432,436,987	7,153.06

The total annual usage from the table above corresponds to an average day rate of 9.40 million gallons per day (MGD). The percentage of unmetered water in the system was determined to be 9.53% that had to be added to the consumption demand data to account for water that is not billed. Adding this unmetered demand brings the total average day demand to 10.30 MGD. A further detailing of the method by which unmetered water was computed is provided in following sections. The 10.30 MGD served as the base demand for the average day system demand that was utilized in the model. It should be noted that the above demands also include the large users.

The large users are included and have been individually identified within each demand zone. Below is a table of the large users with their usage and corresponding demand zone.

SYSTEM LARGE USERS	TOTAL ANNUAL USAGE (GAL)	DEMAND ZONE LOCATION
Riverpoint Lace Works	24,491,764	1
Soluol Chemical Co.	11,335,192	1
Bradford Soap Works	8,660,942	1
WWW Realty Assoc.	10,364,512	1
Kent County Hospital	36,521,743	2
Cowesett Hills	20,023,960	2
Cowesett Hills Assoc.	19,275,960	2
Briarwood Meadows	19,051,560	2
Electro Films	24,654,080	2
AIMCO Warwick LLC	19,714,288	2
Bald Hill Realty	9,364,960	2
Amgen	68,507,824	3
G-Tech	16,074,520	3
ON Semiconductor	194,761,248	4
Amtrol Inc.	19,103,920	4
E & A Portfolio Ltd.	9,925,960	4
Wholesale to Warwick	72,294,200	4
Arkwright Interlaken	12,056,309	5
Clariant	158,473,524	7
Westwood Trailer Park	26,711,080	7
Maple Root Corp.	7,689,440	7
Haven Eldercare of New England	9,646,956	7
Sherwood Valley Trailer Park	9,113,632	7

The above list of large users depicts usage from September 1, 2001 to August 31, 2002, which corresponds to the base year of the average day model.

3.2 Characteristics of Customer Consumption

The consumer classification makeup of each demand allocation zone must be determined in order to develop appropriate usage multipliers for maximum day and peak hour. These usage multipliers are used in the model to develop simulations for maximum day and peak hour demand allocations in each demand zone. Generally speaking, residential users typically have a higher maximum day and average day multiplier than commercial and industrial users because of the irrigation of lawns and larger number of water-using appliances. Low and medium density residential customers have a higher maximum day and average day multiplier than high-density residential customers also due to the irrigation of lawns and large number of water-using appliances.

For a predominately residential community, the maximum day multipliers are characteristically high. These high multipliers are due to lawn watering, bathing and pool facility demands. These activities usually cause greater system demands during the dry, warmer periods of the year. Lawn watering and bathing and pool facility demands have the ability to increase the per capita water demand during periods of the year when maximum day demands occur. Daily peaks during these periods occur in the morning between the hours of 6 AM and 9 AM and again in the evening between the hours of 5 PM and 9 PM. These peaks are highest in the evening hours of the summer months.

The average day and peak hour multipliers vary with consumer classifications and are also dependent on the hour of the day that the peak hour and average day demands occur. Commercial and industrial consumers utilize water on a more consistent basis throughout the day and year. Industries with multiple shifts have a more consistent water use pattern throughout the entire day. Residential consumers have higher peak hour multipliers during the early morning and evening hours.

3.3 Supply/Demand Rates

Consumption data was correlated with actual flow record data from all system sources to develop the maximum day and peak hour demand allocations. All of the water for the KCWA water distribution system is produced via the three wells and received directly from interconnections with Providence Water and the City of Warwick (indirectly through Providence Water). Each of these facilities is metered on a continual basis. Production and source water data was reviewed for the base year in which the consumer demand data was utilized.

The average day demand for the KCWA water distribution system was computed as 7,153.06 GPM (10.30 MGD) which also includes the unaccounted for water volume. This demand serves as the “base demand” and is simply an average of all water

consumption over a 365 day period for the base year. This actual base demand was utilized as the average day demand scenario that was incorporated into the model.

Unaccounted for water volumes, or unmetered water, consist of water used for fire fighting, hydrant flushing, system leaks, theft, or malfunctioning meters. For the time period of September 1, 2001 to August 31, 2002, the unmetered water volume was calculated to be 9.53% or roughly 361 million gallons. This value was calculated by totaling the volume of water produced or purchased during the base year period and compared to the actual water that was billed or accounted for through actual billing records.

Due to the fact that locations of unmetered water are difficult to predict, the calculated value of unmetered water was distributed across the system service territory evenly amongst the demand allocation zones.

Multipliers are developed to represent the fluctuation in water use within the water system on a day when demands vary significantly from the average demand. Varying demand patterns are examined in order to determine the multipliers. This is accomplished primarily by reviewing daily recordings and charts for sources of supply, storage facilities, booster pump stations, and pressure reducing valve stations. Specific multipliers are also developed for each large user and are primarily based on the characteristic of the large user. For example, a large industry will generally have a low multiplier

Historical production data for the past four years from 2000 was evaluated to develop the maximum day and peak hour multipliers. This included identifying maximum days that occurred in the system for each of the four years. These were determined to be as follows.

CALENDAR YEAR	TOTAL ANNUAL PRODUCED (GAL)	AVERAGE DAY CONSUMPTION (GAL)	MAXIMUM 24 HOUR CONSUMPTION (GAL)	DATE OF MAXIMUM DAY
2003	3,509,974,400	9,616,368	15,682,800	07-08-03
2002	3,566,515,100	9,771,274	18,549,700	07-03-02
2001	3,736,988,144	10,238,324	18,583,155	05-12-01
2000	3,448,580,308	9,448,165	18,564,652	07-14-00

A review of the data suggests that a maximum day demand for the system is in the range of 18.6 MGD as evidenced through the years 2000 to 2002. Based on this historical record data, it was determined that a demand of 18.6 MGD would most accurately represent a maximum day demand for the water system. An appropriate maximum day demand factor(s) was developed for the water system, which was determined to be 2.13. This factor is in consideration of the fact that the large users were also assigned varying multipliers based on the type of use of the large user.

The remaining water usage was appropriated to the consumers in the water system. The following table identifies the multipliers for the large users for both maximum day and peak hour.

LARGE WATER USERS	TOTAL ANNUAL USAGE (GAL)	MAP ID LOCATION*	MAXIMUM DAY MULTIPLIER	PEAK HOUR MULTIPLIER
Riverpoint Lace Works	24,491,764	1A	1.5	1.5
Soluol Chemical Co.	11,335,192	1B	1.5	1.5
Bradford Soap Works	8,660,942	1C	1.5	1.5
WWW Realty Assoc.	10,364,512	1D	2.0	2.5
Kent County Hospital	36,521,743	2A	1.5	1.5
Cowesett Hills	20,023,960	2B	2.0	2.5
Cowesett Hills Assoc.	19,275,960	2C	2.0	2.5
Briarwood Meadows	19,051,560	2D	2.0	2.5
Electro Films	24,654,080	2E	1.5	1.5
AIMCO Warwick LLC	19,714,288	2F	2.0	2.5
Bald Hill Realty	9,364,960	2G	2.0	2.0
Amgen	68,507,824	3A	1.2	1.2
G-Tech	16,074,520	3B	1.2	1.2
ON Semiconductor	194,761,248	4A	1.2	1.2
Amtrol Inc.	19,103,920	4B	1.2	1.2
E & A Portfolio Ltd.	9,925,960	4C	1.5	1.5
Wholesale to Warwick	72,294,200	4D	2.0	2.5
Arkwright Interlaken	12,056,309	5A	1.5	1.5
Clariant	158,473,524	7A	1.2	1.2
Westwood Trailer Park	26,711,080	7B	2.0	2.5
Maple Root Corp.	7,689,440	7C	2.0	2.5
Haven Eldercare	9,646,956	7D	2.0	2.5
Sherwood Trailer Park	9,113,632	7E	2.0	2.5

* Identifies the location in the particular demand allocation zone on the node and pipeline plan.

Large Users Multipliers:

The multipliers (maximum day and peak hour) for the large users were developed from a combination of available resources. In addition, C&E's past experience through development of numerous models for water systems has resulted in a database of various user types and multipliers (i.e. hospitals, large residential users, industrial and manufacturing, etc.) that also served as a basis of reference. Generally, large users were classified into specific groups in an attempt to characterize their water usage patterns.

One group, which includes apartment complexes, trailer parks, condominium developments and similar residential users, were assigned similar peaking factors (i.e. 2.0 for maximum day and 2.5 for peak hour) that were developed for the overall model. Facilities such as hospitals and large office facilities were included in a separate group that generally maintains a fairly consistent water use throughout the day and year as

evidenced from historical investigations with these types of facilities. The increase in demand at these facilities is typically associated with increased seasonal irrigation.

Industrial and commercial users, most notably the larger facilities that were included in the model, tend to operate on a consistent basis while employing multiple shifts and weekends. These usage patterns are generally well defined by their average daily demand. Maximum day and peak hour multipliers tend to be lower than residential but do however increase in the summer. This is typically associated with hot weather and increased use and evaporation from cooling towers, increased air-cooling demand and irrigation. Several of the large users were contacted and surveyed as to typical water demand patterns. This included ON Semiconductor, Clariant and Amgen. These contacts were utilized to generally confirm the multipliers that were utilized herein. Largely, it was reported that water use as developed from the average day demand is spread evenly throughout the day. Usually, the bias may be toward a larger demand during the first shift that employs the largest staff.

In order to develop a peak hour demand multiplier it was necessary to review the historical records for the maximum days. This included obtaining flow data for pump stations, tank charts, well stations and other available data related to system operation during this period. Through review of this data it was determined that the peak demand of the water system occurred during a period on July 2, 2002 between the hours of 6:00 AM and 9:00 AM. It was determined that at this time, the total system production from all sources of supply was approximately 18.9 MGD with an aggregate volume of water from storage to the system of approximately 2.3 MGD on an average hourly basis over this three (3) hour period. In other words, during this period the demand was such that the supply rate was exceeded and reserve water capacity was withdrawn from the tanks. The peak hour demand rate was determined to be 22.1 MGD (18.9 supply rate plus 2.3 tank volume plus 0.9 unmetered volume). This translates to a peak hour multiplier of 2.45.

It should be noted that the unaccounted for water is assigned a multiplier of 1.0, as it is not considered to vary significantly with customer demands during maximum day and peak hour periods.

4.0 Hydraulic Model Development

4.1 Representation of System Facilities

All of the major facilities of the KCWA water distribution system are represented in the mathematical hydraulic model. This includes all sources of supply (including wholesale), booster pumping and storage facilities, well stations, pressure reducing valves stations, and pipelines. Information describing the characteristics of each of the water system facilities was acquired from available records of the KCWA. This also included numerous meetings and discussions with KCWA staff during development of the model to verify system geometry including pipeline layout, size, age, material, etc. A general overview of the operation of the system including pump sequencing, booster pump operation, manual and automatic operation of facilities, etc. was also obtained from KCWA staff in order to properly establish initial operating conditions for model scenarios. The following is a general description of the facilities and the method by which they are represented in the WaterCAD hydraulic modeling software program.

Junction Nodes – Junction nodes connect two or more pipe segments together and are a point at which flow is introduced or removed from the water distribution system. This is the location where consumer demands are assigned to the model. A junction node must also be inserted in the model at points where the size, age, or material of a pipe section changes. Junction nodes are assigned a prefix of “J-“ followed by an identifying number. Each junction node is also assigned an elevation in feet (mean Sea Level). These elevations allow the model to compute pressures. Each junction node in the model has been assigned an elevation that was obtained from United States Geological Survey (USGS), 7.5-minute series topographic maps.

In addition, each junction node is further identified in the “Notes” column of the model by an identifying town / city description. For example, “WW” represents West Warwick, “EG” represents East Greenwich, “WAR” represents Warwick, etc. This further aids in identifying the location of a particular junction node.

Pipelines – Pipelines are model elements that have a constant diameter, material, and age and are connected to a junction node. Pipelines can also be connected to tanks, reservoirs, pumps, and PRVs. The characteristics of each pipeline in the model include size or diameter, length, material, age, Hazen-Williams C-Value coefficients, and connection nodes, tanks, reservoirs, pumps, or PRVs.

Each pipe segment was also identified in the model database with material of construction (i.e. Ductile Iron, Cast Iron, etc.) and a general notes column that identifies the town or city in which it is located along with the date of installation.

All pipeline characteristics were obtained from maps and pipeline databases provided by the KCWA. C-values were determined from hydrant flow tests conducted by C&E with

assistance from KCWA staff on December 16, 2003 through December 17, 2003. The results of these tests are provided in Appendix D – Hydrant C-Value Test Results.

The C-values of the pipelines are dependent on the age, material, and diameter of the pipe. Pipes that are made from asbestos cement (AC), polyvinyl chloride (PVC), and ductile iron (DI) have higher C-values due to the fact that they are generally free from corrosion and deterioration. Pipes that are constructed from cast iron (CI) have lower C-values because they are typically older and subject to tuberculation. In addition, CI pipe segments that experience low flows (i.e. in residential neighborhoods or on dead ends) exhibit higher rates of tuberculation and are therefore assigned lower C-values. CI pipes that are considered transmission mains and have higher flow rates typically exhibit less tuberculation and have a higher C-value. The following is table contains the values of C-factors used for the pipelines in the hydraulic model.

AGE	PIPE DIAMETER (INCHES)	AC	CI	PVC	DI
2000-	4,6,8,10,12,16,20			140	140
1990-1999	4,6,8,10,12,16,20			135	135
1980-1989	4,6,8,10,12,16,20			130	130
1970-1979	4,6,8,10,12,16,20	130		125	125
1960-1969	4,6,8,10,12,16,20	125			120
1950-1959	4,6,8,10,12,16,20	120			
1940-1949	4,6	115	50		
	8, 10,12,16,20	115	80		
1930-1939	4,6	110	45		
	8, 10,12,16,20	110	75		
1920-1929	4,6		40		
	8,10,12,16,20		70		
1910-1919	4,6		35		
	8, 10,12,16,20		65		
1880's-1909	4,6		30		
	8, 10,12,16,20		60		

Further, the junction nodes and pipelines in the model are such that they are grouped by a numbering sequence that allows easier identification and relation to the node and pipeline plan. The numbering sequence was performed by town / city in which the junction node or pipeline is located. This assignment of numbers by location allows future expansion for additional pipe and junction node segments within each town / city as the water system is expanded. The following is the general numbering sequence and reserved numbers for future system additions that was incorporated in the model.

CITY / TOWN	PIPE SEGMENT NUMBER	JUNCTION NUMBER
West Warwick	P-1 to P-1999	J-1 to J-1999
Warwick	P-2000 to P-2999	J-2000 to J-2999
West Greenwich	P-3000 to P-3999	J-3000 to J-3999
East Greenwich	P-4000 to P-4999	J-4000 to J-4999
Cranston	P-5000 to P-5999	J-5000 to J-5999
Scituate	P-6000 to P-6999	J-6000 to J-6999
Coventry	P-7000 to P-8999	J-7000 to J-8999

Pressure Reducing Valves (PRVs) – PRV’s are depicted in the model in areas where the water pressure is reduced. A PRV will decrease water pressure from a higher hydraulic gradient to a lower hydraulic gradient. The model incorporates the following PRV stations and labeling scheme.

<u>Label</u>	<u>Description</u>
PRV-1	Love Lane PRV Station
PRV-2	Middle Road PRV Station
PRV-3	Post Road PRV Station
PRV-4	Division Street PRV Station
PRV-5	Centerville Road PRV Station
PRV-6	Cowesett Road PRV Station
PRV-7	Helen Avenue PRV Station
PRV-8	Mishnock Road PRV Station
PRV-9*	Hope Road Booster Pump Station

* The Hope Road Booster Pump Station employs a hydro pneumatic pressure tank. By using a PRV with a downstream setting equal to the boosted pressure, the PRV is acting similar to a booster pump system to this zone. This is a standard method recommended by the software developer to represent and model these types of system facilities.

Reservoirs – In the model, a reservoir represents a source of water that is not readily depleted and offers a constant source of supply. The Providence Water aqueduct is represented as a reservoir set equal to the hydraulic grade of 232 feet. This represents a continual uninterrupted source of supply that would not vary even under extended period simulation. Groundwater wells or similar sources of supply are also represented as reservoirs with fixed elevations. If the reservoir is representing a well, the water elevation in the reservoir is set to the pumping water level in the well casing.

Tanks – A total of ten (10) water storage tanks have been represented in the model. Critical information for each tank includes the type of tank (standpipe, elevated, reservoir), overflow elevation, initial water level, base elevation, height, and diameter. This information is essential especially for performing extended period simulations. The following tanks and labeling scheme have been incorporated into the model.

<u>Label</u>	<u>Description</u>
T-1	Read School House Road Tank
T-2	Tiogue Tank
T-3	Frenchtown Road Tank
T-4	Technology Park Tank
T-5	Carrs Pond Road Tank
T-6	West Street Tank (currently off line)
T-7	Crompton (Setian Lane) Tank
T-8	Wakefield Street Tank
T-9	Seven Mile Road Underground Tank 1
T-10	Seven Mile Road Underground Tank 1

Pumps – Pumps are hydraulic elements that add hydraulic head (power) to the water system. They generally represent booster stations, transmission pump stations and well stations. A number of pump systems have been incorporated into the model to represent the booster and transmission pump systems at Clinton Avenue, Bald Hill Road, Knotty Oak and Johnson Boulevard pump stations. They are also representative of the well fields including Mishnock, East Greenwich and Spring Lake well stations.

Each of the pumps has been represented in the model by a pump curve, which correlates head and flow for a particular pump at each facility. These pump curves were obtained from KCWA records or in certain instances directly from the pump manufacturer. A copy of these pump curves are provided in Appendix E – Booster Pump Station / Well Station Pump Curves.

4.2 Simulations Overview

Demands from the consumption data provided by the KCWA were sorted by street address for each of the Town and Cities. Demands were correlated to a street in each Town or City and applied to the junction nodes in each of the respective demand allocation zones. Large user demands for the large users are individually tracked and assigned to a specific location in the system. The junction node and pipeline database directories for the system serve as the basis of information for input to the model. All information regarding pipelines (i.e. length, diameter, material, C-value, etc.), junction nodes (i.e. demand, elevation, etc.), pumps (i.e. pump curves, etc.), tanks (i.e. overflow elevations, level in tank, etc.), reservoirs (i.e. initial hydraulic grade line, etc.), and PRVs (i.e. hydraulic grade lines, etc.) can be found in Appendix A for the Average Day scenario. Also included in Appendix A is a summary sheet of the Calculation Results for this particular scenario.

When viewing the pipe and junction node result tables, the calculated values consist of each pipeline segment in the system along with a solved flow, head loss, and velocity. The results for each junction node in the system consist of the demand, elevation, solved pressure, pressure head, and hydraulic grade line. It should be noted that a pipeline that

has a “minus” sign preceding the flow rate simply means that flow is occurring in the direction opposite to the direction in which the pipeline was originally entered in the database. As demand situations change the direction of flow in pipelines may also change. This is especially evident when pipelines supplying tanks are filling or draining or when conducting fire flow scenarios.

Appendix B and C contain Calculation Results that summarize both the maximum day and peak hour scenarios. The full output of the junction nodes and pipe segments for these scenarios were not included due to the volume of sheets (over 100 per scenario) but can readily be obtained from the model results files. The critical information for these scenarios is however included which includes total system demand, tank fill and draw rates, reservoir supply rates, booster pumping rates and total dynamic head and PRV flow rates.

It should be noted that all completed simulations were conducted with the West Street tank off line. The Seven Mile Road tanks are normally “locked up” due to the hydraulic influence of the Clinton Avenue Pump Station. These tanks tend to drain under peak demand conditions in the system.

The Warwick Tanks are “floated” at the same elevation of the Providence Water gradient in the main 78 – inch supply aqueduct. These tanks contain an aggregate storage capacity of 12 million gallons.

4.3 Average Day Simulation

A complete summary of this simulation is provided in Appendix A.

Initial Modeling Conditions:

The following is a summary of the initial model conditions (i.e. tank levels, pumps on / off, etc.) categorized by the various pressure gradients:

<u>Facility</u>	<u>Status</u>
<u>Low Service (334') Gradient</u>	
- Setian Lane Tank	332 feet
- Seven Mile Road Reservoirs	334 feet (locked up)
- Frenchtown Road Tank	332 feet
- Tiogue Avenue Tank	333 feet
- Wakefield Street Tank	327 feet
- West Street Tank	Out of Service - Offline
- Mishnock Wells	Off – Inactive
- East Greenwich Well	On – Active
- Spring Lake (Coventry) Well	On – Active
- Clinton Avenue Pump Station	On – Two Pumps Active
- Bald Hill Road Pump Station	On – One Pump Active

Intermediate High (430') Gradient

- Read School House Road Tank 427 feet
- Knotty Oak Pump Station On – One Pump Active

High Service (500') Gradient

- Technology Park Tank 497 feet
- Carrs Pond Tank 487 feet
- Johnson Boulevard Pump Station On – One Pump Active

Low Service Reduced (334') Gradient

- Centerville Road PRV Station Active - Open
- Division Road PRV Station Active - Open
- Middle Road PRV Station Active - Open
- Cowesett Road PRV Station Active - Open
- Love Lane PRV Station Active - Open
- Post Road PRV Station Active - Open

High Service (500') Reduced Gradient

- Mishnock Road PRV Station Active – Open
- Helen Ave. PRV Station Active – Open

Warwick Tanks (232') Gradient

- Warwick Tanks (12 MGD Storage) Active - Open

Hope Road (510') Gradient

- Hope Road Booster Pump Station Active – Hydro pneumatic Tank

Oaklawn (231') Gradient

- Wholesale Connection to Providence Water Active - Open

Results Summary:

This scenario was premised on a total system demand of 7,244 gpm or 10.4 MGD, which is the total system demand. The scenario indicates that the total volume of flow being stored in the tanks (aggregate volume going to storage tanks) is equal to 1,563 gpm or 2.25 MGD. Overall, the hydraulic gradients for the various pressure zones were calculated to be in the range in which these pressure zones are normally operated.

Facility

Output Results Summary

Low Service (334') Gradient

- Setian Lane Tank Filling 407 gpm
- Seven Mile Road Reservoirs “Locked up”
- Frenchtown Road Tank Filling 147 gpm
- Tiogue Avenue Tank Draining 45 gpm
- Wakefield Street Tank Filling 218 gpm

- West Street Tank
 - Mishnock Wells
 - East Greenwich Well
 - Spring Lake (Coventry) Well
 - Clinton Avenue Pump Station
 - Bald Hill Road Pump Station
- Out of Service - offline
Off – inactive
1,130 gpm output
294 gpm output
5,286 gpm output
2,020 gpm output

Intermediate High (430') Gradient

- Read School House Road Tank
 - Knotty Oak Pump Station
- Filling 1,055 gpm
1,331 gpm output

High Service (500') Gradient

- Technology Park Tank
 - Carrs Pond Tank
 - Johnson Boulevard Pump Station
- Draining 277 gpm
Filling 205 gpm
1,080 gpm output

Low Service Reduced (334') Gradient

- Centerville Road PRV Station
 - Division Road PRV Station
 - Middle Road PRV Station
 - Cowesett Road PRV Station
 - Love Lane PRV Station
 - Post Road PRV Station
- Open 176 gpm
Open 327 gpm
Open 275 gpm
Open 199 gpm
Open 324 gpm
Inactive - Closed

High Service (500') Reduced Gradient

- Mishnock Road PRV Station
 - Helen Ave. PRV Station
- Open 272 gpm
Open 45 gpm

Warwick Tanks (232') Gradient

- Warwick Tanks (12 MGD Storage)
- Draining 2,024 gpm (total)

Hope Road (510') Gradient

- Hope Road Booster Pump Station
- 4.45 gpm output

Oaklawn (231') Gradient

- Wholesale Connection to Providence Water
- Open 246 gpm

4.4 Maximum Day Simulation

A complete summary of this simulation is provided in Appendix B.

Initial Modeling Conditions:

The following is a summary of the initial model conditions (i.e. tank levels, pumps on / off, etc.) categorized by the various pressure gradients:

<u>Facility</u>	<u>Status</u>
<u>Low Service (334') Gradient</u>	
- Setian Lane Tank	332 feet
- Seven Mile Road Reservoirs	334 feet (locked up)
- Frenchtown Road Tank	332 feet
- Tiogue Avenue Tank	333 feet
- Wakefield Street Tank	327 feet
- West Street Tank	Out of Service - Offline
- Mishnock Wells	Off – Inactive
- East Greenwich Well	On – Active
- Spring Lake (Coventry) Well	On – Active
- Clinton Avenue Pump Station	On – Three Pumps Active
- Bald Hill Road Pump Station	On – Three Pumps Active
<u>Intermediate High (430') Gradient</u>	
- Read School House Road Tank	427 feet
- Knotty Oak Pump Station	On – One Pump Active
<u>High Service (500') Gradient</u>	
- Technology Park Tank	497 feet
- Carrs Pond Tank	487 feet
- Johnson Boulevard Pump Station	On – One Pump Active
<u>Low Service Reduced (334') Gradient</u>	
- Centerville Road PRV Station	Active - Open
- Division Road PRV Station	Active - Open
- Middle Road PRV Station	Active - Open
- Cowesett Road PRV Station	Active - Open
- Love Lane PRV Station	Active - Open
- Post Road PRV Station	Active - Open
<u>High Service (500') Reduced Gradient</u>	
- Mishnock Road PRV Station	Active – Open
- Helen Ave. PRV Station	Active – Open
<u>Warwick Tanks (232') Gradient</u>	
- Warwick Tanks (12 MGD Storage)	Active - Open
<u>Hope Road (510') Gradient</u>	
- Hope Road Booster Pump Station	Active – Hydro pneumatic Tank
<u>Oaklawn (231') Gradient</u>	
- Wholesale Connection to Providence Water	Active - Open

Results Summary:

This scenario was premised on a total system demand of 13,543 gpm or 19.5 MGD, which is the system demand including unmetered water volume. The scenario indicates that the total volume of flow being depleted from the tanks (aggregate volume draining out of storage tanks) is equal to 407 gpm or 0.59 MGD. Overall, the hydraulic gradients for the various pressure zones were calculated to be in the range in which these pressure zones are normally operated.

Facility

Output Results Summary

Low Service (334') Gradient

- Setian Lane Tank	Filling 1,414 gpm
- Seven Mile Road Reservoirs	“Locked up”
- Frenchtown Road Tank	Draining 140 gpm
- Tiogue Avenue Tank	Draining 758 gpm
- Wakefield Street Tank	Draining 693 gpm
- West Street Tank	Out of Service - offline
- Mishnock Wells	Off – inactive
- East Greenwich Well	1,144 gpm output
- Spring Lake (Coventry) Well	298 gpm output
- Clinton Avenue Pump Station	6,400 gpm output
- Bald Hill Road Pump Station	5,037 gpm output

Intermediate High (430') Gradient

- Read School House Road Tank	Filling 873 gpm
- Knotty Oak Pump Station	1,433 gpm output

High Service (500') Gradient

- Technology Park Tank	Draining 692 gpm
- Carrs Pond Tank	Draining 395 gpm
- Johnson Boulevard Pump Station	1,110 gpm output

Low Service Reduced (334') Gradient

- Centerville Road PRV Station	Open 425 gpm
- Division Road PRV Station	Open 483 gpm
- Middle Road PRV Station	Open 367 gpm
- Cowesett Road PRV Station	Open 530 gpm
- Love Lane PRV Station	Open 275 gpm
- Post Road PRV Station	Open 537 gpm

High Service (500') Reduced Gradient

- Mishnock Road PRV Station	Open 293 gpm
- Helen Ave. PRV Station	Open 343 gpm

Warwick Tanks (232') Gradient

- Warwick Tanks (12 MGD Storage) Draining 5,043 gpm (total)

Hope Road (510') Gradient

- Hope Road Booster Pump Station 9.04 gpm output

Oaklawn (231') Gradient

- Wholesale Connection to Providence Water Open 501 gpm

4.5 Peak Hour Simulation

A complete summary of this simulation is provided in Appendix B.

Initial Modeling Conditions:

The following is a summary of the initial model conditions (i.e. tank levels, pumps on / off, etc.) categorized by the various pressure gradients:

Facility

Status

Low Service (334') Gradient

- Setian Lane Tank	332 feet
- Seven Mile Road Reservoirs	334 feet (locked up)
- Frenchtown Road Tank	332 feet
- Tiogue Avenue Tank	333 feet
- Wakefield Street Tank	327 feet
- West Street Tank	Out of Service - Offline
- Mishnock Wells	Off – Inactive
- East Greenwich Well	On – Active
- Spring Lake (Coventry) Well	On – Active
- Clinton Avenue Pump Station	On – Three Pumps Active
- Bald Hill Road Pump Station	On – Three Pumps Active

Intermediate High (430') Gradient

- Read School House Road Tank	427 feet
- Knotty Oak Pump Station	On – One Pump Active

High Service (500') Gradient

- Technology Park Tank	497 feet
- Carrs Pond Tank	487 feet
- Johnson Boulevard Pump Station	On – One Pump Active

Low Service Reduced (334') Gradient

- Centerville Road PRV Station	Active - Open
- Division Road PRV Station	Active - Open
- Middle Road PRV Station	Active - Open
- Cowesett Road PRV Station	Active - Open

- Love Lane PRV Station Active - Open
- Post Road PRV Station Active - Open

High Service (500') Reduced Gradient

- Mishnock Road PRV Station Active – Open
- Helen Ave. PRV Station Active – Open

Warwick Tanks (232') Gradient

- Warwick Tanks (12 MGD Storage) Active - Open

Hope Road (510') Gradient

- Hope Road Booster Pump Station Active – Hydro pneumatic Tank

Oaklawn (231') Gradient

- Wholesale Connection to Providence Water Active - Open

Results Summary:

This scenario was premised on a total system demand of 15,315 gpm or 22.1 MGD, which is the system demand including unmetered water volume. The scenario indicates that the total volume of flow being depleted from the tanks (aggregate volume draining out of storage tanks) is equal to 1,894 gpm or 2.7 MGD. Overall, the hydraulic gradients for the various pressure zones were calculated to be in the range in which these pressure zones are normally operated.

Facility

Output Results Summary

Low Service (334') Gradient

- | | |
|-------------------------------|--------------------------|
| - Setian Lane Tank | Filling 1,200 gpm |
| - Seven Mile Road Reservoirs | “Locked up” |
| - Frenchtown Road Tank | Draining 568 gpm |
| - Tiogue Avenue Tank | Draining 1,030 gpm |
| - Wakefield Street Tank | Draining 950 gpm |
| - West Street Tank | Out of Service - offline |
| - Mishnock Wells | Off – inactive |
| - East Greenwich Well | 1,150 gpm output |
| - Spring Lake (Coventry) Well | 302 gpm output |
| - Clinton Avenue Pump Station | 6,525 gpm output |
| - Bald Hill Road Pump Station | 5,095 gpm output |

Intermediate High (430') Gradient

- | | |
|-------------------------------|------------------|
| - Read School House Road Tank | Filling 804 gpm |
| - Knotty Oak Pump Station | 1,444 gpm output |

High Service (500') Gradient

- | | |
|------------------------|------------------|
| - Technology Park Tank | Draining 819 gpm |
| - Carrs Pond Tank | Draining 567 gpm |

- Johnson Boulevard Pump Station 1,106 gpm output

Low Service Reduced (334') Gradient

- Centerville Road PRV Station Open 429 gpm
- Division Road PRV Station Open 582 gpm
- Middle Road PRV Station Open 447 gpm
- Cowesett Road PRV Station Open 515 gpm
- Love Lane PRV Station Open 433 gpm
- Post Road PRV Station Open 615 gpm

High Service (500') Reduced Gradient

- Mishnock Road PRV Station Open 340 gpm
- Helen Ave. PRV Station Open 400 gpm

Warwick Tanks (232') Gradient

- Warwick Tanks (12 MGD Storage) Draining 5,104 gpm (total)

Hope Road (510') Gradient

- Hope Road Booster Pump Station 10.31 gpm output

Oaklawn (231') Gradient

- Wholesale Connection to Providence Water Open 571 gpm

5.0 Model Calibration

5.1 General

As stated previously, every effort was made to mathematically reproduce the KCWA's water supply and distribution system in such a manner as to realistically simulate existing physical operation of the water system under various flow and operating conditions. The completed hydraulic model as described herein accurately represents the physical system infrastructure of the water system facilities in order to perform simulations to realistically simulate the existing operation practices of the KCWA water supply and distribution system. To accomplish this task, all readily available system operation data was reviewed (i.e. flow records, consumption data, drawings and cut sheets of infrastructure, mapping, etc.) and applied to each scenario in the model in order to represent actual system operating conditions. This was supplemented by information obtained from operations personnel. The data provided by the KCWA was applied to an average day, maximum day and peak hour scenario in the model.

Calibration is achieved by comparing results of various scenarios in the model with the performance of the physical system. Actual recorded system conditions (i.e. flow records, tank charts, pressure readings, etc.) are compared to calculated values in the model during a time when the system is most closely experiencing a particular demand scenario. The model is considered "calibrated" when it is concluded that the actual physical conditions as evidenced through historic and current records are within an acceptable tolerance to the model output results. According to the American Water Works Association (AWWA) *Distribution Network Analysis for Water Utilities*, a model is acceptably calibrated if "... it predicts performance within 5 to 10 percent of observed performance". For purposes of completing and calibrating the model for the KCWA system, it is expected that the completed model is able to predict observed performance in the system to 5 percent or better thus achieving a relative accuracy of upwards of 95 percent.

An inherent problem in calibrating a hydraulic computer model is the vast number of system infrastructure changes that occur routinely through ongoing capital and infrastructure improvement projects. For example, when reviewing historic data with which to compare computed results, it is critical to consider that various improvements are likely to have occurred since the recording of the data. This may impact the results in that the improvements are likely to have been included in the model yet the historical data was collected when these improvements were not in place. Most critical are pipeline improvement projects involving large water transmission mains. Such improvements can dramatically alter the flow patterns throughout the water system. Nevertheless an attempt was made to correlate historic data with actual model results in order to achieve a relative accuracy of the model that is consistent with standard hydraulic modeling practices.

For purposes of calibration, it is ideal to collect operational data during the periods at which the maximum day and peak hour demands occur. The system experiences the greatest head losses at times when these maximum demand conditions occur and are most measurable by the model. The model calculates head losses at specific demand conditions therefore, field measurements of operational conditions will be more accurate due to the fact that there is more head loss during periods at which the flows are highest. To establish data in the base scenario of the model, it is best to collect physical data when demands are low to ensure that interference with system operations is minimized.

As part of the model verification and calibration process, C&E was provided with field test results from a series of hydrant tests conducted by KCWA personnel from 2000 and 2001 in East Greenwich, West Greenwich and Coventry. This data was correlated by street location and was completed on various fire hydrants throughout the system. As a means to compare model results and to obtain a level of verification, a comparison was made to the recorded static pressure obtained from the field test results and that predicted by the model under an average day simulation. It should be noted that historical records were available as to the tank level, pumps operating, etc. at the time of the tests, however it is considered impractical to attempt to correlate the actual flow test data to predicted model results. This is due to the fact that since the tests were completed (two years previous) substantial infrastructure improvements were conducted which were included in the model thus making calibration with the use of these actual flow tests impossible.

The following table illustrates a comparison of a random selection of twenty two (22) historical hydrant flow test data compared to predicted model results for an Average Day simulation. The nearest junction node to the test hydrant was utilized for purposes of comparison. In general, the percentage of accuracy was in the range of 93 to near 100 percent with an average relative accuracy of 96.1 percent.

STREET	CITY/TOWN	STATIC PRESSURE* (PSI)	CALCULATED MODEL PRESSURE (PSI)	JUNCTION NODE**	% ACCURACY
Brayton St.	EG	68	65.71	J-4468	96.6
Brisas Cir.	EG	94	88.38	J-4422	94.0
		94	87.95	J-4424	93.6
		94	91.41	J-4425	97.2
Chief Botelho Ct.	EG	75	71.87	J-4133	95.8
		75	71.44	J-4132	95.3
Arrowhead Tr.	EG	134	127.59	J-4047	95.2
		134	128.01	J-4566	95.5
Boxwood Dr.	EG	73	70.69	J-4239	96.8
		73	68.53	J-4240	93.9
Bailey Dr.	WG	72	74.76	J-3008	96.2
		72	74.76	J-3009	96.2
Lake Dr./Cambio Ct.	WG	44	43.18	J-3023	98.1
Lake Dr./Pine Tree Ln.	WG	68	70.44	J-3025	96.4
Mohawk Tr.	WG	62	65.24	J-3014	94.8
Old Hickory Rd.	WG	61	58.32	J-3019	95.6
Mishnock Rd./Ragnell Rd.	WG	71	74.33	J-3030	95.3
Chandler Dr./Daniel Dr.	COV	62	60.22	J-7159	97.1
Diane Dr.	COV	67	69.50	J-7165	96.3
Gail Ct.	COV	82	81.65	J-7201	99.6
		82	85.17	J-7200	96.1
Lloyd Dr./Alvero Rd.	COV	76	77.04	J-7193	98.6

Average 96.1

** The location of the hydrant was correlated to the nearest junction node in the model.

* Hydrant flow tests were conducted by KCWA from October 2000 to June 2001.

Further verification as to the relative accuracy of the model was achieved through a review of the historical pump flow and head and tank chart data supplied by KCWA. The comparison of the computer outputs from the major pumping stations such as Clinton Avenue have been found to be near accurate to historic data when comparing station output and total system head with various combinations of pumps running. This is further affirmed through additional comparison of results to other booster pump stations and tank charts for rates of tanks filling and draining.

Appendix A
Average Day Summary Results
Pipeline Database Results
Junction Node Database Results

Calculation Results Summary

Scenario: AD Run 2

[Analysis Started]

[Steady State]

0:00:00 Balanced after 8 trials; relative flow change = 0.000392

Flow Summary

Flow Supplied 8,981.87 gpm

Flow Demanded 7,269.62 gpm

Flow Stored 1,712.09 gpm

0:00:00 Reservoir R-1 is closed
0:00:00 Reservoir R-3 is closed
0:00:00 Reservoir R-2 is closed
0:00:00 Reservoir R-5 is emptying
0:00:00 Reservoir R-6 is emptying
0:00:00 Reservoir R-7 is emptying
0:00:00 Reservoir R-8 is emptying
0:00:00 Reservoir R-9 is emptying
0:00:00 Reservoir R-10 is emptying
0:00:00 Tank T-1 is filling at 37.00 ft
0:00:00 Tank T-2 is emptying at 23.00 ft
0:00:00 Tank T-3 is filling at 48.00 ft
0:00:00 Tank T-4 is emptying at 147.00 ft
0:00:00 Tank T-6 is closed at 44.00 ft
0:00:00 Tank T-7 is filling at 18.00 ft
0:00:00 Tank T-8 is filling at 63.00 ft
0:00:00 Tank T-9 is closed at 11.00 ft
0:00:00 Tank T-10 is closed at 11.00 ft
0:00:00 Tank T-5 is filling at 69.00 ft
0:00:00 PRV PRV-7 active
0:00:00 PRV PRV-2 active
0:00:00 PRV PRV-3 closed
0:00:00 PRV PRV-4 active
0:00:00 PRV PRV-8 active
0:00:00 PRV PRV-6 active
0:00:00 PRV PRV-1 active
0:00:00 PRV PRV-5 active

[Analysis Ended]

Scenario: AD Run 2
Steady State Analysis
Pump Report

Label	Elevation (ft)	Control Status	Intake Pump Grade (ft)	Discharge Pump Grade (ft)	Discharge (gpm)	Pump Head (ft)	Description	Notes
PMP-1	259.00	Off	235.00	337.77	0.00	0.00	Mishnock Well 1	COV
PMP-2	259.00	Off	259.00	337.77	0.00	0.00	Mishnock Well 2 (Abandoned)	COV
PMP-3	259.00	Off	246.24	337.77	0.00	0.00	Mishnock Well 3	COV
PMP-4	249.80	On	229.75	339.19	293.85	109.44	Coventry/Spring Lake Well	COV
PMP-5	15.50	On	15.44	337.79	1,129.96	322.35	EG Well Station 1	EG
PMP-6	273.00	On	355.39	512.00	1,331.34	156.61	Pump 1 Knotty Oak Rd. PS	COV
PMP-9	250.00	On	330.85	518.90	1,080.50	188.05	Pump 3 Johnson Blvd. PS	COV
PMP-10	250.00	Off	331.61	518.02	0.00	0.00	Pump 2 Johnson Blvd. PS	COV
PMP-11	250.00	Off	331.61	518.02	0.00	0.00	Pump 1 Johnson Blvd. PS	COV
PMP-12	273.00	Off	361.04	504.86	0.00	0.00	Pump 2 Knotty Oak Rd. PS	COV
PMP-13	182.00	On	232.11	415.64	2,643.93	183.53	Pump 4 Clinton Ave. PS	SCIT
PMP-14	182.00	On	232.12	415.65	2,643.93	183.53	Pump 3 Clinton Ave. PS	SCIT
PMP-15	182.00	Off	233.83	411.09	0.00	0.00	Pump 2 Clinton Ave. PS	SCIT
PMP-16	182.00	Off	233.83	411.09	0.00	0.00	Pump 1 Clinton Ave. PS	SCIT
PMP-17	130.00	On	226.87	354.74	2,020.89	127.88	Pump 1 Bald Hill Rd. PS	WAR
PMP-18	130.00	Off	231.05	334.80	0.00	0.00	Pump 2 Bald Hill Rd. PS	WAR
PMP-19	130.00	Off	231.05	334.80	0.00	0.00	Pump 4 Bald Hill Rd. PS	WAR
PMP-20	130.00	Off	231.05	334.80	0.00	0.00	Pump 3 Bald Hill Rd. PS	WAR

**Scenario: AD Run 2
Steady State Analysis
Reservoir Report**

Label	Elevation (ft)	Zone	Inflow (gpm)	Calculated Hydraulic Grade (ft)	Description	Notes
R-1	235.00	Zone - 1	0.00	235.00	Mishnock Well 1	COV
R-2	259.00	Zone - 1	0.00	259.00	Mishnock Well 2 (Abandoned)	COV
R-3	246.24	Zone - 1	0.00	246.24	Mishnock Well 3	COV
R-5	229.80	Zone - 1	-293.85	229.80	Coventry/Spring Lake Well	COV
R-6	15.50	Zone - 1	-1,129.96	15.50	EG Well Station 1	EG
R-7	231.00	Zone - 5	-245.79	231.00	Master Meter from Providence	CRA
R-8	234.00	Zone - 1	-5,287.85	234.00	Providence Water Aqueduct	SCIT
R-9	232.00	Zone - 6	-840.26	232.00	Warwick Tanks	WAR
R-10	232.00	Zone - 6	-1,184.15	232.00	Warwick Tanks	WAR

**Scenario: AD Run 2
Steady State Analysis
Tank Report**

Label	Zone	Base Elevation (ft)	Minimum Elevation (ft)	Initial HGL (ft)	Maximum Elevation (ft)	Tank Diameter (ft)	Inflow (gpm)	Current Status	Calculated Hydraulic Grade (ft)	Calculated Percent Full (%)	Description	Notes
T-1	Zone - 7	390.00	410.00	427.00	430.00	80.00	1,055.95	Filling	427.00	85.0	Read School House Rd. Tank 1.5 MG	COV
T-2	Zone - 1	310.00	330.00	333.00	355.00	58.00	-44.68	Draining	333.00	12.0	Tiogou Tank 0.771 MG	COV
T-3	Zone - 1	284.00	304.00	332.00	334.00	73.00	147.48	Filling	332.00	93.3	Frenchtown Rd. Tank 1.5 MG	EG
T-4	Zone - 2	350.00	370.00	497.00	500.00	85.25	-277.47	Draining	497.00	97.7	Technology Park Tank	WG
T-5	Zone - 2	418.00	438.00	487.00	500.00	80.00	205.03	Filling	487.00	79.0	Carrs Pond Rd. Tank	WG
T-6	Zone - 1	284.00	304.00	328.00	334.00	58.00	0.00	Steady	328.00	80.0	West Street Tank 1 MG	WW
T-7	Zone - 1	314.00	324.00	332.00	334.00	160.00	407.23	Filling	332.00	80.0	Crompton Tank	WW
T-8	Zone - 1	264.00	284.00	327.00	334.00	70.00	218.55	Filling	327.00	86.0	Wakefield St. Tank	WW
T-9	Zone - 1	323.00	328.00	334.00	334.00	N/A	0.00	Full	334.00	100.0	Seven Mile Rd. Underground Tank 1, 0.5 MG	CRA
T-10	Zone - 1	323.00	328.00	334.00	334.00	N/A	0.00	Full	334.00	100.0	Seven Mile Rd. Underground Tank 2, 1 MG	CRA

**Scenario: AD Run 2
Steady State Analysis
Valve Report**

Label	Elevation (ft)	Diameter (in)	Initial HGL (ft)	Initial Valve Status	Control Status	Discharge (gpm)	From Pressure (psi)	To Pressure (psi)	From HGL (ft)	To HGL (ft)	Headloss (ft)	Description
PRV-1	204.00	6.0	270.00	Active	Throttling	323.77	56.83	28.57	335.35	270.02	65.33	Love Ln. PRV
PRV-2	201.00	6.0	270.00	Active	Throttling	275.32	55.88	29.86	330.16	270.02	60.14	Middle Rd. PRV
PRV-3	30.00	6.0	268.00	Active	Closed	0.00	132.40	132.35	336.02	335.90	0.00	Post Rd. PRV
PRV-4	148.00	6.0	270.00	Active	Throttling	328.48	78.75	52.80	330.01	270.04	59.97	Division St. PRV
PRV-5	35.00	6.0	268.00	Active	Throttling	175.49	122.28	100.84	317.62	268.08	49.54	Centerville Rd. PRV
PRV-6	125.00	6.0	268.00	Active	Throttling	199.18	83.54	61.89	318.09	268.05	50.04	Cowesett Rd. PRV
PRV-7	280.00	6.0	430.00	Active	Throttling	45.40	101.02	64.92	513.48	430.05	83.43	Helen Ave. PRV
PRV-8	330.00	6.0	435.00	Active	Throttling	271.58	72.67	45.44	497.96	435.04	62.92	Mishnock Rd. PRV
PRV-9	281.00	6.0	510.00	Active	Inactive	4.44	55.76	55.76	409.87	409.87	0.00	Hope Rd. Booster PS

KCWA Model
Pipeline Database
Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-1	Carriage Rd.	8	Asbestos Cement	130	WW 1975	330	17.76	0.110	0.000
P-2	Little John La.	8	Ductile Iron	135	WW 1991	429	7.96	0.050	0.000
P-3	Whispering Pines Ct.	8	Ductile Iron	135	WW 1991	258	1.54	0.010	0.000
P-4	Little John La.	8	Ductile Iron	135	WW 1991	639	4.88	0.030	0.000
P-5	Medeival Way	8	Ductile Iron	135	WW 1991	579	22.77	0.150	0.010
P-6	Medeival Way	8	Ductile Iron	135	WW 1991	307	26.12	0.170	0.010
P-7	Longbow Dr.	8	Ductile Iron	135	WW 1991	314	3.46	0.020	0.000
P-8	Kings Forest	8	Ductile Iron	135	WW 1991	962	6.99	0.040	0.000
P-9	Longbow Dr.	8	Ductile Iron	135	WW 1991	367	13.75	0.090	0.000
P-10	Longbow Dr.	8	Ductile Iron	135	WW 1991	584	5.07	0.030	0.000
P-11	Cobblestone La.	8	Ductile Iron	135	WW 1991	288	20.35	0.130	0.000
P-12	Drawbridge Dr.	16	Ductile Iron	135	WW 1991	294	124.44	0.200	0.000
P-13	Medeival Way	8	Ductile Iron	135	WW 1991	699	21.12	0.130	0.010
P-14	Medeival Way	8	Ductile Iron	135	WW 1991	842	12.13	0.080	0.000
P-15	Longbow Dr.	8	Ductile Iron	135	WW 1991	313	19.20	0.120	0.000
P-16	Enfield Dr.	6	Asbestos Cement	120	WW 1950	1389	-27.03	0.310	0.150
P-17	Drawbridge Dr.	16	Ductile Iron	135	WW 1991	402	133.94	0.210	0.010
P-18	Drawbridge Dr.	16	Ductile Iron	135	WW 1991	791	102.55	0.160	0.010
P-20	Medeival Way	8	Ductile Iron	135	WW 1991	367	14.91	0.100	0.000
P-21	Longbow Dr.	8	Ductile Iron	135	WW 1991	579	20.43	0.130	0.010
P-22	Crossbow La.	8	Asbestos Cement	130	WW 1973	905	57.18	0.360	0.080
P-23	Crossbow La.	8	Ductile Iron	135	WW 1991	317	24.30	0.160	0.010
P-24	Crossbow La.	8	Ductile Iron	135	WW 1991	274	43.19	0.280	0.010
P-25	Crossbow La.	8	Ductile Iron	135	WW 1991	309	43.36	0.280	0.020
P-26	New London Tpk.	12	Asbestos Cement	125	WW 1960	467	81.59	0.230	0.010
P-27	Green Bush Rd.	12	Asbestos Cement	130	WW 1973	130	-80.05	0.230	0.000
P-29	Rotary Dr.	8	Asbestos Cement	125	WW 1962	301	10.05	0.060	0.000
P-30	Chamber Way	6	Asbestos Cement	125	WW 1968	331	1.54	0.020	0.000
P-31	Rotary Dr.	8	Asbestos Cement	125	WW 1962	914	13.12	0.080	0.010
P-32	Rotary Dr.	8	Asbestos Cement	125	WW 1969	400	-11.67	0.070	0.000
P-33	Exchange Rd.	8	Asbestos Cement	125	WW 1969	377	40.61	0.260	0.020
P-34	Jaycee Dr.	8	Asbestos Cement	125	WW 1962	753	29.12	0.190	0.020
P-35	Lions Dr.	8	Asbestos Cement	125	WW 1969	573	-6.10	0.040	0.000
P-36	Kiwanis Dr.	8	Asbestos Cement	125	WW 1969	567	26.33	0.170	0.010
P-37	Lions Dr.	8	Asbestos Cement	125	WW 1969	264	21.77	0.140	0.000
P-38	Service Rd.	8	Asbestos Cement	125	WW 1989	652	11.13	0.130	0.010
P-39	Exchange Rd.	6	Asbestos Cement	125	WW 1969	617	-20.56	0.130	0.010
P-40	Service Rd.	8	Ductile Iron	135	WW 1991	276	31.71	0.200	0.010
P-41	Quill Dr.	6	Ductile Iron	135	WW 1991	612	1.54	0.020	0.000
P-42	Service Rd.	8	Ductile Iron	135	WW 1991	429	27.10	0.170	0.010
P-43	Quiver Dr.	8	Ductile Iron	135	WW 1991	725	1.71	0.010	0.000
P-44	Service Rd.	8	Ductile Iron	135	WW 1991	400	23.85	0.150	0.010
P-45	Exchange Rd.	8	Asbestos Cement	125	WW 1969	293	-9.38	0.060	0.000
P-46	Providence St.	12	Ductile Iron	140	WW 2003	272	69.22	0.200	0.000
P-48	Green Bush Rd.	16	Asbestos Cement	130	WW 1973	990	-108.88	0.170	0.010
P-50	Green Bush Rd.	16	Asbestos Cement	130	WW 1973	1736	170.19	0.270	0.040
P-52	Acorn La.	8	Asbestos Cement	130	WW 1973	455	-12.23	0.090	0.000
P-53	Acorn La.	8	Asbestos Cement	130	WW 1973	382	-5.31	0.030	0.000
P-54	Acorn La.	8	Asbestos Cement	130	WW 1973	306	18.84	0.120	0.000
P-55	Acorn La.	8	Asbestos Cement	130	WW 1973	1405	-4.55	0.030	0.000
P-57	Cone Dr.	8	Asbestos Cement	130	WW 1973	345	9.17	0.060	0.000
P-58	Cone Dr.	8	Asbestos Cement	130	WW 1973	1182	5.33	0.030	0.000
P-59	Bramble Dr.	8	Asbestos Cement	130	WW 1973	1535	5.38	0.030	0.000
P-62	Friar Tuck La.	8	Asbestos Cement	130	WW 1973	301	1.54	0.010	0.000
P-63	Nottingham Dr.	8	Asbestos Cement	130	WW 1973	727	12.22	0.080	0.000
P-64	Nottingham Dr.	8	Asbestos Cement	130	WW 1973	1677	18.38	0.120	0.020
P-65	J.P. Murphy Hwy	16	Asbestos Cement	130	WW 1980	3191	35.45	0.060	0.000
P-66	J.P. Murphy Hwy	16	Asbestos Cement	130	WW 1980	1827	-23.34	0.040	0.000
P-67	J.P. Murphy Hwy	16	Asbestos Cement	130	WW 1980	3728	24.68	0.040	0.000
P-68	J.P. Murphy Hwy	16	Asbestos Cement	130	WW 1980	1587	21.60	0.030	0.000
P-69	Keys Way	12	Ductile Iron	135	WW 1998	1157	1.54	0.000	0.000
P-70	Providence St.	12	Cast iron	80	WW 1968	823	97.79	0.280	0.070
P-71	Crudale Rd.	12	Ductile Iron	140	WW 2000	256	5.96	0.020	0.000
P-72	Szydio Dr.	12	Ductile Iron	140	WW 2000	841	2.88	0.010	0.000
P-73	Lacroix Dr.	12	Ductile Iron	140	WW 2000	783	1.54	0.000	0.000
P-74	Crudale Rd.	12	Ductile Iron	140	WW 2000	628	1.54	0.000	0.000
P-75	Energy Way	12	Ductile Iron	140	WW 2000	1034	10.57	0.030	0.000
P-76	Crudale Dr.	12	Ductile Iron	140	WW 2000	1390	9.03	0.030	0.000
P-78	Draw Bridge Dr.	16	Ductile Iron	135	WW 1991	213	229.62	0.370	0.010
P-79	Legend Way	16	Ductile Iron	135	WW 1991	273	258.55	0.410	0.010
P-80	Easement Connection	16	Ductile Iron	135	WW 1998	1838	36.99	0.060	0.000
P-81	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	100	-113.26	0.320	0.000
P-82	Anderson Ave.	6	Asbestos Cement	115	WW 1941	239	6.16	0.070	0.000
P-83	Forest Ave.	2	Copper	135	WW 1941	274	0.38	0.040	0.000
P-85	Fox Run	6	Ductile Iron	135	WW 1990	392	1.54	0.020	0.000
P-86	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	117	31.00	0.050	0.000
P-87	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	247	9.23	0.030	0.000
P-88	Flanders Dr.	12	Ductile Iron	140	WW 2000	604	20.22	0.060	0.000
P-89	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	389	-60.10	0.170	0.000
P-90	Forest Ave.	6	Asbestos Cement	115	WW 1941	259	-1.16	0.010	0.000
P-91	Victory Ave.	6	Asbestos Cement	115	WW 1941	406	-2.70	0.030	0.000
P-92	Setian Ln.	12	Asbestos Cement	125	WW 1969	764	35.17	0.100	0.000
P-94	Elizabeth Ct.	8	Asbestos Cement	130	WW 1970	561	1.54	0.010	0.000

KCWA Model
Pipeline Database
Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-95	Royal Dr.	8	Asbestos Cement	130	WW 1977	1003	1.54	0.010	0.000
P-96	Hatheway Dr.	8	Asbestos Cement	130	WW 1978	1415	0.00	0.000	0.000
P-97	Carolyn Dr.	8	Asbestos Cement	130	WW 1978	528	-0.96	0.010	0.000
P-98	Carolyn Dr.	8	Asbestos Cement	130	WW 1978	687	0.58	0.000	0.000
P-99	Kimberly Ln.	8	Asbestos Cement	130	WW 1975	456	-2.50	0.020	0.000
P-100	Kimberly Ln.	6	Asbestos Cement	130	WW 1975	901	1.54	0.020	0.000
P-101	Kimberly Ln.	8	Asbestos Cement	130	WW 1975	247	3.66	0.020	0.000
P-102	Anderson Ave.	6	Asbestos Cement	115	WW 1941	289	-4.24	0.050	0.000
P-103	Turner Dr.	8	Asbestos Cement	130	WW 1975	1029	33.22	0.210	0.030
P-104	Spruce Ct	6	Asbestos Cement	130	WW 1978	196	1.54	0.020	0.000
P-105	Turner Dr.	8	Asbestos Cement	130	WW 1975	325	-7.69	0.050	0.000
P-106	Turner Dr.	8	Asbestos Cement	130	WW 1975	290	30.14	0.190	0.010
P-107	Michael St.	6	Asbestos Cement	130	WW 1971	291	20.91	0.240	0.020
P-108	Michael St.	6	Asbestos Cement	130	WW 1971	349	1.54	0.020	0.000
P-109	Claire St.	6	Asbestos Cement	125	WW 1964	521	17.83	0.200	0.020
P-110	Claire St.	6	Asbestos Cement	125	WW 1964	322	14.75	0.170	0.010
P-111	Edwards Ct.	6	Asbestos Cement	125	WW 1967	185	1.54	0.020	0.000
P-112	New London Tpk.	12	Asbestos Cement	120	WW 1959	992	156.10	0.440	0.090
P-113	New London Tpk.	12	Asbestos Cement	120	WW 1959	90	0.00	0.000	0.000
P-114	New London Tpk.	12	Asbestos Cement	120	WW 1959	2495	190.86	0.540	0.340
P-115	Terre Mar Dr.	8	Asbestos Cement	130	WW 1975	638	1.54	0.010	0.000
P-116	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	662	-48.38	0.140	0.010
P-117	Providence St.	12	Ductile Iron	140	WW 2003	348	59.99	0.170	0.000
P-119	Linden Dr.	6	Asbestos Cement	115	WW 1941	596	1.54	0.020	0.000
P-120	Seitan Ln.	8	Asbestos Cement	130	WW 1976	647	10.18	0.060	0.000
P-121	Seitan Ln.	8	Asbestos Cement	130	WW 1976	142	16.46	0.110	0.000
P-122	Surrey Ln.	8	Asbestos Cement	130	WW 1975	2015	-11.24	0.070	0.010
P-123	Surrey Ln.	8	Asbestos Cement	130	WW 1975	695	-6.02	0.040	0.000
P-124	Pine Orchard Rd.	8	Asbestos Cement	130	WW 1977	794	-3.54	0.020	0.000
P-125	Pine Orchard Rd.	8	Asbestos Cement	130	WW 1977	720	-5.91	0.040	0.000
P-126	Pine Orchard Rd.	8	Asbestos Cement	130	WW 1977	1761	0.94	0.010	0.000
P-128	Cold Spring Dr.	8	PVC	130	WW 1985	297	3.08	0.020	0.000
P-129	Cold Spring Dr.	8	PVC	130	WW 1985	780	0.74	0.000	0.000
P-130	Cold Spring Dr.	8	PVC	130	WW 1985	661	-0.80	0.010	0.000
P-131	Loggers Run	8	Ductile Iron	135	WW 1997	1135	14.39	0.090	0.010
P-132	Loggers Run	8	Ductile Iron	135	WW 1997	265	-5.03	0.030	0.000
P-133	Loggers Run	8	Ductile Iron	135	WW 1997	432	-5.56	0.040	0.000
P-134	Pine Orchard Rd.	12	Asbestos Cement	125	WW 1969	672	11.41	0.030	0.000
P-135	Lonsdale St.	12	Asbestos Cement	125	WW 1969	1116	0.00	0.000	0.000
P-136	Lonsdale St.	12	Asbestos Cement	125	WW 1969	1158	24.61	0.070	0.000
P-137	Sturbridge Way	8	Ductile Iron	135	WW 1998	900	1.54	0.010	0.000
P-138	Kulas Rd.	12	Asbestos Cement	130	WW 1970	1421	34.48	0.100	0.010
P-139	Kulas Rd.	8	Asbestos Cement	130	WW 1970	788	0.00	0.000	0.000
P-140	Maryland Dr.	6	Asbestos Cement	110	WW 1939	672	9.83	0.110	0.010
P-141	Birchwood Ln.	8	Asbestos Cement	125	WW 1969	467	-4.24	0.030	0.000
P-142	Birchwood Ln.	8	Asbestos Cement	125	WW 1969	575	-4.92	0.030	0.000
P-143	Robin Ln.	8	Asbestos Cement	125	WW 1969	207	22.17	0.140	0.000
P-144	Robin Ln.	8	Asbestos Cement	125	WW 1969	404	10.84	0.070	0.000
P-145	Crossland Rd.	6	Asbestos Cement	110	WW 1939	184	1.54	0.020	0.000
P-146	Laural Ln.	8	Asbestos Cement	125	WW 1969	601	5.85	0.040	0.000
P-147	Laural Ln.	8	Asbestos Cement	125	WW 1969	532	3.44	0.020	0.000
P-148	Laural Ln.	8	Asbestos Cement	125	WW 1969	721	3.46	0.020	0.000
P-149	Hemlock Ln.	8	Asbestos Cement	125	WW 1969	525	0.86	0.010	0.000
P-150	Hemlock Ln.	8	Asbestos Cement	125	WW 1969	218	-3.02	0.020	0.000
P-151	Hemlock Ln.	8	Asbestos Cement	125	WW 1969	539	-9.80	0.060	0.000
P-152	Hornbeam Ln.	8	Asbestos Cement	130	WW 1977	302	5.24	0.030	0.000
P-153	Providence St.	12	Ductile Iron	140	WW 2003	309	48.52	0.140	0.000
P-154	Providence St.	12	Ductile Iron	140	WW 2003	321	45.44	0.130	0.000
P-155	Fernwood Dr.	6	Asbestos Cement	115	WW 1940	487	1.54	0.020	0.000
P-156	Pinewood Dr.	8	Asbestos Cement	130	WW 1977	115	6.36	0.040	0.000
P-157	Maywood Dr.	6	Asbestos Cement	120	WW 1955	661	11.54	0.130	0.010
P-158	Marco Dr.	8	Asbestos Cement	130	WW 1977	319	-9.03	0.060	0.000
P-159	Crossland Dr.	6	Asbestos Cement	110	WW 1939	627	-6.85	0.080	0.010
P-160	Huckleberry Dr.	8	Asbestos Cement	130	WW 1977	579	-1.19	0.010	0.000
P-161	Pinewood Dr.	8	Asbestos Cement	130	WW 1977	319	6.01	0.040	0.000
P-162	Providence St.	12	Ductile Iron	140	WW 2003	322	32.37	0.090	0.000
P-163	Marco Dr.	8	Asbestos Cement	130	WW 1977	319	-6.30	0.040	0.000
P-164	Hopedale Dr.	6	Asbestos Cement	110	WW 1939	673	15.44	0.180	0.030
P-165	Midland Dr.	8	Asbestos Cement	130	WW 1977	579	-0.14	0.000	0.000
P-166	Marco Dr.	8	Asbestos Cement	130	WW 1977	319	4.61	0.030	0.000
P-167	Crossland Dr.	6	Asbestos Cement	110	WW 1939	317	-16.85	0.190	0.020
P-168	Marco Dr.	8	Asbestos Cement	130	WW 1977	319	-4.62	0.030	0.000
P-169	Hopedale Dr.	6	Asbestos Cement	110	WW 1939	375	30.75	0.350	0.060
P-170	Stoney Creek Dr.	8	Asbestos Cement	130	WW 1977	571	-0.04	0.000	0.000
P-171	Pinewood Dr.	8	Asbestos Cement	130	WW 1977	328	3.12	0.020	0.000
P-172	Pinewood Dr.	8	Asbestos Cement	130	WW 1977	157	1.54	0.010	0.000
P-173	Marco Dr.	8	Asbestos Cement	130	WW 1977	345	3.04	0.020	0.000
P-174	Marco Dr.	8	Asbestos Cement	130	WW 1977	226	1.54	0.010	0.000
P-175	Whitebirch Ln.	8	Asbestos Cement	130	WW 1977	568	0.04	0.000	0.000
P-176	Pinewood Dr.	8	Asbestos Cement	130	WW 1977	210	-2.66	0.020	0.000
P-177	Pinewood Dr.	8	Asbestos Cement	130	WW 1977	135	1.54	0.010	0.000
P-178	Juniper Dr	8	Asbestos Cement	130	WW 1977	582	-5.73	0.040	0.000
P-180	Woodland Dr.	6	Asbestos Cement	120	WW 1950	311	7.69	0.090	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-181	Juniper Dr.	8	Asbestos Cement	130	WW 1977	312	-16.31	0.100	0.000
P-183	Watervalley Rd.	8	PVC	130	WW 1984	582	4.62	0.030	0.000
P-184	Watervalley Rd.	8	PVC	130	WW 1984	130	1.54	0.010	0.000
P-185	Deer Run	8	PVC	130	WW 1984	282	1.54	0.010	0.000
P-187	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	3027	7.05	0.020	0.000
P-188	Timber Walk (Private Line)	6	Ductile Iron	130	WW 1988	472	1.54	0.020	0.000
P-189	Woodland Dr.	6	Asbestos Cement	120	WW 1950	509	1.54	0.020	0.000
P-190	Shortway Dr.	6	Asbestos Cement	120	WW 1950	262	4.62	0.050	0.000
P-191	Midway Dr.	6	Asbestos Cement	120	WW 1952	398	1.54	0.020	0.000
P-192	Shortway Dr.	6	Asbestos Cement	120	WW 1950	199	1.54	0.020	0.000
P-193	Hopedale Dr.	6	Asbestos Cement	110	WW 1939	581	21.51	0.240	0.050
P-194	Glendale Dr.	6	Asbestos Cement	120	WW 1950	310	9.20	0.100	0.000
P-195	Glendale Dr.	6	Asbestos Cement	120	WW 1950	313	-6.19	0.070	0.000
P-196	Enfield Dr.	6	Asbestos Cement	120	WW 1950	561	-7.73	0.090	0.010
P-197	Shortway Dr.	6	Asbestos Cement	120	WW 1950	319	13.85	0.160	0.010
P-198	Janel Dr.	6	Asbestos Cement	120	WW 1950	668	12.31	0.140	0.020
P-199	Alden Dr.	6	Asbestos Cement	120	WW 1950	386	10.77	0.120	0.010
P-200	Shortway Dr.	6	Asbestos Cement	120	WW 1957	307	1.54	0.020	0.000
P-201	Alden Dr.	6	Asbestos Cement	120	WW 1950	172	7.69	0.090	0.000
P-202	Alden Dr.	6	Asbestos Cement	120	WW 1950	202	1.54	0.020	0.000
P-203	Brookdale Dr.	6	Asbestos Cement	120	WW 1957	1029	4.62	0.050	0.000
P-204	Brookdale Dr.	8	Asbestos Cement	130	WW 1977	306	3.08	0.020	0.000
P-205	Steven Dr.	8	Asbestos Cement	130	WW 1977	1000	1.54	0.010	0.000
P-206	Glendale Dr.	6	Asbestos Cement	120	WW 1950	323	10.77	0.120	0.010
P-207	Alden Dr.	6	Asbestos Cement	120	WW 1950	367	1.54	0.020	0.000
P-208	Glendale Dr.	6	Asbestos Cement	120	WW 1950	1322	7.69	0.090	0.010
P-209	Glendale Dr.	6	Asbestos Cement	120	WW 1950	209	1.54	0.020	0.000
P-210	Suncrest Dr.	6	Asbestos Cement	120	WW 1950	339	4.62	0.050	0.000
P-211	Oakland Dr.	6	Asbestos Cement	120	WW 1950	615	1.54	0.020	0.000
P-212	Oakland Dr.	6	Asbestos Cement	120	WW 1950	311	1.54	0.020	0.000
P-213	Providence St.	12	Ductile Iron	140	WW 2003	308	15.39	0.040	0.000
P-214	Alden Dr.	6	Asbestos Cement	110	WW 1939	467	1.54	0.020	0.000
P-215	Providence St.	12	Ductile Iron	140	WW 2003	318	12.31	0.030	0.000
P-216	Overhill Dr.	6	Asbestos Cement	110	WW 1939	670	7.70	0.090	0.010
P-217	Overhill Dr.	1	Copper	70	WW 1939	302	1.54	0.630	2.690
P-218	Crossland Dr.	6	Asbestos Cement	110	WW 1939	324	3.08	0.030	0.000
P-219	Alden Dr.	6	Asbestos Cement	110	WW 1939	240	1.54	0.020	0.000
P-220	Crossland Dr.	6	Asbestos Cement	110	WW 1939	164	1.54	0.020	0.000
P-221	Providence St.	12	Ductile Iron	140	WW 2003	311	-3.08	0.010	0.000
P-222	Oakland Dr.	6	Asbestos Cement	115	WW 1947	473	1.54	0.020	0.000
P-223	Providence St.	12	Ductile Iron	140	WW 2003	1013	0.00	0.000	0.000
P-224	River St.	10	Cast iron	70	WW 1928	273	-47.22	0.190	0.020
P-225	Aster St.	6	Asbestos Cement	130	WW 1973	778	7.69	0.090	0.010
P-226	Aster St.	6	Asbestos Cement	130	WW 1973	339	1.54	0.020	0.000
P-227	Daisy St.	6	Asbestos Cement	130	WW 1977	302	4.62	0.050	0.000
P-228	Daisy St.	6	Asbestos Cement	130	WW 1977	183	1.54	0.020	0.000
P-229	Begonia St.	6	Asbestos Cement	130	WW 1978	308	1.54	0.020	0.000
P-230	River St.	10	Cast iron	70	WW 1928	867	-37.99	0.160	0.040
P-231	River St.	8	Cast iron	80	WW 1928	768	-82.99	0.530	0.340
P-232	Providence St.	8	Cast iron	80	WW 1928	1303	-56.46	0.360	0.290
P-233	Wakefield St.	8	Ductile Iron	135	WW 1997	774	7.69	0.050	0.000
P-234	Intervale Rd.	6	Asbestos Cement	125	WW 1964	647	1.54	0.020	0.000
P-235	Wakefield St.	8	Ductile Iron	135	WW 1997	318	4.62	0.030	0.000
P-236	Crossland Rd.	6	Asbestos Cement	110	WW 1939	623	1.54	0.020	0.000
P-237	Wakefield St.	8	Ductile Iron	135	WW 1997	935	1.54	0.010	0.000
P-238	Providence St.	8	Cast iron	70	WW 1928	1008	-142.53	0.910	1.570
P-239	Providence St.	8	Cast iron	70	WW 1928	91	-201.48	1.290	0.270
P-240	Market St.	6	Cast iron	40	WW 1928	325	-16.32	0.190	0.100
P-241	Greenhill St.	6	Cast iron	40	WW 1928	836	-39.94	0.450	1.410
P-242	Providence St.	8	Cast iron	70	WW 1928	591	-186.70	1.190	1.520
P-243	Sheldon St.	2	Galvanized iron	30	WW 1928	764	1.54	0.160	1.120
P-244	Prospect Hill Ave.	8	Cast iron	70	WW 1928	320	57.41	0.370	0.090
P-245	Prospect St.	6	Cast iron	40	WW 1928	688	1.54	0.020	0.000
P-246	Prospect Hill Ave.	8	Cast iron	70	WW 1928	673	54.34	0.350	0.180
P-247	McTeers Ct.	6	Cast iron	40	WW 1928	358	1.54	0.020	0.000
P-248	Prospect Hill Ave.	8	Cast iron	70	WW 1928	366	51.26	0.330	0.090
P-249	Prospect Hill Ave.	8	Cast iron	70	WW 1928	77	-40.03	0.260	0.010
P-250	Barbers Ct.	6	Ductile Iron	140	WW 2000	370	1.54	0.020	0.000
P-251	Fume St.	6	Cast iron	40	WW 1928	179	9.69	0.110	0.020
P-252	Fume St.	6	Cast iron	40	WW 1928	722	8.15	0.090	0.060
P-253	Fume St.	6	Cast iron	40	WW 1928	313	6.61	0.080	0.020
P-254	Prospect Hill Ave.	8	Cast iron	70	WW 1928	734	-36.95	0.240	0.090
P-255	Prospect Hill Ave.	8	Cast iron	70	WW 1928	158	42.02	0.270	0.030
P-256	Wilson St.	6	Cast iron	40	WW 1928	1147	1.54	0.020	0.000
P-257	Prospect Hill Ave.	8	Cast iron	70	WW 1928	296	38.95	0.250	0.040
P-258	Tripoli St.	6	Cast iron	75	WW 1928	135	37.41	0.420	0.060
P-259	Tripoli St.	6	Cast iron	70	WW 1928	337	1.54	0.020	0.000
P-260	Prospect Hill Ave.	6	Asbestos Cement	130	WW 1981	288	3.08	0.030	0.000
P-263	Lancellotta St.	6	Asbestos Cement	130	WW 1981	561	1.54	0.020	0.000
P-264	Penta St.	12	Ductile Iron	135	WW 1994	475	-262.48	0.740	0.090
P-265	Bowen Ct.	12	Ductile Iron	135	WW 1994	139	-273.73	0.780	0.030
P-266	Noble St.	12	Ductile Iron	135	WW 1994	535	-275.27	0.780	0.120
P-267	Penta St.	6	Cast Iron	40	WW 1928	450	-9.71	0.110	0.060

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-268	Water St.	6	Cast iron	40	WW 1928	678	-8.17	0.090	0.060
P-269	Providence St.	8	Cast iron	80	WW 1928	251	-34.31	0.220	0.020
P-270	Providence St.	8	Ductile Iron	135	WW 1996	159	-40.94	0.260	0.010
P-271	Providence St.	12	Ductile Iron	140	WW 2004	346	-19.02	0.050	0.000
P-272	Providence St.	8	Ductile Iron	135	WW 1996	243	-20.38	0.130	0.000
P-273	Providence St.	8	Cast iron	70	WW 1928	202	-21.77	0.140	0.010
P-274	Gage St.	6	Cast iron	40	WW 1928	488	-2.36	0.030	0.000
P-275	Bail Ave.	6	Cast iron	40	WW 1928	664	-0.82	0.010	0.000
P-278	Brayton Ave.	8	Ductile Iron	140	WW 2001	880	1.54	0.010	0.000
P-280	Blossom St.	6	Cast iron	45	WW 1930	257	7.70	0.090	0.020
P-281	Blossom St.	6	Cast iron	45	WW 1930	658	6.16	0.070	0.030
P-282	Auburn St.	6	Asbestos Cement	125	WW 1960	561	1.54	0.020	0.000
P-283	Blossom St.	6	Asbestos Cement	125	WW 1960	561	3.08	0.030	0.000
P-284	Circle Dr.	6	Asbestos Cement	125	WW 1960	339	1.54	0.020	0.000
P-286	Newell St.	6	Ductile Iron	135	WW 1993	215	23.09	0.260	0.010
P-287	River Ave.	6	Ductile Iron	135	WW 1993	1048	7.54	0.090	0.010
P-288	Petti Dr.	6	Ductile Iron	135	WW 1993	274	6.00	0.070	0.000
P-289	Lafayette St.	6	Ductile Iron	135	WW 1993	946	-3.76	0.040	0.000
P-290	Newell St.	6	Ductile Iron	135	WW 1993	307	-14.01	0.160	0.010
P-291	Newell St.	6	Ductile Iron	135	WW 1993	302	8.71	0.100	0.000
P-292	Fornelli St.	6	Asbestos Cement	115	WW 1941	715	1.54	0.020	0.000
P-293	Petti Dr.	6	Ductile Iron	135	WW 1993	540	-8.22	0.090	0.010
P-294	Newell St.	6	Ductile Iron	135	WW 1993	309	5.63	0.060	0.000
P-295	Ivy St.	6	Asbestos Cement	115	WW 1948	733	4.10	0.050	0.000
P-296	Babcock St.	8	Asbestos Cement	125	WW 1967	373	10.77	0.070	0.000
P-297	Carlara St.	6	Asbestos Cement	125	WW 1967	429	1.54	0.020	0.000
P-298	Babcock St.	8	Asbestos Cement	125	WW 1967	274	7.70	0.050	0.000
P-299	Napolean St.	6	Asbestos Cement	125	WW 1967	406	1.54	0.020	0.000
P-300	Babcock St.	8	Asbestos Cement	125	WW 1967	331	4.62	0.030	0.000
P-301	Newell St.	6	Asbestos Cement	130	WW 1980	790	0.74	0.010	0.000
P-302	Moran St.	8	Asbestos Cement	125	WW 1967	349	-2.34	0.010	0.000
P-303	Newell St.	8	Asbestos Cement	125	WW 1967	172	1.54	0.010	0.000
P-304	Providence St.	6	Cast iron	40	WW 1928	232	24.62	0.280	0.160
P-305	Providence St.	10	Cast iron	70	WW 1928	3149	154.01	0.630	1.910
P-306	Tanglewood Dr.	8	Asbestos Cement	130	WW 1978	1096	-54.93	0.350	0.090
P-307	Tanglewood Dr.	8	Asbestos Cement	130	WW 1978	532	-27.85	0.160	0.010
P-308	Morningside Dr.	8	Asbestos Cement	130	WW 1978	405	-25.55	0.160	0.010
P-309	Tower Rd.	8	Asbestos Cement	130	WW 1976	388	-15.51	0.100	0.000
P-310	Musket Rd.	8	Asbestos Cement	130	WW 1980	361	-9.01	0.060	0.000
P-311	Tower Rd.	8	Asbestos Cement	130	WW 1976	1248	-4.96	0.030	0.000
P-312	Rolling Green Ln.	8	Asbestos Cement	130	WW 1972	874	-1.96	0.010	0.000
P-313	Tower Rd.	8	Asbestos Cement	130	WW 1976	857	-5.38	0.030	0.000
P-314	Musket Rd.	8	Asbestos Cement	130	WW 1980	945	-5.52	0.040	0.000
P-315	Tower Rd.	8	Asbestos Cement	130	WW 1976	426	-9.36	0.060	0.000
P-316	Tanglewood Dr.	8	Asbestos Cement	130	WW 1978	642	-10.93	0.070	0.000
P-317	Tanglewood Dr.	8	Asbestos Cement	130	WW 1978	960	-10.80	0.070	0.000
P-318	Morningside Dr.	8	Asbestos Cement	130	WW 1978	1078	-12.19	0.080	0.010
P-319	Mark Fore Dr.	8	Asbestos Cement	130	WW 1980	1158	-11.82	0.080	0.010
P-320	Greenbrier Rd.	8	Asbestos Cement	130	WW 1976	663	-1.66	0.010	0.000
P-321	Greenbrier Rd.	8	Asbestos Cement	130	WW 1976	550	-11.94	0.080	0.000
P-322	Iron Dr.	8	Asbestos Cement	130	WW 1972	247	-1.67	0.010	0.000
P-323	Morningside Dr.	8	Asbestos Cement	130	WW 1978	376	-8.99	0.060	0.000
P-324	New London Ave.	8	Asbestos Cement	130	WW 1972	1460	-7.45	0.050	0.000
P-325	Iron Dr.	8	Asbestos Cement	130	WW 1972	471	-8.73	0.060	0.000
P-326	New London Ave.	8	Asbestos Cement	130	WW 1972	913	-14.64	0.090	0.010
P-327	Tanglewood Dr.	8	Asbestos Cement	130	WW 1978	453	-18.75	0.120	0.010
P-328	New London Ave.	8	Asbestos Cement	130	WW 1972	1090	-31.85	0.200	0.030
P-329	Factory St.	8	Asbestos Cement	115	WW 1940	328	-9.49	0.060	0.000
P-330	Hilltop Ave.	6	Asbestos Cement	120	WW 1950	1042	-9.12	0.100	0.010
P-331	Park Blvd.	8	Asbestos Cement	120	WW 1950	310	1.90	0.010	0.000
P-332	New London Ave.	8	Asbestos Cement	115	WW 1940	832	-19.28	0.120	0.010
P-333	Factory St.	8	Asbestos Cement	115	WW 1940	323	1.17	0.010	0.000
P-334	Queen Ave.	6	Asbestos Cement	115	WW 1948	407	-13.98	0.160	0.010
P-335	Rex St.	8	Ductile Iron	140	WW 2000	404	-8.55	0.050	0.000
P-336	Rex St.	8	Ductile Iron	140	WW 2000	628	-7.01	0.040	0.000
P-337	Park Blvd.	8	Asbestos Cement	120	WW 1950	346	1.07	0.010	0.000
P-338	Queen Ave.	6	Asbestos Cement	115	WW 1948	609	-3.89	0.040	0.000
P-339	Park Blvd.	8	Asbestos Cement	120	WW 1950	332	7.95	0.050	0.000
P-340	Factory St.	8	Asbestos Cement	115	WW 1940	593	16.70	0.110	0.010
P-341	Webster Knight Dr.	6	Asbestos Cement	130	WW 1971	503	1.54	0.020	0.000
P-342	Factory St.	8	Asbestos Cement	115	WW 1940	254	19.77	0.130	0.000
P-343	Earl St.	4	Cast iron	45	WW 1935	479	1.59	0.040	0.010
P-344	First St.	4	Cast iron	45	WW 1937	417	0.05	0.000	0.000
P-345	Border St.	4	Cast iron	30	WW 1885	489	-1.49	0.040	0.020
P-346	Factory St.	8	Asbestos Cement	115	WW 1940	456	24.58	0.160	0.010
P-347	Border St.	6	Asbestos Cement	120	WW 1950	981	-15.72	0.180	0.040
P-348	Third St.	6	Cast iron	50	WW 1941	446	0.21	0.000	0.000
P-349	Earl St.	4	Cast iron	45	WW 1935	1000	-1.68	0.040	0.030
P-350	Park Blvd.	8	Asbestos Cement	120	WW 1950	378	-6.54	0.040	0.000
P-351	Border St.	6	Asbestos Cement	120	WW 1950	827	-13.97	0.160	0.030
P-352	Border St.	6	Asbestos Cement	120	WW 1950	507	-12.43	0.140	0.010
P-353	Earl St.	6	Cast iron	45	WW 1935	743	-6.89	0.080	0.040
P-354	Queen Ave.	6	Asbestos Cement	115	WW 1948	429	-9.23	0.100	0.010

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-356	Queen Ave.	6	Asbestos Cement	115	WW 1948	326	-6.16	0.070	0.000
P-357	St. George St.	6	Asbestos Cement	115	WW 1948	349	-4.62	0.050	0.000
P-358	St. George St.	6	Asbestos Cement	115	WW 1948	193	1.54	0.020	0.000
P-359	Hilltop Ave.	6	Asbestos Cement	120	WW 1952	230	1.54	0.020	0.000
P-360	Earl St.	4	Cast iron	45	WW 1935	261	-17.78	0.450	0.570
P-361	Seth Dr.	6	PVC	130	WW 1987	340	4.62	0.050	0.000
P-362	Seth Dr.	6	PVC	130	WW 1987	164	1.54	0.020	0.000
P-363	Shane Dr.	6	PVC	130	WW 1987	291	1.54	0.020	0.000
P-364	Earl St.	4	Cast iron	45	WW 1935	388	-11.63	0.300	0.390
P-365	Ledgemont Ct.	6	Asbestos Cement	130	WW 1975	407	1.54	0.020	0.000
P-366	Earl St.	4	Cast iron	45	WW 1935	1269	-8.55	0.220	0.720
P-367	New London Ave.	4	Cast iron	45	WW 1932	1516	-12.31	0.310	1.680
P-370	New London Ave.	6	Cast iron	45	WW 1932	592	4.10	0.050	0.010
P-371	New London Ave.	6	Cast iron	45	WW 1932	611	20.19	0.230	0.230
P-372	New London Ave.	6	Cast iron	45	WW 1932	439	15.57	0.180	0.100
P-373	Bishop St.	6	Asbestos Cement	115	WW 1940	337	3.08	0.030	0.000
P-374	Edith St.	6	Asbestos Cement	130	WW 1975	295	1.54	0.020	0.000
P-375	Wells St.	6	Asbestos Cement	115	WW 1940	317	-10.47	0.120	0.010
P-376	Wells St.	6	Asbestos Cement	115	WW 1940	345	-13.55	0.150	0.010
P-377	Leaf St.	6	Asbestos Cement	115	WW 1949	1431	1.54	0.020	0.000
P-378	Perkins St.	6	Asbestos Cement	125	WW 1964	1007	-15.09	0.170	0.030
P-379	Perkins St.	6	Asbestos Cement	125	WW 1964	196	1.54	0.020	0.000
P-380	Lionel Ave.	6	Asbestos Cement	120	WW 1952	348	-18.16	0.210	0.020
P-381	Lexington Ave.	6	Cast iron	45	WW 1939	239	1.54	0.020	0.000
P-382	Lexington Ave.	6	Asbestos Cement	120	WW 1952	366	-21.24	0.240	0.030
P-383	Lexington Ave.	6	Cast iron	45	WW 1939	691	-8.01	0.090	0.050
P-384	Wells St.	6	Ductile Iron	135	WW 1993	202	3.08	0.030	0.000
P-385	Edge St.	6	Ductile Iron	130	WW 1988	310	1.54	0.020	0.000
P-386	Lexington Ave.	6	Cast iron	45	WW 1939	1223	-12.63	0.140	0.200
P-387	Ridge St.	6	Cast iron	45	WW 1939	296	-14.77	0.170	0.060
P-388	Lenox Ave.	6	Ductile Iron	135	WW 1993	629	1.54	0.020	0.000
P-389	Ridge St.	6	Asbestos Cement	115	WW 1945	335	-19.39	0.220	0.020
P-390	Revere Ave.	6	Asbestos Cement	115	WW 1941	288	1.54	0.020	0.000
P-391	Lenox Ave.	2	Galvanized iron	30	WW 1993	260	1.54	0.160	0.380
P-392	Revere Ave.	6	Asbestos Cement	115	WW 1941	816	-22.47	0.250	0.070
P-393	Revere Ave.	6	Asbestos Cement	115	WW 1941	89	-24.30	0.280	0.010
P-394	Concord Ave.	2	Galvanized Iron	30	WW 1928	324	-0.11	0.010	0.000
P-395	Lenox Ave.	6	Ductile Iron	135	WW 1993	303	1.54	0.020	0.000
P-396	Lenox Ave.	4	Cast iron	45	WW 1932	993	-3.19	0.080	0.090
P-397	Revere Ave.	6	Asbestos Cement	115	WW 1941	1013	-25.73	0.290	0.110
P-398	Mason St.	6	Asbestos Cement	120	WW 1954	348	0.30	0.000	0.000
P-399	Ethel Ave.	6	Asbestos Cement	125	WW 1969	912	1.54	0.020	0.000
P-400	Mason St.	6	Asbestos Cement	120	WW 1954	314	-2.78	0.030	0.000
P-401	Mary Ave.	6	Asbestos Cement	125	WW 1969	783	4.62	0.050	0.000
P-402	Faxon St.	6	Asbestos Cement	125	WW 1969	345	1.54	0.020	0.000
P-403	Mary Ave.	6	Asbestos Cement	125	WW 1969	174	1.54	0.020	0.000
P-404	Mason St.	2	Copper	70	WW 1932	311	-8.94	0.910	2.460
P-405	Bel Air Ave.	6	Asbestos Cement	130	WW 1976	347	1.54	0.020	0.000
P-406	Mason St.	6	Asbestos Cement	120	WW 1954	255	-12.01	0.140	0.010
P-407	Tampa St.	2	Copper	70	WW 1932	274	7.53	0.770	1.580
P-408	Davis St.	2	Copper	70	WW 1947	771	1.54	0.160	0.230
P-409	Tampa St.	2	Copper	70	WW 1932	263	4.45	0.450	0.570
P-410	Miami St.	2	Copper	70	WW 1949	280	1.54	0.160	0.090
P-411	Tampa St.	4	Cast iron	45	WW 1932	439	1.37	0.040	0.010
P-414	Tampa St.	6	Asbestos Cement	130	WW 1973	260	-21.08	0.240	0.020
P-415	Noxon St.	6	Asbestos Cement	130	WW 1973	362	-22.62	0.260	0.020
P-416	Noxon St.	6	Asbestos Cement	130	WW 1973	369	1.13	0.010	0.000
P-417	Myron St.	6	Asbestos Cement	130	WW 1976	807	-25.30	0.290	0.070
P-418	Coit Ave.	6	Cast iron	45	WW 1938	85	0.50	0.010	0.000
P-419	Coit Ave.	6	Cast iron	45	WW 1938	307	14.76	0.170	0.070
P-421	Penel Dr.	6	Asbestos Cement	125	WW 1963	606	19.31	0.220	0.030
P-422	Coit Ave.	6	Cast iron	45	WW 1938	92	31.38	0.360	0.080
P-423	Coit Ave.	6	Cast iron	45	WW 1938	231	27.34	0.310	0.160
P-424	Tampa St.	6	Asbestos Cement	125	WW 1961	563	-20.85	0.240	0.030
P-425	Tampa St.	6	Asbestos Cement	125	WW 1961	415	1.54	0.020	0.000
P-426	Hamilton St.	6	Asbestos Cement	120	WW 1953	400	-23.93	0.270	0.030
P-427	Evelyn St.	6	Asbestos Cement	115	WW 1947	338	1.54	0.020	0.000
P-428	Hamilton St.	6	Asbestos Cement	120	WW 1953	178	-27.01	0.310	0.020
P-429	Coit Ave.	6	Cast iron	45	WW 1938	317	15.88	0.180	0.080
P-430	Coit Ave.	6	Cast iron	45	WW 1938	228	13.61	0.150	0.040
P-431	Coit Ave.	6	Cast iron	45	WW 1938	212	14.36	0.160	0.040
P-432	Coit Ave.	6	Cast iron	45	WW 1938	1203	46.01	0.520	2.120
P-433	Atlantic Ave.	6	Asbestos Cement	125	WW 1966	717	-33.19	0.380	0.100
P-434	Atlantic Ave.	6	Asbestos Cement	125	WW 1966	580	-18.37	0.210	0.030
P-435	Glen Dr.	6	Asbestos Cement	125	WW 1966	644	1.54	0.020	0.000
P-436	Lockwood St.	6	PVC	130	WW 1987	744	-16.35	0.190	0.030
P-437	Carder St.	6	PVC	130	WW 1988	643	15.80	0.180	0.020
P-438	Lockwood St.	6	PVC	130	WW 1987	320	-33.69	0.380	0.040
P-440	Glen Dr.	6	PVC	130	WW 1987	720	-21.45	0.240	0.040
P-441	Lockwood St.	6	Asbestos Cement	120	WW 1950	306	-57.26	0.650	0.130
P-443	Lockwood St.	6	Asbestos Cement	120	WW 1950	313	-59.61	0.680	0.150
P-444	Hamilton St.	6	Asbestos Cement	120	WW 1953	643	-10.71	0.120	0.010
P-445	Coit Ave.	6	Cast iron	45	WW 1938	291	-55.13	0.630	0.720

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-446	North Gate Dr.	6	Asbestos Cement	130	WW 1975	993	-33.15	0.380	0.130
P-447	Coit Ave.	6	Cast Iron	45	WW 1938	263	23.51	0.270	0.130
P-448	Coit Ave.	6	Cast Iron	45	WW 1938	206	-58.21	0.660	0.560
P-449	Audrey Dr.	6	Asbestos Cement	130	WW 1978	635	1.54	0.020	0.000
P-450	Lockwood St.	6	Asbestos Cement	120	WW 1950	2400	-50.44	0.570	0.820
P-451	Coit Ave.	6	Cast Iron	45	WW 1938	332	-61.28	0.700	1.000
P-452	Crompton Ave.	6	Asbestos Cement	120	WW 1950	1024	-87.67	0.990	0.970
P-453	Deborah Ct.	6	Ductile Iron	135	WW 1990	573	1.54	0.020	0.000
P-456	Pond View Dr.	8	Ductile Iron	135	WW 1998	238	1.54	0.010	0.000
P-457	Pond View Dr.	8	Ductile Iron	135	WW 1998	363	1.54	0.010	0.000
P-458	Coit Ave.	8	Asbestos Cement	125	WW 1968	278	15.61	0.100	0.000
P-459	Joaquin Ct.	8	Asbestos Cement	130	WW 1979	167	3.08	0.020	0.000
P-460	Joaquin Ct.	8	Asbestos Cement	130	WW 1979	397	0.75	0.000	0.000
P-461	Joaquin Ct.	8	Asbestos Cement	130	WW 1979	360	-0.79	0.010	0.000
P-462	Coit Ave.	8	Asbestos Cement	125	WW 1968	711	11.00	0.070	0.000
P-463	Lockwood St.	6	Asbestos Cement	120	WW 1950	679	-70.23	0.800	0.430
P-464	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	719	-237.02	1.510	1.150
P-465	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	410	-227.57	1.450	0.610
P-466	Jacques St.	6	Asbestos Cement	120	WW 1955	569	18.26	0.210	0.030
P-467	Cochran St.	6	Asbestos Cement	120	WW 1955	694	9.02	0.100	0.010
P-468	Cochran St.	6	Asbestos Cement	120	WW 1955	344	7.70	0.090	0.000
P-469	Judy Ter.	6	Asbestos Cement	125	WW 1965	312	4.62	0.050	0.000
P-470	Judy Ter.	6	Asbestos Cement	125	WW 1965	261	1.54	0.020	0.000
P-471	Judy Ter.	6	Asbestos Cement	125	WW 1965	477	1.54	0.020	0.000
P-472	Cochran St.	6	Asbestos Cement	120	WW 1955	1764	1.54	0.020	0.000
P-473	Tina Dr. (Private)	8	Asbestos Cement	115	WW 1940	659	1.54	0.010	0.000
P-474	Cowesett Rd.	12	Asbestos Cement	130	WW 1972	711	169.66	0.480	0.070
P-475	Country Dr.	8	Asbestos Cement	120	WW 1956	842	-313.52	2.000	2.080
P-476	Country Dr.	8	Asbestos Cement	120	WW 1956	584	-251.40	1.600	0.960
P-477	Country Dr.	6	Asbestos Cement	120	WW 1956	311	69.81	0.790	0.190
P-478	Country Dr.	6	Asbestos Cement	120	WW 1956	998	30.84	0.350	0.140
P-479	Fairgreen Dr.	6	Asbestos Cement	120	WW 1956	697	37.44	0.420	0.140
P-480	Fairgreen Dr.	6	Asbestos Cement	120	WW 1956	315	66.74	0.760	0.180
P-481	Meadow Dr.	6	Asbestos Cement	120	WW 1956	857	-63.66	0.720	0.450
P-482	Fairgreen Dr.	6	Asbestos Cement	120	WW 1956	536	1.54	0.020	0.000
P-483	Country Dr.	8	Asbestos Cement	120	WW 1956	340	-322.75	2.060	0.890
P-484	Quaker Ln.	8	PVC	130	WW 1981	498	422.97	2.700	1.850
P-485	Quaker Ln.	8	PVC	130	WW 1981	700	361.97	2.310	1.950
P-486	Pepin St.	8	Asbestos Cement	125	WW 1964	1244	266.37	1.700	2.110
P-487	Pepin St.	8	Asbestos Cement	125	WW 1964	1045	-57.92	0.370	0.100
P-488	Old Carriage Rd.	8	Asbestos Cement	130	WW 1976	1583	-59.46	0.380	0.160
P-489	Cowesett Rd.	12	Asbestos Cement	130	WW 1972	932	-480.10	1.360	0.610
P-490	Cowesett Rd.	12	Asbestos Cement	130	WW 1972	189	-481.63	1.370	0.120
P-491	Quaker Dr.	8	Asbestos Cement	125	WW 1965	829	0.00	0.000	0.000
P-492	Quaker Dr.	8	Asbestos Cement	125	WW 1965	557	-0.87	0.010	0.000
P-493	Shady Hill Dr.	8	Asbestos Cement	125	WW 1965	2055	-0.67	0.000	0.000
P-494	Quaker Dr.	8	Asbestos Cement	125	WW 1965	908	0.78	0.000	0.000
P-495	Sycamore Dr.	8	Asbestos Cement	125	WW 1968	1326	-1.63	0.010	0.000
P-496	Shady Hill Dr.	8	Asbestos Cement	125	WW 1965	355	2.99	0.020	0.000
P-497	Sycamore Dr.	8	Asbestos Cement	125	WW 1968	1186	-6.16	0.040	0.000
P-498	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	80	165.25	1.050	0.070
P-499	Kulas Rd.	8	Asbestos Cement	130	WW 1970	1375	10.77	0.070	0.010
P-500	Monterey Dr.	8	Asbestos Cement	125	WW 1963	808	0.00	0.000	0.000
P-501	Cedar Dr.	6	Asbestos Cement	125	WW 1968	930	-1.93	0.020	0.000
P-502	Cedar Dr.	6	Asbestos Cement	125	WW 1968	332	-9.23	0.100	0.000
P-503	Monterey Dr.	8	Asbestos Cement	125	WW 1963	321	0.39	0.000	0.000
P-504	Bayberry Dr.	6	Asbestos Cement	125	WW 1964	969	-1.07	0.010	0.000
P-505	Monterey Dr.	8	Asbestos Cement	125	WW 1963	324	-5.77	0.040	0.000
P-506	Monterey Dr.	8	Asbestos Cement	125	WW 1963	315	-0.08	0.000	0.000
P-507	Ponderosa Dr.	6	Asbestos Cement	125	WW 1969	975	-0.63	0.010	0.000
P-508	Monterey Dr.	8	Asbestos Cement	125	WW 1963	329	-3.16	0.020	0.000
P-509	Monterey Dr.	8	Asbestos Cement	125	WW 1963	1697	-0.99	0.010	0.000
P-510	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	499	-229.11	1.460	0.750
P-511	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	138	124.58	0.800	0.070
P-512	Narragansett Ave.	8	Ductile Iron	140	WW 2001	1223	79.11	0.500	0.180
P-513	Narragansett Ave.	8	Ductile Iron	140	WW 2001	568	89.21	0.570	0.100
P-514	Lee St.	6	Asbestos Cement	120	WW 1950	797	-11.64	0.130	0.020
P-515	Carlson Cir.	6	Asbestos Cement	120	WW 1950	556	8.62	0.100	0.010
P-516	Carlson Cir.	6	Asbestos Cement	120	WW 1950	584	-11.09	0.130	0.010
P-517	Lee St.	6	Asbestos Cement	120	WW 1950	516	7.27	0.080	0.000
P-518	Rei St.	6	Asbestos Cement	115	WW 1947	175	18.17	0.210	0.010
P-519	Dawes St.	8	PVC	130	WW 1986	884	5.86	0.040	0.000
P-520	Buckley Ave.	6	Asbestos Cement	120	WW 1954	335	10.77	0.120	0.010
P-521	Buckley Ave.	6	Asbestos Cement	115	WW 1941	317	9.23	0.100	0.010
P-522	Boucher St.	6	Asbestos Cement	125	WW 1968	560	1.54	0.020	0.000
P-523	Boucher St.	6	Asbestos Cement	125	WW 1968	284	4.62	0.050	0.000
P-524	Tiffany Ave.	6	Asbestos Cement	125	WW 1968	217	1.54	0.020	0.000
P-525	Tiffany Ave.	6	Asbestos Cement	125	WW 1968	242	1.54	0.020	0.000
P-526	Revere Ave.	6	Asbestos Cement	115	WW 1941	299	1.54	0.020	0.000
P-527	Lee St.	6	Asbestos Cement	120	WW 1950	130	-19.90	0.230	0.010
P-528	Dounetos St.	6	Asbestos Cement	120	WW 1954	329	-21.44	0.240	0.020
P-529	Carlson Cir.	6	Asbestos Cement	120	WW 1950	1052	14.53	0.160	0.040
P-530	Dounetos St.	8	Asbestos Cement	120	WW 1954	872	-37.51	0.240	0.040

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-531	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	786	-37.77	0.240	0.040
P-532	Hollow Cir.	6	Asbestos Cement	125	WW 1968	698	1.54	0.020	0.000
P-533	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	192	-39.31	0.250	0.010
P-534	High View Dr.	8	Asbestos Cement	125	WW 1967	320	3.08	0.020	0.000
P-535	High View Dr.	8	Asbestos Cement	125	WW 1967	438	0.80	0.010	0.000
P-536	High View Dr.	8	Asbestos Cement	125	WW 1967	737	-0.74	0.000	0.000
P-537	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	409	-43.93	0.280	0.030
P-538	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	247	-1.27	0.010	0.000
P-539	Albion St.	6	Asbestos Cement	115	WW 1949	577	1.54	0.020	0.000
P-540	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	623	-4.35	0.030	0.000
P-541	Berkeley St.	2	PVC	130	WW 1984	402	1.54	0.160	0.040
P-542	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	323	-4.15	0.030	0.000
P-543	Ashton St.	6	PVC	130	WW 1984	456	1.54	0.020	0.000
P-544	Winthrop Ave.	2	Galvanized iron	30	WW 1910	772	-1.54	0.160	1.130
P-545	Winthrop Ave.	4	Cast iron	35	WW 1910	905	-1.74	0.040	0.040
P-546	Standard Ave.	2	Galvanized iron	30	WW 1910	448	-1.54	0.160	0.650
P-547	Standard Ave.	6	Cast iron	35	WW 1910	907	-4.42	0.050	0.030
P-548	Brewster Ave.	6	Cast iron	35	WW 1910	259	1.34	0.020	0.000
P-549	Carlton Pl.	6	Asbestos Cement	120	WW 1954	583	1.54	0.020	0.000
P-550	West Warwick Ave.	6	Cast iron	60	WW 1885	315	85.75	0.970	1.030
P-551	Harbour Ave.	6	Asbestos Cement	115	WW 1946	593	1.54	0.020	0.000
P-552	West Warwick Ave.	6	Cast iron	60	WW 1885	324	82.68	0.940	0.990
P-553	Matteson Ave.	8	Cast iron	60	WW 1900	1084	72.48	0.460	0.650
P-554	Matteson Ave.	8	Cast iron	60	WW 1900	315	70.95	0.450	0.180
P-555	West Warwick Ave.	6	Cast iron	30	WW 1885	305	8.65	0.100	0.050
P-556	Pawtuxet Ter.	2	Galvanized iron	30	WW 1932	644	3.08	0.310	3.390
P-557	West Warwick Ave.	6	Cast iron	60	WW 1885	72	4.04	0.050	0.000
P-558	Cottage St.	4	Cast iron	35	WW 1910	727	6.16	0.160	0.360
P-559	West Warwick Ave.	6	Cast iron	60	WW 1885	250	-3.66	0.040	0.000
P-560	West Warwick Ave.	6	Cast iron	60	WW 1885	296	-2.74	0.030	0.000
P-561	West Warwick Ave.	6	Cast iron	60	WW 1885	50	-0.98	0.010	0.000
P-562	Arthur St.	6	Asbestos Cement	115	WW 1940	644	-2.46	0.030	0.000
P-563	Laramie Ave.	6	Ductile Iron	135	WW 1991	652	-3.30	0.040	0.000
P-564	Harbour Ave.	6	Asbestos Cement	115	WW 1946	312	-5.53	0.060	0.000
P-565	West Warwick Ave.	6	Cast Iron	60	WW 1885	264	-6.94	0.080	0.010
P-566	West Warwick Ave.	6	Cast iron	60	WW 1885	168	-10.21	0.120	0.010
P-567	Kent St.	8	Ductile Iron	140	WW 2001	728	19.61	0.130	0.010
P-568	Harbour Ave.	6	Asbestos Cement	115	WW 1946	388	-11.91	0.140	0.010
P-569	West Warwick Ave.	6	Cast iron	60	WW 1885	191	-31.36	0.360	0.100
P-570	Leeder St.	2	Galvanized iron	30	WW 1928	298	1.54	0.160	0.440
P-571	Arthur St.	6	Asbestos Cement	115	WW 1940	374	1.54	0.020	0.000
P-572	Laramie Ave.	6	PVC	130	WW 1989	628	1.54	0.020	0.000
P-573	Kent St.	8	Ductile Iron	140	WW 2001	631	1.54	0.010	0.000
P-574	Harbour Ave.	2	Copper	70	WW 1946	316	4.62	0.470	0.730
P-575	Bell St.	6	Asbestos Cement	130	WW 1975	638	1.54	0.020	0.000
P-576	Harbour Ave.	2	Copper	70	WW 1946	179	1.54	0.160	0.050
P-577	Pawtuxet Ter.	8	Cast iron	60	WW 1900	197	69.41	0.440	0.110
P-578	Bleach Ave.	6	Cast iron	45	WW 1936	318	3.08	0.030	0.000
P-579	Arthur St.	2	Galvanized iron	30	WW 1935	759	1.54	0.160	1.110
P-580	Pawtuxet Ter.	6	Cast iron	45	WW 1935	802	64.79	0.740	2.670
P-581	Jefferson St.	6	Asbestos Cement	115	WW 1949	225	1.54	0.020	0.000
P-582	Pawtuxet Ter.	6	Asbestos Cement	115	WW 1948	368	61.71	0.700	0.200
P-583	Morris St.	6	Asbestos Cement	115	WW 1948	823	1.54	0.020	0.000
P-584	Orrin St.	6	Asbestos Cement	115	WW 1949	359	-3.08	0.030	0.000
P-585	Pawtuxet Ter.	6	Asbestos Cement	115	WW 1948	361	58.63	0.670	0.180
P-586	Moretti Dr.	6	Asbestos Cement	120	WW 1950	419	49.83	0.570	0.140
P-587	Robinson Way	6	Asbestos Cement	115	WW 1947	317	27.17	0.310	0.040
P-588	Robinson Way	6	Asbestos Cement	115	WW 1947	341	7.70	0.090	0.000
P-589	Podgurski St.	6	Asbestos Cement	120	WW 1954	581	1.54	0.020	0.000
P-590	Robinson Way	6	Asbestos Cement	115	WW 1947	299	4.62	0.050	0.000
P-591	Pulaski St.	6	Cast iron	75	WW 1887	712	32.29	0.370	0.250
P-592	Pawtuxet Ter.	6	Asbestos Cement	115	WW 1948	1114	7.26	0.080	0.010
P-593	Pulaski St.	6	Cast iron	75	WW 1887	165	62.72	0.710	0.200
P-594	Pulaski St.	6	Cast iron	75	WW 1887	315	-3.84	0.040	0.000
P-595	Robinson Way	6	Asbestos Cement	115	WW 1947	959	-21.13	0.240	0.070
P-596	Pulaski St.	6	Cast iron	75	WW 1887	305	15.74	0.180	0.030
P-597	Colonial Way	6	Asbestos Cement	115	WW 1947	1144	-17.93	0.200	0.060
P-598	Barnold St.	6	Asbestos Cement	120	WW 1953	785	1.54	0.020	0.000
P-599	Pulaski St.	6	Cast iron	75	WW 1887	302	30.60	0.350	0.100
P-600	Aldrich St.	6	Asbestos Cement	115	WW 1963	1199	1.54	0.020	0.000
P-601	Pulaski St.	6	Cast iron	75	WW 1887	323	27.52	0.310	0.090
P-602	Pulaski St.	6	Cast iron	75	WW 1887	245	24.44	0.280	0.050
P-603	Windsor Park Dr.	6	Ductile Iron	135	WW 1990	220	3.08	0.030	0.000
P-604	Sophia's Way	6	Ductile Iron	135	WW 1990	312	1.54	0.020	0.000
P-605	Pulaski St.	6	Cast iron	75	WW 1887	780	19.83	0.220	0.110
P-606	Eileen Dr.	6	Asbestos Cement	120	WW 1959	308	-15.54	0.180	0.010
P-607	Eileen Dr.	6	Asbestos Cement	120	WW 1959	298	-18.61	0.210	0.020
P-608	Harvest Dr.	6	Asbestos Cement	125	WW 1967	325	1.54	0.020	0.000
P-609	Pulaski St.	6	Cast iron	75	WW 1887	343	33.83	0.380	0.130
P-610	Roundway Dr.	6	Asbestos Cement	120	WW 1953	167	-1.54	0.020	0.000
P-611	Roundway Dr.	6	Asbestos Cement	120	WW 1953	414	12.75	0.140	0.010
P-612	Roundway Dr.	6	Asbestos Cement	120	WW 1953	128	29.63	0.340	0.020
P-613	Sherwood Dr.	6	Asbestos Cement	120	WW 1954	951	-15.83	0.180	0.040

KCWA Model
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-614	Sheffield Ave.	6	Asbestos Cement	120	WW 1954	170	-26.44	0.300	0.020
P-615	Sheffield Ave.	6	Asbestos Cement	120	WW 1954	310	9.07	0.100	0.000
P-616	Feniand Dr.	6	Asbestos Cement	120	WW 1955	366	-13.97	0.160	0.010
P-617	Wilshire Way	6	Asbestos Cement	120	WW 1955	329	-15.51	0.180	0.010
P-618	Sheffield Ave.	6	Asbestos Cement	120	WW 1954	416	21.50	0.240	0.030
P-619	Creighton Pl.	6	Asbestos Cement	120	WW 1955	362	1.54	0.020	0.000
P-620	Sheffield Ave.	6	Asbestos Cement	120	WW 1954	290	18.42	0.210	0.020
P-621	Harley St.	8	Asbestos Cement	120	WW 1954	713	65.03	0.420	0.100
P-622	Coaches Ct.	6	Asbestos Cement	120	WW 1954	257	20.30	0.230	0.020
P-623	Sidney St.	6	Asbestos Cement	120	WW 1955	877	18.76	0.210	0.050
P-624	Barnold St.	6	Asbestos Cement	120	WW 1955	205	1.54	0.020	0.000
P-625	Sidney St.	6	Asbestos Cement	120	WW 1955	297	20.22	0.230	0.020
P-626	Sidney St.	6	Asbestos Cement	120	WW 1955	275	24.36	0.280	0.020
P-627	Sidney St.	6	Asbestos Cement	120	WW 1955	297	5.67	0.060	0.000
P-628	Wilshire Way	6	Asbestos Cement	120	WW 1955	608	-12.92	0.150	0.020
P-629	Harley St.	8	Asbestos Cement	120	WW 1954	378	-14.46	0.090	0.000
P-630	Sheffield Ave.	6	Asbestos Cement	120	WW 1954	914	10.82	0.120	0.020
P-631	Harley St.	8	Asbestos Cement	120	WW 1954	414	-26.82	0.170	0.010
P-632	Kowalik Dr.	6	Asbestos Cement	120	WW 1954	745	5.68	0.060	0.000
P-633	Harley St.	8	Asbestos Cement	120	WW 1954	315	-34.03	0.220	0.010
P-634	Lada Dr.	6	Asbestos Cement	120	WW 1955	231	-8.29	0.090	0.000
P-635	Lada Dr.	6	Asbestos Cement	120	WW 1955	342	4.54	0.050	0.000
P-636	Harley St.	8	Asbestos Cement	120	WW 1954	788	-27.28	0.170	0.020
P-637	Bryant Pl.	6	Asbestos Cement	120	WW 1955	553	-14.37	0.160	0.020
P-638	Harley St.	8	Asbestos Cement	120	WW 1954	704	-43.19	0.280	0.040
P-639	West Warwick Ave.	6	Cast iron	60	WW 1885	1107	-34.44	0.390	0.670
P-640	West Warwick Ave.	6	Cast iron	60	WW 1885	118	79.61	0.900	0.340
P-641	Main St.	8	Cast iron	75	WW 1935	360	115.18	0.740	0.330
P-642	Legris Ave.	6	Ductile Iron	135	WW 1994	160	35.66	0.400	0.020
P-643	Bridal Ave.	6	Cast iron	40	WW 1922	1327	9.21	0.100	0.150
P-645	Bridal Ave.	6	Cast iron	40	WW 1922	173	3.05	0.030	0.000
P-646	Main St.	6	Cast iron	60	WW 1885	1092	-37.12	0.420	0.760
P-647	Epworth Ave.	6	Cast iron	30	WW 1885	268	-4.79	0.050	0.020
P-648	Epworth Ave.	6	Cast iron	30	WW 1885	761	-6.33	0.070	0.070
P-649	Epworth Ave.	4	Cast iron	30	WW 1885	347	-7.87	0.200	0.360
P-650	Main St.	6	Cast iron	60	WW 1885	753	33.87	0.380	0.440
P-651	Main St.	6	Cast iron	60	WW 1885	223	-43.27	0.490	0.210
P-652	Crossen St.	6	Cast iron	30	WW 1885	359	-54.05	0.610	1.810
P-653	Brookside Ave.	8	Cast iron	60	WW 1885	962	118.66	0.760	1.420
P-654	To Mill (Private)	10	Cast iron	60	WW 1885	306	1.54	0.010	0.000
P-655	Brookside Ave.	8	Cast iron	60	WW 1885	1040	115.58	0.740	1.460
P-656	Crossen St.	4	Cast iron	30	WW 1885	539	2.09	0.050	0.050
P-657	Riverdale Ave.	2	Cast iron	30	WW 1885	167	0.55	0.060	0.040
P-658	Riverdale Ave.	4	Cast iron	30	WW 1885	796	-0.92	0.020	0.020
P-659	Eddy St.	6	Cast iron	30	WW 1885	546	1.54	0.020	0.000
P-660	Eddy St.	6	Cast iron	30	WW 1885	640	-4.00	0.050	0.030
P-661	Main St.	6	Cast iron	30	WW 1885	288	-5.54	0.060	0.020
P-662	Hare St.	1	Galvanized iron	30	WW 1885	574	0.06	0.030	0.060
P-663	Main St.	6	Cast iron	30	WW 1885	180	-7.14	0.080	0.020
P-664	Brookside Ave.	10	Cast iron	60	WW 1885	646	-174.25	0.710	0.660
P-665	Robert St.	4	Cast iron	40	WW 1929	370	-14.89	0.380	0.730
P-666	Robert St.	4	Cast iron	40	WW 1929	334	-6.85	0.170	0.160
P-667	Main St.	6	Cast iron	30	WW 1885	879	-8.39	0.100	0.140
P-668	Washington St.	8	Cast iron	75	WW 1931	135	43.01	0.270	0.020
P-669	Washington St.	8	Cast iron	75	WW 1931	250	79.17	0.510	0.120
P-670	St. John St.	6	Cast iron	30	WW 1890	783	9.58	0.110	0.160
P-671	Washington St.	8	Cast iron	75	WW 1931	344	68.04	0.430	0.120
P-672	Brookside Ave.	8	Cast iron	70	WW 1922	281	-66.51	0.420	0.110
P-673	Robert St.	6	Cast iron	40	WW 1929	591	-30.28	0.340	0.600
P-674	Roosevelt St.	1	PVC	140	WW 2000	350	1.54	0.630	0.860
P-675	Ottawa St.	4	Cast iron	30	WW 1885	314	-3.68	0.090	0.080
P-676	Mill St.	4	Cast iron	30	WW 1885	562	-5.22	0.130	0.270
P-677	Mill St.	4	Cast iron	30	WW 1885	380	-6.76	0.170	0.290
P-678	Robert St.	6	Cast iron	40	WW 1929	658	29.68	0.340	0.640
P-679	Washington St.	8	Cast iron	60	WW 1885	71	-86.88	0.550	0.060
P-680	Washington St.	12	Cast iron	60	WW 1885	109	46.17	0.130	0.000
P-681	Baker St.	2	Galvanized iron	30	WW 1900	20	4.62	0.470	0.220
P-682	Washington St.	12	Cast iron	60	WW 1886	418	40.01	0.110	0.010
P-683	Walnut St.	6	Asbestos Cement	130	WW 1972	582	1.54	0.020	0.000
P-684	Washington St.	12	Cast iron	60	WW 1886	265	65.32	0.190	0.020
P-685	Nolan St.	2	PVC	125	WW 1978	564	1.54	0.160	0.060
P-686	Washington St.	12	Cast iron	60	WW 1886	1276	67.31	0.190	0.090
P-687	Washington St.	12	Cast iron	60	WW 1885	490	71.14	0.200	0.040
P-688	Easement	6	Cast iron	30	WW 1890	184	90.37	1.030	2.400
P-689	Washington St.	12	Cast iron	60	WW 1885	379	-20.77	0.060	0.000
P-690	West Warwick Ave.	6	Cast iron	60	WW 1890	275	88.83	1.010	0.960
P-691	Andrew Ave.	6	Cast iron	30	WW 1886	405	-5.37	0.060	0.030
P-692	Rathburn St.	6	Asbestos Cement	120	WW 1956	346	-6.28	0.070	0.000
P-693	Andrew Ave.	2	Galvanized iron	30	WW 1910	1734	-0.63	0.060	0.480
P-694	Willow St.	6	Cast iron	30	WW 1890	305	1.27	0.010	0.000
P-695	Willow St.	6	Cast iron	30	WW 1890	529	16.08	0.180	0.280
P-696	West St.	6	Cast iron	30	WW 1888	82	13.20	0.150	0.020
P-697	West St.	6	Cast iron	30	WW 1888	1131	6.60	0.070	0.120

KCWA Model
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Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-698	Beauchene St.	6	Cast iron	30	WW 1888	316	5.06	0.960	0.020
P-699	East St.	6	Ductile Iron	135	WW 1990	679	28.39	0.320	0.060
P-700	East St.	6	Ductile Iron	135	WW 1990	843	-24.87	0.280	0.060
P-701	Brookside Ave.	8	Cast iron	70	WW 1922	497	-130.62	0.830	0.660
P-702	Brookside Ave.	8	Ductile Iron	140	WW 2000	405	-65.65	0.420	0.040
P-703	West St.	4	Cast iron	30	WW 1889	382	1.34	0.030	0.010
P-704	Lemoine Ct.	2	Galvanized iron	30	WW 1889	339	1.54	0.160	0.500
P-705	West St.	4	Cast iron	30	WW 1889	390	-1.74	0.040	0.020
P-706	West St.	6	Cast iron	50	WW 1940	160	1.93	0.020	0.000
P-707	Wood St.	6	Asbestos Cement	120	WW 1950	352	1.54	0.020	0.000
P-708	West St.	2	Galvanized iron	30	WW 1940	1216	-1.15	0.120	1.040
P-709	Shippee Ave.	8	Cast iron	60	WW 1889	268	10.93	0.070	0.000
P-710	Agnes St.	6	Cast iron	35	WW 1910	433	1.54	0.020	0.000
P-711	Shippee Ave.	8	Cast iron	60	WW 1889	255	7.85	0.050	0.000
P-712	Shippee Ave.	8	Cast iron	60	WW 1889	314	-17.83	0.110	0.010
P-713	Shippee Ave.	8	Cast iron	60	WW 1889	296	4.77	0.030	0.000
P-714	Plante St.	2	PVC	130	WW 1981	472	1.54	0.160	0.050
P-715	Andrew Ave.	6	Cast iron	45	WW 1930	2096	19.52	0.220	0.760
P-716	Hebert St.	2	Galvanized iron	30	WW 1928	791	1.54	0.160	1.160
P-717	Shippee Ave.	12	Cast iron	75	WW 1930	395	275.07	0.780	0.260
P-718	Pond St.	12	Cast iron	75	WW 1930	707	238.30	0.680	0.350
P-719	Lachance St.	6	Cast iron	45	WW 1938	315	5.20	0.060	0.010
P-720	Pond St.	12	Cast iron	75	WW 1930	356	206.14	0.580	0.130
P-721	Pond St.	12	Cast iron	60	WW 1885	381	172.99	0.490	0.160
P-722	Pond St.	12	Cast iron	60	WW 1885	493	160.56	0.460	0.180
P-723	Pond St.	12	Cast iron	60	WW 1885	261	134.59	0.380	0.070
P-724	Washington St.	8	Cast iron	60	WW 1885	579	48.91	0.310	0.170
P-725	Ottawa St.	6	Cast iron	30	WW 1885	321	-21.36	0.240	0.290
P-726	Archambault Ave.	12	Asbestos Cement	115	WW 1941	536	-24.43	0.070	0.000
P-727	Ottawa St.	6	Cast iron	30	WW 1885	350	-14.22	0.160	0.150
P-728	Ottawa St.	6	Cast iron	30	WW 1886	114	-10.89	0.120	0.030
P-729	Washington St.	8	Cast iron	60	WW 1885	697	68.73	0.440	0.370
P-730	Crawford St.	6	Cast iron	45	WW 1936	187	1.54	0.020	0.000
P-731	Granite St.	4	Cast Iron	30	WW 1886	737	-4.87	0.120	0.310
P-732	Barnes St.	8	Cast iron	75	WW 1936	127	-30.62	0.200	0.010
P-733	Horne St.	6	Cast iron	50	WW 1940	775	-27.01	0.310	0.420
P-734	Barnes St.	8	Cast iron	75	WW 1936	191	-46.83	0.300	0.030
P-735	Barnes St.	8	Cast iron	75	WW 1936	121	-24.21	0.150	0.010
P-736	Shippee Ave.	6	Cast iron	45	WW 1939	101	36.23	0.410	0.110
P-737	Shippee Ave.	6	Cast iron	45	WW 1939	249	33.15	0.380	0.240
P-738	Rika St.	8	Ductile Iron	140	WW 2001	649	24.15	0.150	0.010
P-739	Shippee Ave.	6	Cast iron	45	WW 1939	234	7.46	0.080	0.010
P-740	McGlynn St.	1.5	Copper	70	WW 1941	624	0.26	0.050	0.030
P-741	Shippee Ave.	6	Cast iron	45	WW 1939	368	5.66	0.060	0.010
P-742	McNiff St.	4	Cast iron	50	WW 1940	110	13.18	0.340	0.110
P-743	McNiff St.	6	Cast iron	50	WW 1940	450	-15.47	0.180	0.090
P-744	Barnes St.	8	Cast iron	75	WW 1936	344	-18.54	0.120	0.010
P-745	McNiff St.	6	Cast iron	50	WW 1940	697	1.54	0.020	0.000
P-746	Archambault Ave.	12	Asbestos Cement	115	WW 1941	1433	42.76	0.120	0.010
P-747	Gareau St.	6	Cast iron	50	WW 1940	349	37.70	0.430	0.350
P-748	Gareau St.	6	Cast iron	50	WW 1940	615	-27.11	0.310	0.340
P-749	McNiff St.	6	Cast iron	50	WW 1940	163	-9.07	0.100	0.010
P-750	Jodoin St.	6	Cast iron	50	WW 1945	429	1.54	0.020	0.000
P-751	McNiff St.	6	Cast iron	50	WW 1940	193	-12.15	0.140	0.020
P-752	Middle St.	2	Galvanized iron	30	WW 1933	353	1.54	0.160	0.520
P-753	Curson St.	4	Cast iron	45	WW 1935	253	-22.14	0.570	0.830
P-754	Hillcrest Dr.	6	Cast iron	50	WW 1949	341	4.62	0.050	0.010
P-755	Valley View Dr.	1	Copper	70	WW 1950	273	1.54	0.630	2.430
P-756	Hillcrest Dr.	6	Cast iron	50	WW 1949	280	1.54	0.020	0.000
P-757	Curson St.	8	Ductile Iron	140	WW 2002	260	-29.83	0.190	0.010
P-758	Curson St.	8	Asbestos Cement	115	WW 1947	712	-23.68	0.150	0.020
P-759	West St.	12	Cast iron	75	WW 1930	204	-322.60	0.920	0.180
P-760	Guertin St.	2	Galvanized iron	30	WW 1950	358	1.54	0.160	0.520
P-761	West St.	12	Cast iron	75	WW 1930	510	-325.68	0.920	0.450
P-762	Virginia Ave.	6	Asbestos Cement	125	WW 1967	301	4.62	0.050	0.000
P-763	Bouchard St.	6	Asbestos Cement	125	WW 1967	247	3.08	0.030	0.000
P-764	Bouchard St.	6	Asbestos Cement	125	WW 1967	307	1.54	0.020	0.000
P-765	West St.	12	Cast iron	75	WW 1930	267	-331.84	0.940	0.240
P-767	West St. Tank	12	Ductile Iron	140	WW 2002	194	0.00	0.000	0.000
P-768	West St. Tank	12	Cast iron	75	WW 1930	130	0.71	0.000	0.000
P-769	West St.	16	Asbestos Cement	130	WW 1944	446	-333.38	0.530	0.040
P-770	Gough Ave.	16	Asbestos Cement	130	WW 1944	160	-334.92	0.530	0.010
P-771	Gough Ave.	16	Asbestos Cement	130	WW 1944	712	-359.59	0.570	0.070
P-772	Gough Ave.	16	Asbestos Cement	130	WW 1944	114	-362.67	0.580	0.010
P-773	Hebert St.	1.5	Copper	110	WW 1966	216	1.54	0.280	0.120
P-774	Gough Ave.	6	Asbestos Cement	115	WW 1944	112	23.14	0.260	0.010
P-775	Gough Ave.	6	Cast iron	75	WW 1937	132	1.48	0.020	0.000
P-776	Regnaier Ct.	6	PVC	130	WW 1982	592	1.54	0.020	0.000
P-777	Gough Ave.	6	Cast iron	75	WW 1937	294	-1.60	0.020	0.000
P-778	Kinne St.	4	Cast iron	80	WW 1949	700	-3.14	0.080	0.020
P-779	Kinne St.	6	Asbestos Cement	115	WW 1949	234	-4.67	0.050	0.000
P-780	Youngs Ave.	6	Asbestos Cement	120	WW 1956	350	-56.74	0.640	0.150
P-781	Kinne St.	6	Asbestos Cement	115	WW 1949	570	1.54	0.020	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-782	Youngs Ave.	8	Ductile Iron	140	WW 2001	1067	48.98	0.310	0.060
P-783	Greene St.	8	Asbestos Cement	110	WW 1933	691	45.72	0.290	0.060
P-784	Gough Ave.	6	Cast iron	75	WW 1937	661	-20.12	0.230	0.100
P-785	Youngs Ave.	6	Cast iron	30	WW 1885	458	20.24	0.230	0.370
P-786	Tobin St.	6	Cast iron	50	WW 1945	329	1.54	0.020	0.000
P-787	Youngs Ave.	6	Cast iron	30	WW 1885	2079	17.17	0.190	1.250
P-788	Main St.	6	Cast iron	60	WW 1936	212	-30.32	0.340	0.100
P-789	Kerion St.	1.3	Galvanized iron	30	WW 1938	688	1.54	0.400	9.920
P-790	Main St.	6	Cast iron	60	WW 1936	335	-33.40	0.380	0.190
P-792	Harris Ave.	6	Cast iron	30	WW 1885	1423	-15.19	0.170	0.680
P-793	South St.	6	Asbestos Cement	120	WW 1954	393	1.54	0.020	0.000
P-794	Harris Ave.	6	Cast iron	30	WW 1885	965	-18.27	0.210	0.650
P-795	Greene St.	4	Cast iron	45	WW 1933	527	-31.75	0.810	3.370
P-796	Greene St.	8	Asbestos Cement	110	WW 1933	475	-10.40	0.070	0.000
P-797	Greene St.	4	Cast iron	30	WW 1887	311	-8.11	0.210	0.340
P-798	Harris Ave.	8	Asbestos Cement	120	WW 1950	303	17.35	0.110	0.000
P-799	Harris Ave.	8	Asbestos Cement	115	WW 1946	1141	14.27	0.090	0.610
P-800	Greene St.	4	Cast iron	45	WW 1933	399	3.08	0.080	0.030
P-801	Peters Ln.	8	Asbestos Cement	125	WW 1960	1067	1.54	0.010	0.000
P-802	Greene St.	1	Copper	70	WW 1950	253	1.54	0.630	2.250
P-803	Woodside Ave.	6	Cast iron	45	WW 1938	454	44.60	0.510	0.760
P-804	Downing Dr.	6	Asbestos Cement	130	WW 1978	481	1.54	0.020	0.000
P-805	Woodside Ave.	6	Cast iron	45	WW 1938	224	41.52	0.470	0.330
P-806	Patrick Rd.	6	Asbestos Cement	130	WW 1978	394	104.11	1.180	0.440
P-807	Quinn Dr.	6	Asbestos Cement	130	WW 1978	250	1.54	0.020	0.000
P-808	Woodside Ave.	6	Cast iron	45	WW 1938	827	-64.13	0.730	2.700
P-809	Greene St.	6	Asbestos Cement	120	WW 1952	213	1.54	0.020	0.000
P-810	Patrick Rd.	6	Asbestos Cement	130	WW 1978	315	101.03	1.150	0.330
P-811	Spencer St.	6	Asbestos Cement	120	WW 1950	309	97.95	1.110	0.360
P-812	Spencer St.	6	Asbestos Cement	120	WW 1950	633	1.54	0.020	0.000
P-813	Sunrise Ave.	6	Asbestos Cement	125	WW 1965	877	182.48	2.070	3.000
P-814	Woodside Ave.	6	Cast iron	45	WW 1885	1372	57.11	0.650	3.620
P-815	Woodside Ave.	6	Cast iron	45	WW 1885	240	66.51	0.750	0.840
P-816	Flynn Ter.	4	Cast iron	30	WW 1885	382	3.08	0.080	0.070
P-817	Flynn Ter.	6	Asbestos Cement	120	WW 1952	472	1.54	0.020	0.000
P-818	Woodside Ave.	6	Cast iron	45	WW 1885	691	61.89	0.700	2.110
P-819	Fruit St.	4	Cast iron	30	WW 1885	296	-10.93	0.280	0.560
P-820	Sunset Ave.	6	Cast iron	30	WW 1885	548	1.54	0.020	0.000
P-821	Sunset Ave.	6	Cast iron	30	WW 1885	715	-14.01	0.160	0.300
P-822	Maple Ave.	6	Cast iron	40	WW 1885	344	101.53	1.150	3.270
P-823	Maple Ave.	6	Cast iron	40	WW 1885	864	-117.08	1.330	10.700
P-824	Sunrise Ave.	4	Cast iron	30	WW 1885	618	3.08	0.080	0.110
P-825	Pine St.	6	Asbestos Cement	120	WW 1957	399	1.54	0.020	0.000
P-826	Main St.	10	Cast iron	60	WW 1885	104	-141.61	0.580	0.070
P-827	Main St.	10	Cast iron	60	WW 1885	607	-164.14	0.670	0.550
P-828	Main St.	10	Cast iron	60	WW 1885	238	-130.12	0.530	0.140
P-829	Clyde St.	6	Cast iron	30	WW 1885	498	10.56	0.120	0.120
P-830	Industrial Ln.	8	Cast iron	60	WW 1885	1837	6.21	0.040	0.010
P-831	Clyde St.	12	PVC	130	WW 1980	1244	35.55	0.100	0.010
P-832	Industrial Ln.	10	Cast iron	60	WW 1885	341	4.67	0.020	0.000
P-835	Wightman St.	12	PVC	130	WW 1988	626	27.62	0.080	0.000
P-836	Alexander Dr.	12	Ductile Iron	140	WW 2001	569	26.08	0.070	0.000
P-837	Alexander Dr.	12	Ductile Iron	140	WW 2001	579	65.45	0.190	0.010
P-838	Medinah Dr.	8	Ductile Iron	140	WW 2001	581	-40.91	0.260	0.020
P-839	Saddlebrook Dr.	8	PVC	130	WW 1989	233	-42.03	0.270	0.010
P-840	Saddlebrook Dr.	8	PVC	130	WW 1988	610	-43.57	0.280	0.030
P-841	Crestwood Dr.	8	PVC	130	WW 1988	859	49.28	0.310	0.050
P-842	Saddlebrook Dr.	8	PVC	130	WW 1988	520	0.42	0.000	0.000
P-843	Crestwood Dr.	8	PVC	130	WW 1988	332	47.32	0.300	0.020
P-844	Crestwood Dr.	8	PVC	130	WW 1988	459	-94.39	0.600	0.110
P-845	Meadowchase Ln.	8	PVC	130	WW 1988	447	1.54	0.010	0.000
P-846	Crestwood Dr.	8	PVC	130	WW 1988	316	-97.46	0.620	0.080
P-847	Louise Dr.	6	Asbestos Cement	120	WW 1955	705	3.08	0.030	0.000
P-848	Brookfield Dr.	6	Asbestos Cement	130	WW 1972	282	1.54	0.020	0.000
P-849	Crestwood Dr.	6	Asbestos Cement	120	WW 1957	297	-102.08	1.160	0.370
P-850	Wakefield St.	12	Ductile Iron	135	WW 1997	510	436.01	1.240	0.260
P-851	Wakefield St.	12	Ductile Iron	135	WW 1997	215	431.25	1.220	0.110
P-852	Wakefield St.	12	Ductile Iron	135	WW 1997	464	425.09	1.210	0.220
P-853	Cyr Ct.	12	Ductile Iron	140	WW 2001	384	-62.37	0.180	0.000
P-854	Wakefield St.	12	Ductile Iron	135	WW 1997	175	485.92	1.380	0.110
P-855	Wakefield St.	12	Asbestos Cement	130	WW 1980	2914	536.19	1.520	2.330
P-856	Carrie Ann Dr.	12	Ductile Iron	135	WW 1990	338	222.45	0.630	0.050
P-857	Derrick Ct.	12	Ductile Iron	135	WW 1990	169	203.98	0.580	0.020
P-858	Carrie Ann Dr.	12	Ductile Iron	135	WW 1990	167	18.47	0.050	0.000
P-859	Shannon Ln.	8	Ductile Iron	135	WW 1993	265	9.83	0.060	0.000
P-860	Colleen Ln.	8	Ductile Iron	135	WW 1993	228	1.54	0.010	0.000
P-861	Shannon Ln.	8	Ductile Iron	135	WW 1993	269	6.76	0.040	0.000
P-862	Kathleen Ct.	8	Ductile Iron	135	WW 1993	422	1.54	0.010	0.000
P-863	Kathleen Ct.	8	Ductile Iron	135	WW 1993	576	-4.02	0.030	0.000
P-864	Carrie Ann Dr.	8	Ductile Iron	135	WW 1993	200	1.54	0.010	0.000
P-865	Carrie Ann Dr.	8	Ductile Iron	135	WW 1993	530	-7.09	0.050	0.000
P-866	Shannon Ln.	8	Ductile Iron	135	WW 1993	565	7.69	0.050	0.000
P-867	Gilcrest Cir.	8	Ductile Iron	140	WW 2001	465	2.98	0.020	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-868	Gilcrest Cir.	8	Ductile Iron	140	WW 2001	311	1.44	0.010	0.000
P-869	Gilcrest Cir.	8	Ductile Iron	140	WW 2001	485	3.17	0.020	0.000
P-870	Gilcrest Cir.	8	Ductile Iron	140	WW 2001	679	0.10	0.000	0.000
P-871	Gilcrest Cir.	8	Ductile Iron	140	WW 2001	639	1.54	0.010	0.000
P-874	Wakefield St.	12	PVC	130	WW 1989	186	1.54	0.000	0.000
P-875	Lombardi Ln.	12	PVC	130	WW 1989	814	127.76	0.360	0.050
P-877	River Farms Dr.	8	PVC	135	WW 1990	267	1.54	0.010	0.000
P-878	River Farms Dr.	12	PVC	130	WW 1989	343	228.48	0.650	0.060
P-879	Queen Ann Ct.	8	Ductile Iron	140	WW 2002	335	1.16	0.010	0.000
P-881	River Farms Dr.	12	PVC	130	WW 1989	1245	284.51	0.810	0.310
P-882	River Farms Dr.	8	PVC	135	WW 1990	250	41.33	0.260	0.010
P-883	River Farms Dr.	8	PVC	135	WW 1990	377	1.54	0.010	0.000
P-884	River Farms Dr.	8	PVC	135	WW 1990	245	38.25	0.240	0.010
P-885	River Farms Dr.	12	PVC	130	WW 1989	118	241.64	0.690	0.020
P-886	River Farms Dr.	12	PVC	130	WW 1989	320	278.35	0.790	0.080
P-887	Wakefield St.	12	Ductile Iron	135	WW 1997	115	429.71	1.220	0.060
P-888	Burlingame Rd.	8	PVC	130	WW 1981	2177	-53.35	0.340	0.170
P-889	Vincenzo Dr.	6	PVC	130	WW 1981	408	-54.89	0.620	0.140
P-890	Vincenzo Dr.	6	Asbestos Cement	125	WW 1964	588	-33.94	0.390	0.090
P-891	Harding St.	6	Asbestos Cement	115	WW 1947	252	25.56	0.290	0.030
P-892	Horta Dr.	6	Asbestos Cement	125	WW 1964	579	24.02	0.270	0.050
P-893	Horta Dr.	6	Asbestos Cement	125	WW 1964	233	22.49	0.260	0.020
P-894	Hoover St.	6	Ductile Iron	130	WW 1988	947	3.08	0.030	0.000
P-895	Harding St.	6	Asbestos Cement	115	WW 1947	170	-61.04	0.690	0.090
P-896	Harding St.	6	Asbestos Cement	115	WW 1947	1974	-3.22	0.040	0.000
P-897	Buehler Dr.	6	Asbestos Cement	120	WW 1953	386	-59.36	0.670	0.180
P-898	Buehler Dr.	6	Asbestos Cement	120	WW 1953	342	-53.66	0.610	0.130
P-899	Cleveland St.	6	Asbestos Cement	115	WW 1948	948	-7.24	0.080	0.010
P-900	Grace Ct.	6	Asbestos Cement	125	WW 1968	168	1.54	0.020	0.000
P-901	Cleveland St.	6	Asbestos Cement	115	WW 1948	450	-10.32	0.120	0.010
P-902	Garfield Ter.	6	Ductile Iron	135	WW 1992	290	1.54	0.020	0.000
P-903	Cleveland St.	6	Asbestos Cement	115	WW 1948	172	-13.40	0.150	0.010
P-904	Cleveland St.	6	Asbestos Cement	115	WW 1948	314	-24.17	0.270	0.030
P-905	Ledge Dr.	6	Asbestos Cement	120	WW 1955	437	1.54	0.020	0.000
P-906	Cleveland St.	6	Asbestos Cement	115	WW 1948	275	-27.25	0.310	0.030
P-907	Wakefield St.	12	Ductile Iron	135	WW 1997	428	-566.88	1.610	0.350
P-908	Wakefield St.	12	Ductile Iron	135	WW 1997	974	-561.92	1.590	0.790
P-909	Wakefield St.	12	Ductile Iron	135	WW 1997	737	-563.46	1.600	0.600
P-910	Clyde St.	6	Cast Iron	30	WW 1885	1094	25.64	0.290	1.390
P-911	Grandview Dr.	6	Asbestos Cement	120	WW 1958	890	-5.50	0.070	0.010
P-912	Clyde St.	6	Cast Iron	30	WW 1885	706	17.61	0.200	0.450
P-914	Oak St.	6	Cast Iron	30	WW 1885	242	1.72	0.020	0.000
P-915	Oak St.	6	Cast Iron	30	WW 1885	147	-11.51	0.130	0.040
P-916	Smith St.	6	Cast Iron	30	WW 1885	692	-13.05	0.150	0.250
P-917	Harmony St.	4	Cast Iron	30	WW 1890	676	4.79	0.120	0.280
P-918	Harmony St.	6	Cast Iron	30	WW 1890	523	3.25	0.040	0.010
P-919	Smith St.	6	Cast Iron	30	WW 1885	188	-19.38	0.220	0.140
P-920	Wakefield St.	12	Ductile Iron	135	WW 1997	154	590.64	1.680	0.140
P-921	Clyde St.	6	Cast Iron	30	WW 1885	1012	16.07	0.180	0.540
P-922	Westly St.	6	Cast Iron	30	WW 1885	230	11.68	0.130	0.070
P-923	Westly St.	6	Cast Iron	30	WW 1885	456	8.60	0.100	0.080
P-924	Westly St.	6	Cast Iron	30	WW 1885	232	26.70	0.300	0.320
P-925	Main St.	8	Cast Iron	60	WW 1885	717	142.22	0.910	1.480
P-926	Knight St.	6	Cast Iron	30	WW 1885	537	-19.63	0.220	0.420
P-927	Knight St.	6	Cast Iron	30	WW 1885	318	-23.32	0.260	0.340
P-928	Knight St.	6	Cast Iron	30	WW 1885	305	-14.59	0.170	0.140
P-929	Wakefield St.	12	Ductile Iron	135	WW 1997	323	614.63	1.740	0.310
P-930	Main St.	8	Cast Iron	60	WW 1885	505	-117.06	0.750	0.730
P-931	Main St.	8	Cast Iron	60	WW 1885	318	-116.45	0.740	0.450
P-932	Main St.	8	Cast Iron	60	WW 1885	321	-128.26	0.820	0.550
P-933	Packard St.	6	Cast Iron	30	WW 1885	390	-2.15	0.020	0.010
P-934	Ventura St.	6	Cast Iron	30	WW 1885	473	10.27	0.120	0.110
P-935	Wakefield St.	12	Ductile Iron	135	WW 1997	549	611.12	1.730	0.520
P-936	Angell St.	6	Asbestos Cement	130	WW 1977	632	3.08	0.030	0.000
P-937	Angell St.	2	Galvanized Iron	30	WW 1928	418	1.54	0.160	0.610
P-938	Bettez St.	4	Cast Iron	30	WW 1885	1059	-19.65	0.500	5.910
P-939	Phenix Ave.	6	Cast Iron	30	WW 1885	364	-34.59	0.390	0.800
P-940	Phenix Ave.	6	Cast Iron	30	WW 1885	816	14.77	0.170	0.370
P-941	Main St.	10	Cast Iron	60	WW 1885	393	740.92	3.030	5.820
P-942	Mello St.	6	Asbestos Cement	120	WW 1951	251	9.23	0.100	0.000
P-943	Mello St.	6	Asbestos Cement	120	WW 1951	290	4.20	0.050	0.000
P-944	Mello St.	6	Asbestos Cement	120	WW 1951	654	3.49	0.040	0.000
P-945	Centracchio St.	6	PVC	130	WW 1987	391	1.54	0.020	0.000
P-946	Centracchio St.	6	Ductile Iron	135	WW 1992	267	0.41	0.000	0.000
P-947	Centracchio St.	6	Ductile Iron	135	WW 1992	259	1.54	0.020	0.000
P-948	Brook St.	6	Ductile Iron	135	WW 1992	510	-2.67	0.030	0.000
P-949	Phenix Ave.	6	Cast Iron	30	WW 1885	247	13.41	0.150	0.090
P-950	Phenix Ave.	8	Cast Iron	75	WW 1932	203	89.05	0.570	0.120
P-951	Phenix Ave.	6	Cast Iron	30	WW 1885	140	1.54	0.020	0.000
P-952	Phenix Ave.	8	Cast Iron	75	WW 1932	1017	85.97	0.550	0.550
P-955	Phenix Ave.	6	Cast Iron	45	WW 1932	747	72.12	0.820	3.030
P-956	Phenix Ave.	6	Cast Iron	45	WW 1932	426	56.73	0.640	1.110
P-957	Phenix Ave.	6	Cast Iron	45	WW 1932	236	1.54	0.020	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Friction Headloss (ft)
P-958	Melrose St.	6	Cast iron	45	WW 1938	127	13.85	0.160	0.020
P-959	Melrose St.	6	Cast iron	45	WW 1938	833	4.62	0.050	0.020
P-960	Waverly St.	8	Asbestos Cement	125	WW 1965	402	3.08	0.020	0.000
P-961	Phenix Ave.	8	Asbestos Cement	125	WW 1965	322	1.54	0.010	0.000
P-962	Linwood St.	6	Asbestos Cement	115	WW 1942	508	7.70	0.090	0.010
P-963	Garnet St.	6	Asbestos Cement	125	WW 1961	555	6.16	0.070	0.000
P-964	Schofield St.	6	Asbestos Cement	125	WW 1961	329	3.08	0.030	0.000
P-965	Garnet St.	6	Asbestos Cement	125	WW 1961	276	1.54	0.020	0.000
P-966	Lowell St.	6	Asbestos Cement	125	WW 1962	279	1.54	0.020	0.000
P-967	Woodbine St.	6	Cast iron	45	WW 1932	559	4.62	0.050	0.010
P-968	Miller Dr.	6	Asbestos Cement	120	WW 1955	676	3.08	0.030	0.000
P-969	Sternbach St.	6	Asbestos Cement	125	WW 1965	330	1.54	0.020	0.000
P-970	Aberdeen St.	6	Cast iron	40	WW 1922	1119	-1.54	0.020	0.000
P-971	Aberdeen St.	6	Cast iron	40	WW 1922	1058	77.19	0.880	6.060
P-972	Alpine St.	6	Cast iron	45	WW 1935	276	-80.26	0.910	1.370
P-973	Atwood St.	6	Asbestos Cement	130	WW 1977	632	1.54	0.020	0.000
P-974	Alpine St.	6	Cast iron	45	WW 1935	309	-83.34	0.950	1.640
P-975	Summit Ave.	6	Cast iron	30	WW 1885	1174	53.98	0.610	5.910
P-976	Summit Ave.	6	Cast iron	30	WW 1885	139	52.44	0.600	0.660
P-977	Summit Ave.	6	Cast iron	30	WW 1885	354	50.90	0.580	1.600
P-978	Alpine St.	6	Cast iron	30	WW 1885	353	-138.86	1.580	10.220
P-979	Parker St.	6	Cast iron	30	WW 1885	186	-105.87	1.200	3.260
P-980	Parker St.	6	Cast iron	30	WW 1885	1699	-34.54	0.390	3.740
P-981	Highland St.	6	Cast iron	30	WW 1885	781	129.82	1.470	19.960
P-982	Main St.	10	Cast iron	60	WW 1885	157	777.18	3.170	2.540
P-984	East Main St.	6	Cast iron	60	WW 1886	219	40.53	0.460	0.180
P-985	Cross St.	1	Galvanized iron	30	WW 1928	360	1.54	0.630	15.380
P-986	East Main St.	6	Cast iron	60	WW 1886	259	37.45	0.420	0.180
P-987	Ein St.	1	Galvanized iron	30	WW 1928	357	1.54	0.630	15.260
P-988	East Main St.	6	Cast iron	60	WW 1886	405	34.37	0.390	0.240
P-989	Junior St.	6	Cast iron	40	WW 1922	646	24.89	0.280	0.450
P-990	Junior St.	6	Cast iron	40	WW 1922	512	23.35	0.260	0.320
P-991	Junior St.	6	Cast iron	40	WW 1922	387	7.90	0.090	0.030
P-992	Hay St.	6	PVC	125	WW 1973	560	1.54	0.020	0.000
P-994	Providence St.	10	Cast iron	70	WW 1928	2599	210.48	0.880	2.810
P-995	East Main St.	6	Cast iron	60	WW 1886	64	9.48	0.110	0.000
P-997	Bridge St.	4	Cast iron	45	WW 1935	1240	-7.05	0.180	0.490
P-998	Providence St.	6	Cast iron	60	WW 1885	1466	5.35	0.060	0.030
P-999	Central St.	8	Cast iron	75	WW 1937	144	-214.90	1.370	0.420
P-1000	Central St.	8	Cast iron	75	WW 1937	149	8.84	0.060	0.000
P-1001	Central St.	8	Cast iron	75	WW 1937	974	7.30	0.050	0.010
P-1002	Bridge St.	6	Cast iron	45	WW 1935	671	-16.49	0.190	0.180
P-1003	Bridge St.	6	Cast iron	45	WW 1935	146	32.59	0.370	0.140
P-1004	East Main St.	12	Asbestos Cement	120	WW 1951	917	225.28	0.640	0.170
P-1005	East Main St.	12	Asbestos Cement	120	WW 1951	838	-275.90	0.780	0.230
P-1007	Main St.	10	Cast iron	60	WW 1885	292	241.60	0.990	0.540
P-1008	Main St.	10	Cast iron	60	WW 1885	165	-37.04	0.150	0.010
P-1009	Main St.	6	Cast iron	60	WW 1885	477	23.31	0.260	0.140
P-1010	Brayton St.	4	Cast iron	30	WW 1885	569	2.02	0.050	0.050
P-1011	Brayton St.	4	Cast iron	30	WW 1885	352	0.48	0.010	0.000
P-1012	Providence St.	6	Cast iron	60	WW 1885	1201	10.86	0.120	0.090
P-1013	Dinsdale Ct.	2	Galvanized iron	30	WW 1930	401	1.54	0.160	0.590
P-1014	Providence St.	6	Cast iron	60	WW 1885	395	7.78	0.090	0.020
P-1015	Factory St.	6	Cast iron	30	WW 1885	273	16.03	0.180	0.150
P-1016	Factory St.	6	Cast iron	30	WW 1885	1109	43.33	0.490	3.710
P-1017	Bridge St.	6	Cast iron	45	WW 1935	261	22.25	0.250	0.120
P-1018	Providence St.	6	Cast iron	60	WW 1885	1797	20.71	0.240	0.420
P-1019	Main St.	6	Cast iron	60	WW 1885	489	19.75	0.220	0.110
P-1020	Main St.	6	Cast iron	60	WW 1885	397	20.61	0.230	0.090
P-1021	Main St.	6	Cast iron	60	WW 1885	348	21.34	0.240	0.090
P-1022	Providence St.	6	Cast iron	60	WW 1885	328	10.92	0.120	0.020
P-1023	Providence St.	6	Cast iron	60	WW 1885	278	28.83	0.330	0.120
P-1024	Ellison St.	2	Copper	70	WW 1940	318	-1.08	0.110	0.050
P-1025	Ellison St.	2	Copper	70	WW 1940	370	-2.62	0.270	0.300
P-1026	Main St.	6	Cast iron	60	WW 1885	635	28.81	0.330	0.280
P-1027	Main St.	8	Cast iron	75	WW 1935	289	33.22	0.210	0.030
P-1029	Main St.	8	Cast iron	75	WW 1935	150	57.54	0.370	0.040
P-1030	Main St.	8	Cast iron	75	WW 1935	470	60.63	0.390	0.130
P-1031	Main St.	8	Cast iron	75	WW 1935	412	52.93	0.340	0.090
P-1032	Providence St.	6	Cast iron	60	WW 1885	175	-18.37	0.210	0.030
P-1033	Main St.	8	Cast iron	75	WW 1935	1605	3.08	0.020	0.000
P-1034	St. Mary St.	6	Cast iron	30	WW 1890	414	1.54	0.020	0.000
P-1035	Main St.	6	Cast iron	60	WW 1885	552	28.94	0.330	0.240
P-1036	Gough Ave.	6	Cast iron	60	WW 1886	340	-14.38	0.160	0.040
P-1037	Main St.	6	Cast iron	60	WW 1885	1038	-16.10	0.180	0.150
P-1038	Youngs Ave.	2	Galvanized iron	30	WW 1885	1120	1.54	0.160	1.640
P-1039	Main St.	6	Cast iron	60	WW 1885	696	-19.18	0.220	0.140
P-1040	Walker St.	8	Ductile Iron	140	WW 2001	366	-20.72	0.130	0.000
P-1041	Walker St.	8	Ductile Iron	140	WW 2001	416	-22.26	0.140	0.010
P-1042	Walker St.	8	Ductile Iron	140	WW 2001	367	-23.79	0.150	0.010
P-1043	Potter Ave.	6	Cast iron	30	WW 1885	1408	-5.35	0.060	0.100
P-1044	Potter Ave.	8	Ductile Iron	140	WW 2001	451	-6.89	0.040	0.000
P-1045	Gough Ave.	6	Cast iron	30	WW 1886	1545	9.00	0.100	0.280

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-1046	Archambault Ave.	6	Cast iron	30	WW 1887	434	-2.91	0.030	0.010
P-1047	Gardner Ave.	4	Cast iron	30	WW 1887	785	-4.45	0.110	0.280
P-1048	Weaver St.	6	Cast iron	30	WW 1890	329	-9.33	0.110	0.060
P-1049	Archambault Ave.	12	Asbestos Cement	115	WW 1941	573	-29.10	0.080	0.000
P-1050	Archambault Ave.	12	Asbestos Cement	115	WW 1941	587	-30.64	0.090	0.000
P-1051	Curson St.	4	Cast iron	45	WW 1935	372	8.46	0.220	0.210
P-1052	Curson St.	6	Cast iron	30	WW 1890	805	4.62	0.050	0.040
P-1053	McElroy St.	4	Cast iron	40	WW 1928	478	1.54	0.040	0.010
P-1054	Bank St.	6	Cast iron	30	WW 1890	320	3.08	0.030	0.010
P-1055	Curson St.	6	Cast iron	50	WW 1947	650	6.16	0.070	0.020
P-1056	Payan St.	6	Cast iron	45	WW 1936	313	4.62	0.050	0.010
P-1057	Payan St.	6	Cast iron	45	WW 1936	168	1.54	0.020	0.000
P-1058	Coutu Ct.	4	Cast iron	45	WW 1936	284	1.54	0.040	0.010
P-1059	Payan St.	6	Cast iron	45	WW 1936	551	2.30	0.030	0.000
P-1060	Weaver St.	6	Cast iron	30	WW 1890	277	7.71	0.090	0.040
P-1061	Weaver St.	4	Cast iron	30	WW 1890	345	4.63	0.120	0.130
P-1062	Payan St.	6	Cast iron	45	WW 1936	316	-6.95	0.080	0.020
P-1063	Payan St.	6	Cast iron	45	WW 1936	283	-12.93	0.150	0.050
P-1064	John St.	6	Cast iron	50	WW 1945	282	7.70	0.090	0.010
P-1065	John St.	6	Cast iron	50	WW 1945	217	6.16	0.070	0.010
P-1066	Kenmore St.	2	Copper	100	WW 1949	826	1.54	0.160	0.130
P-1067	John St.	1	Copper	100	WW 1945	320	3.08	1.260	5.310
P-1068	Hall St.	6	PVC	130	WW 1987	205	1.54	0.020	0.000
P-1069	Gough Ave.	6	Cast iron	75	WW 1937	533	64.29	0.730	0.680
P-1071	Payan St.	6	Cast iron	45	WW 1936	407	-22.17	0.250	0.190
P-1072	Gough Ave.	6	Cast iron	75	WW 1937	282	-42.25	0.480	0.150
P-1074	Gough Ave.	6	Cast iron	45	WW 1936	170	62.76	0.710	0.530
P-1075	Gough Ave.	6	Cast iron	75	WW 1936	418	43.79	0.500	0.260
P-1076	Gough Ave.	6	Cast iron	30	WW 1886	569	17.43	0.200	0.350
P-1077	Gough Ave.	6	Cast iron	60	WW 1886	1105	18.54	0.210	0.210
P-1078	Main St.	6	Cast iron	60	WW 1885	120	22.99	0.260	0.030
P-1079	Cowesett Rd.	6	Cast iron	30	WW 1895	1071	1.54	0.020	0.010
P-1080	Church St.	6	Cast iron	30	WW 1885	1707	-3.08	0.030	0.040
P-1081	Church St.	6	Cast iron	45	WW 1936	247	1.54	0.020	0.000
P-1082	Nestor St.	6	Cast iron	30	WW 1885	197	-3.37	0.040	0.010
P-1083	Nestor St.	6	Cast iron	30	WW 1885	537	-14.44	0.160	0.240
P-1084	Fountain St.	6	Asbestos Cement	125	WW 1969	148	9.53	0.110	0.000
P-1085	Nestor St.	2	Galvanized iron	30	WW 1885	154	-2.67	0.270	0.620
P-1086	Nestor St.	2	Galvanized iron	30	WW 1885	363	1.54	0.160	0.530
P-1087	Fountain St.	6	Asbestos Cement	125	WW 1969	738	9.12	0.100	0.010
P-1088	School St.	6	Cast iron	30	WW 1885	240	7.58	0.090	0.030
P-1089	School St.	6	Cast iron	30	WW 1885	93	1.43	0.020	0.000
P-1090	Pennsylvania Ave.	6	Cast iron	30	WW 1885	227	3.08	0.030	0.010
P-1091	School St.	6	Cast iron	30	WW 1885	416	-3.19	0.040	0.010
P-1092	Spring St.	6	Cast iron	30	WW 1885	397	4.62	0.050	0.020
P-1093	Spring St.	2	Galvanized iron	30	WW 1885	147	1.54	0.160	0.210
P-1094	Spring St.	2	Galvanized iron	30	WW 1885	213	1.54	0.160	0.310
P-1095	Church St.	4	Cast iron	45	WW 1936	1224	-5.75	0.150	0.330
P-1096	Fairmont St.	6	Asbestos Cement	125	WW 1962	838	7.70	0.090	0.010
P-1097	Rowland St.	6	Asbestos Cement	130	WW 1971	265	6.16	0.070	0.000
P-1098	Orchard St.	6	Asbestos Cement	130	WW 1971	250	4.62	0.050	0.000
P-1099	Orchard St.	6	Asbestos Cement	130	WW 1971	196	1.54	0.020	0.000
P-1100	Tilton St.	6	Asbestos Cement	130	WW 1971	522	1.54	0.020	0.000
P-1101	Church St.	4	Cast iron	30	WW 1885	114	1.54	0.040	0.010
P-1102	Church St.	4	Cast iron	45	WW 1936	642	-14.98	0.380	1.020
P-1103	New London Ave.	6	Cast iron	45	WW 1932	326	-16.52	0.190	0.090
P-1104	New London Ave.	6	Cast iron	45	WW 1932	503	-31.15	0.350	0.430
P-1105	New London Ave.	6	Cast iron	45	WW 1932	301	-24.50	0.280	0.170
P-1106	Centre St.	4	Cast iron	45	WW 1932	1229	-8.19	0.210	0.640
P-1107	Legris Ave.	6	Ductile Iron	135	WW 1994	359	24.92	0.280	0.030
P-1108	Legris Ave.	6	Cast iron	45	WW 1932	599	15.19	0.170	0.140
P-1109	Main St.	8	Cast iron	60	WW 1885	1656	77.98	0.500	1.120
P-1110	Main St.	8	Cast iron	60	WW 1885	78	-13.09	0.080	0.000
P-1112	Main St.	8	Cast iron	60	WW 1885	948	88.48	0.560	0.810
P-1113	Manchester St.	6	Cast iron	30	WW 1885	323	3.08	0.030	0.010
P-1114	Hepburn St.	6	Cast iron	30	WW 1885	518	1.54	0.020	0.000
P-1115	Main St.	8	Cast iron	60	WW 1885	522	83.87	0.540	0.410
P-1116	Main St.	8	Cast iron	60	WW 1885	508	67.88	0.430	0.270
P-1117	Main St.	8	Cast iron	60	WW 1885	280	6.27	0.040	0.000
P-1118	Main St.	8	Cast iron	60	WW 1885	213	1.54	0.010	0.000
P-1119	Main St.	8	Cast iron	60	WW 1885	814	-6.64	0.040	0.010
P-1120	Manchester St.	4	Cast iron	30	WW 1885	373	6.16	0.160	0.240
P-1121	Manchester St.	4	Cast iron	30	WW 1885	621	2.37	0.060	0.070
P-1122	Manchester St.	4	Cast iron	30	WW 1885	188	1.54	0.040	0.010
P-1123	Hepburn St.	4	Cast iron	30	WW 1885	554	2.24	0.060	0.060
P-1124	Hepburn St.	2	PVC	130	WW 1989	594	0.71	0.070	0.010
P-1125	Main St.	8	Cast iron	60	WW 1885	891	-14.34	0.090	0.030
P-1126	Pulaski St.	8	Cast iron	60	WW 1885	1426	1.54	0.010	0.000
P-1127	Pulaski St.	6	Cast iron	75	WW 1885	226	-57.00	0.650	0.230
P-1128	Pulaski St.	6	Cast iron	75	WW 1885	304	1.54	0.020	0.000
P-1129	Pulaski St.	8	Cast iron	75	WW 1885	2208	-60.08	0.380	0.610
P-1130	Main St.	8	Cast iron	60	WW 1885	284	-17.42	0.110	0.010
P-1131	Remington St.	6	Cast iron	30	WW 1895	369	4.62	0.050	0.020

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-1132	Manchester St.	8	Cast iron	60	WW 1885	105	1.54	0.010	0.000
P-1133	Manchester St.	8	Cast iron	60	WW 1885	497	1.54	0.010	0.000
P-1134	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	499	-3.28	0.020	0.000
P-1135	Cowesett Rd.	4	Cast iron	30	WW 1895	1525	-10.51	0.270	2.670
P-1136	Manchester St.	12	Ductile Iron	130	WW 1987	322	1.54	0.000	0.000
P-1137	Main St.	8	Cast iron	60	WW 1885	1233	-23.57	0.150	0.090
P-1138	East Greenwich Ave.	4	Cast iron	30	WW 1895	94	-25.11	0.640	0.830
P-1139	East Greenwich Ave.	4	Cast iron	30	WW 1895	853	-28.19	0.720	9.290
P-1140	East Greenwich Ave.	6	Asbestos Cement	115	WW 1948	871	-29.73	0.340	0.120
P-1141	Deerfield Dr.	8	Asbestos Cement	130	WW 1972	56	0.00	0.000	0.000
P-1142	Deerfield Dr.	8	Asbestos Cement	130	WW 1972	808	10.91	0.070	0.000
P-1143	Lori Ct.	8	Asbestos Cement	130	WW 1972	271	1.54	0.010	0.000
P-1144	Deerfield Dr.	8	Asbestos Cement	130	WW 1972	397	7.83	0.050	0.000
P-1145	Deerfield Dr.	8	Asbestos Cement	130	WW 1972	334	4.62	0.030	0.000
P-1146	Deerfield Dr.	8	Asbestos Cement	130	WW 1972	650	2.29	0.010	0.000
P-1147	Wendy Way	6	Asbestos Cement	130	WW 1971	1141	0.79	0.010	0.000
P-1148	Deerfield Dr.	8	Asbestos Cement	130	WW 1972	435	1.54	0.010	0.000
P-1149	Lonsdale St.	12	Asbestos Cement	125	WW 1969	715	-3.08	0.010	0.000
P-1150	Fawn Ln.	8	Asbestos Cement	130	WW 1977	981	1.67	0.010	0.000
P-1151	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	924	24.03	0.070	0.000
P-1152	Oakridge Dr.	12	PVC	130	WW 1986	205	35.25	0.100	0.000
P-1154	Oakridge Dr.	12	PVC	130	WW 1986	643	32.18	0.090	0.000
P-1155	Lonsdale St.	12	Asbestos Cement	125	WW 1969	957	-2.94	0.010	0.000
P-1156	Oakridge Dr.	12	PVC	130	WW 1986	619	29.10	0.080	0.000
P-1157	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	1244	-12.45	0.040	0.000
P-1158	East Greenwich Ave.	6	Asbestos Cement	115	WW 1948	414	-31.27	0.350	0.060
P-1159	Campbell St.	6	Asbestos Cement	120	WW 1952	153	-32.81	0.370	0.020
P-1161	Campbell St.	6	Asbestos Cement	120	WW 1952	1499	-34.34	0.390	0.250
P-1162	New London Tpk.	8	Cast iron	70	WW 1928	133	-54.09	0.350	0.030
P-1163	New London Tpk.	12	Asbestos Cement	130	WW 1978	181	-169.31	0.480	0.020
P-1164	New London Tpk.	8	Cast iron	70	WW 1928	784	18.20	0.120	0.030
P-1165	Esmond St.	6	Asbestos Cement	120	WW 1950	1073	1.54	0.020	0.000
P-1166	New London Tpk.	8	Cast iron	70	WW 1928	1247	15.12	0.100	0.030
P-1167	New London Tpk.	8	Cast iron	70	WW 1928	786	-13.59	0.090	0.020
P-1168	New London Tpk.	4	Cast iron	30	WW 1887	1672	1.54	0.040	0.080
P-1169	Cowesett Rd.	12	Asbestos Cement	125	WW 1965	2040	-359.84	1.020	0.840
P-1170	New London Tpk.	12	Asbestos Cement	125	WW 1965	2102	-361.38	1.030	0.870
P-1171	New London Tpk.	12	Asbestos Cement	130	WW 1978	1190	113.69	0.320	0.050
P-1172	Tiogua Ave.	12	Asbestos Cement	125	WW 1965	1840	-249.23	0.710	0.380
P-1173	Field Ave.	6	Asbestos Cement	115	WW 1947	1052	1.54	0.020	0.000
P-1174	Tiogua Ave.	12	Asbestos Cement	125	WW 1965	307	-252.31	0.720	0.070
P-1175	Oriole Ave.	6	Asbestos Cement	120	WW 1950	974	1.54	0.020	0.000
P-1176	Tiogua Ave.	12	Asbestos Cement	125	WW 1965	198	-255.38	0.720	0.040
P-1179	St. Onge Dr.	8	Asbestos Cement	130	WW 1980	455	1.94	0.010	0.000
P-1180	Nicole Dr.	8	Asbestos Cement	130	WW 1980	264	1.54	0.010	0.000
P-1181	Nicole Dr.	8	Asbestos Cement	130	WW 1980	1220	1.14	0.010	0.000
P-1182	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	454	-31.45	0.090	0.000
P-1186	Meggan Ct.	12	PVC	130	WW 1987	366	1.54	0.000	0.000
P-1187	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	212	168.85	0.480	0.020
P-1188	Royal Dr.	8	Asbestos Cement	130	WW 1971	132	-16.33	0.100	0.000
P-1189	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	649	53.86	0.150	0.010
P-1190	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	489	47.70	0.140	0.000
P-1191	Kimberly Ln.	8	Asbestos Cement	130	WW 1970	430	4.62	0.030	0.000
P-1192	Brisas Dr.	6	Asbestos Cement	130	WW 1970	225	1.54	0.020	0.000
P-1193	Kimberly Ln.	8	Asbestos Cement	130	WW 1970	1249	1.54	0.010	0.000
P-1196	East Greenwich Ave.	20	Ductile Iron	140	WW 2000	273	204.70	0.210	0.000
P-1197	East Greenwich Ave.	20	Asbestos Cement	125	WW 1969	852	404.76	0.410	0.040
P-1198	Flanders Ln.	20	Ductile Iron	140	WW 2000	464	-404.76	0.410	0.020
P-1199	Crompton/Setian Ln. Tank	16	Ductile Iron	140	WW 2000	297	-404.76	0.650	0.030
P-1200	Maple Ave.	6	Cast iron	40	WW 1885	1243	-121.69	1.380	16.540
P-1201	Colvin St.	4	Cast iron	30	WW 1885	251	1.54	0.040	0.010
P-1202	Maple St.	6	Cast iron	30	WW 1885	894	-124.77	1.420	21.230
P-1203	Colvin St.	6	Cast iron	50	WW 1940	493	1.54	0.020	0.000
P-1204	Maple St.	6	Cast iron	45	WW 1930	901	-127.85	1.450	10.560
P-1205	Fairview Ave.	12	Cast iron	60	WW 1885	255	310.03	0.880	0.310
P-1207	Fairview Ave.	12	Cast iron	60	WW 1885	281	308.49	0.880	0.340
P-1208	Hoxie Ct.	8	Ductile Iron	140	WW 2002	919	1.54	0.010	0.000
P-1209	Fairview Ave.	6	Cast iron	60	WW 1885	1004	305.41	3.470	34.660
P-1210	Fairview Ave.	6	Cast iron	60	WW 1885	459	302.33	3.430	15.550
P-1211	Fairview Ave.	12	Cast iron	60	WW 1885	1565	-1.54	0.000	0.000
P-1212	Hillside Ave.	12	Cast iron	60	WW 1887	564	-638.18	1.810	2.610
P-1213	Fairview Ave.	16	Asbestos Cement	115	WW 1944	940	635.10	1.010	0.320
P-1214	Main St.	8	Cast iron	60	WW 1885	1227	-648.90	4.140	42.120
P-1216	Highland St.	6	Cast iron	30	WW 1885	637	-165.89	1.880	25.640
P-1217	Douglas St.	4	Cast iron	50	WW 1949	419	-14.25	0.360	0.500
P-1218	Sisson St.	1	Galvanized iron	30	WW 1941	525	1.54	0.630	22.430
P-1219	Douglas St.	4	Cast iron	50	WW 1949	380	-17.33	0.440	0.650
P-1220	Le Valley St.	4	Cast iron	30	WW 1885	154	-18.87	0.480	0.800
P-1221	Le Valley St.	4	Cast iron	30	WW 1885	126	-15.94	0.410	0.480
P-1223	Summit Ave.	6	Cast iron	30	WW 1885	311	3.16	0.040	0.010
P-1224	Lanphear St.	6	Cast iron	30	WW 1885	200	-9.98	0.110	0.040
P-1225	Lanphear St.	6	Cast iron	30	WW 1885	758	11.60	0.130	0.220
P-1226	Le Valley St.	4	Cast iron	30	WW 1885	326	17.48	0.450	1.460

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Friction Headloss (ft)	Calculated
P-1227	Providence St.	8	Ductile Iron	135	WW 1994	2137	1.54	0.010	0.000	
P-1228	Ames St.	16	Asbestos Cement	120	WW 1957	872	-1152.13	1.840	0.820	
P-1229	Pleasant St.	4	Cast iron	30	WW 1885	810	34.22	0.870	12.630	
P-1230	Summit Ave.	6	Cast iron	30	WW 1885	378	110.48	1.250	7.170	
P-1231	Summit Ave.	6	Cast iron	30	WW 1885	460	107.41	1.220	8.280	
P-1232	Richard St.	6	Asbestos Cement	120	WW 1955	796	1.54	0.020	0.000	
P-1233	Summit Ave.	6	Cast iron	30	WW 1885	416	-4.70	0.050	0.020	
P-1235	Summit Ave.	4	Cast iron	30	WW 1885	549	1.54	0.040	0.030	
P-1236	Summit Ave.	6	Cast iron	30	WW 1885	171	-77.81	0.880	1.690	
P-1237	North Pleasant St.	6	Cast iron	30	WW 1890	857	-79.34	0.900	8.800	
P-1238	Broad St.	6	Cast iron	30	WW 1890	769	-85.50	0.970	9.070	
P-1239	North Pleasant St.	6	Cast iron	30	WW 1890	109	4.62	0.050	0.010	
P-1240	Terrace Ave.	2	Galvanized iron	30	WW 1890	189	1.54	0.160	0.280	
P-1241	North Pleasant St.	6	Cast iron	30	WW 1890	159	1.54	0.020	0.000	
P-1242	North Pleasant St.	6	Cast iron	30	WW 1890	683	-7.78	0.090	0.100	
P-1243	North Pleasant St.	6	Cast iron	30	WW 1890	216	-15.12	0.170	0.100	
P-1244	Terrace Ave.	4	Cast iron	30	WW 1890	489	-21.16	0.540	3.130	
P-1245	North Pleasant St.	4	Cast iron	30	WW 1890	1009	4.50	0.110	0.370	
P-1246	North Pleasant St.	6	Asbestos Cement	130	WW 1975	695	2.96	0.030	0.000	
P-1248	Broad St.	6	Cast iron	30	WW 1890	1010	5.81	0.070	0.080	
P-1250	Highland St.	8	Cast iron	60	WW 1885	218	-17.43	0.110	0.010	
P-1251	Main St.	8	Cast iron	60	WW 1885	1748	156.26	1.000	4.300	
P-1252	Highland St.	8	Cast iron	60	WW 1885	176	154.72	0.990	0.420	
P-1253	Highland St.	6	Cast iron	30	WW 1885	208	153.18	1.740	7.220	
P-1254	Pleasant St.	6	Cast iron	30	WW 1885	835	38.68	0.440	2.270	
P-1255	Pleasant St.	6	Cast iron	30	WW 1885	194	-32.31	0.370	0.380	
P-1256	Main St.	8	Cast iron	60	WW 1885	234	650.44	4.150	8.070	
P-1257	Pleasant St.	6	Cast iron	30	WW 1885	304	-25.35	0.290	0.380	
P-1258	Fairview Ave.	16	Cast iron	60	WW 1895	219	-501.23	0.800	0.160	
P-1259	Fairview Ave.	12	Cast iron	60	WW 1895	276	439.41	1.250	0.640	
P-1260	Fairview Ave.	16	Cast iron	60	WW 1895	198	-711.17	1.130	0.280	
P-1261	Fairview Ave.	12	Cast iron	60	WW 1895	274	208.40	0.580	0.160	
P-1262	Fairview Ave.	6	Cast iron	60	WW 1895	2157	-1.54	0.020	0.000	
P-1264	River Farms Dr. Easement	12	PVC	130	WW 1989	1740	276.81	0.790	0.410	
P-1265	Main St.	6	Cast iron	60	WW 1936	136	-4.98	0.060	0.000	
P-1267	Wakefield St. Tank	12	Ductile Iron	135	WW 1990	310	203.98	0.580	0.040	
P-1268	Easement	12	Ductile Iron	140	WW 2001	570	63.91	0.180	0.010	
P-1269	Loggers Run	8	Ductile Iron	135	WW 1997	643	6.29	0.040	0.000	
P-1270	Easement	8	Ductile Iron	135	WW 1997	418	9.77	0.060	0.000	
P-1272	Greenbush Rd.	16	Asbestos Cement	130	WW 1973	93	100.61	0.160	0.000	
P-1275	Acorn Ln.	12	Ductile Iron	140	WW 2000	817	31.92	0.090	0.000	
P-1277	Nottingham Dr.	16	Ductile Iron	140	WW 2000	1557	41.09	0.070	0.000	
P-1280	West St. Tank	12	Ductile Iron	140	WW 2002	210	0.00	0.000	0.000	
P-1281	West St. Tank	12	Ductile Iron	140	WW 2002	142	0.71	0.000	0.000	
P-1282	West St. Tank	12	Cast iron	75	WW 1930	276	0.71	0.000	0.000	
P-1283	West St. Tank	8	Cast iron	75	WW 1930	98	0.00	0.000	0.000	
P-1285	Main St.	6	Cast iron	60	WW 1885	300	24.42	0.280	0.100	
P-1287	Bradley Ct.	6	Cast iron	30	WW 1886	360	1.54	0.020	0.000	
P-1289	West St.	12	Cast iron	75	WW 1930	364	-289.69	0.820	0.260	
P-1291	Curson St.	8	Ductile Iron	140	WW 2002	251	-31.37	0.200	0.010	
P-1293	East Greenwich Ave.	20	Asbestos Cement	125	WW 1969	218	0.00	0.000	0.000	
P-1294	East Greenwich Ave.	12	PVC	130	WW 1986	939	28.29	0.080	0.000	
P-1295	East Greenwich Ave.	12	Ductile Iron	135	WW 1990	833	15.52	0.040	0.000	
P-1296	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	770	51.62	0.150	0.010	
P-1298	Flanders Dr.	20	Asbestos Cement	125	WW 1969	637	19.08	0.020	0.000	
P-1300	Hoover St.	6	Ductile Iron	140	WW 2002	413	1.54	0.020	0.000	
P-1304	Crompton/Selian Ln. Tank	20	Ductile Iron	140	WW 2000	392	0.00	0.000	0.000	
P-1305	Wakefield St.	12	Asbestos Cement	130	WW 1980	200	130.84	0.370	0.010	
P-1306	Wakefield St. (Private)	12	Ductile Iron	135	WW 1997	233	1.54	0.000	0.000	
P-1307	Providence St.	8	Asbestos Cement	130	WW 1972	494	17.87	0.110	0.010	
P-1308	New London Ave.	4	Cast iron	45	WW 1932	581	-1.21	0.030	0.010	
P-1309	Waite St.	6	Asbestos Cement	120	WW 1950	460	9.56	0.110	0.010	
P-1310	Creamer Ave.	8	Ductile Iron	135	WW 1999	421	8.02	0.050	0.000	
P-1311	Creamer Ave.	8	Ductile Iron	135	WW 1999	381	3.08	0.020	0.000	
P-1312	New London Ave.	4	Cast iron	45	WW 1932	313	-3.08	0.080	0.030	
P-1313	Sykes St.	8	Ductile Iron	135	WW 1999	690	-3.40	0.020	0.000	
P-1314	Archambault Ave.	12	Asbestos Cement	115	WW 1944	201	18.23	0.050	0.000	
P-1315	Industrial Rd.	16	Ductile Iron	135	WW 1998	150	0.00	0.050	0.000	
P-1316	Providence St.	8	Ductile Iron	135	WW 1994	898	-4.84	0.030	0.000	
P-1317	Providence St.	8	Ductile Iron	135	WW 1994	284	-14.08	0.090	0.000	
P-1318	Providence St.	8	Asbestos Cement	130	WW 1972	531	-17.15	0.110	0.010	
P-1319	River Farms Dr.	12	PVC	130	WW 1989	425	225.77	0.640	0.070	
P-1320	River Farms Dr.	12	PVC	130	WW 1989	2126	286.05	0.810	0.530	
P-1321	Krystal Pond Dr.	8	PVC	135	WW 1990	415	-61.81	0.390	0.040	
P-1322	Krystal Pond Dr.	8	PVC	135	WW 1990	114	1.54	0.010	0.000	
P-1323	Krystal Pond Dr.	8	Ductile Iron	140	WW 2002	275	-64.89	0.410	0.030	
P-1324	Krystal Pond Dr.	8	Ductile Iron	140	WW 2002	556	-65.27	0.420	0.060	
P-1325	River Farms Dr.	12	PVC	130	WW 1989	479	126.22	0.360	0.030	
P-1326	River Farms Dr.	12	PVC	130	WW 1989	998	296.82	0.840	0.270	
P-1327	Dairy Farm Rd.	12	Ductile Iron	140	WW 2003	364	-172.14	0.490	0.030	
P-1328	Dairy Farm Rd.	12	Ductile Iron	140	WW 2003	562	-173.68	0.490	0.050	
P-1329	Dairy Farm Rd.	12	Ductile Iron	140	WW 2003	318	-175.21	0.500	0.030	
P-1330	Wakefield St.	12	Asbestos Cement	130	WW 1980	201	312.21	0.890	0.060	

KCWA Model
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 Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-1331	Wakefield St.	12	Asbestos Cement	130	WW 1980	1116	133.92	0.380	0.070
P-1332	Dairy Farm Rd.	12	Ductile Iron	140	WW 2003	500	-176.75	0.500	0.040
P-1333	Wakefield St.	12	Ductile Iron	135	WW 1997	647	537.73	1.530	0.480
P-1334	New London Ave.	8	Asbestos Cement	115	WW 1940	200	-20.82	0.130	0.000
P-1335	Hilltop Ave.	6	Asbestos Cement	110	WW 1931	249	1.54	0.020	0.000
P-1336	Main St.	8	Cast iron	75	WW 1935	96	34.59	0.220	0.010
P-1337	Main St.	8	Cast iron	75	WW 1935	323	49.75	0.320	0.060
P-1338	Archambault Ave.	12	Asbestos Cement	115	WW 1944	399	16.70	0.050	0.000
P-1339	Weaver St.	4	Cast iron	30	WW 1890	327	6.17	0.160	0.210
P-1340	Providence St.	10	Cast iron	60	WW 1885	577	-214.41	0.880	0.860
P-1341	Providence St.	10	Cast iron	60	WW 1885	133	-208.01	0.850	0.190
P-1342	Central St.	6	Cast iron	30	WW 1886	251	7.94	0.090	0.040
P-1343	Junior St.	6	Cast iron	40	WW 1922	138	13.91	0.160	0.030
P-1344	Junior St.	6	Cast iron	40	WW 1922	354	14.12	0.160	0.090
P-1345	Providence St.	6	Ductile Iron	130	WW 1989	212	-1.54	0.020	0.000
P-1346	Providence St.	6	Ductile Iron	130	WW 1989	132	-4.82	0.050	0.000
P-1347	Junior St.	8	Ductile Iron	140	WW 2002	283	-1.75	0.010	0.000
P-1348	East Main St.	12	Asbestos Cement	120	WW 1951	529	-276.95	0.790	0.140
P-1349	East Main St.	12	Asbestos Cement	120	WW 1951	131	-277.11	0.790	0.040
P-1350	East Main St.	6	Cast iron	30	WW 1886	718	20.98	0.240	0.630
P-1351	East Main St.	6	Cast iron	30	WW 1885	794	18.06	0.200	0.530
P-1352	Pike St.	4	Cast iron	30	WW 1885	545	-1.38	0.040	0.020
P-1353	Clyde St.	6	Cast iron	30	WW 1886	532	2.81	0.030	0.010
P-1354	Clyde St.	6	Cast iron	30	WW 1886	177	-0.52	0.010	0.000
P-1355	Industrial Ln.	6	Cast iron	30	WW 1886	77	-1.79	0.020	0.000
P-1356	Wightman St.	12	PVC	130	WW 1988	79	14.01	0.040	0.000
P-1357	Wightman St.	12	PVC	130	WW 1988	1314	-18.16	0.050	0.000
P-1358	Clyde St.	12	PVC	130	WW 1980	199	-30.63	0.090	0.000
P-1359	Vine St.	4	Cast iron	30	WW 1886	615	1.54	0.040	0.030
P-1360	Phenix Ave.	6	Cast iron	45	WW 1932	127	79.82	0.910	0.620
P-1361	Phenix Ave.	6	Cast iron	45	WW 1932	306	76.74	0.870	1.390
P-1362	Newlight St.	6	Asbestos Cement	125	WW 1966	600	1.54	0.020	0.000
P-1363	Phenix Ave.	6	Cast iron	45	WW 1932	270	73.66	0.840	1.140
P-1364	Ledge Dr.	6	Asbestos Cement	120	WW 1955	300	1.54	0.020	0.000
P-1365	Lachance St.	6	Cast iron	45	WW 1938	329	-31.61	0.360	0.290
P-1366	Webster St.	4	Cast iron	35	WW 1910	389	4.62	0.120	0.110
P-1367	Pawtuxet Ter.	6	Asbestos Cement	115	WW 1946	262	1.54	0.020	0.000
P-1370	Bratt Ln.	12	Ductile Iron	140	WW 2000	137	0.00	0.000	0.000
P-1371	Bratt Ln.	8	Asbestos Cement	130	WW 1975	222	9.81	0.060	0.000
P-1372	Bratt Ln.	12	Ductile Iron	140	WW 2000	1426	-13.77	0.040	0.000
P-1373	Bratt Ln.	12	Ductile Iron	140	WW 2000	220	-10.91	0.030	0.000
P-1374	Bratt Ln.	8	Ductile Iron	140	WW 2000	90	-4.40	0.030	0.000
P-1375	Bratt Ln.	8	Asbestos Cement	130	WW 1975	1128	-15.75	0.100	0.010
P-1376	Bratt Ln.	8	Asbestos Cement	130	WW 1975	251	33.46	0.210	0.010
P-1377	Easement	8	Asbestos Cement	130	WW 1975	403	50.75	0.320	0.030
P-1378	Drawbridge Dr.	16	Ductile Iron	135	WW 1991	379	86.10	0.140	0.000
P-1379	Drawbridge Dr.	16	Ductile Iron	135	WW 1991	350	83.02	0.130	0.000
P-1380	Misty Oak Ct.	6	Ductile Iron	135	WW 1991	163	1.54	0.020	0.000
P-1381	Washington St.	12	Cast iron	60	WW 1886	231	-62.25	0.180	0.010
P-1382	Morris St.	6	Asbestos Cement	115	WW 1948	122	1.54	0.020	0.000
P-1383	Roundway Dr.	6	Asbestos Cement	120	WW 1953	159	1.54	0.020	0.000
P-1384	Wiltshire Way	6	Asbestos Cement	120	WW 1955	222	-17.05	0.190	0.010
P-1385	Sheffield Ave.	6	Asbestos Cement	120	WW 1954	124	-27.97	0.320	0.010
P-1386	Drawbridge Dr.	8	Ductile Iron	135	WW 1991	422	27.39	0.170	0.010
P-1387	Drawbridge Dr.	8	Ductile Iron	135	WW 1991	345	24.31	0.160	0.010
P-1388	Arrow Ct.	6	Ductile Iron	135	WW 1991	210	1.54	0.020	0.000
P-1389	Quill Dr.	8	Ductile Iron	135	COV 1991	225	1.54	0.010	0.000
P-1390	Jaycee Dr.	8	Asbestos Cement	125	WW 1962	381	37.63	0.240	0.020
P-1391	Jaycee Dr.	8	Asbestos Cement	125	WW 1962	302	0.00	0.000	0.000
P-1392	Greenbush Rd.	12	Ductile Iron	140	WW 2000	730	197.01	0.560	0.080
P-1393	Greenbush Rd.	12	Ductile Iron	140	WW 2000	280	195.47	0.550	0.030
P-1394	Greenbush Rd.	8	Ductile Iron	140	WW 2000	277	36.09	0.230	0.010
P-1395	Greenbush Rd.	16	Asbestos Cement	130	WW 1973	660	-113.06	0.180	0.010
P-1396	Greenbush Rd.	12	Asbestos Cement	130	WW 1973	268	-78.51	0.220	0.010
P-1397	Greene St.	4	Cast iron	45	WW 1933	301	-33.29	0.850	2.100
P-1398	Greene St.	8	Asbestos Cement	110	WW 1933	259	-11.94	0.080	0.000
P-1399	Greene St.	4	Cast iron	45	WW 1933	449	-9.65	0.250	0.320
P-1400	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	153	25.50	0.070	0.000
P-1401	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	227	10.13	0.030	0.000
P-1402	Juniper Dr.	8	Asbestos Cement	130	WW 1977	1344	-12.69	0.080	0.010
P-1403	Juniper Dr.	8	Asbestos Cement	130	WW 1977	171	0.00	0.000	0.000
P-1404	East Greenwich Ave.	20	Asbestos Cement	125	WW 1969	3352	618.69	0.630	0.310
P-1406	Juniper Dr.	8	Ductile Iron	140	WW 2000	393	14.23	0.090	0.000
P-1407	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	154	29.91	0.080	0.000
P-1409	Surrey La	8	Asbestos Cement	130	WW 1975	153	0.00	0.000	0.000
P-1410	Surrey La	8	Asbestos Cement	130	WW 1975	428	-3.68	0.020	0.000
P-1411	East Greenwich Ave.	20	Asbestos Cement	125	WW 1969	654	617.15	0.630	0.060
P-1413	Surrey Ln.	8	Ductile Iron	140	WW 2000	387	-2.14	0.010	0.000
P-1414	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	207	30.51	0.090	0.000
P-1415	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	288	27.43	0.080	0.000
P-1416	Timber Walk	8	Ductile Iron	140	WW 2002	690	1.54	0.010	0.000
P-1418	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	541	-23.79	0.070	0.000
P-1419	Meggan Ct.	12	PVC	130	WW 1987	175	0.00	0.000	0.000

KCWA Model
Pipeline Database
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-1420	Meggan Ct.	12	PVC	130	WW 1987	381	-10.74	0.030	0.000
P-1421	East Greenwich Ave.	20	Asbestos Cement	125	WW 1969	322	615.62	0.630	0.030
P-1423	Meggan Ct.	12	Ductile Iron	140	WW 2000	231	-9.20	0.030	0.000
P-1426	Lauren Ln.	12	PVC	130	WW 1987	250	0.00	0.000	0.000
P-1427	Lauren Ln.	12	PVC	130	WW 1987	631	13.82	0.040	0.000
P-1428	East Greenwich Ave.	20	Asbestos Cement	125	WW 1969	507	614.08	0.630	0.050
P-1430	Lauren Ln.	12	Ductile Iron	140	WW 2000	307	15.36	0.040	0.000
P-1431	East Greenwich Ave.	12	Ductile Iron	140	WW 2000	520	-40.69	0.120	0.000
P-1433	St. Onge Dr.	8	Asbestos Cement	130	WW 1980	292	0.00	0.000	0.000
P-1434	St. Onge Dr.	8	Asbestos Cement	130	WW 1980	505	4.62	0.030	0.000
P-1435	East Greenwich Ave.	20	Asbestos Cement	125	WW 1969	825	612.54	0.630	0.080
P-1436	East Greenwich Ave.	20	Asbestos Cement	125	WW 1969	894	611.00	0.620	0.080
P-1437	St. Onge Dr.	8	Ductile Iron	140	WW 2000	315	6.16	0.040	0.000
P-1438	Green Bush Rd.	16	Ductile Iron	140	WW 2000	1951	203.17	0.320	0.060
P-1440	Nottingham Dr.	8	Asbestos Cement	130	WW 1973	404	9.14	0.060	0.000
P-1441	Nottingham Dr.	8	Asbestos Cement	130	WW 1973	198	45.62	0.290	0.010
P-1442	Nottingham Dr.	16	Ductile Iron	140	WW 2000	1071	39.55	0.060	0.000
P-1443	Nottingham Dr.	16	Ductile Iron	140	WW 2000	333	0.00	0.000	0.000
P-1444	Nottingham Dr.	8	Ductile Iron	140	WW 2000	114	-38.01	0.240	0.000
P-1445	Maid Marian Ln.	8	Asbestos Cement	130	WW 1978	376	4.62	0.030	0.000
P-1446	Maid Marian Ln.	8	Asbestos Cement	130	WW 1978	712	1.54	0.010	0.000
P-1447	Lancer Ln.	8	Asbestos Cement	130	WW 1978	890	1.54	0.010	0.000
P-1448	Green Bush Rd.	16	Asbestos Cement	130	WW 1973	656	107.34	0.170	0.010
P-1449	Green Bush Rd.	16	Asbestos Cement	130	WW 1973	518	126.11	0.200	0.010
P-1450	Easement	10	PVC	130	WW 1988	1753	21.85	0.090	0.010
P-1451	Easement	10	PVC	130	WW 1988	178	20.31	0.080	0.000
P-1452	Green Bush Rd.	12	Ductile Iron	140	WW 2000	286	201.63	0.570	0.030
P-1453	Green Bush Rd.	12	Ductile Iron	140	WW 2000	897	200.09	0.570	0.100
P-1454	Easement	10	Ductile Iron	140	WW 2000	417	0.00	0.000	0.000
P-1455	Green Bush Rd.	12	Ductile Iron	140	WW 2000	930	198.55	0.560	0.100
P-1456	Acorn La.	8	Asbestos Cement	130	WW 1973	103	3.08	0.020	0.000
P-1457	Acorn La.	8	Asbestos Cement	130	WW 1973	75	1.54	0.010	0.000
P-1458	Acorn Ln.	8	Ductile Iron	140	WW 2000	339	0.00	0.000	0.000
P-1459	Cone Dr.	12	Ductile Iron	140	WW 2000	152	30.38	0.090	0.000
P-1460	Cone Dr.	12	Ductile Iron	140	WW 2000	288	44.17	0.130	0.000
P-1461	Cone Dr.	8	Asbestos Cement	130	WW 1973	324	37.26	0.240	0.010
P-1462	Cone Dr.	8	Asbestos Cement	130	WW 1973	130	20.39	0.130	0.000
P-1463	Cone Dr.	8	Ductile Iron	140	WW 2000	54	15.33	0.100	0.000
P-1464	Crossbow Ln.	16	Ductile Iron	140	WW 2000	841	1.54	0.000	0.000
P-1465	Locust Dr.	6	PVC	130	WW 1986	435	1.54	0.020	0.000
P-1466	Locust Dr.	6	PVC	130	WW 1986	315	-1.54	0.020	0.000
P-1467	Setian Ln.	12	Asbestos Cement	125	WW 1969	697	32.09	0.090	0.000
P-1468	Setian Ln.	12	Asbestos Cement	125	WW 1969	1195	21.43	0.060	0.000
P-1469	Pine Orchard Rd.	8	Asbestos Cement	130	WW 1977	548	-3.67	0.020	0.000
P-1470	Pine Orchard Rd.	8	Asbestos Cement	130	WW 1977	1032	3.91	0.020	0.000
P-1471	Easement	8	Asbestos Cement	125	WW 1969	307	9.12	0.060	0.000
P-1472	Cowesett Rd.	12	Asbestos Cement	125	WW 1965	811	-355.22	1.010	0.330
P-1473	Cowesett Rd.	12	Asbestos Cement	125	WW 1965	1335	-358.30	1.020	0.540
P-1474	Cowesett Rd.	8	Asbestos Cement	115	WW 1940	499	163.71	1.040	0.400
P-1475	Pond View Dr.	8	Ductile Iron	135	WW 1998	441	4.62	0.030	0.000
P-1476	Coil Ave.	6	Asbestos Cement	125	WW 1968	277	23.31	0.260	0.020
P-1477	Coil Ave.	8	Asbestos Cement	125	WW 1968	495	21.77	0.140	0.010
P-1478	Pennsylvania Ave.	6	Ductile Iron	130	WW 1989	100	1.54	0.020	0.000
P-1479	Dawes St.	8	PVC	130	WW 1986	308	4.32	0.030	0.000
P-1480	Dawes St.	1	Copper	70	WW 1935	350	2.78	1.140	9.320
P-1481	Main St.	8	Cast Iron	60	WW 1885	502	89.53	0.570	0.440
P-1482	Main St.	8	Cast Iron	60	WW 1885	220	83.38	0.530	0.170
P-1483	Wyman St.	6	Cast iron	30	WW 1885	325	4.62	0.050	0.020
P-1484	Pearson St.	2	Cast iron	30	WW 1885	314	1.54	0.160	0.460
P-1485	Wyman St.	6	Cast iron	30	WW 1885	111	1.54	0.020	0.000
P-1486	Capron St.	4	Cast iron	35	WW 1910	480	3.08	0.080	0.070
P-1487	Capron St.	2	Galvanized iron	30	WW 1910	341	1.54	0.160	0.500
P-1488	Baker St.	4	Cast iron	30	WW 1900	200	3.08	0.080	0.040
P-1489	Baker St.	2	Galvanized iron	30	WW 1900	175	1.54	0.160	0.260
P-1490	Duke St.	8	Ductile Iron	140	WW 2004	509	4.62	0.030	0.000
P-1491	Duke St.	8	Ductile Iron	140	WW 2004	134	1.54	0.010	0.000
P-1492	Danby St.	8	Ductile Iron	140	WW 2004	218	1.54	0.010	0.000
P-1493	Gerald St.	8	Ductile Iron	135	WW 1999	320	1.54	0.010	0.000
P-1494	Legris Ave.	8	Cast iron	75	WW 1939	1024	48.60	0.310	0.190
P-1495	Legris Ave.	8	Cast iron	75	WW 1939	330	21.33	0.140	0.010
P-1496	Legris Ave.	8	Cast iron	75	WW 1939	370	16.60	0.110	0.010
P-1497	Legris Ave.	8	Cast iron	75	WW 1939	553	2.44	0.020	0.000
P-1498	Legris Ave.	8	Asbestos Cement	120	WW 1959	357	-48.77	0.310	0.030
P-1499	Legris Ave.	8	Asbestos Cement	120	WW 1959	3543	-4.30	0.030	0.000
P-1500	Main St.	8	Cast iron	75	WW 1935	769	-6.93	0.040	0.000
P-1501	Main St.	8	Cast iron	75	WW 1935	887	-15.89	0.100	0.020
P-1502	Le Valley St.	4	Cast iron	30	WW 1885	320	-7.42	0.190	0.290
P-1503	Grant St.	2	Copper	100	WW 1987	200	0.58	0.060	0.010
P-1504	Grant St.	6	PVC	130	WW 1987	175	-2.50	0.030	0.000
P-1505	Grant St.	1.5	Copper	100	WW 1987	352	-0.96	0.170	0.090
P-1506	Ontario St.	6	PVC	125	WW 1963	298	0.81	0.010	0.000
P-1507	Ontario St.	2	Galvanized iron	30	WW 1963	250	-0.73	0.070	0.080
P-1508	Gerald St.	1.5	Copper	70	WW 1947	277	1.54	0.280	0.340

KCWA Model
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-1510	New London Tpk.	12	Asbestos Cement	120	WW 1959	92	193.93	0.550	0.010
P-1511	Hale Ct.	8	Ductile Iron	140	(emette Place Subdivision)				
250	6.66	0.04	0						
P-1512	Hale Ct.	8	Ductile Iron	140	ernette Plac	250	3.33	0.020	0.000
P-1513	Sunrise Ave.	8	Ductile Iron	140	a View Plat	277	170.12	1.090	0.170
P-1514	Emerson Ct.	8	Ductile Iron	140	a View Plat	310	165.95	1.060	0.180
P-1515	Emerson Ct.	8	Ductile Iron	140	a View Plat	150	161.78	1.030	0.080
P-1516	Sunrise Ave.	8	Ductile Iron	140	a View Plat	461	174.29	1.110	0.290
P-1518	Greene St.	6	Asbestos Cement	120	WW 1952	358	-156.07	1.770	0.990
P-1519	Emerson Ct.	8	Ductile Iron	140	a View Plat	549	-157.61	1.010	0.290
P-1520	Prospect Hill Ave.	6	Asbestos Cement	130	WW 1981	281	9.33	0.110	0.000
P-1521	Silvercup Cir.	8	Ductile Iron	140	n View Con	420	25.00	0.160	0.010
P-1522	Silvercup Cir.	8	Ductile Iron	140	n View Con	500	5.87	0.040	0.000
P-1523	Silvercup Cir.	8	Ductile Iron	140	n View Con	400	-6.63	0.040	0.000
P-1524	Crompton Rd.	16	Ductile Iron	135	EG 1991	543	-540.52	0.860	0.100
P-1525	Gentry Glen Condos	8	Ductile Iron	140	new Subdiv	210	-8.14	0.050	0.000
P-1526	Gentry Glen Condos	8	Ductile Iron	140	new Subdiv	60	-25.34	0.160	0.000
P-1527	Gentry Glen Condos	8	Ductile Iron	140	new Subdiv	450	-42.54	0.270	0.020
P-1528	Gentry Glen Condos	8	Ductile Iron	140	new Subdiv	200	-59.74	0.380	0.020
P-1529	Gentry Glen Condos	8	Ductile Iron	140	new Subdiv	250	17.20	0.110	0.000
P-1530	Drawbridge Dr.	16	Ductile Iron	135	WW 1991	235	228.08	0.360	0.010
P-1532	Gentry Glen Condos	8	Ductile Iron	140	new Subdiv	415	-94.14	0.600	0.080
P-2000	Centerville Rd.	12	Asbestos Cement	120	WAR 1958	595	329.46	0.930	0.220
P-2001	YMCA Private Line	8	Ductile Iron	130	WAR 1989	687	1.76	0.010	0.000
P-2002	Centerville Rd.	12	Asbestos Cement	120	WAR 1958	358	286.61	0.810	0.100
P-2003	Centerville Rd. (Private)	12	Asbestos Cement	120	WAR 1958	187	1.76	0.010	0.000
P-2004	Centerville Rd.	12	Asbestos Cement	120	WAR 1958	908	283.09	0.800	0.260
P-2005	Private Line	6	Ductile Iron	130	WAR 1989	724	1.76	0.020	0.000
P-2006	Centerville Rd.	12	Asbestos Cement	120	WAR 1958	1688	279.56	0.790	0.470
P-2007	Dunmore Rd.	8	Asbestos Cement	125	WAR 1960	338	15.87	0.100	0.000
P-2008	Douglas Rd.	6	Asbestos Cement	125	WAR 1960	1129	7.56	0.090	0.010
P-2009	Baldwin Rd.	6	Asbestos Cement	125	WAR 1960	655	5.79	0.070	0.000
P-2010	Pitman Rd.	6	Asbestos Cement	125	WAR 1960	1292	1.57	0.020	0.000
P-2011	Baldwin Rd.	6	Asbestos Cement	125	WAR 1960	743	1.07	0.010	0.000
P-2012	Baldwin Rd.	6	Asbestos Cement	125	WAR 1960	261	1.76	0.020	0.000
P-2013	Baldwin Rd.	6	Asbestos Cement	125	WAR 1960	724	-2.46	0.030	0.000
P-2014	Douglas Rd.	6	Asbestos Cement	125	WAR 1960	1914	6.55	0.070	0.010
P-2015	Douglas Rd.	6	Asbestos Cement	125	WAR 1960	288	1.76	0.020	0.000
P-2016	Douglas Rd.	6	Asbestos Cement	125	WAR 1960	595	3.02	0.030	0.000
P-2017	Baldwin Rd.	6	Asbestos Cement	125	WAR 1960	683	1.26	0.010	0.000
P-2018	Centerville Rd.	12	Asbestos Cement	120	WAR 1958	505	261.93	0.740	0.120
P-2019	Cedar Pond Dr. (Private)	8	Ductile Iron	140	WAR 2000	173	1.76	0.010	0.000
P-2020	Centerville Rd.	12	Asbestos Cement	120	WAR 1958	1241	258.41	0.730	0.300
P-2021	Centerville Rd.	12	Asbestos Cement	120	WAR 1958	341	254.88	0.720	0.080
P-2022	Hardig Rd.	8	Asbestos Cement	130	WAR 1972	266	1.76	0.010	0.000
P-2023	Centerville Rd.	12	Asbestos Cement	120	WAR 1958	1722	133.70	0.380	0.120
P-2024	Centerville Rd.	8	Asbestos Cement	120	WAR 1954	2305	131.94	0.840	1.150
P-2025	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	741	43.47	0.280	0.040
P-2026	Carriage Hill Dr.	6	Asbestos Cement	130	WAR 1980	437	1.76	0.020	0.000
P-2027	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	532	39.95	0.250	0.020
P-2028	Larchmont Rd.	6	Asbestos Cement	125	WAR 1962	1198	19.52	0.220	0.070
P-2029	Larchmont Rd.	6	Asbestos Cement	125	WAR 1962	459	17.76	0.200	0.020
P-2030	Wampum Rd.	8	Asbestos Cement	130	WAR 1977	399	11.06	0.070	0.000
P-2031	Hollow Ct.	6	Asbestos Cement	130	WAR 1977	371	1.76	0.020	0.000
P-2032	Wampum Rd.	8	Asbestos Cement	130	WAR 1977	323	7.53	0.050	0.000
P-2033	Boulder View Dr.	8	Asbestos Cement	130	WAR 1977	388	4.00	0.030	0.000
P-2034	Boulder View Dr.	8	Asbestos Cement	130	WAR 1977	393	1.76	0.010	0.000
P-2035	Centerville Rd.	8	Cast iron	75	WAR 1932	456	86.70	0.550	0.250
P-2036	Drum Rock Rd.	8	Cast iron	75	WAR 1932	1029	1.76	0.010	0.000
P-2038	Duchess St.	8	Ductile Iron	140	WAR 2001	1059	5.17	0.030	0.000
P-2039	Duchess St.	8	Ductile Iron	140	WAR 2001	192	1.76	0.010	0.000
P-2040	Irene St.	8	Ductile Iron	140	WAR 2001	546	1.64	0.010	0.000
P-2041	Irene St.	8	Ductile Iron	140	WAR 2001	140	1.76	0.010	0.000
P-2042	Orient St.	8	Ductile Iron	140	WAR 2001	745	-1.88	0.010	0.000
P-2043	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	423	-8.20	0.050	0.000
P-2044	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	453	4.55	0.030	0.000
P-2045	Judge St.	6	Asbestos Cement	125	WAR 1961	321	28.90	0.330	0.040
P-2046	Larchmont Rd.	6	Asbestos Cement	125	WAR 1962	799	11.34	0.130	0.020
P-2047	Viceroy Rd.	6	Asbestos Cement	125	WAR 1962	536	9.58	0.110	0.010
P-2048	Saxony Dr.	6	Asbestos Cement	125	WAR 1962	644	-11.18	0.130	0.010
P-2049	Larchmont Rd.	6	Asbestos Cement	125	WAR 1962	306	-15.80	0.180	0.010
P-2051	Boulder View Dr.	8	Asbestos Cement	130	WAR 1977	347	-0.48	0.000	0.000
P-2052	Sage Dr.	6	Asbestos Cement	125	WAR 1969	535	1.76	0.020	0.000
P-2053	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	742	-26.11	0.170	0.010
P-2054	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	157	-5.42	0.030	0.000
P-2055	Superior St.	6	Asbestos Cement	125	WAR 1962	460	32.05	0.360	0.060
P-2056	Saxony Dr.	6	Asbestos Cement	125	WAR 1962	878	-2.85	0.030	0.000
P-2057	Superior St.	6	Asbestos Cement	125	WAR 1962	429	33.14	0.380	0.060
P-2058	Viceroy Rd.	6	Asbestos Cement	125	WAR 1962	1222	-13.84	0.160	0.040
P-2059	Bishop Rd.	6	Ductile Iron	140	WAR 2001	155	3.39	0.040	0.000
P-2060	Viceroy Rd.	6	Asbestos Cement	125	WAR 1962	307	-19.00	0.220	0.020
P-2061	Viceroy Rd.	6	Asbestos Cement	125	WAR 1962	132	45.22	0.510	0.030
P-2062	Viceroy Rd.	6	Asbestos Cement	125	WAR 1962	634	1.76	0.020	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-2063	Zinnia St.	8	Asbestos Cement	130	WAR 1977	335	41.70	0.270	0.020
P-2064	Nanci Karen Dr.	8	Asbestos Cement	130	WAR 1977	465	1.76	0.010	0.000
P-2065	Nanci Karen Dr.	8	Asbestos Cement	130	WAR 1977	657	16.25	0.100	0.010
P-2066	Nanci Karen Dr.	8	Asbestos Cement	130	WAR 1977	599	3.53	0.020	0.000
P-2067	Nanci Karen Dr.	8	Asbestos Cement	130	WAR 1977	285	1.76	0.010	0.000
P-2068	Zinnia St.	8	Asbestos Cement	130	WAR 1977	529	21.92	0.140	0.010
P-2069	Birkshire Dr.	8	Asbestos Cement	125	WAR 1964	647	3.56	0.020	0.000
P-2070	Quaid Ln.	8	Asbestos Cement	125	WAR 1965	588	10.96	0.070	0.000
P-2071	Zinnia St.	8	Asbestos Cement	130	WAR 1977	469	16.59	0.110	0.000
P-2072	Quaid Ln.	8	Asbestos Cement	125	WAR 1965	396	23.80	0.150	0.010
P-2073	Sturbridge Dr.	8	Asbestos Cement	130	WAR 1979	698	1.76	0.010	0.000
P-2074	Sturbridge Dr.	8	Asbestos Cement	130	WAR 1979	626	13.07	0.080	0.000
P-2075	Birkshire Dr.	8	Asbestos Cement	125	WAR 1964	1085	-11.04	0.070	0.010
P-2076	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	339	189.85	0.540	0.040
P-2077	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	175	175.74	0.500	0.020
P-2078	Sturbridge Dr.	8	Asbestos Cement	130	WAR 1979	1102	-35.11	0.220	0.040
P-2079	Cowesett Rd.	12	Ductile Iron	130	WAR 1988	355	209.09	0.590	0.050
P-2080	Spinnaker Ln.	8	Ductile Iron	130	WAR 1989	982	1.76	0.010	0.000
P-2081	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	845	-202.65	0.570	0.100
P-2082	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	983	-249.24	0.710	0.180
P-2083	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	169	-266.87	0.760	0.030
P-2084	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	382	75.79	0.480	0.050
P-2085	Ginger St.	8	Ductile Iron	140	WAR 2001	519	1.76	0.010	0.000
P-2086	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	206	72.27	0.460	0.030
P-2087	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	1510	39.24	0.250	0.060
P-2088	Mark Allen Dr.	8	Ductile Iron	140	WAR 2001	1077	31.27	0.200	0.030
P-2089	Oberlin Dr.	8	Ductile Iron	140	WAR 2001	555	1.76	0.010	0.000
P-2091	Darling St.	8	Ductile Iron	140	WAR 2001	944	22.45	0.140	0.010
P-2092	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	586	-344.43	0.980	0.190
P-2093	Jerry St.	6	Ductile Iron	135	WAR 1994	362	1.76	0.020	0.000
P-2095	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	1379	-439.55	1.250	0.820
P-2096	Briarwood Ct.	6	Ductile Iron	135	WAR 1992	274	1.76	0.020	0.000
P-2097	Sleepy Hollow Farm Dr.	8	Ductile Iron	135	WAR 1997	3188	84.54	0.540	0.560
P-2099	Sleepy Hollow Farm Dr.	8	Ductile Iron	135	WAR 1997	636	77.49	0.490	0.090
P-2100	Sleepy Hollow Farm Dr.	8	Ductile Iron	135	WAR 1997	2618	35.86	0.230	0.090
P-2101	Sleepy Hollow Farm Dr.	8	Ductile Iron	135	WAR 1997	239	46.55	0.300	0.010
P-2102	Pender John Ct.	8	Ductile Iron	135	WAR 1997	666	29.17	0.190	0.020
P-2103	Major Potter Rd.	12	Ductile Iron	135	WAR 1997	439	37.74	0.110	0.000
P-2104	Hardig Rd. (Private)	12	Ductile Iron	135	WAR 1997	497	5.29	0.020	0.000
P-2105	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	312	-446.60	1.270	0.190
P-2106	Hardig Rd. (Private)	12	Ductile Iron	135	WAR 1997	273	3.53	0.010	0.000
P-2107	Hardig Rd. (Private)	12	Ductile Iron	135	WAR 1997	1069	1.76	0.010	0.000
P-2108	Brighwater Dr.	8	PVC	130	WAR 1987	615	1.76	0.010	0.000
P-2109	Cowesett Green Rd.	8	PVC	130	WAR 1986	362	1.76	0.010	0.000
P-2110	Hallmark Ct.	8	PVC	130	WAR 1987	923	1.76	0.010	0.000
P-2111	Cowesett Green Rd.	8	PVC	130	WAR 1986	558	15.87	0.100	0.000
P-2112	Cowesett Green Rd.	8	PVC	130	WAR 1986	748	12.34	0.080	0.000
P-2113	Blossom Ct.	8	PVC	130	WAR 1987	351	1.76	0.010	0.000
P-2114	Cowesett Green Rd.	8	PVC	130	WAR 1986	354	8.81	0.060	0.000
P-2115	Cowesett Green Rd.	8	PVC	130	WAR 1986	971	5.29	0.030	0.000
P-2116	Green Meadow Dr.	8	PVC	130	WAR 1987	213	1.76	0.010	0.000
P-2117	Hardig Rd. (Private)	6	Ductile Iron	135	WAR 1997	703	1.76	0.020	0.000
P-2118	Major Potter Rd.	12	PVC	130	WAR 1988	341	78.65	0.220	0.010
P-2119	Larchwood Dr.	12	PVC	130	WAR 1987	481	44.83	0.130	0.000
P-2120	Larchwood Dr.	12	PVC	130	WAR 1987	1559	41.30	0.120	0.010
P-2121	Arrowhead Way	8	PVC	130	WAR 1988	809	1.76	0.010	0.000
P-2122	Larchwood Dr.	12	PVC	130	WAR 1987	1186	37.78	0.110	0.010
P-2123	Pasco Cir.	8	PVC	130	WAR 1988	795	1.76	0.010	0.000
P-2124	Larchwood Dr.	12	PVC	130	WAR 1987	251	34.25	0.100	0.000
P-2125	Michelle Cir.	8	PVC	130	WAR 1988	302	1.76	0.010	0.000
P-2126	Larchwood Dr.	12	PVC	130	WAR 1987	2338	30.72	0.090	0.010
P-2127	Macara Cir.	8	PVC	130	WAR 1988	446	1.76	0.010	0.000
P-2128	Edmond Dr.	8	Asbestos Cement	120	WAR 1954	848	12.34	0.080	0.010
P-2129	Edmond Dr.	8	Asbestos Cement	120	WAR 1954	238	1.76	0.010	0.000
P-2130	Edmond Dr.	8	Asbestos Cement	120	WAR 1954	717	7.05	0.050	0.000
P-2132	Edmond Dr.	8	Asbestos Cement	120	WAR 1954	516	3.53	0.020	0.000
P-2133	Edmond Cir.	6	Asbestos Cement	120	WAR 1954	205	1.76	0.020	0.000
P-2134	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	298	205.56	0.580	0.040
P-2135	Cowesett Rd.	8	Ductile Iron	135	WAR 1998	96	-199.18	1.270	0.080
P-2136	Cowesett Rd.	8	Ductile Iron	135	WAR 1998	79	-199.17	1.270	0.070
P-2137	Cowesett Rd.	8	Ductile Iron	135	WAR 1998	100	-197.41	1.260	0.080
P-2138	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	3563	-450.13	1.280	2.210
P-2139	Love Ln.	12	Asbestos Cement	120	WAR 1957	1683	4.62	0.010	0.000
P-2140	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	905	-1.76	0.010	0.000
P-2141	Blue Ridge Rd.	8	Ductile Iron	135	WAR 1990	636	12.34	0.080	0.000
P-2142	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	171	9.19	0.060	0.000
P-2143	Meeting House Dr.	8	Asbestos Cement	120	WAR 1956	379	12.72	0.080	0.000
P-2144	Katelyn Ct.	8	Ductile Iron	135	WAR 1990	499	1.76	0.010	0.000
P-2145	Cobble Hill Rd.	8	Asbestos Cement	125	WAR 1960	584	17.63	0.110	0.010
P-2146	Blue Ridge Rd.	8	Ductile Iron	135	WAR 1990	529	8.82	0.060	0.000
P-2147	Cobble Hill Rd.	8	Asbestos Cement	125	WAR 1960	61	7.05	0.050	0.000
P-2148	Verdant Ln.	8	Asbestos Cement	130	WAR 1972	645	1.76	0.010	0.000
P-2150	Cobble Hill Rd.	8	Asbestos Cement	125	WAR 1960	779	8.81	0.060	0.000

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P-2151	Cobble Hill Rd.	8	Asbestos Cement	125	WAR 1960	277	1.76	0.010	0.000
P-2152	Contour Rd.	8	PVC	130	WAR 1988	390	5.29	0.030	0.000
P-2153	Contour Rd.	8	PVC	130	WAR 1988	617	1.76	0.010	0.000
P-2154	North Winnisquam Dr.	8	PVC	130	WAR 1988	239	1.76	0.010	0.000
P-2155	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	373	-10.20	0.070	0.000
P-2156	Blue Ridge Rd.	8	Ductile Iron	135	WAR 1990	540	5.29	0.030	0.000
P-2157	Blue Ridge Rd.	8	Ductile Iron	135	WAR 1990	146	1.76	0.010	0.000
P-2158	Timbertine Rd.	8	Asbestos Cement	120	WAR 1956	2427	-4.64	0.030	0.000
P-2159	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	811	-7.32	0.050	0.000
P-2160	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	881	-3.56	0.020	0.000
P-2161	Alanna Ct.	8	Ductile Iron	135	WAR 1990	564	1.76	0.010	0.000
P-2162	Alicia Ct.	8	Ductile Iron	135	WAR 1990	480	1.76	0.010	0.000
P-2163	Landmark Rd.	8	Asbestos Cement	120	WAR 1956	1429	-5.52	0.040	0.000
P-2164	Love Ln.	12	Asbestos Cement	120	WAR 1957	3558	-9.86	0.030	0.000
P-2165	Love Ln.	12	Asbestos Cement	120	WAR 1957	1330	-10.07	0.030	0.000
P-2166	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	109	-464.23	1.320	0.070
P-2167	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	2288	1.76	0.010	0.000
P-2168	Nancy Allen Dr.	8	Asbestos Cement	125	WAR 1961	412	-1.56	0.010	0.000
P-2169	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	366	-9.96	0.060	0.000
P-2170	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	169	2.92	0.020	0.000
P-2171	Paddock Dr.	8	Asbestos Cement	130	WAR 1980	1270	5.29	0.030	0.000
P-2172	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	271	-4.37	0.030	0.000
P-2173	Red Chimney Dr.	8	Asbestos Cement	120	WAR 1956	507	5.09	0.030	0.000
P-2174	Ladderlook Dr.	8	Asbestos Cement	125	WAR 1960	1303	-11.22	0.070	0.010
P-2175	Martingale Dr.	8	Asbestos Cement	130	WAR 1980	736	1.76	0.010	0.000
P-2176	Martingale Dr.	8	Asbestos Cement	130	WAR 1980	806	1.76	0.010	0.000
P-2177	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	623	-471.28	1.340	0.420
P-2178	So. Cobblehill Rd.	8	Asbestos Cement	125	WAR 1960	1001	-14.64	0.090	0.010
P-2179	Peaceful Ln.	8	Ductile Iron	135	WAR 1998	454	1.76	0.010	0.000
P-2180	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	1842	-474.81	1.380	1.260
P-2181	Cowesett Rd. (Stop & Shop Private Line)	12	Asbestos Cement	125	WAR 1966	206	1.76	0.010	0.000
P-2182	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	1077	-478.33	1.360	0.750
P-2184	Major Potter Rd.	8	PVC	130	WAR 1986	709	87.06	0.560	0.140
P-2185	Major Potter Rd.	8	PVC	130	WAR 1986	720	41.25	0.260	0.040
P-2186	Brookline Dr.	8	PVC	130	WAR 1988	542	44.05	0.280	0.030
P-2187	Telmore Rd.	12	Asbestos Cement	130	WAR 1973	1336	1.76	0.010	0.000
P-2188	Quaker Ln.	24	Asbestos Cement	130	WAR 1980	6814	1321.31	0.940	0.990
P-2189	Major Potter Rd.	12	PVC	130	WAR 1983	56	3.53	0.010	0.000
P-2191	Hedge Row Dr.	8	Asbestos Cement	125	WAR 1965	291	-13.98	0.090	0.000
P-2192	Eagle Nest Condos (Private)	12	PVC	130	WAR 1988	229	1.76	0.010	0.000
P-2193	Stubtoe Dr.	8	Asbestos Cement	125	WAR 1967	707	17.47	0.110	0.010
P-2194	Winnisquam Dr.	8	Asbestos Cement	125	WAR 1966	433	16.36	0.100	0.000
P-2196	Quaker Ln.	20	Asbestos Cement	125	WAR 1969	1107	652.34	0.670	0.110
P-2197	Hedge Row Dr.	8	Asbestos Cement	125	WAR 1965	276	7.84	0.050	0.000
P-2198	Old Oak Dr.	8	Asbestos Cement	125	WAR 1967	709	11.40	0.070	0.000
P-2199	Winnisquam Dr.	8	Asbestos Cement	125	WAR 1966	401	3.19	0.020	0.000
P-2200	Winnisquam Dr.	8	Asbestos Cement	125	WAR 1966	185	-10.66	0.070	0.000
P-2201	So. Cobblehill Rd.	8	Asbestos Cement	125	WAR 1960	295	-8.56	0.050	0.000
P-2202	So. Cobblehill Rd.	8	Asbestos Cement	125	WAR 1960	213	1.76	0.010	0.000
P-2203	Old Lyme Dr.	8	Asbestos Cement	125	WAR 1967	570	12.09	0.080	0.000
P-2204	Quaker Ln.	24	Asbestos Cement	130	WAR 1980	77	-1323.07	0.940	0.010
P-2205	Brookline Dr.	8	PVC	130	WAR 1988	333	12.43	0.080	0.000
P-2206	Lisa Marie Cir.	8	PVC	130	WAR 1988	666	1.76	0.010	0.000
P-2207	Brookline Dr.	8	PVC	130	WAR 1988	802	19.48	0.120	0.010
P-2208	Brookline Dr.	8	PVC	130	WAR 1988	749	15.95	0.100	0.010
P-2209	Turtle Creek Dr.	8	PVC	130	WAR 1988	481	1.76	0.010	0.000
P-2210	Hedgerow Dr.	8	Asbestos Cement	125	WAR 1965	169	1.72	0.010	0.000
P-2211	Hedgerow Dr.	8	Asbestos Cement	125	WAR 1965	276	-1.80	0.010	0.000
P-2212	Hedgerow Dr.	1.5	Copper	70	WAR 1965	198	1.76	0.320	0.310
P-2213	Stubtoe Dr.	8	Asbestos Cement	125	WAR 1967	461	22.81	0.150	0.010
P-2214	Stubtoe Dr.	8	Asbestos Cement	125	WAR 1967	550	18.04	0.120	0.010
P-2215	Winnisquam Dr.	8	Asbestos Cement	125	WAR 1966	321	16.31	0.100	0.000
P-2216	Winnisquam Dr.	8	Asbestos Cement	125	WAR 1966	559	17.55	0.110	0.010
P-2217	Silent Dr.	8	Asbestos Cement	125	WAR 1966	528	3.00	0.020	0.000
P-2218	Castle Rocks Rd.	8	Ductile Iron	135	WAR 1998	769	7.05	0.050	0.000
P-2219	Castle Rocks Rd.	8	Ductile Iron	135	WAR 1998	1215	2.02	0.010	0.000
P-2220	Castle Rocks Rd.	8	Ductile Iron	135	WAR 1998	77	-3.27	0.020	0.000
P-2221	Castle Rocks Rd.	8	Ductile Iron	135	WAR 1998	726	0.14	0.000	0.000
P-2222	Castle Rocks Rd.	8	Ductile Iron	135	WAR 1998	1791	-1.50	0.010	0.000
P-2223	Castle Rocks Rd.	8	Ductile Iron	135	WAR 1998	738	0.12	0.000	0.000
P-2224	Major Potter Rd.	12	Ductile Iron	135	WAR 1997	691	65.15	0.180	0.010
P-2225	Major Potter Rd.	12	PVC	130	WAR 1988	547	49.69	0.140	0.010
P-2226	Shadowbrook Dr.	8	PVC	135	WAR 1990	1122	13.70	0.090	0.010
P-2227	Shadowbrook Dr.	8	PVC	135	WAR 1990	1829	10.17	0.060	0.010
P-2228	Sandy Brook Ct.	8	PVC	135	WAR 1990	216	1.76	0.010	0.000
P-2229	Quaker Ln.	24	Asbestos Cement	130	WAR 1980	217	-1324.84	0.940	0.030
P-2230	Quaker Ln.	8	Asbestos Cement	130	WAR 1980	89	692.64	4.420	0.820
P-2231	Bald Hill Rd.	24	Asbestos Cement	130	WAR 1984	2935	-2019.24	1.430	0.930
P-2232	Heritage Dr.	8	Asbestos Cement	125	WAR 1964	813	1.76	0.010	0.000
P-2233	Gilbert Stuart Dr.	8	Asbestos Cement	125	WAR 1966	1236	3.20	0.020	0.000
P-2235	Heritage Dr.	8	Asbestos Cement	125	WAR 1966	417	26.34	0.170	0.010
P-2237	Varnum Dr.	8	Asbestos Cement	125	WAR 1964	660	-7.38	0.050	0.000
P-2238	Varnum Dr.	8	Asbestos Cement	125	WAR 1964	2218	7.45	0.050	0.010

KCWA Model
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-2239	Varnum Dr.	8	Asbestos Cement	125	WAR 1984	2315	-7.63	0.050	0.010
P-2240	Heritage Dr.	8	Asbestos Cement	125	WAR 1966	1416	9.51	0.060	0.010
P-2241	Heritage Dr.	8	Asbestos Cement	125	WAR 1966	493	6.23	0.040	0.000
P-2242	Nathaniel Green Dr.	6	Asbestos Cement	125	WAR 1984	910	-1.52	0.020	0.000
P-2243	Heritage Dr.	8	Asbestos Cement	125	WAR 1966	592	4.46	0.030	0.000
P-2244	Quaker Ln.	8	Asbestos Cement	130	WAR 1980	142	690.88	4.410	1.310
P-2245	Gilbert Stuart Dr.	8	Asbestos Cement	125	WAR 1966	1509	2.26	0.010	0.000
P-2246	Roelker Dr.	8	Asbestos Cement	125	WAR 1964	701	5.68	0.040	0.000
P-2247	Gilbert Stuart Dr.	8	Asbestos Cement	125	WAR 1966	848	8.82	0.060	0.000
P-2248	Gilbert Stuart Dr.	8	Asbestos Cement	125	WAR 1966	760	3.63	0.020	0.000
P-2249	Valley Brook Dr.	8	Asbestos Cement	130	WAR 1973	918	3.42	0.020	0.000
P-2250	Blair Dr.	8	Asbestos Cement	130	WAR 1970	419	-1.76	0.010	0.000
P-2251	Valley Brook Dr.	8	Asbestos Cement	130	WAR 1973	196	1.76	0.010	0.000
P-2252	Gilbert Stuart Dr.	8	Asbestos Cement	130	WAR 1973	1517	0.11	0.000	0.000
P-2253	Gilbert Stuart Dr.	8	Asbestos Cement	125	WAR 1966	649	0.11	0.000	0.000
P-2254	Gilbert Stuart Dr.	8	Asbestos Cement	125	WAR 1966	1411	-1.66	0.010	0.000
P-2256	Major Potter Rd.	8	PVC	130	WAR 1986	237	23.18	0.150	0.000
P-2257	Major Potter Rd.	8	PVC	130	WAR 1986	566	15.12	0.100	0.000
P-2258	Major Potter Rd.	8	Asbestos Cement	130	WAR 1975	825	19.65	0.130	0.010
P-2259	Joseph Ct.	8	PVC	130	WAR 1986	2876	6.29	0.040	0.000
P-2260	Major Potter Rd.	8	Asbestos Cement	130	WAR 1975	386	15.36	0.100	0.000
P-2261	Major Potter Rd.	8	Asbestos Cement	130	WAR 1975	657	11.83	0.080	0.000
P-2262	Indian Hill Rd.	6	Ductile Iron	140	WAR 2000	736	1.76	0.020	0.000
P-2263	Governors Dr.	8	Ductile Iron	140	WAR 2000	888	-1.76	0.010	0.000
P-2264	Quaker Ln.	8	Asbestos Cement	130	WAR 1974	1352	358.44	2.290	3.690
P-2265	Abigail St.	6	Asbestos Cement	120	WAR 1953	816	-1.76	0.020	0.000
P-2266	Welthian Ct.	6	Asbestos Cement	120	WAR 1953	421	-1.76	0.020	0.000
P-2267	Governors Dr.	8	Ductile Iron	140	WAR 2000	524	-5.29	0.030	0.000
P-2268	Love Ln.	20	Asbestos Cement	125	WAR 1964	832	337.88	0.350	0.030
P-2269	Benjamin St.	6	Asbestos Cement	120	WAR 1951	938	-3.53	0.040	0.000
P-2270	Hedgerow Dr.	8	Asbestos Cement	125	WAR 1965	702	2.53	0.020	0.000
P-2271	Hedgerow Dr.	8	Asbestos Cement	125	WAR 1965	524	-1.00	0.010	0.000
P-2272	Hedgerow Dr.	6	Asbestos Cement	125	WAR 1965	223	1.76	0.020	0.000
P-2273	Love Ln.	12	Asbestos Cement	120	WAR 1957	1035	0.00	0.000	0.000
P-2274	Love Ln.	12	Asbestos Cement	120	WAR 1957	331	-3.53	0.010	0.000
P-2276	Gilbane St.	8	Asbestos Cement	125	WAR 1967	772	1.76	0.010	0.000
P-2278	Tollgate Rd.	12	Cast iron	90	WAR 1928	399	-170.14	0.480	0.080
P-2279	Emily Ln.	8	Ductile Iron	135	WAR 1994	417	1.76	0.010	0.000
P-2280	Quaker Ln.	8	Asbestos Cement	130	WAR 1974	677	356.68	2.280	1.830
P-2281	Gauvin Dr.	8	Asbestos Cement	125	WAR 1967	935	19.39	0.120	0.010
P-2282	Fish's Ln.	8	Asbestos Cement	125	WAR 1967	788	1.76	0.010	0.000
P-2283	Tanner Ave.	6	Asbestos Cement	120	WAR 1952	860	-1.76	0.020	0.000
P-2284	Tanner Ave.	6	Asbestos Cement	120	WAR 1952	757	1.76	0.020	0.000
P-2285	Gauvin Dr.	8	Asbestos Cement	125	WAR 1967	457	15.87	0.100	0.000
P-2286	Gilbert St.	6	Asbestos Cement	125	WAR 1964	312	3.53	0.040	0.000
P-2287	Flagg Ave.	6	Asbestos Cement	125	WAR 1964	914	-1.76	0.020	0.000
P-2288	Gilbert St.	6	Asbestos Cement	125	WAR 1964	1237	0.75	0.010	0.000
P-2289	Sutter Ave.	6	Asbestos Cement	125	WAR 1964	694	-1.02	0.010	0.000
P-2290	Gilbert St.	6	Asbestos Cement	120	WAR 1952	325	10.58	0.120	0.010
P-2291	Gilbert St.	6	Asbestos Cement	125	WAR 1964	312	7.05	0.080	0.000
P-2292	Founder Ave.	6	Asbestos Cement	120	WAR 1952	886	-1.76	0.020	0.000
P-2293	Gilbert St.	6	Asbestos Cement	120	WAR 1952	496	19.39	0.220	0.030
P-2294	Gilbert St.	6	Asbestos Cement	120	WAR 1952	313	15.87	0.180	0.010
P-2295	Winman Ct.	8	Ductile Iron	135	WAR 1994	796	1.76	0.010	0.000
P-2296	Commonwealth Ave.	10	Cast iron	80	WAR 1928	1204	80.43	0.330	0.170
P-2298	Tollgate Rd.	10	Cast iron	70	WAR 1928	6250	124.10	0.510	2.540
P-2299	Commonwealth Ave.	8	Asbestos Cement	120	WAR 1959	1448	119.41	0.760	0.600
P-2300	Gauvin Dr.	8	Asbestos Cement	125	WAR 1967	498	8.01	0.050	0.000
P-2301	Whitehall Dr.	8	Asbestos Cement	125	WAR 1965	380	40.94	0.260	0.020
P-2302	Whitehall Dr.	8	Asbestos Cement	125	WAR 1965	234	1.76	0.010	0.000
P-2303	Cindy Ln.	8	Asbestos Cement	125	WAR 1965	1211	37.42	0.240	0.050
P-2304	Cindy Ln.	6	Asbestos Cement	125	WAR 1965	406	1.76	0.020	0.000
P-2306	Gauvin Dr.	8	Asbestos Cement	125	WAR 1967	420	1.76	0.010	0.000
P-2307	Craig Dr.	6	Asbestos Cement	120	WAR 1955	1862	33.89	0.380	0.300
P-2308	Commonwealth Ave.	8	Asbestos Cement	120	WAR 1959	734	76.71	0.490	0.130
P-2310	Tollgate Rd.	12	Cast iron	90	WAR 1928	714	-162.69	0.460	0.120
P-2311	Country View Dr.	8	Asbestos Cement	125	WAR 1968	1270	6.10	0.040	0.000
P-2312	Ledgemont Dr.	8	Asbestos Cement	130	WAR 1972	844	4.48	0.030	0.000
P-2313	Commonwealth Ave.	8	Ductile Iron	135	WAR 1995	839	26.36	0.170	0.020
P-2314	Commonwealth Ave.	8	Ductile Iron	135	WAR 1995	410	1.76	0.010	0.000
P-2315	Leon Whipple Rd.	8	Ductile Iron	135	WAR 1995	503	48.58	0.310	0.030
P-2316	Leon Whipple Rd.	8	Ductile Iron	135	WAR 1995	881	62.60	0.400	0.090
P-2317	Nicolas Ln.	8	Ductile Iron	135	WAR 1995	507	22.84	0.150	0.010
P-2318	Nicolas Ln.	8	Ductile Iron	135	WAR 1995	333	19.31	0.120	0.000
P-2319	Remy Cir	8	Ductile Iron	135	WAR 1995	479	-1.76	0.010	0.000
P-2320	Nicolas Ln.	8	Ductile Iron	135	WAR 1995	376	15.79	0.100	0.000
P-2321	Natalie Ln.	8	Ductile Iron	135	WAR 1995	218	-1.76	0.010	0.000
P-2322	Country View Dr.	8	Asbestos Cement	125	WAR 1968	1613	8.82	0.060	0.000
P-2323	Tollgate Rd.	12	Cast iron	90	WAR 1928	851	-185.01	0.520	0.190
P-2324	Hilary St.	6	Asbestos Cement	130	WAR 1973	265	1.76	0.020	0.000
P-2326	Forbes St.	6	Asbestos Cement	130	WAR 1973	333	1.76	0.020	0.000
P-2327	Tollgate Rd.	12	Cast iron	90	WAR 1928	1674	-176.20	0.500	0.340
P-2328	Tollgate Rd.	12	Cast iron	90	WAR 1928	518	-181.48	0.510	0.110

KCWA Model
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-2329	Vale St.	6	Asbestos Cement	130	WAR 1973	262	-3.53	0.040	0.000
P-2330	Love Ln.	16	Ductile Iron	140	WAR 2001	695	91.74	0.150	0.000
P-2331	Country Ln.	6	Asbestos Cement	115	WAR 1948	1221	12.92	0.150	0.040
P-2332	Downing Ln.	8	Asbestos Cement	130	WAR 1972	633	1.76	0.010	0.000
P-2333	Country View Dr.	8	Asbestos Cement	125	WAR 1988	608	5.29	0.030	0.000
P-2334	Patterson Ave.	6	Asbestos Cement	115	WAR 1946	712	7.71	0.090	0.010
P-2335	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	1171	103.90	0.290	0.040
P-2336	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	209	100.38	0.280	0.010
P-2337	Tivoli Ct.	8	Ductile Iron	130	WAR 1988	763	1.76	0.010	0.000
P-2338	Love Ln.	16	Ductile Iron	140	WAR 2001	479	77.05	0.120	0.000
P-2339	Country View Dr.	8	Asbestos Cement	125	WAR 1988	990	1.76	0.010	0.000
P-2340	Patterson Ave.	6	Asbestos Cement	115	WAR 1946	460	-3.45	0.040	0.000
P-2341	Patterson Ave.	6	Asbestos Cement	115	WAR 1946	447	-0.08	0.000	0.000
P-2342	Highland Ave.	8	Cast iron	75	WAR 1936	911	-19.99	0.130	0.030
P-2343	Love Ln.	16	Ductile Iron	140	WAR 2001	482	-75.29	0.120	0.000
P-2344	Bruce Ln.	6	Asbestos Cement	115	WAR 1946	571	1.76	0.020	0.000
P-2345	Highland Ave.	8	Cast iron	75	WAR 1936	1509	18.15	0.120	0.050
P-2346	Highland Ave.	8	Asbestos Cement	120	WAR 1953	1348	14.62	0.090	0.010
P-2347	Post Rd.	16	Ductile Iron	135	WAR 1999	803	31.04	0.050	0.000
P-2348	Island View Dr.	8	Asbestos Cement	130	WAR 1975	285	5.29	0.030	0.000
P-2349	Island View Dr.	8	Asbestos Cement	130	WAR 1975	452	1.76	0.010	0.000
P-2350	Sea Breeze Ln.	6	Asbestos Cement	130	WAR 1975	210	1.76	0.020	0.000
P-2351	Bay Vista Pl.	1.5	Copper	70	WAR 1964	573	1.76	0.320	0.910
P-2352	Post Rd.	16	Ductile Iron	135	WAR 1999	192	23.98	0.040	0.000
P-2353	Post Rd.	16	Ductile Iron	135	WAR 1999	811	18.69	0.030	0.000
P-2354	Valentine Cir.	6	Asbestos Cement	130	WAR 1973	277	1.76	0.020	0.000
P-2355	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	552	106.33	0.300	0.020
P-2356	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	448	81.17	0.230	0.010
P-2357	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	792	74.12	0.210	0.020
P-2358	Stiness Dr.	6	PVC	130	WAR 1988	758	1.76	0.020	0.000
P-2359	Valentine Cir.	6	Cast iron	45	WAR 1936	733	5.29	0.060	0.020
P-2360	Valentine Cir.	6	Asbestos Cement	130	WAR 1973	671	1.76	0.020	0.000
P-2361	Stiness Dr.	1.5	Copper	70	WAR 1936	875	1.76	0.320	1.390
P-2362	Masthead Dr.	6	Asbestos Cement	125	WAR 1967	746	3.53	0.040	0.000
P-2363	Fred Humiak Way	6	PVC	130	WAR 1982	886	1.76	0.020	0.000
P-2364	Post Rd.	16	Ductile Iron	135	WAR 1999	1890	-18.17	0.030	0.000
P-2365	Post Rd.	16	Ductile Iron	135	WAR 1999	1224	-7.78	0.010	0.000
P-2366	Post Rd.	16	Ductile Iron	135	WAR 1999	802	-14.83	0.020	0.000
P-2367	Post Rd.	16	Ductile Iron	135	WAR 1999	159	-30.27	0.050	0.000
P-2368	Post Rd.	16	Ductile Iron	135	WAR 1999	158	-32.04	0.050	0.000
P-2369	Post Rd.	16	Ductile Iron	135	WAR 1999	169	-33.24	0.050	0.000
P-2370	Post Rd.	16	Ductile Iron	135	WAR 1999	946	-44.24	0.070	0.000
P-2371	Post Rd.	16	Ductile Iron	135	WAR 1999	1161	-29.46	0.050	0.000
P-2372	Post Rd.	16	Ductile Iron	135	WAR 1999	358	-40.32	0.060	0.000
P-2373	Post Rd.	16	Ductile Iron	135	WAR 1999	311	-43.56	0.070	0.000
P-2374	Post Rd.	16	Ductile Iron	135	WAR 1999	369	-47.23	0.080	0.000
P-2375	Post Rd.	16	Ductile Iron	135	WAR 1999	424	-48.99	0.080	0.000
P-2376	Post Rd.	16	Ductile Iron	135	WAR 1999	589	-53.93	0.090	0.000
P-2377	Love Ln.	16	Ductile Iron	140	WAR 2001	1293	53.54	0.090	0.000
P-2378	Windermere Way	8	Asbestos Cement	110	WAR 1939	477	36.84	0.240	0.030
P-2380	Windermere Way	8	Asbestos Cement	110	WAR 1939	864	16.81	0.110	0.010
P-2381	Crestwood Rd.	6	Asbestos Cement	110	WAR 1939	1005	-9.45	0.110	0.020
P-2382	Lantern Ln.	6	Asbestos Cement	115	WAR 1946	251	-3.09	0.040	0.000
P-2383	Crestwood Rd.	6	Asbestos Cement	110	WAR 1939	999	-8.13	0.090	0.010
P-2384	Crestwood Rd.	8	Asbestos Cement	110	WAR 1939	595	24.50	0.160	0.020
P-2385	Crestwood Rd.	8	Asbestos Cement	110	WAR 1939	427	16.64	0.110	0.010
P-2386	Crestwood Rd.	8	Asbestos Cement	110	WAR 1939	257	15.69	0.100	0.000
P-2387	Crestwood Rd.	8	Asbestos Cement	110	WAR 1939	1067	6.97	0.040	0.000
P-2388	Dexterdale Dr.	8	Asbestos Cement	110	WAR 1939	250	12.16	0.080	0.000
P-2389	Dexterdale Dr.	8	Asbestos Cement	115	WAR 1940	1166	-6.95	0.040	0.000
P-2390	Creston Way	6	Asbestos Cement	110	WAR 1939	638	-0.81	0.010	0.000
P-2391	Westchester Way	6	Asbestos Cement	125	WAR 1966	373	-2.58	0.030	0.000
P-2392	Westchester Way	6	Asbestos Cement	125	WAR 1966	759	-6.10	0.070	0.000
P-2393	Chevy Ct.	1.5	Copper	70	WAR 1955	211	1.76	0.320	0.340
P-2394	Joyce Glen	1.3	Copper	70	WAR 1956	223	-1.76	0.460	0.860
P-2396	Chace St.	8	Ductile Iron	135	WAR 1996	338	-2.05	0.010	0.000
P-2397	Chace St.	8	Ductile Iron	130	WAR 1987	267	1.76	0.010	0.000
P-2398	Venus Dr.	8	Ductile Iron	130	WAR 1987	353	-5.57	0.040	0.000
P-2399	Venus Dr.	8	Ductile Iron	130	WAR 1987	506	-9.10	0.060	0.000
P-2400	Hesper Dr.	8	Ductile Iron	130	WAR 1987	727	1.76	0.010	0.000
P-2401	Williams St.	4	Cast iron	30	WAR 1890	476	1.90	0.050	0.040
P-2402	Williams St.	4	Cast iron	30	WAR 1890	329	1.22	0.030	0.010
P-2403	Blackmore St.	4	Cast iron	30	WAR 1890	766	-0.54	0.010	0.010
P-2404	Ladd St.	4	Cast iron	30	WAR 1890	281	-2.31	0.060	0.030
P-2405	Ladd St.	4	Cast iron	30	WAR 1890	45	2.23	0.060	0.000
P-2406	Duane St.	4	Cast iron	30	WAR 1890	773	1.08	0.030	0.020
P-2407	Duane St.	8	Asbestos Cement	130	WAR 1972	611	-6.30	0.040	0.000
P-2408	Duane St.	4	Cast iron	30	WAR 1890	587	-0.62	0.020	0.010
P-2409	Ladd St.	4	Cast iron	30	WAR 1890	330	3.53	0.090	0.080
P-2410	North Marlborough St.	4	Cast iron	30	WAR 1890	195	1.76	0.050	0.010
P-2411	Hall St.	4	Cast iron	30	WAR 1890	513	2.12	0.050	0.050
P-2412	Arnold Ave.	4	Cast iron	30	WAR 1890	429	0.36	0.010	0.000
P-2414	Highpoint Dr.	6	Asbestos Cement	120	WAR 1954	863	3.53	0.040	0.000

KCWA Model
Pipeline Database
Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-2415	Azalea Ct.	6	Asbestos Cement	120	WAR 1954	573	1.76	0.020	0.000
P-2416	Goodwin St.	6	Cast iron	45	WAR 1930	819	1.76	0.020	0.000
P-2417	Wolverstone Rd.	6	PVC	125	WAR 1975	1307	1.76	0.020	0.000
P-2418	Meadow St.	4	Cast iron	40	WAR 1928	706	1.76	0.050	0.030
P-2419	Centerville Rd.	12	Cast iron	70	WAR 1928	172	175.49	0.500	0.050
P-2420	Centerville Rd.	12	Cast iron	70	WAR 1928	579	173.73	0.490	0.180
P-2422	Post Rd.	16	Ductile Iron	135	WAR 1999	2312	27.03	0.040	0.000
P-2423	Arnolds Neck Dr.	8	Ductile Iron	135	WAR 1993	1759	16.23	0.100	0.010
P-2424	Harrop Ave.	8	Asbestos Cement	115	WAR 1946	857	-1.40	0.010	0.000
P-2425	Quaker Ln. (Private)	8	Asbestos Cement	130	WAR 1978	274	1.76	0.010	0.000
P-2426	Beacon Hill Dr.	8	Asbestos Cement	130	WAR 1975	493	1.76	0.010	0.000
P-2427	Centerville Rd.	12	Asbestos Cement	120	WAR 1956	2553	331.22	0.940	0.970
P-2428	Gilbane St.	8	Asbestos Cement	125	WAR 1967	1442	12.34	0.080	0.010
P-2429	New England Way	8	Asbestos Cement	125	WAR 1967	586	8.81	0.060	0.000
P-2430	New England Way	8	Asbestos Cement	125	WAR 1967	512	1.76	0.010	0.000
P-2431	Wilcar St.	6	Asbestos Cement	130	WAR 1971	452	5.29	0.060	0.000
P-2432	Wilcar St.	6	Asbestos Cement	130	WAR 1971	163	1.76	0.020	0.000
P-2433	Dawn Ln.	6	Asbestos Cement	130	WAR 1971	556	1.76	0.020	0.000
P-2434	Alger Ave.	8	Cast iron	60	WAR 1890	352	9.24	0.060	0.000
P-2435	Alger Ave.	8	Cast iron	60	WAR 1890	985	1.76	0.010	0.000
P-2437	Oak Grove St.	8	Ductile Iron	130	WAR 1984	428	5.71	0.040	0.000
P-2438	John Wickes Ave.	6	Ductile Iron	130	WAR 1988	525	1.76	0.020	0.000
P-2439	Oak Grove St.	8	Ductile Iron	130	WAR 1984	286	2.19	0.010	0.000
P-2440	Chepiwonket Way	8	Ductile Iron	130	WAR 1984	758	-11.92	0.080	0.000
P-2441	Oak Grove St.	8	Ductile Iron	130	WAR 1984	163	12.34	0.080	0.000
P-2442	Oak Grove St.	8	Ductile Iron	130	WAR 1984	89	2.80	0.020	0.000
P-2443	Elisha St.	4	Cast iron	30	WAR 1890	512	1.03	0.030	0.010
P-2444	Plymouth St.	8	Asbestos Cement	115	WAR 1948	994	7.78	0.050	0.000
P-2445	Herbert St.	4	Cast iron	30	WAR 1889	755	-0.73	0.020	0.010
P-2446	Herbert St.	8	Ductile Iron	135	WAR 1992	244	5.29	0.030	0.000
P-2447	Herbert St.	2	Galvanized iron	30	WAR 1895	340	1.76	0.180	0.640
P-2449	Post Rd.	16	Ductile Iron	135	WAR 1999	116	-13.07	0.020	0.000
P-2450	Gamet St.	8	Ductile Iron	135	WAR 1992	478	1.76	0.010	0.000
P-2452	Cowesett Rd.	12	Ductile Iron	135	WAR 1998	154	102.80	0.290	0.010
P-2453	Hibiscus Ln.	8	Ductile Iron	135	WAR 1996	486	19.86	0.130	0.010
P-2454	Poppy Pl.	8	Ductile Iron	135	WAR 1996	265	1.76	0.010	0.000
P-2455	Hibiscus Ln.	8	Ductile Iron	135	WAR 1996	663	16.34	0.100	0.010
P-2457	Ashmont St.	6	Asbestos Cement	120	WAR 1957	204	7.52	0.090	0.000
P-2458	Post Rd.	16	Ductile Iron	135	WAR 1999	1180	89.29	0.140	0.010
P-2459	Rice St.	6	Ductile Iron	135	WAR 1992	613	1.76	0.020	0.000
P-2460	Post Rd.	16	Ductile Iron	135	WAR 1999	303	95.05	0.150	0.000
P-2461	Shenandoah Rd.	8	Ductile Iron	140	WAR 2001	1599	17.63	0.110	0.010
P-2462	Bokar St.	8	Ductile Iron	140	WAR 2001	304	7.05	0.050	0.000
P-2463	Friar Tuck Rd.	8	Ductile Iron	140	WAR 2001	82	3.15	0.020	0.000
P-2464	Friar Tuck Rd.	8	Ductile Iron	140	WAR 2001	134	2.14	0.010	0.000
P-2465	Friar Tuck Rd.	8	Ductile Iron	140	WAR 2001	409	1.76	0.010	0.000
P-2466	Rip Van Winkle Cir.	8	Ductile Iron	140	WAR 2001	1014	0.37	0.000	0.000
P-2467	Shenandoah Rd.	8	Ductile Iron	140	WAR 2001	1427	1.76	0.010	0.000
P-2468	Bokar St.	8	Ductile Iron	140	WAR 2001	334	7.05	0.050	0.000
P-2469	Cumberland Rd.	8	Ductile Iron	140	WAR 2001	260	1.76	0.010	0.000
P-2470	Cumberland Rd.	8	Ductile Iron	140	WAR 2001	1494	1.76	0.010	0.000
P-2471	Bokar St.	8	Ductile Iron	140	WAR 2001	720	1.76	0.010	0.000
P-2472	Post Rd.	16	Ductile Iron	135	WAR 1999	640	75.66	0.120	0.000
P-2473	Reeland Ave.	6	Asbestos Cement	125	WAR 1965	657	1.76	0.020	0.000
P-2474	Post Rd.	16	Ductile Iron	135	WAR 1999	315	72.13	0.120	0.009
P-2475	Calhoun Ave.	6	Ductile Iron	135	WAR 1994	282	5.29	0.060	0.000
P-2476	Glass St.	6	Ductile Iron	135	WAR 1994	286	1.76	0.020	0.000
P-2477	Calhoun Ave.	6	Ductile Iron	135	WAR 1994	275	1.76	0.020	0.000
P-2478	Post Rd.	16	Ductile Iron	135	WAR 1999	414	65.08	0.100	0.000
P-2479	Clyde Ave.	6	Asbestos Cement	125	WAR 1967	323	1.76	0.020	0.000
P-2480	Post Rd.	16	Ductile Iron	135	WAR 1999	141	21.59	0.030	0.000
P-2482	Post Rd.	16	Ductile Iron	135	WAR 1999	385	-18.58	0.030	0.000
P-2483	Matteson Ave.	8	Cast iron	75	WAR 1933	333	6.69	0.040	0.000
P-2484	Centennial St.	6	Asbestos Cement	115	WAR 1942	299	5.29	0.060	0.000
P-2485	Weber Ave.	6	Asbestos Cement	115	WAR 1942	380	1.76	0.020	0.000
P-2486	Centennial St.	6	Asbestos Cement	115	WAR 1942	304	1.76	0.020	0.000
P-2487	Greenwich Ave.	12	Cast iron	75	WAR 1933	598	77.57	0.220	0.040
P-2488	Great Oak Dr.	8	Ductile Iron	135	WAR 1998	416	1.76	0.010	0.000
P-2489	Greenwich Ave.	12	Cast iron	75	WAR 1933	825	74.05	0.210	0.050
P-2490	Carson Ave.	6	Asbestos Cement	130	WAR 1972	488	5.29	0.060	0.000
P-2491	Carson Ave.	6	Asbestos Cement	130	WAR 1972	186	1.76	0.020	0.000
P-2492	Pond View Dr.	6	Asbestos Cement	130	WAR 1972	607	1.76	0.020	0.000
P-2493	Rutherford Ave.	6	Asbestos Cement	120	WAR 1950	364	13.64	0.150	0.010
P-2494	Rutherford Ave.	6	Asbestos Cement	120	WAR 1950	346	10.05	0.110	0.010
P-2495	Montgomery St.	6	Asbestos Cement	120	WAR 1952	1136	5.82	0.070	0.010
P-2496	Blue Hill Dr.	6	Asbestos Cement	120	WAR 1954	298	1.76	0.020	0.000
P-2497	Blue Hill Dr.	6	Asbestos Cement	120	WAR 1954	335	2.29	0.030	0.000
P-2498	Caverly St.	6	Asbestos Cement	120	WAR 1955	529	-1.30	0.010	0.000
P-2499	Ontario Ave.	6	Asbestos Cement	120	WAR 1955	336	2.37	0.030	0.000
P-2500	Cardinal St.	6	Asbestos Cement	120	WAR 1954	537	0.61	0.010	0.000
P-2501	Blue Hill Dr.	6	Asbestos Cement	120	WAR 1954	335	-1.83	0.020	0.000
P-2502	Blue Hill Dr.	6	Asbestos Cement	120	WAR 1954	336	0.67	0.010	0.000
P-2503	Plantation St.	6	Asbestos Cement	120	WAR 1959	1127	-1.09	0.010	0.000

KCWA Model
Pipeline Database
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-2504	Vancouver Ave.	6	Asbestos Cement	120	WAR 1950	555	1.76	0.020	0.000
P-2505	Irondale St.	6	Asbestos Cement	120	WAR 1954	678	-5.43	0.060	0.000
P-2506	Lancaster Ave.	6	Asbestos Cement	120	WAR 1950	336	-7.20	0.080	0.000
P-2507	Montgomery St.	6	Asbestos Cement	120	WAR 1952	329	-2.47	0.030	0.000
P-2508	Lancaster Ave.	6	Asbestos Cement	120	WAR 1950	779	-6.49	0.070	0.010
P-2509	Scarsdale St.	6	Asbestos Cement	120	WAR 1952	556	1.83	0.020	0.000
P-2510	Scarsdale St.	6	Asbestos Cement	120	WAR 1952	491	2.78	0.030	0.000
P-2511	Vancouver Ave.	6	Asbestos Cement	120	WAR 1950	587	9.91	0.110	0.010
P-2512	Andover Ave.	6	Asbestos Cement	125	WAR 1962	595	4.66	0.050	0.000
P-2513	Northbridge Ave.	8	Asbestos Cement	125	WAR 1962	617	1.76	0.010	0.000
P-2514	Northbridge Ave.	8	Asbestos Cement	125	WAR 1962	1169	1.13	0.010	0.000
P-2515	Vancouver Ave.	6	Asbestos Cement	120	WAR 1950	976	-3.49	0.040	0.000
P-2516	Vancouver Ave.	6	Asbestos Cement	120	WAR 1950	401	-8.89	0.100	0.010
P-2517	Chapel St.	6	Asbestos Cement	120	WAR 1950	582	-0.16	0.000	0.000
P-2518	Lancaster Ave.	6	Asbestos Cement	120	WAR 1950	323	9.20	0.100	0.000
P-2519	Vancouver Ave.	6	Asbestos Cement	120	WAR 1950	341	-10.49	0.120	0.010
P-2520	Vancouver Ave.	6	Asbestos Cement	120	WAR 1950	387	-10.37	0.120	0.010
P-2521	Greenwich Ave.	12	Cast iron	75	WAR 1933	644	-28.00	0.080	0.010
P-2522	Lancaster Ave.	6	Asbestos Cement	120	WAR 1950	359	14.77	0.170	0.010
P-2523	Bangor St.	6	Asbestos Cement	120	WAR 1950	615	1.89	0.020	0.000
P-2524	Lancaster Ave.	6	Asbestos Cement	120	WAR 1950	329	11.12	0.130	0.010
P-2525	Breana Ln.	6	Ductile Iron	130	WAR 1988	646	1.76	0.020	0.000
P-2526	Greenwich Ave.	12	Cast iron	75	WAR 1933	380	-46.30	0.130	0.010
P-2527	Greenwich Ave.	12	Cast iron	75	WAR 1933	290	-49.82	0.140	0.010
P-2528	Gorton Holden Ter.	8	Asbestos Cement	130	WAR 1978	674	1.76	0.010	0.000
P-2529	Greenwich Ave.	12	Cast iron	75	WAR 1933	790	15.87	0.050	0.000
P-2530	Thames Ave.	2	Copper	70	WAR 1940	809	1.76	0.180	0.320
P-2531	Greenwich Ave.	12	Cast iron	75	WAR 1933	386	12.34	0.040	0.000
P-2532	Old East Ave.	6	Asbestos Cement	120	WAR 1957	348	8.82	0.100	0.000
P-2533	Quinlan Ct.	1.3	Copper	70	WAR 1957	321	1.76	0.460	1.240
P-2534	Old East Ave.	6	Asbestos Cement	120	WAR 1957	322	5.29	0.060	0.000
P-2535	Ironwood Ct.	1.3	Copper	70	WAR 1957	316	1.76	0.460	1.220
P-2536	Old East Ave.	6	Asbestos Cement	120	WAR 1957	169	1.76	0.020	0.000
P-2537	Greenwich Ave.	12	Cast iron	75	WAR 1933	671	1.76	0.010	0.000
P-2538	Commonwealth Ave.	10	Cast iron	70	WAR 1928	1703	87.48	0.360	0.360
P-2539	Kearsage Dr.	8	Asbestos Cement	125	WAR 1963	401	5.29	0.030	0.000
P-2540	Kearsage Dr.	8	Asbestos Cement	125	WAR 1963	183	1.76	0.010	0.000
P-2541	Brian Dr.	8	Asbestos Cement	125	WAR 1964	711	1.76	0.010	0.000
P-2542	Commonwealth Ave.	10	Cast iron	80	WAR 1928	2736	91.01	0.370	0.490
P-2543	College Hill Rd.	6	PVC	130	WAR 1985	431	1.76	0.020	0.000
P-2544	East Ave.	10	Cast iron	80	WAR 1928	299	-92.77	0.380	0.060
P-2545	Tillinghast Ave.	6	Ductile Iron	135	WAR 1995	794	5.29	0.060	0.000
P-2546	Blade St.	6	Cast iron	40	WAR 1928	1731	0.59	0.010	0.000
P-2547	Tillinghast Ave.	6	Ductile Iron	135	WAR 1995	669	2.94	0.030	0.000
P-2548	Tillinghast Ave.	6	Ductile Iron	140	WAR 2003	992	1.17	0.010	0.000
P-2549	East Ave.	10	Cast iron	70	WAR 1928	255	-99.82	0.410	0.070
P-2550	Baker St.	6	Cast iron	40	WAR 1928	571	2.59	0.030	0.010
P-2551	Burton St.	6	Asbestos Cement	140	WAR 1979	465	1.76	0.020	0.000
P-2552	Baker St.	6	Cast iron	40	WAR 1928	605	-0.94	0.010	0.000
P-2553	Rossi St.	4	Cast iron	40	WAR 1928	428	-2.70	0.070	0.040
P-2554	Pontiac St.	6	Cast iron	40	WAR 1928	810	-6.23	0.070	0.040
P-2555	Pontiac St.	6	Cast iron	40	WAR 1928	305	-8.61	0.100	0.030
P-2556	East Ave.	10	Cast iron	80	WAR 1928	455	104.17	0.430	0.100
P-2557	Pontiac St.	6	Cast iron	40	WAR 1928	356	1.76	0.020	0.000
P-2558	West Pontiac St.	6	Cast iron	40	WAR 1928	418	0.62	0.010	0.000
P-2559	Amy St.	6	Cast iron	40	WAR 1928	247	-1.14	0.010	0.000
P-2560	Railroad Row	4	Cast iron	40	WAR 1928	667	-2.91	0.070	0.060
P-2561	East Ave.	10	Cast iron	80	WAR 1928	123	-114.55	0.470	0.030
P-2562	East Ave.	10	Cast iron	80	WAR 1928	1402	-119.22	0.490	0.410
P-2563	O'Donnell Ave.	6	Cast iron	40	WAR 1928	167	-3.15	0.040	0.000
P-2564	O'Donnell Ave.	6	Cast iron	40	WAR 1928	387	14.10	0.160	0.100
P-2565	Adelaide Ave.	6	Cast iron	40	WAR 1928	344	2.85	0.030	0.000
P-2566	Adelaide Ave.	6	Cast iron	40	WAR 1928	855	1.08	0.010	0.000
P-2568	Dongay Ave.	6	Asbestos Cement	130	WAR 1972	394	9.49	0.110	0.010
P-2569	Levesque St.	8	Asbestos Cement	130	WAR 1972	412	5.78	0.040	0.000
P-2570	Jambay Ave.	6	Asbestos Cement	130	WAR 1972	407	1.76	0.020	0.000
P-2571	Levesque St.	6	Asbestos Cement	130	WAR 1972	1252	1.95	0.020	0.000
P-2572	Adelaide Ave.	6	Asbestos Cement	130	WAR 1972	249	-0.49	0.010	0.000
P-2573	Jambay Ave.	8	Asbestos Cement	130	WAR 1972	1480	-2.26	0.010	0.000
P-2574	Hill Top Dr.	6	Asbestos Cement	115	WAR 1948	414	3.53	0.040	0.000
P-2575	Fairmount Dr.	6	Asbestos Cement	120	WAR 1950	1006	0.00	0.000	0.000
P-2576	Hill Top Dr.	6	Asbestos Cement	115	WAR 1948	934	1.76	0.020	0.000
P-2577	Shady Glen Dr.	6	Asbestos Cement	115	WAR 1948	1059	0.00	0.000	0.000
P-2578	Hill Top Dr.	6	Asbestos Cement	115	WAR 1948	1075	0.00	0.000	0.000
P-2579	Spencer Ave.	10	Cast iron	80	WAR 1890	876	-26.85	0.110	0.030
P-2580	Spencer Ave.	10	Cast iron	60	WAR 1890	764	25.09	0.100	0.020
P-2581	Sammarino Cir.	8	Asbestos Cement	130	WAR 1976	641	0.00	0.000	0.000
P-2582	Sammarino Cir.	8	Asbestos Cement	130	WAR 1976	219	1.76	0.010	0.000
P-2583	D'Agillo Dr.	8	Asbestos Cement	130	WAR 1977	2319	-3.53	0.020	0.000
P-2584	Overhill Rd.	6	Cast iron	30	WAR 1886	1623	0.00	0.000	0.000
P-2585	Spencer Ave.	10	Cast iron	60	WAR 1890	1061	-23.33	0.100	0.030
P-2586	Spencer Ave.	10	Cast iron	60	WAR 1890	416	21.57	0.090	0.010
P-2587	Bay View Ave.	10	Cast iron	70	WAR 1928	1519	1.76	0.010	0.000

KCWA Model
Pipeline Database
Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-2588	Bay View Ave.	12	Cast iron	70	WAR 1928	237	23.59	0.070	0.000
P-2589	Beverly Rd.	6	Cast iron	45	WAR 1939	323	1.76	0.020	0.000
P-2590	Bay View Ave.	12	Cast iron	70	WAR 1928	764	20.07	0.060	0.000
P-2591	Berkeley Rd.	6	Cast iron	40	WAR 1928	593	1.76	0.020	0.000
P-2592	Bay View Ave.	12	Cast iron	70	WAR 1928	883	16.54	0.050	0.000
P-2593	Spencer Ave.	6	Cast iron	45	WAR 1936	963	-5.55	0.060	0.030
P-2594	Cedar St.	6	Asbestos Cement	125	WAR 1966	1455	-13.17	0.150	0.040
P-2595	Cedar St.	6	Cast iron	45	WAR 1936	1100	5.85	0.070	0.040
P-2596	Love Ln.	16	Ductile Iron	140	WAR 2001	3833	-14.93	0.020	0.000
P-2597	Harrop Ave.	6	Cast iron	45	WAR 1933	901	-3.16	0.040	0.010
P-2598	Harrop Ave.	6	Cast iron	45	WAR 1933	139	1.76	0.020	0.000
P-2599	Arnolds Neck Dr.	8	Asbestos Cement	115	WAR 1946	646	15.87	0.100	0.010
P-2600	Arnolds Neck Dr.	8	Asbestos Cement	115	WAR 1946	974	14.10	0.090	0.010
P-2601	Arnolds Neck Dr.	8	Asbestos Cement	115	WAR 1946	1722	7.80	0.050	0.000
P-2602	Shallock Ave.	6	Asbestos Cement	115	WAR 1946	408	1.76	0.020	0.000
P-2603	Staples Ave.	6	Asbestos Cement	115	WAR 1946	531	4.54	0.050	0.000
P-2604	Staples Ave.	6	Asbestos Cement	115	WAR 1946	2096	2.77	0.030	0.000
P-2605	Arnolds Neck Dr.	8	Asbestos Cement	115	WAR 1946	932	4.28	0.030	0.000
P-2606	Arnolds Neck Dr.	8	Asbestos Cement	115	WAR 1946	293	1.76	0.010	0.000
P-2607	Paul Ave.	6	Asbestos Cement	115	WAR 1946	282	0.75	0.010	0.000
P-2608	Paul Ave.	6	Asbestos Cement	115	WAR 1946	298	1.76	0.020	0.000
P-2610	Post Rd.	8	Ductile Iron	135	WAR 1999	301	0.14	0.000	0.000
P-2611	Water St.	8	Ductile Iron	140	WAR 2001	211	16.36	0.100	0.000
P-2613	Water St.	8	Ductile Iron	140	WAR 2001	1034	14.59	0.090	0.010
P-2614	Post Rd.	8	Cast iron	60	WAR 1890	1053	-8.07	0.050	0.010
P-2615	Colonial Ave.	8	Ductile Iron	140	WAR 2001	838	12.83	0.080	0.000
P-2616	Post Rd.	8	Cast iron	60	WAR 1890	272	19.14	0.120	0.010
P-2617	Post Rd.	8	Cast iron	60	WAR 1890	321	16.08	0.100	0.010
P-2618	Post Rd.	8	Cast iron	60	WAR 1890	337	5.01	0.030	0.000
P-2619	Post Rd.	8	Cast iron	60	WAR 1890	449	1.76	0.010	0.000
P-2620	Pleasant St.	4	Cast iron	35	WAR 1910	525	1.30	0.030	0.010
P-2621	Coyte St.	4	Cast iron	35	WAR 1910	309	-0.47	0.010	0.000
P-2622	Prospect St.	8	Ductile Iron	135	WAR 1990	284	9.31	0.060	0.000
P-2623	Coyte St.	4	Cast iron	35	WAR 1910	347	1.87	0.050	0.020
P-2624	Spruce St.	4	Cast iron	35	WAR 1910	533	-1.48	0.040	0.020
P-2625	Spruce St.	6	PVC	130	WAR 1985	453	1.59	0.020	0.000
P-2626	Post Rd.	1.5	Copper	70	WAR 1946	652	1.76	0.320	1.040
P-2627	Oak St.	4	Cast iron	35	WAR 1910	324	-1.94	0.050	0.020
P-2628	Prospect St.	8	Ductile Iron	135	WAR 1990	461	-3.45	0.020	0.000
P-2629	Oak St.	8	Ductile Iron	135	WAR 1990	340	-0.25	0.000	0.600
P-2630	Pleasant St.	8	Ductile Iron	135	WAR 1990	615	-2.02	0.010	0.000
P-2631	Veterans Memorial Dr.	8	Asbestos Cement	115	WAR 1949	903	1.76	0.010	0.000
P-2632	Veterans Memorial Dr.	8	Asbestos Cement	115	WAR 1949	1447	-5.54	0.040	0.000
P-2633	Greenwich Ave.	12	Cast iron	75	WAR 1933	918	-91.93	0.260	0.080
P-2634	Greenwich Ave.	12	Cast iron	75	WAR 1933	2379	84.62	0.240	0.170
P-2636	Panlo Rd.	6	Asbestos Cement	120	WAR 1954	409	3.53	0.040	0.000
P-2637	Panlo Rd.	6	Asbestos Cement	120	WAR 1954	898	1.00	0.010	0.000
P-2638	Sophia Rd.	6	Asbestos Cement	120	WAR 1954	1495	0.76	0.010	0.000
P-2639	Bridal Ave.	6	Cast iron	40	WAR 1922	805	9.86	0.110	0.100
P-2640	Bridal Ave.	6	Cast iron	40	WAR 1922	533	2.81	0.030	0.010
P-2641	Cactus St.	8	Asbestos Cement	120	WAR 1956	493	5.29	0.030	0.000
P-2642	Cactus St.	8	Asbestos Cement	120	WAR 1956	298	2.77	0.020	0.000
P-2643	Crocus St.	6	Asbestos Cement	120	WAR 1956	825	0.75	0.010	0.000
P-2644	Cactus St.	8	Asbestos Cement	120	WAR 1956	120	1.76	0.010	0.000
P-2645	Major Potter Rd.	8	PVC	130	WAR 1988	4652	1.76	0.010	0.000
P-2646	Major Potter Rd.	12	PVC	130	WAR 1983	1686	-7.05	0.020	0.000
P-2647	Tollgate Rd.	10	Cast iron	70	WAR 1928	117	127.62	0.620	0.050
P-2648	Elmer Ave.	8	Ductile Iron	135	WAR 1995	485	1.76	0.010	0.000
P-2649	Fairmount Dr.	20	Asbestos Cement	125	WAR 1964	953	357.27	0.360	0.030
P-2650	Hill Top Dr.	20	Asbestos Cement	125	WAR 1964	355	355.51	0.360	0.010
P-2651	Hill Top Dr.	20	Asbestos Cement	125	WAR 1964	1452	325.53	0.330	0.040
P-2652	Love Ln. PRV	20	Asbestos Cement	125	WAR 1964	369	323.77	0.330	0.010
P-2653	Love Ln.	20	Asbestos Cement	125	WAR 1964	119	15.87	0.020	0.000
P-2654	Governors Dr.	8	Ductile Iron	140	WAR 2000	1162	-10.58	0.070	0.000
P-2655	Love Ln.	12	Asbestos Cement	120	WAR 1957	1140	-5.29	0.020	0.000
P-2656	Love Ln.	12	Asbestos Cement	120	WAR 1957	503	-10.58	0.030	0.000
P-2657	Love Ln.	12	Asbestos Cement	120	WAR 1957	3137	-320.25	0.910	1.120
P-2658	Love Ln. PRV	12	Asbestos Cement	120	WAR 1957	330	323.78	0.920	0.120
P-2659	Love Ln.	12	Asbestos Cement	120	WAR 1957	308	1.76	0.010	0.000
P-2660	Love Ln.	12	Asbestos Cement	120	WAR 1957	107	0.00	0.000	0.000
P-2661	Bay View Ave.	6	Asbestos Cement	125	WAR 1965	767	1.76	0.020	0.000
P-2662	Adelaide Ave.	6	Asbestos Cement	130	WAR 1972	465	-0.68	0.010	0.000
P-2663	Briarbrook Dr.	8	Ductile Iron	130	WAR 1985	712	5.29	0.030	0.000
P-2664	Green Hill Way	8	Ductile Iron	130	WAR 1985	485	1.76	0.010	0.000
P-2665	Briarbrook Dr.	8	Ductile Iron	130	WAR 1985	419	1.76	0.010	0.000
P-2667	Bald Hill Rd.	24	Asbestos Cement	130	WAR 1984	2533	-2022.76	1.430	0.810
P-2668	Bald Hill Rd. PS	24	Asbestos Cement	130	WAR 1984	206	2021.00	1.430	0.070
P-2669	Bald Hill Rd. PS	12	Ductile Iron	130	WAR 1984	367	2021.00	5.730	3.420
P-2670	Bald Hill Rd. PS	10	Ductile Iron	130	WAR 1984	838	2021.00	8.260	19.000
P-2672	Bald Hill Rd. PS	12	Ductile Iron	130	WAR 1984	387	0.00	0.000	0.000
P-2673	Bald Hill Rd. PS	10	Ductile Iron	130	WAR 1984	854	0.00	0.000	0.000
P-2674	Bald Hill Rd. PS	24	Asbestos Cement	130	WAR 1984	163	0.00	0.000	0.000
P-2675	Bald Hill Rd. PS	24	Asbestos Cement	130	WAR 1984	177	0.00	0.000	0.000

KCWA Model
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-2676	Bald Hill Rd. PS	12	Ductile Iron	130	WAR 1984	752	0.00	0.000	0.000
P-2677	Bald Hill Rd. PS	10	Ductile Iron	130	WAR 1984	327	0.00	0.000	0.000
P-2678	Bald Hill Rd. PS	24	Asbestos Cement	130	WAR 1984	161	0.00	0.000	0.000
P-2679	Bald Hill Rd. PS	12	Ductile Iron	130	WAR 1984	788	0.00	0.000	0.000
P-2680	Bald Hill Rd. PS	10	Ductile Iron	130	WAR 1984	348	0.00	0.000	0.000
P-2681	Bald Hill Rd. PS	24	Asbestos Cement	130	WAR 1984	451	-2021.00	1.430	0.140
P-2682	Bald Hill Rd. PS	24	Asbestos Cement	130	WAR 1984	132	0.00	0.000	0.000
P-2683	Bald Hill Rd. PS	24	Asbestos Cement	130	WAR 1984	199	0.00	0.000	0.000
P-2684	Bald Hill Rd. PS	24	Asbestos Cement	130	WAR 1984	176	0.00	0.000	0.000
P-2685	Centerville Rd.	12	Cast iron	70	WAR 1928	562	177.25	0.500	0.180
P-2686	Centerville Rd.	12	Cast iron	70	WAR 1928	263	175.49	0.500	0.080
P-2687	Centerville Rd.	12	Cast iron	70	WAR 1928	130	0.00	0.000	0.000
P-2688	Warwick Tanks	24	Asbestos Cement	130	WAR 1984	154	2024.53	1.440	0.050
P-2689	Warwick Tanks	24	Asbestos Cement	130	WAR 1984	353	840.31	0.600	0.020
P-2690	Warwick Tanks	24	Asbestos Cement	130	WAR 1984	187	1184.22	0.840	0.020
P-2691	Prospect St.	8	Ductile Iron	135	WAR 1990	251	7.55	0.050	0.000
P-2692	Post Rd.	16	Ductile Iron	135	WAR 1999	776	-35.56	0.060	0.000
P-2694	Cedar St.	6	Asbestos Cement	125	WAR 1966	955	4.09	0.050	0.000
P-2695	Carrs Ln.	6	Ductile Iron	135	WAR 1991	711	1.76	0.020	0.000
P-2696	Rutherford Ave.	6	Asbestos Cement	120	WAR 1950	639	17.17	0.190	0.030
P-2697	Rutherford Ct.	6	Asbestos Cement	120	WAR 1950	292	1.76	0.020	0.000
P-2698	Quaker Ln.	20	Asbestos Cement	125	WAR 1969	1358	692.04	0.710	0.160
P-2699	Post Rd.	12	Cast iron	70	WAR 1928	387	80.03	0.230	0.030
P-2701	Post Rd.	8	Cast iron	60	WAR 1890	433	-9.83	0.060	0.010
P-2702	Post Rd.	8	Cast iron	60	WAR 1890	101	18.26	0.120	0.000
P-2703	Post Rd.	8	Cast iron	60	WAR 1890	62	29.86	0.190	0.010
P-2704	Post Rd.	12	Cast iron	70	WAR 1928	402	48.41	0.140	0.010
P-2705	Post Rd.	12	Cast iron	70	WAR 1928	188	45.03	0.130	0.000
P-2706	Post Rd.	8	Ductile Iron	135	WAR 1999	50	1.62	0.010	0.000
P-2707	Ashmont St.	6	Asbestos Cement	120	WAR 1957	415	14.57	0.170	0.010
P-2708	Ashmont St.	6	Asbestos Cement	120	WAR 1957	267	11.05	0.130	0.010
P-2709	Taylor Ln.	8	Ductile Iron	140	WAR 2003	250	1.76	0.010	0.000
P-2710	Windemere Way	8	Asbestos Cement	110	WAR 1939	349	26.95	0.170	0.010
P-2711	Windemere Way	8	Asbestos Cement	110	WAR 1939	534	20.34	0.130	0.010
P-2712	Lantern Ln.	6	Asbestos Cement	115	WAR 1946	477	-4.85	0.060	0.000
P-2713	Peacock Rd.	8	Asbestos Cement	130	WAR 1972	325	3.53	0.020	0.000
P-2714	Peacock Rd.	8	Ductile Iron	135	WAR 1992	700	1.76	0.010	0.000
P-2715	Boulder View Dr.	8	PVC	130	WAR 1988	615	-2.24	0.010	0.000
P-2716	Tollgate Rd.	12	Cast iron	90	WAR 1928	127	-164.85	0.470	0.020
P-2717	Tollgate Rd.	12	Cast iron	90	WAR 1928	1573	-166.61	0.470	0.290
P-2718	Tollgate Rd.	12	Cast iron	90	WAR 1928	1623	-191.29	0.540	0.380
P-2719	Tollgate Rd.	12	Cast iron	90	WAR 1928	1043	-194.82	0.550	0.250
P-2720	Orchard Ave.	8	Asbestos Cement	130	WAR 1971	1044	1.76	0.010	0.000
P-2721	Centerville Rd.	8	Cast iron	75	WAR 1932	675	83.18	0.530	0.340
P-2722	Centerville Rd.	8	Cast iron	75	WAR 1932	274	79.65	0.510	0.130
P-2723	Benefit St.	6	Cast iron	45	WAR 1932	520	1.76	0.020	0.000
P-2724	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	178	18.66	0.120	0.000
P-2725	Diamond Hill Rd.	8	Ductile Iron	140	WAR 2000	1378	15.13	0.100	0.010
P-2726	Osborne St.	6	Asbestos Cement	125	WAR 1964	200	1.76	0.020	0.000
P-2727	Sage Dr.	6	Asbestos Cement	125	WAR 1969	536	4.94	0.060	0.000
P-2728	Sage Dr.	6	Asbestos Cement	125	WAR 1969	306	3.05	0.030	0.000
P-2729	Bishop Rd.	6	Ductile Iron	140	WAR 2001	177	1.63	0.020	0.000
P-2730	Bishop Rd.	6	Asbestos Cement	125	WAR 1969	341	1.76	0.020	0.000
P-2731	Oberlin Dr.	8	Ductile Iron	140	WAR 2001	328	27.74	0.180	0.010
P-2732	Oberlin Dr.	8	Ductile Iron	140	WAR 2001	729	24.22	0.150	0.010
P-2733	Tomahawk Ct.	8	Ductile Iron	140	WAR 2001	674	1.76	0.010	0.000
P-2734	Sandro Dr.	6	Asbestos Cement	120	WAR 1954	335	0.00	0.000	0.000
P-2735	Sandro Dr.	6	Asbestos Cement	120	WAR 1954	764	-3.53	0.040	0.000
P-2736	Sandro Cir.	6	Asbestos Cement	120	WAR 1954	175	1.76	0.020	0.000
P-2737	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	404	-347.96	0.990	0.160
P-2738	Cowesett Rd.	12	Asbestos Cement	125	WAR 1966	478	-351.48	1.000	0.190
P-2739	Whispering Ln.	6	PVC	130	WAR 1988	390	1.76	0.020	0.000
P-2740	Ann Nolst Ct.	8	Ductile Iron	135	WAR 1997	731	46.92	0.300	0.040
P-2741	Easement	8	Ductile Iron	135	WAR 1997	627	45.16	0.290	0.030
P-2742	Spencer Hill Ct.	8	Ductile Iron	135	WAR 1997	319	43.39	0.280	0.020
P-2743	Major Potter Rd.	12	Cast iron	80	WAR 1969	532	8.81	0.030	0.000
P-2744	Major Potter Rd.	8	Ductile Iron	140	WAR 2000	1055	5.29	0.030	0.000
P-2745	Major Potter Rd.	8	Ductile Iron	140	WAR 2000	469	1.76	0.010	0.000
P-2746	Private Meter	12	PVC	130	WAR 1988	345	1.76	0.010	0.000
P-2747	Corey Ave.	6	Cast iron	30	WAR 1887	400	1.48	0.020	0.000
P-2748	Corey Ave.	8	Ductile Iron	135	WAR 1996	150	-0.28	0.000	0.000
P-2749	Centerville Rd.	8	Cast iron	75	WAR 1932	207	15.93	0.100	0.000
P-3000	Pinehill Rd.	8	Ductile Iron	135	WG 1995	228	81.14	0.520	0.040
P-3001	Nichole Ln.	8	Asbestos Cement	130	WG 1981	1035	37.52	0.240	0.040
P-3002	Nichole Ln.	8	Asbestos Cement	130	WG 1981	348	50.15	0.320	0.020
P-3003	Nichole Ln.	8	Asbestos Cement	130	WG 1981	330	-18.49	0.120	0.000
P-3004	Easement	8	Asbestos Cement	130	WG 1981	700	67.33	0.430	0.090
P-3005	Mishnock Rd.	12	Ductile Iron	130	WG 1989	1672	-187.91	0.530	0.190
P-3006	Mishnock Rd.	12	Asbestos Cement	130	WG 1970	439	253.93	0.720	0.090
P-3008	Bailey Dr.	8	Asbestos Cement	130	WG 1971	134	1.31	0.010	0.000
P-3009	Bailey Dr.	8	Asbestos Cement	130	WG 1971	1578	54.83	0.350	0.130
P-3010	Mishnock Rd.	12	Asbestos Cement	130	WG 1970	1785	193.85	0.550	0.220
P-3011	Mishnock Rd.	12	Asbestos Cement	130	WG 1970	1895	146.57	0.420	0.140

KCWA Model
Pipeline Database
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-3012	Mohawk Tr.	8	Asbestos Cement	130	WG 1971	536	45.97	0.290	0.030
P-3013	Seminole Tr.	8	Asbestos Cement	130	WG 1971	433	14.05	0.090	0.000
P-3014	Cheyenne Tr.	6	Asbestos Cement	130	WG 1971	718	1.31	0.010	0.000
P-3015	Seminole Tr.	8	Asbestos Cement	130	WG 1971	1386	11.43	0.070	0.010
P-3016	Mohawk Tr.	8	Asbestos Cement	130	WG 1971	297	30.61	0.200	0.010
P-3017	Mohawk Tr.	8	Asbestos Cement	130	WG 1971	130	-13.64	0.090	0.000
P-3018	Mohawk Tr.	8	Asbestos Cement	130	WG 1971	226	23.76	0.150	0.000
P-3019	Sioux Tr.	6	Asbestos Cement	130	WG 1971	378	21.14	0.240	0.020
P-3020	Clubhouse Rd.	6	Asbestos Cement	130	WG 1971	804	-15.66	0.180	0.030
P-3021	Mohawk Tr.	8	Asbestos Cement	130	WG 1971	694	1.31	0.010	0.000
P-3022	Clubhouse Rd.	6	Asbestos Cement	130	WG 1971	1399	35.49	0.400	0.210
P-3023	Clubhouse Rd.	6	Asbestos Cement	130	WG 1971	1410	1.31	0.010	0.000
P-3024	Old Hickory Dr.	8	Ductile Iron	135	WG 1998	2133	32.86	0.210	0.070
P-3025	Mac Cue Point Rd.	8	Asbestos Cement	130	WG 1971	356	1.31	0.010	0.000
P-3026	Lake Dr.	8	Asbestos Cement	130	WG 1971	842	30.24	0.190	0.020
P-3027	Cambio Ct.	6	Asbestos Cement	130	WG 1977	710	1.31	0.010	0.000
P-3028	Lake Dr.	8	Asbestos Cement	130	WG 1971	3614	27.62	0.180	0.090
P-3029	Pine Tree Ln.	8	Asbestos Cement	130	WG 1971	1161	-15.20	0.100	0.010
P-3030	Pond View Ct.	6	Asbestos Cement	130	WG 1976	934	1.31	0.010	0.000
P-3031	Lake Dr.	8	Asbestos Cement	130	WG 1971	1285	41.51	0.260	0.060
P-3032	Pine Tree Ln.	8	Asbestos Cement	130	WG 1971	1215	-17.82	0.110	0.010
P-3033	Mishnock Rd.	12	Asbestos Cement	130	WG 1970	833	-178.34	0.510	0.090
P-3034	Mishnock Rd.	12	Asbestos Cement	130	WG 1970	871	-197.47	0.560	0.110
P-3035	Ragnell Rd.	6	Asbestos Cement	140	WG 1976	348	1.31	0.010	0.000
P-3036	Mishnock Rd.	12	Asbestos Cement	130	WG 1970	1462	-200.09	0.570	0.190
P-3038	Nooseneck Hill Rd.	8	Asbestos Cement	125	WG 1965	1307	9.18	0.060	0.000
P-3039	Valerie Dr. (Private)	8	Ductile Iron	135	WG 1990	699	1.31	0.010	0.000
P-3040	Nooseneck Hill Rd.	8	Asbestos Cement	125	WG 1965	497	6.55	0.040	0.000
P-3041	Valerie Dr.	8	Asbestos Cement	125	WG 1969	817	1.31	0.010	0.000
P-3042	Nooseneck Hill Rd.	8	Asbestos Cement	125	WG 1965	865	3.93	0.030	0.000
P-3043	Brant Tr. (Private)	8	Asbestos Cement	125	WG 1965	752	1.31	0.010	0.000
P-3044	Nooseneck Hill Rd.	8	Asbestos Cement	125	WG 1965	126	1.31	0.010	0.000
P-3045	Hopkins Hill Rd.	20	Ductile Iron	140	WG 2001	102	1.31	0.000	0.000
P-3046	Hopkins Hill Rd.	20	Ductile Iron	140	WG 2001	2685	-144.08	0.150	0.010
P-3047	Hopkins Hill Rd.	18	Ductile Iron	130	WG 1988	1432	743.87	1.190	0.520
P-3048	Hopkins Hill Rd.	20	Ductile Iron	140	WG 2001	1460	-145.39	0.150	0.010
P-3049	Hopkins Hill Rd.	12	Ductile Iron	130	WG 1989	1609	1.31	0.000	0.000
P-3050	Technology Park Tank	16	Ductile Iron	130	WG 1988	2944	741.25	1.180	1.060
P-3051	Technology Park Tank	16	Ductile Iron	130	WG 1988	676	-277.52	0.440	0.040
P-3052	Welgen - 95 Easement	16	Ductile Iron	135	WG 1995	11117	985.27	1.570	6.300
P-3053	Division St.	16	Ductile Iron	140	WG 2001	4660	250.85	0.400	0.200
P-3054	Carrs Pond Rd.	20	Ductile Iron	140	WG 2001	5092	100.22	0.100	0.010
P-3055	Carrs Pond Rd. Tank	18	Ductile Iron	140	WG 2001	763	205.03	0.330	0.020
P-3056	Carrs Pond Rd.	20	Ductile Iron	140	WG 2001	2173	-104.81	0.110	0.010
P-3057	Division St.	20	Ductile Iron	140	WG 2001	4535	149.32	0.150	0.020
P-3058	Hopkins Hill Rd.	20	Ductile Iron	140	WG 2001	1973	-146.70	0.150	0.010
P-3059	Division St.	20	Ductile Iron	140	WG 2001	4123	-148.01	0.150	0.020
P-3060	Mishnock Rd.	12	Asbestos Cement	130	WG 1970	2490	218.54	0.620	0.380
P-3061	Mishnock Rd.	12	Asbestos Cement	130	WG 1970	130	10.49	0.030	0.000
P-3062	Nooseneck Hill Rd.	12	Asbestos Cement	125	WG 1965	1168	0.00	0.000	0.000
P-3063	Eddy St.	8	Asbestos Cement	130	WG 1971	283	58.76	0.380	0.030
P-3064	Roland Dr.	8	Asbestos Cement	130	WG 1971	2103	57.45	0.370	0.190
P-4000	Longmeadow Dr.	8	Ductile Iron	140	EG 2003	2138	-1.77	0.010	0.000
P-4001	Frenchtown Rd.	16	Ductile Iron	140	EG 2002	2727	-3.55	0.010	0.000
P-4002	Frenchtown Rd.	16	Asbestos Cement	130	EG 1970	585	30.08	0.050	0.000
P-4003	Frenchtown Rd.	16	Asbestos Cement	130	EG 1970	971	15.56	0.020	0.000
P-4004	Bear Swamp Rd.	8	Asbestos Cement	130	EG 1978	1076	3.21	0.020	0.000
P-4005	Easement	12	Ductile Iron	130	EG 1989	576	1.43	0.000	0.000
P-4006	Juniper Rd.	12	Ductile Iron	130	EG 1989	957	-12.75	0.040	0.000
P-4007	Juniper Rd.	12	Ductile Iron	130	EG 1989	881	12.41	0.040	0.000
P-4008	Hunters Crossing Rd.	12	Ductile Iron	130	EG 1989	1023	1.77	0.010	0.000
P-4009	Juniper Rd.	12	Ductile Iron	135	EG 1992	1104	8.86	0.030	0.000
P-4010	Mallard Way	12	Ductile Iron	135	EG 1992	949	1.77	0.010	0.000
P-4011	Juniper Rd.	12	Ductile Iron	135	EG 1992	489	5.32	0.020	0.000
P-4012	Wood Duck Ct.	8	Ductile Iron	135	EG 1992	483	1.77	0.010	0.000
P-4013	Juniper Rd.	8	Ductile Iron	135	EG 1992	395	1.77	0.010	0.000
P-4014	Woodbridge Dr.	8	PVC	125	EG 1978	1767	-35.40	0.230	0.070
P-4015	Woodbridge Dr.	8	PVC	125	EG 1978	557	-13.20	0.080	0.000
P-4016	Sonnet Dr.	8	PVC	130	EG 1987	780	1.77	0.010	0.000
P-4017	Woodbridge Dr.	8	PVC	125	EG 1978	2728	-16.74	0.110	0.030
P-4018	High Hawk Rd.	12	PVC	130	EG 1986	605	1.77	0.010	0.000
P-4019	High Hawk Rd.	12	PVC	130	EG 1986	502	-20.29	0.060	0.000
P-4020	Sheep Farm Dr.	12	PVC	130	EG 1987	1938	23.05	0.070	0.000
P-4021	Sheep Farm Dr.	8	PVC	130	EG 1987	760	18.18	0.120	0.010
P-4022	Deerfield Dr.	8	PVC	130	EG 1987	1052	23.98	0.150	0.020
P-4023	High Hawk Rd.	12	PVC	130	EG 1986	435	-45.11	0.130	0.000
P-4024	Pheasant Dr.	12	PVC	130	EG 1989	2856	-99.28	0.280	0.100
P-4025	Sparrow Ln.	8	Ductile Iron	135	EG 1993	933	1.77	0.010	0.000
P-4026	Pheasant Dr.	16	Ductile Iron	135	EG 1993	695	-102.83	0.160	0.010
P-4027	Easement	16	Ductile Iron	135	EG 1994	1495	-104.60	0.170	0.010
P-4029	High Hawk Rd.	12	PVC	130	EG 1986	268	-52.40	0.150	0.000
P-4030	Osprey Dr.	8	PVC	130	EG 1987	1923	8.77	0.060	0.010
P-4031	Osprey Dr.	8	PVC	130	EG 1987	550	-3.10	0.020	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-4032	Rabbit Run	8	PVC	130	EB 1987	876	10.10	0.060	0.000
P-4033	Deerfield Dr.	8	PVC	130	EG 1987	692	11.12	0.070	0.000
P-4034	Eagle Ln.	8	PVC	130	EG 1987	463	1.77	0.010	0.000
P-4035	Deerfield Dr.	8	PVC	130	EG 1987	841	7.57	0.050	0.000
P-4036	Deerfield Dr.	8	PVC	130	EG 1987	904	-2.79	0.020	0.000
P-4037	Deerfield Dr	8	Asbestos Cement	130	EG 1974	736	-3.05	0.020	0.000
P-4038	Falcon Cir.	8	Asbestos Cement	130	EG 1974	2691	1.52	0.010	0.000
P-4039	Deerfield Dr.	8	Asbestos Cement	130	EG 1974	761	-6.34	0.040	0.000
P-4040	High Hawk Rd.	12	PVC	130	EG 1986	970	-41.85	0.120	0.010
P-4041	Chestnut Dr.	8	Asbestos Cement	125	EG 1968	462	22.91	0.150	0.010
P-4042	High Hawk Rd.	8	Asbestos Cement	130	EG 1970	1954	-0.50	0.000	0.000
P-4043	Squirrel Ln.	8	Asbestos Cement	130	EG 1972	818	5.32	0.030	0.000
P-4044	Owl Tree Ln.	8	Ductile Iron	140	EG 2000	599	1.77	0.010	0.000
P-4045	Squirrel Ln.	8	Asbestos Cement	130	EG 1972	146	1.77	0.010	0.000
P-4046	High Hawk Rd.	8	Asbestos Cement	130	EG 1970	193	-7.59	0.050	0.000
P-4047	Cardinal Ln.	8	Asbestos Cement	130	EG 1972	520	4.70	0.030	0.000
P-4048	Robin Ct.	6	Asbestos Cement	130	EG 1972	476	1.77	0.020	0.000
P-4049	Cardinal Ln.	8	Asbestos Cement	130	EG 1972	931	1.16	0.010	0.000
P-4050	High Hawk Rd.	8	Asbestos Cement	130	EG 1970	670	-14.07	0.090	0.000
P-4051	Arbor Way	8	Asbestos Cement	130	EG 1972	797	1.77	0.010	0.000
P-4052	High Hawk Rd.	8	Asbestos Cement	130	EG 1970	555	-17.61	0.110	0.010
P-4053	High Hawk Rd.	8	Asbestos Cement	130	EG 1970	2547	-33.74	0.220	0.090
P-4055	Chestnut Dr.	8	Asbestos Cement	125	EG 1968	203	-6.94	0.040	0.000
P-4056	Frenchtown Rd.	12	Ductile Iron	135	EG 1999	696	1.10	0.000	0.000
P-4057	Franklin Rd.	8	Asbestos Cement	125	EG 1968	932	-28.08	0.180	0.020
P-4058	Frenchtown Road Tank Easement	8	Ductile Iron	135	EG 1999	99	-1.77	0.010	0.000
P-4059	French Road Tank Easement	12	Ductile Iron	135	EG 1999	884	-4.16	0.010	0.000
P-4060	Frenchtown Rd.	16	Asbestos Cement	130	EG 1970	686	10.58	0.020	0.000
P-4061	Frenchtown Rd	12	Asbestos Cement	125	EG 1964	139	0.00	0.000	0.000
P-4062	Frenchtown Rd.	12	Ductile Iron	135	EG 1999	59	8.81	0.020	0.000
P-4063	Frenchtown Rd.	12	Ductile Iron	135	EG 1999	243	7.03	0.020	0.000
P-4064	Frenchtown Road Tank Easement	20	Asbestos Cement	130	EG 1970	770	146.85	0.150	0.000
P-4065	Frenchtown Road Tank	8	Ductile Iron	135	EG 1999	73	0.00	0.000	0.000
P-4066	Frenchtown Road Tank	16	Asbestos Cement	130	EG 1970	356	146.85	0.230	0.010
P-4067	Post Rd.	10	Ductile Iron	135	EG 1996	2310	5.29	0.020	0.000
P-4068	Cardinal Lane Easement	8	Asbestos Cement	130	EG 1977	331	-0.62	0.000	0.000
P-4069	Frenchtown Rd.	12	Ductile Iron	135	EG 1999	2156	-0.17	0.000	0.000
P-4070	Tillinghast Rd.	12	Ductile Iron	135	EG 1993	4419	7.09	0.020	0.000
P-4071	Tillinghast Rd.	12	Ductile Iron	140	EG 2000	1099	3.55	0.010	0.000
P-4072	Frederick T. Miller Way	8	Ductile Iron	140	EG 2000	500	1.77	0.010	0.000
P-4073	Pardon's Wood Ln.	8	Ductile Iron	135	EG 1993	1012	1.77	0.010	0.000
P-4075	Frenchtown Road (334')	20	Asbestos Cement	130	EG 1970	3033	-148.62	0.150	0.020
P-4076	Tillinghast Rd.	20	Ductile Iron	130	EG 1983	3189	170.87	0.170	0.030
P-4077	Tillinghast Rd.	20	Ductile Iron	130	EG 1983	1082	169.10	0.170	0.010
P-4078	Tillinghast Rd.	20	Ductile Iron	130	EG 1983	4513	189.71	0.190	0.040
P-4079	Tillinghast Road (Closed Valve)	12	Ductile Iron	135	EG 1994	45	0.00	0.000	0.000
P-4080	River Run	8	PVC	125	EG 1979	1650	8.86	0.060	0.010
P-4081	River Run	8	PVC	125	EG 1979	1516	2.89	0.020	0.000
P-4082	Quail Ct.	8	PVC	125	EG 1979	291	1.77	0.010	0.000
P-4083	River Run	8	PVC	125	EG 1979	983	-0.66	0.000	0.000
P-4084	River Run	8	PVC	125	EG 1979	726	-4.20	0.030	0.000
P-4085	Rosewood Ct.	8	PVC	125	EG 1979	158	1.77	0.010	0.000
P-4086	Laurel Woods Dr.	8	Ductile Iron	135	EG 1995	1060	-31.25	0.200	0.030
P-4087	Laurel Woods Dr.	8	Ductile Iron	135	EG 1995	1290	-17.52	0.110	0.010
P-4088	Laurel Woods Dr.	8	Ductile Iron	135	EG 1995	1618	15.50	0.100	0.010
P-4089	Laurel Woods Dr. (easement)	8	Ductile Iron	135	EG 1995	550	-34.80	0.220	0.020
P-4090	Adirondack Dr.	8	Ductile Iron	130	EG 1981	352	-36.57	0.230	0.010
P-4091	Cavalier Dr.	8	Ductile Iron	130	EG 1981	1114	-20.15	0.130	0.010
P-4092	Remy Place	8	Ductile Iron	130	EG 1981	395	1.77	0.010	0.000
P-4093	Cavalier Dr.	8	Ductile Iron	130	EG 1981	1458	-23.69	0.150	0.030
P-4094	Adirondack Dr.	8	Ductile Iron	130	EG 1981	602	8.32	0.050	0.000
P-4095	Adirondack Dr.	8	Ductile Iron	130	EG 1981	1916	21.74	0.140	0.030
P-4096	Cartier Ct.	6	Ductile Iron	130	EG 1986	540	1.77	0.020	0.000
P-4097	Adirondack Dr.	8	Ductile Iron	130	EG 1981	915	18.20	0.120	0.010
P-4098	Ezechial Carrie Rd.	8	PVC	130	EG 1984	1549	-15.20	0.100	0.010
P-4099	Huling Ln.	8	Ductile Iron	130	EG 1984	576	1.77	0.010	0.000
P-4100	Huling Ln.	8	Ductile Iron	130	EG 1984	829	-18.74	0.120	0.010
P-4101	Adirondack Dr.	8	Asbestos Cement	130	EG 1976	586	33.79	0.220	0.020
P-4102	Adirondack Dr.	8	Asbestos Cement	130	EG 1976	950	-54.30	0.350	0.080
P-4103	Adirondack Dr.	8	Asbestos Cement	130	EG 1976	706	-86.80	0.550	0.140
P-4104	Frenchtown Rd.	12	Asbestos Cement	125	EG 1964	554	270.04	0.770	0.130
P-4105	Frenchtown Rd.	12	Asbestos Cement	125	EG 1964	332	304.72	0.860	0.100
P-4106	Hugenot Dr.	8	Asbestos Cement	130	EG 1976	740	-27.18	0.170	0.020
P-4107	Hugenot Dr.	8	Asbestos Cement	130	EG 1975	767	1.77	0.010	0.000
P-4108	Monroe Dr.	6	Asbestos Cement	130	EG 1975	666	-30.73	0.350	0.080
P-4109	Jodie Beth Cir.	8	Asbestos Cement	130	EG 1973	1794	39.99	0.260	0.080
P-4110	Kirker Dr.	8	Asbestos Cement	130	EG 1973	1243	36.45	0.230	0.050
P-4111	Jodie Beth Cir.	8	Ductile Iron	135	EG 1995	883	1.77	0.010	0.000
P-4113	Frenchtown Rd.	20	Asbestos Cement	130	EG 1970	608	-330.13	0.340	0.020
P-4114	Frenchtown Rd.	12	Asbestos Cement	125	EG 1964	2770	-398.61	1.130	1.370
P-4115	So County Tr.	12	Asbestos Cement	125	EG 1964	8682	294.30	0.830	2.460
P-4116	Middle Rd.	20	Ductile Iron	130	EG 1983	1502	184.39	0.190	0.010
P-4117	Clemente Dr.	6	Asbestos Cement	125	EG 1963	661	8.86	0.100	0.010

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-4118	Middle Rd.	12	Asbestos Cement	130	EG 1973	1424	234.22	0.660	0.250
P-4119	Stoneridge Dr.	8	Asbestos Cement	130	EG 1973	627	-49.43	0.320	0.040
P-4120	Stoneridge Dr.	8	Asbestos Cement	130	EG 1973	2007	-26.92	0.170	0.050
P-4121	Crystal Dr.	8	Asbestos Cement	130	EG 1975	1235	27.83	0.180	0.030
P-4122	Crystal Ct.	6	Asbestos Cement	130	EG 1975	179	1.77	0.020	0.000
P-4123	Crystal Dr.	8	Asbestos Cement	130	EG 1975	843	24.28	0.150	0.020
P-4124	Stoneridge Dr.	8	Asbestos Cement	130	EG 1975	591	-56.52	0.360	0.050
P-4125	Stoneridge Dr.	8	Asbestos Cement	130	EG 1973	2554	-63.61	0.410	0.280
P-4126	Stoneridge Dr.	20	Ductile Iron	130	EG 1983	717	18.14	0.020	0.000
P-4127	Granite Dr.	6	Asbestos Cement	130	EG 1975	533	5.32	0.060	0.000
P-4128	Limerock Dr.	6	Asbestos Cement	130	EG 1977	1312	1.77	0.020	0.000
P-4129	Granite Dr.	6	Asbestos Cement	130	EG 1975	1104	1.77	0.020	0.000
P-4130	Middle Rd.	20	Ductile Iron	135	EG 1991	2	190.12	0.190	0.000
P-4132	Fernwood Dr.	20	Ductile Iron	130	EG 1983	1760	-7.50	0.010	0.000
P-4133	Fernwood Dr.	6	Ductile Iron	130	EG 1983	335	1.77	0.020	0.000
P-4134	Fernwood Dr.	20	Ductile Iron	130	EG 1983	1519	-14.59	0.010	0.000
P-4135	Lynn Cir.	8	PVC	130	EG 1986	2908	5.32	0.030	0.000
P-4136	Darl Ct.	8	PVC	130	EG 1986	444	1.77	0.010	0.000
P-4137	Lynn Cir.	8	PVC	130	EG 1986	190	1.77	0.010	0.000
P-4138	Middle Rd.	16	Ductile Iron	135	EG 1994	1139	5.32	0.010	0.000
P-4139	Mawney Brook Dr.	8	Ductile Iron	135	EG 1994	766	1.77	0.010	0.000
P-4140	Middle Rd.	16	Ductile Iron	135	EG 1994	322	1.77	0.000	0.000
P-4142	Clemente Dr.	6	Asbestos Cement	125	EG 1963	428	-3.97	0.090	0.000
P-4143	Middle Rd.	16	Ductile Iron	140	EG 2003	667	5.32	0.010	0.000
P-4144	McPartland Way	8	Ductile Iron	140	EG 2003	935	3.55	0.020	0.000
P-4145	McPartland Way	8	Ductile Iron	140	EG 2003	1715	0.64	0.000	0.000
P-4146	McPartland Way	8	Ductile Iron	140	EG 2003	560	-1.13	0.010	0.000
P-4147	Middle Rd.	16	Ductile Iron	140	EG 2002	990	-111.70	0.180	0.010
P-4148	Middle Rd.	16	Ductile Iron	140	EG 2002	743	12.41	0.020	0.000
P-4149	Easement	16	Ductile Iron	135	EG 1994	2491	-125.88	0.200	0.030
P-4150	Westfield Dr.	8	Ductile Iron	135	EG 1991	397	-17.05	0.110	0.000
P-4151	Brookfield Dr.	8	Ductile Iron	135	EG 1994	822	1.77	0.010	0.000
P-4152	Westfield Dr.	8	Ductile Iron	135	EG 1991	1056	-20.60	0.130	0.010
P-4153	Westfield Dr.	16	Ductile Iron	135	EG 1991	1739	110.60	0.180	0.020
P-4154	Lenihan Rd.	8	Ductile Iron	140	EG 2002	2044	5.32	0.030	0.000
P-4155	Lenihan Rd.	8	Ductile Iron	140	EG 2002	1242	1.77	0.010	0.000
P-4156	Ramano Rd.	8	Ductile Iron	140	EG 2002	519	1.77	0.010	0.000
P-4157	Middle Rd.	16	Ductile Iron	140	EG 2001	1419	-106.58	0.170	0.010
P-4158	Middle Rd.	16	Ductile Iron	135	EG 1993	425	-110.13	0.180	0.000
P-4159	Moosehorn Rd.	16	Ductile Iron	135	EG 1993	1807	-111.90	0.180	0.020
P-4160	Miss Fry Dr.	16	Ductile Iron	135	EG 1993	774	-113.67	0.180	0.010
P-4161	Chief Botelho Ct.	8	Ductile Iron	135	EG 1994	537	1.77	0.010	0.000
P-4162	Miss Fry Dr.	16	Ductile Iron	135	EG 1993	1271	-117.21	0.190	0.010
P-4163	Bill Corr Way	8	Ductile Iron	135	EG 1993	721	1.77	0.010	0.000
P-4164	Partridge Run	8	Ductile Iron	135	EG 1993	1720	1.77	0.010	0.000
P-4165	Westfield Dr.	16	Ductile Iron	135	EG 1991	827	-132.97	0.210	0.010
P-4166	Westfield Dr.	16	Ductile Iron	135	EG 1993	2713	-255.50	0.410	0.130
P-4167	Miss Fry Dr.	16	Ductile Iron	135	EG 1993	1736	-120.76	0.190	0.020
P-4168	Division St.	16	Ductile Iron	135	EG 1995	4525	508.13	0.810	0.750
P-4169	Clemente Dr.	6	Asbestos Cement	125	EG 1963	741	5.32	0.060	0.000
P-4170	Watch Hill	8	Asbestos Cement	130	EG 1983	1088	-1.21	0.010	0.000
P-4171	Fox Run	8	Asbestos Cement	130	EG 1980	761	1.77	0.010	0.000
P-4172	Fox Run	8	Asbestos Cement	130	EG 1980	2093	-4.75	0.030	0.000
P-4173	Signal Ridge Way	12	Asbestos Cement	130	EG 1980	423	20.17	0.060	0.000
P-4174	Signal Ridge Way	12	Asbestos Cement	130	EG 1980	920	15.35	0.040	0.000
P-4175	Watch Hill	8	Asbestos Cement	130	EG 1983	4313	-3.05	0.020	0.000
P-4176	Signal Ridge Way	12	Asbestos Cement	130	EG 1980	765	-26.70	0.080	0.000
P-4177	Boulder Way	20	Ductile Iron	130	EG 1983	3139	-83.52	0.090	0.010
P-4178	Signal Ridge Way	12	Asbestos Cement	130	EG 1980	1038	-17.84	0.050	0.000
P-4179	Signal Ridge Way	20	Ductile Iron	130	EG 1983	3173	-67.46	0.070	0.000
P-4180	Division St.	12	Asbestos Cement	120	EG 1957	52	69.23	0.200	0.000
P-4182	So County Tr.	12	Asbestos Cement	125	EG 1963	8327	172.18	0.490	0.870
P-4183	Shippew Town Rd.	16	Ductile Iron	135	EG 1995	1904	-509.90	0.810	0.320
P-4184	Crompton Rd.	16	Ductile Iron	135	EG 1991	274	-542.30	0.870	0.050
P-4185	Crompton Rd.	16	Ductile Iron	135	EG 1991	4079	-802.62	1.280	1.580
P-4186	South County Tr.	12	Asbestos Cement	125	EG 1963	3443	42.55	0.120	0.030
P-4187	Ridge Rd.	6	Asbestos Cement	130	EG 1970	288	1.77	0.020	0.000
P-4188	Ridge Rd.	6	Asbestos Cement	130	EG 1970	322	8.19	0.090	0.000
P-4189	Valley Rd.	6	Asbestos Cement	130	EG 1970	271	4.64	0.050	0.000
P-4190	Pegot Tr.	8	Asbestos Cement	130	EG 1970	370	14.18	0.090	0.000
P-4191	Pegot Tr.	8	Asbestos Cement	130	EG 1970	171	10.64	0.070	0.000
P-4192	Wildwood Tr.	6	Asbestos Cement	130	EG 1970	1427	3.55	0.040	0.000
P-4193	Ayrault Rd.	6	Asbestos Cement	130	EG 1970	165	1.77	0.020	0.000
P-4194	Pegot Tr.	6	Asbestos Cement	130	EG 1970	1200	5.32	0.060	0.010
P-4195	Ayrault Rd.	6	PVC	130	EG 1988	114	1.77	0.020	0.000
P-4196	Ayrault Rd.	6	PVC	130	EG 1988	307	1.77	0.020	0.000
P-4197	Valley Rd.	6	Asbestos Cement	130	EG 1970	1234	1.77	0.020	0.000
P-4198	Sleepy Hollow Rd.	6	Asbestos Cement	130	EG 1970	976	1.77	0.020	0.000
P-4199	Pegot Tr.	8	Asbestos Cement	130	EG 1970	945	-11.31	0.070	0.000
P-4200	King Phillip Tr.	8	Asbestos Cement	130	EG 1970	424	-14.86	0.090	0.000
P-4201	Canonicus Tr.	8	Ductile Iron	135	EG 1999	719	11.74	0.070	0.000
P-4202	King Phillip Tr.	8	Asbestos Cement	130	EG 1970	256	-31.91	0.200	0.010
P-4203	Cononchet Tr.	6	Asbestos Cement	130	EG 1970	441	1.77	0.020	0.000

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P-4204	Pequot Tr.	8	Asbestos Cement	130	EG 1970	160	1.77	0.010	0.000
P-4205	Canonicus Tr.	6	Asbestos Cement	130	EG 1970	659	3.55	0.040	0.000
P-4206	Pequot Tr.	6	Asbestos Cement	130	EG 1970	458	1.77	0.020	0.000
P-4207	Sixth Ave.	10	Ductile Iron	135	EG 1996	96	63.04	0.260	0.000
P-4208	South County Tr.	12	Asbestos Cement	125	EG 1963	1843	1.77	0.010	0.000
P-4209	South County Tr.	12	Asbestos Cement	125	EG 1963	5478	-3.55	0.010	0.000
P-4210	South County Tr.	12	Asbestos Cement	125	EG 1963	512	-40.78	0.120	0.000
P-4211	King Phillip Tr.	8	Asbestos Cement	130	EG 1970	345	35.46	0.230	0.010
P-4212	Middle Rd.	12	Asbestos Cement	125	EG 1962	2477	294.82	0.840	0.700
P-4213	Spring Valley Dr.	8	Asbestos Cement	125	EG 1968	705	15.96	0.100	0.010
P-4214	Pine Hill Dr.	8	Asbestos Cement	125	EG 1968	657	1.77	0.010	0.000
P-4215	Spring Valley Dr.	8	Asbestos Cement	125	EG 1968	513	12.41	0.080	0.000
P-4216	Spring Valley Dr.	8	Asbestos Cement	125	EG 1968	1135	5.56	0.040	0.000
P-4217	Holly Hill Ct.	6	Asbestos Cement	125	EG 1968	218	1.77	0.020	0.000
P-4218	Sunset Dr.	8	Asbestos Cement	125	EG 1968	1446	5.08	0.030	0.000
P-4219	Spring Valley Dr.	8	Asbestos Cement	125	EG 1968	576	-2.01	0.010	0.000
P-4220	Spring Valley Dr.	8	Asbestos Cement	125	EG 1968	845	5.32	0.030	0.000
P-4221	Oak Dell Cir.	8	Asbestos Cement	125	EG 1968	1488	1.44	0.010	0.000
P-4222	Spring Valley Dr.	8	Asbestos Cement	125	EG 1968	955	-0.33	0.000	0.000
P-4223	Spring Valley Dr.	8	Asbestos Cement	125	EG 1968	704	-2.11	0.010	0.000
P-4224	Middle Rd. PRV	8	Ductile Iron	140	EG 2001	211	275.32	1.760	0.310
P-4226	Post Rd.	20	Asbestos Cement	125	EG 1964	287	375.00	0.380	0.010
P-4227	Old Post Rd.	20	Asbestos Cement	125	EG 1964	331	373.23	0.380	0.010
P-4228	Grandview Dr.	20	Asbestos Cement	125	EG 1964	151	371.45	0.380	0.010
P-4229	Eugene St.	20	Asbestos Cement	125	EG 1964	1553	369.68	0.380	0.060
P-4230	South Pierce Rd.	20	Asbestos Cement	125	EG 1964	2058	367.91	0.380	0.070
P-4231	Westwood Dr.	20	Asbestos Cement	125	EG 1964	2279	366.14	0.370	0.080
P-4232	LeBaron Dr.	20	Asbestos Cement	125	EG 1964	1373	364.36	0.370	0.050
P-4233	Middle Rd.	20	Asbestos Cement	125	EG 1964	2174	362.59	0.370	0.080
P-4234	Kenyon Ave.	20	Asbestos Cement	125	EG 1964	3078	360.82	0.370	0.110
P-4235	Kenyon Ave.	20	Asbestos Cement	125	EG 1964	2001	359.04	0.370	0.070
P-4236	EG Well Station 1	12	Ductile Iron	135	EG 1997	371	1129.96	3.210	1.100
P-4237	EG Well Station 1	12	Ductile Iron	135	EG 1997	20	1129.96	3.210	0.060
P-4238	EG Well Station 1	12	Ductile Iron	135	EG 1997	20	1129.96	3.210	0.060
P-4239	Post Rd.	16	Ductile Iron	135	EG 1997	133	749.65	1.200	0.050
P-4240	Post Rd.	16	Ductile Iron	135	EG 1997	340	747.87	1.190	0.120
P-4241	Post Rd.	16	Ductile Iron	135	EG 1997	1102	744.33	1.190	0.370
P-4242	Post Rd.	12	Ductile Iron	125	EG 1970	239	1.77	0.010	0.000
P-4243	Post Rd. PRV	8	Ductile Iron	135	EG 1997	498	0.00	0.000	0.000
P-4244	Post Rd. PRV	8	Ductile Iron	135	EG 1997	524	0.00	0.000	0.000
P-4247	River Farm Rd.	8	Ductile Iron	135	EG 1998	1432	-1.77	0.010	0.000
P-4248	River Farm Rd.	8	Asbestos Cement	125	EG 1968	586	12.26	0.080	0.000
P-4249	River Farm Rd.	8	Ductile Iron	135	EG 1995	2093	4.12	0.030	0.000
P-4250	River Farm Rd.	8	Ductile Iron	135	EG 1995	590	5.89	0.040	0.000
P-4251	Jefferson Dr.	8	Asbestos Cement	125	EG 1968	2295	4.59	0.030	0.000
P-4252	Edward Dr.	6	Asbestos Cement	125	EG 1963	669	3.12	0.040	0.000
P-4253	Sycamore Dr.	8	Asbestos Cement	125	EG 1968	537	-21.79	0.140	0.010
P-4254	Teakwood Dr.	6	Asbestos Cement	125	EG 1968	502	1.77	0.020	0.000
P-4255	Sycamore Dr.	8	Asbestos Cement	125	EG 1968	601	-25.34	0.160	0.010
P-4256	Cyprus Dr.	6	Asbestos Cement	125	EG 1968	470	-1.77	0.020	0.000
P-4257	Chestnut Dr.	8	Asbestos Cement	125	EG 1968	823	-1.77	0.010	0.000
P-4258	Chestnut Dr.	8	Asbestos Cement	125	EG 1968	565	-28.88	0.180	0.020
P-4259	New Castle St.	8	PVC	125	EG 1978	546	1.77	0.010	0.000
P-4260	Grandview Dr.	6	Asbestos Cement	125	EG 1968	532	1.77	0.020	0.000
P-4261	Chestnut Dr.	8	Asbestos Cement	125	EG 1968	1467	24.01	0.150	0.030
P-4262	Walnut Dr.	6	Asbestos Cement	125	EG 1968	1416	1.77	0.020	0.000
P-4263	Main St.	10	Cast iron	60	EG 1886	1013	-13.57	0.060	0.010
P-4264	Sycamore Dr.	8	Asbestos Cement	125	EG 1968	307	-15.80	0.100	0.000
P-4265	Sycamore Dr.	8	Asbestos Cement	125	EG 1968	516	-18.25	0.120	0.010
P-4266	Hamilton Dr.	6	Asbestos Cement	125	EG 1968	2692	-0.67	0.010	0.000
P-4267	New Castle St.	8	PVC	125	EG 1978	153	1.77	0.010	0.000
P-4268	Grandview Dr.	6	Asbestos Cement	125	EG 1961	847	26.27	0.300	0.080
P-4269	Post Rd.	10	Cast iron	60	EG 1886	1778	21.01	0.090	0.040
P-4270	Chestnut Dr.	8	Asbestos Cement	125	EG 1968	709	4.72	0.030	0.000
P-4271	Chestnut Dr.	8	Asbestos Cement	125	EG 1968	566	27.56	0.180	0.010
P-4272	Post Rd.	10	Cast iron	60	EG 1886	3079	19.24	0.080	0.050
P-4273	McGraw Ct.	6	Ductile Iron	135	EG 1991	361	1.77	0.020	0.000
P-4274	Grandview Dr.	6	Asbestos Cement	125	EG 1968	404	4.68	0.050	0.000
P-4275	Misty Oak Dr.	8	Asbestos Cement	125	EG 1965	359	5.83	0.040	0.000
P-4276	Old Post Rd.	10	Cast iron	60	EG 1886	424	17.46	0.070	0.010
P-4277	Locus Dr.	6	Asbestos Cement	125	EG 1968	1019	24.11	0.270	0.080
P-4278	Post Rd.	10	Ductile Iron	135	EG 1996	1638	-5.35	0.020	0.000
P-4279	Main St.	10	Cast iron	60	EG 1886	591	-18.89	0.080	0.010
P-4280	Flinstone Ct.	6	Asbestos Cement	125	EG 1968	473	1.77	0.020	0.000
P-4281	Misty Oak Dr.	8	PVC	130	EG 1984	644	28.16	0.180	0.020
P-4282	Misty Oak Dr.	8	PVC	130	EG 1984	651	24.62	0.160	0.010
P-4283	Mulberry Ct.	6	PVC	130	EG 1984	238	1.77	0.020	0.000
P-4285	Old Post Rd.	10	Cast iron	60	EG 1886	636	13.92	0.060	0.010
P-4287	Grandview Dr.	6	Asbestos Cement	125	EG 1961	318	18.67	0.210	0.020
P-4288	Grandview Dr.	6	Asbestos Cement	125	EG 1961	627	16.90	0.190	0.030
P-4289	Post Rd.	10	Ductile Iron	135	EG 1996	818	44.22	0.180	0.010
P-4290	Maplewood Dr.	8	Asbestos Cement	125	EG 1960	1028	6.90	0.040	0.000
P-4291	Post Rd.	10	Ductile Iron	135	EG 1996	110	150.66	0.620	0.020

KCWA Model
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Label	Description	Diameter (in)	Material	Hazen- Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-4292	Post Rd.	10	Ductile Iron	135	EG 1996	268	50.65	0.210	0.010
P-4293	Silverwood Dr.	6	Asbestos Cement	125	EG 1968	333	-18.69	0.210	0.020
P-4294	Post Rd.	10	Ductile Iron	135	EG 1996	291	57.87	0.240	0.010
P-4295	Hickory Dr.	8	Asbestos Cement	125	EG 1968	535	-13.54	0.090	0.000
P-4296	Terrace Dr.	6	Asbestos Cement	125	EG 1968	1615	0.13	0.000	0.000
P-4297	Silverwood Dr.	6	Asbestos Cement	125	EG 1968	340	-23.37	0.270	0.030
P-4298	Silverwood Dr.	6	Asbestos Cement	125	EG 1968	399	-16.78	0.190	0.020
P-4299	Hickory Dr.	8	Asbestos Cement	125	EG 1968	251	-1.77	0.010	0.000
P-4300	Hickory Dr.	8	Asbestos Cement	125	EG 1968	352	-11.90	0.080	0.000
P-4301	Boxwood Dr.	6	Asbestos Cement	125	EG 1968	1285	-8.35	0.090	0.010
P-4302	Tanglewood Dr.	8	Asbestos Cement	120	EG 1959	1187	35.58	0.230	0.050
P-4303	Post Rd.	10	Ductile Iron	135	EG 1996	215	56.22	0.230	0.010
P-4304	Laurel Hill Rd.	6	Asbestos Cement	125	EG 1960	916	6.56	0.100	0.010
P-4306	Post Rd.	10	Ductile Iron	135	EG 1996	1703	-69.52	0.280	0.070
P-4307	Tanglewood Dr.	8	Asbestos Cement	120	EG 1959	535	25.26	0.160	0.010
P-4308	Tanglewood Dr.	8	Asbestos Cement	120	EG 1959	473	22.11	0.140	0.010
P-4309	Laurel Hill Rd.	6	Asbestos Cement	125	EG 1959	253	6.78	0.080	0.000
P-4310	Laurel Hill Rd.	6	Asbestos Cement	125	EG 1959	1209	6.39	0.070	0.010
P-4311	Tory Ln.	6	Asbestos Cement	120	EG 1959	695	1.36	0.020	0.000
P-4312	Post Rd.	10	Ductile Iron	135	EG 1996	60	-74.84	0.310	0.000
P-4313	Tanglewood Dr.	8	Asbestos Cement	125	EG 1959	509	73.03	0.470	0.080
P-4314	Trappers Ln.	6	Asbestos Cement	120	EG 1959	644	1.77	0.020	0.000
P-4315	Tanglewood Dr.	8	Asbestos Cement	120	EG 1959	957	1.77	0.010	0.000
P-4316	Grandview Dr.	6	Asbestos Cement	125	EG 1968	962	-37.15	0.420	0.170
P-4317	Grandview Dr.	6	Asbestos Cement	125	EG 1968	503	30.56	0.350	0.060
P-4318	Red Oak Rd.	6	Asbestos Cement	125	EG 1968	1060	69.48	0.790	0.610
P-4319	Tanglewood Dr.	8	Asbestos Cement	120	EG 1959	207	26.72	0.170	0.010
P-4320	Tanglewood Dr.	8	Asbestos Cement	120	EG 1959	299	76.57	0.490	0.050
P-4321	Post Rd.	10	Ductile Iron	135	EG 1996	1660	39.62	0.160	0.020
P-4322	North Gate Dr.	8	Asbestos Cement	125	EG 1969	321	65.81	0.420	0.040
P-4323	So. Pierce Rd.	8	Ductile Iron	130	EG 1983	75	53.94	0.340	0.010
P-4324	Dowling Dr.	8	Asbestos Cement	125	EG 1969	1861	36.32	0.230	0.080
P-4325	Tamarack Dr.	8	Asbestos Cement	125	EG 1969	636	58.72	0.370	0.070
P-4326	Larch Rd.	6	Asbestos Cement	125	EG 1969	555	-51.62	0.590	0.180
P-4327	Larch Rd.	6	Asbestos Cement	125	EG 1969	1337	-20.84	0.240	0.080
P-4328	Tucker St.	6	Asbestos Cement	125	EG 1962	668	-8.21	0.090	0.010
P-4329	Bow St.	8	Asbestos Cement	125	EG 1969	2669	27.71	0.180	0.070
P-4330	Bow St.	8	Asbestos Cement	125	EG 1969	519	24.17	0.150	0.010
P-4331	Devon Pl.	6	Asbestos Cement	125	EG 1969	912	1.77	0.020	0.000
P-4332	Tamarack Dr.	8	Asbestos Cement	125	EG 1969	775	36.11	0.230	0.030
P-4333	Tamarack Dr.	8	Asbestos Cement	125	EG 1969	1436	32.56	0.210	0.050
P-4334	Avenger Dr.	6	Asbestos Cement	125	EG 1969	359	1.77	0.020	0.000
P-4335	Fairfield Ave.	6	Ductile Iron	135	EG 1998	263	-22.64	0.260	0.020
P-4336	Middle Rd.	12	Asbestos Cement	125	EG 1962	757	204.19	0.580	0.110
P-4337	Middle Rd.	8	Ductile Iron	140	EG 2001	81	202.42	1.290	0.070
P-4338	Fairfield Ave.	6	Ductile Iron	135	EG 1998	254	-26.19	0.300	0.020
P-4339	Middle Rd.	8	Ductile Iron	140	EG 2001	417	149.17	0.950	0.200
P-4340	Crest Ridge Dr.	8	Asbestos Cement	125	EG 1969	1153	51.48	0.330	0.090
P-4341	Crest Ridge Dr.	8	Asbestos Cement	125	EG 1969	676	27.04	0.170	0.020
P-4342	Fairfield Ave.	6	Ductile Iron	135	EG 1998	283	-29.73	0.340	0.030
P-4343	Middle Rd.	12	Asbestos Cement	125	EG 1962	286	273.55	0.780	0.070
P-4344	Middle Rd.	12	Asbestos Cement	125	EG 1962	630	271.78	0.770	0.150
P-4345	Cindyann Dr.	8	Asbestos Cement	125	EG 1963	652	25.27	0.160	0.010
P-4346	Power St.	6	PVC	130	EG 1983	339	1.77	0.020	0.000
P-4347	Victory St.	6	Asbestos Cement	125	EG 1969	284	1.77	0.020	0.000
P-4348	Fairfield Ave.	6	Ductile Iron	135	EG 1998	256	12.66	0.140	0.010
P-4349	Bunker Hill Ln.	8	Asbestos Cement	125	EG 1964	772	24.24	0.150	0.020
P-4350	Fairfield Ave.	6	Ductile Iron	135	EG 1998	240	1.90	0.020	0.000
P-4351	Lillian St.	6	Asbestos Cement	125	EG 1962	620	8.99	0.100	0.010
P-4352	Kent Dr.	6	Asbestos Cement	125	EG 1968	1316	21.26	0.240	0.080
P-4353	Peltine St.	1.3	Copper	70	EG 1953	583	0.12	0.030	0.020
P-4354	Overfield Rd.	6	Ductile Iron	130	EG 1989	1240	4.21	0.050	0.000
P-4355	Overfield Rd.	6	Ductile Iron	130	EG 1989	436	3.15	0.040	0.000
P-4356	Mayflower Dr.	6	Asbestos Cement	125	EG 1969	692	22.67	0.260	0.050
P-4357	Mayflower Dr.	6	Asbestos Cement	125	EG 1969	228	-9.95	0.110	0.000
P-4358	Allen Dr.	6	Asbestos Cement	125	EG 1968	543	7.41	0.080	0.000
P-4359	So. Pierce Rd.	8	Ductile Iron	130	EG 1983	328	54.88	0.350	0.030
P-4360	So. Pierce Rd.	8	Ductile Iron	130	EG 1983	334	51.34	0.330	0.020
P-4361	Kent Dr.	6	Asbestos Cement	125	EG 1968	453	30.32	0.340	0.060
P-4362	Kent Dr.	6	Asbestos Cement	125	EG 1968	1546	30.44	0.350	0.190
P-4363	Hanaford Dr.	6	Asbestos Cement	125	EG 1968	575	30.84	0.350	0.070
P-4364	Hanaford Dr.	6	Asbestos Cement	125	EG 1968	261	27.17	0.310	0.030
P-4365	Gould Pl.	6	Asbestos Cement	120	EG 1958	977	-1.90	0.020	0.000
P-4366	Hanaford Dr.	6	Asbestos Cement	125	EG 1968	1156	33.50	0.380	0.170
P-4367	Middle Rd.	8	Ductile Iron	140	EG 2001	114	111.81	0.710	0.030
P-4368	Middle Rd.	8	Ductile Iron	140	EG 2001	1263	101.93	0.650	0.290
P-4369	Atherton Rd.	6	Asbestos Cement	120	EG 1957	1282	-8.10	0.090	0.010
P-4370	So. Pierce Rd.	8	Ductile Iron	130	EG 1983	274	65.44	0.550	0.050
P-4371	Middle Rd.	8	Ductile Iron	130	EG 1987	1713	49.07	0.310	0.120
P-4372	Eugene St.	6	Asbestos Cement	125	EG 1968	1209	1.77	0.020	0.000
P-4373	Howland Rd.	8	Asbestos Cement	125	EG 1962	2606	-39.44	0.250	0.130
P-4374	Allen Dr.	6	Asbestos Cement	125	EG 1968	328	39.14	0.440	0.060
P-4375	Grasslands Rd.	6	Ductile Iron	130	EG 1986	427	-13.25	0.150	0.010

KCWA Model
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-4376	Howland Rd.	8	Ductile Iron	125	EG 1977	456	46.32	0.300	0.030
P-4377	Friendly Rd.	6	Ductile Iron	130	EG 1988	582	-15.02	0.170	0.020
P-4378	Nichols Ln	6	Asbestos Cement	125	EG 1968	1360	14.83	0.170	0.040
P-4379	Allen Dr.	6	Asbestos Cement	125	EG 1968	587	22.54	0.260	0.040
P-4380	Allen Dr.	6	Asbestos Cement	125	EG 1968	555	2.56	0.030	0.000
P-4381	Howland Rd.	8	Ductile Iron	125	EG 1977	597	59.38	0.380	0.060
P-4382	Howland Rd.	8	Ductile Iron	125	EG 1977	401	75.81	0.480	0.070
P-4383	Wintrop Rd.	6	Asbestos Cement	125	EG 1968	1370	18.21	0.210	0.070
P-4384	Mayflower Dr.	6	Asbestos Cement	125	EG 1969	592	12.52	0.140	0.010
P-4385	Mayflower Dr.	6	Asbestos Cement	125	EG 1969	576	8.98	0.100	0.010
P-4386	John Alden Rd.	6	Asbestos Cement	130	EG 1970	301	1.77	0.020	0.000
P-4387	Cindyann Dr.	8	Asbestos Cement	125	EG 1963	1316	-0.75	0.000	0.000
P-4388	Cindyann Dr.	8	Asbestos Cement	125	EG 1963	3538	-29.18	0.190	0.100
P-4389	Kent Dr.	8	Asbestos Cement	125	EG 1968	1576	-1.77	0.010	0.000
P-4390	Kent Dr.	8	Asbestos Cement	125	EG 1968	621	23.11	0.150	0.010
P-4391	Great Rd.	8	Asbestos Cement	125	EG 1969	1077	26.66	0.170	0.030
P-4392	Middle Rd.	8	Ductile Iron	140	EG 2001	423	102.72	0.660	0.100
P-4393	Crossways Rd.	6	Ductile Iron	130	EG 1989	103	3.55	0.040	0.000
P-4394	Maplewood Dr.	8	Asbestos Cement	125	EG 1960	624	-20.46	0.130	0.010
P-4395	Maplewood Dr.	8	Asbestos Cement	125	EG 1960	1304	22.21	0.140	0.020
P-4396	Glenn Dr.	6	Asbestos Cement	125	EG 1960	1559	44.45	0.500	0.390
P-4397	Middle Rd.	8	Ductile Iron	140	EG 2001	531	56.50	0.360	0.040
P-4398	Middle Rd.	8	Ductile Iron	130	EG 1987	491	-24.97	0.160	0.010
P-4399	So Pierce Rd.	8	Ductile Iron	130	EG 1983	2207	79.70	0.510	0.370
P-4400	Upland Ave.	6	Asbestos Cement	125	EG 1968	265	3.55	0.040	0.000
P-4401	Upland Ave.	2	PVC	125	EG 1978	393	1.77	0.180	0.050
P-4402	Grandview Dr.	6	Asbestos Cement	125	EG 1968	313	13.35	0.150	0.010
P-4403	Grandview Dr.	6	Asbestos Cement	125	EG 1968	190	1.77	0.020	0.000
P-4404	Cora St.	8	Ductile Iron	135	EG 1999	1172	-2.72	0.020	0.000
P-4405	Cora St.	8	Ductile Iron	135	EG 1999	473	-9.81	0.060	0.000
P-4406	Taylor Cir.	6	Asbestos Cement	125	EG 1968	356	5.32	0.060	0.000
P-4407	Taylor Cir.	6	Asbestos Cement	125	EG 1968	220	1.77	0.020	0.000
P-4408	Violet Ct.	6	Asbestos Cement	125	EG 1968	192	1.77	0.020	0.000
P-4409	So. Pierce Rd.	8	Ductile Iron	130	EG 1983	620	84.83	0.540	0.120
P-4410	Greenwich Blvd.	2	PVC	125	EG 1978	198	3.55	0.360	0.100
P-4411	Phillips Dr.	6	Asbestos Cement	130	EG 1970	360	-2.39	0.030	0.000
P-4412	Phillips Dr.	6	Asbestos Cement	130	EG 1970	347	-5.93	0.070	0.000
P-4413	Woodland Rd.	6	Asbestos Cement	125	EG 1969	1101	-1.77	0.020	0.000
P-4414	Friendly Rd.	6	Ductile Iron	130	EG 1988	679	1.77	0.020	0.000
P-4415	Crossways Rd.	6	Asbestos Cement	120	EG 1959	222	-20.34	0.230	0.010
P-4416	Westwood Dr.	6	Asbestos Cement	125	EG 1969	1460	-6.68	0.080	0.010
P-4417	Wanton Shippee Rd.	6	Asbestos Cement	120	EG 1955	1159	1.39	0.020	0.000
P-4418	Birchwood Way	6	Asbestos Cement	125	EG 1969	475	4.91	0.060	0.000
P-4419	Landover Dr.	6	Asbestos Cement	120	EG 1959	413	-23.50	0.270	0.030
P-4420	Le Baron Dr.	6	Asbestos Cement	125	EG 1968	240	-8.45	0.100	0.000
P-4421	Landover Dr.	6	Asbestos Cement	120	EG 1959	353	-27.04	0.310	0.040
P-4422	Lafayette Dr.	6	Asbestos Cement	125	EG 1969	1428	-8.23	0.090	0.020
P-4423	Birchwood Way	6	Asbestos Cement	125	EG 1969	377	11.36	0.130	0.010
P-4424	Birchwood Way	6	Asbestos Cement	125	EG 1969	340	17.65	0.200	0.020
P-4425	Le Baron Dr.	6	Asbestos Cement	125	EG 1968	94	39.35	0.450	0.020
P-4426	Le Baron Dr.	6	Asbestos Cement	125	EG 1968	365	29.51	0.330	0.040
P-4427	Bayberry Dr.	6	Asbestos Cement	125	EG 1969	1499	-8.06	0.090	0.020
P-4428	Lilibridge Dr.	6	Asbestos Cement	125	EG 1962	768	1.77	0.020	0.000
P-4429	Phillips Dr.	6	Asbestos Cement	130	EG 1970	597	2.85	0.030	0.000
P-4430	Coddington Ct.	6	Asbestos Cement	130	EG 1970	242	1.77	0.020	0.000
P-4431	Phillips Dr.	6	Asbestos Cement	130	EG 1970	567	9.94	0.110	0.010
P-4432	Phillips Dr.	6	Asbestos Cement	130	EG 1970	374	6.40	0.070	0.000
P-4433	Country Ct.	6	Asbestos Cement	130	EG 1970	194	1.77	0.020	0.000
P-4434	Reeds Pl.	6	Asbestos Cement	125	EG 1969	407	1.77	0.020	0.000
P-4435	Post Rd.	12	Ductile Iron	135	EG 1997	109	0.00	0.000	0.000
P-4436	Phillips Rd.	6	Asbestos Cement	120	EG 1954	218	-28.82	0.330	0.030
P-4437	Cedar Ave.	8	Asbestos Cement	125	EG 1966	647	-56.88	0.360	0.060
P-4438	Le Baron Dr.	6	Asbestos Cement	125	EG 1968	232	-18.45	0.210	0.010
P-4439	Ridgefield Dr.	8	Asbestos Cement	130	EG 1974	617	-59.57	0.380	0.060
P-4440	Midlands Dr.	6	Asbestos Cement	130	EG 1974	690	1.77	0.020	0.000
P-4441	Ridgefield Dr.	8	Asbestos Cement	130	EG 1974	549	-63.12	0.400	0.060
P-4442	Sarah's Trace	8	PVC	130	EG 1989	744	1.77	0.010	0.000
P-4443	Ridgefield Dr.	8	Asbestos Cement	130	EG 1974	539	-66.67	0.430	0.070
P-4444	Middle Rd.	8	Ductile Iron	130	EG 1987	1126	-66.44	0.440	0.140
P-4445	Balsam Dr.	6	Asbestos Cement	125	EG 1969	1521	-21.14	0.240	0.100
P-4446	Balsam Dr.	6	Asbestos Cement	125	EG 1969	285	1.77	0.020	0.000
P-4447	Hemlock Dr.	8	Asbestos Cement	125	EG 1969	583	-24.69	0.160	0.010
P-4448	Alder Ct.	6	Asbestos Cement	130	EG 1971	286	1.77	0.020	0.000
P-4449	Hemlock Dr.	8	Asbestos Cement	125	EG 1969	1014	-28.24	0.180	0.030
P-4450	Blueberry Dr.	6	Asbestos Cement	125	EG 1961	1351	-16.89	0.190	0.060
P-4451	Barrows Dr.	6	Asbestos Cement	125	EG 1961	870	1.77	0.020	0.000
P-4452	Blueberry Dr.	6	Asbestos Cement	125	EG 1961	743	-20.44	0.230	0.040
P-4453	Dalehill Dr.	6	Asbestos Cement	125	EG 1960	528	-35.03	0.400	0.080
P-4454	Howland Rd.	8	Asbestos Cement	125	EG 1962	1963	-26.84	0.170	0.050
P-4455	Dalehill Dr.	8	Asbestos Cement	125	EG 1960	257	-36.81	0.230	0.010
P-4456	Dalehill Dr.	6	Asbestos Cement	125	EG 1960	600	12.82	0.150	0.010
P-4457	Oakwood Dr.	6	Asbestos Cement	120	EG 1959	1540	1.77	0.020	0.000
P-4458	Hemlock Dr.	8	Asbestos Cement	125	EG 1969	2045	-13.12	0.080	0.010

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-4459	Cresthill Dr.	6	Asbestos Cement	120	EG 1958	803	-17.41	0.200	0.040
P-4460	Gladridge Dr.	6	Asbestos Cement	120	EG 1958	457	1.77	0.020	0.000
P-4461	Cresthill Dr.	6	Asbestos Cement	120	EG 1958	479	-20.96	0.240	0.030
P-4462	Dalehill Dr.	8	Asbestos Cement	125	EG 1960	574	-9.28	0.060	0.000
P-4463	Division St.	12	Asbestos Cement	120	EG 1957	727	-204.77	0.580	0.110
P-4464	Green Bush Rd.	8	Ductile Iron	135	EG 1994	176	1.77	0.010	0.000
P-4465	Division St.	12	Asbestos Cement	120	EG 1957	738	-208.32	0.590	0.120
P-4466	Division St.	12	Asbestos Cement	120	EG 1957	575	-247.09	0.700	0.130
P-4467	Sanctuary Dr.	8	Ductile Iron	140	EG 2000	1330	37.00	0.240	0.050
P-4468	Field Stone Dr.	6	Ductile Iron	140	EG 2000	465	1.77	0.020	0.000
P-4469	Sanctuary Dr.	8	Ductile Iron	140	EG 2000	409	33.45	0.210	0.010
P-4470	Deep Meadow Dr.	6	Ductile Iron	140	EG 2000	288	-13.80	0.160	0.010
P-4471	Ivy Guarded Way	6	Ductile Iron	140	EG 2000	261	1.77	0.020	0.000
P-4472	Sanctuary Dr.	8	Ductile Iron	140	EG 2000	418	43.70	0.280	0.020
P-4473	Sanctuary Dr.	8	Ductile Iron	140	EG 2000	719	21.29	0.140	0.010
P-4474	Sanctuary Dr.	8	Ductile Iron	140	EG 2000	761	-20.64	0.130	0.010
P-4475	Twin Pond Easement	8	Ductile Iron	140	EG 2000	744	40.16	0.260	0.030
P-4476	Tall Pine Dr.	8	Ductile Iron	140	EG 2000	384	-15.57	0.100	0.000
P-4477	Cindyann Dr.	8	Asbestos Cement	125	EG 1963	1135	-58.94	0.380	0.120
P-4478	Tall Pine Dr.	8	Asbestos Cement	130	EG 1972	783	-17.34	0.110	0.010
P-4479	Cindyann Dr.	8	Asbestos Cement	125	EG 1963	190	-32.73	0.210	0.010
P-4480	Apple Tree Ct.	6	Asbestos Cement	130	EG 1971	434	1.77	0.020	0.000
P-4481	Cindyann Dr.	8	Asbestos Cement	125	EG 1963	331	-61.84	0.330	0.030
P-4482	Cindyann Dr.	8	Asbestos Cement	125	EG 1963	531	-37.73	0.240	0.020
P-4483	Greenwich Blvd.	2	PVC	125	EG 1970	402	1.77	0.180	0.050
P-4484	Red Barn Ln.	8	Asbestos Cement	130	EG 1973	1865	-15.89	0.100	0.020
P-4485	Clover Hill Ct.	6	Asbestos Cement	130	EG 1976	205	1.77	0.020	0.000
P-4486	Red Barn Ln.	8	Asbestos Cement	130	EG 1973	667	-19.43	0.120	0.010
P-4487	Howland Rd.	8	Asbestos Cement	125	EG 1962	221	-30.39	0.190	0.010
P-4488	Howland Rd.	8	Asbestos Cement	125	EG 1962	735	-68.96	0.440	0.100
P-4489	Old Greenwich Dr.	6	Asbestos Cement	130	EG 1972	182	1.77	0.020	0.000
P-4490	Old Greenwich Dr.	6	Asbestos Cement	130	EG 1972	179	-1.77	0.020	0.000
P-4491	Old Greenwich Dr.	6	Asbestos Cement	130	EG 1972	238	1.77	0.020	0.000
P-4492	Twin Pond Rd.	6	Asbestos Cement	125	EG 1965	775	-5.32	0.060	0.000
P-4493	Pegwin Dr.	6	Asbestos Cement	125	EG 1964	601	-38.38	0.440	0.110
P-4494	Pegwin Dr.	6	Asbestos Cement	125	EG 1964	972	31.29	0.360	0.130
P-4495	Division St. PRV	8	Ductile Iron	135	EG 1994	272	-328.49	2.100	0.590
P-4497	Division St.	12	Asbestos Cement	120	EG 1957	789	163.56	0.460	0.080
P-4498	Division St.	12	Asbestos Cement	120	EG 1957	694	123.00	0.350	0.040
P-4499	Cedar Ave.	8	Asbestos Cement	125	EG 1966	820	34.10	0.220	0.030
P-4500	Howland Farms	8	Ductile Iron	135	EG 1990	2310	-33.49	0.210	0.070
P-4501	Cedar Ave.	8	Asbestos Cement	125	EG 1966	1436	65.82	0.420	0.180
P-4502	Dalehill Dr.	8	Asbestos Cement	125	EG 1960	778	15.23	0.100	0.010
P-4503	Cedar Ave.	8	Ductile Iron	125	EG 1979	1065	48.82	0.310	0.080
P-4504	Pricewood Dr.	6	Asbestos Cement	120	EG 1958	893	-2.52	0.030	0.000
P-4505	Sylvan Dr.	8	Asbestos Cement	115	EG 1949	365	-31.78	0.200	0.010
P-4506	Sylvan Dr.	8	Asbestos Cement	115	EG 1949	366	-29.94	0.190	0.010
P-4507	Verrdale Dr.	6	Asbestos Cement	115	EG 1948	1356	-3.62	0.040	0.000
P-4508	Brookside Dr.	6	Asbestos Cement	120	EG 1950	953	7.17	0.080	0.010
P-4509	Brookside Dr.	6	Asbestos Cement	120	EG 1950	659	1.77	0.020	0.000
P-4510	Sylvan Dr.	8	Asbestos Cement	115	EG 1949	442	-38.88	0.250	0.020
P-4511	Sylvan Dr.	8	Asbestos Cement	115	EG 1949	842	-29.64	0.190	0.030
P-4512	Kenson Dr.	6	Asbestos Cement	120	EG 1950	1403	-11.01	0.120	0.030
P-4513	Sylvan Dr.	6	Asbestos Cement	120	EG 1950	294	-42.42	0.480	0.070
P-4514	First Ave.	8	Asbestos Cement	125	EG 1967	359	-53.05	0.340	0.030
P-4515	First Ave.	8	Asbestos Cement	125	EG 1967	583	8.86	0.060	0.000
P-4516	First Ave.	8	Asbestos Cement	125	EG 1967	279	1.77	0.010	0.000
P-4517	Brisas Cir.	8	Asbestos Cement	125	EG 1967	484	5.31	0.030	0.000
P-4518	Brisas Cir.	8	Asbestos Cement	125	EG 1967	903	1.83	0.010	0.000
P-4519	Brisas Cir.	8	Asbestos Cement	125	EG 1967	206	1.77	0.010	0.000
P-4520	Brisas Cir.	8	Asbestos Cement	125	EG 1967	1024	-1.71	0.010	0.000
P-4521	Division St.	12	Asbestos Cement	120	EG 1957	1417	87.13	0.250	0.050
P-4523	Cedar Ave.	8	Ductile Iron	125	EG 1979	2139	81.35	0.520	0.400
P-4524	Cedar Ave.	8	Asbestos Cement	125	EG 1966	2375	57.26	0.370	0.230
P-4525	Middle Rd.	8	Ductile Iron	130	EG 1987	1921	0.00	0.000	0.000
P-4526	Division St.	12	Asbestos Cement	120	EG 1957	1060	0.54	0.000	0.000
P-4527	Kenyon Ave.	8	Asbestos Cement	115	EG 1949	1152	22.32	0.140	0.020
P-4528	Knollwood Ave.	6	Asbestos Cement	120	EG 1950	1670	7.82	0.090	0.020
P-4529	Knollwood Ave.	6	Asbestos Cement	120	EG 1950	1118	4.27	0.050	0.000
P-4530	Virginia Ave.	6	Asbestos Cement	120	EG 1950	992	1.77	0.020	0.000
P-4531	Kenyon Ave.	8	Asbestos Cement	115	EG 1949	1402	12.73	0.080	0.010
P-4532	First Ave.	6	Cast iron	30	EG 1886	406	3.37	0.040	0.010
P-4533	Overbrook Ln.	6	Asbestos Cement	120	EG 1955	808	23.23	0.280	0.070
P-4534	Overbrook Ln.	6	Asbestos Cement	120	EG 1955	291	1.77	0.020	0.000
P-4535	Harwood Rd.	6	Cast iron	45	EG 1932	1353	19.69	0.220	0.500
P-4536	Division St.	12	Asbestos Cement	120	EG 1957	212	-24.47	0.070	0.000
P-4537	Division St.	12	Asbestos Cement	120	EG 1957	153	-26.24	0.070	0.000
P-4538	Division St.	12	Asbestos Cement	120	EG 1957	898	-28.02	0.080	0.000
P-4539	Division St.	4	Cast iron	30	EG 1890	428	-1.77	0.050	0.030
P-4540	Kenyon Ave.	6	Cast iron	30	EG 1886	264	7.58	0.090	0.040
P-4541	Ledge Rd.	8	Ductile Iron	140	EG 2002	880	5.44	0.030	0.000
P-4542	Kenyon Ave.	6	Cast Iron	30	EG 1886	404	0.37	0.000	0.000
P-4543	Hyland Ave.	8	Ductile Iron	140	EG 2002	634	4.98	0.030	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-4544	Kenyon Ave.	6	Cast iron	30	EG 1886	446	-6.38	0.070	0.040
P-4545	Kenyon Ave.	6	Cast iron	30	EG 1886	303	-12.20	0.140	0.100
P-4546	Spring St.	6	Cast iron	30	EG 1886	921	4.04	0.050	0.040
P-4547	Spring St.	6	Cast iron	30	EG 1886	122	4.88	0.060	0.010
P-4548	Proctor Ave.	6	Cast iron	30	EG 1886	440	-1.06	0.010	0.000
P-4549	Kenyon Ave.	6	Cast iron	30	EG 1886	782	5.72	0.060	0.060
P-4550	Division St.	6	Cast iron	30	EG 1886	971	2.17	0.020	0.010
P-4551	Division St.	12	Asbestos Cement	120	EG 1957	113	-7.62	0.620	0.000
P-4552	West St.	6	Cast iron	30	EG 1886	409	8.01	0.090	0.060
P-4553	Eldredge Ave.	8	Ductile Iron	140	EG 2002	422	2.61	0.020	0.000
P-4554	West St.	6	Cast iron	30	EG 1886	693	0.53	0.010	0.000
P-4555	West St.	6	Cast iron	30	EG 1886	500	3.87	0.040	0.020
P-4556	Spring St.	6	Cast iron	30	EG 1886	271	4.16	0.050	0.010
P-4557	James St.	8	Ductile Iron	140	EG 2002	270	5.71	0.040	0.000
P-4558	Division St.	12	Asbestos Cement	120	EG 1957	158	-9.39	0.030	0.000
P-4559	Division St.	12	Asbestos Cement	120	EG 1957	328	-57.64	0.160	0.000
P-4560	Division St.	8	Cast iron	60	EG 1890	530	60.91	0.390	0.230
P-4561	Division St.	8	Cast iron	60	EG 1890	76	57.99	0.370	0.030
P-4562	Division St.	8	Cast iron	60	EG 1890	381	29.36	0.190	0.040
P-4563	Division St.	8	Cast iron	60	EG 1890	388	30.45	0.190	0.050
P-4564	Division St.	8	Cast iron	60	EG 1890	355	-2.51	0.020	0.000
P-4565	Division St.	8	Cast iron	60	EG 1890	298	17.96	0.110	0.010
P-4566	Division St.	8	Cast iron	60	EG 1890	318	8.03	0.050	0.000
P-4567	Division St.	8	Cast iron	60	EG 1890	335	3.55	0.020	0.000
P-4568	Brayton St.	8	Ductile Iron	140	EG 2002	1117	46.48	0.300	0.060
P-4569	Church St.	8	Ductile Iron	140	EG 2002	409	5.56	0.040	0.000
P-4570	Church St.	8	Ductile Iron	140	EG 2002	321	39.15	0.250	0.010
P-4571	Rector St.	12	Ductile Iron	135	EG 1997	113	120.32	0.340	0.010
P-4572	Rector St.	12	Ductile Iron	135	EG 1997	548	125.76	0.360	0.030
P-4573	Spring St.	6	Cast iron	30	EG 1886	285	0.08	0.000	0.000
P-4574	Spring St.	6	Cast iron	30	EG 1886	477	-2.88	0.030	0.010
P-4575	Spring St.	6	Cast iron	30	EG 1886	112	-6.26	0.070	0.010
P-4576	Reynolds St.	4	Cast iron	30	EG 1886	817	1.61	0.040	0.040
P-4577	Friendship St.	6	Asbestos Cement	120	EG 1950	318	1.17	0.010	0.000
P-4578	Mawney St.	4	Cast iron	30	EG 1886	1103	-1.19	0.030	0.030
P-4579	Friendship St.	4	Cast iron	30	EG 1886	324	0.86	0.020	0.010
P-4580	Prospect St.	12	Ductile Iron	135	EG 1996	596	-37.91	0.110	0.000
P-4581	Prospect St.	12	Ductile Iron	135	EG 1996	688	-113.99	0.320	0.030
P-4582	Spring St.	12	Ductile Iron	135	EG 1996	144	-123.90	0.350	0.010
P-4583	Division St.	12	Asbestos Cement	120	EG 1957	1924	290.46	0.820	0.570
P-4584	Reynolds St.	4	Cast iron	30	EG 1886	550	-1.33	0.030	0.020
P-4585	First Ave.	6	Cast iron	30	EG 1886	294	-5.87	0.070	0.020
P-4586	First Ave.	6	Cast iron	30	EG 1886	316	5.04	0.060	0.020
P-4587	Mawney St.	4	Cast iron	30	EG 1886	578	0.29	0.010	0.000
P-4588	First Ave.	6	Cast iron	30	EG 1886	291	2.98	0.030	0.010
P-4589	Prospect St.	6	Asbestos Cement	115	EG 1949	603	-0.45	0.010	0.000
P-4590	First Ave.	6	Cast iron	30	EG 1886	978	1.66	0.020	0.010
P-4591	Cliff St.	12	Ductile Iron	135	EG 1996	596	-34.78	0.100	0.000
P-4592	Friendship St.	12	Ductile Iron	135	EG 1996	974	-36.55	0.100	0.010
P-4593	First Ave.	6	Cast iron	30	EG 1886	340	-2.95	0.030	0.010
P-4594	Main St.	10	Cast iron	60	EG 1886	590	-12.19	0.050	0.000
P-4595	Vine St.	8	Ductile Iron	140	EG 2002	356	3.32	0.020	0.000
P-4596	Marlborough St.	8	Ductile Iron	140	EG 2002	367	-13.41	0.090	0.000
P-4597	Bridge St.	8	Ductile Iron	140	EG 2002	285	4.48	0.030	0.000
P-4598	Main St.	10	Cast iron	60	EG 1886	251	-38.73	0.160	0.020
P-4599	Greene St.	8	Ductile Iron	140	EG 2002	429	-71.99	0.460	0.050
P-4600	Greene St.	8	Ductile Iron	140	EG 2002	899	-74.31	0.470	0.120
P-4601	Rector St.	12	Ductile Iron	135	EG 1997	994	-164.82	0.470	0.080
P-4602	Division St.	12	Asbestos Cement	120	EG 1957	669	1.77	0.010	0.000
P-4603	Rector St.	12	Ductile Iron	135	EG 1997	245	-286.92	0.810	0.060
P-4604	Liberty St.	8	Ductile Iron	140	EG 2002	996	0.55	0.000	0.000
P-4605	Spring St.	6	Cast iron	30	EG 1886	960	-8.14	0.090	0.150
P-4606	Pierce St.	6	Cast iron	30	EG 1886	366	-1.63	0.020	0.000
P-4607	Dedford St.	6	Asbestos Cement	130	EG 1970	185	1.77	0.020	0.000
P-4608	Pierce St.	6	Cast iron	30	EG 1886	301	7.38	0.080	0.040
P-4609	Revolution St.	6	Asbestos Cement	115	EG 1944	455	0.62	0.010	0.000
P-4610	Marion St.	4	Cast iron	30	EG 1886	792	-1.15	0.030	0.020
P-4611	Pierce St.	6	Cast iron	30	EG 1886	806	4.98	0.060	0.050
P-4612	Main St.	8	Cast iron	60	EG 1886	813	-22.74	0.150	0.060
P-4613	King St.	6	Cast iron	30	EG 1886	335	8.40	0.100	0.050
P-4614	Marlborough St.	12	Asbestos Cement	120	EG 1956	824	22.24	0.060	0.000
P-4615	King St.	6	Cast iron	30	EG 1886	313	7.53	0.090	0.040
P-4616	Duke St.	4	Cast iron	30	EG 1887	827	-1.24	0.030	0.030
P-4617	King St.	6	Cast iron	30	EG 1886	190	5.81	0.070	0.020
P-4618	King St.	6	Cast iron	30	EG 1886	170	8.59	0.100	0.030
P-4619	Crop St.	4	Cast iron	30	EG 1886	323	0.83	0.020	0.010
P-4620	Wine St.	4	Cast iron	30	EG 1887	54	-0.94	0.020	0.000
P-4621	Blicknell Ave.	4	Cast iron	30	EG 1890	492	-2.72	0.070	0.070
P-4622	King St.	6	Ductile Iron	130	EG 1987	476	5.98	0.070	0.000
P-4623	Main St.	8	Cast iron	60	EG 1886	400	27.42	0.180	0.040
P-4624	Queen St.	6	Cast iron	30	EG 1886	327	8.54	0.100	0.050
P-4625	Marlborough St.	12	Asbestos Cement	140	EG 1956	693	23.14	0.070	0.000
P-4626	Queen St.	6	Cast iron	30	EG 1886	319	8.93	0.100	0.060

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P-4627	Duke St.	8	Ductile Iron	140	EG 2000	174	5.14	0.030	0.000
P-4628	Duke St.	4	Cast Iron	30	EG 1886	530	-1.19	0.030	0.010
P-4629	Exchange St.	8	Ductile Iron	140	EG 2000	563	4.55	0.030	0.000
P-4630	Queen St.	6	Cast Iron	30	EG 1886	634	4.65	0.050	0.030
P-4631	Queen St.	6	Asbestos Cement	130	EG 1975	448	-1.48	0.020	0.000
P-4632	Water St.	6	Asbestos Cement	130	EG 1972	743	-4.21	0.050	0.000
P-4633	Main St.	8	Cast Iron	60	EG 1886	258	23.88	0.150	0.020
P-4634	Main St.	8	Cast Iron	60	EG 1886	56	-13.55	0.090	0.000
P-4635	London St.	6	Cast Iron	30	EG 1886	348	0.32	0.000	0.000
P-4636	London St.	6	Cast Iron	30	EG 1886	112	11.78	0.130	0.030
P-4637	Crompton Ave. (Private)	6	Ductile Iron	130	EG 1987	159	1.77	0.020	0.000
P-4638	London St.	12	Asbestos Cement	120	EG 1959	335	35.66	0.100	0.000
P-4639	Marlborough St.	12	Asbestos Cement	120	EG 1956	524	33.89	0.100	0.000
P-4640	Marlborough St.	12	Asbestos Cement	120	EG 1956	426	25.30	0.070	0.000
P-4641	Main St.	10	Cast Iron	60	EG 1886	499	15.65	0.060	0.010
P-4642	London St.	6	Cast Iron	30	EG 1886	214	8.24	0.090	0.030
P-4643	London St.	6	Cast Iron	30	EG 1886	178	8.87	0.100	0.030
P-4644	Duke St.	4	Cast Iron	30	EG 1886	526	-2.40	0.060	0.060
P-4645	Long St.	8	Ductile Iron	140	EG 2002	319	-6.81	0.040	0.000
P-4646	Duke St.	4	Cast Iron	30	EG 1886	431	2.63	0.070	0.060
P-4647	London St.	6	Ductile Iron	130	EG 1987	178	5.32	0.060	0.000
P-4648	Lion St.	8	Ductile Iron	140	EG 2000	228	4.51	0.030	0.000
P-4649	Castle St.	8	Ductile Iron	140	EG 2000	315	1.34	0.010	0.000
P-4650	Castle St.	8	Ductile Iron	140	EG 2000	309	-0.43	0.000	0.000
P-4651	Long St.	8	Ductile Iron	140	EG 2002	195	1.77	0.010	0.000
P-4652	Long St.	8	Ductile Iron	140	EG 2002	364	0.38	0.000	0.000
P-4653	Lion St.	8	Ductile Iron	140	EG 2000	290	1.39	0.010	0.000
P-4654	Castle St.	8	Ductile Iron	140	EG 2000	435	-4.36	0.030	0.000
P-4655	Water St.	6	Ductile Iron	130	EG 1987	1566	-0.96	0.010	0.000
P-4656	Marlborough St.	8	Ductile Iron	140	EG 2003	749	-13.23	0.080	0.000
P-4657	Main St.	10	Cast Iron	60	EG 1886	413	31.49	0.130	0.020
P-4658	Union St.	8	Ductile Iron	140	EG 2002	337	-14.07	0.090	0.000
P-4659	Marlborough St.	8	Ductile Iron	140	EG 2003	466	1.77	0.010	0.000
P-4660	Crompton Ave.	6	Ductile Iron	130	EG 1987	2004	1.77	0.020	0.000
P-4661	Rocky Hollow Rd.	8	Ductile Iron	140	EG 2002	488	1.77	0.010	0.000
P-4662	First Ave.	6	Cast Iron	30	EG 1886	86	34.66	0.390	0.190
P-4663	Second St.	12	Ductile Iron	135	EG 1996	1016	35.84	0.100	0.010
P-4664	Fourth Ave.	6	Asbestos Cement	120	EG 1951	333	6.32	0.070	0.000
P-4665	Third St.	6	Asbestos Cement	120	EG 1950	195	1.77	0.020	0.000
P-4666	Fourth Ave.	6	PVC	130	EG 1983	1420	2.77	0.030	0.000
P-4667	Sixth Ave.	6	Cast Iron	30	EG 1890	309	1.77	0.020	0.000
P-4668	Sixth Ave.	6	Cast Iron	30	EG 1890	1276	-0.77	0.010	0.000
P-4669	Second St.	12	Ductile Iron	135	EG 1996	655	-27.74	0.080	0.000
P-4670	Sixth Ave.	12	Ductile Iron	135	EG 1996	259	25.20	0.070	0.000
P-4671	Middle Rd.	12	Steel	125	EG 1975	280	277.09	0.790	0.070
P-4672	Middle Rd. PRV	8	Ductile Iron	140	EG 2001	301	275.32	1.760	0.440
P-4673	Crompton Rd.	16	Ductile Iron	135	EG 1991	354	-548.67	0.880	0.070
P-4674	Division St.	12	Asbestos Cement	120	EG 1957	4758	330.26	0.940	1.800
P-4675	Division St. PRV	8	Ductile Iron	135	EG 1994	138	328.48	2.100	0.300
P-4676	Division St.	12	Asbestos Cement	120	EG 1957	297	-326.71	0.930	0.110
P-4678	Division St.	12	Asbestos Cement	120	EG 1957	111	0.00	0.000	0.000
P-4679	Hyland Ave.	8	Ductile Iron	140	EG 2002	406	3.21	0.020	0.000
P-4680	Proctor Ave.	8	Ductile Iron	140	EG 2002	275	0.38	0.000	0.000
P-4681	First Ave.	6	Cast Iron	30	EG 1886	310	-8.14	0.090	0.050
P-4682	Proctor Ave.	8	Ductile Iron	140	EG 2002	558	4.05	0.030	0.000
P-4683	Eldredge Ave.	8	Ductile Iron	140	EG 2002	649	3.94	0.030	0.000
P-4684	Church St.	8	Ductile Iron	140	EG 2002	399	-0.45	0.000	0.000
P-4685	Pierce St.	6	Cast Iron	30	EG 1886	657	-5.17	0.060	0.040
P-4686	Church St.	8	Ductile Iron	140	EG 2002	988	76.44	0.490	0.130
P-4687	Main St.	8	Cast Iron	60	EG 1886	298	-32.91	0.210	0.040
P-4688	Church St.	8	Ductile Iron	140	EG 2002	389	62.11	0.400	0.040
P-4689	Main St.	8	Cast Iron	60	EG 1886	689	17.11	0.110	0.030
P-4690	Spring St.	6	Cast Iron	30	EG 1886	348	8.54	0.160	0.060
P-4691	Lincoln St.	8	Ductile Iron	140	EG 2002	769	-2.71	0.020	0.000
P-4692	Main St.	10	Cast Iron	60	EG 1886	380	-17.28	0.070	0.010
P-4693	Bridge St.	8	Ductile Iron	140	EG 2002	317	-19.67	0.130	0.000
P-4694	Rocky Hollow Rd.	8	Ductile Iron	140	EG 2002	417	-11.41	0.070	0.000
P-4695	Marlborough St.	8	Ductile Iron	140	EG 2003	380	14.96	0.100	0.000
P-4696	Cedar Ave.	8	Ductile Iron	135	EG 1996	341	-56.48	0.360	0.030
P-4697	Overfield Rd.	6	Ductile Iron	130	EG 1989	648	1.37	0.020	0.000
P-4698	Overfield Rd.	6	Ductile Iron	130	EG 1989	582	15.68	0.180	0.020
P-4699	Post Rd.	10	Ductile Iron	135	EG 1996	1269	50.24	0.210	0.030
P-4700	Crossways Rd.	6	Ductile Iron	135	EG 1997	342	10.76	0.120	0.010
P-4701	Division St.	12	Asbestos Cement	120	EG 1957	1019	59.01	0.170	0.020
P-4702	Division St.	12	Asbestos Cement	120	EG 1957	377	2.42	0.010	0.000
P-4703	First Ave.	8	Asbestos Cement	125	EG 1967	519	-54.82	0.350	0.050
P-4704	Ashbrook Run	8	Ductile Iron	130	EG 1889	638	1.77	0.010	0.000
P-4705	Division St.	12	Asbestos Cement	130	EG 1971	429	35.95	0.100	0.000
P-4706	Division St.	12	Asbestos Cement	130	EG 1971	5489	97.70	0.280	0.190
P-4707	Old Quaker Ln.	8	Ductile Iron	140	EG 2003	727	-63.52	0.410	0.070
P-4708	Old Quaker Ln.	10	Ductile Iron	140	EG 2003	228	-65.30	0.270	0.010
P-4709	Amtrol Fire Line	10	Asbestos Cement	125	EG 1969	315	1.77	0.010	0.000
P-4710	Quaker Ln.	20	Asbestos Cement	125	EG 1969	1825	648.81	0.660	0.200

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Friction Headloss (ft)	Calculated
P-4711	Quaker Ln.	20	Asbestos Cement	125	EG 1969	1005	578.20	0.590	0.080	
P-4712	Amrol Fire Line	10	Asbestos Cement	125	EG 1969	144	-68.84	0.280	0.010	
P-4713	Division St.	8	Cast iron	60	EG 1890	413	1.77	0.010	0.000	
P-4714	Arrowhead Dr.	8	Asbestos Cement	130	EG 1973	1299	14.36	0.090	0.010	
P-4715	Arrowhead Dr.	8	Asbestos Cement	130	EG 1973	197	6.95	0.040	0.000	
P-4716	Tillinghast Rd.	12	Ductile Iron	135	EG 1999	175	5.18	0.010	0.000	
P-4717	Tillinghast Rd.	12	Ductile Iron	135	EG 1999	2997	9.04	0.030	0.000	
P-4718	Arrowhead Dr.	8	Ductile Iron	135	EG 1999	333	5.63	0.040	0.000	
P-4719	Middle Rd.	20	Ductile Iron	130	EG 1983	20	3.55	0.000	0.000	
P-4720	Middle Rd.	12	Ductile Iron	130	EG 1983	20	1.77	0.010	0.000	
P-4721	Frenchtown Rd	20	Asbestos Cement	130	EG 1970	1878	-321.26	0.330	0.050	
P-4722	Frenchtown Rd	20	Asbestos Cement	130	EG 1970	784	-328.35	0.340	0.020	
P-4723	Graham Way	8	Ductile Iron	130	EG 1989	1084	5.32	0.030	0.000	
P-4724	Rhodes Way	8	Ductile Iron	140	EG 2002	329	1.77	0.010	0.000	
P-4725	Graham Way	8	Ductile Iron	130	EG 1989	611	1.77	0.010	0.000	
P-4726	Middle Rd.	12	Ductile Iron	135	EG 1991	2857	188.34	0.530	0.310	
P-4727	Middle Rd.	12	Asbestos Cement	130	EG 1973	1048	186.57	0.530	0.120	
P-4728	Frenchtown Rd.	12	Asbestos Cement	125	EG 1964	9053	-220.91	0.630	1.500	
P-4730	Frenchtown Rd.	16	Ductile Iron	135	EG 1998	827	742.55	1.180	0.280	
P-4731	Frenchtown Rd.	16	Ductile Iron	135	EG 1998	8957	516.32	0.820	1.530	
P-4732	Frenchtown Rd.	12	Asbestos Cement	125	EG 1964	205	-224.46	0.640	0.030	
P-4733	Frenchtown Rd.	12	Asbestos Cement	125	EG 1964	457	1.77	0.010	0.000	
P-4734	Post Rd.	20	Ductile Iron	135	EG 1997	956	378.55	0.390	0.030	
P-4735	Post Rd.	20	Asbestos Cement	125	EG 1964	707	376.77	0.380	0.030	
P-4736	Post Rd.	10	Cast iron	60	EG 1886	1850	12.15	0.050	0.010	
P-4737	Post Rd.	10	Cast iron	60	EG 1886	290	82.91	0.340	0.070	
P-4738	Post Rd.	10	Ductile Iron	135	EG 1996	812	59.23	0.240	0.020	
P-4739	Post Rd.	10	Ductile Iron	135	EG 1996	362	-15.08	0.060	0.000	
P-4740	Post Rd.	6	Ductile Iron	135	EG 1996	47	-72.54	0.820	0.030	
P-5000	Turner Ave.	6	Cast iron	45	CRA 1936	583	-1.48	0.020	0.000	
P-5001	Oriole Ave.	6	Asbestos Cement	115	CRA 1948	326	1.48	0.020	0.000	
P-5002	Oriole Ave.	6	Asbestos Cement	115	CRA 1948	313	-1.67	0.020	0.000	
P-5003	Angell Ave.	6	Asbestos Cement	110	CRA 1939	591	1.48	0.020	0.000	
P-5004	Oriole Ave.	6	Asbestos Cement	115	CRA 1948	316	-0.33	0.000	0.000	
P-5005	Angell Ave.	6	Asbestos Cement	110	CRA 1939	598	-4.31	0.050	0.000	
P-5006	Angell Ave.	6	Asbestos Cement	110	CRA 1939	299	1.48	0.020	0.000	
P-5007	Harrison Ave.	6	Asbestos Cement	115	CRA 1941	292	-7.27	0.080	0.000	
P-5008	Harrison Ave.	6	Asbestos Cement	115	CRA 1942	325	-11.16	0.130	0.010	
P-5009	Lincoln Park Ave.	6	Asbestos Cement	130	CRA 1971	1476	-1.81	0.020	0.000	
P-5010	Olive St.	6	Asbestos Cement	115	CRA 1948	293	-6.25	0.070	0.000	
P-5011	Turner Ave.	6	Cast iron	45	CRA 1936	588	0.35	0.000	0.000	
P-5012	Turner Ave.	6	Cast iron	45	CRA 1936	588	2.77	0.030	0.010	
P-5013	Vinton Ave.	6	Asbestos Cement	115	CRA 1948	1513	-12.64	0.140	0.040	
P-5014	Turner Ave.	6	Cast iron	45	CRA 1936	635	-8.08	0.090	0.040	
P-5015	Angell Ave.	6	Asbestos Cement	115	CRA 1948	356	4.77	0.050	0.000	
P-5016	Searle Ave.	6	Asbestos Cement	115	CRA 1948	331	-3.29	0.040	0.000	
P-5017	Wheelock Ave.	6	Asbestos Cement	130	CRA 1977	277	1.48	0.020	0.000	
P-5018	Wheelock Ave.	8	Cast iron	75	CRA 1936	449	-11.04	0.070	0.010	
P-5019	Exchange St.	8	Cast iron	75	CRA 1936	373	-25.16	0.160	0.020	
P-5020	Wilbur Ave.	12	Ductile Iron	140	CRA 2002	672	14.50	0.040	0.000	
P-5021	Wilbur Ave.	12	Ductile Iron	140	CRA 2002	333	1.48	0.000	0.000	
P-5022	Fruit St.	6	Asbestos Cement	110	CRA 1938	315	11.54	0.130	0.010	
P-5023	Stoneham St.	6	Asbestos Cement	125	CRA 1963	719	10.06	0.110	0.010	
P-5024	Warren Ave.	6	Asbestos Cement	110	CRA 1939	339	-18.06	0.200	0.020	
P-5025	Warren Ave.	6	Asbestos Cement	110	CRA 1939	488	26.64	0.300	0.060	
P-5026	Allard St.	6	Asbestos Cement	110	CRA 1935	783	1.48	0.020	0.000	
P-5027	Allard St.	2	Copper	70	CRA 1935	150	2.96	0.300	0.150	
P-5028	Warren Ave.	6	Asbestos Cement	110	CRA 1939	322	20.72	0.240	0.020	
P-5029	Loring St.	6	Asbestos Cement	120	CRA 1950	312	9.77	0.110	0.010	
P-5030	Amanda St.	6	Asbestos Cement	120	CRA 1950	293	1.48	0.020	0.000	
P-5031	Loring St.	6	Asbestos Cement	120	CRA 1950	327	6.81	0.080	0.000	
P-5032	Ellison St.	8	Ductile Iron	140	CRA 2002	361	5.33	0.030	0.000	
P-5033	Benjamin St.	6	Asbestos Cement	125	CRA 1965	348	-0.23	0.000	0.000	
P-5034	Benjamin St.	6	Asbestos Cement	125	CRA 1965	326	-3.55	0.040	0.000	
P-5035	Warren Ave.	6	Asbestos Cement	110	CRA 1939	569	-6.51	0.070	0.010	
P-5036	Esther St.	6	Asbestos Cement	130	CRA 1974	296	1.48	0.020	0.000	
P-5037	Warren Ave.	6	Asbestos Cement	110	CRA 1939	1108	1.48	0.020	0.000	
P-5038	Ellison St.	8	Ductile Iron	140	CRA 2002	1622	4.08	0.030	0.000	
P-5039	Amanda St.	6	Asbestos Cement	120	CRA 1950	1312	-1.84	0.020	0.000	
P-5040	Amanda St.	6	Asbestos Cement	120	CRA 1950	309	4.44	0.050	0.000	
P-5041	Amanda St.	6	Asbestos Cement	120	CRA 1950	118	1.48	0.020	0.000	
P-5042	Amanda Ct.	6	Asbestos Cement	125	CRA 1966	313	1.48	0.020	0.000	
P-5043	Wilbur Ave.	12	Ductile Iron	140	CRA 2002	560	-59.20	0.170	0.010	
P-5045	Oaklawn Ave.	12	Ductile Iron	140	CRA 2002	736	60.68	0.170	0.010	
P-5046	Old Spring Rd.	12	Cast iron	70	CRA 1928	800	22.20	0.060	0.010	
P-5048	Old Spring Rd.	12	Cast iron	70	CRA 1928	969	20.72	0.060	0.010	
P-5049	Capeway Rd.	6	Asbestos Cement	115	CRA 1949	258	2.96	0.030	0.000	
P-5050	Oaklawn Ave.	12	Ductile Iron	140	CRA 2002	1016	159.95	0.450	0.080	
P-5051	Willow Dr.	8	Ductile Iron	140	CRA 2003	289	1.48	0.010	0.000	
P-5052	Oaklawn Ave.	12	Ductile Iron	140	CRA 2002	338	156.99	0.450	0.020	
P-5053	Westbrook Rd.	8	Ductile Iron	140	CRA 2003	352	1.48	0.010	0.000	
P-5054	Oaklawn Ave.	12	Cast iron	70	CRA 1928	412	16.28	0.050	0.000	
P-5055	Oaklawn Ave.	12	Ductile Iron	140	CRA 2003	2004	145.15	0.410	0.120	

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-5056	Oaklawn Ave.	12	Ductile Iron	140	CRA 2003	334	154.03	0.440	0.020
P-5057	Fairway Dr.	8	Ductile Iron	140	CRA 2003	212	5.92	0.040	0.000
P-5058	Hagen Ave.	8	Ductile Iron	140	CRA 2003	354	2.47	0.020	0.000
P-5059	Green Ct.	8	Ductile Iron	140	CRA 2003	441	0.99	0.010	0.000
P-5060	Fairway Dr.	8	Ductile Iron	140	CRA 2003	662	1.97	0.010	0.000
P-5061	Fairway Dr.	8	Ductile Iron	140	CRA 2003	177	1.48	0.010	0.000
P-5062	New London Ave.	12	Ductile Iron	140	CRA 2003	1350	143.67	0.410	0.080
P-5063	Warfield Ave.	6	Cast iron	45	CRA 1936	297	41.44	0.470	0.430
P-5064	Warfield Ave.	6	Asbestos Cement	120	CRA 1953	249	31.08	0.350	0.030
P-5065	Warfield Ave.	6	Asbestos Cement	120	CRA 1953	146	1.48	0.020	0.000
P-5066	Woodlawn Dr.	6	Asbestos Cement	120	CRA 1954	1040	28.12	0.320	0.120
P-5067	Ontario Ave.	6	Asbestos Cement	120	CRA 1959	318	25.16	0.290	0.030
P-5068	Versailles St.	6	Asbestos Cement	125	CRA 1969	355	19.24	0.220	0.020
P-5069	Versailles St.	6	Asbestos Cement	125	CRA 1969	624	1.48	0.020	0.000
P-5070	Versailles St.	6	Asbestos Cement	125	CRA 1969	620	4.44	0.050	0.000
P-5071	Versailles St.	6	Asbestos Cement	125	CRA 1969	70	1.48	0.020	0.000
P-5072	Brianwood Rd.	6	Asbestos Cement	120	CRA 1957	87	1.48	0.020	0.000
P-5073	Woodlawn Dr.	6	Asbestos Cement	120	CRA 1954	665	1.48	0.020	0.000
P-5074	Brookfield Dr.	6	Asbestos Cement	120	CRA 1955	409	8.88	0.100	0.010
P-5075	Gaunt Dr.	6	Asbestos Cement	120	CRA 1954	314	4.68	0.050	0.000
P-5076	Gaunt Dr.	1	Copper	70	CRA 1956	95	1.48	0.600	0.790
P-5077	Manor Rd.	6	Asbestos Cement	120	CRA 1954	1057	1.72	0.020	0.000
P-5078	Brianwood Rd.	6	Asbestos Cement	120	CRA 1957	103	1.48	0.020	0.000
P-5079	Brianwood Rd.	6	Asbestos Cement	120	CRA 1957	252	-1.24	0.010	0.000
P-5080	Brookfield Dr.	6	Asbestos Cement	120	CRA 1955	1258	-2.72	0.030	0.000
P-5081	Burdick Dr.	8	Asbestos Cement	130	CRA 1970	287	16.28	0.100	0.000
P-5082	Ontario Ave.	6	Asbestos Cement	130	CRA 1970	353	1.48	0.020	0.000
P-5083	Burdick Dr.	8	Asbestos Cement	130	CRA 1970	339	13.32	0.090	0.000
P-5084	Rainbow Rd.	6	Asbestos Cement	130	CRA 1971	246	1.48	0.020	0.000
P-5085	Burdick Dr.	8	Asbestos Cement	130	CRA 1970	342	10.36	0.070	0.000
P-5086	Sunrise Dr.	8	Asbestos Cement	130	CRA 1972	407	5.72	0.040	0.000
P-5087	Sunkist Cir.	8	Asbestos Cement	130	CRA 1971	124	1.48	0.010	0.000
P-5088	Sunrise Dr.	8	Asbestos Cement	130	CRA 1972	400	2.76	0.020	0.000
P-5089	Burdick Dr.	8	Asbestos Cement	130	CRA 1970	854	1.48	0.010	0.000
P-5090	Burdick Dr.	8	Asbestos Cement	130	CRA 1970	364	-0.20	0.000	0.000
P-5091	Redfern Dr.	6	Asbestos Cement	130	CRA 1970	121	1.48	0.020	0.000
P-5092	Burdick Dr.	8	Asbestos Cement	130	CRA 1970	1528	-3.16	0.020	0.000
P-5093	Oaklawn Ave.	12	Cast iron	70	CRA 1928	1856	14.80	0.040	0.010
P-5094	Bald Hill Rd.	10	Asbestos Cement	125	CRA 1968	319	13.32	0.050	0.000
P-5095	Bald Hill Rd.	10	Asbestos Cement	125	CRA 1968	602	11.84	0.050	0.000
P-5096	Bald Hill Rd.	6	Asbestos Cement	125	CRA 1968	71	7.40	0.080	0.000
P-5097	Bald Hill Rd.	6	Asbestos Cement	125	CRA 1968	605	2.96	0.030	0.000
P-5098	Moon Ave.	6	Cast iron	40	CRA 1928	223	1.48	0.020	0.000
P-5099	Bald Hill Rd.	6	Asbestos Cement	125	CRA 1968	424	2.96	0.030	0.000
P-5100	Bald Hill Rd.	6	Asbestos Cement	125	CRA 1968	330	1.48	0.020	0.000
P-5101	Bald Hill Rd.	10	Asbestos Cement	125	CRA 1968	957	2.96	0.010	0.000
P-5102	Bald Hill Rd.	8	Asbestos Cement	125	CRA 1968	707	1.48	0.010	0.000
P-5103	New London Ave.	12	Ductile Iron	140	CRA 2003	1418	100.75	0.290	0.040
P-5104	Southview Ter.	8	Asbestos Cement	130	CRA 1980	464	1.48	0.010	0.000
P-5105	Greenview Rd.	8	Asbestos Cement	130	CRA 1975	316	-1.48	0.010	0.000
P-5106	Verdant Dr.	8	Asbestos Cement	130	CRA 1976	468	3.36	0.020	0.000
P-5107	Verdant Dr.	8	Asbestos Cement	130	CRA 1976	347	2.19	0.010	0.000
P-5108	Verdant Dr.	8	Asbestos Cement	130	CRA 1976	771	0.58	0.000	0.000
P-5109	Carrage Dr.	8	Asbestos Cement	130	CRA 1975	335	-0.90	0.010	0.000
P-5110	Candle Dr.	8	Asbestos Cement	130	CRA 1977	540	0.13	0.000	0.000
P-5111	Carrage Dr.	8	Asbestos Cement	130	CRA 1975	340	-2.25	0.010	0.000
P-5112	Hardpoint Rd.	8	Asbestos Cement	130	CRA 1976	566	0.31	0.000	0.000
P-5113	Carrage Dr.	8	Asbestos Cement	130	CRA 1975	228	-4.04	0.030	0.000
P-5114	Red Barn Ct.	8	Asbestos Cement	130	CRA 1977	408	4.44	0.030	0.000
P-5115	Chapel Dr.	6	PVC	130	CRA 1988	303	1.48	0.020	0.000
P-5116	Red Barn Ct.	8	Asbestos Cement	130	CRA 1977	189	1.48	0.010	0.000
P-5117	Red Barn Ct.	8	Asbestos Cement	130	CRA 1977	240	-9.96	0.060	0.000
P-5118	Greenview Rd.	8	Asbestos Cement	130	CRA 1975	512	-6.32	0.040	0.000
P-5119	Seven Mile Rd.	16	Ductile Iron	130	CRA 1982	84	14.80	0.020	0.000
P-5120	Seven Mile Rd.	16	Ductile Iron	135	CRA 1999	1802	1.48	0.000	0.000
P-5121	Hope Rd.	12	Cast iron	60	CRA 1886	669	11.84	0.030	0.000
P-5122	Hope Rd.	6	Cast iron	30	CRA 1886	726	10.36	0.120	0.170
P-5123	Hall Ave.	6	Asbestos Cement	130	CRA 1973	575	2.96	0.030	0.000
P-5124	Hope Rd.	6	Cast iron	30	CRA 1886	1139	5.92	0.070	0.100
P-5125	Main St.	12	Cast iron	60	CRA 1886	3945	-353.57	1.000	6.100
P-5126	Lippitt Ave.	6	Asbestos Cement	130	CRA 1975	1591	1.48	0.020	0.000
P-5127	Hope Rd.	4	Ductile Iron	135	CRA 1999	164	0.00	0.000	0.000
P-5128	Hope Rd.	4	Ductile Iron	135	CRA 1999	457	2.96	0.080	0.000
P-5129	Hope Rd.	4	Ductile Iron	135	CRA 1999	759	1.48	0.040	0.000
P-5130	Hope Rd. PS	3	Ductile Iron	135	CRA 1999	211	4.44	0.200	0.020
P-5133	Seven Mile Rd. Tanks	16	Ductile Iron	135	CRA 1999	212	0.00	0.000	0.000
P-5134	Seven Mile Rd. Tanks	16	Ductile Iron	135	CRA 1999	256	0.00	0.000	0.000
P-5135	Seven Mile Rd. Tanks	16	Ductile Iron	135	CRA 1999	758	0.00	0.000	0.000
P-5136	Providence Master Meter	12	Ductile Iron	140	CRA 2002	209	245.79	0.700	0.030
P-5137	Oaklawn Ave.	12	Ductile Iron	140	CRA 2002	204	244.31	0.690	0.030
P-5138	Normandy Dr.	6	Asbestos Cement	120	CRA 1950	1001	1.48	0.020	0.000
P-5139	Oaklawn Ave.	12	Ductile Iron	140	CRA 2003	357	-146.63	0.420	0.020
P-5140	Allard St.	1	Copper	70	CRA 1935	150	1.48	0.600	1.240

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-5141	Warren Ave.	6	Asbestos Cement	110	CRA 1939	125	-9.47	0.110	0.000
P-5142	Hall Ave.	6	PVC	130	CRA 1985	140	1.48	0.020	0.000
P-5143	Hope Rd. PS	3	Ductile Iron	135	CRA 1999	162	4.44	0.200	0.010
P-5144	Hope Rd. PS	3	Ductile Iron	135	CRA 1999	211	4.44	0.200	0.020
P-6000	Orchard Dr.	8	Asbestos Cement	130	SCIT 1973	2588	-1.23	0.010	0.000
P-6001	Blossom Ln.	8	Asbestos Cement	130	SCIT 1973	510	1.23	0.010	0.000
P-6002	Blossom Ln.	8	Asbestos Cement	130	SCIT 1973	242	-3.70	0.020	0.000
P-6003	North Rd.	8	Asbestos Cement	130	SCIT 1972	133	1.23	0.010	0.000
P-6004	North Rd.	6	PVC	130	SCIT 1986	332	-8.63	0.100	0.000
P-6005	Reservation Dr.	6	Asbestos Cement	125	SCIT 1964	736	1.23	0.010	0.000
P-6006	North Rd.	6	PVC	130	SCIT 1986	1302	-11.10	0.130	0.020
P-6007	High St.	6	PVC	130	SCIT 1986	1054	-52.47	0.600	0.330
P-6008	Harrington Ave.	6	Cast iron	45	SCIT 1936	1047	1.23	0.010	0.000
P-6009	Harrington Ave.	6	PVC	130	SCIT 1986	227	-54.94	0.620	0.080
P-6010	Main St.	8	Asbestos Cement	125	SCIT 1967	683	124.60	0.800	0.280
P-6011	Main St.	6	Cast iron	45	SCIT 1939	442	45.65	0.520	0.770
P-6012	North Rd.	6	PVC	130	SCIT 1986	493	-40.14	0.460	0.090
P-6013	Mill St.	6	Cast iron	30	SCIT 1887	1423	67.97	0.770	10.970
P-6014	Main St.	6	Cast iron	30	SCIT 1887	300	-91.84	1.040	4.040
P-6015	Main St.	8	Ductile Iron	130	SCIT 1988	826	154.88	0.990	0.480
P-6016	Hope Furnace Rd.	12	Ductile Iron	135	SCIT 1991	2152	4.93	0.010	0.000
P-6018	Hope Furnace Rd.	12	Ductile Iron	135	SCIT 1991	1369	3.70	0.010	0.000
P-6019	Howard Ave.	12	Ductile Iron	135	SCIT 1991	2513	1.23	0.000	0.000
P-6020	Howard Ave.	12	Ductile Iron	135	SCIT 1991	535	1.23	0.000	0.000
P-6021	Hope Ave.	8	Asbestos Cement	125	SCIT 1967	3086	-180.77	1.150	2.550
P-6022	Hope Ave.	16	Asbestos Cement	120	SCIT 1956	299	384.40	0.610	0.040
P-6023	Cranberry Dr.	16	Ductile Iron	135	SCIT 1991	1261	6.16	0.010	0.000
P-6024	Pasture View Ln.	16	Ductile Iron	135	SCIT 1991	588	1.23	0.000	0.000
P-6025	Cranberry Dr.	16	Ductile Iron	135	SCIT 1991	441	3.70	0.010	0.000
P-6026	Kerri Ct.	16	Ductile Iron	135	SCIT 1991	737	1.23	0.000	0.000
P-6027	Cranberry Dr.	16	Ductile Iron	135	SCIT 1991	1621	1.23	0.000	0.000
P-6028	Hope Ave.	16	Asbestos Cement	120	SCIT 1956	846	377.00	0.600	0.100
P-6029	Meadow Rd.	6	Asbestos Cement	125	SCIT 1966	268	6.16	0.070	0.000
P-6030	Garden Ln.	6	Asbestos Cement	125	SCIT 1966	618	2.03	0.020	0.000
P-6031	Country Ln.	6	Asbestos Cement	125	SCIT 1966	160	1.23	0.010	0.000
P-6032	Country Ln.	6	Asbestos Cement	125	SCIT 1966	304	-0.43	0.000	0.000
P-6033	Meadow Rd.	6	Asbestos Cement	125	SCIT 1966	83	1.23	0.010	0.000
P-6034	Meadow Rd.	6	Asbestos Cement	125	SCIT 1966	311	-2.90	0.030	0.000
P-6035	Hope Ave.	16	Asbestos Cement	120	SCIT 1956	303	369.60	0.590	0.030
P-6038	Clinton Ave. PS	30	Steel	125	SCIT 1972	465	5289.60	2.400	0.320
P-6039	Clinton Ave.	20	Asbestos Cement	120	SCIT 1972	161	2230.67	2.280	0.170
P-6041	Clinton Ave.	16	Asbestos Cement	120	SCIT 1972	938	1661.80	2.650	1.740
P-6042	Clinton Ave.	20	Asbestos Cement	120	SCIT 1971	357	3057.70	3.120	0.690
P-6043	Clinton Ave.	20	Asbestos Cement	120	SCIT 1971	346	3047.83	3.110	0.670
P-6044	Jackson Flat Rd.	20	Asbestos Cement	120	SCIT 1971	264	3046.60	3.110	0.510
P-6045	Colvin St.	16	Asbestos Cement	120	SCIT 1957	1869	1660.57	2.650	3.460
P-6046	Colvin St.	20	Asbestos Cement	125	SCIT 1968	1972	3045.37	3.110	3.510
P-6047	Clinton Ave.	6	Cast Iron	45	SCIT 1939	281	-1.23	0.010	0.000
P-6048	Colvin St.	20	Asbestos Cement	125	SCIT 1968	280	3054.88	3.120	0.500
P-6049	Patnode Ave.	8	Ductile Iron	135	SCIT 1993	691	4.90	0.030	0.000
P-6050	Doray Dr.	8	Asbestos Cement	120	SCIT 1958	457	1.23	0.010	0.000
P-6051	Doray Dr.	8	Asbestos Cement	120	SCIT 1958	382	2.44	0.020	0.000
P-6052	Jackson Flat Rd.	8	Ductile Iron	135	SCIT 1999	144	1.23	0.010	0.000
P-6053	Jackson Flat Rd.	8	Ductile Iron	135	SCIT 1999	700	-0.03	0.000	0.000
P-6054	Clinton Ave.	6	Cast iron	45	SCIT 1939	369	-1.26	0.010	0.000
P-6055	Colvin St.	16	Asbestos Cement	120	SCIT 1957	276	1648.59	2.630	0.500
P-6056	Colvin St. Connection	16	Asbestos Cement	125	SCIT 1968	85	-10.74	0.020	0.000
P-6057	Patnode Ave. Connection	8	Ductile Iron	135	SCIT 1993	101	-8.63	0.060	0.000
P-6059	Clinton Ave.	16	Asbestos Cement	120	SCIT 1972	621	567.64	0.910	0.160
P-6060	Clinton Ave.	16	Asbestos Cement	120	SCIT 1972	115	-666.40	0.900	0.030
P-6061	Clinton Ave. PS	30	Steel	125	SCIT 1999	10	5289.60	2.400	0.010
P-6062	Clinton Ave. PS	30	Steel	125	SCIT 1999	87	-5289.60	2.400	0.060
P-6063	Clinton Ave. PS	12	Ductile Iron	135	SCIT 1999	20	-2644.80	7.500	0.280
P-6064	Clinton Ave. PS	30	Steel	125	SCIT 1999	5	-2644.80	1.200	0.000
P-6065	Clinton Ave. PS	12	Ductile Iron	135	SCIT 1999	20	-2644.80	7.500	0.280
P-6066	Clinton Ave. PS	30	Steel	125	SCIT 1999	5	0.00	0.000	0.000
P-6067	Clinton Ave. PS	12	Ductile Iron	135	SCIT 1999	20	0.00	0.000	0.000
P-6068	Clinton Ave. PS	30	Steel	125	SCIT 1999	5	0.00	0.000	0.000
P-6069	Clinton Ave. PS	16	Ductile Iron	135	SCIT 1999	20	0.00	0.000	0.000
P-6070	Clinton Ave. PS	30	Steel	125	SCIT 1999	100	5289.60	2.400	0.070
P-6071	Clinton Ave. PS	16	Ductile Iron	135	SCIT 1999	10	0.00	0.000	0.000
P-6072	Clinton Ave. PS	30	Steel	125	SCIT 1999	5	5289.60	2.400	0.000
P-6073	Clinton Ave. PS	12	Ductile Iron	135	SCIT 1999	10	0.00	0.000	0.000
P-6074	Clinton Ave. PS	30	Steel	125	SCIT 1999	5	5289.60	2.400	0.000
P-6075	Clinton Ave. PS	12	Ductile Iron	135	SCIT 1999	10	2644.80	7.500	0.140
P-6076	Clinton Ave. PS	30	Steel	125	SCIT 1999	5	2644.80	1.200	0.000
P-6077	Clinton Ave. PS	12	Ductile Iron	135	SCIT 1999	10	2644.80	7.500	0.140
P-6078	North Rd.	8	Asbestos Cement	130	SCIT 1973	989	-6.16	0.040	0.000
P-6079	White Ln.	6	PVC	130	SCIT 1988	728	1.23	0.010	0.000
P-6080	North Rd.	6	Cast iron	45	SCIT 1939	293	-47.42	0.540	0.550
P-6081	Ives St.	6	Cast iron	45	SCIT 1939	329	-8.51	0.100	0.030
P-6082	Ives St. Easement	4	Cast iron	45	SCIT 1939	274	-9.74	0.250	0.200
P-6083	Main St.	6	Cast iron	30	SCIT 1887	494	-88.14	1.000	6.160

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-6084	Brown St.	6	Cast iron	30	SCIT 1887	312	2.47	0.030	0.010
P-6085	Goddard St.	6	Cast iron	30	SCIT 1887	234	1.23	0.010	0.000
P-7000	Nooseneck Hill Rd.	12	Ductile Iron	130	COV 1989	5023	206.74	0.590	0.690
P-7001	Harkney Hill Rd.	12	Ductile Iron	130	COV 1989	1662	205.51	0.580	0.220
P-7002	Harkney Hill Rd.	12	Ductile Iron	130	COV 1989	335	1.22	0.000	0.000
P-7003	Hill Farm Rd.	12	Ductile Iron	130	COV 1989	759	203.07	0.580	0.100
P-7004	Hill Farm Rd.	12	Asbestos Cement	130	COV 1982	2235	25.11	0.070	0.010
P-7005	Lakehurst Dr.	6	Ductile Iron	135	COV 1991	829	2.45	0.030	0.000
P-7007	Isle of Capri Rd.	6	Ductile Iron	135	COV 1991	1074	1.22	0.010	0.000
P-7008	Hill Farm Rd.	12	Asbestos Cement	130	COV 1982	2231	21.44	0.060	0.000
P-7009	Sherwood Valley Ln. (Private)	12	Asbestos Cement	130	COV 1982	190	18.99	0.050	0.000
P-7010	Hill Farm Rd.	12	PVC	130	COV 1988	1420	1.22	0.000	0.000
P-7011	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	2154	176.73	1.130	1.710
P-7012	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	853	47.73	0.300	0.060
P-7013	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	1172	28.97	0.180	0.030
P-7014	Magnolia Ln.	8	Asbestos Cement	125	COV 1968	327	0.00	0.000	0.000
P-7015	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	1841	45.42	0.290	0.120
P-7016	Magnolia Ln.	8	Asbestos Cement	125	COV 1968	1435	-22.68	0.140	0.030
P-7017	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	480	82.35	0.530	0.090
P-7018	Magnolia Ln.	8	Asbestos Cement	125	COV 1968	831	2.41	0.020	0.000
P-7019	Dogwood Dr.	6	PVC	130	COV 1986	793	17.53	0.200	0.030
P-7020	Magnolia Ln.	8	Asbestos Cement	125	COV 1968	275	18.72	0.120	0.000
P-7021	Magnolia Ln.	8	Asbestos Cement	125	COV 1968	564	-13.19	0.080	0.000
P-7022	Circlewood Dr.	8	Asbestos Cement	130	COV 1978	2528	14.56	0.090	0.020
P-7023	Rustic Way	8	Asbestos Cement	130	COV 1979	509	30.68	0.200	0.010
P-7024	Circlewood Dr.	8	Asbestos Cement	130	COV 1978	745	44.02	0.280	0.040
P-7025	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	617	-29.73	0.190	0.020
P-7026	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	446	-56.04	0.360	0.040
P-7027	Kingswood Dr.	6	Asbestos Cement	125	COV 1968	660	25.09	0.280	0.060
P-7028	Kingswood Dr.	6	Asbestos Cement	125	COV 1968	407	2.30	0.030	0.000
P-7029	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	567	-66.88	0.430	0.070
P-7030	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	916	72.53	0.460	0.140
P-7031	Jack Pine Rd.	6	Asbestos Cement	125	COV 1962	337	15.55	0.180	0.010
P-7032	Peachtree Ln.	6	Asbestos Cement	130	COV 1975	1848	-21.56	0.240	0.110
P-7033	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	319	67.95	0.430	0.040
P-7034	Apple Blossom Ln.	6	Asbestos Cement	125	COV 1962	934	22.54	0.260	0.070
P-7035	Apple Blossom Ln.	6	Asbestos Cement	125	COV 1962	1098	18.57	0.210	0.050
P-7036	Fairview Ave.	16	Asbestos Cement	115	COV 1944	395	-704.69	1.120	0.160
P-7037	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	825	55.75	0.360	0.080
P-7038	Cherry Blossom Ln.	6	Asbestos Cement	125	COV 1962	1479	15.37	0.170	0.050
P-7039	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	667	-22.79	0.150	0.010
P-7040	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	296	-53.79	0.340	0.030
P-7041	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	285	-39.16	0.250	0.010
P-7042	Jack Pine Rd.	6	Asbestos Cement	125	COV 1962	302	5.51	0.060	0.000
P-7043	Jack Pine Rd.	6	Asbestos Cement	125	COV 1962	318	-35.89	0.410	0.050
P-7044	Red Maple Rd.	8	Asbestos Cement	125	COV 1962	707	-15.85	0.100	0.010
P-7045	Red Maple Rd.	8	Asbestos Cement	125	COV 1962	375	-40.18	0.260	0.020
P-7046	Plum Tree Ln.	8	Asbestos Cement	130	COV 1973	1155	23.10	0.150	0.020
P-7047	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	346	-53.87	0.340	0.030
P-7048	Jack Pine Rd.	6	Asbestos Cement	125	COV 1962	464	-11.84	0.130	0.010
P-7049	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	1091	-43.26	0.280	0.060
P-7050	Blueberry Ln.	6	Asbestos Cement	125	COV 1967	468	2.74	0.030	0.000
P-7051	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	917	-41.74	0.270	0.050
P-7052	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	276	-44.19	0.280	0.020
P-7053	Peninsula Ct.	6	Asbestos Cement	130	COV 1976	668	1.22	0.010	0.000
P-7054	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	588	36.93	0.240	0.030
P-7055	Wisteria Dr.	8	Asbestos Cement	125	COV 1962	573	0.00	0.000	0.000
P-7056	West View Dr.	8	Asbestos Cement	130	COV 1973	417	35.71	0.230	0.020
P-7057	West View Dr.	8	Asbestos Cement	130	COV 1973	438	3.88	0.020	0.000
P-7058	West View Dr.	6	Asbestos Cement	130	COV 1973	347	-5.72	0.040	0.000
P-7059	Linden Ln.	6	Asbestos Cement	130	COV 1973	482	-29.77	0.340	0.050
P-7060	Blue Spruce Dr.	8	Asbestos Cement	130	COV 1976	1332	30.60	0.200	0.040
P-7061	Lynn Dr.	12	PVC	130	COV 1987	397	36.44	0.100	0.000
P-7062	Lynn Dr.	12	PVC	130	COV 1987	138	35.21	0.100	0.000
P-7065	Lynn Dr.	12	PVC	130	COV 1987	1047	-7.05	0.020	0.000
P-7066	West View Dr.	8	Asbestos Cement	130	COV 1987	1142	-27.54	0.180	0.030
P-7067	West View Dr.	8	Asbestos Cement	130	COV 1973	670	-22.83	0.150	0.010
P-7068	Winterberry Dr.	6	Asbestos Cement	130	COV 1973	790	-5.93	0.070	0.000
P-7069	Crocus Ct.	6	Asbestos Cement	130	COV 1973	134	1.22	0.010	0.000
P-7070	Winterberry Dr.	6	Asbestos Cement	130	COV 1973	598	-8.38	0.100	0.010
P-7071	Ray St.	6	PVC	130	COV 1981	843	1.22	0.010	0.000
P-7072	Fairview Ave.	16	Asbestos Cement	115	COV 1944	366	-707.14	1.130	0.150
P-7073	Sugar Maple Dr.	12	Ductile Iron	135	COV 1991	481	27.27	0.080	0.000
P-7074	Harris Ave.	8	Asbestos Cement	120	COV 1950	754	18.57	0.120	0.010
P-7075	Sugar Maple Dr.	12	Ductile Iron	135	COV 1991	733	20.95	0.060	0.000
P-7076	Butternut Dr.	8	Ductile Iron	135	COV 1991	263	37.96	0.240	0.010
P-7077	Lynn Dr.	12	PVC	130	COV 1986	385	19.26	0.050	0.000
P-7079	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	617	75.75	0.480	0.100
P-7082	Wolfe Ct.	6	Ductile Iron	135	COV 1990	301	1.22	0.010	0.000
P-7083	Sugar Maple Dr.	12	Ductile Iron	135	COV 1991	565	24.82	0.070	0.000
P-7084	Sugar Maple Dr.	12	Ductile Iron	135	COV 1991	511	42.85	0.120	0.000
P-7085	Sugar Maple Dr.	12	Ductile Iron	135	COV 1991	510	-18.23	0.050	0.000
P-7086	Pamela Ct.	8	Ductile Iron	135	COV 1991	146	1.22	0.010	0.000

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Label	Description	Diameter (in)	Material	Hazen- Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7087	Sugar Maple Dr.	12	Ductile Iron	135	COV 1991	347	-20.68	0.060	0.000
P-7088	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	1492	47.26	0.300	0.100
P-7089	Red Cedar Dr.	6	Asbestos Cement	130	COV 1976	324	1.22	0.010	0.000
P-7090	Wood Cove Dr.	8	Asbestos Cement	125	COV 1968	806	44.81	0.290	0.050
P-7091	Clubhouse Rd.	8	Asbestos Cement	130	COV 1974	216	34.30	0.220	0.010
P-7092	Clubhouse Rd.	8	Asbestos Cement	130	COV 1974	976	15.91	0.100	0.010
P-7093	Island Dr.	8	Asbestos Cement	130	COV 1976	447	9.79	0.060	0.000
P-7094	Osprey Dr.	8	PVC	130	COV 1981	1445	2.45	0.020	0.000
P-7095	Kingfisher Dr.	8	PVC	130	COV 1985	728	1.22	0.010	0.000
P-7096	Island Dr.	8	Asbestos Cement	130	COV 1976	1078	6.12	0.040	0.000
P-7097	Osprey Dr.	8	PVC	130	COV 1985	169	1.22	0.010	0.000
P-7098	Island Dr.	6	Ductile Iron	135	COV 1993	1012	3.67	0.040	0.000
P-7099	Island Dr.	6	Ductile Iron	135	COV 1993	235	1.22	0.010	0.000
P-7100	Island Dr.	6	Ductile Iron	135	COV 1993	227	1.22	0.010	0.000
P-7101	Marion Dr.	8	Asbestos Cement	130	COV 1975	1045	4.90	0.030	0.000
P-7102	Veronica Ct.	6	Asbestos Cement	130	COV 1975	393	1.22	0.010	0.000
P-7103	Marion Dr.	8	Asbestos Cement	130	COV 1975	483	2.45	0.020	0.000
P-7104	Sharon Dr.	8	Ductile Iron	135	COV 1993	4015	1.22	0.010	0.000
P-7105	Silver Maple Dr.	8	Asbestos Cement	130	COV 1978	401	17.16	0.110	0.000
P-7106	Juniper Hill Dr.	8	Asbestos Cement	130	COV 1979	864	8.15	0.050	0.000
P-7107	Azalea Way	8	Asbestos Cement	130	COV 1979	1052	-2.19	0.010	0.000
P-7108	Silver Maple Dr.	8	Asbestos Cement	130	COV 1978	838	7.79	0.050	0.000
P-7109	Juniper Hill Dr.	8	Asbestos Cement	130	COV 1979	521	9.11	0.060	0.000
P-7110	Giblin Ln.	8	Ductile Iron	135	COV 1990	408	3.67	0.020	0.000
P-7111	Giblin Ln.	8	Ductile Iron	135	COV 1990	1205	-3.25	0.020	0.000
P-7112	Silver Maple Dr.	8	Ductile Iron	135	COV 1991	287	-11.95	0.080	0.000
P-7113	Silver Maple Dr.	8	Asbestos Cement	130	COV 1978	223	-4.38	0.030	0.000
P-7114	Juniper Hill Dr.	8	Ductile Iron	135	COV 1998	1228	4.22	0.030	0.000
P-7115	Orchard Tr.	8	Ductile Iron	135	COV 1992	496	5.70	0.040	0.000
P-7116	Orchard Tr.	8	Ductile Iron	135	COV 1992	634	1.96	0.010	0.000
P-7117	Regal Wood Dr.	8	Ductile Iron	135	COV 1989	537	-1.77	0.010	0.000
P-7118	Silver Maple Dr.	8	Ductile Iron	135	COV 1991	572	7.48	0.050	0.000
P-7119	Tamarack Tr.	8	Ductile Iron	135	COV 1992	1170	1.82	0.010	0.000
P-7120	Arbutus Tr.	8	Ductile Iron	135	COV 1992	746	-2.52	0.020	0.000
P-7121	Silver Maple Dr.	8	Ductile Iron	135	COV 1991	449	4.43	0.030	0.000
P-7122	Catalpa Way	8	Ductile Iron	135	COV 1994	1015	-0.33	0.000	0.000
P-7123	Arbutus Tr.	8	Ductile Iron	135	COV 1992	419	-3.11	0.020	0.000
P-7124	Arbutus Tr.	8	Ductile Iron	135	COV 1992	459	1.56	0.010	0.000
P-7125	Tallwood Dr.	8	Ductile Iron	140	COV 2001	513	-1.28	0.010	0.000
P-7126	Regal Wood Dr.	8	Ductile Iron	135	COV 1999	1033	-2.50	0.020	0.000
P-7127	Tallwood Dr.	8	Ductile Iron	140	COV 2001	485	1.62	0.010	0.000
P-7128	Reservoir Rd.	8	Ductile Iron	135	COV 1996	1553	1.22	0.010	0.000
P-7129	Reservoir Rd.	12	Ductile Iron	135	COV 1993	2353	-0.83	0.000	0.000
P-7130	Catalpa Way	8	Ductile Iron	135	COV 1994	504	3.54	0.020	0.000
P-7131	White Oak Ct.	8	Ductile Iron	135	COV 1999	528	1.67	0.010	0.000
P-7132	White Oak Ct.	8	Ductile Iron	135	COV 1999	605	0.44	0.000	0.000
P-7133	White Oak Ct.	8	Ductile Iron	135	COV 1999	227	1.22	0.010	0.000
P-7134	Ash Ln.	8	Ductile Iron	135	COV 1999	350	-2.00	0.010	0.000
P-7135	Catalpa Way	8	Ductile Iron	135	COV 1994	606	-0.65	0.000	0.000
P-7136	Catalpa Way	8	Ductile Iron	135	COV 1994	621	-2.58	0.020	0.000
P-7137	Reservoir Rd.	12	Ductile Iron	135	COV 1993	1436	-4.64	0.010	0.000
P-7138	Reservoir Rd.	12	PVC	130	COV 1988	489	-60.30	0.170	0.010
P-7139	Kiley Way	8	Ductile Iron	135	COV 1999	1890	-0.78	0.000	0.000
P-7140	Kiley Way	8	Ductile Iron	135	COV 1999	157	1.22	0.010	0.000
P-7141	Kiley Way Easement	8	Ductile Iron	135	COV 1999	585	-3.23	0.020	0.000
P-7142	Eastgate Dr.	8	Asbestos Cement	130	COV 1979	495	-8.80	0.060	0.000
P-7143	Doric Ct.	6	Asbestos Cement	130	COV 1980	355	1.22	0.010	0.000
P-7144	Eastgate Dr.	8	Asbestos Cement	130	COV 1979	666	-11.25	0.070	0.000
P-7145	Acacia Ct.	8	Asbestos Cement	130	COV 1980	722	1.22	0.010	0.000
P-7146	Eastgate Dr.	8	Asbestos Cement	130	COV 1979	538	-16.92	0.110	0.010
P-7147	Clubhouse Rd.	8	Asbestos Cement	130	COV 1974	1309	-9.28	0.060	0.000
P-7148	Clubhouse Rd.	8	Asbestos Cement	130	COV 1974	736	-8.86	0.060	0.000
P-7149	Clubhouse Rd.	8	PVC	130	COV 1988	99	2.45	0.020	0.000
P-7150	Clubhouse Rd.	8	PVC	130	COV 1988	600	1.22	0.010	0.000
P-7152	Clubhouse Rd. (Coventry High School)	8	Ductile Iron	135	COV 1990	590	-16.21	0.100	0.000
P-7153	Reservoir Rd.	12	PVC	130	COV 1987	1247	64.42	0.180	0.020
P-7154	Clubhouse Rd.	8	PVC	130	COV 1988	408	2.45	0.020	0.000
P-7155	Reservoir Rd.	12	PVC	130	COV 1988	417	60.75	0.170	0.010
P-7156	Reservoir Rd.	8	Asbestos Cement	125	COV 1965	416	-83.07	0.530	0.080
P-7157	Butternut Dr.	8	Asbestos Cement	130	COV 1978	931	-36.73	0.230	0.040
P-7158	Reservoir Rd.	8	Asbestos Cement	125	COV 1965	680	-47.56	0.300	0.050
P-7159	Nooseneck Hill Rd.	12	Ductile Iron	130	COV 1989	3039	-22.14	0.060	0.010
P-7160	Tiogou Ave.	12	Ductile Iron	130	COV 1989	1521	-23.37	0.070	0.000
P-7161	Jefferson Dr.	12	Ductile Iron	130	COV 1989	1389	-24.59	0.070	0.000
P-7162	Jefferson Dr.	12	Ductile Iron	130	COV 1989	1122	-25.82	0.070	0.000
P-7164	Helen Ave.	12	Ductile Iron	130	COV 1989	1340	-42.95	0.120	0.010
P-7165	Helen Ave.	12	Ductile Iron	130	COV 1989	353	44.18	0.130	0.000
P-7166	Monroe Dr.	8	Asbestos Cement	130	COV 1977	725	13.46	0.090	0.000
P-7167	Monroe Dr.	8	Asbestos Cement	130	COV 1977	589	5.96	0.040	0.000
P-7168	Monroe Dr.	8	Asbestos Cement	130	COV 1985	1103	4.74	0.030	0.000
P-7169	Monroe Dr.	8	Ductile Iron	135	COV 1999	467	3.61	0.020	0.000
P-7170	Monroe Dr.	8	Ductile Iron	135	COV 1999	781	2.39	0.020	0.000
P-7171	Adams Dr.	8	Asbestos Cement	130	COV 1978	539	1.16	0.010	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7172	Hoover Dr.	8	Asbestos Cement	130	COV 1978	468	-4.96	0.030	0.000
P-7173	Hoover Dr.	8	Asbestos Cement	130	COV 1978	426	0.10	0.000	0.000
P-7174	Garfield Dr.	8	Asbestos Cement	130	COV 1979	1170	-6.28	0.040	0.000
P-7175	Adams Dr.	8	Asbestos Cement	130	COV 1978	415	4.90	0.030	0.000
P-7176	Adams Dr.	8	Asbestos Cement	130	COV 1978	572	1.22	0.010	0.000
P-7177	Hancock Dr.	8	Asbestos Cement	130	COV 1977	1233	2.45	0.020	0.000
P-7178	Hancock Dr.	8	Asbestos Cement	130	COV 1977	287	1.22	0.010	0.000
P-7179	Read School House Rd.	12	Asbestos Cement	130	COV 1973	265	-1055.82	3.000	0.740
P-7180	Read School House Rd.	12	Asbestos Cement	130	COV 1973	226	1.22	0.000	0.000
P-7181	Read School House Rd.	12	Asbestos Cement	130	COV 1973	2715	-1057.04	3.000	7.630
P-7182	Flat River Rd.	12	Asbestos Cement	130	COV 1973	191	1.22	0.000	0.000
P-7183	Flat River Rd.	12	Asbestos Cement	130	COV 1973	479	-1059.49	3.010	1.350
P-7184	Brenda Dr.	6	Asbestos Cement	130	COV 1971	667	1.22	0.010	0.000
P-7185	Flat River Rd.	12	Asbestos Cement	125	COV 1966	1007	-1061.94	3.010	3.070
P-7186	Walker Ln.	12	Ductile Iron	135	COV 1994	4126	-287.95	0.820	0.970
P-7187	Walker Ln.	12	Ductile Iron	135	COV 1994	1065	-289.17	0.820	0.250
P-7188	Cobblestone Ter.	8	Ductile Iron	135	COV 1994	979	-107.77	0.690	0.270
P-7189	Cobblestone Ter.	8	Ductile Iron	135	COV 1994	1668	-109.00	0.700	0.470
P-7190	Cobblestone Ter.	8	Ductile Iron	135	COV 1994	1010	-182.62	1.170	0.740
P-7191	Cobblestone Ter.	8	Ductile Iron	135	COV 1993	2401	-292.84	1.870	4.210
P-7192	Leuba Rd.	8	Ductile Iron	135	COV 1993	2953	59.32	0.380	0.270
P-7193	Flat River Rd.	12	Asbestos Cement	125	COV 1966	3469	775.22	2.200	5.900
P-7194	Leuba Rd.	8	Asbestos Cement	130	COV 1974	152	-353.38	2.260	0.400
P-7195	Thompson Dr.	8	Asbestos Cement	130	COV 1974	725	1.22	0.010	0.000
P-7196	Leuba Rd.	8	Asbestos Cement	130	COV 1974	686	-355.83	2.270	1.850
P-7197	Leuba Rd.	8	Asbestos Cement	130	COV 1974	776	1.22	0.010	0.000
P-7198	Chandler Dr.	8	Asbestos Cement	130	COV 1974	614	-358.28	2.290	1.680
P-7199	Daniel Dr.	6	Asbestos Cement	130	COV 1975	506	-129.82	1.470	0.860
P-7200	Metro Dr.	8	Asbestos Cement	130	COV 1975	847	-89.27	0.570	0.180
P-7201	Metro Dr.	8	Asbestos Cement	130	COV 1975	495	-90.49	0.580	0.110
P-7202	Daniel Dr.	6	Asbestos Cement	130	COV 1975	809	43.00	0.490	0.180
P-7203	Daniel Dr.	6	Asbestos Cement	130	COV 1975	508	41.77	0.470	0.110
P-7204	Metro Dr.	8	Asbestos Cement	130	COV 1975	504	4.89	0.030	0.000
P-7205	Diane Dr.	8	Asbestos Cement	130	COV 1979	695	2.44	0.020	0.000
P-7206	Diane Dr.	8	Asbestos Cement	130	COV 1979	566	1.22	0.010	0.000
P-7207	Metro Dr.	8	Asbestos Cement	130	COV 1975	730	1.22	0.010	0.000
P-7208	Chandler Dr.	8	Asbestos Cement	130	COV 1974	2160	-229.69	1.470	2.590
P-7209	Daniel Dr.	6	Asbestos Cement	130	COV 1975	225	140.83	1.600	0.440
P-7210	Daniel Dr.	6	Asbestos Cement	130	COV 1975	521	139.60	1.580	1.010
P-7211	Chandler Dr.	8	Asbestos Cement	130	COV 1974	509	-371.74	2.370	1.490
P-7212	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	73	-458.14	2.920	0.310
P-7213	Boulder Dr.	8	Ductile Iron	135	COV 1990	927	91.13	0.580	0.190
P-7214	Boulder Dr.	8	Ductile Iron	135	COV 1990	412	1.22	0.010	0.000
P-7215	Stoney Hill Cir.	8	Ductile Iron	135	COV 1990	1146	88.68	0.570	0.220
P-7216	Glacier Way	8	Ductile Iron	135	COV 1990	760	1.22	0.010	0.000
P-7217	Stoney Hill Cir.	8	Ductile Iron	135	COV 1990	491	85.23	0.550	0.090
P-7218	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	953	-85.18	0.540	0.180
P-7220	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	151	23.05	0.150	0.000
P-7221	Old Main St.	8	Asbestos Cement	120	COV 1950	772	375.18	2.390	2.660
P-7222	Flat River Rd.	12	Asbestos Cement	125	COV 1966	527	717.12	2.030	0.780
P-7223	Old Main St.	8	Asbestos Cement	120	COV 1950	665	-353.35	2.260	2.050
P-7224	Leader St.	6	Asbestos Cement	120	COV 1950	382	6.12	0.070	0.000
P-7225	Leader St.	6	Asbestos Cement	125	COV 1962	263	1.22	0.010	0.000
P-7226	First St.	6	Asbestos Cement	120	COV 1954	310	3.67	0.040	0.000
P-7227	First St.	6	Asbestos Cement	120	COV 1954	66	1.22	0.010	0.000
P-7228	Second St.	6	Asbestos Cement	120	COV 1954	283	1.22	0.010	0.000
P-7229	Flat River Rd.	8	Asbestos Cement	120	COV 1950	1147	-360.70	2.300	3.680
P-7230	Alvero Rd.	8	Asbestos Cement	125	COV 1963	583	218.06	1.390	0.680
P-7231	Hopkins Ct.	6	Asbestos Cement	125	COV 1963	369	1.22	0.010	0.000
P-7232	Cynthia Dr.	8	Asbestos Cement	125	COV 1965	234	79.98	0.510	0.040
P-7233	Cynthia Dr.	8	Asbestos Cement	125	COV 1965	1337	27.26	0.170	0.030
P-7234	Linda Ct.	6	Asbestos Cement	125	COV 1968	286	1.22	0.010	0.000
P-7235	Cynthia Dr.	8	Asbestos Cement	125	COV 1965	656	24.81	0.160	0.010
P-7236	Cynthia Dr.	8	Asbestos Cement	125	COV 1965	581	-51.50	0.330	0.050
P-7237	Alvero Rd.	8	Asbestos Cement	125	COV 1963	501	135.63	0.870	0.240
P-7238	Lloyd Dr.	8	Asbestos Cement	125	COV 1963	444	-68.97	0.440	0.060
P-7239	Lloyd Dr.	8	Asbestos Cement	125	COV 1963	382	-26.59	0.170	0.010
P-7240	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	618	170.19	1.090	0.420
P-7241	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	253	168.97	1.080	0.170
P-7243	Lloyd Dr.	8	Asbestos Cement	125	COV 1963	400	-27.81	0.180	0.010
P-7244	Frances Ct.	6	Asbestos Cement	125	COV 1963	223	1.22	0.010	0.000
P-7245	Lloyd Dr.	8	Asbestos Cement	125	COV 1963	451	-30.26	0.190	0.010
P-7246	Patty St.	8	Asbestos Cement	125	COV 1966	556	43.60	0.280	0.030
P-7247	Lloyd Dr.	8	Asbestos Cement	125	COV 1963	363	-75.09	0.480	0.060
P-7248	Alvero Rd.	8	Ductile Iron	140	COV 2001	960	203.37	1.300	0.800
P-7249	Flat River Rd.	8	Asbestos Cement	120	COV 1950	655	-579.98	3.700	5.060
P-7250	Gail Ct.	8	Asbestos Cement	125	COV 1969	838	1.22	0.010	0.000
P-7252	Abbotts Crossing Rd.	6	Asbestos Cement	120	COV 1950	181	2.45	0.030	0.000
P-7253	Abbotts Crossing Rd.	6	Asbestos Cement	120	COV 1950	1895	1.22	0.010	0.000
P-7255	Flat River Rd.	8	Asbestos Cement	120	COV 1950	2907	-232.36	1.480	4.130
P-7256	Main St.	8	Cast iron	60	COV 1890	653	0.00	0.000	0.000
P-7257	Main St.	16	Cast iron	60	COV 1890	87	-233.59	0.370	0.020
P-7258	Main St.	16	Cast iron	60	COV 1890	634	-234.81	0.370	0.110

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Label	Description	Diameter (in)	Material	Hazen- Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7259	Main St.	16	Cast iron	60	COV 1890	76	-1.22	0.000	0.000
P-7260	Main St.	16	Cast iron	60	COV 1890	781	-237.26	0.380	0.140
P-7261	Station St.	12	Asbestos Cement	115	COV 1941	155	-238.48	0.680	0.030
P-7262	Station St.	8	Asbestos Cement	125	COV 1963	717	-239.71	1.530	1.000
P-7263	Park St.	6	Cast iron	45	COV 1933	359	4.90	0.060	0.010
P-7264	Holden St.	6	Asbestos Cement	125	COV 1964	147	1.22	0.010	0.000
P-7265	Holden St.	6	Asbestos Cement	125	COV 1964	126	2.45	0.030	0.000
P-7266	Francis St.	6	Asbestos Cement	115	COV 1944	669	1.22	0.010	0.000
P-7267	Tero Dr.	6	Asbestos Cement	130	COV 1975	758	-1.22	0.010	0.000
P-7268	Maple St.	8	Asbestos Cement	120	COV 1956	1412	616.88	3.940	12.230
P-7269	Station St.	8	Asbestos Cement	125	COV 1963	947	245.83	1.570	1.380
P-7270	Maple St.	8	Asbestos Cement	120	COV 1956	996	-619.33	3.950	8.690
P-7271	Maple St.	8	Asbestos Cement	120	COV 1956	268	-500.47	3.190	1.580
P-7272	Maple St.	8	Asbestos Cement	120	COV 1956	84	-120.08	0.770	0.040
P-7273	Maple St.	8	Asbestos Cement	120	COV 1956	256	-121.31	0.770	0.110
P-7274	Knotty Oak Rd.	8	Asbestos Cement	115	COV 1947	89	825.84	5.270	1.430
P-7275	Knotty Oak Rd.	8	Asbestos Cement	115	COV 1947	540	703.31	4.490	6.450
P-7276	Foster Dr.	6	Asbestos Cement	115	COV 1947	354	3.67	0.040	0.000
P-7277	Foster Dr.	6	Asbestos Cement	115	COV 1947	334	1.22	0.010	0.000
P-7278	Foster Dr.	6	Asbestos Cement	115	COV 1947	147	1.22	0.010	0.000
P-7279	Knotty Oak Rd.	8	Asbestos Cement	115	COV 1947	1140	698.41	4.460	13.440
P-7280	Long Pond Rd.	8	Asbestos Cement	120	COV 1959	295	12.24	0.080	0.000
P-7281	Long Pond Rd.	8	Asbestos Cement	120	COV 1959	458	5.32	0.030	0.000
P-7282	Meredith Dr.	6	Asbestos Cement	120	COV 1959	486	1.32	0.010	0.000
P-7283	Dawn Ln.	6	Asbestos Cement	125	COV 1962	518	0.09	0.000	0.000
P-7284	Dawn Ln.	6	Asbestos Cement	125	COV 1962	232	1.22	0.010	0.000
P-7285	Long Pond Rd.	8	Asbestos Cement	120	COV 1959	676	-2.36	0.020	0.000
P-7286	Meredith Dr.	6	Asbestos Cement	120	COV 1959	393	0.42	0.000	0.000
P-7287	Meadow Ln.	6	Asbestos Cement	130	COV 1976	504	-1.46	0.020	0.000
P-7288	Valley Crest Rd.	8	Asbestos Cement	125	COV 1960	297	-5.70	0.040	0.000
P-7289	Valley Crest Rd.	8	Asbestos Cement	125	COV 1960	299	3.01	0.020	0.000
P-7290	Cindy Ln.	6	Asbestos Cement	125	COV 1966	625	1.00	0.010	0.000
P-7291	Meredith Dr.	6	Asbestos Cement	120	COV 1959	515	-0.66	0.010	0.000
P-7292	Meredith Dr.	6	Asbestos Cement	120	COV 1959	267	0.44	0.000	0.000
P-7293	Valley Crest Rd.	6	Asbestos Cement	120	COV 1959	995	-0.79	0.010	0.000
P-7294	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	570	-552.94	3.530	3.480
P-7295	Sweetwater Dr.	8	Asbestos Cement	130	COV 1978	615	-184.64	1.180	0.490
P-7296	Sweetwater Dr.	8	Asbestos Cement	130	COV 1978	1462	-185.87	1.190	1.180
P-7297	Teakwood Dr. East	8	Asbestos Cement	130	COV 1979	555	18.36	0.120	0.010
P-7298	Teakwood Dr. East	8	Asbestos Cement	130	COV 1979	204	1.22	0.010	0.000
P-7299	Ivy Dr.	8	Asbestos Cement	130	COV 1979	672	15.91	0.100	0.010
P-7300	Watercress Ct.	8	Asbestos Cement	130	COV 1979	805	1.22	0.010	0.000
P-7301	Watercress Ct.	8	Asbestos Cement	130	COV 1979	613	13.46	0.090	0.000
P-7302	Ironwood Dr.	8	Asbestos Cement	130	COV 1985	500	7.88	0.050	0.000
P-7303	Laura Ct.	8	Asbestos Cement	130	COV 1985	454	1.22	0.010	0.000
P-7304	Ironwood Dr.	8	Asbestos Cement	130	COV 1985	483	5.43	0.030	0.000
P-7305	Heather Ct.	8	Asbestos Cement	130	COV 1985	309	1.22	0.010	0.000
P-7306	Ironwood Dr.	8	Asbestos Cement	130	COV 1985	477	2.98	0.020	0.000
P-7307	Teakwood Dr. West	8	Asbestos Cement	130	COV 1979	328	1.22	0.010	0.000
P-7308	Teakwood Dr. West	8	Asbestos Cement	130	COV 1979	603	0.53	0.000	0.000
P-7309	Teakwood Dr. West	8	Asbestos Cement	130	COV 1979	192	1.22	0.010	0.000
P-7310	Deer Run Rd.	6	Asbestos Cement	130	COV 1984	1456	-1.92	0.020	0.000
P-7311	Watercress Ct.	8	Asbestos Cement	130	COV 1979	180	1.22	0.010	0.000
P-7312	Watercress Ct.	8	Asbestos Cement	130	COV 1979	1174	-4.36	0.030	0.000
P-7313	Teakwood Dr. East	8	Asbestos Cement	130	COV 1979	596	-205.45	1.310	0.580
P-7314	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	936	-369.52	2.360	2.710
P-7315	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	446	209.12	1.330	0.450
P-7316	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	937	2.45	0.020	0.000
P-7317	Knotty Oak Rd.	8	Asbestos Cement	115	COV 1947	169	-1327.53	8.470	6.550
P-7318	Fairview Ave.	16	Asbestos Cement	115	COV 1944	526	-726.94	1.160	0.230
P-7319	Fairview Ave.	16	Asbestos Cement	115	COV 1944	162	-728.16	1.160	0.070
P-7320	Walnut Hill Rd.	8	Asbestos Cement	125	COV 1965	709	3.67	0.020	0.000
P-7321	White Rock Dr.	8	Asbestos Cement	125	COV 1965	220	1.22	0.010	0.000
P-7322	White Rock Dr.	8	Asbestos Cement	125	COV 1965	1030	1.22	0.010	0.000
P-7323	Knotty Oak Rd.	12	Asbestos Cement	125	COV 1962	251	677.60	1.920	0.330
P-7324	Highwood Dr.	8	Asbestos Cement	125	COV 1964	328	162.62	1.040	0.220
P-7325	Maplewood Dr.	8	Asbestos Cement	125	COV 1964	1493	69.73	0.450	0.210
P-7326	Glenwood Dr.	8	Asbestos Cement	130	COV 1976	605	1.77	0.010	0.000
P-7327	Highwood Dr.	8	Asbestos Cement	125	COV 1964	900	-91.66	0.590	0.210
P-7328	Glenwood Dr.	8	Asbestos Cement	130	COV 1976	917	66.74	0.430	0.110
P-7329	Charwood Dr.	8	Asbestos Cement	130	COV 1978	594	65.51	0.420	0.070
P-7330	Driftwood Dr.	6	Asbestos Cement	130	COV 1971	1730	-13.01	0.150	0.040
P-7331	Highwood Dr.	8	Asbestos Cement	130	COV 1978	632	-92.21	0.590	0.140
P-7332	Highwood Dr.	8	Asbestos Cement	130	COV 1978	2655	77.97	0.500	0.430
P-7334	Charwood Dr.	8	Asbestos Cement	130	COV 1978	499	77.30	0.490	0.080
P-7335	Ginger Tr.	8	Ductile Iron	135	COV 1998	943	72.41	0.460	0.120
P-7336	Jasmine Ct.	8	Ductile Iron	135	COV 1998	221	1.22	0.010	0.000
P-7337	Ginger Tr.	8	Ductile Iron	135	COV 1998	1695	69.96	0.450	0.210
P-7338	Peppermint Ct.	8	Ductile Iron	135	COV 1998	233	1.22	0.010	0.000
P-7339	Ginger Tr.	8	Ductile Iron	135	COV 1998	717	67.51	0.430	0.080
P-7340	Cinnamon Ct.	8	Ductile Iron	135	COV 1998	568	1.22	0.010	0.000
P-7341	Ginger Tr.	8	Ductile Iron	135	COV 1998	1177	65.06	0.420	0.130
P-7342	Station St.	8	Asbestos Cement	125	COV 1963	1559	-72.04	0.460	0.230

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7343	Station St.	8	Asbestos Cement	125	COV 1963	2445	135.88	0.870	1.190
P-7344	Hunters Crossing Dr.	16	Ductile Iron	135	COV 1995	1057	-443.99	0.710	0.140
P-7345	Remington Farm Dr.	8	Ductile Iron	135	COV 1995	2150	-49.85	0.320	0.140
P-7346	Moss Ln.	8	Ductile Iron	135	COV 1995	1194	-27.70	0.180	0.030
P-7347	Remington Farm Dr.	8	Ductile Iron	135	COV 1995	1636	23.37	0.150	0.030
P-7348	Remington Farm Dr.	8	Ductile Iron	135	COV 1995	182	-52.30	0.330	0.010
P-7349	Hunters Crossing Dr.	16	Ductile Iron	135	COV 1995	1739	-395.37	0.630	0.180
P-7350	Hunters Crossing Dr.	16	Ductile Iron	135	COV 1995	999	-448.89	0.720	0.130
P-7351	Red Barn Ct.	8	Ductile Iron	135	COV 1995	577	-45.64	0.290	0.030
P-7352	Red Barn Ct.	8	Ductile Iron	135	COV 1995	181	1.22	0.010	0.000
P-7353	Ginger Tr.	8	Ductile Iron	135	COV 1998	272	3.67	0.020	0.000
P-7354	Almond Way	8	Ductile Iron	135	COV 1998	247	1.22	0.010	0.000
P-7355	Ginger Tr.	8	Ductile Iron	135	COV 1998	426	1.22	0.010	0.000
P-7356	Wildflower Dr.	8	Ductile Iron	135	COV 1995	1011	-48.09	0.310	0.060
P-7357	Hunters Crossing Dr.	16	Ductile Iron	135	COV 1995	870	-404.47	0.650	0.090
P-7358	Hunters Crossing Dr.	16	Ductile Iron	135	COV 1995	217	-453.79	0.720	0.030
P-7359	Silo Ln.	8	Ductile Iron	135	COV 1995	268	1.22	0.010	0.000
P-7360	Hunters Crossing Dr.	16	Ductile Iron	135	COV 1995	1071	-456.23	0.730	0.150
P-7361	Knotty Oak Rd.	16	Ductile Iron	135	COV 1995	477	-457.46	0.730	0.070
P-7362	Knotty Oak Rd.	12	Asbestos Cement	125	COV 1962	2072	-513.76	1.460	1.650
P-7363	Gervais St.	8	Asbestos Cement	125	COV 1962	2063	55.08	0.350	0.190
P-7364	Breezy Lake Dr.	6	Asbestos Cement	125	COV 1965	323	3.67	0.040	0.000
P-7365	Breezy Lake Dr.	6	Asbestos Cement	125	COV 1965	642	1.33	0.020	0.000
P-7366	Breezy Lake Dr.	6	Asbestos Cement	125	COV 1965	191	0.11	0.000	0.000
P-7367	Breezy Lake Dr.	6	Asbestos Cement	125	COV 1965	898	-1.11	0.010	0.000
P-7368	Gervais St.	8	Asbestos Cement	125	COV 1962	468	50.19	0.320	0.040
P-7369	La Forge Dr.	8	Asbestos Cement	125	COV 1968	455	23.43	0.150	0.010
P-7370	Viola St.	6	Asbestos Cement	125	COV 1968	487	8.07	0.090	0.010
P-7371	Viola St.	6	Asbestos Cement	125	COV 1968	406	2.26	0.030	0.000
P-7372	Viola St.	6	Asbestos Cement	125	COV 1968	338	1.03	0.010	0.000
P-7373	Viola St.	6	Asbestos Cement	125	COV 1968	331	1.22	0.010	0.000
P-7374	Short Way Dr.	6	Asbestos Cement	130	COV 1971	394	-1.42	0.020	0.000
P-7375	Centennial St.	8	Asbestos Cement	130	COV 1971	388	-4.59	0.030	0.000
P-7376	Centennial St.	8	Asbestos Cement	130	COV 1971	211	1.95	0.010	0.000
P-7377	La Forge Dr.	8	Asbestos Cement	125	COV 1968	493	-6.80	0.040	0.000
P-7378	La Casa Dr.	6	Asbestos Cement	130	COV 1970	439	6.12	0.070	0.000
P-7379	La Forge Dr.	8	Asbestos Cement	125	COV 1968	622	-14.14	0.090	0.000
P-7380	La Casa Dr.	6	Asbestos Cement	130	COV 1970	424	4.90	0.060	0.000
P-7381	Sheri Dr.	8	Ductile Iron	130	COV 1989	165	3.67	0.020	0.000
P-7382	Sheri Dr.	8	Ductile Iron	130	COV 1989	542	1.22	0.010	0.000
P-7383	Sheri Dr.	8	Ductile Iron	130	COV 1989	334	1.22	0.010	0.000
P-7384	Centennial St.	8	Asbestos Cement	130	COV 1971	1002	7.52	0.050	0.000
P-7385	Centennial St.	8	Ductile Iron	130	COV 1989	362	1.22	0.010	0.000
P-7386	Country View Dr.	8	Ductile Iron	130	COV 1989	369	5.07	0.030	0.000
P-7387	Brookfield Rd.	8	Ductile Iron	135	COV 1991	640	1.22	0.010	0.000
P-7388	Country View Dr.	8	Ductile Iron	130	COV 1989	1180	2.62	0.020	0.000
P-7390	Gervais St.	8	Asbestos Cement	125	COV 1962	360	-21.86	0.140	0.010
P-7391	Gervais St.	8	Asbestos Cement	125	COV 1962	355	-1.05	0.010	0.000
P-7392	Pond View Dr.	6	Asbestos Cement	125	COV 1966	314	2.45	0.030	0.000
P-7393	Pond View Dr.	6	Asbestos Cement	125	COV 1966	498	0.71	0.010	0.000
P-7394	Pond View Dr.	6	Asbestos Cement	125	COV 1966	983	-0.52	0.010	0.000
P-7395	Gervais St.	8	Asbestos Cement	125	COV 1962	501	-25.53	0.160	0.010
P-7396	Blackrock Rd.	8	Asbestos Cement	115	COV 1949	787	19.59	0.130	0.010
P-7397	Blackrock Rd.	8	Asbestos Cement	115	COV 1949	2311	6.35	0.040	0.000
P-7398	Congdon St.	6	Cast iron	40	COV 1928	1294	5.13	0.060	0.050
P-7399	Boston St.	6	Ductile Iron	135	COV 1992	56	14.69	0.170	0.000
P-7400	Puritan Ave.	6	Asbestos Cement	125	COV 1962	1344	7.33	0.080	0.010
P-7401	Benoit St.	6	Ductile Iron	135	COV 1992	1778	6.10	0.070	0.010
P-7402	Boston St.	6	Cast iron	40	COV 1928	188	6.14	0.070	0.010
P-7403	Boston St.	6	Cast iron	40	COV 1928	1160	3.69	0.040	0.020
P-7404	Irene St.	6	Asbestos Cement	125	COV 1969	1037	1.22	0.010	0.000
P-7406	Mishnock Well 1	8	Ductile Iron	130	COV 1989	25	0.00	0.000	0.000
P-7407	Mishnock Well 1	12	Asbestos Cement	130	COV 1989	146	0.00	0.000	0.000
P-7408	Mishnock Well 1	8	Ductile Iron	130	COV 1989	11	0.00	0.000	0.000
P-7409	Mishnock Well 2	12	Ductile Iron	130	COV 1989	148	0.00	0.000	0.000
P-7410	Mishnock Well 2	12	Asbestos Cement	130	COV 1989	160	0.00	0.000	0.000
P-7412	Mishnock Well 3	8	Ductile Iron	130	COV 1989	177	0.00	0.000	0.000
P-7413	Mishnock Well 3	8	Ductile Iron	130	COV 1989	177	0.00	0.000	0.000
P-7414	Mishnock Well 3	8	Ductile Iron	130	COV 1989	25	0.00	0.000	0.000
P-7415	Mishnock Wells	12	Ductile Iron	130	COV 1989	518	0.00	0.000	0.000
P-7416	Mishnock Wells	12	Ductile Iron	130	COV 1989	316	-1.23	0.000	0.000
P-7417	Nooseneck Hill Rd.	12	Asbestos Cement	125	COV 1965	930	-2.45	0.010	0.000
P-7418	Linda Ct. (Private)	6	Asbestos Cement	125	COV 1966	188	1.22	0.010	0.000
P-7419	Nooseneck Hill Rd.	12	Asbestos Cement	125	COV 1965	866	-4.90	0.010	0.000
P-7420	Steere Ln.	6	Asbestos Cement	125	COV 1966	116	18.47	0.210	0.010
P-7421	Steere Ln.	6	Asbestos Cement	125	COV 1966	301	1.22	0.010	0.000
P-7422	Maple Root Rd.	6	Asbestos Cement	125	COV 1965	1393	16.02	0.180	0.050
P-7424	Comfort Way (Private)	6	Ductile Iron	130	COV 1989	258	1.22	0.010	0.000
P-7426	Nooseneck Hill Rd.	12	Asbestos Cement	125	COV 1965	2954	-50.82	0.140	0.030
P-7428	Lane A (Private)	6	Asbestos Cement	125	COV 1965	83	7.89	0.090	0.000
P-7429	Lane A (Private)	6	Asbestos Cement	125	COV 1965	304	4.23	0.050	0.000
P-7430	Lane A (Private)	6	Asbestos Cement	125	COV 1965	301	1.91	0.020	0.000
P-7431	Lane A (Private)	6	Asbestos Cement	125	COV 1965	1209	0.69	0.010	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7432	Lane A (Private)	6	Asbestos Cement	125	COV 1965	311	-0.53	0.010	0.000
P-7433	Lane B (Private)	6	Asbestos Cement	125	COV 1965	1287	-1.09	0.010	0.000
P-7434	Lane A (Private)	6	Asbestos Cement	125	COV 1965	328	-0.67	0.010	0.000
P-7435	Lane C (Private)	6	Asbestos Cement	125	COV 1965	688	-1.89	0.020	0.000
P-7436	Lane C (Private)	6	Asbestos Cement	125	COV 1965	672	-2.44	0.030	0.000
P-7437	Lane A (Private)	6	Asbestos Cement	125	COV 1965	209	5.57	0.060	0.000
P-7438	Lane D (Private)	6	Asbestos Cement	125	COV 1965	662	1.90	0.020	0.000
P-7439	Lane D (Private)	6	Asbestos Cement	125	COV 1965	197	0.68	0.010	0.000
P-7440	Lane A (Private)	6	Asbestos Cement	125	COV 1965	301	2.45	0.030	0.000
P-7441	Lane E (Private)	6	Asbestos Cement	125	COV 1965	864	1.22	0.010	0.000
P-7442	Fairview Ave.	6	Cast iron	70	COV 1887	1325	-60.56	0.690	1.720
P-7443	Jefferson Dr.	8	Asbestos Cement	130	COV 1977	1505	123.97	0.790	0.580
P-7444	Jefferson Dr.	8	Asbestos Cement	130	COV 1977	1120	122.75	0.780	0.420
P-7445	Adams Dr.	8	Asbestos Cement	130	COV 1977	653	121.53	0.780	0.240
P-7446	Old Mishnock Tr.	8	Ductile Iron	135	COV 1993	1337	-19.80	0.130	0.020
P-7447	Old Mishnock Tr.	8	Ductile Iron	135	COV 1993	652	-6.60	0.040	0.000
P-7448	Sycamore Dr.	8	Ductile Iron	135	COV 1994	479	-7.83	0.050	0.000
P-7449	Sycamore Dr.	8	Ductile Iron	135	COV 1994	600	-9.05	0.060	0.000
P-7450	Sycamore Dr.	8	Ductile Iron	135	COV 1994	561	-14.42	0.090	0.000
P-7451	Sycamore Dr.	8	Ductile Iron	135	COV 1994	431	-24.69	0.160	0.010
P-7452	Melrose Dr.	8	Ductile Iron	135	COV 1993	1000	13.94	0.090	0.010
P-7453	Sycamore Dr.	8	Ductile Iron	135	COV 1994	561	-39.86	0.250	0.020
P-7454	Pine Hill Rd.	8	Ductile Iron	135	COV 1994	139	1.22	0.010	0.000
P-7455	Pine Hill Rd.	8	Ductile Iron	135	COV 1994	258	-42.31	0.270	0.010
P-7456	Mishnock Rd.	12	Ductile Iron	130	COV 1989	699	270.36	0.770	0.160
P-7457	Helen Ave.	6	Asbestos Cement	120	COV 1954	863	30.31	0.340	0.110
P-7458	Helen Ave.	6	Asbestos Cement	120	COV 1954	274	29.09	0.330	0.030
P-7459	Linwood Dr.	6	Asbestos Cement	125	COV 1962	714	9.20	0.100	0.010
P-7460	Noella Ave.	6	Asbestos Cement	125	COV 1960	293	-13.90	0.160	0.010
P-7461	Helen Ave.	6	Asbestos Cement	120	COV 1954	150	-89.99	1.020	0.150
P-7462	Noella Ave.	6	Asbestos Cement	125	COV 1960	178	21.88	0.250	0.010
P-7463	Laurie Ave.	6	Asbestos Cement	130	COV 1970	812	-0.44	0.010	0.000
P-7464	Linwood Dr.	6	Asbestos Cement	125	COV 1962	431	-18.66	0.210	0.020
P-7465	Noella Ave.	6	Asbestos Cement	125	COV 1960	437	21.10	0.240	0.030
P-7467	Lorraine Ave.	6	Asbestos Cement	120	COV 1959	811	-26.53	0.300	0.080
P-7468	Helen Ave.	6	Asbestos Cement	120	COV 1954	327	-74.86	0.850	0.230
P-7469	Deborah Ave.	6	Asbestos Cement	125	COV 1962	779	17.43	0.200	0.030
P-7470	Linwood Dr.	6	Asbestos Cement	125	COV 1963	427	-33.12	0.380	0.060
P-7471	Noella Ave.	6	Asbestos Cement	125	COV 1963	480	2.45	0.030	0.000
P-7472	Noella Ave.	6	Asbestos Cement	125	COV 1962	471	1.22	0.010	0.000
P-7473	Deborah Ave.	6	Asbestos Cement	125	COV 1962	62	-1.22	0.010	0.000
P-7474	Linwood Dr.	6	Asbestos Cement	125	COV 1963	125	49.32	0.560	0.040
P-7475	Fairview Ave.	6	Cast iron	70	COV 1887	96	-61.78	0.700	0.130
P-7476	Lorraine Ave.	6	Asbestos Cement	120	COV 1959	818	25.30	0.290	0.080
P-7477	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	873	-270.12	0.770	0.200
P-7478	Linwood Dr.	6	Asbestos Cement	125	COV 1963	279	-46.87	0.530	0.080
P-7479	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	248	294.20	0.830	0.070
P-7480	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	79	-42.22	0.120	0.000
P-7481	Maude Ave.	6	Asbestos Cement	120	COV 1958	1516	-23.13	0.260	0.120
P-7482	Helen Ave.	6	Asbestos Cement	120	COV 1954	348	-47.11	0.530	0.100
P-7483	Helen Ave.	6	Asbestos Cement	120	COV 1954	316	22.76	0.260	0.020
P-7484	Helen Ave.	6	Asbestos Cement	120	COV 1954	1372	21.53	0.240	0.100
P-7485	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	333	20.31	0.060	0.000
P-7486	Johnson Blvd.	10	Asbestos Cement	125	COV 1961	320	335.19	1.370	0.280
P-7487	Rosemary St.	6	Asbestos Cement	125	COV 1962	653	1.22	0.010	0.000
P-7488	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	268	-224.47	0.640	0.040
P-7489	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	288	-282.30	0.800	0.070
P-7490	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	337	-332.74	0.940	0.110
P-7491	Clifton Ave.	6	Asbestos Cement	120	COV 1956	528	18.57	0.210	0.030
P-7492	Marion Ave.	6	Asbestos Cement	125	COV 1962	269	1.22	0.010	0.000
P-7493	Clifton Ave.	6	Asbestos Cement	120	COV 1956	468	16.12	0.180	0.020
P-7494	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	393	-352.53	1.000	0.140
P-7495	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	1379	-353.76	1.000	0.510
P-7496	Tiogou Ave.	8	Asbestos Cement	115	COV 1948	1104	-188.93	1.210	1.160
P-7497	Coventry/Spring Lake Well	12	Ductile Iron	130	COV 1989	558	293.87	0.830	0.150
P-7498	Coventry/Spring Lake Well	8	Ductile Iron	130	COV 1989	314	293.87	1.880	0.590
P-7499	Coventry/Spring Lake Well	8	Ductile Iron	130	COV 1989	25	293.87	1.880	0.050
P-7500	Tiogou Ave.	8	Asbestos Cement	115	COV 1948	1310	103.72	0.660	0.450
P-7501	Fairview Ave.	6	Cast iron	70	COV 1887	217	-63.00	0.710	0.300
P-7502	Tiogou Ave.	12	Asbestos Cement	125	COV 1962	64	21.48	0.060	0.000
P-7503	Tiogou Ave.	8	Ductile Iron	135	COV 1995	69	-34.73	0.220	0.000
P-7504	Tiogou Ave.	12	Asbestos Cement	125	COV 1962	1345	-66.73	0.190	0.020
P-7505	Tiogou Ave.	12	Asbestos Cement	125	COV 1962	117	-12.03	0.030	0.000
P-7506	Tiogou Ave.	12	Ductile Iron	140	COV 2000	57	-55.92	0.160	0.000
P-7507	Tiogou Ave.	12	Asbestos Cement	125	COV 1962	2581	-57.15	0.160	0.040
P-7508	Tiogou Ave.	12	Asbestos Cement	125	COV 1962	313	185.70	0.530	0.040
P-7509	Tiogou Ave.	12	Asbestos Cement	125	COV 1962	1493	184.48	0.520	0.180
P-7510	Tiogou Ave.	12	Asbestos Cement	125	COV 1962	1412	183.25	0.520	0.170
P-7511	South Main St.	8	Asbestos Cement	115	COV 1948	326	-35.95	0.230	0.020
P-7512	Lowell St.	6	Asbestos Cement	115	COV 1949	579	4.90	0.060	0.000
P-7513	Robbins Dr.	6	Asbestos Cement	115	COV 1949	437	2.45	0.030	0.000
P-7514	Robbins Dr.	6	Asbestos Cement	115	COV 1949	671	1.22	0.010	0.000
P-7516	Lowell St.	6	Asbestos Cement	115	COV 1949	416	1.22	0.010	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7517	South Main St.	8	Asbestos Cement	115	COV 1948	1641	-42.07	0.270	0.110
P-7518	Barber St.	2	Galvanized iron	65	COV 1898	784	3.67	0.380	1.370
P-7519	Carr's Tr.	1	Galvanized iron	65	COV 1927	372	1.22	0.500	2.480
P-7520	Barber St.	1	Galvanized iron	65	COV 1927	257	1.22	0.500	1.720
P-7521	Fairview Ave.	6	Cast iron	70	COV 1887	1007	6.12	0.070	0.020
P-7522	Woodside Ave.	6	Cast iron	45	COV 1939	340	45.83	0.520	0.600
P-7523	South Main St.	8	Asbestos Cement	115	COV 1948	246	292.27	1.870	0.580
P-7524	South Main St.	8	Asbestos Cement	115	COV 1948	484	-46.97	0.300	0.040
P-7525	South Main St.	8	Asbestos Cement	115	COV 1948	315	-308.18	1.970	0.820
P-7526	South Main St.	8	Asbestos Cement	115	COV 1948	644	-311.85	1.990	1.710
P-7527	Manor Dr.	6	Asbestos Cement	125	COV 1961	632	2.45	0.030	0.000
P-7528	Homestead Dr.	6	Asbestos Cement	125	COV 1961	325	1.22	0.010	0.000
P-7529	Stone St.	6	Cast iron	50	COV 1940	413	7.34	0.080	0.020
P-7530	Stone St.	2	Cast iron	50	COV 1940	483	1.22	0.130	0.180
P-7531	Beaton St.	6	Asbestos Cement	115	COV 1948	614	3.67	0.040	0.000
P-7532	Sunapee Ct.	6	Asbestos Cement	120	COV 1957	243	1.22	0.010	0.000
P-7533	Sunapee Ct.	6	Asbestos Cement	120	COV 1957	803	1.22	0.010	0.000
P-7534	South Main St.	8	Asbestos Cement	115	COV 1948	512	-320.42	2.050	1.430
P-7535	South Main St.	16	Cast iron	60	COV 1890	690	-1110.97	1.770	2.190
P-7536	South Main St.	16	Cast iron	60	COV 1890	167	-958.63	1.530	0.400
P-7537	South Main St.	16	Cast iron	60	COV 1890	449	-932.74	1.490	1.030
P-7538	Bank St.	8	Cast iron	60	COV 1890	240	1.22	0.010	0.000
P-7539	Parker St.	8	Ductile Iron	140	COV 2001	763	184.35	1.180	0.530
P-7540	Femcrest Dr.	6	Asbestos Cement	125	COV 1969	645	-27.12	0.310	0.060
P-7541	Kilton St.	8	Ductile Iron	140	COV 2001	618	-153.56	0.980	0.310
P-7542	Hopkins Hill Rd.	12	PVC	130	COV 1986	685	-244.07	0.690	0.130
P-7543	Potters St.	6	Asbestos Cement	120	COV 1950	328	9.79	0.110	0.010
P-7544	Potters St.	6	Asbestos Cement	120	COV 1950	225	2.45	0.030	0.000
P-7545	Prospect Ave.	6	Asbestos Cement	120	COV 1952	454	-1.22	0.010	0.000
P-7546	Dell St.	6	Asbestos Cement	120	COV 1950	423	-2.45	0.030	0.000
P-7547	Woodland Ave.	6	Asbestos Cement	120	COV 1950	778	-6.12	0.070	0.010
P-7548	Woodland Ave.	6	Asbestos Cement	120	COV 1950	315	2.45	0.030	0.000
P-7549	Wildwood St.	6	Asbestos Cement	120	COV 1950	261	1.22	0.010	0.000
P-7550	South Main St.	8	Asbestos Cement	115	COV 1948	359	305.73	1.950	0.920
P-7551	South Main St.	8	Asbestos Cement	115	COV 1948	270	303.28	1.940	0.680
P-7552	Rathbun St.	2	Copper	70	COV 1941	1131	1.22	0.130	0.230
P-7553	Wood St.	16	Cast iron	60	COV 1890	1207	789.32	1.260	2.040
P-7554	Fairview Ave.	6	Cast iron	60	COV 1887	393	2.83	0.030	0.000
P-7555	Wood St.	16	Cast iron	60	COV 1890	1078	785.65	1.260	1.800
P-7556	Brentwood Dr.	6	Asbestos Cement	120	COV 1953	548	1.22	0.010	0.000
P-7557	Wood St.	16	Cast iron	60	COV 1890	568	783.20	1.250	0.940
P-7558	Wood St.	16	Cast iron	60	COV 1890	448	1279.92	2.040	1.850
P-7559	Williams St.	2	Galvanized iron	30	COV 1932	591	2.45	0.250	2.040
P-7560	Williams St.	6	Asbestos Cement	120	COV 1950	607	1.22	0.010	0.000
P-7561	Spencer St.	6	Cast iron	30	COV 1890	527	2.07	0.020	0.010
P-7562	Tiogue Ave.	12	Asbestos Cement	115	COV 1949	351	485.11	1.380	0.290
P-7563	Tiogue Ave.	12	Asbestos Cement	115	COV 1949	3621	476.54	1.350	2.920
P-7564	Tiogue Ave.	12	Asbestos Cement	115	COV 1949	452	474.09	1.340	0.360
P-7565	Whitman St.	6	Asbestos Cement	125	COV 1969	544	1.22	0.010	0.000
P-7566	Clearview Dr.	6	Asbestos Cement	120	COV 1952	330	7.34	0.080	0.000
P-7567	Wendell St.	6	Asbestos Cement	120	COV 1954	333	4.90	0.060	0.000
P-7568	Wendell St.	6	Asbestos Cement	120	COV 1954	325	2.45	0.030	0.000
P-7569	Forestdale St.	6	Asbestos Cement	125	COV 1968	655	1.22	0.010	0.000
P-7570	Pinehurst St.	6	Asbestos Cement	120	COV 1954	533	1.22	0.010	0.000
P-7571	Clearviw Dr.	6	Asbestos Cement	120	COV 1952	375	1.22	0.010	0.000
P-7572	Tobin St.	6	Ductile Iron	130	COV 1989	379	0.84	0.010	0.000
P-7573	Card St.	6	Cast iron	30	COV 1887	541	1.60	0.020	0.000
P-7574	Montana Ave.	3	Galvanized iron	30	COV 1933	499	4.91	0.220	0.870
P-7575	Montana Ave.	3	Galvanized iron	30	COV 1933	358	4.64	0.210	0.480
P-7576	Montana Ave.	3	Galvanized iron	30	COV 1933	300	0.97	0.040	0.030
P-7577	Montana Ave.	3	Galvanized iron	30	COV 1933	302	-1.48	0.070	0.060
P-7578	Alaska St.	2	Galvanized iron	30	COV 1933	611	-2.71	0.280	2.540
P-7579	Arizona St.	2	Galvanized iron	30	COV 1933	752	-2.18	0.220	2.090
P-7580	Idaho St.	2	Galvanized iron	30	COV 1933	706	1.22	0.130	0.670
P-7581	Colorado St.	2	Galvanized iron	30	COV 1933	681	1.22	0.130	0.650
P-7582	Arizona St.	2	Galvanized iron	30	COV 1933	204	1.22	0.130	0.190
P-7583	Idaho St.	2	Galvanized iron	30	COV 1933	382	1.22	0.130	0.370
P-7584	Lakeside Dr.	3	Galvanized iron	30	COV 1933	699	2.45	0.110	0.330
P-7585	Lakeside Dr.	2	Galvanized iron	30	COV 1933	1353	1.22	0.130	1.290
P-7586	South Main St.	16	Cast iron	60	COV 1890	355	-1119.53	1.790	1.140
P-7587	Main St.	16	Cast iron	60	COV 1890	800	-1120.76	1.790	2.580
P-7588	Arnold Rd.	16	Cast iron	60	COV 1890	521	603.06	0.960	0.530
P-7589	Arnold Rd.	16	Cast iron	60	COV 1890	117	600.61	0.960	0.120
P-7590	Sand St.	6	Asbestos Cement	125	COV 1863	242	1.22	0.010	0.000
P-7591	Overview Dr.	1.5	Copper	70	COV 1940	918	0.40	0.070	0.090
P-7592	Overview Dr.	6	Asbestos Cement	115	COV 1949	124	1.22	0.010	0.000
P-7593	Oak Rd.	8	Ductile Iron	140	COV 2000	327	-2.05	0.010	0.000
P-7594	Pine Ave.	8	Ductile Iron	140	COV 2000	227	2.45	0.020	0.000
P-7595	Pine Ave.	8	Ductile Iron	140	COV 2000	944	75.61	0.480	0.130
P-7596	Arnold Rd.	16	Cast iron	60	COV 1890	218	-595.32	0.950	0.220
P-7597	Arnold Rd.	16	Cast iron	60	COV 1890	176	-596.94	0.950	0.180
P-7598	Oak Rd.	8	Ductile Iron	140	COV 2000	442	-81.33	0.520	0.070
P-7599	Larchmont Dr.	8	Asbestos Cement	125	COV 1966	265	1.22	0.010	0.000

KCWA Model
Pipeline Database
Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7600	Larchmont Dr.	8	Asbestos Cement	125	COV 1966	1443	-83.78	0.530	0.290
P-7601	York Dr.	8	Asbestos Cement	125	COV 1966	619	-161.22	1.030	0.410
P-7602	Haywood Rd.	8	Asbestos Cement	120	COV 1959	300	-163.66	1.040	0.220
P-7603	Coventry Dr.	6	Asbestos Cement	120	COV 1959	269	-63.73	0.720	0.140
P-7604	Ada Ct.	6	Asbestos Cement	120	COV 1959	268	1.22	0.010	0.000
P-7605	Coventry Dr.	6	Asbestos Cement	120	COV 1959	371	-66.18	0.750	0.210
P-7606	Audrey Ct.	6	Asbestos Cement	120	COV 1959	255	1.22	0.010	0.000
P-7607	Coventry Dr.	6	Asbestos Cement	120	COV 1959	759	-68.63	0.780	0.460
P-7608	Tiogue Ave.	20	Ductile Iron	140	COV 2000	542	277.00	0.280	0.010
P-7609	Tiogue Ave.	20	Ductile Iron	140	COV 2000	347	-166.05	0.170	0.000
P-7610	Lionel Ave.	8	Asbestos Cement	120	COV 1959	720	109.73	0.700	0.250
P-7611	Charlotte St.	6	Asbestos Cement	120	COV 1959	176	34.88	0.400	0.030
P-7612	Charlotte St.	6	Asbestos Cement	120	COV 1959	611	33.66	0.380	0.100
P-7613	Morris St.	6	Asbestos Cement	120	COV 1959	491	57.71	0.650	0.210
P-7614	Coventry Dr.	6	Asbestos Cement	120	COV 1959	162	101.16	1.150	0.200
P-7615	Lionel Ave.	8	Asbestos Cement	120	COV 1959	605	73.62	0.470	0.100
P-7616	Morris St.	6	Asbestos Cement	120	COV 1959	279	25.28	0.290	0.030
P-7618	Lionel Ave.	8	Asbestos Cement	120	COV 1959	389	47.12	0.300	0.030
P-7619	Coventry Dr.	6	Asbestos Cement	120	COV 1959	561	45.90	0.520	0.160
P-7620	Coventry Dr.	6	Asbestos Cement	120	COV 1959	196	44.67	0.510	0.050
P-7621	York Dr.	8	Asbestos Cement	125	COV 1966	1014	76.21	0.490	0.170
P-7622	Angelwood Dr.	6	Asbestos Cement	120	COV 1959	413	-103.38	1.170	0.530
P-7623	Angelwood Dr.	6	Asbestos Cement	120	COV 1959	556	-56.60	0.640	0.230
P-7624	Lawnwood Rd.	6	Asbestos Cement	125	COV 1969	629	-48.00	0.540	0.180
P-7625	Lawnwood Rd.	6	Asbestos Cement	125	COV 1969	409	-49.22	0.560	0.120
P-7626	York Dr.	8	Asbestos Cement	125	COV 1966	1968	178.37	1.140	1.590
P-7627	Johnson Blvd.	12	Asbestos Cement	125	COV 1961	947	-320.50	0.910	0.310
P-7628	West Lake Dr.	6	Asbestos Cement	125	COV 1961	539	1.22	0.010	0.000
P-7629	Johnson Blvd.	10	Asbestos Cement	120	COV 1956	345	-322.95	1.320	0.300
P-7630	Ledo St.	6	Asbestos Cement	125	COV 1962	714	1.22	0.010	0.000
P-7631	Johnson Blvd.	10	Asbestos Cement	120	COV 1956	326	-325.40	1.330	0.290
P-7632	Majorie St.	6	Asbestos Cement	125	COV 1962	314	6.12	0.070	0.000
P-7633	Majorie St.	6	Asbestos Cement	125	COV 1962	502	2.45	0.030	0.000
P-7634	Carolyn St.	6	Asbestos Cement	125	COV 1961	205	1.22	0.010	0.000
P-7635	Edna St.	6	Asbestos Cement	125	COV 1961	405	2.45	0.030	0.000
P-7636	Nancy St.	6	Asbestos Cement	125	COV 1960	266	1.22	0.010	0.000
P-7637	Johnson Blvd.	10	Asbestos Cement	120	COV 1958	924	-332.74	1.360	0.860
P-7638	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	344	1080.44	1.720	0.230
P-7639	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	1263	-1081.66	1.730	0.850
P-7640	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	266	-1082.89	1.730	0.180
P-7641	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	441	-1084.11	1.730	0.300
P-7642	Johnson Blvd.	12	Asbestos Cement	125	COV 1961	385	403.69	1.150	0.200
P-7643	Johnson Blvd.	12	Asbestos Cement	125	COV 1961	322	402.47	1.140	0.160
P-7644	Colonial Rd.	6	Asbestos Cement	125	COV 1966	474	34.74	0.390	0.080
P-7645	Colonial Rd.	6	Asbestos Cement	125	COV 1966	492	33.52	0.380	0.070
P-7646	Colonial Rd.	6	Asbestos Cement	125	COV 1966	297	32.29	0.370	0.040
P-7647	Johnson Blvd.	12	PVC	135	COV 1991	513	366.50	1.040	0.190
P-7648	Johnson Blvd.	12	PVC	135	COV 1991	309	397.57	1.130	0.130
P-7649	Arnold Rd.	16	Cast iron	60	COV 1890	62	424.20	0.680	0.030
P-7650	Arnold Rd.	16	Cast Iron	60	COV 1890	1238	-661.14	1.050	1.500
P-7651	Arnold Rd.	16	Cast iron	60	COV 1890	390	-669.70	1.070	0.490
P-7652	Twin Lakes Ave.	8	Ductile Iron	140	COV 2001	846	7.34	0.050	0.000
P-7653	Loretta Ave.	8	Ductile Iron	140	COV 2001	316	1.22	0.010	0.000
P-7654	Twin Lakes Ave.	8	Ductile Iron	140	COV 2001	233	4.90	0.030	0.000
P-7655	Henry Ave.	8	Ductile Iron	140	COV 2001	290	1.22	0.010	0.000
P-7656	Twin Lakes Ave.	8	Ductile Iron	140	COV 2001	235	2.45	0.020	0.000
P-7657	Glen Ave.	8	Ductile Iron	140	COV 2001	244	1.22	0.010	0.000
P-7658	Dixie Rd.	6	Ductile Iron	135	COV 1994	560	1.22	0.010	0.000
P-7659	Arnold Rd.	16	Cast iron	60	COV 1890	628	-29.08	0.050	0.000
P-7660	Beach St.	1.5	Copper	70	COV 1954	439	1.22	0.220	0.350
P-7661	West Shore Dr.	1	Copper	70	COV 1936	301	-1.22	0.500	1.750
P-7662	Vale St.	2	Copper	70	COV 1936	613	-2.45	0.250	0.440
P-7663	Arnold Rd.	16	Cast Iron	60	COV 1890	315	31.52	0.050	0.000
P-7666	Quiet Ave.	6	Asbestos Cement	125	COV 1966	286	-1.22	0.010	0.000
P-7667	Cape Way	6	Asbestos Cement	130	COV 1975	132	1.22	0.010	0.000
P-7669	Lydia Rd.	8	Asbestos Cement	125	COV 1963	374	93.95	0.600	0.090
P-7670	Cove Rd.	6	Asbestos Cement	125	COV 1963	550	2.45	0.030	0.000
P-7671	Cove Rd.	6	Asbestos Cement	125	COV 1963	198	1.22	0.010	0.000
P-7672	Lydia Rd.	8	Asbestos Cement	125	COV 1963	974	90.28	0.580	0.220
P-7673	Vera Rd.	6	Asbestos Cement	125	COV 1963	1196	25.75	0.290	0.110
P-7674	Grant Dr.	6	Asbestos Cement	125	COV 1962	390	-20.10	0.230	0.020
P-7675	Grant Dr.	6	Asbestos Cement	125	COV 1962	598	-23.34	0.260	0.050
P-7676	Lydia Rd.	8	Asbestos Cement	125	COV 1963	346	-63.30	0.400	0.040
P-7677	Lydia Rd.	8	Asbestos Cement	125	COV 1963	308	38.74	0.250	0.010
P-7678	Tulip Rd.	6	Asbestos Cement	125	COV 1963	575	19.38	0.220	0.030
P-7679	Myra Rd.	6	Asbestos Cement	125	COV 1963	310	-2.02	0.020	0.000
P-7680	Lydia Rd.	8	Asbestos Cement	125	COV 1963	998	18.13	0.120	0.010
P-7681	Jade Rd.	8	Asbestos Cement	125	COV 1969	315	16.91	0.110	0.000
P-7682	Jade Rd.	8	Asbestos Cement	125	COV 1969	1209	1.22	0.010	0.000
P-7683	Myra Rd.	6	Asbestos Cement	125	COV 1963	825	14.46	0.160	0.030
P-7684	Myra Rd.	6	Asbestos Cement	125	COV 1963	169	-20.17	0.230	0.010
P-7685	Holmes Rd.	6	Asbestos Cement	120	COV 1954	1148	33.41	0.380	0.180
P-7686	Reno Ct.	6	Asbestos Cement	125	COV 1969	273	1.22	0.010	0.000

KCWA Model
 Pipeline Database
 Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7687	Holmes Rd.	6	Asbestos Cement	120	COV 1954	516	30.96	0.350	0.070
P-7688	Arnold Rd.	16	Cast Iron	60	COV 1890	233	12.60	0.020	0.000
P-7689	West Shore Dr.	6	Asbestos Cement	125	COV 1966	541	1.22	0.010	0.000
P-7690	Arnold Rd.	16	Cast Iron	60	COV 1890	222	10.15	0.020	0.000
P-7691	Grant Dr.	6	Asbestos Cement	125	COV 1962	959	-44.63	0.510	0.240
P-7692	Arnold Rd.	16	Cast Iron	60	COV 1890	77	53.56	0.090	0.000
P-7693	Florida Ave.	6	Asbestos Cement	120	COV 1954	545	1.22	0.010	0.000
P-7694	Arnold Rd.	16	Cast Iron	60	COV 1890	308	51.11	0.080	0.000
P-7695	Briar Point Ave.	6	Asbestos Cement	115	COV 1947	550	1.22	0.010	0.000
P-7697	Arnold Rd.	16	Cast Iron	60	COV 1890	1124	17.14	0.030	0.000
P-7698	Larch Dr.	8	Asbestos Cement	120	COV 1959	335	9.79	0.060	0.000
P-7699	Balsam Dr.	6	Asbestos Cement	120	COV 1959	429	4.91	0.060	0.000
P-7700	Balsam Dr.	6	Asbestos Cement	120	COV 1959	161	2.45	0.030	0.000
P-7701	Harrington Dr.	6	Asbestos Cement	125	COV 1965	351	1.22	0.010	0.000
P-7702	Larch Dr.	6	Asbestos Cement	120	COV 1959	839	3.66	0.040	0.000
P-7703	Larch Dr.	6	Asbestos Cement	120	COV 1959	754	-1.24	0.010	0.000
P-7704	Larch Dr.	6	Asbestos Cement	120	COV 1959	224	3.67	0.040	0.000
P-7705	View Rd.	2	Copper	70	COV 1959	459	2.45	0.250	0.330
P-7706	Harrington Rd.	6	Asbestos Cement	125	COV 1965	452	1.22	0.010	0.000
P-7707	Arnold Rd.	16	Cast Iron	60	COV 1890	472	6.12	0.010	0.000
P-7708	Crestwood Rd.	8	Asbestos Cement	120	COV 1959	632	3.67	0.020	0.000
P-7709	North Glen Dr.	6	Asbestos Cement	120	COV 1959	885	1.22	0.010	0.000
P-7710	South Glen Dr.	6	Asbestos Cement	120	COV 1959	1106	1.22	0.010	0.000
P-7711	Arnold Rd.	8	Asbestos Cement	125	COV 1969	1136	1.22	0.010	0.000
P-7712	Arnold Rd.	16	Cast Iron	60	COV 1890	55	1449.72	2.310	0.290
P-7714	Tiogus Ave.	16	Ductile Iron	140	COV 2000	424	-487.56	0.780	0.060
P-7715	Tiogus Ave.	20	Ductile Iron	140	COV 2000	2352	-346.85	0.350	0.060
P-7717	Tiogus Ave.	12	Ductile Iron	140	COV 2000	3087	1.22	0.000	0.000
P-7718	Tiogus Ave.	12	Ductile Iron	140	COV 2000	126	388.77	1.100	0.050
P-7719	East Shore Dr.	6	Asbestos Cement	120	COV 1953	238	44.31	0.500	0.060
P-7720	East Shore Dr.	6	Asbestos Cement	120	COV 1953	961	43.08	0.490	0.240
P-7721	Darton St.	6	Asbestos Cement	120	COV 1953	289	1.22	0.010	0.000
P-7722	East Shore Dr.	6	Asbestos Cement	120	COV 1953	324	40.63	0.460	0.070
P-7723	Elton St.	6	Asbestos Cement	120	COV 1953	695	35.74	0.410	0.130
P-7724	Mead St.	6	Asbestos Cement	120	COV 1953	311	4.90	0.060	0.000
P-7725	Seneca St.	6	Asbestos Cement	130	COV 1971	244	1.22	0.010	0.000
P-7726	Mead St.	6	Asbestos Cement	120	COV 1953	345	2.45	0.030	0.000
P-7727	Mohawk St.	6	Asbestos Cement	120	COV 1953	426	1.22	0.010	0.000
P-7728	Elton St.	6	Asbestos Cement	120	COV 1953	297	29.62	0.340	0.040
P-7729	Tiogus Ave.	12	Asbestos Cement	115	COV 1949	1241	-343.24	0.970	0.540
P-7730	Tiogus Tank	12	Asbestos Cement	120	COV 1953	188	49.96	0.140	0.000
P-7731	Tiogus Tank	12	Asbestos Cement	120	COV 1953	131	49.96	0.140	0.000
P-7732	Tiogus Ave.	12	Ductile Iron	140	COV 2000	47	-371.64	1.050	0.020
P-7733	East Shore Dr.	6	Asbestos Cement	120	COV 1953	778	3.67	0.040	0.000
P-7734	Mohawk St.	6	Asbestos Cement	120	COV 1953	121	1.22	0.010	0.000
P-7735	Mohawk St.	6	Asbestos Cement	120	COV 1953	919	1.22	0.010	0.000
P-7736	Rawlinson Dr.	6	Asbestos Cement	120	COV 1959	264	-1.22	0.010	0.000
P-7737	East Shore Dr.	8	Asbestos Cement	130	COV 1970	548	6.12	0.040	0.000
P-7738	East Shore Dr.	8	Asbestos Cement	130	COV 1970	347	1.22	0.010	0.000
P-7739	Ferris Dr.	6	Ductile Iron	135	COV 1992	455	3.67	0.040	0.000
P-7740	Ferris Dr.	6	Ductile Iron	135	COV 1992	232	1.22	0.010	0.000
P-7741	Ferris Dr.	6	Ductile Iron	135	COV 1992	336	1.22	0.010	0.000
P-7742	Rawlinson Dr.	6	Asbestos Cement	120	COV 1959	1777	-8.57	0.100	0.020
P-7743	Tiogus Ave.	12	Asbestos Cement	115	COV 1949	944	-323.04	0.920	0.370
P-7744	Tiogus Ave.	12	Asbestos Cement	115	COV 1949	68	-420.38	1.190	0.040
P-7745	Tiogus Ave.	12	Asbestos Cement	115	COV 1949	326	285.98	0.810	0.100
P-7746	Jennifer Ln.	8	Ductile Iron	135	COV 1992	266	6.12	0.040	0.000
P-7747	Patience Ln.	8	Ductile Iron	135	COV 1992	432	1.22	0.010	0.000
P-7748	Jennifer Ln.	8	Ductile Iron	135	COV 1992	304	3.67	0.020	0.000
P-7749	Sooner Ln.	8	Ductile Iron	135	COV 1992	432	1.22	0.010	0.000
P-7750	Jennifer Ln.	8	Ductile Iron	135	COV 1995	723	1.22	0.010	0.000
P-7751	Tiogus Ave.	12	Asbestos Cement	115	COV 1949	1201	278.64	0.790	0.360
P-7752	Gilles St.	8	Ductile Iron	140	COV 2000	488	1.22	0.010	0.000
P-7753	Tiogus Ave.	12	Ductile Iron	140	COV 2000	141	276.19	0.780	0.030
P-7754	Tiogus Ave.	12	Asbestos Cement	125	COV 1965	226	274.97	0.780	0.060
P-7755	Tiogus Ave.	12	Asbestos Cement	125	COV 1965	482	228.77	0.650	0.090
P-7756	Old North Rd.	12	PVC	125	COV 1976	947	43.75	0.120	0.010
P-7757	Mulhearn Dr. (Private)	6	Ductile Iron	135	COV 1995	211	2.45	0.030	0.000
P-7758	Mulhearn Dr. (Private)	6	Ductile Iron	135	COV 1995	614	0.64	0.010	0.000
P-7759	Mulhearn Dr. (Private)	6	Ductile Iron	135	COV 1995	738	-0.58	0.010	0.000
P-7760	Deerfield Rd.	8	Ductile Iron	140	COV 2000	305	38.85	0.250	0.010
P-7761	Deerfield Rd.	6	Asbestos Cement	125	COV 1964	857	15.87	0.180	0.030
P-7762	Englewood Rd.	6	Asbestos Cement	125	COV 1964	479	14.64	0.170	0.020
P-7763	Kennedy Dr.	8	Asbestos Cement	125	COV 1961	753	13.42	0.090	0.010
P-7764	Cyruss Rd.	6	Asbestos Cement	125	COV 1962	783	-21.76	0.250	0.050
P-7765	Kennedy Dr.	8	Asbestos Cement	125	COV 1961	367	33.96	0.220	0.010
P-7766	Bonney St.	6	Asbestos Cement	125	COV 1960	717	1.22	0.010	0.000
P-7767	Dawley St.	6	Asbestos Cement	120	COV 1953	753	1.22	0.010	0.000
P-7768	Tiogus Ave.	12	Asbestos Cement	125	COV 1965	489	260.28	0.740	0.110
P-7769	Tiogus Ave.	12	Asbestos Cement	125	COV 1965	552	257.83	0.730	0.120
P-7770	Tiogus Ave.	12	Asbestos Cement	125	COV 1965	312	256.61	0.730	0.070
P-7771	Lantern Ln.	6	Asbestos Cement	125	COV 1960	799	1.22	0.010	0.000
P-7772	Pembroke Ln.	6	Asbestos Cement	125	COV 1965	374	27.26	0.310	0.040

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7773	Columbia Ave.	6	Asbestos Cement	120	COV 1959	870	-14.18	0.160	0.030
P-7774	Holloway Ave.	6	Asbestos Cement	120	COV 1958	338	-96.12	1.090	0.380
P-7775	Pembroke Ln.	6	Asbestos Cement	125	COV 1966	344	40.22	0.460	0.070
P-7776	Princeton Ave.	8	Asbestos Cement	125	COV 1960	793	21.69	0.140	0.010
P-7777	Holloway Ave.	6	Asbestos Cement	120	COV 1958	324	-51.00	0.580	0.110
P-7778	Pembroke Ln.	6	Asbestos Cement	125	COV 1966	858	17.31	0.200	0.040
P-7779	Pettine St.	6	Asbestos Cement	120	COV 1959	314	4.67	0.050	0.000
P-7780	Yale Dr.	6	Asbestos Cement	120	COV 1959	795	-4.77	0.050	0.000
P-7781	Holloway Ave.	6	Asbestos Cement	120	COV 1958	324	-21.28	0.240	0.020
P-7782	Pembroke Ln.	6	Asbestos Cement	125	COV 1966	393	11.41	0.130	0.010
P-7783	Baylor Dr.	6	Asbestos Cement	125	COV 1966	640	5.65	0.060	0.000
P-7784	Colby Dr.	6	Asbestos Cement	125	COV 1963	632	1.23	0.010	0.000
P-7785	Pettine St.	6	Asbestos Cement	120	COV 1959	873	-8.22	0.090	0.010
P-7786	Pembroke Ln.	6	Asbestos Cement	125	COV 1966	1132	4.54	0.050	0.000
P-7787	Baylor Dr.	6	Asbestos Cement	125	COV 1966	324	3.20	0.040	0.000
P-7788	Pembroke Ln.	6	Asbestos Cement	125	COV 1966	746	6.51	0.070	0.010
P-7789	Pettine St.	6	Asbestos Cement	120	COV 1959	484	-8.23	0.090	0.010
P-7790	Pembroke Ln.	6	Asbestos Cement	125	COV 1966	576	13.51	0.150	0.020
P-7791	Yale Dr.	6	Asbestos Cement	120	COV 1959	948	-15.28	0.170	0.040
P-7792	Yale Dr.	6	Asbestos Cement	120	COV 1959	239	27.57	0.310	0.030
P-7793	Princeton Ave.	8	Asbestos Cement	125	COV 1960	1094	-50.19	0.320	0.080
P-7794	Princeton Ave.	8	Asbestos Cement	125	COV 1960	637	76.53	0.490	0.110
P-7795	Columbia Ave.	6	Asbestos Cement	120	COV 1959	531	-28.48	0.320	0.060
P-7796	Columbia Ave.	6	Asbestos Cement	120	COV 1959	1889	-29.71	0.340	0.240
P-7797	Princeton Ave.	8	Asbestos Cement	125	COV 1960	321	103.79	0.660	0.090
P-7798	Wesleyan Ave.	8	Asbestos Cement	125	COV 1967	330	50.86	0.320	0.030
P-7799	Vanderbilt Ter.	6	Asbestos Cement	130	COV 1976	600	17.71	0.200	0.030
P-7800	Cornell Ct.	6	Asbestos Cement	125	COV 1967	517	-1.04	0.010	0.000
P-7801	Princeton Ave.	8	Asbestos Cement	125	COV 1960	630	-51.71	0.330	0.050
P-7802	Princeton Ave.	8	Asbestos Cement	125	COV 1960	357	49.44	0.320	0.030
P-7803	Princeton Ave.	8	Asbestos Cement	125	COV 1960	655	2.42	0.020	0.000
P-7804	Vanderbilt Ter.	6	Asbestos Cement	130	COV 1976	647	17.52	0.200	0.030
P-7805	Princeton Ave.	8	Asbestos Cement	125	COV 1960	485	18.72	0.120	0.010
P-7806	Wesleyan Ave.	8	Asbestos Cement	125	COV 1967	1745	-31.93	0.200	0.060
P-7807	Princeton Ave.	8	Asbestos Cement	125	COV 1960	342	26.84	0.170	0.010
P-7808	Pilgrim Ave.	8	Asbestos Cement	120	COV 1958	1164	-79.20	0.510	0.230
P-7809	Donovan St. (Private)	6	Asbestos Cement	120	COV 1958	317	1.22	0.010	0.000
P-7810	Pilgrim Ave.	8	Asbestos Cement	120	COV 1958	444	-81.65	0.520	0.090
P-7811	Dexter St.	6	Asbestos Cement	120	COV 1950	705	1.22	0.010	0.000
P-7812	Pilgrim Ave.	8	Asbestos Cement	115	COV 1949	1273	-84.09	0.950	1.210
P-7813	Bernard Dr.	6	Asbestos Cement	120	COV 1954	364	1.22	0.010	0.000
P-7814	Card St.	6	Ductile Iron	130	COV 1989	207	1.22	0.010	0.000
P-7815	Wesleyan Ave.	6	Asbestos Cement	125	COV 1967	360	-20.14	0.230	0.020
P-7816	Amherst Ave.	6	Asbestos Cement	125	COV 1967	382	1.22	0.010	0.000
P-7817	Wesleyan Ave.	6	Asbestos Cement	125	COV 1967	771	-22.59	0.260	0.050
P-7818	Pilgrim Ave.	8	Asbestos Cement	120	COV 1958	343	104.81	0.670	0.110
P-7819	Reddington St.	6	Asbestos Cement	130	COV 1975	1245	9.96	0.110	0.020
P-7820	Laurel Ave.	6	Asbestos Cement	125	COV 1967	382	35.24	0.400	0.060
P-7821	Laurel Ave.	6	Asbestos Cement	125	COV 1967	321	43.98	0.500	0.080
P-7822	Centre St.	8	Asbestos Cement	125	COV 1963	1097	0.68	0.000	0.000
P-7823	Pilgrim Ave.	8	Asbestos Cement	120	COV 1958	367	-93.63	0.600	0.100
P-7824	Pilgrim Ave.	8	Asbestos Cement	120	COV 1958	486	93.08	0.590	0.130
P-7825	Matteson St.	6	Asbestos Cement	125	COV 1967	931	-14.86	0.170	0.030
P-7826	Laurel Ave.	6	Asbestos Cement	125	COV 1967	448	-40.97	0.460	0.100
P-7827	Fairview Ave.	6	Cast iron	60	COV 1887	835	117.40	1.330	4.910
P-7828	Laurel Ave.	6	Cast iron	30	COV 1887	281	-42.00	0.480	0.890
P-7829	Laurel Ave.	6	Cast iron	30	COV 1887	300	-24.49	0.280	0.350
P-7830	Laurel Ave.	6	Cast iron	30	COV 1887	201	-24.89	0.280	0.240
P-7831	Taft St.	6	Cast iron	30	COV 1887	559	-18.73	0.210	0.400
P-7832	Taft St.	6	Cast iron	30	COV 1887	301	-19.96	0.230	0.240
P-7833	Greene St.	2	Galvanized iron	30	COV 1946	613	0.83	0.080	0.290
P-7834	Taft St.	6	Asbestos Cement	125	COV 1965	743	-22.01	0.250	0.050
P-7835	Centre St.	6	Ductile Iron	135	COV 1994	676	1.10	0.010	0.000
P-7836	Shellra Ave.	8	Asbestos Cement	125	COV 1965	1810	-22.13	0.140	0.030
P-7837	Turcotte St.	8	PVC	130	COV 1987	418	-24.58	0.160	0.010
P-7838	Cote Ct.	6	Ductile Iron	140	COV 2000	845	-25.81	0.290	0.060
P-7839	Laurel Ave.	6	Asbestos Cement	125	COV 1969	204	45.80	0.520	0.050
P-7840	Laurel Ave.	6	Asbestos Cement	125	COV 1969	719	16.32	0.190	0.030
P-7841	Cote Ct.	6	Ductile Iron	140	COV 2000	577	-28.25	0.320	0.050
P-7842	Cote Ct.	6	Ductile Iron	140	COV 2000	301	1.22	0.010	0.000
P-7843	Sandy Bottom Rd.	8	Asbestos Cement	125	COV 1965	3206	-497.94	3.180	17.310
P-7844	Main St.	16	Cast iron	60	COV 1890	436	1124.43	1.790	1.420
P-7845	Station St.	12	Asbestos Cement	115	COV 1941	99	0.00	0.000	0.000
P-7846	Main St.	16	Cast iron	60	COV 1890	1163	1121.98	1.790	3.760
P-7847	Battley Ave.	6	Ductile Iron	135	COV 1990	400	1.22	0.010	0.000
P-7848	Washington St.	16	Cast iron	60	COV 1890	1140	-1623.59	2.590	7.310
P-7849	Knotty Oak Rd. PS	10	Ductile Iron	135	COV 1995	259	1331.21	5.440	2.530
P-7851	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	404	-2957.25	3.020	0.730
P-7853	Mapledale St.	6	Cast iron	45	COV 1938	576	-2.69	0.030	0.010
P-7854	Mapledale St.	4	Cast iron	30	COV 1890	415	-3.91	0.100	0.120
P-7855	Mapledale St.	4	Cast iron	30	COV 1890	523	-5.14	0.130	0.240
P-7856	Mapledale St.	4	Cast iron	30	COV 1890	107	15.06	0.380	0.360
P-7858	Contentment Dr.	8	Asbestos Cement	130	COV 1969	1048	2.45	0.020	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7859	Contentment Dr.	8	Cast iron	80	COV 1946	1030	1.22	0.010	0.000
P-7860	Washington St.	12	Ductile Iron	140	COV 2004	1482	-21.42	0.060	0.000
P-7861	Pilgrim Ave.	6	Asbestos Cement	115	COV 1949	1018	106.72	1.210	1.500
P-7862	Pilgrim Ave.	6	Asbestos Cement	115	COV 1949	219	-40.78	0.460	0.050
P-7863	Washington St.	12	Cast iron	70	COV 1928	469	-146.27	0.410	0.110
P-7865	Washington St.	12	Cast iron	60	COV 1887	312	6.74	0.020	0.000
P-7866	Anthony St.	6	Cast iron	45	COV 1933	1223	0.00	0.000	0.000
P-7867	Boston St.	6	Cast iron	40	COV 1928	1150	0.00	0.000	0.000
P-7868	Meeting St.	6	Cast iron	45	COV 1938	311	0.02	0.000	0.000
P-7869	Meeting St.	6	Cast iron	45	COV 1938	681	-1.21	0.010	0.000
P-7870	Benoit St.	6	Cast iron	45	COV 1938	123	-3.65	0.040	0.000
P-7871	Boston St.	6	Cast iron	40	COV 1928	184	-1.24	0.010	0.000
P-7872	Meeting St.	2	Galvanized iron	30	COV 1938	186	1.22	0.130	0.180
P-7873	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	1176	-2958.47	3.020	2.140
P-7874	Foster Dr. (Private)	6	Asbestos Cement	115	COV 1947	172	1.22	0.010	0.000
P-7875	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	810	-2960.92	3.020	1.480
P-7876	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	122	-2962.15	3.030	0.220
P-7877	Knotty Oak Rd.	12	Asbestos Cement	125	COV 1962	96	684.95	1.940	0.130
P-7878	Knotty Oak Rd.	12	Asbestos Cement	125	COV 1962	2740	682.50	1.940	3.680
P-7879	Knotty Oak Rd.	12	Asbestos Cement	125	COV 1962	146	683.72	1.940	0.200
P-7880	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	2418	-2963.37	3.030	4.410
P-7881	White Rock Dr.	8	Asbestos Cement	125	COV 1965	759	1.22	0.010	0.000
P-7882	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	3334	-2965.82	3.030	6.100
P-7884	Marie Dr.	8	Asbestos Cement	125	COV 1969	660	1.22	0.010	0.000
P-7885	Marie Dr.	8	Asbestos Cement	125	COV 1969	883	-2.45	0.020	0.000
P-7886	Marie Dr.	8	Asbestos Cement	125	COV 1969	503	-3.67	0.020	0.000
P-7887	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	71	2969.49	3.030	0.130
P-7888	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	1031	2967.04	3.030	1.890
P-7889	Old Hope Rd.	8	Ductile Iron	135	COV 1990	785	1.22	0.010	0.000
P-7890	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	7855	-2974.39	3.040	14.440
P-7891	Knotty Oak Rd.	12	Ductile Iron	130	COV 1989	822	-148.71	0.420	0.060
P-7892	Clarke Rd.	20	Asbestos Cement	125	COV 1968	1222	-2826.90	2.890	1.900
P-7893	Red Oak Dr.	8	Asbestos Cement	130	COV 1980	529	-37.29	0.240	0.020
P-7894	Juniper Ct.	6	Asbestos Cement	130	COV 1979	186	1.22	0.010	0.000
P-7895	Red Oak Dr.	8	Asbestos Cement	130	COV 1980	459	-39.74	0.250	0.020
P-7896	Wintergreen Ct.	6	Asbestos Cement	130	COV 1981	318	1.22	0.010	0.000
P-7897	Barberry Ct.	6	Asbestos Cement	130	COV 1980	318	1.22	0.010	0.000
P-7898	Red Oak Dr.	8	Asbestos Cement	130	COV 1980	481	-43.41	0.280	0.030
P-7899	Honey Locust Ct.	6	Asbestos Cement	130	COV 1979	441	1.22	0.010	0.000
P-7900	Forsythia Ct.	6	Asbestos Cement	130	COV 1979	327	1.22	0.010	0.000
P-7901	Red Oak Dr.	8	Asbestos Cement	130	COV 1980	1135	-47.08	0.300	0.070
P-7902	Red Oak Dr.	8	Asbestos Cement	130	COV 1980	286	-249.36	1.590	0.400
P-7903	Red Oak Dr.	8	Asbestos Cement	130	COV 1980	1011	1.22	0.010	0.000
P-7904	White Pine Rd.	8	Asbestos Cement	130	COV 1980	980	-251.81	1.610	1.390
P-7905	Crabapple Ct.	6	Asbestos Cement	130	COV 1980	303	1.22	0.010	0.000
P-7906	White Pine Rd.	8	Asbestos Cement	130	COV 1980	544	-254.26	1.620	0.790
P-7907	Clarke Rd.	20	Asbestos Cement	125	COV 1968	464	2798.17	2.860	0.710
P-7908	Clarke Rd.	20	Asbestos Cement	125	COV 1968	488	2795.72	2.860	0.740
P-7909	Clarke Rd.	20	Asbestos Cement	125	COV 1968	354	2793.28	2.850	0.540
P-7910	Rosewood Ct.	6	Asbestos Cement	130	COV 1981	409	1.22	0.010	0.000
P-7911	Clarke Rd.	20	Asbestos Cement	125	COV 1968	485	2790.83	2.850	0.730
P-7912	Glenview Ct.	8	Asbestos Cement	130	COV 1976	727	1.22	0.010	0.000
P-7913	Labrea Way	8	Ductile Iron	135	COV 1990	890	1.22	0.010	0.000
P-7914	Sunrise Ave.	6	Asbestos Cement	120	COV 1953	117	-183.71	2.080	0.440
P-7915	Spencer St.	6	Asbestos Cement	115	COV 1945	130	-96.73	1.100	0.160
P-7916	Clarke Rd.	20	Asbestos Cement	125	COV 1968	2355	-3053.65	3.120	4.210
P-7917	Black Walnut Dr.	8	PVC	130	COV 1983	359	201.05	1.280	0.340
P-7918	Poplar Ct.	8	PVC	130	COV 1980	308	1.22	0.010	0.000
P-7919	Black Walnut Dr.	8	PVC	130	COV 1983	137	198.60	1.270	0.130
P-7920	Mulberry Ct.	8	PVC	130	COV 1980	294	1.22	0.010	0.000
P-7921	Black Walnut Dr.	8	PVC	130	COV 1983	433	196.16	1.250	0.390
P-7922	Pin Oak Ct.	8	PVC	130	COV 1980	295	1.22	0.010	0.000
P-7923	Black Walnut Dr.	8	PVC	130	COV 1983	692	193.71	1.240	0.600
P-7924	Birchwood Ln.	8	PVC	130	COV 1980	698	1.22	0.010	0.000
P-7925	Black Walnut Dr.	8	PVC	130	COV 1983	607	191.26	1.220	0.520
P-7926	Briarwood Ct.	8	PVC	130	COV 1980	298	1.22	0.010	0.000
P-7927	Black Walnut Dr.	8	PVC	130	COV 1983	281	188.81	1.210	0.230
P-7928	Elmwood Ct.	8	PVC	130	COV 1980	184	1.22	0.010	0.000
P-7929	Black Walnut Dr.	8	PVC	130	COV 1983	933	186.36	1.190	0.760
P-7930	Hill St.	8	Asbestos Cement	115	COV 1947	603	466.58	2.980	3.370
P-7931	South Pond Dr.	8	Ductile Iron	135	COV 1998	895	3.67	0.020	0.000
P-7932	South Pond Dr.	8	Ductile Iron	135	COV 1998	1548	1.17	0.010	0.000
P-7933	Evergreen Ct.	8	Ductile Iron	135	COV 1998	776	1.22	0.010	0.000
P-7934	South Pond Dr.	8	Ductile Iron	135	COV 1998	1321	-1.28	0.010	0.000
P-7935	Hill St.	8	Asbestos Cement	115	COV 1947	1590	461.68	2.950	8.710
P-7936	Blackrock Rd.	8	Asbestos Cement	115	COV 1949	1415	22.03	0.140	0.030
P-7937	Manning Ct.	6	Asbestos Cement	120	COV 1959	483	-9.79	0.110	0.010
P-7939	Hill St.	8	Asbestos Cement	115	COV 1947	817	438.43	2.800	4.070
P-7940	Blackrock Rd.	8	Asbestos Cement	125	COV 1964	349	-11.02	0.070	0.000
P-7941	Sandalwood Ct.	6	Asbestos Cement	125	COV 1966	419	3.67	0.040	0.000
P-7942	Sandalwood Ct.	6	Asbestos Cement	125	COV 1966	173	1.22	0.010	0.000
P-7943	Hickory Rd.	6	Asbestos Cement	130	COV 1985	1251	1.22	0.010	0.000
P-7944	Blackrock Rd.	8	Asbestos Cement	125	COV 1964	498	9.79	0.060	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-7945	Hornbeam Rd.	8	Asbestos Cement	125	COV 1964	383	4.90	0.030	0.000
P-7946	Hawthorne Rd.	8	Asbestos Cement	125	COV 1964	588	1.22	0.010	0.000
P-7947	Hawthorne Rd.	8	Asbestos Cement	125	COV 1964	682	1.22	0.010	0.000
P-7948	Hornbeam Rd.	8	Asbestos Cement	125	COV 1964	1251	1.22	0.010	0.000
P-7949	Reynolds Ct. (Private)	6	Asbestos Cement	125	COV 1964	135	3.67	0.040	0.000
P-7950	Reynolds Ct. (Private)	6	Asbestos Cement	125	COV 1964	151	2.45	0.030	0.000
P-7951	Reynolds Ct. (Private)	6	Asbestos Cement	125	COV 1964	153	1.22	0.010	0.000
P-7952	Nooseneck Hill Rd.	12	Asbestos Cement	125	COV 1965	988	27.04	0.080	0.000
P-7953	Hill St.	8	Asbestos Cement	115	COV 1947	433	271.67	1.730	0.890
P-7954	Nancy Ct.	6	Asbestos Cement	125	COV 1963	583	1.22	0.010	0.000
P-7955	Blackrock Rd.	8	Asbestos Cement	115	COV 1949	352	-3.67	0.020	0.000
P-7956	Partridge Dr.	8	Ductile Iron	135	COV 1995	658	165.53	1.060	0.400
P-7957	Blackrock Rd.	4	Cast Iron	40	COV 1928	1672	-1.22	0.030	0.030
P-7958	Partridge Dr.	8	Ductile Iron	135	COV 1995	488	1.22	0.010	0.000
P-7959	Fairview Ave.	6	Cast Iron	30	COV 1887	611	-1.84	0.020	0.010
P-7960	Fairview Ave.	6	Cast Iron	30	COV 1887	223	-3.06	0.030	0.010
P-7961	Fairview Ave.	6	Cast Iron	30	COV 1887	696	-4.29	0.050	0.030
P-7962	Washington St.	12	Cast Iron	60	COV 1887	836	5.51	0.020	0.000
P-7963	Fairview Ave.	16	Asbestos Cement	115	COV 1944	1756	147.76	0.240	0.040
P-7964	Washington St.	12	Asbestos Cement	115	COV 1944	1793	123.63	0.350	0.120
P-7965	Washington St.	12	Cast Iron	60	COV 1887	212	270.16	0.770	0.200
P-7966	Hazard St.	6	Cast Iron	50	COV 1940	591	11.62	0.130	0.070
P-7967	Knight St.	6	Cast Iron	50	COV 1940	731	3.67	0.040	0.010
P-7968	Edward St.	6	Ductile Iron	135	COV 1998	412	1.22	0.010	0.000
P-7970	Blackrock Rd.	8	Asbestos Cement	115	COV 1949	1109	1.22	0.010	0.000
P-7971	Edward St.	2	Galvanized Iron	30	COV 1930	259	-1.22	0.130	0.250
P-7972	Edward St.	6	Asbestos Cement	115	COV 1947	103	1.22	0.010	0.000
P-7974	Fairview Ave.	6	Cast Iron	60	COV 1887	346	-0.61	0.010	0.000
P-7975	Fairview Ave.	8	Ductile Iron	135	COV 1999	1061	1.22	0.010	0.000
P-7976	Hazard St.	6	Cast Iron	50	COV 1940	250	3.06	0.030	0.000
P-7977	Fairview Ave.	16	Asbestos Cement	115	COV 1944	1318	-152.65	0.240	0.030
P-7978	Fairview Ave.	16	Asbestos Cement	115	COV 1944	62	-252.24	0.400	0.000
P-7979	Morin Ave.	1	Copper	70	COV 1965	532	1.22	0.500	3.100
P-7980	Gadoury St.	6	Asbestos Cement	115	COV 1949	536	98.36	1.120	0.680
P-7981	Doolittle St.	6	Asbestos Cement	120	COV 1958	612	97.14	1.100	0.700
P-7982	Yates Ave.	6	Asbestos Cement	115	COV 1949	307	54.04	0.610	0.130
P-7983	Yates Ave.	6	Asbestos Cement	115	COV 1949	630	2.45	0.030	0.000
P-7984	Eisenhower St.	6	Asbestos Cement	130	COV 1971	415	1.22	0.010	0.000
P-7985	Macarthur Blvd.	8	Asbestos Cement	115	COV 1948	1114	4.90	0.030	0.000
P-7986	Macarthur Blvd.	8	Asbestos Cement	115	COV 1948	593	1.22	0.010	0.000
P-7987	Cardinal Ave.	6	Asbestos Cement	115	COV 1948	287	2.45	0.030	0.000
P-7988	Palton St.	6	Asbestos Cement	115	COV 1949	863	1.22	0.010	0.000
P-7989	Doolittle St.	6	Asbestos Cement	120	COV 1958	891	41.87	0.480	0.170
P-7990	Cecile Ave.	6	Asbestos Cement	120	COV 1952	300	2.45	0.030	0.000
P-7991	Edward St.	6	Asbestos Cement	120	COV 1952	240	1.22	0.010	0.000
P-7992	Cecile Ave.	6	Asbestos Cement	120	COV 1952	310	16.96	0.190	0.010
P-7993	Macarthur Blvd.	8	Asbestos Cement	115	COV 1948	697	-45.47	0.290	0.050
P-7994	Cecile Ave.	6	Asbestos Cement	120	COV 1952	890	15.58	0.180	0.030
P-7995	Raymond St.	6	Asbestos Cement	115	COV 1949	326	2.45	0.030	0.000
P-7996	Anderson Ave.	6	Asbestos Cement	125	COV 1961	724	1.22	0.010	0.000
P-7997	Macarthur Blvd.	8	Asbestos Cement	115	COV 1948	356	45.63	0.290	0.030
P-7998	Macarthur Blvd.	8	Asbestos Cement	115	COV 1948	194	43.18	0.280	0.010
P-7999	Justa Ave.	6	Asbestos Cement	115	COV 1947	316	-16.35	0.190	0.010
P-8000	Justa Ave.	6	Asbestos Cement	115	COV 1947	303	3.67	0.040	0.000
P-8001	Doolittle St.	6	Asbestos Cement	120	COV 1958	577	-21.24	0.240	0.040
P-8002	Peacock Dr.	8	Ductile Iron	135	COV 1995	823	163.08	1.040	0.490
P-8003	Raymond St.	6	Asbestos Cement	115	COV 1949	439	-11.91	0.140	0.010
P-8004	Macarthur Blvd.	8	Asbestos Cement	115	COV 1948	196	58.30	0.370	0.020
P-8005	Gerald Ave.	6	Asbestos Cement	115	COV 1949	645	-9.46	0.110	0.010
P-8006	Raymond St.	6	Asbestos Cement	115	COV 1949	336	-10.69	0.120	0.010
P-8007	Dion Ave.	6	Asbestos Cement	115	COV 1949	353	1.22	0.010	0.000
P-8008	Macarthur Blvd.	8	Asbestos Cement	115	COV 1948	1531	66.54	0.420	0.230
P-8009	Washington St.	12	Cast Iron	60	COV 1887	1691	257.31	0.730	1.450
P-8010	Washington St.	12	Cast Iron	60	COV 1887	158	256.09	0.730	0.130
P-8011	Washington St.	12	Cast Iron	60	COV 1887	533	321.41	0.910	0.890
P-8012	Pulaski St.	6	Cast Iron	75	COV 1887	473	306.53	3.480	10.880
P-8013	North St.	6	Cast Iron	80	COV 1928	558	330.25	3.750	13.070
P-8014	Pulaski St.	6	Cast Iron	75	COV 1887	232	-24.94	0.280	0.050
P-8015	South St.	6	Cast Iron	30	COV 1890	763	2.45	0.030	0.010
P-8016	South St.	4	Cast Iron	30	COV 1890	343	1.22	0.030	0.010
P-8017	Pulaski St.	6	Cast Iron	75	COV 1887	695	-28.61	0.320	0.200
P-8018	Whitford St.	2	PVC	130	COV 1985	458	1.22	0.130	0.030
P-8019	Pulaski St.	6	Cast Iron	75	COV 1887	820	-31.06	0.350	0.270
P-8020	Washington St.	12	Cast Iron	60	COV 1887	326	13.65	0.040	0.000
P-8022	Washington St.	12	Cast Iron	60	COV 1887	983	8.75	0.020	0.000
P-8023	Read Ave.	6	Cast Iron	70	COV 1887	468	-13.24	0.150	0.040
P-8024	Ann Ct.	2	Copper	70	COV 1940	376	1.22	0.130	0.070
P-8025	Read Ave.	6	Cast Iron	70	COV 1887	318	-15.69	0.180	0.030
P-8026	Rathbun St.	6	Asbestos Cement	120	COV 1956	338	7.50	0.090	0.000
P-8027	Read Ave.	6	Cast Iron	70	COV 1887	1149	-24.41	0.280	0.280
P-8028	Ernest St.	8	Ductile Iron	140	COV 2001	347	1.22	0.010	0.000
P-8029	Read Ave.	6	Cast Iron	70	COV 1887	307	-26.86	0.300	0.090
P-8030	Bassett St.	2	Galvanized Iron	30	COV 1910	418	1.22	0.130	0.400

KCWA Model
Pipeline Database
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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-8031	Read Ave.	6	Cast iron	70	COV 1887	224	-29.31	0.330	0.080
P-8032	Read Ave.	6	Cast iron	70	COV 1887	87	-32.98	0.370	0.040
P-8033	Willow St.	6	Cast iron	30	COV 1895	407	-0.05	0.000	0.000
P-8034	Bates Ave.	6	Cast iron	30	COV 1887	291	2.45	0.030	0.000
P-8035	Bates Ave.	6	Cast iron	30	COV 1887	514	1.22	0.010	0.000
P-8036	Read Ave.	6	Cast iron	70	COV 1887	294	-34.16	0.390	0.130
P-8037	Bennett St.	2	Galvanized iron	30	COV 1900	395	1.22	0.130	0.380
P-8038	Read Ave.	6	Cast iron	70	COV 1887	581	-36.61	0.420	0.300
P-8039	Read Ave.	6	Cast iron	70	COV 1887	1244	-28.04	0.320	0.390
P-8040	Shippee Ave.	8	Cast iron	60	COV 1889	377	30.07	0.190	0.040
P-8041	Phillip St.	6	Cast iron	30	COV 1889	1273	11.01	0.120	0.340
P-8042	Phillip St.	6	Asbestos Cement	120	COV 1954	392	9.79	0.110	0.010
P-8043	Read Ave.	6	Cast iron	70	COV 1887	2714	-59.33	0.670	3.390
P-8044	Gough Ave.	16	Asbestos Cement	130	COV 1944	788	-363.89	0.580	0.080
P-8045	Read Ave.	16	Asbestos Cement	125	COV 1944	499	-365.12	0.580	0.050
P-8047	Read Ave.	16	Asbestos Cement	125	COV 1944	865	-366.34	0.580	0.090
P-8048	Youngs Ave.	8	Asbestos Cement	125	COV 1956	246	66.53	0.420	0.030
P-8049	Greenwood Ave.	6	Asbestos Cement	130	COV 1963	352	1.22	0.010	0.000
P-8050	Youngs Ave.	8	Asbestos Cement	125	COV 1956	848	64.08	0.410	0.100
P-8051	Park Ave.	6	Asbestos Cement	130	COV 1962	355	3.67	0.040	0.000
P-8052	Doris St.	6	Asbestos Cement	130	COV 1963	229	1.22	0.010	0.000
P-8053	Park Ave.	6	Asbestos Cement	130	COV 1962	164	1.22	0.010	0.000
P-8054	Park Ave.	6	Asbestos Cement	130	COV 1962	361	2.45	0.030	0.000
P-8055	Ray St.	6	PVC	130	COV 1981	455	1.22	0.010	0.000
P-8056	Read Ave.	16	Asbestos Cement	125	COV 1944	128	-434.09	0.690	0.020
P-8057	Fairview Ave.	16	Asbestos Cement	115	COV 1944	496	269.38	0.430	0.030
P-8058	Marshall Cir.	6	Asbestos Cement	115	COV 1948	452	1.22	0.010	0.000
P-8059	Fairview Ave.	16	Asbestos Cement	115	COV 1944	516	266.93	0.430	0.040
P-8060	Hope View St.	1.5	Copper	70	COV 1948	308	1.22	0.220	0.250
P-8061	Fairview Ave.	16	Asbestos Cement	115	COV 1944	329	264.48	0.420	0.020
P-8062	Rosella St.	6	Ductile Iron	135	COV 1992	679	3.67	0.040	0.000
P-8063	Marshall Cir.	6	Ductile Iron	135	COV 1992	368	1.22	0.010	0.000
P-8064	Marshall Cir.	6	Ductile Iron	135	COV 1992	561	1.22	0.010	0.000
P-8065	Fairview Ave.	16	Asbestos Cement	115	COV 1944	807	259.59	0.410	0.050
P-8066	Fairview Ave.	16	Asbestos Cement	115	COV 1944	430	242.68	0.390	0.020
P-8067	Woodmist Cir.	8	Ductile Iron	140	COV 2001	1496	15.68	0.100	0.010
P-8068	Woodmist Cir.	8	Ductile Iron	140	COV 2001	649	14.46	0.090	0.000
P-8069	Woodmist Cir.	8	Ductile Iron	140	COV 2001	1813	13.23	0.080	0.010
P-8070	Fairview Ave.	16	Asbestos Cement	115	COV 1944	1280	254.69	0.410	0.080
P-8071	Fairview Ave.	16	Asbestos Cement	115	COV 1944	1164	-729.39	1.160	0.510
P-8072	Fairview Ave.	16	Asbestos Cement	115	COV 1944	253	-633.88	1.010	0.090
P-8073	Hill St.	8	Asbestos Cement	115	COV 1947	866	433.53	2.770	4.220
P-8074	Brown St.	8	Cast iron	70	COV 1928	1414	646.75	4.130	36.260
P-8075	Hillside Ave.	12	Cast iron	60	COV 1887	209	6.12	0.020	0.000
P-8076	Yeaton St.	12	Cast iron	60	COV 1887	682	1.22	0.000	0.000
P-8077	Hillside Ave.	6	Asbestos Cement	120	COV 1959	304	3.67	0.040	0.000
P-8078	Fones St.	6	Asbestos Cement	115	COV 1949	629	1.22	0.010	0.000
P-8079	Hillside Ave.	6	Asbestos Cement	120	COV 1959	267	1.22	0.010	0.000
P-8080	Hillside Ave.	12	Cast iron	60	COV 1887	657	639.41	1.810	3.050
P-8081	Hill St.	6	Cast iron	40	COV 1928	258	-214.44	2.430	9.800
P-8082	Notre Dame St.	1.5	Copper	70	COV 1937	519	1.22	0.220	0.420
P-8083	Hill St.	6	Cast iron	40	COV 1928	255	-216.89	2.460	9.900
P-8084	Mumford St.	8	Ductile Iron	140	COV 2001	493	113.71	0.730	0.140
P-8085	Mumford St.	8	Ductile Iron	140	COV 2001	511	112.49	0.720	0.140
P-8086	Mumford St.	8	Ductile Iron	140	COV 2001	803	-235.88	1.510	0.880
P-8088	Mumford St.	8	Ductile Iron	140	COV 2001	301	-165.73	1.060	0.170
P-8089	Mumford St.	8	Ductile Iron	140	COV 2001	374	-166.95	1.070	0.220
P-8090	Hill St.	8	Asbestos Cement	115	COV 1947	1103	-281.44	1.800	2.420
P-8091	Hill St.	8	Asbestos Cement	115	COV 1947	167	-323.44	2.060	0.470
P-8092	Hill St.	8	Asbestos Cement	115	COV 1947	604	-325.89	2.080	1.740
P-8093	Hill St.	8	Asbestos Cement	115	COV 1947	103	-360.14	2.300	0.360
P-8094	Howard Ave.	16	Asbestos Cement	120	COV 1956	1948	1325.82	2.120	2.380
P-8095	Hill St.	8	Asbestos Cement	115	COV 1947	136	-42.27	0.270	0.010
P-8096	Hill St.	8	Asbestos Cement	115	COV 1947	714	-43.49	0.280	0.050
P-8097	Hill St.	8	Asbestos Cement	115	COV 1947	400	-44.72	0.290	0.030
P-8098	Hill St.	6	Cast iron	30	COV 1887	325	-50.84	0.580	1.460
P-8099	Hill St.	16	Asbestos Cement	120	COV 1956	1292	-1687.17	2.690	2.460
P-8100	Hill St.	16	Asbestos Cement	120	COV 1956	97	-41.04	0.070	0.000
P-8101	Colvin St.	16	Asbestos Cement	120	COV 1956	1265	-1647.36	2.630	2.310
P-8102	Hill St.	6	Cast iron	30	COV 1887	713	1.22	0.010	0.000
P-8103	Hill St.	6	Cast iron	30	COV 1887	496	3.67	0.040	0.020
P-8104	Pierce St.	4	Cast iron	30	COV 1887	451	1.22	0.030	0.010
P-8105	Hill St.	4	Cast iron	30	COV 1887	209	1.22	0.030	0.010
P-8106	Paulette Dr.	6	Asbestos Cement	125	COV 1960	771	1.22	0.010	0.000
P-8107	Rebecca St.	6	Asbestos Cement	125	COV 1961	1466	40.78	0.460	0.310
P-8108	Cedar St.	6	Asbestos Cement	120	COV 1959	345	7.34	0.080	0.000
P-8109	Cedar St.	6	Asbestos Cement	120	COV 1959	366	6.12	0.070	0.000
P-8110	Eleanor Dr.	6	Asbestos Cement	125	COV 1960	1015	4.90	0.060	0.000
P-8111	Elmonte Dr.	6	Asbestos Cement	125	COV 1960	308	3.67	0.040	0.000
P-8112	Elmonte Dr.	6	Asbestos Cement	125	COV 1960	456	1.22	0.010	0.000
P-8113	Canyon Dr.	6	Asbestos Cement	125	COV 1960	469	1.22	0.010	0.000
P-8114	Howard Ave.	8	Asbestos Cement	120	COV 1956	1589	33.02	0.210	0.060
P-8115	Howard Ave.	6	Cast iron	30	COV 1887	2077	31.80	0.360	3.920

KCWA Model
Pipeline Database
Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-8116	Alexis St.	8	Ductile Iron	135	COV 1992	747	2.45	0.020	0.000
P-8117	Alexis St.	8	Ductile Iron	135	COV 1992	414	1.22	0.010	0.000
P-8118	Howard Ave.	16	Asbestos Cement	120	COV 1956	159	1322.14	2.110	0.190
P-8119	Hemlock St. (Private)	6	Asbestos Cement	120	COV 1956	226	1.22	0.010	0.000
P-8120	Howard Ave.	16	Asbestos Cement	120	COV 1956	331	1319.70	2.110	0.400
P-8121	Cedar St.	6	Ductile Iron	135	COV 1994	786	-32.21	0.370	0.099
P-8122	Howard Ave.	16	Asbestos Cement	120	COV 1956	1283	1350.68	2.160	1.620
P-8124	Harris St.	6	Cast Iron	30	COV 1900	318	36.11	0.410	0.760
P-8125	Elm St.	6	Cast Iron	30	COV 1900	545	-22.82	0.260	0.560
P-8126	Highland Ave.	6	Ductile Iron	135	COV 1994	993	3.67	0.040	0.000
P-8127	Highland Ave.	6	Ductile Iron	135	COV 1994	285	1.22	0.010	0.000
P-8128	Potter St.	6	Ductile Iron	135	COV 1994	415	1.22	0.010	0.000
P-8129	Harris St.	6	Cast Iron	30	COV 1900	225	57.70	0.650	1.280
P-8130	Mill St.	6	Cast Iron	30	COV 1900	717	32.87	0.370	1.440
P-8131	Broad St.	6	Cast Iron	30	COV 1900	610	-53.86	0.610	3.060
P-8132	Main St.	12	Cast Iron	60	COV 1886	711	-211.34	0.600	0.420
P-8133	Harris St.	6	Cast Iron	30	COV 1900	723	23.61	0.270	0.790
P-8134	Terrace Ave.	4	Cast Iron	30	COV 1900	291	22.39	0.570	2.070
P-8135	Lemis St.	6	Asbestos Cement	125	COV 1960	1416	1.22	0.010	0.000
P-8136	New London Tpk.	12	Asbestos Cement	125	COV 1960	389	-84.35	0.240	0.010
P-8137	New London Tpk.	12	Asbestos Cement	125	COV 1960	341	-88.28	0.250	0.010
P-8138	Vairene St.	6	Asbestos Cement	125	COV 1967	614	9.53	0.110	0.010
P-8139	Vairene St.	6	Asbestos Cement	125	COV 1967	73	1.22	0.010	0.000
P-8140	Rosebud St.	6	Asbestos Cement	125	COV 1961	310	7.08	0.080	0.000
P-8141	Angus St.	6	Asbestos Cement	125	COV 1960	757	-2.71	0.030	0.000
P-8142	Angus St.	6	Asbestos Cement	125	COV 1960	1208	8.57	0.100	0.010
P-8143	Old North Rd.	12	Asbestos Cement	130	COV 1976	678	1.22	0.000	0.000
P-8144	Old North Rd.	12	Asbestos Cement	130	COV 1976	1472	6.12	0.020	0.000
P-8145	New London Tpk.	12	Asbestos Cement	125	COV 1960	351	-99.04	0.280	0.010
P-8146	Rejane St.	6	Asbestos Cement	120	COV 1951	773	1.22	0.010	0.000
P-8147	Rejane St.	6	Asbestos Cement	120	COV 1951	223	1.22	0.010	0.000
P-8148	Linray St.	6	Asbestos Cement	125	COV 1965	313	-2.45	0.030	0.000
P-8149	Martin St.	6	Asbestos Cement	125	COV 1960	405	-4.90	0.060	0.000
P-8150	Martin St.	6	Asbestos Cement	125	COV 1960	189	1.22	0.010	0.000
P-8151	New London Tpk.	12	Asbestos Cement	125	COV 1960	154	-101.49	0.290	0.010
P-8152	Wendy Dr.	8	Asbestos Cement	130	COV 1973	244	-1.67	0.010	0.000
P-8153	Longfellow Dr.	8	Asbestos Cement	130	COV 1973	325	15.96	0.100	0.000
P-8154	Lions Dr.	8	Asbestos Cement	130	COV 1973	554	25.63	0.160	0.010
P-8155	Longfellow Dr.	8	Asbestos Cement	130	COV 1973	500	-10.89	0.070	0.000
P-8156	Longfellow Dr.	8	Asbestos Cement	130	COV 1973	449	-21.81	0.140	0.010
P-8157	Wendy Dr.	8	Asbestos Cement	130	COV 1973	224	-4.50	0.030	0.000
P-8158	Wendy Dr.	8	Asbestos Cement	130	COV 1973	546	18.86	0.120	0.010
P-8159	Longfellow Dr.	8	Asbestos Cement	130	COV 1973	992	-18.54	0.120	0.010
P-8160	Whittier Dr.	8	Asbestos Cement	130	COV 1973	579	24.58	0.160	0.010
P-8161	Whittier Dr.	8	Asbestos Cement	130	COV 1973	228	-44.34	0.280	0.010
P-8162	New London Tpk.	12	Asbestos Cement	125	COV 1960	501	108.39	0.310	0.020
P-8163	Tiffany Rd.	8	Asbestos Cement	130	COV 1976	380	4.90	0.030	0.000
P-8164	Tiffany Rd.	8	Asbestos Cement	130	COV 1976	333	2.45	0.020	0.000
P-8165	Trafford Park Dr.	8	Asbestos Cement	130	COV 1977	1342	1.22	0.010	0.000
P-8166	New London Tpk.	12	Asbestos Cement	125	COV 1960	1007	-153.95	0.440	0.090
P-8167	Tiffany Rd.	8	PVC	130	COV 1987	213	1.22	0.010	0.000
P-8168	New London Tpk.	12	Asbestos Cement	125	COV 1960	209	101.04	0.290	0.010
P-8169	New London Tpk.	8	Asbestos Cement	125	COV 1969	535	-160.07	1.020	0.350
P-8170	New London Tpk.	8	Asbestos Cement	125	COV 1969	316	1.22	0.010	0.000
P-8171	Compton Rd.	16	Ductile Iron	135	COV 1991	482	-804.39	1.280	0.190
P-8172	Compton Rd.	16	Ductile Iron	135	COV 1991	255	-805.62	1.290	0.100
P-8173	Compton Rd.	16	Ductile Iron	135	COV 1991	152	-806.84	1.290	0.060
P-8174	Compton Rd.	12	Asbestos Cement	130	COV 1972	454	1.22	0.000	0.000
P-8175	New London Tpk.	16	Ductile Iron	135	COV 1995	548	-812.96	1.300	0.220
P-8176	Arnold Rd.	8	Asbestos Cement	125	COV 1969	431	-163.74	1.050	0.300
P-8177	Gay St.	8	PVC	130	COV 1986	432	-164.97	1.050	0.280
P-8178	Gay St.	8	PVC	130	COV 1986	196	1.22	0.010	0.000
P-8179	Grafton St.	8	PVC	130	COV 1986	488	-167.41	1.070	0.330
P-8180	Grand View St.	8	Ductile Iron	140	COV 2003	286	-169.86	1.080	0.170
P-8181	Grand View St.	8	Ductile Iron	135	COV 1991	452	1.22	0.010	0.000
P-8182	Martin St.	6	Asbestos Cement	125	COV 1960	388	6.12	0.070	0.000
P-8183	Arnold Rd.	16	Ductile Iron	135	COV 1991	593	4.90	0.010	0.000
P-8184	Arnold Rd.	16	Ductile Iron	135	COV 1991	225	3.67	0.010	0.000
P-8185	Arnold Rd.	16	Ductile Iron	135	COV 1991	2355	2.45	0.000	0.000
P-8186	Arnold Rd.	16	Ductile Iron	135	COV 1991	313	1.22	0.000	0.000
P-8187	Arnold Rd.	16	Ductile Iron	135	COV 1991	1011	0.00	0.000	0.000
P-8188	Arnold Rd.	16	Ductile Iron	135	COV 1991	3803	-1.22	0.000	0.000
P-8189	Johnson Blvd.	16	Ductile Iron	135	COV 1991	329	-2.45	0.000	0.000
P-8190	Johnson Blvd.	16	Ductile Iron	135	COV 1991	219	-3.67	0.010	0.000
P-8191	Johnson Blvd.	16	Ductile Iron	135	COV 1991	1627	-4.90	0.010	0.000
P-8192	Tiffany Rd.	8	PVC	130	COV 1987	1804	1.22	0.010	0.000
P-8193	Johnson Blvd.	16	Ductile Iron	135	COV 1991	1496	1074.32	1.710	0.990
P-8194	Johnson Blvd.	16	Ductile Iron	135	COV 1991	251	1073.10	1.710	0.170
P-8195	Rosemary St.	12	Ductile Iron	130	COV 1988	583	1071.87	3.040	1.680
P-8196	King St.	12	Ductile Iron	130	COV 1989	441	1069.42	3.030	1.270
P-8197	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	105	47.85	0.140	0.000
P-8198	Helen Ave.	12	Ductile Iron	130	COV 1989	212	45.40	0.130	0.000
P-8199	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	314	1020.35	2.890	0.830

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-8200	Clark Mill St.	8	Ductile Iron	135	COV 1997	1159	1.22	0.010	0.000
P-8201	Hopkins Hill Rd.	12	Ductile Iron	130	COV 1989	5396	1017.90	2.890	14.130
P-8202	Mishnock Rd.	8	Ductile Iron	130	COV 1989	219	271.58	1.730	0.360
P-8203	Windsor Park Dr.	6	Asbestos Cement	120	COV 1953	863	-6.40	0.070	0.010
P-8204	Windsor Park Dr.	6	Asbestos Cement	120	COV 1953	314	-7.62	0.090	0.000
P-8205	Kennington Ave.	5	Asbestos Cement	120	COV 1953	711	2.53	0.030	0.000
P-8206	Windsor Park Dr.	6	Asbestos Cement	120	COV 1953	296	13.44	0.150	0.010
P-8207	Windsor Park Dr.	6	Asbestos Cement	120	COV 1953	363	-12.14	0.140	0.010
P-8208	Kimberly Ave.	6	Asbestos Cement	120	COV 1953	639	-0.60	0.010	0.000
P-8209	Windsor Park Dr.	6	Asbestos Cement	120	COV 1953	368	11.38	0.130	0.010
P-8210	Windsor Park Dr.	6	Asbestos Cement	120	COV 1953	344	-13.20	0.150	0.010
P-8211	Kathy Ave.	6	Asbestos Cement	120	COV 1953	468	-1.75	0.020	0.000
P-8212	Roundway Dr.	6	Asbestos Cement	120	COV 1953	380	12.76	0.140	0.010
P-8213	Windsor Park Dr.	6	Asbestos Cement	120	COV 1953	730	-12.67	0.140	0.020
P-8214	Roundway Dr.	6	Asbestos Cement	120	COV 1953	481	15.73	0.180	0.020
P-8215	Nooseneck Hill Rd.	12	Asbestos Cement	125	COV 1965	3197	-24.59	0.070	0.010
P-8216	King St.	6	Ductile Iron	135	COV 1994	1300	1.22	0.010	0.000
P-8217	Fairview Ave.	6	Cast iron	70	COV 1887	354	116.17	1.320	1.530
P-8219	Broad St.	6	Cast iron	30	COV 1900	318	-5.71	0.060	0.020
P-8220	White Rock Dr.	8	Asbestos Cement	125	COV 1965	134	0.00	0.000	0.000
P-8221	Blackrock Rd.	8	Asbestos Cement	115	COV 1949	131	0.00	0.000	0.000
P-8222	Boston St.	6	Cast iron	40	COV 1928	228	-2.47	0.030	0.000
P-8223	Benoit St.	6	Cast iron	45	COV 1938	411	4.88	0.060	0.010
P-8224	Hancock St.	8	Asbestos Cement	130	COV 1977	139	0.00	0.000	0.000
P-8225	Adams Dr.	8	Asbestos Cement	130	COV 1978	89	0.00	0.000	0.000
P-8226	Nooseneck Hill Rd.	12	Asbestos Cement	125	COV 1965	3529	47.15	0.130	0.030
P-8227	Haywood Dr.	8	Ductile Iron	135	COV 1999	555	1.22	0.010	0.000
P-8228	Arnold Rd.	16	Cast iron	60	COV 1890	72	614.09	0.980	0.080
P-8229	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	461	1080.44	1.720	0.310
P-8230	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	157	1080.44	1.720	0.110
P-8231	Johnson Blvd. PS	12	Ductile Iron	135	COV 1991	199	1080.44	3.060	0.540
P-8232	Johnson Blvd. PS	12	Ductile Iron	135	COV 1991	209	1080.44	3.060	0.570
P-8233	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	160	1080.44	1.720	0.110
P-8234	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	166	0.00	0.000	0.000
P-8235	Johnson Blvd. PS	12	Ductile Iron	135	COV 1991	202	0.00	0.000	0.000
P-8236	Johnson Blvd. PS	12	Ductile Iron	135	COV 1991	209	0.00	0.000	0.000
P-8237	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	169	0.00	0.000	0.000
P-8238	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	172	0.00	0.000	0.000
P-8239	Johnson Blvd. PS	10	Ductile Iron	135	COV 1991	199	0.00	0.000	0.000
P-8240	Johnson Blvd. PS	10	Ductile Iron	135	COV 1991	209	0.00	0.000	0.000
P-8241	Johnson Blvd. PS	16	Ductile Iron	135	COV 1991	169	0.00	0.000	0.000
P-8242	Knotty Oak Rd.	8	Asbestos Cement	115	COV 1947	302	2.45	0.020	0.000
P-8243	Washington St.	16	Cast iron	60	COV 1890	129	0.00	0.000	0.000
P-8244	Washington St.	16	Cast iron	60	COV 1886	229	0.00	0.000	0.000
P-8245	Knotty Oak Rd.	8	Asbestos Cement	115	COV 1947	771	1.23	0.010	0.000
P-8246	Washington St.	16	Cast iron	60	COV 1886	1426	-1.22	0.000	0.000
P-8247	Knotty Oak Rd. PS	10	Ductile Iron	135	COV 1995	263	-1331.21	5.440	2.570
P-8249	Knotty Oak Rd. PS	10	Ductile Iron	135	COV 1995	235	-1331.21	5.440	2.290
P-8250	Knotty Oak Rd. PS	10	Ductile Iron	135	COV 1995	246	-1331.21	5.440	2.400
P-8251	Knotty Oak Rd. PS	10	Ductile Iron	135	COV 1995	255	0.00	0.000	0.000
P-8252	Knotty Oak Rd. PS	10	Ductile Iron	135	COV 1995	495	0.00	0.000	0.000
P-8253	Knotty Oak Rd.	20	Asbestos Cement	120	COV 1968	711	-1624.82	1.660	0.430
P-8254	Knotty Oak Rd. PS	12	Ductile Iron	135	COV 1995	634	0.00	0.000	0.000
P-8255	Knotty Oak Rd. PS	12	Ductile Iron	135	COV 1995	479	1331.21	3.780	1.920
P-8256	Knotty Oak Rd. PS	12	Ductile Iron	135	COV 1995	370	-1331.21	3.780	1.490
P-8257	Mishnock Well	12	Asbestos Cement	130	COV 1989	14	0.00	0.000	0.000
P-8258	Mishnock Well 2 (Abandoned)	12	Ductile Iron	130	COV 1989	5	0.00	0.000	0.000
P-8259	Mishnock Well 2 (Abandoned)	8	Ductile Iron	130	COV 1989	6	0.00	0.000	0.000
P-8262	Mishnock Rd.	8	Ductile Iron	130	COV 1989	136	271.58	1.730	0.220
P-8263	Mishnock Rd.	12	Ductile Iron	130	COV 1989	833	272.81	0.770	0.190
P-8264	Helen Ave.	12	Asbestos Cement	120	COV 1954	90	45.40	0.130	0.000
P-8265	Mishnock Rd.	12	Ductile Iron	130	COV 1989	103	0.00	0.000	0.000
P-8266	Helen Ave.	12	Ductile Iron	130	COV 1989	872	46.63	0.130	0.010
P-8267	Arnold Rd.	16	Cast iron	60	COV 1890	293	611.64	0.980	0.310
P-8268	Helen Ave.	12	Asbestos Cement	120	COV 1954	148	0.00	0.000	0.000
P-8269	Colvintown Rd.	8	Ductile Iron	140	COV 2003	4121	1.22	0.010	0.000
P-8270	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	1194	-550.49	3.510	7.220
P-8271	Donna's Way	8	Ductile Iron	130	COV 1989	532	1.22	0.010	0.000
P-8272	Flat River Rd.	12	Asbestos Cement	125	COV 1966	124	373.96	1.060	0.050
P-8273	Colvintown Rd.	8	Asbestos Cement	130	COV 1971	1373	371.11	2.370	4.000
P-8274	Old Main St.	8	Asbestos Cement	130	COV 1971	745	346.83	2.210	1.910
P-8275	Old Main St.	8	Asbestos Cement	130	COV 1971	317	344.39	2.200	0.800
P-8276	Dumont Farm Rd.	8	Ductile Iron	140	COV 2002	393	1.22	0.010	0.000
P-8277	Howard Ave.	16	Asbestos Cement	120	COV 1957	513	1380.03	2.200	0.670
P-8278	Bates Ave.	8	Cast iron	80	COV 1940	875	3.67	0.020	0.000
P-8279	Bates Ave.	2	Cast iron	50	COV 1940	248	1.22	0.130	0.090
P-8280	Bates Ave.	6	Cast iron	50	COV 1940	811	2.45	0.030	0.010
P-8281	Edward St.	2	Galvanized iron	30	COV 1998	142	1.22	0.130	0.140
P-8282	Hazard St.	6	Cast iron	50	COV 1940	231	6.73	0.080	0.010
P-8283	Hazard St.	6	Cast iron	50	COV 1940	993	4.28	0.050	0.020
P-8284	Sharp St.	6	Asbestos Cement	125	COV 1963	150	1.22	0.010	0.000
P-8285	Sheltra Ave.	8	PVC	130	COV 1985	998	-23.36	0.150	0.020
P-8286	Old North Rd.	12	Ductile Iron	140	COV 2002	520	1.22	0.000	0.000

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Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-8287	Washington St.	12	Cast iron	60	COV 1887	296	9.45	0.030	0.000
P-8288	Washington St.	12	Cast iron	60	COV 1887	1758	7.96	0.020	0.000
P-8289	Capwell St.	8	Cast iron	60	COV 1887	635	0.27	0.000	0.000
P-8290	Washington St.	12	Cast iron	60	COV 1887	134	4.39	0.010	0.000
P-8291	Washington St.	12	Cast iron	60	COV 1887	714	2.21	0.010	0.000
P-8292	Capwell St.	6	Cast iron	30	COV 1887	760	-0.96	0.010	0.000
P-8293	Tiogue Ave.	16	Ductile Iron	140	COV 2000	681	12.23	0.020	0.000
P-8294	Tiogue Ave.	16	Ductile Iron	140	COV 2000	1042	7.60	0.010	0.000
P-8295	Arizona St.	8	Ductile Iron	140	COV 2000	107	-3.40	0.020	0.000
P-8296	Tiogue Ave.	16	Ductile Iron	140	COV 2000	2639	2.45	0.000	0.000
P-8297	Alaska St.	8	Ductile Iron	140	COV 2000	123	-3.93	0.030	0.000
P-8298	Tiogue Ave.	8	Ductile Iron	135	COV 1995	978	1.22	0.010	0.000
P-8299	Arnold Rd.	16	Cast iron	60	COV 1890	530	609.19	0.970	0.550
P-8300	Hazel St.	2	Copper	70	COV 1941	300	1.22	0.130	0.060
P-8301	Ridge Ave.	8	Ductile Iron	140	COV 2000	272	1.22	0.010	0.000
P-8302	Acom St.	6	Asbestos Cement	125	COV 1966	1019	7.34	0.080	0.010
P-8303	Beechwood St.	6	Asbestos Cement	120	COV 1954	442	-3.67	0.040	0.000
P-8304	Beechwood St.	6	Asbestos Cement	120	COV 1954	677	1.22	0.010	0.000
P-8305	Powhatan Ave.	6	Asbestos Cement	125	COV 1966	510	-6.12	0.070	0.000
P-8306	Arnold Rd.	16	Cast iron	60	COV 1890	307	-35.20	0.060	0.000
P-8307	Arnold Rd.	16	Cast iron	60	COV 1890	267	-35.31	0.060	0.000
P-8308	Forest St.	6	Asbestos Cement	120	COV 1954	807	-1.11	0.010	0.000
P-8309	Forest St.	6	Asbestos Cement	120	COV 1954	330	-2.33	0.030	0.000
P-8310	Arnold Rd.	16	Cast iron	60	COV 1890	358	48.66	0.080	0.000
P-8311	Arnold Rd.	16	Cast iron	60	COV 1890	61	43.88	0.070	0.000
P-8312	Cook St.	6	Ductile Iron	140	COV 2000	724	-3.55	0.040	0.000
P-8313	Arnold Rd.	8	Asbestos Cement	125	COV 1969	565	0.00	0.000	0.000
P-8314	Arnold Rd.	8	Asbestos Cement	125	COV 1969	1585	0.00	0.000	0.000
P-8315	Salvas Ave.	8	Ductile Iron	140	COV 2003	879	-171.09	1.090	0.530
P-8316	New London Tpk.	12	Asbestos Cement	125	COV 1960	193	-156.40	0.440	0.020
P-8317	New London Tpk.	12	Ductile Iron	135	COV 1995	742	-158.85	0.450	0.060
P-8318	New London Tpk.	12	PVC	130	COV 1988	831	-157.62	0.450	0.070
P-8319	Prospect Ave.	6	Asbestos Cement	120	COV 1952	199	1.22	0.010	0.000
P-8320	Lambert St.	1	Ductile Iron	135	COV 1997	100	1.22	0.500	0.170
P-8321	Stone St.	6	Cast iron	50	COV 1940	299	-2.45	0.030	0.000
P-8322	Ferncrest St.	8	Ductile Iron	140	COV 2001	636	183.13	1.170	0.440
P-8323	Locust St.	8	Ductile Iron	140	COV 2001	322	154.78	0.990	0.160
P-8324	Station St.	8	Asbestos Cement	125	COV 1963	3093	4.71	0.030	0.000
P-8325	Station St.	8	Asbestos Cement	125	COV 1963	1343	-369.83	2.360	4.180
P-8326	Fairway Dr.	8	Ductile Iron	130	COV 1989	150	373.32	2.380	0.440
P-8327	Fairway Dr.	12	Ductile Iron	130	COV 1989	175	372.09	1.060	0.070
P-8328	Fairway Dr.	12	Ductile Iron	130	COV 1989	617	263.24	0.750	0.130
P-8329	Easement	12	Ductile Iron	130	COV 1989	1776	357.40	1.010	0.670
P-8330	Easement	12	Ductile Iron	130	COV 1989	286	356.18	1.010	0.110
P-8331	Fairway Dr.	8	Ductile Iron	130	COV 1989	452	60.56	0.390	0.050
P-8332	Fairway Dr.	8	Ductile Iron	130	COV 1989	1694	1.22	0.010	0.000
P-8333	Fairway Dr.	8	Ductile Iron	130	COV 1989	917	58.11	0.370	0.090
P-8334	Fairway Dr.	8	Ductile Iron	130	COV 1989	167	-37.28	0.240	0.010
P-8335	Brassie Ct.	6	Ductile Iron	130	COV 1989	377	1.22	0.010	0.000
P-8336	Mashie Cir.	6	Ductile Iron	130	COV 1989	263	-1.22	0.010	0.000
P-8337	Fairway Dr.	8	Ductile Iron	130	COV 1989	251	39.72	0.250	0.010
P-8338	Birdie Ct.	6	Ductile Iron	130	COV 1989	371	1.22	0.010	0.000
P-8339	Fairway Dr.	8	Ductile Iron	130	COV 1989	349	-42.17	0.270	0.020
P-8340	Fairway Dr.	8	Ductile Iron	130	COV 1989	274	-44.62	0.280	0.020
P-8341	Niblick Cir.	6	Ductile Iron	130	COV 1989	830	-8.96	0.100	0.010
P-8342	Fairway Dr.	8	Ductile Iron	130	COV 1989	245	-36.89	0.240	0.010
P-8343	Fairway Dr.	8	Ductile Iron	130	COV 1989	1095	-47.07	0.300	0.070
P-8344	Flat River Rd.	8	Asbestos Cement	120	COV 1950	800	-582.42	3.720	6.230
P-8345	Flat River Rd.	8	Asbestos Cement	120	COV 1950	194	-228.69	1.460	0.270
P-8346	Easement	8	Ductile Iron	130	COV 1989	552	354.96	2.270	1.480
P-8347	Lynn Dr.	12	PVC	130	COV 1987	496	33.99	0.100	0.000
P-8348	Lynn Dr.	12	PVC	130	COV 1987	114	29.91	0.080	0.000
P-8349	Reservoir Rd.	8	Asbestos Cement	125	COV 1965	142	2.86	0.020	0.000
P-8350	Reservoir Rd.	12	PVC	130	COV 1987	145	-18.88	0.050	0.000
P-8352	Reservoir Rd.	8	Asbestos Cement	125	COV 1965	114	5.46	0.030	0.000
P-8353	Reservoir Rd.	8	Asbestos Cement	125	COV 1965	814	-3.83	0.020	0.000
P-8354	Reservoir Rd.	12	PVC	130	COV 1987	796	-14.64	0.040	0.000
P-8355	Reservoir Rd.	12	PVC	130	COV 1987	190	-20.92	0.060	0.000
P-8356	Reservoir Rd.	8	Asbestos Cement	125	COV 1965	118	-5.05	0.030	0.000
P-8357	Nooseneck Hill Rd.	12	Asbestos Cement	125	COV 1965	147	49.59	0.140	0.000
P-8358	Nooseneck Hill Rd.	12	Asbestos Cement	125	COV 1965	418	48.37	0.140	0.000
P-8359	Reservoir Rd.	8	Asbestos Cement	125	COV 1965	205	0.00	0.000	0.000
P-8360	Clubhouse Rd.	8	Asbestos Cement	125	COV 1965	614	-17.43	0.110	0.010
P-8361	Clubhouse Rd.	8	Asbestos Cement	130	COV 1974	186	-12.54	0.080	0.000
P-8362	Clubhouse Rd.	8	Asbestos Cement	130	COV 1974	715	-14.98	0.100	0.010
P-8363	Red Cedar Dr.	8	Ductile Iron	135	COV 1990	375	1.22	0.010	0.000
P-8364	Clubhouse Rd.	8	Ductile Iron	135	COV 1990	147	1.22	0.010	0.000
P-8365	Regal Wood Dr.	8	Ductile Iron	135	COV 1999	196	1.22	0.010	0.000
P-8366	Howard Ave.	6	Cast iron	30	COV 1887	144	-30.57	0.350	0.250
P-8367	Lincoln Ave.	8	Ductile Iron	140	COV 2001	384	-71.38	0.460	0.050
P-8368	Lincoln Ave.	16	Asbestos Cement	120	COV 1957	234	1139.26	1.820	0.220
P-8369	Howard Ave.	16	Asbestos Cement	120	COV 1957	331	1211.86	1.930	0.340
P-8370	Ames St.	16	Asbestos Cement	120	COV 1957	523	-1040.86	1.660	0.410

KCWA Model
 Pipeline Database
 Average Day

Label	Description	Diameter (in)	Material	Hazen-Williams C	Notes	Length (ft)	Discharge (gpm)	Velocity (ft/s)	Calculated Friction Headloss (ft)
P-8371	Ames St.	16	Asbestos Cement	120	COV 1957	637	-1138.03	1.820	0.590
P-8372	Hill St.	8	Ductile Iron	140	COV 2001	605	-95.95	0.610	0.130
P-8373	Main St.	12	Cast iron	60	COV 1886	3930	277.61	0.790	3.850
P-8374	Main St.	12	Cast iron	60	COV 1886	532	248.67	0.710	0.430
P-8375	Easement	6	Cast iron	30	COV 1900	432	-27.71	0.310	0.630
P-8376	Boston St.	6	Ductile Iron	135	COV 1992	1107	-10.79	0.120	0.020
P-8377	Boston St.	6	Asbestos Cement	115	COV 1949	1392	-12.01	0.140	0.040
P-8378	Blackrock Rd.	8	Ductile Iron	135	COV 1990	710	1.40	0.010	0.000
P-8379	Blackrock Rd.	8	PVC	130	COV 1988	500	0.17	0.000	0.000
P-8380	Easement	6	Asbestos Cement	125	COV 1966	268	8.57	0.100	0.000
P-8381	Sandlewood Ct.	6	Asbestos Cement	125	COV 1966	534	7.34	0.080	0.000
P-8382	Sandlewood Ct.	6	Asbestos Cement	125	COV 1966	172	1.22	0.010	0.000
P-8383	Sandlewood Ct.	6	Asbestos Cement	125	COV 1966	224	-4.90	0.060	0.000
P-8384	Morningside Dr.	6	Asbestos Cement	130	COV 1972	1148	-14.69	0.170	0.030
P-8386	Adams Dr.	12	Ductile Iron	130	COV 1989	178	-27.04	0.080	0.000
P-8387	Adams Dr.	12	Ductile Iron	130	COV 1989	416	-41.73	0.120	0.000

KCWA Model
Junction Node Database
Average Day

Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-1	300	Zone - 2	WW	Fixed	1.54	488.60	81.6
J-2	290	Zone - 2	WW	Fixed	1.54	488.59	85.92
J-3	320	Zone - 2	WW	Fixed	1.54	488.59	72.94
J-4	295	Zone - 2	WW	Fixed	1.54	488.59	83.76
J-5	310	Zone - 2	WW	Fixed	1.54	488.59	77.27
J-6	310	Zone - 2	WW	Fixed	1.54	488.58	77.26
J-7	310	Zone - 2	WW	Fixed	1.54	488.58	77.26
J-8	295	Zone - 2	WW	Fixed	1.54	488.58	83.75
J-9	293	Zone - 2	WW	Fixed	1.54	488.58	84.62
J-10	290	Zone - 2	WW	Fixed	1.54	488.59	85.92
J-11	327	Zone - 2	WW	Fixed	1.54	488.57	69.91
J-12	293	Zone - 2	WW	Fixed	1.54	488.58	84.62
J-13	300	Zone - 2	WW	Fixed	1.54	488.60	81.6
J-14	290	Zone - 2	WW	Fixed	1.54	488.58	85.92
J-15	300	Zone - 2	WW	Fixed	1.54	488.58	81.59
J-16	300	Zone - 2	WW	Fixed	1.54	488.57	81.59
J-17	265	Zone - 2	WW	Fixed	1.54	488.49	96.69
J-18	300	Zone - 2	WW	Fixed	1.54	488.56	81.58
J-19	261	Zone - 2	WW	Fixed	1.54	488.54	98.45
J-20	240	Zone - 2	WW	Fixed	1.54	488.51	107.52
J-21	255	Zone - 2	WW	Fixed	1.54	488.50	101.02
J-22	265	Zone - 2	WW	Fixed	1.54	488.49	96.7
J-23	263	Zone - 2	WW	Fixed	1.54	488.52	97.57
J-24	263	Zone - 2	WW	Fixed	1.54	488.52	97.57
J-25	250	Zone - 2	WW	Fixed	1.54	488.52	103.19
J-26	266	Zone - 2	WW	Fixed	1.54	488.52	96.27
J-27	261	Zone - 2	WW	Fixed	1.54	488.52	98.44
J-28	250	Zone - 2	WW	Fixed	1.54	488.54	103.2
J-29	261	Zone - 2	WW	Fixed	1.54	488.54	98.44
J-30	260	Zone - 2	WW	Fixed	1.54	488.55	98.88
J-31	330	Zone - 2	WW	Fixed	1.54	488.57	68.6
J-32	310	Zone - 2	WW	Fixed	1.54	488.56	77.26
J-33	300	Zone - 2	WW	Fixed	1.54	488.56	81.58
J-34	260	Zone - 2	WW	Fixed	1.54	488.55	98.88
J-35	71	Zone - 5	WW	Fixed	1.54	230.31	68.93
J-36	280	Zone - 2	WW	Fixed	1.54	488.48	90.2
J-37	215	Zone - 2	WW	Fixed	1.54	488.47	118.32
J-38	223	Zone - 2	WW	Fixed	1.54	488.46	114.85
J-39	223	Zone - 2	WW	Fixed	1.54	488.42	114.83
J-40	270	Zone - 2	WW	Fixed	1.54	488.48	94.53
J-41	270	Zone - 2	WW	Fixed	1.54	488.48	94.52
J-42	269	Zone - 2	WW	Fixed	1.54	488.48	94.96
J-43	262	Zone - 2	WW	Fixed	1.54	488.47	97.98
J-44	215	Zone - 2	WW	Fixed	1.54	488.47	118.32
J-45	271	Zone - 2	WW	Fixed	1.54	488.48	94.09
J-46	230	Zone - 2	WW	Fixed	1.54	488.47	111.83
J-47	230	Zone - 2	WW	Fixed	1.54	488.47	111.83
J-48	250	Zone - 2	WW	Fixed	1.54	488.47	103.18
J-49	325	Zone - 2	WW	Fixed	1.54	488.40	70.69
J-50	287	Zone - 2	WW	Fixed	1.54	488.39	87.13
J-51	245	Zone - 2	WW	Fixed	1.54	488.39	105.3
J-52	250	Zone - 2	WW	Fixed	1.54	488.39	103.14
J-54	245	Zone - 2	WW	Fixed	1.54	488.39	105.3
J-55	260	Zone - 2	WW	Fixed	1.54	488.39	98.82
J-56	260	Zone - 2	WW	Fixed	1.54	488.39	98.81
J-57	285	Zone - 2	WW	Fixed	1.54	488.39	88
J-58	250	Zone - 2	WW	Fixed	1.54	488.39	103.14
J-59	270	Zone - 2	WW	Fixed	1.54	488.39	94.49
J-60	300	Zone - 2	WW	Fixed	1.54	488.61	81.6
J-62	281	Zone - 2	WW	Fixed	1.54	488.39	89.73
J-63	290	Zone - 2	WW	Fixed	1.54	488.39	85.83
J-64	260	Zone - 2	WW	Fixed	1.54	488.38	98.81
J-65	250	Zone - 2	WW	Fixed	1.54	488.38	103.14
J-66	272	Zone - 2	WW	Fixed	1.54	488.39	93.62
J-67	289	Zone - 2	WW	Fixed	1.54	488.39	86.26
J-68	289	Zone - 2	WW	Fixed	1.54	488.39	86.27
J-69	270	Zone - 2	WW	Fixed	1.54	488.38	94.48

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-70	332	Zone - 2	WW	Fixed	1.54	488.36	67.66
J-71	300	Zone - 2	WW	Fixed	1.54	488.38	81.5
J-72	255	Zone - 2	WW	Fixed	1.54	488.39	100.98
J-73	230	Zone - 2	WW	Fixed	1.54	331.22	43.79
J-74	170	Zone - 1	WW	Fixed	1.54	331.22	69.75
J-75	190	Zone - 1	WW	Fixed	1.54	331.22	61.1
J-76	200	Zone - 1	WW	Fixed	1.54	331.22	56.77
J-77	180	Zone - 1	WW	Fixed	1.54	331.22	65.43
J-78	170	Zone - 1	WW	Fixed	1.54	331.27	69.77
J-79	180	Zone - 1	WW	Fixed	1.54	331.23	65.43
J-80	180	Zone - 1	WW	Fixed	1.54	331.23	65.43
J-81	180	Zone - 1	WW	Fixed	1.54	331.22	65.43
J-82	195	Zone - 1	WW	Fixed	1.54	331.20	58.93
J-83	170	Zone - 1	WW	Fixed	1.54	331.20	69.75
J-84	180	Zone - 1	WW	Fixed	1.54	331.18	65.41
J-85	170	Zone - 1	WW	Fixed	1.54	331.17	69.73
J-86	195	Zone - 1	WW	Fixed	1.54	331.18	58.92
J-87	255	Zone - 1	WW	Fixed	1.54	331.63	33.15
J-88	241	Zone - 2	WW	Fixed	1.54	331.63	39.21
J-89	180	Zone - 2	WW	Fixed	1.54	488.38	133.42
J-90	175	Zone - 2	WW	Fixed	1.54	488.38	135.58
J-91	290	Zone - 2	WW	Fixed	1.54	488.39	85.83
J-92	270	Zone - 2	WW	Fixed	1.54	488.38	94.48
J-93	260	Zone - 2	WW	Fixed	1.54	488.38	98.81
J-94	322	Zone - 2	WW	Fixed	1.54	488.38	71.98
J-95	300	Zone - 2	WW	Fixed	1.54	488.38	81.5
J-96	300	Zone - 2	WW	Fixed	1.54	488.38	81.5
J-97	260	Zone - 2	WW	Fixed	1.54	488.37	98.8
J-98	270	Zone - 2	WW	Fixed	1.54	488.37	94.48
J-99	273	Zone - 2	WW	Fixed	1.54	488.38	93.18
J-100	260	Zone - 1	WW	Fixed	1.54	329.32	29.99
J-101	280	Zone - 2	WW	Fixed	1.54	488.37	90.15
J-102	260	Zone - 2	WW	Fixed	1.54	488.38	98.81
J-103	250	Zone - 2	WW	Fixed	1.54	488.38	103.14
J-104	205	Zone - 1	WW	Fixed	1.54	327.63	53.06
J-105	250	Zone - 2	WW	Fixed	1.54	488.36	103.13
J-106	250	Zone - 2	WW	Fixed	1.54	488.36	103.13
J-107	270	Zone - 2	WW	Fixed	1.54	488.36	94.48
J-108	280	Zone - 2	WW	Fixed	1.54	488.37	90.15
J-109	280	Zone - 2	WW	Fixed	1.54	488.36	90.15
J-110	257	Zone - 2	WW	Fixed	1.54	488.36	100.1
J-111	270	Zone - 2	WW	Fixed	1.54	488.36	94.48
J-112	272	Zone - 2	WW	Fixed	1.54	488.36	93.61
J-113	246	Zone - 2	WW	Fixed	1.54	488.36	104.86
J-114	260	Zone - 2	WW	Fixed	1.54	488.36	98.8
J-115	250	Zone - 2	WW	Fixed	1.54	488.36	103.13
J-116	240	Zone - 2	WW	Fixed	1.54	488.36	107.45
J-117	266	Zone - 2	WW	Fixed	1.54	488.36	96.21
J-118	246	Zone - 2	WW	Fixed	1.54	488.36	104.86
J-119	250	Zone - 2	WW	Fixed	1.54	488.36	103.13
J-120	264	Zone - 2	WW	Fixed	1.54	488.36	97.07
J-121	250	Zone - 2	WW	Fixed	1.54	488.36	103.13
J-122	240	Zone - 2	WW	Fixed	1.54	488.36	107.45
J-123	247	Zone - 2	WW	Fixed	1.54	488.36	104.43
J-124	240	Zone - 2	WW	Fixed	1.54	488.36	107.45
J-125	260	Zone - 2	WW	Fixed	1.54	488.36	98.8
J-126	259	Zone - 2	WW	Fixed	1.54	488.38	99.24
J-127	262	Zone - 2	WW	Fixed	1.54	488.37	97.94
J-128	245	Zone - 2	WW	Fixed	1.54	488.37	105.29
J-129	245	Zone - 2	WW	Fixed	1.54	488.37	105.29
J-130	250	Zone - 2	WW	Fixed	1.54	488.37	103.13
J-131	241	Zone - 2	WW	Fixed	1.54	488.38	107.03
J-132	250	Zone - 2	WW	Fixed	1.54	488.38	103.13
J-133	83	Zone - 5	WW	Fixed	1.54	230.46	63.8
J-134	71	Zone - 5	WW	Fixed	1.54	230.46	68.99
J-135	76	Zone - 5	WW	Fixed	1.54	230.45	66.83
J-136	82	Zone - 5	WW	Fixed	1.54	230.45	64.23

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-137	82	Zone - 5	WW	Fixed	1.54	230.45	64.23
J-138	76	Zone - 5	WW	Fixed	1.54	230.45	66.82
J-139	75	Zone - 5	WW	Fixed	1.54	230.46	67.26
J-140	74	Zone - 5	WW	Fixed	1.54	230.45	67.69
J-141	75	Zone - 5	WW	Fixed	1.54	230.44	67.25
J-142	74	Zone - 5	WW	Fixed	1.54	230.44	67.68
J-143	79	Zone - 5	WW	Fixed	1.54	230.45	65.53
J-144	75	Zone - 5	WW	Fixed	1.54	230.45	67.26
J-145	71	Zone - 5	WW	Fixed	1.54	230.45	68.99
J-146	73	Zone - 5	WW	Fixed	1.54	230.43	68.11
J-147	74	Zone - 5	WW	Fixed	1.54	230.45	67.69
J-148	75	Zone - 5	WW	Fixed	1.54	230.42	67.24
J-149	68	Zone - 5	WW	Fixed	1.54	230.36	70.24
J-150	64	Zone - 5	WW	Fixed	1.54	230.35	71.97
J-151	64	Zone - 5	WW	Fixed	1.54	230.35	71.97
J-152	58	Zone - 5	WW	Fixed	1.54	230.35	74.57
J-153	56	Zone - 5	WW	Fixed	1.54	230.35	75.43
J-154	57	Zone - 5	WW	Fixed	1.54	230.35	75
J-155	59	Zone - 5	WW	Fixed	1.54	230.31	74.12
J-156	55	Zone - 5	WW	Fixed	1.54	230.30	75.85
J-157	55	Zone - 5	WW	Fixed	1.54	230.31	75.85
J-158	52	Zone - 5	WW	Fixed	1.54	230.29	77.14
J-159	52	Zone - 5	WW	Fixed	1.54	230.28	77.13
J-160	60	Zone - 5	WW	Fixed	1.54	230.27	73.67
J-161	60	Zone - 5	WW	Fixed	1.54	230.27	73.67
J-162	60	Zone - 5	WW	Fixed	1.54	230.27	73.67
J-163	60	Zone - 5	WW	Fixed	1.54	230.27	73.67
J-164	50	Zone - 5	WW	Fixed	1.54	230.26	77.99
J-165	70	Zone - 5	WW	Fixed	1.54	230.26	69.34
J-166	120	Zone - 5	WW	Fixed	1.54	230.26	47.71
J-167	62	Zone - 5	WW	Fixed	1.54	230.30	72.82
J-168	66	Zone - 5	WW	Fixed	1.54	230.30	71.09
J-169	63	Zone - 5	WW	Fixed	1.54	230.29	72.38
J-170	62	Zone - 5	WW	Fixed	1.54	230.29	72.81
J-171	72	Zone - 5	WW	Fixed	1.54	230.29	68.48
J-172	64	Zone - 5	WW	Fixed	1.54	230.29	71.94
J-173	71	Zone - 5	WW	Fixed	1.54	230.29	68.92
J-174	75	Zone - 5	WW	Fixed	1.54	230.45	67.25
J-175	75	Zone - 5	WW	Fixed	1.54	230.45	67.25
J-176	77	Zone - 5	WW	Fixed	1.54	230.45	66.39
J-177	76	Zone - 5	WW	Fixed	1.54	230.44	66.82
J-178	75	Zone - 5	WW	Fixed	1.54	227.75	66.09
J-179	75	Zone - 5	WW	Fixed	1.54	230.44	67.25
J-180	74	Zone - 5	WW	Fixed	1.54	230.44	67.68
J-181	74	Zone - 5	WW	Fixed	1.54	230.44	67.68
J-182	62	Zone - 5	WW	Fixed	1.54	230.45	72.88
J-183	66	Zone - 5	WW	Fixed	1.54	230.45	71.15
J-184	64	Zone - 1	WW	Fixed	1.54	321.12	111.25
J-185	58	Zone - 1	WW	Fixed	1.54	321.10	113.83
J-186	46	Zone - 1	WW	Fixed	1.54	321.09	119.02
J-187	37	Zone - 1	WW	Fixed	1.54	321.09	122.91
J-188	41	Zone - 1	WW	Fixed	1.54	321.09	121.18
J-189	42	Zone - 1	WW	Fixed	1.54	321.09	120.75
J-190	42	Zone - 1	WW	Fixed	1.54	321.09	120.75
J-191	42	Zone - 1	WW	Fixed	1.54	321.44	120.9
J-192	56	Zone - 1	WW	Fixed	1.54	321.12	114.71
J-193	59	Zone - 1	WW	Fixed	1.54	321.12	113.41
J-194	66	Zone - 1	WW	Fixed	1.54	321.12	110.38
J-195	60	Zone - 1	WW	Fixed	1.54	321.12	112.97
J-196	180	Zone - 1	WW	Fixed	1.54	321.12	61.06
J-197	78	Zone - 1	WW	Fixed	1.54	323.21	106.09
J-198	78	Zone - 1	WW	Fixed	1.54	323.47	106.2
J-200	76	Zone - 1	WW	Fixed	1.54	324.95	107.71
J-201	52	Zone - 1	WW	Fixed	1.54	320.33	116.09
J-202	104	Zone - 1	WW	Fixed	1.54	323.15	94.82
J-203	52	Zone - 1	WW	Fixed	1.54	323.15	117.31
J-204	141	Zone - 1	WW	Fixed	1.54	323.04	78.76

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-205	130	Zone - 1	WW	Fixed	1.54	323.04	83.52
J-206	148	Zone - 1	WW	Fixed	1.54	322.99	75.71
J-207	148	Zone - 1	WW	Fixed	1.54	322.99	75.71
J-208	148	Zone - 1	WW	Fixed	1.54	322.99	75.71
J-209	150	Zone - 1	WW	Fixed	1.54	322.98	74.84
J-210	180	Zone - 1	WW	Fixed	1.54	322.94	61.84
J-211	177	Zone - 1	WW	Fixed	1.54	322.93	63.14
J-212	177	Zone - 1	WW	Fixed	1.54	322.92	63.13
J-213	190	Zone - 1	WW	Fixed	1.54	322.92	57.51
J-214	205	Zone - 1	WW	Fixed	1.54	322.90	51.01
J-215	205	Zone - 1	WW	Fixed	1.54	322.87	51
J-216	203	Zone - 1	WW	Fixed	1.54	322.87	51.86
J-217	200	Zone - 1	WW	Fixed	1.54	322.87	53.16
J-220	206	Zone - 1	WW	Fixed	1.54	322.87	50.56
J-221	88	Zone - 1	WW	Fixed	1.54	325.04	102.56
J-222	94	Zone - 1	WW	Fixed	1.54	325.07	99.97
J-223	134	Zone - 1	WW	Fixed	1.54	325.19	82.72
J-224	88	Zone - 1	WW	Fixed	1.54	324.99	102.53
J-225	65	Zone - 1	WW	Fixed	1.54	324.93	112.46
J-226	65	Zone - 1	WW	Fixed	1.54	324.92	112.46
J-227	94	Zone - 1	WW	Fixed	1.54	324.91	99.9
J-228	94	Zone - 1	WW	Fixed	1.54	324.91	99.9
J-229	94	Zone - 1	WW	Fixed	1.54	324.90	99.9
J-230	95	Zone - 1	WW	Fixed	1.54	324.90	99.47
J-231	85	Zone - 1	WW	Fixed	1.54	324.90	103.79
J-232	95	Zone - 1	WW	Fixed	1.54	324.90	99.47
J-233	95	Zone - 1	WW	Fixed	1.54	324.88	99.46
J-234	100	Zone - 1	WW	Fixed	1.54	324.85	97.28
J-235	100	Zone - 1	WW	Fixed	1.54	324.85	97.28
J-236	105	Zone - 1	WW	Fixed	1.54	324.85	95.12
J-237	105	Zone - 1	WW	Fixed	1.54	324.85	95.12
J-238	85	Zone - 1	WW	Fixed	1.54	321.25	102.21
J-239	85	Zone - 1	WW	Fixed	1.54	321.24	102.21
J-240	82	Zone - 1	WW	Fixed	1.54	321.23	103.5
J-241	88	Zone - 1	WW	Fixed	1.54	321.23	100.91
J-242	89	Zone - 1	WW	Fixed	1.54	321.23	100.47
J-243	99	Zone - 1	WW	Fixed	1.54	321.22	96.15
J-244	93	Zone - 1	WW	Fixed	1.54	321.22	98.74
J-245	98	Zone - 1	WW	Fixed	1.54	321.22	96.58
J-246	119	Zone - 1	WW	Fixed	1.54	321.22	87.49
J-247	98	Zone - 1	WW	Fixed	1.54	321.22	96.58
J-248	125	Zone - 1	WW	Fixed	1.54	321.22	84.89
J-249	90	Zone - 1	WW	Fixed	1.54	321.22	100.04
J-250	105	Zone - 1	WW	Fixed	1.54	321.22	93.55
J-251	72	Zone - 1	WW	Fixed	1.54	321.22	107.82
J-252	74	Zone - 1	WW	Fixed	1.54	321.22	106.96
J-253	74	Zone - 1	WW	Fixed	1.54	321.22	106.96
J-254	87	Zone - 1	WW	Fixed	1.54	323.19	102.19
J-255	160	Zone - 1	WW	Fixed	1.54	323.08	70.56
J-256	200	Zone - 1	WW	Fixed	1.54	323.06	53.24
J-257	176	Zone - 1	WW	Fixed	1.54	323.07	63.63
J-258	209	Zone - 1	WW	Fixed	1.54	323.06	49.35
J-259	231	Zone - 1	WW	Fixed	1.54	323.06	39.83
J-260	240	Zone - 1	WW	Fixed	1.54	323.06	35.93
J-261	251	Zone - 1	WW	Fixed	1.54	323.05	31.17
J-262	261	Zone - 1	WW	Fixed	1.54	323.05	26.85
J-263	248	Zone - 1	WW	Fixed	1.54	323.06	32.47
J-264	170	Zone - 1	WW	Fixed	1.54	323.06	66.22
J-265	223	Zone - 1	WW	Fixed	1.54	323.06	43.29
J-266	248	Zone - 1	WW	Fixed	1.54	323.06	32.47
J-267	220	Zone - 1	WW	Fixed	1.54	323.06	44.59
J-268	249	Zone - 1	WW	Fixed	1.54	323.05	32.04
J-269	250	Zone - 1	WW	Fixed	1.54	323.04	31.6
J-270	246	Zone - 1	WW	Fixed	1.54	323.00	33.31
J-271	229	Zone - 1	WW	Fixed	1.54	323.00	40.87
J-272	190	Zone - 1	WW	Fixed	1.54	322.98	57.53
J-273	203	Zone - 1	WW	Fixed	1.54	322.98	51.91

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 Average Day

Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-274	222	Zone - 1	WW	Fixed	1.54	323.00	43.7
J-275	210	Zone - 1	WW	Fixed	1.54	322.98	48.88
J-276	210	Zone - 1	WW	Fixed	1.54	322.98	48.88
J-277	163	Zone - 1	WW	Fixed	1.54	322.98	69.21
J-278	185	Zone - 1	WW	Fixed	1.54	322.98	59.7
J-279	195	Zone - 1	WW	Fixed	1.54	323.00	55.38
J-280	185	Zone - 1	WW	Fixed	1.54	323.00	59.71
J-281	175	Zone - 1	WW	Fixed	1.54	323.00	64.03
J-282	185	Zone - 1	WW	Fixed	1.54	322.99	59.7
J-283	145	Zone - 1	WW	Fixed	1.54	322.99	77.01
J-284	150	Zone - 1	WW	Fixed	1.54	323.01	74.85
J-285	153	Zone - 1	WW	Fixed	1.54	322.98	73.54
J-286	163	Zone - 1	WW	Fixed	1.54	322.98	69.21
J-287	157	Zone - 1	WW	Fixed	1.54	322.95	71.8
J-288	157	Zone - 1	WW	Fixed	1.54	322.93	71.79
J-289	172	Zone - 1	WW	Fixed	1.54	322.97	65.32
J-290	172	Zone - 1	WW	Fixed	1.54	322.63	65.17
J-291	159	Zone - 1	WW	Fixed	1.54	322.97	70.94
J-292	168	Zone - 1	WW	Fixed	1.54	322.97	67.05
J-293	178	Zone - 1	WW	Fixed	1.54	322.97	63.59
J-294	157	Zone - 1	WW	Fixed	1.54	322.31	71.52
J-295	130	Zone - 1	WW	Fixed	1.54	322.31	83.2
J-296	130	Zone - 1	WW	Fixed	1.54	322.31	83.2
J-297	144	Zone - 1	WW	Fixed	1.54	322.31	77.15
J-298	144	Zone - 1	WW	Fixed	1.54	321.87	76.95
J-299	150	Zone - 1	WW	Fixed	1.54	321.87	74.36
J-300	151	Zone - 1	WW	Fixed	1.54	320.86	73.49
J-301	158	Zone - 1	WW	Fixed	1.54	320.60	70.35
J-302	163	Zone - 1	WW	Fixed	1.54	320.48	68.13
J-303	158	Zone - 1	WW	Fixed	1.54	320.60	70.35
J-304	160	Zone - 1	WW	Fixed	1.54	320.60	69.48
J-305	181	Zone - 1	WW	Fixed	1.54	320.49	60.35
J-306	192	Zone - 1	WW	Fixed	1.54	320.51	55.6
J-307	220	Zone - 1	WW	Fixed	1.54	320.49	43.48
J-308	223	Zone - 1	WW	Fixed	1.54	320.56	42.21
J-309	230	Zone - 1	WW	Fixed	1.54	320.56	39.18
J-310	216	Zone - 1	WW	Fixed	1.54	320.59	45.25
J-311	230	Zone - 1	WW	Fixed	1.54	320.59	39.19
J-312	210	Zone - 1	WW	Fixed	1.54	320.63	47.86
J-313	184	Zone - 1	WW	Fixed	1.54	320.68	59.13
J-314	190	Zone - 1	WW	Fixed	1.54	320.68	56.54
J-315	170	Zone - 1	WW	Fixed	1.54	320.68	65.19
J-317	205	Zone - 1	WW	Fixed	1.54	320.72	50.07
J-318	214	Zone - 1	WW	Fixed	1.54	320.72	46.17
J-319	186	Zone - 1	WW	Fixed	1.54	320.75	58.3
J-320	216	Zone - 1	WW	Fixed	1.54	320.75	45.32
J-321	205	Zone - 1	WW	Fixed	1.54	320.34	49.9
J-322	150	Zone - 1	WW	Fixed	1.54	320.84	73.92
J-323	150	Zone - 1	WW	Fixed	1.54	320.85	73.92
J-324	159	Zone - 1	WW	Fixed	1.54	320.85	70.03
J-325	184	Zone - 1	WW	Fixed	1.54	320.85	59.21
J-328	148	Zone - 1	WW	Fixed	1.54	320.84	74.78
J-329	159	Zone - 1	WW	Fixed	1.54	320.84	70.02
J-330	146	Zone - 1	WW	Fixed	1.54	320.85	75.65
J-331	150	Zone - 1	WW	Fixed	1.54	320.84	73.92
J-332	150	Zone - 1	WW	Fixed	1.54	320.84	73.92
J-333	154	Zone - 1	WW	Fixed	1.54	320.84	72.18
J-334	143	Zone - 1	WW	Fixed	1.54	323.93	78.28
J-335	146	Zone - 1	WW	Fixed	1.54	323.93	76.98
J-336	141	Zone - 1	WW	Fixed	1.54	323.93	79.15
J-337	143	Zone - 1	WW	Fixed	1.54	322.13	77.5
J-338	143	Zone - 1	WW	Fixed	1.54	321.90	77.4
J-339	143	Zone - 1	WW	Fixed	1.54	321.42	77.2
J-340	143	Zone - 1	WW	Fixed	1.54	321.34	77.16
J-341	139	Zone - 1	WW	Fixed	1.54	321.41	78.92
J-342	141	Zone - 1	WW	Fixed	1.54	323.95	79.15
J-343	141	Zone - 1	WW	Fixed	1.54	323.98	79.17



KCWA Model
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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-344	149	Zone - 1	WW	Fixed	1.54	323.98	75.71
J-345	164	Zone - 1	WW	Fixed	1.54	324.05	69.25
J-346	164	Zone - 1	WW	Fixed	1.54	324.05	69.25
J-347	152	Zone - 1	WW	Fixed	1.54	324.36	74.57
J-348	161	Zone - 1	WW	Fixed	1.54	324.32	70.66
J-349	164	Zone - 1	WW	Fixed	1.54	324.23	69.32
J-350	172	Zone - 1	WW	Fixed	1.54	324.39	65.93
J-351	182	Zone - 1	WW	Fixed	1.54	324.39	61.61
J-352	172	Zone - 1	WW	Fixed	1.54	324.43	65.95
J-353	170	Zone - 1	WW	Fixed	1.54	324.43	66.81
J-354	176	Zone - 1	WW	Fixed	1.54	324.45	64.23
J-355	170	Zone - 1	WW	Fixed	1.54	324.37	66.79
J-356	149	Zone - 1	WW	Fixed	1.54	323.93	75.68
J-358	149	Zone - 1	WW	Fixed	1.54	324.05	75.74
J-359	144	Zone - 1	WW	Fixed	1.54	324.08	77.91
J-360	135	Zone - 1	WW	Fixed	1.54	324.08	81.81
J-361	160	Zone - 1	WW	Fixed	1.54	324.08	70.99
J-362	160	Zone - 1	WW	Fixed	1.54	324.13	71.01
J-363	172	Zone - 1	WW	Fixed	1.54	324.28	65.88
J-364	172	Zone - 1	WW	Fixed	1.54	324.44	65.95
J-365	182	Zone - 1	WW	Fixed	1.54	325.22	61.97
J-366	188	Zone - 1	WW	Fixed	1.54	325.37	59.43
J-367	188	Zone - 1	WW	Fixed	1.54	325.97	59.69
J-368	193	Zone - 1	WW	Fixed	1.54	325.97	57.53
J-369	198	Zone - 1	WW	Fixed	1.54	325.36	55.1
J-370	187	Zone - 1	WW	Fixed	1.54	327.04	60.59
J-371	189	Zone - 1	WW	Fixed	1.54	328.05	60.16
J-372	184	Zone - 1	WW	Fixed	1.54	327.04	61.88
J-373	203	Zone - 1	WW	Fixed	1.54	327.01	53.65
J-374	203	Zone - 1	WW	Fixed	1.54	327.01	53.65
J-375	208	Zone - 1	WW	Fixed	1.54	327.01	51.49
J-376	209	Zone - 1	WW	Fixed	1.54	327.01	51.06
J-377	201	Zone - 1	WW	Fixed	1.54	327.00	54.52
J-378	203	Zone - 1	WW	Fixed	1.54	327.00	53.65
J-379	205	Zone - 1	WW	Fixed	1.54	327.00	52.79
J-380	208	Zone - 1	WW	Fixed	1.54	327.00	51.49
J-381	280	Zone - 1	WW	Fixed	1.54	325.81	19.82
J-382	198	Zone - 1	WW	Fixed	1.54	325.33	55.09
J-383	203	Zone - 1	WW	Fixed	1.54	325.32	52.92
J-384	198	Zone - 1	WW	Fixed	1.54	325.33	55.09
J-385	198	Zone - 1	WW	Fixed	1.54	325.33	55.09
J-386	210	Zone - 1	WW	Fixed	1.54	325.33	49.9
J-387	191	Zone - 1	WW	Fixed	1.54	325.33	58.12
J-388	219	Zone - 1	WW	Fixed	1.54	325.33	46
J-389	230	Zone - 1	WW	Fixed	1.54	325.32	41.24
J-390	205	Zone - 1	WW	Fixed	1.54	325.26	52.03
J-391	191	Zone - 1	WW	Fixed	1.54	327.38	59.01
J-392	210	Zone - 1	WW	Fixed	1.54	328.36	51.21
J-393	202	Zone - 1	WW	Fixed	1.54	328.16	54.58
J-394	190	Zone - 1	WW	Fixed	1.54	328.02	59.72
J-395	189	Zone - 1	WW	Fixed	1.54	327.84	60.07
J-396	213	Zone - 1	WW	Fixed	1.54	327.84	49.69
J-397	208	Zone - 1	WW	Fixed	1.54	329.26	52.47
J-398	180	Zone - 1	WW	Fixed	1.54	331.45	65.52
J-399	189	Zone - 1	WW	Fixed	1.54	329.51	60.79
J-400	219	Zone - 1	WW	Fixed	1.54	329.36	47.75
J-401	208	Zone - 1	WW	Fixed	1.54	325.13	50.68
J-402	220	Zone - 2	WW	Fixed	1.54	488.36	116.11
J-403	230	Zone - 2	WW	Fixed	1.54	488.36	111.78
J-404	250	Zone - 2	WW	Fixed	1.54	488.36	103.13
J-405	247	Zone - 2	WW	Fixed	1.54	488.36	104.43
J-406	206	Zone - 1	WW	Fixed	1.54	325.74	51.81
J-407	230	Zone - 2	WW	Fixed	1.54	488.36	111.78
J-408	230	Zone - 2	WW	Fixed	1.54	488.36	111.78
J-409	235	Zone - 2	WW	Fixed	1.54	488.36	109.62
J-410	225	Zone - 2	WW	Fixed	1.54	488.36	113.94
J-411	241	Zone - 2	WW	Fixed	1.54	488.36	107.02

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-412	228	Zone - 2	WW	Fixed	1.54	488.36	112.64
J-413	255	Zone - 2	WW	Fixed	1.54	488.36	100.96
J-414	205	Zone - 1	WW	Fixed	1.54	328.41	53.39
J-415	205	Zone - 1	WW	Fixed	1.54	328.34	53.36
J-416	208	Zone - 1	WW	Fixed	1.54	328.16	51.99
J-417	250	Zone - 1	WW	Fixed	1.54	328.18	33.82
J-418	230	Zone - 1	WW	Fixed	1.54	328.17	42.47
J-419	250	Zone - 1	WW	Fixed	1.54	328.18	33.83
J-420	216	Zone - 1	WW	Fixed	1.54	328.16	48.53
J-421	210	Zone - 1	WW	Fixed	1.54	328.16	51.12
J-422	216	Zone - 1	WW	Fixed	1.54	328.15	48.52
J-423	196	Zone - 1	WW	Fixed	1.54	328.15	57.17
J-424	200	Zone - 1	WW	Fixed	1.54	328.15	55.44
J-425	194	Zone - 1	WW	Fixed	1.54	328.15	58.04
J-426	180	Zone - 1	WW	Fixed	1.54	328.15	64.1
J-427	194	Zone - 1	WW	Fixed	1.54	328.15	58.04
J-428	196	Zone - 1	WW	Fixed	1.54	328.15	57.17
J-429	250	Zone - 1	WW	Fixed	1.54	328.19	33.83
J-430	250	Zone - 1	WW	Fixed	1.54	328.22	33.84
J-431	255	Zone - 1	WW	Fixed	1.54	328.26	31.7
J-432	250	Zone - 1	WW	Fixed	1.54	328.30	33.88
J-433	250	Zone - 1	WW	Fixed	1.54	328.75	34.07
J-434	250	Zone - 1	WW	Fixed	1.54	328.31	33.88
J-435	250	Zone - 1	WW	Fixed	1.54	328.31	33.88
J-436	250	Zone - 1	WW	Fixed	1.54	328.31	33.88
J-437	254	Zone - 1	WW	Fixed	1.54	328.26	32.13
J-438	250	Zone - 1	WW	Fixed	1.54	328.26	33.86
J-439	260	Zone - 1	WW	Fixed	1.54	328.26	29.53
J-440	261	Zone - 1	WW	Fixed	1.54	328.22	29.08
J-441	248	Zone - 1	WW	Fixed	1.54	328.26	34.72
J-442	250	Zone - 1	WW	Fixed	1.54	328.26	33.86
J-443	147	Zone - 1	WW	Fixed	1.54	317.27	73.67
J-444	135	Zone - 1	WW	Fixed	1.54	318.40	79.35
J-445	137	Zone - 1	WW	Fixed	1.54	318.45	78.5
J-446	150	Zone - 1	WW	Fixed	1.54	317.75	72.58
J-447	142	Zone - 1	WW	Fixed	1.54	318.40	76.32
J-448	140	Zone - 1	WW	Fixed	1.54	318.43	77.2
J-449	200	Zone - 1	WW	Fixed	1.54	322.67	53.07
J-450	198	Zone - 1	WW	Fixed	1.54	322.67	53.94
J-451	198	Zone - 1	WW	Fixed	1.54	320.47	53.85
J-452	198	Zone - 1	WW	Fixed	1.54	320.47	52.98
J-453	186	Zone - 1	WW	Fixed	1.54	318.39	57.28
J-454	200	Zone - 1	WW	Fixed	1.54	317.99	51.05
J-455	200	Zone - 1	WW	Fixed	1.54	317.88	51
J-456	150	Zone - 1	WW	Fixed	1.54	318.38	72.85
J-457	200	Zone - 1	WW	Fixed	1.54	314.99	49.75
J-458	150	Zone - 1	WW	Fixed	1.54	318.38	72.85
J-459	150	Zone - 1	WW	Fixed	1.54	318.03	72.7
J-460	150	Zone - 1	WW	Fixed	1.54	318.42	72.87
J-461	140	Zone - 1	WW	Fixed	1.54	318.43	77.2
J-462	175	Zone - 1	WW	Fixed	1.54	318.43	62.06
J-463	155	Zone - 1	WW	Fixed	1.54	318.44	70.71
J-464	130	Zone - 1	WW	Fixed	1.54	318.47	81.54
J-465	145	Zone - 1	WW	Fixed	1.54	318.46	75.05
J-466	130	Zone - 1	WW	Fixed	1.54	318.94	81.74
J-467	132	Zone - 1	WW	Fixed	1.54	318.50	80.69
J-468	178	Zone - 1	WW	Fixed	1.54	318.43	60.76
J-469	185	Zone - 1	WW	Fixed	1.54	318.44	57.73
J-470	155	Zone - 1	WW	Fixed	1.54	318.46	70.72
J-471	137	Zone - 1	WW	Fixed	1.54	317.72	78.18
J-472	135	Zone - 1	WW	Fixed	1.54	317.72	79.06
J-473	137	Zone - 1	WW	Fixed	1.54	317.67	78.17
J-474	200	Zone - 1	WW	Fixed	1.54	317.81	50.97
J-475	200	Zone - 1	WW	Fixed	1.54	317.81	50.97
J-476	198	Zone - 1	WW	Fixed	1.54	316.70	51.35
J-477	198	Zone - 1	WW	Fixed	1.54	316.24	51.16
J-478	198	Zone - 1	WW	Fixed	1.54	316.24	51.16

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-479	191	Zone - 1	WW	Fixed	1.54	316.13	54.14
J-480	202	Zone - 1	WW	Fixed	1.54	315.88	49.27
J-481	203	Zone - 1	WW	Fixed	1.54	315.88	48.84
J-482	189	Zone - 1	WW	Fixed	1.54	316.04	54.96
J-483	189	Zone - 1	WW	Fixed	1.54	315.91	54.91
J-484	195	Zone - 1	WW	Fixed	1.54	315.88	52.3
J-485	212	Zone - 1	WW	Fixed	1.54	315.88	44.94
J-486	215	Zone - 1	WW	Fixed	1.54	315.88	43.64
J-487	210	Zone - 1	WW	Fixed	1.54	315.45	45.62
J-488	166	Zone - 1	WW	Fixed	1.54	316.04	64.92
J-489	172	Zone - 1	WW	Fixed	1.54	315.86	62.24
J-490	177	Zone - 1	WW	Fixed	1.54	315.86	60.08
J-491	220	Zone - 1	WW	Fixed	1.54	315.83	41.46
J-492	160	Zone - 1	WW	Fixed	1.54	315.83	67.42
J-493	190	Zone - 1	WW	Fixed	1.54	315.75	54.4
J-494	169	Zone - 1	WW	Fixed	1.54	315.75	63.49
J-495	210	Zone - 1	WW	Fixed	1.54	315.68	45.72
J-496	205	Zone - 1	WW	Fixed	1.54	315.63	47.87
J-497	220	Zone - 1	WW	Fixed	1.54	315.63	41.38
J-498	210	Zone - 1	WW	Fixed	1.54	315.63	45.7
J-499	212	Zone - 1	WW	Fixed	1.54	315.54	44.8
J-500	211	Zone - 1	WW	Fixed	1.54	315.55	45.23
J-501	215	Zone - 1	WW	Fixed	1.54	315.55	43.5
J-502	202	Zone - 1	WW	Fixed	1.54	315.62	49.16
J-503	194	Zone - 1	WW	Fixed	1.54	315.61	52.61
J-504	169	Zone - 1	WW	Fixed	1.54	315.65	63.45
J-505	169	Zone - 1	WW	Fixed	1.54	315.66	63.45
J-506	179	Zone - 1	WW	Fixed	1.54	315.65	59.12
J-507	175	Zone - 1	WW	Fixed	1.54	315.65	60.85
J-508	179	Zone - 1	WW	Fixed	1.54	315.67	59.13
J-509	195	Zone - 1	WW	Fixed	1.54	315.62	52.19
J-510	195	Zone - 1	WW	Fixed	1.54	315.62	52.19
J-511	166	Zone - 1	WW	Fixed	1.54	315.77	64.8
J-512	166	Zone - 1	WW	Fixed	1.54	315.76	64.79
J-513	163	Zone - 1	WW	Fixed	1.54	315.71	66.07
J-514	160	Zone - 1	WW	Fixed	1.54	315.71	67.37
J-515	166	Zone - 1	WW	Fixed	1.54	315.70	64.77
J-516	169	Zone - 1	WW	Fixed	1.54	315.68	63.46
J-517	179	Zone - 1	WW	Fixed	1.54	315.67	59.13
J-518	170	Zone - 1	WW	Fixed	1.54	315.69	63.03
J-519	171	Zone - 1	WW	Fixed	1.54	315.69	62.6
J-520	166	Zone - 1	WW	Fixed	1.54	315.70	64.77
J-521	161	Zone - 1	WW	Fixed	1.54	315.71	66.94
J-522	162	Zone - 1	WW	Fixed	1.54	315.71	66.5
J-523	162	Zone - 1	WW	Fixed	1.54	315.73	66.51
J-524	139	Zone - 1	WW	Fixed	1.54	322.05	79.2
J-525	140	Zone - 1	WW	Fixed	1.54	321.09	78.35
J-526	135	Zone - 1	WW	Fixed	1.54	320.86	80.41
J-527	135	Zone - 1	WW	Fixed	1.54	320.86	80.41
J-528	130	Zone - 1	WW	Fixed	1.54	320.85	82.57
J-529	121	Zone - 1	WW	Fixed	1.54	320.85	86.47
J-530	165	Zone - 1	WW	Fixed	1.54	322.48	68.14
J-531	165	Zone - 1	WW	Fixed	1.54	322.51	68.15
J-532	172	Zone - 1	WW	Fixed	1.54	322.62	65.17
J-533	172	Zone - 1	WW	Fixed	1.54	323.13	65.39
J-534	171	Zone - 1	WW	Fixed	1.54	323.55	66
J-535	181	Zone - 1	WW	Fixed	1.54	324.72	70.84
J-536	135	Zone - 1	WW	Fixed	1.54	323.40	81.51
J-537	130	Zone - 1	WW	Fixed	1.54	323.40	83.68
J-538	160	Zone - 1	WW	Fixed	1.54	323.51	70.74
J-539	145	Zone - 1	WW	Fixed	1.54	323.47	77.22
J-540	168	Zone - 1	WW	Fixed	1.54	323.49	67.27
J-541	168	Zone - 1	WW	Fixed	1.54	323.48	67.27
J-542	170	Zone - 1	WW	Fixed	1.54	323.51	66.42
J-543	170	Zone - 1	WW	Fixed	1.54	323.53	66.43
J-544	173	Zone - 1	WW	Fixed	1.54	325.27	65.88
J-545	173	Zone - 1	WW	Fixed	1.54	325.87	66.14

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-546	175	Zone - 1	WW	Fixed	1.54	326.00	65.33
J-547	173	Zone - 1	WW	Fixed	1.54	326.13	66.25
J-548	173	Zone - 1	WW	Fixed	1.54	326.11	66.24
J-549	170	Zone - 1	WW	Fixed	1.54	326.01	67.5
J-550	178	Zone - 1	WW	Fixed	1.54	325.91	63.99
J-551	165	Zone - 1	WW	Fixed	1.54	325.77	69.56
J-552	172	Zone - 1	WW	Fixed	1.54	324.91	66.16
J-553	162	Zone - 1	WW	Fixed	1.54	325.83	70.88
J-554	161	Zone - 1	WW	Fixed	1.54	326.06	71.41
J-555	164	Zone - 1	WW	Fixed	1.54	326.32	70.23
J-556	164	Zone - 1	WW	Fixed	1.54	326.37	70.25
J-557	164	Zone - 1	WW	Fixed	1.54	326.37	70.25
J-558	165	Zone - 1	WW	Fixed	1.54	326.15	69.72
J-559	165	Zone - 1	WW	Fixed	1.54	326.36	69.81
J-560	147	Zone - 1	WW	Fixed	1.54	326.36	77.6
J-561	170	Zone - 1	WW	Fixed	1.54	326.35	67.64
J-562	150	Zone - 1	WW	Fixed	1.54	326.29	76.27
J-563	202	Zone - 1	WW	Fixed	1.54	326.27	53.76
J-564	215	Zone - 1	WW	Fixed	1.54	326.24	48.13
J-565	215	Zone - 1	WW	Fixed	1.54	324.77	47.49
J-566	203	Zone - 1	WW	Fixed	1.54	326.29	53.34
J-567	200	Zone - 1	WW	Fixed	1.54	326.68	54.81
J-568	270	Zone - 1	WW	Fixed	1.54	326.45	24.42
J-569	270	Zone - 1	WW	Fixed	1.54	326.43	24.41
J-570	201	Zone - 1	WW	Fixed	1.54	326.34	54.23
J-571	170	Zone - 1	WW	Fixed	1.54	326.42	67.67
J-572	172	Zone - 1	WW	Fixed	1.54	326.47	66.83
J-573	172	Zone - 1	WW	Fixed	1.54	325.82	66.55
J-574	172	Zone - 1	WW	Fixed	1.54	325.86	66.57
J-575	179	Zone - 1	WW	Fixed	1.54	326.43	63.79
J-576	186	Zone - 1	WW	Fixed	1.54	325.94	60.55
J-577	178	Zone - 1	WW	Fixed	1.54	326.46	64.23
J-578	178	Zone - 1	WW	Fixed	1.54	326.46	64.23
J-579	180	Zone - 1	WW	Fixed	1.54	326.46	63.37
J-580	191	Zone - 1	WW	Fixed	1.54	327.41	59.02
J-581	195	Zone - 1	WW	Fixed	1.54	327.39	57.28
J-582	210	Zone - 1	WW	Fixed	1.54	327.39	50.79
J-583	211	Zone - 1	WW	Fixed	1.54	327.36	50.34
J-584	195	Zone - 1	WW	Fixed	1.54	327.37	57.27
J-585	190	Zone - 1	WW	Fixed	1.54	327.33	59.41
J-586	215	Zone - 1	WW	Fixed	1.54	326.20	48.11
J-587	205	Zone - 1	WW	Fixed	1.54	327.18	52.86
J-588	178	Zone - 1	WW	Fixed	1.54	326.73	64.35
J-589	178	Zone - 1	WW	Fixed	1.54	326.86	64.4
J-590	179	Zone - 1	WW	Fixed	1.54	326.59	63.86
J-591	175	Zone - 1	WW	Fixed	1.54	326.43	65.52
J-592	172	Zone - 1	WW	Fixed	1.54	326.18	66.71
J-593	179	Zone - 1	WW	Fixed	1.54	326.43	63.78
J-594	179	Zone - 1	WW	Fixed	1.54	326.56	63.84
J-595	174	Zone - 1	WW	Fixed	1.54	325.86	65.7
J-596	178	Zone - 1	WW	Fixed	1.54	326.85	64.4
J-597	178	Zone - 1	WW	Fixed	1.54	326.81	64.38
J-598	178	Zone - 1	WW	Fixed	1.54	326.84	64.4
J-599	205	Zone - 1	WW	Fixed	1.54	327.07	52.81
J-600	205	Zone - 1	WW	Fixed	1.54	326.85	52.72
J-601	196	Zone - 1	WW	Fixed	1.54	326.84	56.61
J-602	179	Zone - 1	WW	Fixed	1.54	326.83	63.96
J-603	179	Zone - 1	WW	Fixed	1.54	326.72	63.91
J-604	177	Zone - 1	WW	Fixed	1.54	326.80	64.81
J-605	174	Zone - 1	WW	Fixed	1.54	326.80	66.11
J-606	174	Zone - 1	WW	Fixed	1.54	326.41	65.94
J-607	179	Zone - 1	WW	Fixed	1.54	326.85	63.97
J-608	172	Zone - 1	WW	Fixed	1.54	326.84	66.99
J-609	179	Zone - 1	WW	Fixed	1.54	326.87	63.98
J-610	205	Zone - 1	WW	Fixed	1.54	326.56	52.59
J-611	210	Zone - 1	WW	Fixed	1.54	327.66	50.91
J-612	239	Zone - 1	WW	Fixed	1.54	327.65	38.36

KCWA Model
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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-613	239	Zone - 1	WW	Fixed	1.54	325.22	37.31
J-614	250	Zone - 1	WW	Fixed	1.54	327.65	33.6
J-615	210	Zone - 1	WW	Fixed	1.54	327.67	50.91
J-616	211	Zone - 1	WW	Fixed	1.54	327.65	50.47
J-617	215	Zone - 1	WW	Fixed	1.54	327.85	48.82
J-618	218	Zone - 1	WW	Fixed	1.54	327.33	47.3
J-619	240	Zone - 1	WW	Fixed	1.54	328.30	38.2
J-620	235	Zone - 1	WW	Fixed	1.54	328.30	40.37
J-621	235	Zone - 1	WW	Fixed	1.54	328.30	40.37
J-622	230	Zone - 1	WW	Fixed	1.54	328.30	42.53
J-623	240	Zone - 1	WW	Fixed	1.54	328.55	38.31
J-624	240	Zone - 1	WW	Fixed	0.00	328.55	38.31
J-625	240	Zone - 1	WW	Fixed	0.00	328.55	38.31
J-626	245	Zone - 1	WW	Fixed	1.54	328.58	36.16
J-627	245	Zone - 1	WW	Fixed	1.54	328.60	36.17
J-628	275	Zone - 1	WW	Fixed	1.54	328.66	23.22
J-629	275	Zone - 1	WW	Fixed	1.54	328.55	23.17
J-630	245	Zone - 1	WW	Fixed	1.54	328.59	36.16
J-631	245	Zone - 1	WW	Fixed	1.54	328.59	36.16
J-632	273	Zone - 1	WW	Fixed	1.54	328.59	24.05
J-633	269	Zone - 1	WW	Fixed	1.54	328.59	25.78
J-634	269	Zone - 1	WW	Fixed	1.54	328.61	25.79
J-635	269	Zone - 1	WW	Fixed	1.54	328.61	25.79
J-636	264	Zone - 1	WW	Fixed	1.54	328.61	27.96
J-637	245	Zone - 1	WW	Fixed	1.54	328.55	36.15
J-638	265	Zone - 1	WW	Fixed	1.54	328.50	27.47
J-639	248	Zone - 1	WW	Fixed	1.54	328.27	34.73
J-640	248	Zone - 1	WW	Fixed	1.54	328.27	34.73
J-641	125	Zone - 1	WW	Fixed	1.54	327.39	87.56
J-642	125	Zone - 1	WW	Fixed	1.54	327.49	87.61
J-643	145	Zone - 1	WW	Fixed	1.54	317.57	74.66
J-644	124	Zone - 1	WW	Fixed	1.54	327.89	88.13
J-646	185	Zone - 1	WW	Fixed	1.54	328.11	61.92
J-647	195	Zone - 1	WW	Fixed	1.54	328.11	57.59
J-648	228	Zone - 1	WW	Fixed	1.54	328.55	43.51
J-649	215	Zone - 1	WW	Fixed	1.54	330.54	49.99
J-650	245	Zone - 1	WW	Fixed	1.54	328.55	36.15
J-651	245	Zone - 1	WW	Fixed	1.54	328.87	36.29
J-652	264	Zone - 1	WW	Fixed	1.54	329.18	28.2
J-653	228	Zone - 1	WW	Fixed	1.54	329.17	43.77
J-654	215	Zone - 1	WW	Fixed	1.54	329.13	49.38
J-655	250	Zone - 1	WW	Fixed	1.54	329.18	34.26
J-656	215	Zone - 1	WW	Fixed	1.54	326.88	48.41
J-657	260	Zone - 1	WW	Fixed	1.54	330.12	30.34
J-658	250	Zone - 1	WW	Fixed	1.54	330.12	34.66
J-659	245	Zone - 1	WW	Fixed	1.54	330.13	36.83
J-660	240	Zone - 1	WW	Fixed	1.54	330.05	38.96
J-661	250	Zone - 1	WW	Fixed	1.54	330.05	34.63
J-662	205	Zone - 1	WW	Fixed	1.54	331.82	54.87
J-663	200	Zone - 1	WW	Fixed	1.54	332.25	57.22
J-664	232	Zone - 1	WW	Fixed	1.54	329.99	42.4
J-665	200	Zone - 1	WW	Fixed	1.54	329.99	56.24
J-666	180	Zone - 1	WW	Fixed	1.54	332.68	66.06
J-667	145	Zone - 1	WW	Fixed	1.54	330.41	80.22
J-668	145	Zone - 1	WW	Fixed	1.54	329.73	79.92
J-669	140	Zone - 1	WW	Fixed	1.54	329.66	82.06
J-670	150	Zone - 1	WW	Fixed	1.54	329.66	77.73
J-671	110	Zone - 1	WW	Fixed	1.54	328.18	94.4
J-672	152	Zone - 1	WW	Fixed	1.54	331.83	77.81
J-673	155	Zone - 1	WW	Fixed	1.54	331.83	76.51
J-674	95	Zone - 1	WW	Fixed	1.54	332.47	102.74
J-675	80	Zone - 1	WW	Fixed	1.54	328.81	107.85
J-676	94	Zone - 1	WW	Fixed	1.54	347.02	109.47
J-677	128	Zone - 1	WW	Fixed	1.54	346.91	94.71
J-678	135	Zone - 1	WW	Fixed	1.54	346.90	91.68
J-679	80	Zone - 1	WW	Fixed	1.54	328.93	107.7
J-680	80	Zone - 1	WW	Fixed	1.54	329.79	108.07

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-681	80	Zone - 1	WW	Fixed	1.54	329.94	108.14
J-682	80	Zone - 1	WW	Fixed	1.54	329.83	108.09
J-683	80	Zone - 1	WW	Fixed	1.54	329.81	108.08
J-684	80	Zone - 1	WW	Fixed	1.54	329.81	108.08
J-685	80	Zone - 1	WW	Fixed	1.54	329.82	108.08
J-686	130	Zone - 1	WW	Fixed	1.54	329.83	86.46
J-687	130	Zone - 1	WW	Fixed	1.54	329.83	86.46
J-688	150	Zone - 1	WW	Fixed	1.54	329.83	77.81
J-689	170	Zone - 1	WW	Fixed	1.54	329.83	69.15
J-690	150	Zone - 1	WW	Fixed	1.54	329.86	77.82
J-691	170	Zone - 1	WW	Fixed	1.54	329.87	69.17
J-692	150	Zone - 1	WW	Fixed	1.54	329.91	77.84
J-693	130	Zone - 1	WW	Fixed	1.54	329.86	86.47
J-694	160	Zone - 1	WW	Fixed	1.54	330.02	73.56
J-695	160	Zone - 1	WW	Fixed	1.54	330.02	73.56
J-696	195	Zone - 1	WW	Fixed	1.54	330.11	58.45
J-697	175	Zone - 1	WW	Fixed	1.54	330.11	67.11
J-698	203	Zone - 1	WW	Fixed	1.54	330.13	55
J-699	194	Zone - 1	WW	Fixed	1.54	330.51	59.06
J-700	200	Zone - 1	WW	Fixed	1.54	330.24	56.35
J-701	218	Zone - 1	WW	Fixed	1.54	329.83	48.38
J-702	175	Zone - 1	WW	Fixed	1.54	329.83	66.99
J-703	218	Zone - 1	WW	Fixed	1.54	329.73	48.34
J-704	210	Zone - 1	WW	Fixed	1.54	327.09	50.66
J-705	210	Zone - 1	WW	Fixed	0.00	327.05	50.64
J-706	210	Zone - 1	WW	Fixed	0.00	327.03	50.63
J-707	210	Zone - 1	WW	Fixed	1.54	327.05	50.64
J-708	210	Zone - 1	WW	Fixed	1.54	327.05	50.64
J-709	210	Zone - 1	WW	Fixed	1.54	327.05	50.64
J-710	170	Zone - 1	WW	Fixed	1.54	327.05	67.95
J-711	170	Zone - 1	WW	Fixed	1.54	327.05	67.95
J-712	170	Zone - 1	WW	Fixed	1.54	327.05	67.95
J-713	170	Zone - 1	WW	Fixed	1.54	327.05	67.95
J-714	170	Zone - 1	WW	Fixed	1.54	327.05	67.95
J-715	170	Zone - 1	WW	Fixed	1.54	327.05	67.95
J-716	200	Zone - 1	WW	Fixed	1.54	327.05	54.97
J-717	200	Zone - 1	WW	Fixed	1.54	327.05	54.97
J-718	180	Zone - 1	WW	Fixed	1.54	327.05	63.62
J-719	210	Zone - 1	WW	Fixed	1.54	326.96	50.6
J-721	210	Zone - 1	WW	Fixed	1.54	326.96	50.6
J-722	235	Zone - 1	WW	Fixed	1.54	326.91	39.77
J-723	230	Zone - 1	WW	Fixed	1.54	326.63	41.81
J-724	230	Zone - 1	WW	Fixed	1.54	326.63	41.81
J-725	230	Zone - 1	WW	Fixed	1.54	326.57	41.78
J-726	230	Zone - 1	WW	Fixed	1.54	326.57	41.78
J-727	190	Zone - 1	WW	Fixed	1.54	325.98	58.83
J-728	185	Zone - 1	WW	Fixed	1.54	325.68	60.87
J-729	185	Zone - 1	WW	Fixed	1.54	325.67	60.86
J-730	185	Zone - 1	WW	Fixed	1.54	325.67	60.86
J-731	185	Zone - 1	WW	Fixed	1.54	325.66	60.86
J-732	185	Zone - 1	WW	Fixed	1.54	325.59	60.83
J-733	203	Zone - 1	WW	Fixed	1.54	330.07	54.98
J-734	240	Zone - 1	WW	Fixed	1.54	329.91	38.9
J-735	265	Zone - 1	WW	Fixed	1.54	330.05	28.15
J-736	249	Zone - 1	WW	Fixed	1.54	330.15	35.11
J-737	249	Zone - 1	WW	Fixed	1.54	330.12	35.1
J-738	265	Zone - 1	WW	Fixed	1.54	330.07	28.15
J-739	240	Zone - 1	WW	Fixed	1.54	330.06	38.97
J-740	244	Zone - 1	WW	Fixed	1.54	330.24	37.31
J-741	244	Zone - 1	WW	Fixed	1.54	330.43	37.39
J-742	220	Zone - 1	WW	Fixed	1.54	330.57	47.84
J-743	240	Zone - 1	WW	Fixed	1.54	330.44	39.13
J-744	240	Zone - 1	WW	Fixed	1.54	330.44	39.13
J-745	210	Zone - 1	WW	Fixed	1.54	330.44	52.11
J-746	218	Zone - 1	WW	Fixed	1.54	330.44	48.65
J-747	210	Zone - 1	WW	Fixed	1.54	330.45	52.11
J-748	208	Zone - 1	WW	Fixed	1.54	330.48	52.99

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-749	210	Zone - 1	WW	Fixed	1.54	330.48	52.13
J-750	190	Zone - 1	WW	Fixed	1.54	330.89	60.95
J-751	155	Zone - 1	WW	Fixed	1.54	331.72	76.46
J-752	125	Zone - 1	WW	Fixed	1.54	332.36	89.71
J-753	135	Zone - 1	WW	Fixed	1.54	330.89	84.75
J-754	80	Zone - 1	WW	Fixed	1.54	330.41	108.34
J-755	95	Zone - 1	WW	Fixed	1.54	332.04	102.56
J-756	88	Zone - 1	WW	Fixed	1.54	332.04	105.58
J-757	88	Zone - 1	WW	Fixed	1.54	332.08	105.6
J-758	103	Zone - 1	WW	Fixed	1.54	332.35	99.23
J-759	107	Zone - 1	WW	Fixed	1.54	332.06	97.37
J-760	103	Zone - 1	WW	Fixed	1.54	332.50	99.29
J-761	80	Zone - 1	WW	Fixed	1.54	331.96	109.01
J-762	80	Zone - 1	WW	Fixed	1.54	331.88	108.98
J-763	80	Zone - 1	WW	Fixed	1.54	331.53	108.83
J-764	88	Zone - 1	WW	Fixed	1.54	332.32	105.71
J-765	88	Zone - 1	WW	Fixed	1.54	332.68	105.86
J-766	92	Zone - 1	WW	Fixed	1.54	332.83	104.2
J-767	88	Zone - 1	WW	Fixed	1.54	332.31	105.7
J-768	88	Zone - 1	WW	Fixed	1.54	332.80	105.91
J-769	92	Zone - 1	WW	Fixed	1.54	333.38	104.43
J-770	108	Zone - 1	WW	Fixed	1.54	332.50	97.13
J-771	145	Zone - 1	WW	Fixed	1.54	331.89	80.86
J-772	108	Zone - 1	WW	Fixed	1.54	339.06	99.97
J-773	122	Zone - 1	WW	Fixed	1.54	339.91	94.28
J-775	210	Zone - 1	WW	Fixed	1.54	330.45	52.11
J-776	210	Zone - 1	WW	Fixed	1.54	330.45	52.11
J-777	213	Zone - 1	WW	Fixed	1.54	330.44	50.81
J-778	213	Zone - 1	WW	Fixed	1.54	330.44	50.81
J-779	198	Zone - 1	WW	Fixed	1.54	330.44	57.3
J-780	198	Zone - 1	WW	Fixed	1.54	330.44	57.3
J-781	135	Zone - 1	WW	Fixed	1.54	338.96	88.25
J-782	135	Zone - 1	WW	Fixed	1.54	338.84	88.19
J-783	135	Zone - 1	WW	Fixed	1.54	338.84	88.19
J-784	153	Zone - 1	WW	Fixed	1.54	338.27	80.16
J-785	160	Zone - 1	WW	Fixed	1.54	334.95	75.69
J-787	215	Zone - 1	WW	Fixed	1.54	331.75	50.51
J-788	249	Zone - 1	WW	Fixed	1.54	330.57	35.29
J-789	220	Zone - 1	WW	Fixed	1.54	331.73	48.34
J-790	265	Zone - 1	WW	Fixed	1.54	331.71	28.86
J-791	248	Zone - 1	WW	Fixed	1.54	331.71	36.22
J-792	273	Zone - 1	WW	Fixed	1.54	331.71	25.4
J-793	231	Zone - 1	WW	Fixed	1.54	331.72	43.58
J-794	256	Zone - 1	WW	Fixed	1.54	331.72	32.76
J-795	256	Zone - 1	WW	Fixed	1.54	331.72	32.76
J-796	263	Zone - 1	WW	Fixed	1.54	331.72	29.73
J-797	245	Zone - 1	WW	Fixed	1.54	331.72	37.52
J-798	165	Zone - 1	WW	Fixed	1.54	338.26	74.96
J-799	212	Zone - 1	WW	Fixed	1.54	338.26	54.62
J-800	212	Zone - 1	WW	Fixed	1.54	338.26	54.62
J-801	220	Zone - 1	WW	Fixed	1.54	345.27	54.2
J-802	158	Zone - 1	WW	Fixed	1.54	345.27	81.02
J-803	158	Zone - 1	WW	Fixed	1.54	346.69	81.64
J-804	130	Zone - 1	WW	Fixed	1.54	346.69	93.75
J-805	148	Zone - 1	WW	Fixed	1.54	348.40	86.7
J-806	122	Zone - 1	WW	Fixed	1.54	342.26	95.3
J-807	122	Zone - 1	WW	Fixed	1.54	341.57	95
J-808	148	Zone - 1	WW	Fixed	1.54	359.00	91.29
J-809	138	Zone - 1	WW	Fixed	1.54	362.39	97.08
J-810	155	Zone - 1	WW	Fixed	1.54	362.87	89.93
J-811	92	Zone - 1	WW	Fixed	1.54	342.21	108.25
J-812	90	Zone - 1	WW	Fixed	1.54	327.71	102.85
J-813	90	Zone - 1	WW	Fixed	1.54	327.43	102.72
J-814	105	Zone - 1	WW	Fixed	1.54	312.04	89.58
J-815	90	Zone - 1	WW	Fixed	1.54	327.17	102.61
J-816	105	Zone - 1	WW	Fixed	1.54	311.91	89.52
J-817	89	Zone - 1	WW	Fixed	1.54	326.85	102.91

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-818	75	Zone - 1	WW	Fixed	1.54	326.42	108.78
J-819	75	Zone - 1	WW	Fixed	1.54	326.12	108.65
J-820	75	Zone - 1	WW	Fixed	1.54	326.09	108.63
J-821	75	Zone - 1	WW	Fixed	1.54	326.09	108.63
J-823	90	Zone - 1	WW	Fixed	1.54	327.71	102.84
J-824	127	Zone - 1	WW	Fixed	1.54	326.93	86.5
J-825	88	Zone - 1	WW	Fixed	1.54	327.09	103.44
J-826	89	Zone - 1	WW	Fixed	1.54	327.57	103.22
J-827	89	Zone - 1	WW	Fixed	1.54	327.57	103.22
J-828	121	Zone - 1	WW	Fixed	1.54	327.57	89.37
J-829	90	Zone - 1	WW	Fixed	1.54	327.76	102.87
J-830	91	Zone - 1	WW	Fixed	1.54	327.99	102.53
J-831	100	Zone - 1	WW	Fixed	1.54	328.18	98.72
J-832	118	Zone - 1	WW	Fixed	1.54	327.93	90.83
J-833	118	Zone - 1	WW	Fixed	1.54	327.94	90.83
J-834	129	Zone - 1	WW	Fixed	1.54	326.42	85.41
J-835	121	Zone - 1	WW	Fixed	1.54	325.83	88.62
J-836	140	Zone - 1	WW	Fixed	1.54	326.31	80.61
J-837	140	Zone - 1	WW	Fixed	1.54	326.07	80.5
J-838	127	Zone - 1	WW	Fixed	1.54	327.48	86.74
J-839	125	Zone - 1	WW	Fixed	1.54	327.19	87.48
J-840	136	Zone - 1	WW	Fixed	1.54	326.92	82.6
J-841	140	Zone - 1	WW	Fixed	1.54	326.28	80.59
J-842	149	Zone - 1	WW	Fixed	1.54	326.41	76.76
J-843	148	Zone - 1	WW	Fixed	1.54	326.88	77.39
J-844	140	Zone - 1	WW	Fixed	1.54	326.42	80.65
J-845	150	Zone - 1	WW	Fixed	1.54	326.40	76.32
J-846	163	Zone - 1	WW	Fixed	1.54	326.35	70.67
J-847	163	Zone - 1	WW	Fixed	1.54	326.31	70.66
J-848	170	Zone - 1	WW	Fixed	1.54	326.20	67.58
J-849	140	Zone - 1	WW	Fixed	1.54	326.34	80.62
J-850	173	Zone - 1	WW	Fixed	1.54	326.34	66.34
J-851	170	Zone - 1	WW	Fixed	1.54	326.34	67.64
J-852	136	Zone - 1	WW	Fixed	1.54	326.85	82.57
J-853	125	Zone - 1	WW	Fixed	1.54	327.11	87.44
J-854	160	Zone - 1	WW	Fixed	1.54	325.47	71.59
J-855	124	Zone - 1	WW	Fixed	1.54	327.38	87.99
J-856	124	Zone - 1	WW	Fixed	1.54	327.38	87.99
J-857	125	Zone - 1	WW	Fixed	1.54	327.39	87.56
J-858	125	Zone - 1	WW	Fixed	1.54	327.39	87.56
J-859	160	Zone - 1	WW	Fixed	1.54	327.21	72.34
J-860	210	Zone - 1	WW	Fixed	1.54	327.21	50.71
J-861	172	Zone - 1	WW	Fixed	1.54	326.42	66.81
J-862	195	Zone - 1	WW	Fixed	1.54	326.75	57
J-863	168	Zone - 1	WW	Fixed	1.54	326.40	68.53
J-864	170	Zone - 1	WW	Fixed	1.54	326.41	67.67
J-865	175	Zone - 1	WW	Fixed	1.54	326.73	65.64
J-866	170	Zone - 1	WW	Fixed	1.54	326.68	67.79
J-867	163	Zone - 1	WW	Fixed	1.54	326.66	70.81
J-868	170	Zone - 1	WW	Fixed	1.54	326.68	67.79
J-869	175	Zone - 1	WW	Fixed	1.54	326.18	65.41
J-870	180	Zone - 1	WW	Fixed	1.54	326.17	63.24
J-871	180	Zone - 1	WW	Fixed	1.54	326.17	63.24
J-872	180	Zone - 1	WW	Fixed	1.54	326.16	63.24
J-873	184	Zone - 1	WW	Fixed	1.54	326.73	61.75
J-874	168	Zone - 1	WW	Fixed	1.54	326.46	68.56
J-875	202	Zone - 1	WW	Fixed	1.54	326.81	54
J-876	230	Zone - 1	WW	Fixed	1.54	326.80	41.88
J-877	230	Zone - 1	WW	Fixed	1.54	326.79	41.88
J-878	211	Zone - 1	WW	Fixed	1.54	326.66	50.04
J-879	242	Zone - 1	WW	Fixed	1.54	321.48	34.39
J-880	242	Zone - 1	WW	Fixed	1.54	321.48	34.39
J-881	240	Zone - 1	WW	Fixed	1.54	327.90	38.03
J-883	210	Zone - 1	WW	Fixed	1.54	327.03	50.63
J-884	210	Zone - 1	WW	Fixed	1.54	327.18	50.7
J-885	248	Zone - 1	WW	Fixed	1.54	327.44	34.37
J-886	235	Zone - 1	WW	Fixed	1.54	317.18	35.56

KCWA Model
Junction Node Database
Average Day

Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-887	155	Zone - 1	WW	Fixed	1.54	317.17	70.16
J-888	200	Zone - 1	WW	Fixed	1.54	317.22	50.72
J-889	200	Zone - 1	WW	Fixed	1.54	317.22	50.72
J-890	178	Zone - 1	WW	Fixed	1.54	317.49	60.35
J-891	183	Zone - 1	WW	Fixed	1.54	317.23	58.07
J-892	183	Zone - 1	WW	Fixed	1.54	317.22	58.07
J-893	200	Zone - 1	WW	Fixed	1.54	318.10	51.1
J-894	178	Zone - 1	WW	Fixed	1.54	316.69	60.01
J-895	198	Zone - 1	WW	Fixed	1.54	317.21	51.58
J-896	198	Zone - 1	WW	Fixed	1.54	317.16	51.56
J-897	198	Zone - 1	WW	Fixed	1.54	317.16	51.56
J-898	198	Zone - 1	WW	Fixed	1.54	317.16	51.55
J-899	155	Zone - 1	WW	Fixed	1.54	317.16	70.16
J-900	189	Zone - 1	WW	Fixed	1.54	317.14	55.44
J-901	200	Zone - 1	WW	Fixed	1.54	316.93	50.59
J-902	155	Zone - 1	WW	Fixed	1.54	316.83	70.02
J-903	189	Zone - 1	WW	Fixed	1.54	318.49	56.02
J-904	230	Zone - 1	WW	Fixed	1.54	318.48	38.28
J-905	230	Zone - 1	WW	Fixed	1.54	318.48	38.28
J-906	230	Zone - 1	WW	Fixed	1.54	318.48	38.28
J-907	230	Zone - 1	WW	Fixed	1.54	318.48	38.28
J-908	210	Zone - 1	WW	Fixed	1.54	318.48	46.93
J-909	200	Zone - 1	WW	Fixed	1.54	318.09	51.09
J-910	155	Zone - 1	WW	Fixed	1.54	319.58	71.21
J-911	155	Zone - 1	WW	Fixed	1.54	319.67	71.24
J-912	163	Zone - 1	WW	Fixed	1.54	320.24	68.03
J-913	163	Zone - 1	WW	Fixed	1.54	320.85	68.3
J-914	155	Zone - 1	WW	Fixed	1.54	319.67	71.24
J-915	189	Zone - 1	WW	Fixed	1.54	318.96	56.23
J-916	156	Zone - 1	WW	Fixed	1.54	317.99	70.08
J-917	149	Zone - 1	WW	Fixed	1.54	317.98	73.11
J-918	149	Zone - 1	WW	Fixed	1.54	317.97	73.11
J-919	167	Zone - 1	WW	Fixed	1.54	317.16	64.97
J-920	155	Zone - 1	WW	Fixed	1.54	317.16	70.16
J-921	156	Zone - 1	WW	Fixed	1.54	318.97	70.51
J-922	149	Zone - 1	WW	Fixed	1.54	318.73	73.43
J-923	161	Zone - 1	WW	Fixed	1.54	318.66	68.21
J-924	161	Zone - 1	WW	Fixed	1.54	318.65	68.21
J-925	150	Zone - 1	WW	Fixed	1.54	318.67	72.98
J-926	170	Zone - 1	WW	Fixed	1.54	319.00	64.47
J-927	170	Zone - 1	WW	Fixed	1.54	319.00	64.47
J-928	166	Zone - 1	WW	Fixed	1.54	316.35	65.05
J-929	166	Zone - 1	WW	Fixed	1.54	316.35	65.05
J-930	167	Zone - 1	WW	Fixed	1.54	319.02	65.77
J-931	165	Zone - 1	WW	Fixed	1.54	319.00	66.63
J-932	165	Zone - 1	WW	Fixed	1.54	319.00	66.63
J-933	150	Zone - 1	WW	Fixed	1.54	319.00	73.12
J-934	155	Zone - 1	WW	Fixed	1.54	331.03	76.16
J-935	150	Zone - 1	WW	Fixed	1.54	331.03	78.33
J-936	155	Zone - 1	WW	Fixed	1.54	319.12	71.01
J-937	155	Zone - 1	WW	Fixed	1.54	320.07	71.42
J-938	185	Zone - 1	WW	Fixed	1.54	330.60	62.99
J-939	225	Zone - 1	WW	Fixed	1.54	330.74	45.75
J-940	225	Zone - 2	WW	Fixed	1.54	488.38	113.95
J-941	238	Zone - 2	WW	Fixed	1.54	488.38	108.33
J-942	220	Zone - 2	WW	Fixed	1.54	488.38	116.12
J-943	250	Zone - 2	WW	Fixed	1.54	488.38	103.14
J-944	257	Zone - 2	WW	Fixed	1.54	488.38	100.11
J-945	286	Zone - 2	WW	Fixed	1.54	488.38	87.56
J-946	260	Zone - 2	WW	Fixed	1.54	488.38	98.81
J-947	270	Zone - 2	WW	Fixed	1.54	488.38	94.48
J-948	285	Zone - 2	WW	Fixed	1.54	488.39	88
J-949	300	Zone - 2	WW	Fixed	1.54	488.38	81.5
J-950	301	Zone - 2	WW	Fixed	1.54	488.38	81.07
J-951	298	Zone - 2	WW	Fixed	1.54	488.38	82.37
J-952	220	Zone - 1	WW	Fixed	1.54	330.81	47.94
J-953	211	Zone - 1	WW	Fixed	1.54	330.83	51.85

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-955	160	Zone - 1	WW	Fixed	1.54	331.11	74.03
J-956	160	Zone - 1	WW	Fixed	1.54	331.15	74.05
J-957	155	Zone - 1	WW	Fixed	1.54	331.08	76.18
J-958	185	Zone - 1	WW	Fixed	1.54	331.08	63.2
J-959	185	Zone - 1	WW	Fixed	1.54	331.05	63.19
J-960	155	Zone - 1	WW	Fixed	1.54	319.99	71.38
J-961	155	Zone - 1	WW	Fixed	1.54	330.19	75.79
J-962	155	Zone - 1	WW	Fixed	1.54	331.09	76.19
J-963	161	Zone - 1	WW	Fixed	1.54	331.48	73.76
J-964	200	Zone - 1	WW	Fixed	1.54	331.48	56.88
J-965	183	Zone - 1	WW	Fixed	1.54	331.55	72.92
J-966	205	Zone - 1	WW	Fixed	1.54	331.55	54.75
J-967	270	Zone - 2	WW	Fixed	1.54	488.38	94.48
J-968	290	Zone - 2	WW	Fixed	1.54	488.38	85.83
J-969	285	Zone - 2	WW	Fixed	1.54	488.38	87.99
J-972	290	Zone - 2	WW	Fixed	1.54	488.38	85.83
J-973	290	Zone - 2	WW	Fixed	1.54	488.38	85.83
J-974	281	Zone - 2	WW	Fixed	1.54	488.40	89.73
J-975	270	Zone - 2	WW	Fixed	1.54	488.39	94.49
J-976	265	Zone - 2	WW	Fixed	1.54	488.39	96.65
J-977	265	Zone - 2	WW	Fixed	1.54	488.39	96.65
J-978	265	Zone - 2	WW	Fixed	1.54	488.39	96.65
J-979	240	Zone - 2	WW	Fixed	1.54	488.39	107.47
J-980	281	Zone - 1	WW	Fixed	1.54	332.07	22.1
J-981	281	Zone - 1	WW	Fixed	1.54	332.08	22.1
J-982	272	Zone - 1	WW	Fixed	0.00	332.04	25.98
J-983	290	Zone - 1	WW	Fixed	0.00	332.03	18.18
J-984	111	Zone - 1	WW	Fixed	1.54	369.70	111.93
J-985	120	Zone - 1	WW	Fixed	1.54	369.69	108.03
J-986	142	Zone - 1	WW	Fixed	1.54	386.89	105.95
J-987	130	Zone - 1	WW	Fixed	1.54	386.88	111.14
J-988	140	Zone - 1	WW	Fixed	1.54	395.48	110.54
J-989	170	Zone - 1	WW	Fixed	1.54	395.38	97.51
J-991	180	Zone - 1	WW	Fixed	1.54	395.26	93.13
J-992	200	Zone - 1	WW	Fixed	1.54	395.26	84.48
J-993	230	Zone - 1	WW	Fixed	1.54	352.86	53.16
J-994	140	Zone - 1	WW	Fixed	1.54	330.34	82.35
J-995	215	Zone - 1	WW	Fixed	1.54	330.34	49.9
J-996	103	Zone - 1	WW	Fixed	1.54	386.78	122.78
J-998	111	Zone - 1	WW	Fixed	1.54	389.39	120.44
J-999	132	Zone - 1	WW	Fixed	1.54	390.14	111.69
J-1000	120	Zone - 1	WW	Fixed	1.54	367.71	107.17
J-1001	150	Zone - 1	WW	Fixed	1.54	391.06	104.3
J-1002	150	Zone - 1	WW	Fixed	1.54	392.16	104.77
J-1003	129	Zone - 1	WW	Fixed	1.54	392.73	114.1
J-1004	116	Zone - 1	WW	Fixed	1.54	394.69	120.57
J-1005	100	Zone - 1	WW	Fixed	1.54	394.68	127.49
J-1006	100	Zone - 1	WW	Fixed	1.54	394.74	127.52
J-1007	129	Zone - 1	WW	Fixed	1.54	394.44	114.84
J-1008	90	Zone - 1	WW	Fixed	1.54	324.90	101.63
J-1009	140	Zone - 1	WW	Fixed	1.54	395.78	110.66
J-1010	132	Zone - 1	WW	Fixed	1.54	378.41	106.61
J-1011	138	Zone - 1	WW	Fixed	1.54	370.98	100.8
J-1012	132	Zone - 1	WW	Fixed	1.54	370.98	103.39
J-1013	136	Zone - 1	WW	Fixed	1.54	394.67	111.92
J-1015	132	Zone - 1	WW	Fixed	1.54	394.70	113.66
J-1016	132	Zone - 1	WW	Fixed	1.54	380.13	107.35
J-1017	132	Zone - 1	WW	Fixed	1.54	389.05	111.21
J-1018	132	Zone - 1	WW	Fixed	1.54	389.04	111.21
J-1019	132	Zone - 1	WW	Fixed	1.54	388.76	111.09
J-1020	156	Zone - 1	WW	Fixed	1.54	389.04	100.82
J-1021	132	Zone - 1	WW	Fixed	1.54	394.78	113.69
J-1022	132	Zone - 1	WW	Fixed	1.54	394.86	113.73
J-1023	180	Zone - 1	WW	Fixed	1.54	394.49	92.8
J-1025	110	Zone - 1	WW	Fixed	1.54	394.83	123.23
J-1026	110	Zone - 1	WW	Fixed	1.54	394.84	123.24
J-1027	110	Zone - 1	WW	Fixed	1.54	396.99	124.17

KCWA Model
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Average Day

Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-1028	110	Zone - 1	WW	Fixed	1.54	396.56	123.98
J-1029	103	Zone - 1	WW	Fixed	1.54	395.31	126.47
J-1030	140	Zone - 1	WW	Fixed	1.54	395.49	110.54
J-1031	103	Zone - 1	WW	Fixed	1.54	352.85	108.1
J-1032	260	Zone - 2	WW	Fixed	1.54	488.37	98.8
J-1033	280	Zone - 2	WW	Fixed	1.54	488.48	90.2
J-1034	270	Zone - 2	WW	Fixed	1.54	488.48	94.53
J-1035	269	Zone - 2	WW	Fixed	1.54	488.48	94.96
J-1036	265	Zone - 2	WW	Fixed	1.54	488.48	96.69
J-1037	250	Zone - 2	WW	Fixed	1.54	488.47	103.18
J-1039	240	Zone - 1	WW	Fixed	0.00	328.55	38.31
J-1040	240	Zone - 1	WW	Fixed	0.00	328.55	38.31
J-1041	130	Zone - 1	WW	Fixed	1.54	327.04	85.25
J-1042	130	Zone - 1	WW	Fixed	1.54	327.04	85.25
J-1043	210	Zone - 1	WW	Fixed	1.54	327.67	50.91
J-1044	272	Zone - 2	WW	Fixed	1.54	488.39	93.62
J-1045	240	Zone - 1	WW	Fixed	1.54	330.06	38.97
J-1046	272	Zone - 1	WW	Fixed	0.00	332.04	25.98
J-1047	210	Zone - 1	WW	Fixed	1.54	326.97	50.61
J-1048	210	Zone - 1	WW	Fixed	1.54	326.97	50.61
J-1049	90	Zone - 1	WW	Fixed	1.54	324.90	101.63
J-1050	130	Zone - 1	WW	Fixed	1.54	321.06	82.66
J-1051	130	Zone - 1	WW	Fixed	1.54	321.05	82.66
J-1052	130	Zone - 1	WW	Fixed	1.54	321.05	82.66
J-1053	130	Zone - 1	WW	Fixed	1.54	321.05	82.66
J-1054	127	Zone - 1	WW	Fixed	1.54	321.05	83.96
J-1055	230	Zone - 1	WW	Fixed	1.54	326.50	41.75
J-1056	230	Zone - 1	WW	Fixed	1.54	326.54	41.77
J-1057	230	Zone - 1	WW	Fixed	1.54	326.54	41.77
J-1058	235	Zone - 1	WW	Fixed	1.54	326.89	39.76
J-1059	235	Zone - 1	WW	Fixed	1.54	326.92	39.77
J-1060	235	Zone - 1	WW	Fixed	1.54	326.97	39.79
J-1061	235	Zone - 1	WW	Fixed	1.54	326.99	39.8
J-1062	210	Zone - 1	WW	Fixed	1.54	327.04	50.64
J-1063	218	Zone - 1	WW	Fixed	1.54	329.27	48.14
J-1064	200	Zone - 1	WW	Fixed	1.54	330.11	56.29
J-1065	246	Zone - 1	WW	Fixed	1.54	322.99	33.31
J-1066	190	Zone - 1	WW	Fixed	1.54	322.98	57.53
J-1067	170	Zone - 1	WW	Fixed	1.54	322.97	66.18
J-1068	172	Zone - 1	WW	Fixed	1.54	326.40	66.8
J-1069	150	Zone - 1	WW	Fixed	1.54	326.40	78.32
J-1070	170	Zone - 1	WW	Fixed	1.54	326.69	67.79
J-1071	88	Zone - 1	WW	Fixed	1.54	326.88	103.35
J-1072	89	Zone - 1	WW	Fixed	1.54	326.09	102.58
J-1073	80	Zone - 1	WW	Fixed	1.54	326.09	106.47
J-1074	80	Zone - 1	WW	Fixed	1.54	326.09	106.47
J-1075	100	Zone - 1	WW	Fixed	1.54	328.14	98.71
J-1076	85	Zone - 1	WW	Fixed	1.54	328.23	105.23
J-1077	80	Zone - 1	WW	Fixed	1.54	329.82	108.08
J-1078	80	Zone - 1	WW	Fixed	1.54	329.82	108.08
J-1079	80	Zone - 1	WW	Fixed	1.54	331.93	109
J-1080	153	Zone - 1	WW	Fixed	1.54	337.62	79.88
J-1081	212	Zone - 1	WW	Fixed	1.54	337.62	54.35
J-1082	155	Zone - 1	WW	Fixed	1.54	336.15	78.38
J-1083	170	Zone - 1	WW	Fixed	1.54	336.15	71.89
J-1084	142	Zone - 1	WW	Fixed	1.54	317.91	76.11
J-1085	175	Zone - 1	WW	Fixed	1.54	314.99	60.57
J-1086	280	Zone - 1	WW	Fixed	1.54	331.76	22.39
J-1087	280	Zone - 2	WW	Fixed	1.54	488.48	90.2
J-1088	280	Zone - 2	WW	Fixed	1.54	488.48	90.2
J-1089	270	Zone - 2	WW	Fixed	1.54	488.49	94.53
J-1090	300	Zone - 2	WW	Fixed	1.54	488.58	81.59
J-1091	300	Zone - 2	WW	Fixed	1.54	488.58	81.59
J-1092	202	Zone - 1	WW	Fixed	1.54	316.13	49.38
J-1093	202	Zone - 1	WW	Fixed	1.54	315.88	49.27
J-1094	202	Zone - 1	WW	Fixed	1.54	315.62	49.16
J-1095	210	Zone - 1	WW	Fixed	1.54	315.67	45.72

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-1096	300	Zone - 2	COV	Fixed	1.54	488.60	81.6
J-1097	295	Zone - 2	COV	Fixed	1.54	488.60	83.76
J-1098	330	Zone - 2	COV	Fixed	1.54	488.57	68.6
J-1099	265	Zone - 2	COV	Fixed	1.54	488.50	96.7
J-1100	260	Zone - 1	COV	Fixed	1.54	331.68	31.01
J-1101	270	Zone - 2	WW	Fixed	1.54	488.49	94.53
J-1102	259	Zone - 2	WW	Fixed	1.54	488.38	99.24
J-1103	259	Zone - 2	WW	Fixed	1.54	488.37	99.24
J-1104	259	Zone - 1	WW	Fixed	1.54	332.36	31.74
J-1105	180	Zone - 2	WW	Fixed	1.54	488.38	133.42
J-1106	175	Zone - 2	WW	Fixed	1.54	488.38	135.58
J-1107	180	Zone - 1	WW	Fixed	1.54	332.30	65.89
J-1108	180	Zone - 2	WW	Fixed	1.54	488.38	133.42
J-1109	180	Zone - 2	WW	Fixed	1.54	488.38	133.42
J-1110	286	Zone - 2	WW	Fixed	1.54	488.38	87.56
J-1111	286	Zone - 2	WW	Fixed	1.54	488.38	87.56
J-1112	180	Zone - 1	WW	Fixed	1.54	332.27	65.88
J-1113	290	Zone - 2	WW	Fixed	1.54	488.38	85.83
J-1114	290	Zone - 2	WW	Fixed	1.54	488.38	85.83
J-1115	290	Zone - 1	WW	Fixed	1.54	332.23	18.27
J-1118	295	Zone - 2	WW	Fixed	1.54	488.38	83.67
J-1117	295	Zone - 2	WW	Fixed	1.54	488.38	83.67
J-1118	295	Zone - 1	WW	Fixed	1.54	332.15	16.07
J-1119	223	Zone - 1	WW	Fixed	1.54	332.01	47.17
J-1120	223	Zone - 2	WW	Fixed	1.54	488.47	114.86
J-1121	223	Zone - 2	WW	Fixed	1.54	488.47	114.86
J-1122	250	Zone - 2	WW	Fixed	1.54	488.47	103.18
J-1123	250	Zone - 2	WW	Fixed	1.54	488.47	103.18
J-1124	250	Zone - 2	WW	Fixed	1.54	488.47	103.18
J-1125	223	Zone - 2	WW	Fixed	1.54	488.46	114.85
J-1126	223	Zone - 2	WW	Fixed	1.54	488.46	114.85
J-1127	223	Zone - 1	WW	Fixed	1.54	331.98	47.15
J-1128	215	Zone - 2	WW	Fixed	1.54	488.47	118.32
J-1129	215	Zone - 1	WW	Fixed	1.54	331.87	50.56
J-1130	215	Zone - 2	WW	Fixed	1.54	488.47	118.32
J-1131	269	Zone - 2	WW	Fixed	1.54	488.48	94.96
J-1132	269	Zone - 2	WW	Fixed	1.54	488.48	94.96
J-1133	300	Zone - 2	WW	Fixed	1.54	488.48	81.54
J-1134	301	Zone - 2	WW	Fixed	1.54	488.38	81.07
J-1135	300	Zone - 2	WW	Fixed	1.54	488.38	81.5
J-1136	332	Zone - 2	WW	Fixed	1.54	488.38	67.66
J-1137	322	Zone - 2	WW	Fixed	1.54	488.38	71.98
J-1138	250	Zone - 1	WW	Fixed	1.54	328.75	34.07
J-1139	187	Zone - 1	WW	Fixed	1.54	327.01	60.58
J-1140	198	Zone - 1	WW	Fixed	1.54	317.16	51.55
J-1141	210	Zone - 1	WW	Fixed	1.54	328.16	51.12
J-1142	189	Zone - 1	WW	Fixed	1.54	319.16	56.31
J-1143	189	Zone - 1	WW	Fixed	1.54	319.14	56.31
J-1144	189	Zone - 1	WW	Fixed	1.54	318.68	56.11
J-1145	189	Zone - 1	WW	Fixed	1.54	319.14	56.31
J-1146	142	Zone - 1	WW	Fixed	1.54	317.85	76.08
J-1147	142	Zone - 1	WW	Fixed	1.54	317.35	75.87
J-1148	165	Zone - 1	WW	Fixed	1.54	326.11	69.7
J-1149	165	Zone - 1	WW	Fixed	1.54	325.85	69.59
J-1150	121	Zone - 1	WW	Fixed	1.54	320.85	86.47
J-1151	121	Zone - 1	WW	Fixed	1.54	320.85	86.47
J-1152	130	Zone - 1	WW	Fixed	1.54	321.05	82.66
J-1153	152	Zone - 1	WW	Fixed	1.54	320.99	73.11
J-1154	153	Zone - 1	WW	Fixed	1.54	320.93	72.66
J-1155	153	Zone - 1	WW	Fixed	1.54	320.89	72.64
J-1157	139	Zone - 1	WW	Fixed	1.54	321.47	78.95
J-1158	129	Zone - 1	WW	Fixed	1.54	394.80	115
J-1159	162	Zone - 1	WW	Fixed	1.54	324.23	70.19
J-1160	162	Zone - 1	WW	Fixed	1.54	324.13	70.14
J-1161	171	Zone - 1	WW	Fixed	1.54	324.28	66.32
J-1162	92	Zone - 1	WW Riverpoint Lace Works	Fixed	51.04	339.53	107.09
J-1163	78	Zone - 1	WW Soluol Chemical	Fixed	23.62	323.57	106.25

KCWA Model
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Average Day

Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-1164	89	Zone - 1	WW Bradford Soap Works	Fixed	18.05	326.01	102.54
J-1165	250	Zone - 2	WW WWW Realty Assoc.	Fixed	21.60	488.39	103.14
J-1168	255	Zone - 1	WW	Fixed	1.54	331.64	33.16
J-1167	188	Zone - 1	WW	Fixed	1.67	332.68	62.6
J-1168	190	Zone - 1	WW	Fixed	1.67	332.68	61.73
J-1169	152	Zone - 1	WW	Fixed	2.08	332.48	78.09
J-1170	167	Zone - 1	WW	Fixed	2.08	332.41	71.56
J-1171	167	Zone - 1	WW	Fixed	2.08	332.37	71.55
J-1172	170	Zone - 1	WW	Fixed	2.08	332.56	70.33
J-1174	192	Zone - 1	WW	Fixed	0.00	332.25	60.68
J-1175	186	Zone - 1	WW	Fixed	6.25	322.87	59.22
J-1176	195	Zone - 1	WW	Fixed	6.25	322.87	55.32
J-1177	190	Zone - 1	WW	Fixed	6.25	322.87	57.49
J-1178	318	Zone - 2	WW	Fixed	8.61	488.47	73.76
J-1179	306	Zone - 2	WW	Fixed	8.61	488.48	78.95
J-1180	302	Zone - 2	WW	Fixed	8.61	488.48	80.68
J-1181	286	Zone - 2	WW	Fixed	8.61	488.52	87.62
J-1182	282	Zone - 2	WW	Fixed	8.61	488.53	89.36
J-1183	282	Zone - 2	WW	Fixed	8.61	488.53	89.36
J-1184	287	Zone - 2	WW	Fixed	8.61	488.60	87.22
J-2000	130	Zone - 1	WAR	Fixed	1.76	320.63	82.48
J-2002	120	Zone - 1	WAR	Fixed	1.76	320.42	86.71
J-2003	117	Zone - 1	WAR	Fixed	1.76	320.32	87.97
J-2004	117	Zone - 1	WAR	Fixed	1.76	320.32	87.97
J-2005	100	Zone - 1	WAR	Fixed	1.76	320.08	95.22
J-2006	143	Zone - 1	WAR	Fixed	1.76	320.08	76.61
J-2007	125	Zone - 1	WAR	Fixed	1.76	319.64	84.21
J-2008	129	Zone - 1	WAR	Fixed	1.76	319.64	82.48
J-2009	132	Zone - 1	WAR	Fixed	1.76	319.63	81.18
J-2010	132	Zone - 1	WAR	Fixed	1.76	319.62	81.18
J-2011	140	Zone - 1	WAR	Fixed	1.76	319.62	77.71
J-2012	130	Zone - 1	WAR	Fixed	1.76	319.62	82.04
J-2013	140	Zone - 1	WAR	Fixed	1.76	319.62	77.71
J-2014	138	Zone - 1	WAR	Fixed	1.76	319.62	78.58
J-2015	142	Zone - 1	WAR	Fixed	1.76	319.62	76.85
J-2016	140	Zone - 1	WAR	Fixed	1.76	319.62	77.71
J-2017	114	Zone - 1	WAR	Fixed	1.76	319.52	88.92
J-2018	116	Zone - 1	WAR	Fixed	1.76	319.52	88.05
J-2019	84	Zone - 1	WAR	Fixed	1.76	319.24	101.78
J-2020	82	Zone - 1	WAR	Fixed	1.76	319.17	102.61
J-2021	86	Zone - 1	WAR	Fixed	1.76	319.24	100.91
J-2022	60	Zone - 1	WAR	Fixed	1.76	319.06	112.08
J-2023	53	Zone - 1	WAR	Fixed	1.76	317.98	114.65
J-2024	52	Zone - 1	WAR	Fixed	1.76	317.96	115.07
J-2025	50	Zone - 1	WAR	Fixed	1.76	317.96	115.93
J-2026	73	Zone - 1	WAR	Fixed	1.76	317.94	105.97
J-2027	123	Zone - 1	WAR	Fixed	1.76	317.88	84.32
J-2028	119	Zone - 1	WAR	Fixed	1.76	317.86	86.04
J-2029	100	Zone - 1	WAR	Fixed	1.76	317.86	94.26
J-2030	106	Zone - 1	WAR	Fixed	1.76	317.86	91.66
J-2031	55	Zone - 1	WAR	Fixed	1.76	317.86	113.73
J-2032	45	Zone - 1	WAR	Fixed	1.76	317.86	118.05
J-2033	53	Zone - 1	WAR	Fixed	1.76	317.86	114.59
J-2034	55	Zone - 1	WAR	Fixed	1.76	317.73	113.67
J-2035	60	Zone - 1	WAR	Fixed	1.76	317.73	111.51
J-2036	119	Zone - 1	WAR	Fixed	1.76	317.93	86.07
J-2037	183	Zone - 1	WAR	Fixed	1.76	317.93	58.38
J-2038	183	Zone - 1	WAR	Fixed	1.76	317.93	58.38
J-2039	187	Zone - 1	WAR	Fixed	1.76	317.93	56.65
J-2040	190	Zone - 1	WAR	Fixed	1.76	317.93	55.35
J-2041	183	Zone - 1	WAR	Fixed	1.76	317.93	58.38
J-2042	184	Zone - 1	WAR	Fixed	1.76	317.93	57.95
J-2043	171	Zone - 1	WAR	Fixed	1.76	317.90	63.56
J-2044	143	Zone - 1	WAR	Fixed	1.76	317.88	75.66
J-2045	131	Zone - 1	WAR	Fixed	1.76	317.88	80.85
J-2046	170	Zone - 1	WAR	Fixed	1.76	317.89	63.98
J-2047	120	Zone - 1	WAR	Fixed	1.76	317.86	85.6

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2048	100	Zone - 1	WAR	Fixed	1.76	317.86	94.26
J-2049	130	Zone - 1	WAR	Fixed	1.76	317.86	81.28
J-2050	181	Zone - 1	WAR	Fixed	1.76	317.95	59.25
J-2051	183	Zone - 1	WAR	Fixed	1.76	317.95	58.39
J-2052	178	Zone - 1	WAR	Fixed	1.76	317.89	60.52
J-2053	161	Zone - 1	WAR	Fixed	1.76	317.83	67.85
J-2054	135	Zone - 1	WAR	Fixed	1.76	317.86	79.12
J-2055	127	Zone - 1	WAR	Fixed	1.76	317.86	82.58
J-2056	171	Zone - 1	WAR	Fixed	1.76	317.80	63.51
J-2057	165	Zone - 1	WAR	Fixed	1.76	317.80	66.11
J-2058	140	Zone - 1	WAR	Fixed	1.76	317.78	76.92
J-2059	145	Zone - 1	WAR	Fixed	1.76	317.78	74.75
J-2060	168	Zone - 1	WAR	Fixed	1.76	317.78	64.8
J-2061	161	Zone - 1	WAR	Fixed	1.76	317.78	67.83
J-2062	160	Zone - 1	WAR	Fixed	1.76	317.78	68.26
J-2063	133	Zone - 1	WAR	Fixed	1.76	317.78	79.94
J-2064	159	Zone - 1	WAR	Fixed	1.76	317.78	68.69
J-2065	130	Zone - 1	WAR	Fixed	1.76	317.77	81.24
J-2066	130	Zone - 1	WAR	Fixed	1.76	317.77	81.24
J-2067	130	Zone - 1	WAR	Fixed	1.76	317.77	81.24
J-2068	147	Zone - 1	WAR	Fixed	1.76	317.78	73.89
J-2069	154	Zone - 1	WAR	Fixed	1.76	317.74	70.84
J-2070	140	Zone - 1	WAR	Fixed	1.76	317.73	76.89
J-2071	132	Zone - 1	WAR	Fixed	1.76	317.68	80.33
J-2072	120	Zone - 1	WAR	Fixed	1.76	317.68	85.53
J-2073	155	Zone - 1	WAR	Fixed	1.76	317.89	70.47
J-2074	153	Zone - 1	WAR	Fixed	1.76	318.07	71.42
J-2075	165	Zone - 1	WAR	Fixed	1.76	318.10	66.24
J-2076	165	Zone - 1	WAR	Fixed	1.76	318.04	66.22
J-2077	151	Zone - 1	WAR	Fixed	1.76	318.04	72.27
J-2078	164	Zone - 1	WAR	Fixed	1.76	318.02	66.64
J-2079	168	Zone - 1	WAR	Fixed	1.76	317.99	64.89
J-2080	170	Zone - 1	WAR	Fixed	1.76	317.99	64.03
J-2081	177	Zone - 1	WAR	Fixed	1.76	317.97	60.99
J-2082	168	Zone - 1	WAR	Fixed	1.76	318.30	65.03
J-2083	160	Zone - 1	WAR	Fixed	1.76	318.30	68.49
J-2084	162	Zone - 1	WAR	Fixed	1.76	319.49	68.14
J-2085	173	Zone - 1	WAR	Fixed	1.76	318.65	63.02
J-2086	168	Zone - 1	WAR	Fixed	1.76	318.65	65.18
J-2087	151	Zone - 1	WAR	Fixed	1.76	317.87	72.2
J-2088	150	Zone - 1	WAR	Fixed	1.76	318.08	72.72
J-2089	162	Zone - 1	WAR	Fixed	1.76	317.98	67.49
J-2090	165	Zone - 1	WAR	Fixed	1.76	317.89	66.15
J-2091	153	Zone - 1	WAR	Fixed	1.76	317.87	71.33
J-2092	205	Zone - 1	WAR	Fixed	1.76	317.64	48.74
J-2093	131	Zone - 1	WAR	Fixed	1.76	317.85	80.84
J-2094	152	Zone - 1	WAR	Fixed	1.76	318.05	71.84
J-2095	157	Zone - 1	WAR	Fixed	1.76	318.06	69.68
J-2096	152	Zone - 1	WAR	Fixed	1.76	318.06	71.84
J-2097	153	Zone - 1	WAR	Fixed	1.76	318.05	71.41
J-2098	158	Zone - 1	WAR	Fixed	1.76	318.05	69.25
J-2099	161	Zone - 1	WAR	Fixed	1.76	319.49	68.57
J-2100	153	Zone - 1	WAR	Fixed	1.76	318.06	71.41
J-2101	156	Zone - 1	WAR	Fixed	1.76	318.06	70.12
J-2102	157	Zone - 1	WAR	Fixed	1.76	318.06	69.68
J-2103	157	Zone - 1	WAR	Fixed	1.76	318.06	69.68
J-2104	140	Zone - 1	WAR	Fixed	1.76	317.86	76.95
J-2105	156	Zone - 1	WAR	Fixed	1.76	317.88	70.04
J-2106	156	Zone - 1	WAR	Fixed	1.76	317.88	70.04
J-2107	157	Zone - 1	WAR	Fixed	1.76	317.87	69.6
J-2108	160	Zone - 1	WAR	Fixed	1.76	317.87	68.3
J-2109	150	Zone - 1	WAR	Fixed	1.76	317.87	72.63
J-2110	150	Zone - 1	WAR	Fixed	1.76	317.87	72.63
J-2111	140	Zone - 1	WAR	Fixed	1.76	317.86	76.95
J-2112	140	Zone - 1	WAR	Fixed	1.76	317.86	76.95
J-2113	150	Zone - 1	WAR	Fixed	1.76	317.74	72.57
J-2114	156	Zone - 1	WAR	Fixed	1.76	317.74	69.98

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2115	153	Zone - 1	WAR	Fixed	1.76	317.74	71.27
J-2116	154	Zone - 1	WAR	Fixed	1.76	317.74	70.84
J-2117	140	Zone - 1	WAR	Fixed	1.76	317.74	76.9
J-2118	137	Zone - 3	WAR	Fixed	1.76	317.64	78.15
J-2119	110	Zone - 3	WAR	Fixed	1.76	267.98	68.35
J-2120	110	Zone - 1	WAR	Fixed	1.76	267.89	68.31
J-2121	52	Zone - 3	WAR	Fixed	1.76	267.79	93.36
J-2122	160	Zone - 1	WAR	Fixed	1.76	317.64	68.2
J-2123	218	Zone - 1	WAR	Fixed	1.76	317.64	43.11
J-2124	184	Zone - 1	WAR	Fixed	1.76	317.64	57.82
J-2125	174	Zone - 1	WAR	Fixed	1.76	317.64	62.15
J-2126	171	Zone - 1	WAR	Fixed	1.76	317.64	63.44
J-2127	170	Zone - 1	WAR	Fixed	1.76	317.63	63.87
J-2128	178	Zone - 1	WAR	Fixed	1.76	317.63	60.41
J-2129	166	Zone - 1	WAR	Fixed	1.76	317.63	65.6
J-2130	178	Zone - 1	WAR	Fixed	1.76	317.63	60.41
J-2131	169	Zone - 1	WAR	Fixed	1.76	317.63	64.31
J-2132	200	Zone - 1	WAR	Fixed	1.76	317.63	50.89
J-2133	161	Zone - 1	WAR	Fixed	1.76	317.63	67.77
J-2134	170	Zone - 1	WAR	Fixed	1.76	317.63	63.87
J-2135	169	Zone - 1	WAR	Fixed	1.76	317.63	64.3
J-2136	190	Zone - 1	WAR	Fixed	1.76	317.64	55.22
J-2137	215	Zone - 1	WAR	Fixed	1.76	317.64	44.41
J-2138	208	Zone - 1	WAR	Fixed	1.76	317.64	47.44
J-2139	215	Zone - 1	WAR	Fixed	1.76	317.64	44.41
J-2140	184	Zone - 1	WAR	Fixed	1.76	317.64	57.82
J-2141	218	Zone - 1	WAR	Fixed	1.76	317.64	43.11
J-2142	217	Zone - 1	WAR	Fixed	1.76	317.64	43.54
J-2143	210	Zone - 1	WAR	Fixed	1.76	317.65	46.58
J-2144	212	Zone - 1	WAR	Fixed	1.76	317.64	45.71
J-2145	217	Zone - 1	WAR	Fixed	1.76	317.65	43.55
J-2146	221	Zone - 1	WAR	Fixed	1.76	317.65	41.82
J-2147	215	Zone - 1	WAR	Fixed	1.76	317.65	44.41
J-2148	153	Zone - 1	WAR	Fixed	1.76	317.67	71.24
J-2149	165	Zone - 1	WAR	Fixed	1.76	317.66	66.05
J-2150	120	Zone - 1	WAR	Fixed	1.76	317.71	85.54
J-2151	121	Zone - 1	WAR	Fixed	1.76	317.67	85.09
J-2152	174	Zone - 1	WAR	Fixed	1.76	317.66	62.15
J-2153	217	Zone - 1	WAR	Fixed	1.76	317.65	43.55
J-2154	162	Zone - 1	WAR	Fixed	1.76	317.66	67.34
J-2155	212	Zone - 1	WAR	Fixed	1.76	317.65	45.71
J-2156	168	Zone - 1	WAR	Fixed	1.76	317.66	64.75
J-2157	210	Zone - 1	WAR	Fixed	1.76	317.65	46.58
J-2158	138	Zone - 1	WAR	Fixed	1.76	317.66	77.73
J-2159	138	Zone - 1	WAR	Fixed	1.76	317.66	77.73
J-2160	120	Zone - 1	WAR	Fixed	1.76	317.66	85.52
J-2161	130	Zone - 1	WAR	Fixed	1.76	317.66	81.19
J-2162	218	Zone - 1	WAR	Fixed	1.76	317.65	43.11
J-2163	222	Zone - 1	WAR	Fixed	1.76	317.34	41.25
J-2164	143	Zone - 1	WAR	Fixed	1.76	317.67	75.57
J-2165	157	Zone - 1	WAR	Fixed	1.76	317.67	69.51
J-2166	157	Zone - 1	WAR	Fixed	1.76	317.87	69.6
J-2167	157	Zone - 1	WAR	Fixed	1.76	317.87	69.6
J-2168	130	Zone - 1	WAR	Fixed	1.76	317.87	81.28
J-2169	130	Zone - 1	WAR	Fixed	1.76	317.87	81.28
J-2170	144	Zone - 1	WAR	Fixed	1.76	317.86	75.22
J-2171	139	Zone - 1	WAR	Fixed	1.76	317.85	77.38
J-2172	137	Zone - 1	WAR	Fixed	1.76	317.85	78.25
J-2173	120	Zone - 3	WAR	Fixed	1.76	268.77	64.37
J-2174	98	Zone - 3	WAR	Fixed	1.76	268.77	73.89
J-2175	100	Zone - 3	WAR	Fixed	1.76	268.77	73.02
J-2176	117	Zone - 3	WAR	Fixed	1.76	268.77	65.67
J-2177	75	Zone - 3	WAR	Fixed	1.76	268.78	83.84
J-2178	95	Zone - 3	WAR	Fixed	1.76	268.78	75.18
J-2179	102	Zone - 3	WAR	Fixed	1.76	268.78	72.16
J-2180	85	Zone - 3	WAR	Fixed	1.76	268.78	79.51
J-2181	89	Zone - 3	WAR	Fixed	1.76	268.77	77.78

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2182	89	Zone - 3	WAR	Fixed	1.76	268.77	77.78
J-2183	130	Zone - 3	WAR	Fixed	1.76	268.77	60.04
J-2184	170	Zone - 3	WAR	Fixed	1.76	268.77	42.73
J-2185	113	Zone - 3	WAR	Fixed	1.76	268.77	67.39
J-2186	115	Zone - 3	WAR	Fixed	1.76	268.77	66.53
J-2187	76	Zone - 1	WAR	Fixed	1.76	268.77	83.4
J-2189	172	Zone - 1	WAR	Fixed	1.76	317.67	63.02
J-2190	200	Zone - 1	WAR	Fixed	1.76	317.66	50.91
J-2191	221	Zone - 1	WAR	Fixed	1.76	317.65	41.81
J-2192	210	Zone - 1	WAR	Fixed	1.76	317.65	46.57
J-2193	117	Zone - 1	WAR	Fixed	1.76	335.40	94.49
J-2194	171	Zone - 1	WAR	Fixed	1.76	335.40	71.13
J-2195	137	Zone - 1	WAR	Fixed	1.76	335.40	85.84
J-2196	115	Zone - 1	WAR	Fixed	1.76	335.40	95.35
J-2197	170	Zone - 1	WAR	Fixed	1.76	335.39	71.56
J-2198	187	Zone - 1	WAR	Fixed	1.76	335.39	64.2
J-2199	155	Zone - 1	WAR	Fixed	1.76	335.40	78.05
J-2200	222	Zone - 1	WAR	Fixed	1.76	317.65	41.38
J-2201	218	Zone - 1	WAR	Fixed	1.76	317.65	43.11
J-2203	40	Zone - 1	WAR	Fixed	1.76	317.24	119.95
J-2205	50	Zone - 1	WAR	Fixed	1.76	317.55	115.76
J-2206	35	Zone - 1	WAR	Fixed	1.76	317.55	122.25
J-2207	56	Zone - 1	WAR	Fixed	1.76	317.63	113.19
J-2208	66	Zone - 1	WAR	Fixed	1.76	317.58	108.85
J-2209	63	Zone - 1	WAR	Fixed	1.76	317.59	110.15
J-2210	51	Zone - 1	WAR	Fixed	1.76	317.59	115.34
J-2211	38	Zone - 1	WAR	Fixed	1.76	317.59	120.96
J-2212	63	Zone - 1	WAR	Fixed	1.76	317.58	110.14
J-2213	40	Zone - 1	WAR	Fixed	1.76	317.58	120.09
J-2214	35	Zone - 1	WAR	Fixed	1.76	317.58	122.26
J-2215	63	Zone - 1	WAR	Fixed	1.76	317.58	110.14
J-2216	40	Zone - 1	WAR	Fixed	1.76	317.58	120.1
J-2217	63	Zone - 1	WAR	Fixed	1.76	317.60	110.15
J-2218	35	Zone - 1	WAR	Fixed	1.76	317.60	122.27
J-2219	57	Zone - 1	WAR	Fixed	1.76	320.27	113.9
J-2221	90	Zone - 1	WAR	Fixed	1.76	321.41	100.12
J-2222	96	Zone - 1	WAR	Fixed	1.76	318.47	96.25
J-2223	103	Zone - 1	WAR	Fixed	1.76	318.61	93.28
J-2224	72	Zone - 1	WAR	Fixed	1.76	318.59	106.69
J-2225	87	Zone - 1	WAR	Fixed	1.76	318.59	100.2
J-2226	80	Zone - 1	WAR	Fixed	1.76	318.54	103.21
J-2227	80	Zone - 1	WAR	Fixed	1.76	318.54	103.21
J-2228	79	Zone - 1	WAR	Fixed	1.76	318.25	103.51
J-2229	96	Zone - 1	WAR	Fixed	1.76	318.49	96.26
J-2231	97	Zone - 1	WAR	Fixed	1.76	318.47	95.82
J-2232	84	Zone - 1	WAR	Fixed	1.76	318.46	101.44
J-2233	89	Zone - 1	WAR	Fixed	1.76	318.47	99.28
J-2234	88	Zone - 1	WAR	Fixed	1.76	318.47	99.71
J-2235	88	Zone - 1	WAR	Fixed	1.76	318.46	99.71
J-2236	88	Zone - 1	WAR	Fixed	1.76	318.46	99.71
J-2237	102	Zone - 1	WAR	Fixed	1.76	318.84	93.82
J-2239	104	Zone - 1	WAR	Fixed	1.76	318.84	92.95
J-2240	115	Zone - 1	WAR	Fixed	1.76	318.73	88.14
J-2241	97	Zone - 1	WAR	Fixed	1.76	318.73	95.93
J-2242	147	Zone - 3	WAR	Fixed	1.76	267.88	52.3
J-2243	159	Zone - 3	WAR	Fixed	1.76	267.85	47.09
J-2244	116	Zone - 3	WAR	Fixed	1.76	267.84	65.69
J-2245	118	Zone - 3	WAR	Fixed	1.76	267.85	64.83
J-2246	100	Zone - 3	WAR	Fixed	1.76	267.85	72.62
J-2247	184	Zone - 3	WAR	Fixed	1.76	267.88	44.94
J-2248	186	Zone - 3	WAR	Fixed	1.76	267.85	35.41
J-2249	187	Zone - 3	WAR	Fixed	1.76	267.85	34.98
J-2250	184	Zone - 3	WAR	Fixed	1.76	267.88	36.29
J-2251	174	Zone - 3	WAR	Fixed	1.76	267.84	40.6
J-2252	145	Zone - 3	WAR	Fixed	1.76	267.80	53.13
J-2253	53	Zone - 3	WAR	Fixed	1.76	267.79	92.93
J-2254	55	Zone - 3	WAR	Fixed	1.76	267.79	92.06

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2255	85	Zone - 3	WAR	Fixed	1.76	267.79	79.08
J-2256	130	Zone - 3	WAR	Fixed	1.76	267.79	59.61
J-2257	96	Zone - 3	WAR	Fixed	1.76	267.79	74.32
J-2258	134	Zone - 3	WAR	Fixed	1.76	266.89	57.5
J-2259	55	Zone - 3	WAR	Fixed	1.76	267.79	92.06
J-2260	72	Zone - 3	WAR	Fixed	1.76	267.79	84.71
J-2261	103	Zone - 3	WAR	Fixed	1.76	267.82	71.31
J-2262	92	Zone - 3	WAR	Fixed	1.76	267.80	76.06
J-2263	155	Zone - 3	WAR	Fixed	1.76	267.82	48.81
J-2264	116	Zone - 3	WAR	Fixed	1.76	267.78	65.67
J-2265	72	Zone - 3	WAR	Fixed	1.76	267.78	84.7
J-2266	155	Zone - 3	WAR	Fixed	1.76	266.39	48.19
J-2267	20	Zone - 3	WAR	Fixed	1.76	267.79	107.21
J-2268	20	Zone - 3	WAR	Fixed	1.76	267.79	107.2
J-2269	48	Zone - 3	WAR	Fixed	1.76	267.79	95.09
J-2270	38	Zone - 3	WAR	Fixed	1.76	267.79	99.42
J-2271	32	Zone - 3	WAR	Fixed	1.76	267.79	102.01
J-2272	37	Zone - 3	WAR	Fixed	1.76	267.79	99.85
J-2273	32	Zone - 3	WAR	Fixed	1.76	267.79	102.01
J-2274	26	Zone - 3	WAR	Fixed	1.76	267.79	104.61
J-2275	44	Zone - 3	WAR	Fixed	1.76	267.79	96.82
J-2276	58	Zone - 3	WAR	Fixed	1.76	267.79	90.77
J-2277	59	Zone - 3	WAR	Fixed	1.76	267.79	90.34
J-2278	52	Zone - 3	WAR	Fixed	1.76	267.79	93.36
J-2279	55	Zone - 3	WAR	Fixed	1.76	267.80	92.07
J-2280	57	Zone - 3	WAR	Fixed	1.76	267.80	91.2
J-2281	205	Zone - 3	WAR	Fixed	1.76	267.88	27.2
J-2282	198	Zone - 3	WAR	Fixed	1.76	267.85	30.22
J-2283	175	Zone - 3	WAR	Fixed	1.76	267.83	40.16
J-2284	155	Zone - 3	WAR	Fixed	1.76	267.82	48.81
J-2285	189	Zone - 3	WAR	Fixed	1.76	267.84	34.11
J-2286	192	Zone - 3	WAR	Fixed	1.76	267.84	32.81
J-2287	180	Zone - 3	WAR	Fixed	1.76	266.97	37.63
J-2288	167	Zone - 3	WAR	Fixed	1.76	267.80	43.61
J-2289	138	Zone - 3	WAR	Fixed	1.76	267.80	56.16
J-2290	134	Zone - 3	WAR	Fixed	1.76	267.79	57.89
J-2291	65	Zone - 3	WAR	Fixed	1.76	267.79	87.74
J-2292	171	Zone - 3	WAR	Fixed	1.76	267.80	41.88
J-2293	162	Zone - 3	WAR	Fixed	1.76	267.80	45.77
J-2294	152	Zone - 3	WAR	Fixed	1.76	267.46	49.95
J-2295	161	Zone - 1	WAR	Fixed	1.76	319.49	68.57
J-2296	78	Zone - 3	WAR	Fixed	1.76	267.79	82.11
J-2297	82	Zone - 3	WAR	Fixed	1.76	267.79	80.38
J-2298	87	Zone - 3	WAR	Fixed	1.76	267.79	78.22
J-2299	72	Zone - 3	WAR	Fixed	1.76	267.79	84.71
J-2300	54	Zone - 3	WAR	Fixed	1.76	267.79	92.5
J-2301	45	Zone - 3	WAR	Fixed	1.76	267.76	96.38
J-2302	56	Zone - 3	WAR	Fixed	1.76	267.75	91.61
J-2303	36	Zone - 3	WAR	Fixed	1.76	267.75	100.27
J-2304	36	Zone - 3	WAR	Fixed	1.76	267.78	100.28
J-2305	36	Zone - 3	WAR	Fixed	1.76	267.78	100.28
J-2306	48	Zone - 3	WAR	Fixed	1.76	267.72	95.06
J-2307	42	Zone - 3	WAR	Fixed	1.76	267.71	97.65
J-2308	75	Zone - 3	WAR	Fixed	1.76	267.80	83.41
J-2310	45	Zone - 3	WAR	Fixed	1.76	267.79	96.39
J-2311	49	Zone - 3	WAR	Fixed	1.76	267.79	94.66
J-2312	60	Zone - 3	WAR	Fixed	1.76	267.79	89.9
J-2313	84	Zone - 3	WAR	Fixed	1.76	267.79	79.52
J-2314	168	Zone - 1	WAR	Fixed	1.76	319.49	65.54
J-2315	170	Zone - 1	WAR	Fixed	1.76	319.68	64.76
J-2316	171	Zone - 1	WAR	Fixed	1.76	319.68	64.33
J-2317	205	Zone - 1	WAR	Fixed	1.76	321.95	50.6
J-2318	203	Zone - 1	WAR	Fixed	1.76	321.95	51.46
J-2319	200	Zone - 1	WAR	Fixed	1.76	321.95	52.76
J-2320	210	Zone - 1	WAR	Fixed	1.76	321.94	48.43
J-2321	203	Zone - 1	WAR	Fixed	1.76	321.94	51.46
J-2322	208	Zone - 1	WAR	Fixed	1.76	321.94	49.3

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2323	200	Zone - 1	WAR	Fixed	1.76	321.94	52.76
J-2324	207	Zone - 1	WAR	Fixed	1.76	321.94	49.73
J-2325	210	Zone - 1	WAR	Fixed	1.76	322.02	48.47
J-2326	243	Zone - 1	WAR	Fixed	1.76	322.02	34.19
J-2327	230	Zone - 1	WAR	Fixed	1.76	322.02	39.81
J-2328	237	Zone - 1	WAR	Fixed	1.76	322.02	36.78
J-2329	210	Zone - 1	WAR	Fixed	1.76	322.45	48.65
J-2330	210	Zone - 1	WAR	Fixed	1.76	322.45	48.65
J-2331	240	Zone - 1	WAR	Fixed	1.76	323.74	36.23
J-2332	240	Zone - 1	WAR	Fixed	1.76	323.74	36.23
J-2333	240	Zone - 1	WAR	Fixed	1.76	324.51	36.56
J-2334	245	Zone - 1	WAR	Fixed	1.76	332.40	37.81
J-2335	242	Zone - 1	WAR	Fixed	1.76	332.40	39.11
J-2336	265	Zone - 1	WAR	Fixed	1.76	332.66	29.27
J-2337	245	Zone - 2	WAR	Fixed	1.76	488.37	105.3
J-2339	245	Zone - 1	WAR	Fixed	1.76	332.66	37.93
J-2340	245	Zone - 1	WAR	Fixed	1.76	332.66	37.93
J-2341	180	Zone - 1	WAR	Fixed	1.76	333.63	66.47
J-2342	180	Zone - 1	WAR	Fixed	1.76	333.64	66.47
J-2343	180	Zone - 1	WAR	Fixed	1.76	333.67	66.49
J-2344	180	Zone - 1	WAR	Fixed	1.76	332.81	66.11
J-2345	130	Zone - 1	WAR	Fixed	1.76	334.61	88.52
J-2346	170	Zone - 1	WAR	Fixed	1.76	327.44	68.12
J-2347	170	Zone - 1	WAR	Fixed	1.76	327.44	68.12
J-2348	130	Zone - 1	WAR	Fixed	1.76	323.51	83.72
J-2349	125	Zone - 1	WAR	Fixed	1.76	321.55	85.04
J-2350	135	Zone - 1	WAR	Fixed	1.76	321.54	80.71
J-2351	170	Zone - 1	WAR	Fixed	1.76	321.54	65.56
J-2352	140	Zone - 1	WAR	Fixed	1.76	321.54	78.54
J-2353	152	Zone - 1	WAR	Fixed	1.76	321.54	73.35
J-2354	160	Zone - 1	WAR	Fixed	1.76	321.54	69.89
J-2355	170	Zone - 1	WAR	Fixed	1.76	321.54	65.56
J-2356	230	Zone - 1	WAR	Fixed	1.76	321.53	39.6
J-2357	230	Zone - 1	WAR	Fixed	1.76	321.53	39.6
J-2358	240	Zone - 1	WAR	Fixed	1.76	321.53	35.27
J-2359	230	Zone - 1	WAR	Fixed	1.76	321.53	39.6
J-2360	185	Zone - 1	WAR	Fixed	1.76	321.53	59.07
J-2361	38	Zone - 1	WAR	Fixed	1.76	317.24	120.82
J-2362	35	Zone - 1	WAR	Fixed	1.76	317.24	122.11
J-2363	30	Zone - 1	WAR	Fixed	1.76	317.24	124.28
J-2364	35	Zone - 1	WAR	Fixed	1.76	317.24	122.11
J-2365	35	Zone - 1	WAR	Fixed	1.76	317.24	122.11
J-2366	32	Zone - 1	WAR	Fixed	1.76	317.24	123.41
J-2367	29	Zone - 3	WAR	Fixed	1.76	267.79	103.31
J-2368	25	Zone - 3	WAR	Fixed	1.76	267.79	105.04
J-2370	31	Zone - 3	WAR	Fixed	1.76	267.79	102.45
J-2371	25	Zone - 3	WAR	Fixed	1.76	267.79	105.04
J-2372	30	Zone - 3	WAR	Fixed	1.76	267.79	102.88
J-2373	30	Zone - 3	WAR	Fixed	1.76	267.78	102.88
J-2374	32	Zone - 3	WAR	Fixed	1.76	267.78	102.01
J-2375	32	Zone - 3	WAR	Fixed	1.76	267.77	102.01
J-2376	35	Zone - 3	WAR	Fixed	1.76	267.78	100.71
J-2377	35	Zone - 3	WAR	Fixed	1.76	267.78	100.71
J-2378	22	Zone - 3	WAR	Fixed	1.76	267.14	106.06
J-2380	37	Zone - 3	WAR	Fixed	1.76	267.79	99.85
J-2381	36	Zone - 3	WAR	Fixed	1.76	267.78	100.28
J-2382	83	Zone - 3	WAR	Fixed	1.76	267.81	79.96
J-2383	50	Zone - 3	WAR	Fixed	1.76	267.81	94.23
J-2384	50	Zone - 3	WAR	Fixed	1.76	267.81	94.23
J-2385	30	Zone - 3	WAR	Fixed	1.76	267.80	102.89
J-2386	31	Zone - 3	WAR	Fixed	1.76	267.78	102.44
J-2387	31	Zone - 3	WAR	Fixed	1.76	267.78	102.44
J-2388	36	Zone - 3	WAR	Fixed	1.76	267.78	100.28
J-2389	25	Zone - 3	WAR	Fixed	1.76	267.78	105.04
J-2390	54	Zone - 3	WAR	Fixed	1.76	267.76	92.49
J-2391	53	Zone - 3	WAR	Fixed	1.76	267.76	92.92
J-2392	54	Zone - 3	WAR	Fixed	1.76	267.76	92.48

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2393	60	Zone - 3	WAR	Fixed	1.76	267.76	89.89
J-2394	53	Zone - 3	WAR	Fixed	1.76	267.76	92.92
J-2395	93	Zone - 3	WAR	Fixed	1.76	267.76	75.61
J-2396	41	Zone - 3	WAR	Fixed	1.76	267.76	98.11
J-2397	40	Zone - 3	WAR	Fixed	1.76	267.76	98.54
J-2398	80	Zone - 3	WAR	Fixed	1.76	267.76	81.24
J-2399	34	Zone - 3	WAR	Fixed	1.76	267.76	101.14
J-2400	41	Zone - 3	WAR	Fixed	1.76	267.77	98.11
J-2401	31	Zone - 3	WAR	Fixed	1.76	267.77	102.44
J-2402	53	Zone - 3	WAR	Fixed	1.76	267.77	92.92
J-2403	53	Zone - 3	WAR	Fixed	1.76	267.77	92.92
J-2404	55	Zone - 3	WAR	Fixed	1.76	267.77	92.06
J-2405	57	Zone - 3	WAR	Fixed	1.76	267.77	91.19
J-2407	54	Zone - 3	WAR	Fixed	1.76	267.77	92.49
J-2410	56	Zone - 3	WAR	Fixed	1.76	267.77	91.62
J-2411	58	Zone - 3	WAR	Fixed	1.76	267.77	90.76
J-2412	25	Zone - 3	WAR	Fixed	1.76	267.57	104.95
J-2413	33	Zone - 3	WAR	Fixed	1.76	267.57	101.49
J-2414	28	Zone - 3	WAR	Fixed	1.76	267.57	103.65
J-2415	49	Zone - 3	WAR	Fixed	1.76	267.57	94.56
J-2416	45	Zone - 3	WAR	Fixed	1.76	267.53	96.28
J-2417	49	Zone - 3	WAR	Fixed	1.76	267.53	94.55
J-2418	36	Zone - 3	WAR	Fixed	1.76	267.48	100.15
J-2419	30	Zone - 3	WAR	Fixed	1.76	267.48	102.75
J-2420	30	Zone - 3	WAR	Fixed	1.76	267.48	102.75
J-2421	30	Zone - 3	WAR	Fixed	1.76	267.48	102.75
J-2422	50	Zone - 3	WAR	Fixed	1.76	267.44	94.08
J-2423	53	Zone - 3	WAR	Fixed	1.76	267.44	92.78
J-2424	59	Zone - 3	WAR	Fixed	1.76	267.43	90.18
J-2425	56	Zone - 3	WAR	Fixed	1.76	267.43	91.48
J-2426	62	Zone - 3	WAR	Fixed	1.76	267.43	88.88
J-2427	58	Zone - 3	WAR	Fixed	1.76	267.43	90.61
J-2428	57	Zone - 3	WAR	Fixed	1.76	267.43	91.04
J-2429	58	Zone - 3	WAR	Fixed	1.76	267.43	90.61
J-2430	56	Zone - 3	WAR	Fixed	1.76	267.43	91.48
J-2431	62	Zone - 3	WAR	Fixed	1.76	267.43	88.88
J-2432	73	Zone - 3	WAR	Fixed	1.76	267.43	84.12
J-2433	57	Zone - 3	WAR	Fixed	1.76	267.43	91.05
J-2434	55	Zone - 3	WAR	Fixed	1.76	267.44	91.91
J-2435	50	Zone - 3	WAR	Fixed	1.76	267.44	94.08
J-2436	42	Zone - 3	WAR	Fixed	1.76	267.44	97.54
J-2437	55	Zone - 3	WAR	Fixed	1.76	267.43	91.91
J-2438	63	Zone - 3	WAR	Fixed	1.76	267.43	88.45
J-2439	51	Zone - 3	WAR	Fixed	1.76	267.43	93.64
J-2440	42	Zone - 3	WAR	Fixed	1.76	267.45	97.54
J-2441	46	Zone - 3	WAR	Fixed	1.76	267.45	95.81
J-2442	48	Zone - 3	WAR	Fixed	1.76	267.45	94.95
J-2443	44	Zone - 3	WAR	Fixed	1.76	267.46	96.68
J-2444	42	Zone - 3	WAR	Fixed	1.76	267.47	97.55
J-2445	40	Zone - 3	WAR	Fixed	1.76	267.46	98.41
J-2446	30	Zone - 3	WAR	Fixed	1.76	267.47	102.74
J-2447	38	Zone - 3	WAR	Fixed	1.76	267.48	99.28
J-2448	48	Zone - 3	WAR	Fixed	1.76	267.48	94.96
J-2449	66	Zone - 3	WAR	Fixed	1.76	267.46	87.16
J-2450	61	Zone - 3	WAR	Fixed	1.76	267.14	89.19
J-2451	67	Zone - 3	WAR	Fixed	1.76	267.46	86.73
J-2452	67	Zone - 3	WAR	Fixed	1.76	267.45	86.73
J-2453	69	Zone - 3	WAR	Fixed	1.76	266.21	85.33
J-2454	67	Zone - 3	WAR	Fixed	1.76	267.45	86.73
J-2455	67	Zone - 3	WAR	Fixed	1.76	266.23	86.2
J-2456	65	Zone - 3	WAR	Fixed	1.76	267.45	87.59
J-2457	57	Zone - 3	WAR	Fixed	1.76	267.46	91.06
J-2458	103	Zone - 1	WAR	Fixed	1.76	319.25	93.56
J-2459	99	Zone - 1	WAR	Fixed	1.76	319.25	95.29
J-2460	100	Zone - 1	WAR	Fixed	1.76	319.25	94.86
J-2461	118	Zone - 1	WAR	Fixed	1.76	319.25	87.07
J-2462	115	Zone - 1	WAR	Fixed	1.76	319.68	88.56

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2463	124	Zone - 1	WAR	Fixed	1.76	319.68	84.66
J-2464	57	Zone - 1	WAR	Fixed	1.76	320.34	113.93
J-2465	57	Zone - 1	WAR	Fixed	1.76	320.33	113.93
J-2466	84	Zone - 1	WAR	Fixed	1.76	320.33	102.25
J-2467	70	Zone - 1	WAR	Fixed	1.76	320.33	108.31
J-2468	48	Zone - 1	WAR	Fixed	1.76	320.42	117.86
J-2469	45	Zone - 1	WAR	Fixed	1.76	320.41	119.16
J-2470	47	Zone - 1	WAR	Fixed	1.76	320.41	118.29
J-2471	45	Zone - 1	WAR	Fixed	1.76	320.42	119.16
J-2472	45	Zone - 1	WAR	Fixed	1.76	320.46	119.18
J-2473	48	Zone - 1	WAR	Fixed	1.76	320.51	117.9
J-2474	45	Zone - 1	WAR	Fixed	1.76	320.54	119.21
J-2475	38	Zone - 1	WAR	Fixed	1.76	320.46	122.21
J-2476	49	Zone - 1	WAR	Fixed	1.76	320.51	117.47
J-2477	41	Zone - 1	WAR	Fixed	1.76	320.51	120.93
J-2478	45	Zone - 1	WAR	Fixed	1.76	320.58	119.23
J-2479	42	Zone - 1	WAR	Fixed	1.76	321.06	120.73
J-2480	63	Zone - 1	WAR	Fixed	1.76	324.92	113.32
J-2481	63	Zone - 1	WAR	Fixed	1.76	324.92	113.32
J-2482	85	Zone - 1	WAR	Fixed	1.76	324.83	103.76
J-2483	103	Zone - 1	WAR	Fixed	1.76	324.82	95.97
J-2485	100	Zone - 1	WAR	Fixed	1.76	324.82	97.27
J-2486	87	Zone - 1	WAR	Fixed	1.76	324.82	102.89
J-2487	50	Zone - 1	WAR	Fixed	1.76	324.82	118.9
J-2488	46	Zone - 1	WAR	Fixed	1.76	324.82	120.63
J-2489	97	Zone - 1	WAR	Fixed	1.76	324.82	98.57
J-2490	89	Zone - 1	WAR	Fixed	1.76	324.82	102.03
J-2491	159	Zone - 1	WAR	Fixed	1.76	335.43	76.33
J-2492	169	Zone - 1	WAR	Fixed	1.76	335.42	72
J-2493	165	Zone - 1	WAR	Fixed	1.76	335.42	73.73
J-2494	127	Zone - 3	WAR	Fixed	1.76	267.86	60.94
J-2495	132	Zone - 3	WAR	Fixed	1.76	267.84	58.77
J-2496	178	Zone - 1	WAR	Fixed	1.76	335.42	68.11
J-2497	178	Zone - 1	WAR	Fixed	1.76	335.42	68.11
J-2498	169	Zone - 1	WAR	Fixed	1.76	335.43	72
J-2499	193	Zone - 1	WAR	Fixed	1.76	335.42	61.62
J-2500	133	Zone - 3	WAR	Fixed	1.76	267.81	58.33
J-2501	144	Zone - 3	WAR	Fixed	1.76	267.80	53.56
J-2502	204	Zone - 3	WAR	Fixed	1.76	267.80	27.6
J-2503	115	Zone - 3	WAR	Fixed	1.76	267.80	66.11
J-2504	113	Zone - 3	WAR	Fixed	1.76	267.80	66.97
J-2505	73	Zone - 3	WAR	Fixed	1.76	267.80	84.28
J-2506	85	Zone - 3	WAR	Fixed	1.76	267.79	79.09
J-2507	145	Zone - 3	WAR	Fixed	1.76	267.84	53.15
J-2508	205	Zone - 3	WAR	Fixed	1.76	267.87	27.2
J-2509	52	Zone - 3	WAR	Fixed	1.76	267.79	93.36
J-2510	34	Zone - 1	WAR	Fixed	1.76	317.25	122.55
J-2511	34	Zone - 1	WAR	Fixed	1.76	317.22	122.54
J-2512	43	Zone - 3	WAR	Fixed	1.76	267.82	97.27
J-2513	28	Zone - 3	WAR	Fixed	1.76	267.77	103.74
J-2514	28	Zone - 3	WAR	Fixed	1.76	267.76	103.73
J-2515	58	Zone - 3	WAR	Fixed	1.76	267.76	90.75
J-2516	54	Zone - 3	WAR	Fixed	1.76	267.77	92.49
J-2517	35	Zone - 3	WAR	Fixed	1.76	267.75	100.7
J-2518	44	Zone - 3	WAR	Fixed	1.76	267.74	96.8
J-2519	45	Zone - 3	WAR	Fixed	1.76	267.74	96.37
J-2520	30	Zone - 3	WAR	Fixed	1.76	267.74	102.86
J-2521	41	Zone - 3	WAR	Fixed	1.76	267.74	98.1
J-2522	33	Zone - 3	WAR	Fixed	1.76	267.74	101.56
J-2523	34	Zone - 3	WAR	Fixed	1.76	267.74	101.13
J-2524	21	Zone - 3	WAR	Fixed	1.76	267.74	106.75
J-2525	21	Zone - 3	WAR	Fixed	1.76	267.74	106.75
J-2526	43	Zone - 3	WAR	Fixed	1.76	267.78	97.25
J-2527	25	Zone - 3	WAR	Fixed	1.76	267.78	105.04
J-2528	25	Zone - 3	WAR	Fixed	1.76	267.78	105.04
J-2529	25	Zone - 3	WAR	Fixed	1.76	267.78	105.04
J-2531	32	Zone - 3	WAR	Fixed	1.76	267.77	102

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2532	30	Zone - 3	WAR	Fixed	1.76	267.77	102.87
J-2533	58	Zone - 3	WAR	Fixed	1.76	267.75	90.75
J-2534	35	Zone - 3	WAR	Fixed	1.76	267.74	100.7
J-2535	47	Zone - 3	WAR	Fixed	1.76	267.74	95.5
J-2536	36	Zone - 3	WAR	Fixed	1.76	267.74	100.26
J-2537	58	Zone - 3	WAR	Fixed	1.76	267.74	90.74
J-2538	49	Zone - 3	WAR	Fixed	1.76	267.74	94.64
J-2539	50	Zone - 3	WAR	Fixed	1.76	267.74	94.21
J-2540	55	Zone - 3	WAR	Fixed	1.76	267.72	92.03
J-2541	55	Zone - 3	WAR	Fixed	1.76	267.72	92.03
J-2542	36	Zone - 3	WAR	Fixed	1.76	266.68	99.81
J-2543	55	Zone - 3	WAR	Fixed	1.76	267.74	92.04
J-2544	45	Zone - 3	WAR	Fixed	1.76	267.74	96.37
J-2545	38	Zone - 3	WAR	Fixed	1.76	267.74	99.4
J-2546	36	Zone - 3	WAR	Fixed	1.76	267.74	100.26
J-2547	47	Zone - 3	WAR	Fixed	1.76	267.74	95.5
J-2551	208	Zone - 1	WAR	Fixed	1.76	322.98	49.75
J-2552	230	Zone - 1	WAR	Fixed	1.76	322.98	40.23
J-2553	127	Zone - 1	WAR	Fixed	1.76	321.01	83.94
J-2554	126	Zone - 1	WAR	Fixed	1.76	320.87	84.31
J-2555	130	Zone - 1	WAR	Fixed	1.76	320.85	82.57
J-2556	145	Zone - 1	WAR	Fixed	1.76	320.87	76.09
J-2557	143	Zone - 1	WAR	Fixed	1.76	320.87	76.96
J-2558	142	Zone - 1	WAR	Fixed	1.76	320.87	77.39
J-2559	245	Zone - 1	WAR	Fixed	1.76	332.66	37.93
J-2560	265	Zone - 2	WAR	Fixed	1.76	488.38	96.64
J-2561	90	Zone - 1	WAR	Fixed	1.76	321.36	100.1
J-2562	90	Zone - 1	WAR	Fixed	1.76	321.36	100.1
J-2563	169	Zone - 1	WAR	Fixed	1.76	335.44	72.01
J-2564	159	Zone - 1	WAR	Fixed	1.76	335.43	76.33
J-2565	204	Zone - 1	WAR	Fixed	1.76	335.36	56.83
J-2566	204	Zone - 3	WAR	Fixed	1.76	269.90	28.51
J-2567	205	Zone - 3	WAR	Fixed	1.76	269.90	28.08
J-2568	204	Zone - 1	WAR	Fixed	1.76	335.42	56.86
J-2569	204	Zone - 1	WAR	Fixed	1.76	335.42	56.86
J-2570	90	Zone - 3	WAR	Fixed	1.76	268.88	77.39
J-2571	80	Zone - 3	WAR	Fixed	1.76	268.88	81.72
J-2572	85	Zone - 3	WAR	Fixed	1.76	268.88	79.55
J-2573	170	Zone - 1	WAR	Fixed	1.76	332.66	70.38
J-2574	110	Zone - 6	WAR	Fixed	1.76	231.93	52.75
J-2575	130	Zone - 6	WAR	Fixed	1.76	231.12	43.75
J-2576	130	Zone - 6	WAR	Fixed	0.00	231.05	43.72
J-2577	130	Zone - 1	WAR	Fixed	0.00	334.75	88.59
J-2578	130	Zone - 6	WAR	Fixed	0.00	231.05	43.72
J-2579	130	Zone - 1	WAR	Fixed	0.00	334.75	88.59
J-2580	130	Zone - 6	WAR	Fixed	0.00	231.05	43.72
J-2581	130	Zone - 1	WAR	Fixed	0.00	334.75	88.59
J-2582	130	Zone - 6	WAR	Fixed	0.00	231.05	43.72
J-2583	130	Zone - 1	WAR	Fixed	0.00	334.75	88.59
J-2584	35	Zone - 1	WAR	Fixed	1.76	317.07	122.04
J-2585	35	Zone - 3	WAR	Fixed	1.76	268.00	100.81
J-2586	110	Zone - 6	WAR	Fixed	0.00	231.98	52.77
J-2587	26	Zone - 3	WAR	Fixed	1.76	267.79	104.61
J-2588	85	Zone - 1	WAR	Fixed	1.76	324.90	103.79
J-2589	40	Zone - 3	WAR	Fixed	1.76	267.46	98.41
J-2590	40	Zone - 3	WAR	Fixed	1.76	267.45	98.41
J-2591	110	Zone - 1	WAR	Fixed	1.76	318.73	90.31
J-2593	25	Zone - 3	WAR	Fixed	1.76	267.79	105.04
J-2594	25	Zone - 3	WAR	Fixed	1.76	267.78	105.04
J-2595	25	Zone - 3	WAR	Fixed	1.76	267.78	105.04
J-2596	30	Zone - 3	WAR	Fixed	1.76	267.79	102.88
J-2597	30	Zone - 3	WAR	Fixed	1.76	267.79	102.88
J-2598	180	Zone - 3	WAR	Fixed	1.76	267.84	38
J-2599	170	Zone - 1	WAR	Fixed	1.76	317.63	63.87
J-2600	34	Zone - 1	WAR	Fixed	1.76	317.27	122.56
J-2601	65	Zone - 1	WAR	Fixed	1.76	318.00	109.46
J-2602	65	Zone - 1	WAR	Fixed	1.76	318.00	109.46

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-2603	43	Zone - 1	WAR	Fixed	1.76	317.38	118.71
J-2604	43	Zone - 1	WAR	Fixed	1.76	317.38	118.71
J-2605	73	Zone - 1	WAR	Fixed	1.76	317.94	105.97
J-2606	73	Zone - 1	WAR	Fixed	1.76	317.94	105.97
J-2607	127	Zone - 1	WAR	Fixed	1.76	317.86	82.58
J-2608	127	Zone - 1	WAR	Fixed	1.76	317.86	82.58
J-2609	170	Zone - 1	WAR	Fixed	1.76	317.98	64.02
J-2610	170	Zone - 1	WAR	Fixed	1.76	317.98	64.02
J-2611	155	Zone - 1	WAR	Fixed	1.76	317.74	70.41
J-2612	155	Zone - 1	WAR	Fixed	1.76	317.74	70.41
J-2613	170	Zone - 1	WAR	Fixed	1.76	318.46	64.23
J-2614	170	Zone - 1	WAR	Fixed	1.76	318.46	64.23
J-2615	155	Zone - 1	WAR	Fixed	1.76	318.04	70.54
J-2616	162	Zone - 1	WAR	Fixed	1.76	318.00	67.49
J-2617	265	Zone - 1	WAR	Fixed	1.76	332.66	29.27
J-2618	245	Zone - 2	WAR	Fixed	1.76	488.37	105.3
J-2619	245	Zone - 2	WAR	Fixed	1.76	488.37	105.3
J-2620	78	Zone - 3	WAR	Fixed	1.76	267.79	82.11
J-2621	87	Zone - 1	WAR Kent County Hospital	Fixed	76.11	318.38	100.11
J-2622	54	Zone - 3	WAR Cowesett Hills	Fixed	41.73	267.77	92.49
J-2623	54	Zone - 3	WAR Cowesett Hills Assoc.	Fixed	40.17	267.77	92.49
J-2624	250	Zone - 1	WAR Briarwood Meadows	Fixed	39.70	332.51	35.7
J-2625	43	Zone - 1	WAR Electro Films	Fixed	51.38	317.25	118.66
J-2626	119	Zone - 1	WAR AIMCO Warwick LLC	Fixed	41.08	320.42	87.15
J-2627	102	Zone - 1	WAR Bald Hill Realty	Fixed	19.52	319.04	93.9
J-3000	330	Zone - 4	WG	Fixed	1.31	434.64	45.27
J-3001	320	Zone - 4	WG	Fixed	1.31	434.60	49.58
J-3002	286	Zone - 4	WG	Fixed	1.31	434.56	64.27
J-3003	279	Zone - 4	WG	Fixed	1.31	434.53	67.29
J-3004	271	Zone - 4	WG	Fixed	1.31	434.54	70.76
J-3005	282	Zone - 4	WG	Fixed	1.31	434.45	65.96
J-3006	279	Zone - 4	WG	Fixed	1.31	434.36	67.22
J-3007	265	Zone - 4	WG	Fixed	1.31	434.14	73.18
J-3008	265	Zone - 4	WG	Fixed	1.31	434.14	73.18
J-3009	265	Zone - 4	WG	Fixed	1.31	434.01	73.12
J-3010	269	Zone - 4	WG	Fixed	1.31	434.14	71.45
J-3011	270	Zone - 4	WG	Fixed	1.31	434.11	71
J-3012	278	Zone - 4	WG	Fixed	1.31	434.11	67.54
J-3013	285	Zone - 4	WG	Fixed	1.31	434.11	64.51
J-3014	287	Zone - 4	WG	Fixed	1.31	434.10	63.64
J-3015	275	Zone - 4	WG	Fixed	1.31	434.10	68.84
J-3016	330	Zone - 4	WG	Fixed	1.31	434.10	45.04
J-3017	325	Zone - 4	WG	Fixed	1.31	434.08	47.19
J-3018	334	Zone - 4	WG	Fixed	1.31	434.10	43.31
J-3019	303	Zone - 4	WG	Fixed	1.31	433.86	56.62
J-3020	333	Zone - 4	WG	Fixed	1.31	433.86	43.64
J-3021	319	Zone - 4	WG	Fixed	1.31	433.80	49.67
J-3022	330	Zone - 4	WG	Fixed	1.31	433.80	44.91
J-3023	338	Zone - 4	WG	Fixed	1.31	433.77	41.44
J-3024	333	Zone - 4	WG	Fixed	1.31	433.77	43.6
J-3025	275	Zone - 4	WG	Fixed	1.31	433.69	68.66
J-3026	274	Zone - 4	WG	Fixed	1.31	433.70	69.09
J-3027	283	Zone - 4	WG	Fixed	1.31	433.70	65.2
J-3028	266	Zone - 4	WG	Fixed	1.31	433.62	72.52
J-3029	264	Zone - 4	WG	Fixed	1.31	433.71	73.43
J-3030	266	Zone - 4	WG	Fixed	1.31	433.82	72.61
J-3031	259	Zone - 4	WG	Fixed	1.31	433.82	75.64
J-3032	271	Zone - 4	WG	Fixed	1.31	433.24	70.2
J-3033	296	Zone - 4	WG	Fixed	1.31	433.24	59.38
J-3034	331	Zone - 4	WG	Fixed	1.31	433.24	44.23
J-3035	287	Zone - 4	WG	Fixed	1.31	433.24	63.27
J-3036	334	Zone - 4	WG	Fixed	1.31	433.24	42.94
J-3037	300	Zone - 4	WG	Fixed	1.31	433.24	57.65
J-3038	354	Zone - 4	WG	Fixed	1.31	433.24	34.28
J-3039	300	Zone - 4	WG	Fixed	1.31	433.24	57.65
J-3041	340	Zone - 2	WG	Fixed	1.31	486.98	63.59
J-3042	342	Zone - 2	WG	Fixed	1.31	486.99	62.73

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-3043	340	Zone - 2	WG	Fixed	1.31	498.02	68.37
J-3045	360	Zone - 2	WG	Fixed	1.31	487.04	54.97
J-3046	426	Zone - 2	WG	Fixed	0.00	487.03	26.4
J-3047	350	Zone - 2	WG	Fixed	1.31	487.02	58.28
J-3048	335	Zone - 2	WG	Fixed	1.31	486.96	65.75
J-3049	340	Zone - 2	WG	Fixed	1.31	498.02	68.37
J-3050	350	Zone - 2	WG	Fixed	1.31	487.00	59.27
J-3051	271	Zone - 4	WG	Fixed	1.31	433.24	70.2
J-3052	279	Zone - 4	WG	Fixed	1.31	434.33	67.21
J-3053	335	Zone - 2	WG Arngen	Fixed	142.77	486.96	65.75
J-3054	340	Zone - 2	WG G-Tech	Fixed	33.50	496.96	67.91
J-4000	270	Zone - 2	EG	Fixed	1.77	486.82	93.81
J-4001	282	Zone - 2	EG	Fixed	1.77	486.82	88.62
J-4002	264	Zone - 2	EG	Fixed	1.77	486.82	96.41
J-4003	265	Zone - 2	EG	Fixed	1.77	486.82	95.97
J-4004	266	Zone - 2	EG	Fixed	1.77	486.82	95.54
J-4005	280	Zone - 2	EG	Fixed	1.77	486.82	89.48
J-4006	280	Zone - 2	EG	Fixed	1.77	486.82	89.48
J-4007	290	Zone - 2	EG	Fixed	1.77	486.82	85.16
J-4008	280	Zone - 2	EG	Fixed	1.77	486.82	89.48
J-4009	288	Zone - 2	EG	Fixed	1.77	486.82	86.02
J-4010	288	Zone - 2	EG	Fixed	1.77	486.82	86.02
J-4011	280	Zone - 2	EG	Fixed	1.77	486.82	89.48
J-4012	277	Zone - 2	EG	Fixed	1.77	486.82	90.78
J-4013	282	Zone - 2	EG	Fixed	1.77	486.82	88.62
J-4014	290	Zone - 2	EG	Fixed	1.77	486.90	85.19
J-4015	292	Zone - 2	EG	Fixed	1.77	486.90	84.32
J-4016	295	Zone - 2	EG	Fixed	1.77	486.90	83.03
J-4017	289	Zone - 2	EG	Fixed	1.77	486.93	85.63
J-4018	290	Zone - 2	EG	Fixed	1.77	486.93	85.2
J-4019	289	Zone - 2	EG	Fixed	1.77	486.93	85.63
J-4020	282	Zone - 2	EG	Fixed	1.77	486.92	88.66
J-4021	287	Zone - 2	EG	Fixed	1.77	486.92	86.49
J-4022	285	Zone - 2	EG	Fixed	1.77	486.93	87.37
J-4023	280	Zone - 2	EG	Fixed	1.77	487.03	89.57
J-4024	260	Zone - 2	EG	Fixed	1.77	487.03	98.23
J-4025	250	Zone - 2	EG	Fixed	1.77	487.05	102.56
J-4026	265	Zone - 2	EG	Fixed	1.77	487.04	96.07
J-4028	280	Zone - 2	EG	Fixed	1.77	486.93	89.53
J-4029	280	Zone - 2	EG	Fixed	1.77	486.92	89.53
J-4030	264	Zone - 2	EG	Fixed	1.77	486.92	96.45
J-4031	271	Zone - 2	EG	Fixed	1.77	486.92	93.42
J-4032	269	Zone - 2	EG	Fixed	1.77	486.92	94.28
J-4033	261	Zone - 2	EG	Fixed	1.77	486.92	97.75
J-4034	257	Zone - 2	EG	Fixed	1.77	486.92	99.48
J-4035	248	Zone - 2	EG	Fixed	1.77	486.92	103.37
J-4036	266	Zone - 2	EG	Fixed	1.77	486.82	95.54
J-4037	258	Zone - 2	EG	Fixed	1.77	486.82	99
J-4038	242	Zone - 2	EG	Fixed	1.77	486.82	105.92
J-4039	260	Zone - 2	EG	Fixed	1.77	486.82	98.14
J-4040	242	Zone - 2	EG	Fixed	1.77	486.82	105.92
J-4041	252	Zone - 2	EG	Fixed	1.77	486.82	101.6
J-4042	260	Zone - 2	EG	Fixed	1.77	486.82	98.14
J-4043	260	Zone - 2	EG	Fixed	1.77	486.82	98.14
J-4044	276	Zone - 2	EG	Fixed	1.77	486.82	91.21
J-4045	225	Zone - 2	EG	Fixed	1.77	486.83	113.28
J-4046	240	Zone - 2	EG	Fixed	1.77	486.83	106.79
J-4047	192	Zone - 2	EG	Fixed	1.77	486.83	127.56
J-4048	189	Zone - 2	EG	Fixed	1.77	486.82	128.85
J-4049	266	Zone - 1	EG	Fixed	1.77	332.01	28.56
J-4050	276	Zone - 2	EG	Fixed	1.77	486.82	91.21
J-4051	276	Zone - 2	EG	Fixed	1.77	486.82	91.21
J-4052	266	Zone - 2	EG	Fixed	1.77	486.82	95.54
J-4053	266	Zone - 2	EG	Fixed	1.77	486.82	95.54
J-4054	266	Zone - 2	EG	Fixed	1.77	486.82	95.54
J-4055	276	Zone - 1	EG	Fixed	0.00	332.01	24.23
J-4056	246	Zone - 2	EG	Fixed	1.77	486.82	104.19

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-4057	212	Zone - 2	EG	Fixed	1.77	486.82	118.9
J-4058	204	Zone - 2	EG	Fixed	1.77	486.82	122.36
J-4059	219	Zone - 2	EG	Fixed	1.77	486.82	115.87
J-4060	190	Zone - 2	EG	Fixed	1.77	486.82	128.42
J-4061	246	Zone - 1	EG	Fixed	1.77	332.03	37.22
J-4062	189	Zone - 1	EG	Fixed	1.77	332.00	61.87
J-4063	237	Zone - 1	EG	Fixed	1.77	331.99	41.1
J-4064	264	Zone - 1	EG	Fixed	1.77	331.95	29.4
J-4065	237	Zone - 1	EG	Fixed	1.77	331.99	41.1
J-4066	250	Zone - 1	EG	Fixed	1.77	331.99	35.47
J-4067	249	Zone - 1	EG	Fixed	1.77	331.99	35.9
J-4068	258	Zone - 1	EG	Fixed	1.77	331.99	32.01
J-4069	260	Zone - 1	EG	Fixed	1.77	331.99	31.15
J-4070	200	Zone - 1	EG	Fixed	1.77	332.02	57.12
J-4071	185	Zone - 1	EG	Fixed	1.77	332.03	63.61
J-4072	174	Zone - 1	EG	Fixed	1.77	332.05	68.38
J-4073	157	Zone - 1	EG	Fixed	1.77	332.07	75.74
J-4074	169	Zone - 1	EG	Fixed	1.77	332.08	70.56
J-4075	167	Zone - 1	EG	Fixed	1.77	332.08	71.42
J-4076	150	Zone - 1	EG	Fixed	1.77	332.11	78.79
J-4077	160	Zone - 1	EG	Fixed	1.77	332.11	74.46
J-4078	162	Zone - 1	EG	Fixed	1.77	332.08	73.58
J-4079	162	Zone - 1	EG	Fixed	1.77	332.08	73.58
J-4080	160	Zone - 1	EG	Fixed	1.77	332.12	74.47
J-4081	165	Zone - 1	EG	Fixed	1.77	332.12	72.3
J-4082	157	Zone - 1	EG	Fixed	1.77	332.13	75.77
J-4083	156	Zone - 1	EG	Fixed	1.77	332.21	76.24
J-4084	162	Zone - 1	EG	Fixed	1.77	332.35	73.7
J-4085	178	Zone - 1	EG	Fixed	1.77	332.21	66.72
J-4086	179	Zone - 1	EG	Fixed	1.77	332.11	66.24
J-4087	176	Zone - 1	EG	Fixed	1.77	332.13	67.55
J-4088	163	Zone - 1	EG	Fixed	1.77	332.13	73.17
J-4089	180	Zone - 1	EG	Fixed	1.77	332.26	65.88
J-4090	185	Zone - 1	EG	Fixed	1.77	332.26	63.71
J-4091	247	Zone - 1	EG	Fixed	1.77	332.10	36.82
J-4092	108	Zone - 1	EG	Fixed	1.77	333.72	97.66
J-4094	229	Zone - 1	EG	Fixed	1.77	331.93	44.53
J-4095	197	Zone - 1	EG	Fixed	1.77	331.51	58.19
J-4096	197	Zone - 1	EG	Fixed	1.77	331.55	58.21
J-4097	220	Zone - 1	EG	Fixed	1.77	331.59	48.28
J-4098	210	Zone - 1	EG	Fixed	1.77	331.56	52.6
J-4099	205	Zone - 1	EG	Fixed	1.77	331.56	54.76
J-4100	227	Zone - 1	EG	Fixed	1.77	331.65	45.28
J-4101	225	Zone - 1	EG	Fixed	1.77	331.93	46.26
J-4102	226	Zone - 1	EG	Fixed	1.77	331.93	45.83
J-4103	221	Zone - 1	EG	Fixed	1.77	331.65	47.87
J-4104	210	Zone - 1	EG	Fixed	1.77	331.64	52.63
J-4105	223	Zone - 1	EG	Fixed	1.77	331.64	47.01
J-4106	229	Zone - 1	EG	Fixed	1.77	331.93	44.53
J-4107	227	Zone - 1	EG	Fixed	1.77	331.93	45.4
J-4108	230	Zone - 1	EG	Fixed	1.77	331.93	44.1
J-4109	254	Zone - 1	EG	Fixed	1.77	331.93	33.72
J-4110	250	Zone - 1	EG	Fixed	1.77	331.93	35.45
J-4111	260	Zone - 1	EG	Fixed	1.77	331.93	31.12
J-4112	262	Zone - 2	EG	Fixed	1.77	487.05	97.37
J-4113	250	Zone - 2	EG	Fixed	1.77	487.05	102.56
J-4114	260	Zone - 2	EG	Fixed	1.77	487.05	98.23
J-4115	280	Zone - 1	EG	Fixed	1.77	331.95	22.48
J-4116	280	Zone - 2	EG	Fixed	1.77	487.06	89.59
J-4117	300	Zone - 2	EG	Fixed	1.77	487.06	80.93
J-4118	300	Zone - 2	EG	Fixed	1.77	487.06	80.93
J-4119	320	Zone - 2	EG	Fixed	1.77	487.06	72.28
J-4120	270	Zone - 2	EG	Fixed	1.77	487.06	93.91
J-4121	330	Zone - 2	EG	Fixed	1.77	487.09	67.97
J-4122	310	Zone - 2	EG	Fixed	1.77	487.10	76.62
J-4123	285	Zone - 2	EG	Fixed	1.77	487.10	87.44
J-4124	310	Zone - 2	EG	Fixed	1.77	487.11	76.63

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-4125	300	Zone - 2	EG	Fixed	1.77	487.06	80.93
J-4126	300	Zone - 2	EG	Fixed	1.77	487.06	80.93
J-4127	312	Zone - 2	EG	Fixed	1.77	487.06	75.74
J-4128	405	Zone - 2	EG	Fixed	1.77	487.03	35.49
J-4129	370	Zone - 2	EG	Fixed	1.77	487.05	50.64
J-4130	367	Zone - 2	EG	Fixed	1.77	487.05	51.94
J-4131	340	Zone - 2	EG	Fixed	1.77	487.07	63.63
J-4132	320	Zone - 2	EG	Fixed	1.77	487.08	72.29
J-4133	321	Zone - 2	EG	Fixed	1.77	487.08	71.86
J-4134	310	Zone - 2	EG	Fixed	1.77	487.10	76.62
J-4135	322	Zone - 2	EG	Fixed	1.77	487.10	71.43
J-4136	300	Zone - 2	EG	Fixed	1.77	487.05	80.93
J-4137	350	Zone - 2	EG	Fixed	1.77	487.25	59.38
J-4138	300	Zone - 2	EG	Fixed	1.77	487.12	80.96
J-4139	312	Zone - 2	EG	Fixed	1.77	488.06	76.17
J-4140	290	Zone - 1	EG	Fixed	1.77	331.94	18.15
J-4141	280	Zone - 1	EG	Fixed	1.77	331.94	22.47
J-4142	280	Zone - 1	EG	Fixed	1.77	331.94	22.47
J-4143	275	Zone - 1	EG	Fixed	1.77	331.94	24.64
J-4144	280	Zone - 1	EG	Fixed	1.77	331.94	22.47
J-4145	270	Zone - 1	EG	Fixed	1.77	331.94	26.8
J-4146	280	Zone - 1	EG	Fixed	1.77	331.94	22.47
J-4147	270	Zone - 1	EG	Fixed	1.77	331.94	26.8
J-4149	310	Zone - 2	EG	Fixed	1.77	488.40	77.19
J-4150	300	Zone - 2	EG	Fixed	1.77	488.63	81.61
J-4151	340	Zone - 2	EG	Fixed	1.77	490.19	64.98
J-4152	109	Zone - 1	EG	Fixed	1.77	333.69	97.21
J-4153	115	Zone - 1	EG	Fixed	1.77	333.66	94.61
J-4154	106	Zone - 1	EG	Fixed	1.77	333.66	98.5
J-4155	103	Zone - 1	EG	Fixed	1.77	333.66	99.8
J-4156	105	Zone - 1	EG	Fixed	1.77	333.66	98.93
J-4157	105	Zone - 1	EG	Fixed	1.77	333.66	98.93
J-4158	112	Zone - 1	EG	Fixed	1.77	333.65	95.9
J-4159	112	Zone - 1	EG	Fixed	1.77	333.65	95.9
J-4160	113	Zone - 1	EG	Fixed	1.77	333.65	95.47
J-4161	112	Zone - 1	EG	Fixed	1.77	333.65	95.9
J-4162	113	Zone - 1	EG	Fixed	1.77	333.65	95.47
J-4163	112	Zone - 1	EG	Fixed	1.77	333.66	95.9
J-4164	110	Zone - 1	EG	Fixed	1.77	333.66	96.77
J-4165	104	Zone - 1	EG	Fixed	1.77	333.66	99.36
J-4166	104	Zone - 1	EG	Fixed	1.77	333.67	99.37
J-4167	111	Zone - 1	EG	Fixed	1.77	333.68	96.34
J-4168	103	Zone - 1	EG	Fixed	1.77	333.68	99.8
J-4169	104	Zone - 1	EG	Fixed	1.77	333.66	99.36
J-4170	50	Zone - 1	EG	Fixed	1.77	333.67	122.73
J-4171	49	Zone - 1	EG	Fixed	1.77	333.67	123.16
J-4172	82	Zone - 1	EG	Fixed	1.77	333.69	108.89
J-4173	80	Zone - 1	EG	Fixed	1.77	333.69	109.76
J-4174	108	Zone - 1	EG	Fixed	1.77	333.66	97.63
J-4175	109	Zone - 1	EG	Fixed	1.77	333.69	97.21
J-4176	201	Zone - 1	EG	Fixed	1.77	330.56	56.05
J-4177	200	Zone - 1	EG	Fixed	1.77	330.55	56.48
J-4178	220	Zone - 1	EG	Fixed	1.77	330.55	47.83
J-4179	218	Zone - 1	EG	Fixed	1.77	330.55	48.69
J-4180	206	Zone - 1	EG	Fixed	1.77	330.54	53.88
J-4181	210	Zone - 1	EG	Fixed	1.77	330.54	52.15
J-4182	215	Zone - 1	EG	Fixed	1.77	330.54	49.99
J-4183	215	Zone - 1	EG	Fixed	1.77	330.54	49.99
J-4184	208	Zone - 1	EG	Fixed	1.77	330.54	53.02
J-4185	212	Zone - 1	EG	Fixed	1.77	330.54	51.29
J-4186	30	Zone - 1	EG	Fixed	1.77	336.06	132.42
J-4187	50	Zone - 1	EG	Fixed	1.77	336.00	123.74
J-4188	50	Zone - 1	EG	Fixed	1.77	335.99	123.74
J-4189	51	Zone - 1	EG	Fixed	1.77	335.98	123.3
J-4190	52	Zone - 1	EG	Fixed	1.77	335.98	122.86
J-4191	57	Zone - 1	EG	Fixed	1.77	335.92	120.68
J-4192	45	Zone - 3	EG	Fixed	1.77	267.93	96.45

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-4193	82	Zone - 1	EG	Fixed	1.77	335.85	109.83
J-4194	57	Zone - 1	EG	Fixed	1.77	335.77	120.61
J-4195	62	Zone - 1	EG	Fixed	1.77	335.72	118.42
J-4196	53	Zone - 1	EG	Fixed	1.77	335.64	122.29
J-4197	102	Zone - 1	EG	Fixed	1.77	335.54	101.04
J-4198	148	Zone - 1	EG	Fixed	1.77	335.47	81.11
J-4199	15.5	Zone - 1	EG	Fixed	0.00	337.44	139.29
J-4200	30	Zone - 1	EG	Fixed	1.77	336.02	132.4
J-4201	30	Zone - 1	EG	Fixed	1.77	335.53	132.19
J-4202	30	Zone - 1	EG	Fixed	1.77	335.90	132.35
J-4203	30	Zone - 3	EG	Fixed	1.77	335.90	132.35
J-4204	58	Zone - 3	EG	Fixed	1.77	267.93	90.83
J-4205	56	Zone - 3	EG	Fixed	1.77	267.93	91.69
J-4206	36	Zone - 3	EG	Fixed	1.77	267.93	100.34
J-4207	50	Zone - 3	EG	Fixed	1.77	267.93	94.29
J-4208	39	Zone - 3	EG	Fixed	1.77	267.93	99.05
J-4209	118	Zone - 3	EG	Fixed	1.77	267.97	64.88
J-4210	84	Zone - 3	EG	Fixed	1.77	267.94	79.58
J-4211	72	Zone - 3	EG	Fixed	1.77	267.94	84.78
J-4212	101	Zone - 3	EG	Fixed	1.77	267.95	72.23
J-4213	30	Zone - 3	EG	Fixed	1.77	267.90	102.93
J-4214	119	Zone - 3	EG	Fixed	1.77	267.95	64.44
J-4215	120	Zone - 3	EG	Fixed	1.77	267.97	64.02
J-4216	122	Zone - 3	EG	Fixed	1.77	267.98	63.16
J-4217	129	Zone - 3	EG	Fixed	1.77	267.98	60.13
J-4218	71	Zone - 3	EG	Fixed	1.77	267.97	85.22
J-4219	119	Zone - 3	EG	Fixed	1.77	267.96	64.45
J-4220	33	Zone - 3	EG	Fixed	1.77	267.94	101.65
J-4221	50	Zone - 3	EG	Fixed	1.77	267.94	94.29
J-4222	118	Zone - 3	EG	Fixed	1.77	268.09	64.94
J-4223	56	Zone - 3	EG	Fixed	1.77	267.96	91.7
J-4224	133	Zone - 3	EG	Fixed	1.77	268.01	58.41
J-4225	120	Zone - 3	EG	Fixed	1.77	267.98	64.02
J-4226	114	Zone - 3	EG	Fixed	1.77	268.09	66.67
J-4227	134	Zone - 3	EG	Fixed	1.77	268.01	57.98
J-4228	84	Zone - 3	EG	Fixed	1.77	267.97	79.59
J-4229	84	Zone - 3	EG	Fixed	1.77	267.97	79.59
J-4230	121	Zone - 3	EG	Fixed	1.77	267.99	63.6
J-4231	126	Zone - 3	EG	Fixed	1.77	267.99	61.43
J-4232	130	Zone - 3	EG	Fixed	1.77	268.91	60.1
J-4233	75	Zone - 3	EG	Fixed	1.77	268.13	83.56
J-4234	118	Zone - 3	EG	Fixed	1.77	268.15	64.96
J-4235	124	Zone - 3	EG	Fixed	1.77	267.99	62.3
J-4236	62	Zone - 3	EG	Fixed	1.77	268.13	89.18
J-4237	118	Zone - 3	EG	Fixed	1.77	268.13	64.95
J-4238	134	Zone - 3	EG	Fixed	1.77	268.13	58.03
J-4239	116	Zone - 3	EG	Fixed	1.77	268.11	65.81
J-4240	121	Zone - 3	EG	Fixed	1.77	268.13	63.66
J-4241	130	Zone - 3	EG	Fixed	1.77	268.97	60.13
J-4242	120	Zone - 3	EG	Fixed	1.77	268.76	64.36
J-4243	146	Zone - 3	EG	Fixed	1.77	268.92	53.18
J-4244	139	Zone - 3	EG	Fixed	1.77	268.90	56.2
J-4245	140	Zone - 3	EG	Fixed	1.77	268.91	55.77
J-4246	135	Zone - 3	EG	Fixed	1.77	268.91	57.93
J-4247	138	Zone - 3	EG	Fixed	1.77	268.84	56.61
J-4248	120	Zone - 3	EG	Fixed	1.77	268.84	64.39
J-4249	128	Zone - 3	EG	Fixed	1.77	268.76	60.9
J-4250	116	Zone - 3	EG	Fixed	1.77	268.15	65.83
J-4251	139	Zone - 3	EG	Fixed	1.77	268.89	56.2
J-4252	124	Zone - 3	EG	Fixed	1.77	269.16	62.8
J-4253	190	Zone - 3	EG	Fixed	1.77	269.34	34.33
J-4254	179	Zone - 3	EG	Fixed	1.77	269.30	39.07
J-4255	132	Zone - 3	EG	Fixed	1.77	269.22	59.37
J-4256	112	Zone - 3	EG	Fixed	1.77	269.07	67.96
J-4257	130	Zone - 3	EG	Fixed	1.77	269.23	60.24
J-4258	155	Zone - 3	EG	Fixed	1.77	269.23	49.42
J-4259	108	Zone - 3	EG	Fixed	1.77	269.12	69.71

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-4260	104	Zone - 3	EG	Fixed	1.77	269.12	71.44
J-4261	142	Zone - 3	EG	Fixed	1.77	269.23	55.05
J-4262	65	Zone - 3	EG	Fixed	1.77	268.40	88
J-4263	142	Zone - 3	EG	Fixed	1.77	269.17	55.02
J-4264	201	Zone - 3	EG	Fixed	1.77	269.06	29.44
J-4265	172	Zone - 3	EG	Fixed	1.77	269.07	42
J-4266	153	Zone - 3	EG	Fixed	1.77	269.01	50.19
J-4267	190	Zone - 3	EG	Fixed	1.77	269.50	34.39
J-4269	193	Zone - 3	EG	Fixed	1.77	269.04	32.9
J-4270	175	Zone - 3	EG	Fixed	1.77	269.03	40.68
J-4271	130	Zone - 3	EG	Fixed	1.77	269.02	60.15
J-4272	95	Zone - 3	EG	Fixed	1.77	268.67	75.14
J-4273	105	Zone - 3	EG	Fixed	1.77	268.76	70.85
J-4274	101	Zone - 3	EG	Fixed	1.77	268.65	72.53
J-4275	170	Zone - 3	EG	Fixed	1.77	269.02	42.84
J-4276	96	Zone - 3	EG	Fixed	1.77	268.75	74.74
J-4277	138	Zone - 3	EG	Fixed	1.77	268.95	56.66
J-4278	192	Zone - 3	EG	Fixed	1.77	268.95	33.29
J-4279	135	Zone - 3	EG	Fixed	1.77	268.92	57.94
J-4280	123	Zone - 3	EG	Fixed	1.77	268.94	63.14
J-4281	77	Zone - 3	EG	Fixed	1.77	268.51	82.86
J-4282	104	Zone - 3	EG	Fixed	1.77	268.96	71.37
J-4283	97	Zone - 3	EG	Fixed	1.77	268.69	74.28
J-4284	89	Zone - 3	EG	Fixed	1.77	268.64	77.72
J-4285	94	Zone - 3	EG	Fixed	1.77	268.65	75.56
J-4286	82	Zone - 3	EG	Fixed	1.77	268.58	80.72
J-4287	164	Zone - 3	EG	Fixed	1.77	269.01	45.43
J-4288	177	Zone - 3	EG	Fixed	1.77	269.01	39.81
J-4289	161	Zone - 3	EG	Fixed	1.77	269.04	46.74
J-4290	152	Zone - 3	EG	Fixed	1.77	269.02	50.63
J-4291	85	Zone - 3	EG	Fixed	1.77	268.55	79.41
J-4292	116	Zone - 3	EG	Fixed	1.77	268.16	65.83
J-4293	75	Zone - 3	EG	Fixed	1.77	268.51	83.72
J-4294	56	Zone - 3	EG	Fixed	1.77	267.90	91.68
J-4295	56	Zone - 3	EG	Fixed	1.77	267.96	91.7
J-4296	50	Zone - 3	EG	Fixed	1.77	267.96	94.3
J-4297	46	Zone - 3	EG	Fixed	1.77	267.96	96.03
J-4298	52	Zone - 3	EG	Fixed	1.77	267.96	93.43
J-4299	49	Zone - 3	EG	Fixed	1.77	267.96	94.73
J-4300	44	Zone - 3	EG	Fixed	1.77	267.96	96.89
J-4301	69	Zone - 3	EG	Fixed	1.77	268.02	86.1
J-4302	50	Zone - 3	EG	Fixed	1.77	268.01	94.32
J-4303	82	Zone - 3	EG	Fixed	1.77	268.02	80.48
J-4304	72	Zone - 3	EG	Fixed	1.77	268.02	84.81
J-4305	57	Zone - 3	EG	Fixed	1.77	268.04	91.31
J-4306	57	Zone - 3	EG	Fixed	1.77	268.02	91.3
J-4307	62	Zone - 3	EG	Fixed	1.77	268.05	89.15
J-4308	55	Zone - 3	EG	Fixed	1.77	268.04	92.17
J-4309	51	Zone - 3	EG	Fixed	1.77	268.06	93.91
J-4310	51	Zone - 3	EG	Fixed	1.77	268.03	93.9
J-4311	58	Zone - 3	EG	Fixed	1.77	268.05	90.88
J-4312	50	Zone - 3	EG	Fixed	1.77	268.01	94.32
J-4313	52	Zone - 3	EG	Fixed	1.77	268.01	93.46
J-4314	50	Zone - 3	EG	Fixed	1.77	268.01	94.32
J-4315	52	Zone - 3	EG	Fixed	1.77	268.01	93.46
J-4316	50	Zone - 3	EG	Fixed	1.77	268.01	94.32
J-4317	61	Zone - 3	EG	Fixed	1.77	267.69	89.42
J-4318	57	Zone - 3	EG	Fixed	1.77	267.64	91.13
J-4319	54	Zone - 3	EG	Fixed	1.77	267.90	92.55
J-4320	51	Zone - 3	EG	Fixed	1.77	267.90	93.84
J-4321	60	Zone - 3	EG	Fixed	1.77	267.89	89.95
J-4322	60	Zone - 3	EG	Fixed	1.77	267.89	89.94
J-4323	60	Zone - 3	EG	Fixed	1.77	267.89	89.94
J-4324	60	Zone - 3	EG	Fixed	1.77	267.89	89.94
J-4325	52	Zone - 3	EG	Fixed	1.77	267.82	93.37
J-4326	61	Zone - 3	EG	Fixed	1.77	267.81	89.48
J-4327	54	Zone - 3	EG	Fixed	1.77	267.81	92.51

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-4328	50	Zone - 3	EG	Fixed	1.77	267.87	94.26
J-4329	57	Zone - 3	EG	Fixed	1.77	267.80	91.2
J-4330	64	Zone - 3	EG	Fixed	1.77	267.72	88.14
J-4332	55	Zone - 3	EG	Fixed	1.77	267.89	92.11
J-4333	51	Zone - 3	EG	Fixed	1.77	267.88	93.84
J-4334	55	Zone - 3	EG	Fixed	1.77	267.87	92.1
J-4335	56	Zone - 3	EG	Fixed	1.77	267.87	91.67
J-4336	64	Zone - 3	EG	Fixed	1.77	267.82	88.18
J-4337	67	Zone - 3	EG	Fixed	1.77	267.79	86.87
J-4338	67	Zone - 3	EG	Fixed	1.77	267.79	86.87
J-4339	67	Zone - 3	EG	Fixed	1.77	267.79	86.87
J-4340	58	Zone - 3	EG	Fixed	1.77	267.90	90.81
J-4341	52	Zone - 3	EG	Fixed	1.77	267.91	93.42
J-4342	52	Zone - 3	EG	Fixed	1.77	267.91	93.42
J-4343	58	Zone - 3	EG	Fixed	1.77	267.93	90.83
J-4344	50	Zone - 3	EG	Fixed	1.77	267.93	94.29
J-4345	55	Zone - 3	EG	Fixed	1.77	267.96	92.14
J-4346	50	Zone - 3	EG	Fixed	1.77	267.89	94.27
J-4347	50	Zone - 3	EG	Fixed	1.77	267.89	94.27
J-4348	55	Zone - 3	EG	Fixed	1.77	267.87	92.1
J-4349	40	Zone - 3	EG	Fixed	1.77	267.84	98.58
J-4350	57	Zone - 3	EG	Fixed	1.77	267.93	91.26
J-4351	50	Zone - 3	EG	Fixed	1.77	267.93	94.29
J-4352	51	Zone - 3	EG	Fixed	1.77	267.88	93.83
J-4353	42	Zone - 3	EG	Fixed	1.77	267.89	97.73
J-4354	42	Zone - 3	EG	Fixed	1.77	267.89	97.73
J-4355	49	Zone - 3	EG	Fixed	1.77	267.89	94.7
J-4356	41	Zone - 3	EG	Fixed	1.77	267.91	98.17
J-4357	64	Zone - 3	EG	Fixed	1.77	267.91	88.22
J-4358	53	Zone - 3	EG	Fixed	1.77	267.94	93
J-4359	51	Zone - 3	EG	Fixed	1.77	267.94	93.86
J-4360	50	Zone - 3	EG	Fixed	1.77	267.98	94.31
J-4361	59	Zone - 3	EG	Fixed	1.77	268.07	90.45
J-4362	50	Zone - 3	EG	Fixed	1.77	268.13	94.37
J-4363	61	Zone - 1	EG	Fixed	1.77	268.13	89.61
J-4364	55	Zone - 3	EG	Fixed	1.77	268.19	92.24
J-4365	53	Zone - 3	EG	Fixed	1.77	268.19	93.1
J-4366	63	Zone - 3	EG	Fixed	1.77	268.25	88.8
J-4367	77	Zone - 3	EG	Fixed	1.77	268.49	82.85
J-4368	77	Zone - 3	EG	Fixed	1.77	268.49	82.85
J-4369	73	Zone - 3	EG	Fixed	1.77	268.51	84.59
J-4370	73	Zone - 3	EG	Fixed	1.77	268.51	84.59
J-4371	70	Zone - 3	EG	Fixed	1.77	268.53	85.9
J-4372	78	Zone - 3	EG	Fixed	1.77	268.59	82.46
J-4373	92	Zone - 3	EG	Fixed	1.77	268.59	76.4
J-4374	88	Zone - 3	EG	Fixed	1.77	268.63	78.15
J-4375	94	Zone - 3	EG	Fixed	1.77	268.72	75.59
J-4376	94	Zone - 3	EG	Fixed	1.77	268.73	75.6
J-4377	85	Zone - 3	EG	Fixed	1.77	268.62	79.44
J-4378	88	Zone - 3	EG	Fixed	1.77	268.62	78.14
J-4379	100	Zone - 3	EG	Fixed	1.77	268.55	72.92
J-4380	100	Zone - 3	EG	Fixed	1.77	268.58	72.94
J-4381	102	Zone - 3	EG	Fixed	1.77	268.58	72.07
J-4382	98	Zone - 3	EG	Fixed	1.77	268.62	73.82
J-4383	112	Zone - 3	EG	Fixed	1.77	269.07	67.96
J-4384	112	Zone - 3	EG	Fixed	1.77	269.07	67.96
J-4385	125	Zone - 3	EG	Fixed	1.77	269.19	62.38
J-4386	130	Zone - 3	EG	Fixed	1.77	269.14	60.2
J-4387	140	Zone - 3	EG	Fixed	1.77	269.14	55.87
J-4388	120	Zone - 3	EG	Fixed	1.77	269.13	64.52
J-4389	140	Zone - 3	EG	Fixed	1.77	269.14	55.87
J-4390	110	Zone - 3	EG	Fixed	1.77	269.13	68.85
J-4391	120	Zone - 3	EG	Fixed	1.77	269.11	64.51
J-4392	123	Zone - 3	EG	Fixed	1.77	269.10	63.21
J-4393	115	Zone - 3	EG	Fixed	1.77	269.07	66.66
J-4394	139	Zone - 3	EG	Fixed	1.77	269.14	56.31
J-4395	139	Zone - 3	EG	Fixed	1.77	269.15	56.31

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-4396	139	Zone - 3	EG	Fixed	1.77	269.14	56.31
J-4397	140	Zone - 3	EG	Fixed	1.77	269.14	55.87
J-4398	139	Zone - 3	EG	Fixed	1.77	269.18	56.32
J-4399	140	Zone - 3	EG	Fixed	1.77	269.20	55.9
J-4400	149	Zone - 3	EG	Fixed	1.77	269.19	52
J-4401	153	Zone - 3	EG	Fixed	1.77	269.19	50.27
J-4402	95	Zone - 3	EG	Fixed	1.77	268.72	75.16
J-4403	98	Zone - 3	EG	Fixed	1.77	268.83	73.91
J-4404	85	Zone - 3	EG	Fixed	1.77	268.72	79.49
J-4405	97	Zone - 3	EG	Fixed	1.77	268.95	74.4
J-4406	100	Zone - 3	EG	Fixed	1.77	268.95	73.1
J-4407	97	Zone - 3	EG	Fixed	1.77	268.95	74.4
J-4408	110	Zone - 3	EG	Fixed	1.77	268.96	68.77
J-4409	93	Zone - 3	EG	Fixed	1.77	268.88	76.09
J-4410	93	Zone - 3	EG	Fixed	1.77	268.84	76.08
J-4411	91	Zone - 3	EG	Fixed	1.77	268.80	76.93
J-4412	95	Zone - 3	EG	Fixed	1.77	268.62	75.12
J-4413	67	Zone - 3	EG	Fixed	1.77	268.54	87.2
J-4414	61	Zone - 3	EG	Fixed	1.77	268.56	89.8
J-4415	62	Zone - 3	EG	Fixed	1.77	268.57	89.37
J-4416	68	Zone - 3	EG	Fixed	1.77	268.56	86.77
J-4417	74	Zone - 3	EG	Fixed	1.77	268.56	84.18
J-4418	51	Zone - 3	EG	Fixed	1.77	268.60	94.14
J-4419	70	Zone - 3	EG	Fixed	1.77	268.62	85.94
J-4420	73	Zone - 3	EG	Fixed	1.77	268.70	84.67
J-4421	71	Zone - 3	EG	Fixed	1.77	268.73	85.55
J-4422	75	Zone - 3	EG	Fixed	1.77	268.69	83.8
J-4423	75	Zone - 3	EG	Fixed	1.77	268.69	83.8
J-4424	76	Zone - 3	EG	Fixed	1.77	268.69	83.37
J-4425	68	Zone - 3	EG	Fixed	1.77	268.69	86.83
J-4426	50	Zone - 3	EG	Fixed	1.77	268.69	94.62
J-4427	76	Zone - 3	EG	Fixed	1.77	268.79	83.41
J-4428	73	Zone - 3	EG	Fixed	1.77	268.77	84.7
J-4429	51	Zone - 3	EG	Fixed	1.77	268.14	93.95
J-4430	78	Zone - 3	EG	Fixed	1.77	268.77	82.54
J-4431	52	Zone - 3	EG	Fixed	1.77	268.12	93.5
J-4432	55	Zone - 3	EG	Fixed	1.77	268.10	92.2
J-4433	89	Zone - 3	EG	Fixed	1.77	268.10	77.49
J-4434	67	Zone - 3	EG	Fixed	1.77	268.10	87.01
J-4435	91	Zone - 3	EG	Fixed	1.77	268.11	76.63
J-4436	68	Zone - 3	EG	Fixed	1.77	268.71	86.84
J-4437	69	Zone - 3	EG	Fixed	1.77	268.71	86.4
J-4438	138	Zone - 3	EG	Fixed	1.77	268.21	56.34
J-4439	78	Zone - 3	EG	Fixed	1.77	268.78	82.54
J-4440	78	Zone - 3	EG	Fixed	1.77	268.78	82.54
J-4441	143	Zone - 3	EG	Fixed	1.77	268.78	54.42
J-4442	143	Zone - 3	EG	Fixed	1.77	268.12	54.14
J-4443	148	Zone - 3	EG	Fixed	1.77	268.15	51.98
J-4444	102	Zone - 3	EG	Fixed	1.77	268.07	71.85
J-4445	96	Zone - 3	EG	Fixed	1.77	268.07	74.45
J-4446	125	Zone - 3	EG	Fixed	1.77	268.07	61.9
J-4447	114	Zone - 3	EG	Fixed	1.77	268.07	66.66
J-4448	135	Zone - 3	EG	Fixed	1.77	268.12	57.59
J-4449	123	Zone - 3	EG	Fixed	1.77	268.08	62.77
J-4450	123	Zone - 3	EG	Fixed	1.77	268.07	62.77
J-4451	100	Zone - 3	EG	Fixed	1.77	268.07	72.72
J-4452	152	Zone - 3	EG	Fixed	1.77	268.14	50.25
J-4453	152	Zone - 3	EG	Fixed	1.77	268.14	50.25
J-4454	146	Zone - 3	EG	Fixed	1.77	268.08	52.82
J-4455	134	Zone - 3	EG	Fixed	1.77	268.08	58.01
J-4456	123	Zone - 3	EG	Fixed	1.77	268.06	62.76
J-4457	148	Zone - 3	EG	Fixed	1.77	268.08	51.95
J-4458	147	Zone - 3	EG	Fixed	1.77	268.14	52.41
J-4459	134	Zone - 3	EG	Fixed	1.77	268.14	58.04
J-4460	115	Zone - 3	EG	Fixed	1.77	267.92	66.16
J-4461	112	Zone - 3	EG	Fixed	1.77	267.89	67.44
J-4462	100	Zone - 3	EG	Fixed	1.77	267.84	72.62

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-4463	52	Zone - 3	EG	Fixed	1.77	267.80	93.37
J-4464	42	Zone - 3	EG	Fixed	1.77	267.80	97.69
J-4465	35	Zone - 3	EG	Fixed	1.77	267.78	100.71
J-4466	33	Zone - 3	EG	Fixed	1.77	267.78	101.58
J-4467	28	Zone - 3	EG	Fixed	1.77	267.78	103.74
J-4468	127.5	Zone - 3	EG	Fixed	1.77	268.08	60.82
J-4469	124	Zone - 3	EG	Fixed	1.77	268.07	62.33
J-4470	111	Zone - 3	EG	Fixed	1.77	268.04	67.94
J-4471	118	Zone - 3	EG	Fixed	1.77	268.04	64.91
J-4472	123	Zone - 3	EG	Fixed	1.77	268.05	62.76
J-4473	92	Zone - 3	EG	Fixed	1.77	268.00	76.15
J-4474	92	Zone - 3	EG	Fixed	1.77	268.00	76.15
J-4475	91	Zone - 3	EG	Fixed	1.77	268.00	76.58
J-4476	98	Zone - 3	EG	Fixed	1.77	268.00	73.55
J-4477	108	Zone - 3	EG	Fixed	1.77	268.03	69.24
J-4478	112	Zone - 3	EG	Fixed	1.77	268.21	67.58
J-4479	75	Zone - 3	EG	Fixed	1.77	268.02	83.51
J-4480	78	Zone - 3	EG	Fixed	1.77	268.00	82.21
J-4481	68	Zone - 3	EG	Fixed	1.77	268.00	86.53
J-4482	71	Zone - 3	EG	Fixed	1.77	267.99	85.23
J-4483	64	Zone - 3	EG	Fixed	1.77	267.99	88.26
J-4484	63	Zone - 3	EG	Fixed	1.77	267.81	88.61
J-4485	57	Zone - 3	EG	Fixed	1.77	267.81	91.21
J-4486	59	Zone - 3	EG	Fixed	1.77	267.81	90.34
J-4487	56	Zone - 3	EG	Fixed	1.77	267.81	91.64
J-4488	51	Zone - 3	EG	Fixed	1.77	267.81	93.8
J-4489	53	Zone - 3	EG	Fixed	1.77	267.83	92.95
J-4490	65	Zone - 3	EG	Fixed	1.77	267.89	87.78
J-4491	134	Zone - 3	EG	Fixed	1.77	268.15	58.04
J-4492	134	Zone - 3	EG	Fixed	1.77	268.21	58.06
J-4493	86	Zone - 3	EG	Fixed	1.77	267.89	78.69
J-4494	106	Zone - 3	EG	Fixed	1.77	267.89	70.04
J-4495	76	Zone - 3	EG	Fixed	1.77	267.89	83.02
J-4496	102	Zone - 3	EG	Fixed	1.77	267.89	71.77
J-4497	102	Zone - 3	EG	Fixed	1.77	267.89	71.77
J-4498	63	Zone - 3	EG	Fixed	1.77	267.85	88.63
J-4499	39	Zone - 3	EG	Fixed	1.77	267.80	98.99
J-4500	27	Zone - 3	EG	Fixed	1.77	267.76	104.17
J-4501	27	Zone - 3	EG	Fixed	1.77	267.74	104.16
J-4502	26	Zone - 3	EG	Fixed	1.77	267.72	104.58
J-4503	31	Zone - 3	EG	Fixed	1.77	267.71	102.41
J-4504	34	Zone - 3	EG	Fixed	1.77	267.71	101.12
J-4505	18	Zone - 3	EG	Fixed	1.77	267.71	108.04
J-4506	64	Zone - 3	EG	Fixed	1.77	267.86	88.2
J-4507	34	Zone - 3	EG	Fixed	1.77	267.80	101.15
J-4508	21	Zone - 3	EG	Fixed	1.77	267.74	106.75
J-4509	21	Zone - 3	EG	Fixed	1.77	267.74	106.75
J-4510	16	Zone - 3	EG	Fixed	1.77	267.71	108.9
J-4511	11	Zone - 3	EG	Fixed	1.77	267.71	111.07
J-4512	59	Zone - 3	EG	Fixed	1.77	267.81	90.34
J-4513	59	Zone - 3	EG	Fixed	1.77	267.81	90.34
J-4514	43	Zone - 3	EG	Fixed	1.77	267.81	97.26
J-4515	36	Zone - 3	EG	Fixed	1.77	267.78	100.28
J-4516	36	Zone - 3	EG	Fixed	1.77	267.78	100.28
J-4517	43	Zone - 3	EG	Fixed	1.77	267.81	97.26
J-4518	37	Zone - 3	EG	Fixed	1.77	267.80	99.86
J-4519	32	Zone - 3	EG	Fixed	1.77	267.74	101.99
J-4520	32	Zone - 3	EG	Fixed	1.77	267.71	101.98
J-4521	25	Zone - 3	EG	Fixed	1.77	267.80	105.05
J-4522	25	Zone - 3	EG	Fixed	1.77	267.71	105.01
J-4523	25	Zone - 3	EG	Fixed	1.77	267.71	105.01
J-4524	21	Zone - 3	EG	Fixed	1.77	267.71	106.74
J-4525	18	Zone - 3	EG	Fixed	1.77	267.71	108.04
J-4526	13	Zone - 3	EG	Fixed	1.77	267.71	110.2
J-4527	20	Zone - 3	EG	Fixed	1.77	267.71	107.17
J-4528	52	Zone - 3	EG	Fixed	1.77	267.81	93.37
J-4529	58	Zone - 3	EG	Fixed	1.77	267.82	90.78

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-4530	56	Zone - 3	EG	Fixed	1.77	267.81	91.64
J-4531	28	Zone - 3	EG	Fixed	1.77	267.71	103.71
J-4532	38	Zone - 3	EG	Fixed	1.77	267.81	99.43
J-4533	68	Zone - 3	EG	Fixed	1.77	267.80	86.44
J-4534	63	Zone - 3	EG	Fixed	1.77	267.79	88.6
J-4535	65	Zone - 3	EG	Fixed	1.77	267.79	87.74
J-4536	62	Zone - 3	EG	Fixed	1.77	267.79	89.04
J-4537	62	Zone - 3	EG	Fixed	1.77	267.79	89.04
J-4538	53	Zone - 3	EG	Fixed	1.77	267.79	92.93
J-4539	62	Zone - 3	EG	Fixed	1.77	267.79	89.04
J-4540	58	Zone - 3	EG	Fixed	1.77	267.80	90.77
J-4541	58	Zone - 3	EG	Fixed	1.77	267.80	90.77
J-4542	53	Zone - 3	EG	Fixed	1.77	267.74	92.91
J-4543	201	Zone - 1	EG	Fixed	1.77	330.48	56.02
J-4544	201	Zone - 3	EG	Fixed	1.77	269.57	29.67
J-4545	300	Zone - 2	EG	Fixed	1.77	488.57	81.59
J-4546	148	Zone - 1	EG	Fixed	1.77	330.32	78.88
J-4547	148	Zone - 3	EG	Fixed	1.77	289.43	52.54
J-4548	80	Zone - 3	EG	Fixed	1.77	268.07	81.37
J-4549	130	Zone - 3	EG	Fixed	1.77	268.08	59.74
J-4550	105	Zone - 3	EG	Fixed	1.77	267.93	70.49
J-4551	63	Zone - 3	EG	Fixed	1.77	267.89	88.65
J-4552	65	Zone - 3	EG	Fixed	1.77	267.83	87.75
J-4553	55	Zone - 3	EG	Fixed	1.77	267.82	92.08
J-4554	50	Zone - 3	EG	Fixed	1.77	267.81	94.24
J-4555	64	Zone - 3	EG	Fixed	1.77	267.84	88.19
J-4556	50	Zone - 3	EG	Fixed	1.77	267.85	94.25
J-4557	50	Zone - 3	EG	Fixed	1.77	267.84	94.25
J-4558	73	Zone - 3	EG	Fixed	1.77	268.77	84.7
J-4559	98	Zone - 3	EG	Fixed	1.77	268.62	73.82
J-4560	243	Zone - 1	EG	Fixed	1.77	332.12	38.56
J-4561	243	Zone - 1	EG	Fixed	1.77	332.19	38.59
J-4562	243	Zone - 1	EG	Fixed	1.77	332.20	38.59
J-4563	243	Zone - 1	EG	Fixed	1.77	332.20	38.59
J-4564	243	Zone - 1	EG	Fixed	1.77	332.20	38.59
J-4565	28	Zone - 3	EG	Fixed	1.77	267.78	103.74
J-4566	189	Zone - 2	EG	Fixed	1.77	486.83	128.85
J-4567	189	Zone - 2	EG	Fixed	1.77	486.82	128.85
J-4568	270	Zone - 1	EG	Fixed	1.77	331.95	26.8
J-4569	247	Zone - 1	EG	Fixed	1.77	332.08	36.81
J-4570	247	Zone - 1	EG	Fixed	1.77	332.08	36.81
J-4571	247	Zone - 1	EG	Fixed	1.77	332.07	36.81
J-4572	247	Zone - 1	EG	Fixed	1.77	332.07	36.81
J-4573	197	Zone - 1	EG	Fixed	1.77	331.62	58.25
J-4574	124	Zone - 3	EG	Fixed	1.77	268.13	62.36
J-4575	30	Zone - 1	EG	Fixed	1.77	335.22	132.05
J-4576	30	Zone - 1	EG	Fixed	1.77	335.25	132.07
J-4577	30	Zone - 1	EG	Fixed	1.77	335.22	132.05
J-4578	50	Zone - 1	EG	Fixed	1.77	336.03	123.75
J-4579	64	Zone - 3	EG	Fixed	1.77	267.79	88.17
J-4580	64	Zone - 3	EG	Fixed	1.77	267.82	88.18
J-4581	174	Zone - 1	EG ON Semiconductor	Fixed	405.88	331.26	68.04
J-4582	243	Zone - 1	EG Amtrol Inc.	Fixed	39.81	332.12	38.56
J-4583	148	Zone - 3	EG E&A Portfolio	Fixed	20.68	269.32	52.49
J-4584	84	Zone - 3	EG Wholesale to Warwick	Fixed	150.66	267.70	88.13
J-5000	90	Zone - 5	CRA	Fixed	1.48	230.83	60.93
J-5001	92	Zone - 5	CRA	Fixed	1.48	230.83	60.07
J-5002	86	Zone - 5	CRA	Fixed	1.48	230.83	62.66
J-5003	95	Zone - 5	CRA	Fixed	1.48	230.83	58.77
J-5004	99	Zone - 5	CRA	Fixed	1.48	230.83	57.04
J-5005	88	Zone - 5	CRA	Fixed	1.48	230.83	61.36
J-5006	96	Zone - 5	CRA	Fixed	1.48	230.84	58.34
J-5007	88	Zone - 5	CRA	Fixed	1.48	230.84	61.8
J-5008	96	Zone - 5	CRA	Fixed	1.48	230.84	58.34
J-5009	89	Zone - 5	CRA	Fixed	1.48	230.85	61.37
J-5010	84	Zone - 5	CRA	Fixed	1.48	230.83	63.53
J-5011	81	Zone - 5	CRA	Fixed	1.48	230.84	64.83

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-5012	88	Zone - 5	CRA	Fixed	1.48	230.84	61.8
J-5013	67	Zone - 5	CRA	Fixed	1.48	230.89	70.91
J-5014	75	Zone - 5	CRA	Fixed	1.48	230.88	67.44
J-5015	82	Zone - 5	CRA	Fixed	1.48	230.84	64.39
J-5016	70	Zone - 5	CRA	Fixed	1.48	230.88	69.61
J-5017	52	Zone - 5	CRA	Fixed	1.48	230.91	77.41
J-5018	59	Zone - 5	CRA	Fixed	1.48	230.91	74.38
J-5019	66	Zone - 5	CRA	Fixed	1.48	230.91	71.35
J-5020	52	Zone - 5	CRA	Fixed	1.48	230.90	77.4
J-5021	52	Zone - 5	CRA	Fixed	1.48	230.89	77.4
J-5022	51	Zone - 5	CRA	Fixed	1.48	230.83	77.8
J-5023	53	Zone - 5	CRA	Fixed	1.48	230.83	76.94
J-5024	60	Zone - 5	CRA	Fixed	1.48	230.68	73.84
J-5025	56	Zone - 5	CRA	Fixed	1.48	230.81	75.63
J-5026	71	Zone - 5	CRA	Fixed	1.48	230.80	69.14
J-5027	60	Zone - 5	CRA	Fixed	1.48	230.80	73.9
J-5028	81	Zone - 5	CRA	Fixed	1.48	230.80	64.81
J-5029	71	Zone - 5	CRA	Fixed	1.48	230.80	69.14
J-5030	54	Zone - 5	CRA	Fixed	1.48	230.80	76.49
J-5031	56	Zone - 5	CRA	Fixed	1.48	230.80	75.63
J-5032	54	Zone - 5	CRA	Fixed	1.48	230.80	76.49
J-5033	52	Zone - 5	CRA	Fixed	1.48	230.80	77.36
J-5034	56	Zone - 5	CRA	Fixed	1.48	230.80	75.63
J-5035	58	Zone - 5	CRA	Fixed	1.48	230.80	74.76
J-5036	66	Zone - 5	CRA	Fixed	1.48	230.80	71.3
J-5037	69	Zone - 5	CRA	Fixed	1.48	230.79	70
J-5038	69	Zone - 5	CRA	Fixed	1.48	230.79	70
J-5039	65	Zone - 5	CRA	Fixed	1.48	230.92	71.78
J-5041	60	Zone - 5	CRA	Fixed	1.48	230.93	73.95
J-5042	78	Zone - 5	CRA	Fixed	1.48	230.92	66.16
J-5044	75	Zone - 5	CRA	Fixed	1.48	230.91	67.46
J-5045	88	Zone - 5	CRA	Fixed	1.48	230.91	61.83
J-5046	72	Zone - 5	CRA	Fixed	1.48	230.85	68.73
J-5047	56	Zone - 5	CRA	Fixed	1.48	230.85	75.65
J-5048	72	Zone - 5	CRA	Fixed	1.48	230.83	68.72
J-5049	56	Zone - 5	CRA	Fixed	1.48	230.83	75.64
J-5050	71	Zone - 5	CRA	Fixed	1.48	230.78	69.13
J-5051	66	Zone - 5	CRA	Fixed	1.48	230.66	71.24
J-5052	66	Zone - 5	CRA	Fixed	1.48	230.80	71.3
J-5053	66	Zone - 5	CRA	Fixed	1.48	230.80	71.3
J-5054	68	Zone - 5	CRA	Fixed	1.48	230.80	70.44
J-5055	56	Zone - 5	CRA	Fixed	1.48	230.80	75.63
J-5056	67	Zone - 5	CRA	Fixed	1.48	230.80	70.87
J-5057	68	Zone - 5	CRA	Fixed	1.48	230.57	70.34
J-5058	68	Zone - 5	CRA	Fixed	1.48	230.14	70.15
J-5059	55	Zone - 5	CRA	Fixed	1.48	230.11	75.76
J-5060	54	Zone - 5	CRA	Fixed	1.48	230.11	76.19
J-5061	76	Zone - 5	CRA	Fixed	1.48	229.99	66.62
J-5062	72	Zone - 5	CRA	Fixed	1.48	229.96	68.34
J-5063	68	Zone - 5	CRA	Fixed	1.48	229.94	70.06
J-5064	55	Zone - 5	CRA	Fixed	1.48	229.94	75.69
J-5065	62	Zone - 5	CRA	Fixed	1.48	229.96	72.67
J-5066	60	Zone - 5	CRA	Fixed	1.48	229.96	73.53
J-5067	60	Zone - 5	CRA	Fixed	1.48	229.96	73.53
J-5068	70	Zone - 5	CRA	Fixed	1.48	229.99	69.22
J-5069	66	Zone - 5	CRA	Fixed	1.48	230.14	71.01
J-5070	68	Zone - 5	CRA	Fixed	1.48	230.14	70.15
J-5071	69	Zone - 5	CRA	Fixed	1.48	229.35	69.38
J-5072	76	Zone - 5	CRA	Fixed	1.48	230.13	66.69
J-5073	73	Zone - 5	CRA	Fixed	1.48	230.13	67.98
J-5074	78	Zone - 5	CRA	Fixed	1.48	230.13	65.82
J-5075	64	Zone - 5	CRA	Fixed	1.48	229.94	71.79
J-5076	50	Zone - 5	CRA	Fixed	1.48	229.94	77.85
J-5077	69	Zone - 5	CRA	Fixed	1.48	229.93	69.63
J-5078	55	Zone - 5	CRA	Fixed	1.48	229.93	75.69
J-5079	60	Zone - 5	CRA	Fixed	1.48	229.93	73.52
J-5080	50	Zone - 5	CRA	Fixed	1.48	229.93	77.85

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-5081	52	Zone - 5	CRA	Fixed	1.48	229.93	76.98
J-5082	76	Zone - 5	CRA	Fixed	1.48	229.93	66.6
J-5083	50	Zone - 5	CRA	Fixed	1.48	229.93	77.85
J-5084	67	Zone - 5	CRA	Fixed	1.48	229.93	70.49
J-5085	67	Zone - 5	CRA	Fixed	1.48	229.93	70.49
J-5086	80	Zone - 5	CRA	Fixed	1.48	230.91	65.29
J-5087	73	Zone - 5	CRA	Fixed	1.48	230.91	68.32
J-5088	60	Zone - 5	CRA	Fixed	1.48	230.90	73.94
J-5089	60	Zone - 5	CRA	Fixed	1.48	230.90	73.94
J-5090	73	Zone - 5	CRA	Fixed	1.48	230.90	68.32
J-5091	66	Zone - 5	CRA	Fixed	1.48	230.90	71.35
J-5092	60	Zone - 5	CRA	Fixed	1.48	230.90	73.94
J-5093	60	Zone - 5	CRA	Fixed	1.48	230.90	73.94
J-5094	62	Zone - 5	CRA	Fixed	1.48	230.90	73.08
J-5095	50	Zone - 5	CRA	Fixed	1.48	230.90	78.27
J-5096	77	Zone - 5	CRA	Fixed	1.48	230.53	66.43
J-5097	89	Zone - 5	CRA	Fixed	1.48	230.53	61.23
J-5098	50	Zone - 5	CRA	Fixed	1.48	230.31	78.01
J-5099	76	Zone - 5	CRA	Fixed	1.48	230.31	66.76
J-5100	70	Zone - 5	CRA	Fixed	1.48	230.31	69.36
J-5101	67	Zone - 5	CRA	Fixed	1.48	230.31	70.66
J-5102	60	Zone - 5	CRA	Fixed	1.48	230.31	73.68
J-5103	60	Zone - 5	CRA	Fixed	1.48	230.31	73.68
J-5104	52	Zone - 5	CRA	Fixed	1.48	230.31	77.15
J-5105	50	Zone - 5	CRA	Fixed	1.48	230.31	78.01
J-5106	61	Zone - 5	CRA	Fixed	1.48	230.31	73.25
J-5107	50	Zone - 5	CRA	Fixed	1.48	230.31	78.01
J-5108	70	Zone - 5	CRA	Fixed	1.48	230.31	69.36
J-5109	57	Zone - 5	CRA	Fixed	1.48	230.31	74.98
J-5111	194	Zone - 1	CRA	Fixed	1.48	411.85	94.25
J-5112	240	Zone - 1	CRA	Fixed	1.48	411.85	74.35
J-5113	194	Zone - 1	CRA	Fixed	1.48	411.84	94.25
J-5114	230	Zone - 1	CRA	Fixed	1.48	411.67	78.6
J-5115	260	Zone - 1	CRA	Fixed	1.48	411.67	65.62
J-5116	281	Zone - 1	CRA	Fixed	1.48	411.58	56.49
J-5117	320	Zone - 8	CRA	Fixed	1.48	411.52	39.59
J-5118	198	Zone - 1	CRA	Fixed	1.48	394.49	85.01
J-5119	250	Zone - 1	CRA	Fixed	1.48	394.49	62.51
J-5120	281	Zone - 8	CRA	Fixed	1.48	411.52	56.47
J-5121	281	Zone - 8	CRA	Fixed	1.48	411.52	56.47
J-5122	281	Zone - 1	CRA	Fixed	0.00	411.56	56.49
J-5124	250	Zone - 1	CRA	Fixed	0.00	411.85	70.02
J-5125	60	Zone - 5	CRA	Fixed	1.48	230.96	73.97
J-5126	101	Zone - 5	CRA	Fixed	1.48	230.91	56.21
J-5127	60	Zone - 5	CRA	Fixed	1.48	229.44	73.31
J-5128	71	Zone - 5	CRA	Fixed	1.48	230.91	69.19
J-5129	260	Zone - 1	CRA	Fixed	1.48	411.67	65.62
J-5130	155	Zone - 1	CRA Arkwright Interlaken	Fixed	25.13	405.93	108.57
J-6000	245	Zone - 1	SCIT	Fixed	1.23	409.02	70.96
J-6001	270	Zone - 1	SCIT	Fixed	1.23	409.02	60.15
J-6002	240	Zone - 1	SCIT	Fixed	1.23	409.02	73.13
J-6003	271	Zone - 1	SCIT	Fixed	1.23	409.02	59.72
J-6004	271	Zone - 1	SCIT	Fixed	1.23	409.02	59.72
J-6005	210	Zone - 1	SCIT	Fixed	1.23	409.03	86.11
J-6006	210	Zone - 1	SCIT	Fixed	1.23	409.03	86.11
J-6007	258	Zone - 1	SCIT	Fixed	1.23	409.05	65.35
J-6008	221	Zone - 1	SCIT	Fixed	1.23	409.38	81.5
J-6009	237	Zone - 1	SCIT	Fixed	1.23	409.38	74.58
J-6010	202	Zone - 1	SCIT	Fixed	1.23	409.46	89.76
J-6011	205	Zone - 1	SCIT	Fixed	1.23	409.18	88.34
J-6012	219	Zone - 1	SCIT	Fixed	1.23	408.41	81.95
J-6013	195	Zone - 1	SCIT	Fixed	1.23	398.20	87.92
J-6014	202	Zone - 1	SCIT	Fixed	1.23	397.73	84.68
J-6015	241	Zone - 1	SCIT	Fixed	1.23	397.73	67.81
J-6017	249	Zone - 1	SCIT	Fixed	1.23	397.73	64.35
J-6018	231	Zone - 1	SCIT	Fixed	1.23	397.73	72.13
J-6019	270	Zone - 1	SCIT	Fixed	1.23	397.73	55.26

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-6020	211	Zone - 1	SCIT	Fixed	1.23	412.01	86.97
J-6021	200	Zone - 1	SCIT	Fixed	1.23	411.98	91.71
J-6022	228	Zone - 1	SCIT	Fixed	1.23	411.98	79.8
J-6023	223	Zone - 1	SCIT	Fixed	1.23	411.98	81.76
J-6024	240	Zone - 1	SCIT	Fixed	1.23	411.98	74.41
J-6025	230	Zone - 1	SCIT	Fixed	1.23	411.98	78.73
J-6026	276	Zone - 1	SCIT	Fixed	1.23	411.98	58.83
J-6027	222	Zone - 1	SCIT	Fixed	1.23	411.88	82.15
J-6028	224	Zone - 1	SCIT	Fixed	1.23	411.88	81.29
J-6029	210	Zone - 1	SCIT	Fixed	1.23	411.88	87.34
J-6030	210	Zone - 1	SCIT	Fixed	1.23	411.88	87.34
J-6031	231	Zone - 1	SCIT	Fixed	1.23	411.88	78.26
J-6032	235	Zone - 1	SCIT	Fixed	1.23	411.88	76.53
J-6033	235	Zone - 1	SCIT	Fixed	1.23	411.85	76.51
J-6036	192	Zone - 1	SCIT	Fixed	0.00	412.68	95.48
J-6037	180	Zone - 1	SCIT	Fixed	1.23	412.36	100.53
J-6038	180	Zone - 1	SCIT	Fixed	1.23	412.20	100.46
J-6039	158	Zone - 1	SCIT	Fixed	1.23	406.67	107.59
J-6040	178	Zone - 1	SCIT	Fixed	1.23	411.69	101.11
J-6041	174	Zone - 1	SCIT	Fixed	1.23	411.04	102.56
J-6042	169	Zone - 1	SCIT	Fixed	1.23	410.55	104.51
J-6043	169	Zone - 1	SCIT	Fixed	1.23	410.50	104.49
J-6045	179	Zone - 1	SCIT	Fixed	1.23	411.69	100.67
J-6046	178	Zone - 1	SCIT	Fixed	1.23	411.69	101.11
J-6047	168	Zone - 1	SCIT	Fixed	1.23	411.69	105.43
J-6048	172	Zone - 1	SCIT	Fixed	1.23	411.69	103.7
J-6049	165	Zone - 1	SCIT	Fixed	1.23	411.69	106.73
J-6050	165	Zone - 1	SCIT	Fixed	1.23	411.69	106.73
J-6051	174	Zone - 1	SCIT	Fixed	1.23	411.69	102.84
J-6052	175	Zone - 1	SCIT	Fixed	1.23	407.13	100.43
J-6053	175	Zone - 1	SCIT	Fixed	1.23	407.13	100.43
J-6054	211	Zone - 1	SCIT	Fixed	1.23	412.04	86.98
J-6055	182	Zone - 1	SCIT	Fixed	0.00	233.99	22.5
J-6056	192	Zone - 1	SCIT	Fixed	0.00	412.73	95.5
J-6057	192	Zone - 1	SCIT	Fixed	0.00	412.74	95.5
J-6058	192	Zone - 1	SCIT	Fixed	0.00	412.74	95.5
J-6059	192	Zone - 1	SCIT	Fixed	0.00	412.74	95.5
J-6060	182	Zone - 1	SCIT	Fixed	0.00	233.83	22.43
J-6061	182	Zone - 1	SCIT	Fixed	0.00	233.83	22.42
J-6062	182	Zone - 1	SCIT	Fixed	0.00	233.83	22.42
J-6063	182	Zone - 1	SCIT	Fixed	0.00	233.83	22.42
J-6064	210	Zone - 1	SCIT	Fixed	1.23	409.02	86.11
J-6065	210	Zone - 1	SCIT	Fixed	1.23	409.02	86.11
J-6066	225	Zone - 1	SCIT	Fixed	1.23	408.95	79.59
J-6067	210	Zone - 1	SCIT	Fixed	1.23	408.98	86.09
J-6068	254	Zone - 1	SCIT	Fixed	1.23	404.37	65.06
J-6069	250	Zone - 1	SCIT	Fixed	1.23	404.36	66.79
J-6070	256	Zone - 1	SCIT	Fixed	1.23	404.36	64.19
J-7000	262	Zone - 4	COV	Fixed	1.22	432.56	73.79
J-7001	260	Zone - 4	COV	Fixed	1.22	432.33	74.56
J-7002	262	Zone - 4	COV	Fixed	1.22	432.33	73.7
J-7003	264	Zone - 4	COV	Fixed	1.22	432.23	72.79
J-7004	258	Zone - 4	COV	Fixed	1.22	432.23	75.38
J-7005	261	Zone - 4	COV	Fixed	1.22	432.23	74.08
J-7007	256	Zone - 4	COV	Fixed	1.22	432.23	76.24
J-7008	299	Zone - 4	COV	Fixed	1.22	432.22	57.64
J-7010	300	Zone - 4	COV	Fixed	1.22	432.22	57.21
J-7011	262	Zone - 4	COV	Fixed	1.22	430.52	72.91
J-7012	262	Zone - 4	COV	Fixed	1.22	430.46	72.89
J-7013	263	Zone - 4	COV	Fixed	1.22	430.43	72.44
J-7015	271	Zone - 4	COV	Fixed	1.22	430.41	68.97
J-7016	262	Zone - 4	COV	Fixed	1.22	430.43	72.87
J-7017	262	Zone - 4	COV	Fixed	1.22	430.43	72.87
J-7018	262	Zone - 4	COV	Fixed	1.22	430.43	72.87
J-7019	263	Zone - 4	COV	Fixed	1.22	430.41	72.43
J-7020	264	Zone - 4	COV	Fixed	1.22	430.37	71.98
J-7021	262	Zone - 4	COV	Fixed	1.22	430.39	72.85

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7022	266	Zone - 4	CDV	Fixed	1.22	430.33	71.1
J-7023	269	Zone - 4	COV	Fixed	1.22	430.33	69.8
J-7024	266	Zone - 4	COV	Fixed	1.22	430.23	71.06
J-7025	266	Zone - 4	COV	Fixed	1.22	430.22	71.05
J-7026	264	Zone - 4	COV	Fixed	1.22	430.29	71.95
J-7027	262	Zone - 4	COV	Fixed	1.22	430.22	72.78
J-7028	262	Zone - 4	COV	Fixed	1.22	430.17	72.76
J-7029	270	Zone - 4	COV	Fixed	1.22	430.16	69.29
J-7030	307	Zone - 4	COV	Fixed	1.22	430.10	53.26
J-7031	299	Zone - 4	COV	Fixed	1.22	430.12	56.73
J-7032	283	Zone - 4	COV	Fixed	1.22	430.14	63.66
J-7033	262	Zone - 4	COV	Fixed	1.22	430.17	72.76
J-7034	265	Zone - 4	COV	Fixed	1.22	430.15	71.45
J-7035	267	Zone - 4	COV	Fixed	1.22	430.13	70.58
J-7036	260	Zone - 4	COV	Fixed	1.22	430.16	73.62
J-7037	262	Zone - 4	COV	Fixed	1.22	430.22	72.78
J-7038	263	Zone - 4	COV	Fixed	1.22	430.27	72.37
J-7039	256	Zone - 4	COV	Fixed	1.22	430.27	75.4
J-7040	284	Zone - 4	COV	Fixed	1.22	430.08	63.2
J-7041	263	Zone - 1	COV	Fixed	1.22	338.18	32.53
J-7042	304	Zone - 4	COV	Fixed	1.22	430.06	54.54
J-7043	314	Zone - 4	COV	Fixed	1.22	430.06	50.21
J-7044	309	Zone - 4	COV	Fixed	1.22	430.06	52.38
J-7045	295	Zone - 4	COV	Fixed	1.22	430.02	58.42
J-7046	282	Zone - 4	COV	Fixed	1.22	430.02	64.04
J-7047	282	Zone - 4	COV	Fixed	1.22	430.02	64.04
J-7048	280	Zone - 4	COV	Fixed	1.22	430.02	64.91
J-7049	256	Zone - 4	COV	Fixed	1.22	430.02	75.29
J-7050	303	Zone - 4	COV	Fixed	1.22	430.02	54.96
J-7051	304	Zone - 4	COV	Fixed	1.22	430.05	54.54
J-7052	317	Zone - 4	COV	Fixed	1.22	430.06	48.91
J-7053	314	Zone - 4	COV	Fixed	1.22	430.06	50.21
J-7054	272	Zone - 4	COV	Fixed	1.22	430.03	68.37
J-7055	305	Zone - 4	COV	Fixed	1.22	430.02	54.09
J-7056	295	Zone - 4	COV	Fixed	1.22	430.02	58.42
J-7057	291	Zone - 4	COV	Fixed	1.22	430.02	60.15
J-7060	295	Zone - 4	COV	Fixed	1.22	430.02	58.42
J-7061	297	Zone - 4	COV	Fixed	1.22	430.02	57.55
J-7062	295	Zone - 4	COV	Fixed	1.22	430.02	58.42
J-7063	295	Zone - 4	COV	Fixed	1.22	430.02	58.42
J-7064	273	Zone - 4	COV	Fixed	1.22	429.92	67.89
J-7065	284	Zone - 4	COV	Fixed	1.22	429.92	63.13
J-7066	294	Zone - 4	COV	Fixed	1.22	429.87	58.79
J-7067	290	Zone - 4	COV	Fixed	1.22	429.87	60.51
J-7068	256	Zone - 4	COV	Fixed	1.22	429.86	75.22
J-7069	256	Zone - 4	COV	Fixed	1.22	429.86	75.22
J-7070	253	Zone - 4	COV	Fixed	1.22	429.86	76.52
J-7071	253	Zone - 4	COV	Fixed	1.22	429.86	76.52
J-7072	253	Zone - 4	COV	Fixed	1.22	429.85	76.52
J-7073	253	Zone - 4	COV	Fixed	1.22	429.85	76.52
J-7074	256	Zone - 4	COV	Fixed	1.22	429.85	75.22
J-7075	260	Zone - 4	COV	Fixed	1.22	429.85	73.49
J-7076	256	Zone - 4	COV	Fixed	1.22	429.85	75.22
J-7077	262	Zone - 4	COV	Fixed	1.22	429.86	72.62
J-7078	256	Zone - 4	COV	Fixed	1.22	429.86	75.22
J-7079	250	Zone - 4	COV	Fixed	1.22	429.86	77.82
J-7080	265	Zone - 4	COV	Fixed	1.22	429.86	71.33
J-7081	301	Zone - 4	COV	Fixed	1.22	429.86	55.75
J-7082	300	Zone - 4	COV	Fixed	1.22	429.86	56.18
J-7083	309	Zone - 4	COV	Fixed	1.22	429.86	52.29
J-7084	307	Zone - 4	COV	Fixed	1.22	429.86	53.15
J-7085	310	Zone - 4	COV	Fixed	1.22	429.86	51.86
J-7086	311	Zone - 4	COV	Fixed	1.22	429.86	51.42
J-7087	311	Zone - 4	COV	Fixed	1.22	429.86	51.42
J-7088	300	Zone - 4	COV	Fixed	1.22	429.86	56.18
J-7089	315	Zone - 4	COV	Fixed	1.22	429.86	49.69
J-7090	291	Zone - 4	COV	Fixed	1.22	429.86	60.08

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psf)
J-7091	299	Zone - 4	COV	Fixed	1.22	429.86	56.62
J-7092	318	Zone - 4	COV	Fixed	1.22	429.86	48.4
J-7093	312	Zone - 4	COV	Fixed	1.22	429.86	50.99
J-7094	315	Zone - 4	COV	Fixed	1.22	429.86	49.69
J-7095	303	Zone - 4	COV	Fixed	1.22	429.86	54.88
J-7096	287	Zone - 4	COV	Fixed	1.22	429.86	61.81
J-7097	291	Zone - 4	COV	Fixed	1.22	429.86	60.08
J-7098	264	Zone - 4	COV	Fixed	1.22	429.86	71.76
J-7099	265	Zone - 4	COV	Fixed	1.22	429.86	71.33
J-7100	262	Zone - 4	COV	Fixed	1.22	429.86	72.62
J-7101	315	Zone - 4	COV	Fixed	1.22	429.86	49.69
J-7102	318	Zone - 4	COV	Fixed	1.22	429.86	48.39
J-7103	313	Zone - 4	COV	Fixed	1.22	429.86	50.56
J-7104	313	Zone - 4	COV	Fixed	1.22	429.86	50.56
J-7105	301	Zone - 4	COV	Fixed	1.22	429.86	55.75
J-7107	257	Zone - 4	COV	Fixed	1.22	429.86	74.79
J-7108	309	Zone - 4	COV	Fixed	1.22	429.86	52.29
J-7109	309	Zone - 4	COV	Fixed	1.22	429.86	52.29
J-7110	300	Zone - 4	COV	Fixed	1.22	429.86	56.19
J-7111	312	Zone - 4	COV	Fixed	1.22	429.86	50.99
J-7112	312	Zone - 4	COV	Fixed	1.22	429.86	50.99
J-7113	303	Zone - 4	COV	Fixed	1.22	429.86	54.89
J-7114	294	Zone - 4	COV	Fixed	1.22	429.87	58.78
J-7115	294	Zone - 4	COV	Fixed	1.22	429.87	58.79
J-7116	294	Zone - 4	COV	Fixed	1.22	429.87	58.79
J-7117	294	Zone - 4	COV	Fixed	1.22	429.87	58.78
J-7118	295	Zone - 4	COV	Fixed	1.22	429.88	58.36
J-7119	265	Zone - 4	COV	Fixed	1.22	429.89	71.34
J-7120	258	Zone - 4	COV	Fixed	1.22	429.87	74.36
J-7121	295	Zone - 4	COV	Fixed	1.22	429.87	58.35
J-7122	267	Zone - 4	COV	Fixed	1.22	429.97	70.51
J-7123	291	Zone - 4	COV	Fixed	1.22	430.01	60.14
J-7124	250	Zone - 4	COV	Fixed	1.22	430.03	77.89
J-7125	244	Zone - 4	COV	Fixed	1.22	430.03	80.49
J-7126	264	Zone - 4	COV	Fixed	1.22	430.03	71.83
J-7127	279	Zone - 4	COV	Fixed	1.22	430.04	65.35
J-7128	276	Zone - 4	COV	Fixed	1.22	430.04	66.65
J-7129	280	Zone - 4	COV	Fixed	1.22	430.05	64.92
J-7131	284	Zone - 4	COV	Fixed	1.22	430.03	63.18
J-7132	291	Zone - 4	COV	Fixed	1.22	430.03	60.15
J-7133	301	Zone - 4	COV	Fixed	1.22	430.03	55.83
J-7134	291	Zone - 4	COV	Fixed	1.22	430.03	60.15
J-7135	291	Zone - 4	COV	Fixed	1.22	430.03	60.15
J-7136	296	Zone - 4	COV	Fixed	1.22	430.03	57.99
J-7137	298	Zone - 4	COV	Fixed	1.22	430.03	57.12
J-7138	291	Zone - 4	COV	Fixed	1.22	430.03	60.15
J-7139	279	Zone - 4	COV	Fixed	1.22	430.03	65.34
J-7140	265	Zone - 4	COV	Fixed	1.22	430.03	71.4
J-7141	264	Zone - 4	COV	Fixed	1.22	430.03	71.83
J-7142	402	Zone - 7	COV	Fixed	0.00	427.75	11.14
J-7143	402	Zone - 7	COV	Fixed	1.22	427.75	11.14
J-7144	288	Zone - 7	COV	Fixed	1.22	435.44	63.79
J-7145	287	Zone - 7	COV	Fixed	1.22	435.44	64.22
J-7146	281	Zone - 7	COV	Fixed	1.22	436.80	67.41
J-7147	265	Zone - 7	COV	Fixed	1.22	436.80	74.33
J-7148	265	Zone - 7	COV	Fixed	1.22	439.90	75.67
J-7149	308	Zone - 7	COV	Fixed	1.22	440.88	57.49
J-7150	300	Zone - 7	COV	Fixed	1.22	441.13	61.06
J-7151	307	Zone - 7	COV	Fixed	1.22	441.40	58.15
J-7152	275	Zone - 7	COV	Fixed	1.22	441.88	72.2
J-7153	285	Zone - 7	COV	Fixed	1.22	446.12	69.71
J-7154	254	Zone - 7	COV	Fixed	1.22	445.85	83
J-7155	288	Zone - 7	COV	Fixed	1.22	446.53	68.59
J-7156	284	Zone - 7	COV	Fixed	1.22	446.53	70.32
J-7157	302	Zone - 7	COV	Fixed	1.22	448.39	63.34
J-7158	349	Zone - 7	COV	Fixed	1.22	448.39	43
J-7159	317	Zone - 7	COV	Fixed	1.22	450.08	57.58

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7160	300	Zone - 7	COV	Fixed	1.22	450.94	65.31
J-7161	310	Zone - 7	COV	Fixed	1.22	451.12	61.06
J-7162	290	Zone - 7	COV	Fixed	1.22	451.23	69.76
J-7163	285	Zone - 7	COV	Fixed	1.22	451.05	71.84
J-7164	282	Zone - 7	COV	Fixed	1.22	451.23	73.22
J-7165	297	Zone - 7	COV	Fixed	1.22	451.23	66.73
J-7166	273	Zone - 7	COV	Fixed	1.22	451.23	77.11
J-7167	270	Zone - 7	COV	Fixed	1.22	451.23	78.41
J-7168	291	Zone - 7	COV	Fixed	1.22	452.69	69.95
J-7169	289	Zone - 7	COV	Fixed	1.22	452.24	70.63
J-7170	300	Zone - 7	COV	Fixed	1.22	454.19	66.71
J-7171	302	Zone - 7	COV	Fixed	1.22	454.50	65.98
J-7172	332	Zone - 7	COV	Fixed	1.22	454.32	52.92
J-7173	335	Zone - 7	COV	Fixed	1.22	454.32	51.62
J-7174	319	Zone - 7	COV	Fixed	1.22	454.09	58.45
J-7175	324	Zone - 7	COV	Fixed	1.22	454.09	56.29
J-7176	293	Zone - 7	COV	Fixed	1.22	454.00	69.66
J-7177	289	Zone - 7	COV	Fixed	1.22	453.40	71.13
J-7178	254	Zone - 7	COV	Fixed	1.22	449.37	84.53
J-7179	250	Zone - 7	COV	Fixed	1.22	446.68	85.1
J-7180	253	Zone - 7	COV	Fixed	1.22	451.44	85.85
J-7181	249	Zone - 7	COV	Fixed	1.22	451.43	87.58
J-7182	249	Zone - 7	COV	Fixed	1.22	451.43	87.58
J-7183	249	Zone - 7	COV	Fixed	1.22	451.43	87.58
J-7184	250	Zone - 7	COV	Fixed	1.22	451.43	87.15
J-7185	249	Zone - 7	COV	Fixed	1.22	451.43	87.58
J-7186	265	Zone - 7	COV	Fixed	1.22	455.14	82.27
J-7187	278	Zone - 7	COV	Fixed	1.22	454.45	76.34
J-7188	268	Zone - 7	COV	Fixed	1.22	454.45	80.67
J-7189	287	Zone - 7	COV	Fixed	1.22	454.41	72.43
J-7190	306	Zone - 7	COV	Fixed	1.22	454.38	64.2
J-7191	307	Zone - 7	COV	Fixed	1.22	454.38	63.76
J-7192	323	Zone - 7	COV	Fixed	1.22	454.36	56.84
J-7193	282	Zone - 7	COV	Fixed	1.22	454.21	74.51
J-7194	305	Zone - 7	COV	Fixed	1.22	454.27	64.58
J-7195	310	Zone - 7	COV	Fixed	1.22	454.28	62.42
J-7196	289	Zone - 7	COV	Fixed	1.22	453.58	71.2
J-7197	323	Zone - 7	COV	Fixed	1.22	454.29	56.8
J-7198	323	Zone - 7	COV	Fixed	1.22	454.29	56.8
J-7199	330	Zone - 7	COV	Fixed	1.22	454.30	53.78
J-7200	272	Zone - 7	COV	Fixed	1.22	460.24	81.44
J-7201	279	Zone - 7	COV	Fixed	1.22	460.24	78.41
J-7202	256	Zone - 7	COV	Fixed	1.22	466.79	91.2
J-7203	278	Zone - 7	COV	Fixed	1.22	466.79	81.68
J-7204	256	Zone - 7	COV	Fixed	1.22	466.79	91.2
J-7206	234	Zone - 7	COV	Fixed	1.22	471.07	102.57
J-7207	252	Zone - 7	COV	Fixed	1.22	470.94	94.73
J-7208	252	Zone - 7	COV	Fixed	1.22	470.96	94.73
J-7209	234	Zone - 7	COV	Fixed	1.22	471.07	102.57
J-7210	224	Zone - 7	COV	Fixed	1.22	471.22	106.96
J-7211	255	Zone - 7	COV	Fixed	1.22	472.26	94
J-7212	224	Zone - 7	COV	Fixed	1.22	471.25	106.97
J-7213	255	Zone - 7	COV	Fixed	1.22	472.25	93.99
J-7214	255	Zone - 7	COV	Fixed	1.22	472.25	93.99
J-7215	255	Zone - 7	COV	Fixed	1.22	472.25	93.99
J-7216	252	Zone - 7	COV	Fixed	1.22	472.25	95.29
J-7217	252	Zone - 7	COV	Fixed	1.22	485.96	101.22
J-7218	271	Zone - 7	COV	Fixed	1.22	485.96	93
J-7219	268	Zone - 7	COV	Fixed	1.22	473.65	88.98
J-7220	275	Zone - 7	COV	Fixed	1.22	496.30	95.74
J-7221	273	Zone - 7	COV	Fixed	1.22	494.71	95.92
J-7222	273	Zone - 7	COV	Fixed	1.22	494.75	95.94
J-7223	275	Zone - 7	COV	Fixed	1.22	494.86	95.12
J-7224	286	Zone - 7	COV	Fixed	1.22	488.36	87.55
J-7225	285	Zone - 7	COV	Fixed	1.22	488.36	87.98
J-7226	288	Zone - 7	COV	Fixed	1.22	488.36	86.69
J-7227	285	Zone - 7	COV	Fixed	1.22	488.36	87.98

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7228	299	Zone - 7	COV	Fixed	1.22	474.83	76.07
J-7229	299	Zone - 7	COV	Fixed	1.22	474.83	76.07
J-7230	291	Zone - 7	COV	Fixed	1.22	474.83	79.53
J-7231	280	Zone - 7	COV	Fixed	1.22	474.83	84.29
J-7232	270	Zone - 7	COV	Fixed	1.22	474.83	88.62
J-7233	270	Zone - 7	COV	Fixed	1.22	474.83	88.62
J-7234	289	Zone - 7	COV	Fixed	1.22	474.83	80.4
J-7235	291	Zone - 7	COV	Fixed	1.22	474.83	79.53
J-7236	287	Zone - 7	COV	Fixed	1.22	474.83	81.26
J-7237	283	Zone - 7	COV	Fixed	1.22	474.83	82.99
J-7238	286	Zone - 7	COV	Fixed	1.22	474.83	81.7
J-7239	300	Zone - 7	COV	Fixed	1.22	465.28	71.51
J-7240	308	Zone - 7	COV	Fixed	1.22	465.78	68.26
J-7241	336	Zone - 7	COV	Fixed	1.22	466.97	56.67
J-7242	324	Zone - 7	COV	Fixed	1.22	466.97	61.86
J-7243	321	Zone - 7	COV	Fixed	1.22	466.97	63.15
J-7244	339	Zone - 7	COV	Fixed	1.22	466.96	55.36
J-7245	340	Zone - 7	COV	Fixed	1.22	466.96	54.93
J-7246	340	Zone - 7	COV	Fixed	1.22	466.96	54.93
J-7247	340	Zone - 7	COV	Fixed	1.22	466.96	54.93
J-7248	345	Zone - 7	COV	Fixed	1.22	466.96	52.77
J-7249	340	Zone - 7	COV	Fixed	1.22	466.96	54.93
J-7250	340	Zone - 7	COV	Fixed	1.22	466.96	54.93
J-7251	340	Zone - 7	COV	Fixed	1.22	466.96	54.93
J-7252	343	Zone - 7	COV	Fixed	1.22	466.96	53.63
J-7253	345	Zone - 7	COV	Fixed	1.22	466.96	52.76
J-7254	345	Zone - 7	COV	Fixed	1.22	466.96	52.76
J-7255	350	Zone - 7	COV	Fixed	1.22	466.96	50.6
J-7256	350	Zone - 7	COV	Fixed	1.22	466.96	50.6
J-7257	348	Zone - 7	COV	Fixed	1.22	467.56	51.73
J-7258	343	Zone - 7	COV	Fixed	1.22	468.01	54.09
J-7259	350	Zone - 7	COV	Fixed	1.22	467.56	50.86
J-7260	273	Zone - 7	COV	Fixed	1.22	502.89	99.46
J-7262	305	Zone - 7	COV	Fixed	1.22	470.79	71.73
J-7263	279	Zone - 7	COV	Fixed	1.22	470.79	82.98
J-7264	279	Zone - 7	COV	Fixed	1.22	470.79	82.98
J-7265	275	Zone - 7	COV	Fixed	1.22	470.79	84.71
J-7266	315	Zone - 7	COV	Fixed	1.22	470.46	67.26
J-7267	320	Zone - 7	COV	Fixed	1.22	470.23	65
J-7268	350	Zone - 7	COV	Fixed	1.22	470.02	51.93
J-7269	353	Zone - 7	COV	Fixed	1.22	470.02	50.63
J-7270	330	Zone - 7	COV	Fixed	1.22	469.91	60.53
J-7271	350	Zone - 7	COV	Fixed	1.22	469.84	51.85
J-7272	350	Zone - 7	COV	Fixed	1.22	469.88	51.87
J-7273	330	Zone - 7	COV	Fixed	1.22	469.45	60.33
J-7274	350	Zone - 7	COV	Fixed	1.22	469.76	51.81
J-7275	350	Zone - 7	COV	Fixed	1.22	469.63	51.76
J-7276	350	Zone - 7	COV	Fixed	1.22	469.63	51.76
J-7277	351	Zone - 7	COV	Fixed	1.22	469.42	51.24
J-7278	351	Zone - 7	COV	Fixed	1.22	469.42	51.24
J-7279	351	Zone - 7	COV	Fixed	1.22	469.34	51.2
J-7280	351	Zone - 7	COV	Fixed	1.22	469.34	51.2
J-7281	350	Zone - 7	COV	Fixed	1.22	469.21	51.58
J-7282	345	Zone - 7	COV	Fixed	1.22	468.15	53.28
J-7283	350	Zone - 7	COV	Fixed	1.22	468.29	51.18
J-7284	350	Zone - 7	COV	Fixed	1.22	468.32	51.19
J-7285	350	Zone - 7	COV	Fixed	1.22	468.33	51.2
J-7286	350	Zone - 7	COV	Fixed	1.22	468.47	51.25
J-7287	353	Zone - 7	COV	Fixed	1.22	468.50	49.97
J-7288	355	Zone - 7	COV	Fixed	1.22	468.50	49.11
J-7289	355	Zone - 7	COV	Fixed	1.22	469.76	49.65
J-7290	355	Zone - 7	COV	Fixed	1.22	469.76	49.65
J-7291	355	Zone - 7	COV	Fixed	1.22	469.76	49.65
J-7292	320	Zone - 7	COV	Fixed	1.22	468.56	64.28
J-7293	320	Zone - 7	COV	Fixed	1.22	468.59	64.29
J-7294	320	Zone - 7	COV	Fixed	1.22	468.59	64.29
J-7295	308	Zone - 7	COV	Fixed	1.22	468.74	69.54

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7296	300	Zone - 7	COV	Fixed	1.22	468.80	73.03
J-7297	274	Zone - 7	COV	Fixed	1.22	468.61	84.2
J-7298	273	Zone - 7	COV	Fixed	1.22	468.61	84.63
J-7299	275	Zone - 7	COV	Fixed	1.22	468.61	83.77
J-7300	275	Zone - 7	COV	Fixed	1.22	468.61	83.77
J-7301	274	Zone - 7	COV	Fixed	1.22	468.58	84.18
J-7302	280	Zone - 7	COV	Fixed	1.22	468.57	81.58
J-7303	290	Zone - 7	COV	Fixed	1.22	468.56	77.26
J-7304	290	Zone - 7	COV	Fixed	1.22	468.56	77.26
J-7305	280	Zone - 7	COV	Fixed	1.22	468.56	81.58
J-7306	282	Zone - 7	COV	Fixed	1.22	468.56	80.72
J-7307	281	Zone - 7	COV	Fixed	1.22	468.56	81.15
J-7308	282	Zone - 7	COV	Fixed	1.22	468.56	80.72
J-7309	279	Zone - 7	COV	Fixed	1.22	468.56	82.02
J-7310	270	Zone - 7	COV	Fixed	1.22	468.56	85.91
J-7311	270	Zone - 7	COV	Fixed	1.22	468.56	85.91
J-7312	290	Zone - 7	COV	Fixed	1.22	468.56	77.25
J-7313	270	Zone - 7	COV	Fixed	1.22	468.56	85.91
J-7314	280	Zone - 7	COV	Fixed	1.22	468.56	81.58
J-7315	280	Zone - 7	COV	Fixed	1.22	468.56	81.58
J-7316	260	Zone - 7	COV	Fixed	1.22	468.56	90.23
J-7317	280	Zone - 7	COV	Fixed	1.22	468.56	81.58
J-7318	283	Zone - 7	COV	Fixed	1.22	468.56	80.28
J-7319	250	Zone - 7	COV	Fixed	1.22	468.56	94.56
J-7320	278	Zone - 7	COV	Fixed	1.22	468.56	82.45
J-7321	290	Zone - 7	COV	Fixed	1.22	468.57	77.26
J-7322	270	Zone - 7	COV	Fixed	1.22	468.56	85.91
J-7323	278	Zone - 7	COV	Fixed	1.22	468.57	82.45
J-7324	273	Zone - 7	COV	Fixed	1.22	468.57	84.61
J-7325	270	Zone - 7	COV	Fixed	1.22	468.55	85.9
J-7326	244	Zone - 7	COV	Fixed	1.22	468.54	97.15
J-7327	252	Zone - 7	COV	Fixed	1.22	468.50	93.67
J-7328	252	Zone - 7	COV	Fixed	1.22	468.49	93.67
J-7329	270	Zone - 7	COV	Fixed	1.22	468.48	85.87
J-7330	236	Zone - 7	COV	Fixed	1.22	468.47	100.58
J-7331	246	Zone - 7	COV	Fixed	1.22	468.48	96.26
J-7332	232	Zone - 7	COV	Fixed	1.22	468.46	102.3
J-7333	271	Zone - 7	COV	Fixed	1.22	468.48	85.44
J-7334	259	Zone - 1	COV	Fixed	0.00	338.13	34.24
J-7335	259	Zone - 1	COV	Fixed	0.00	338.13	34.24
J-7336	259	Zone - 1	COV	Fixed	0.00	338.13	34.24
J-7337	259	Zone - 1	COV	Fixed	0.00	338.13	34.24
J-7338	259	Zone - 1	COV	Fixed	1.22	338.13	34.24
J-7339	259	Zone - 1	COV	Fixed	1.22	338.13	34.24
J-7340	259	Zone - 1	COV	Fixed	1.22	338.13	34.24
J-7341	260	Zone - 1	COV	Fixed	1.22	338.13	33.8
J-7342	256	Zone - 1	COV	Fixed	1.22	338.13	35.53
J-7343	256	Zone - 1	COV	Fixed	1.22	338.13	35.53
J-7344	258	Zone - 1	COV	Fixed	1.22	338.13	34.67
J-7346	259	Zone - 1	COV	Fixed	1.22	338.14	34.24
J-7347	259	Zone - 1	COV	Fixed	1.22	338.14	34.24
J-7348	256	Zone - 1	COV	Fixed	1.22	338.18	35.56
J-7349	250	Zone - 1	COV	Fixed	1.22	338.22	38.17
J-7350	279	Zone - 1	COV	Fixed	1.22	338.18	25.61
J-7351	279	Zone - 1	COV	Fixed	1.22	338.18	25.6
J-7352	278	Zone - 1	COV	Fixed	1.22	338.18	26.04
J-7353	265	Zone - 1	COV	Fixed	1.22	338.18	31.66
J-7354	294	Zone - 1	COV	Fixed	1.22	338.18	19.11
J-7355	291	Zone - 1	COV	Fixed	1.22	338.18	20.41
J-7356	286	Zone - 1	COV	Fixed	1.22	338.18	22.58
J-7357	290	Zone - 1	COV	Fixed	1.22	338.18	20.85
J-7358	277	Zone - 1	COV	Fixed	1.22	338.18	26.47
J-7359	284	Zone - 1	COV	Fixed	1.22	338.18	23.44
J-7360	273	Zone - 1	COV	Fixed	1.22	338.18	28.2
J-7361	278	Zone - 1	COV	Fixed	1.22	338.18	26.04
J-7362	244	Zone - 1	COV	Fixed	1.22	338.24	40.77
J-7363	264	Zone - 1	COV	Fixed	1.22	337.86	31.87

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7364	279	Zone - 1	COV	Fixed	1.22	337.23	25.19
J-7365	276	Zone - 1	COV	Fixed	1.22	336.99	26.39
J-7366	285	Zone - 4	COV	Fixed	1.22	434.55	64.71
J-7367	282	Zone - 4	COV	Fixed	1.22	434.56	66
J-7368	300	Zone - 4	COV	Fixed	1.22	434.56	58.22
J-7369	306	Zone - 4	COV	Fixed	1.22	434.56	55.62
J-7370	310	Zone - 4	COV	Fixed	1.22	434.57	53.89
J-7371	322	Zone - 4	COV	Fixed	1.22	434.59	48.71
J-7372	323	Zone - 4	COV	Fixed	1.22	434.59	48.28
J-7373	335	Zone - 2	COV	Fixed	1.22	498.54	70.76
J-7374	251	Zone - 1	COV	Fixed	1.22	336.87	37.15
J-7375	251	Zone - 1	COV	Fixed	1.22	336.84	37.14
J-7376	277	Zone - 1	COV	Fixed	1.22	336.83	25.89
J-7377	280	Zone - 1	COV	Fixed	1.22	336.84	24.59
J-7378	275	Zone - 1	COV	Fixed	1.22	336.82	26.75
J-7379	242	Zone - 1	COV	Fixed	1.22	336.82	41.02
J-7380	272	Zone - 1	COV	Fixed	1.22	336.79	28.03
J-7381	272	Zone - 1	COV	Fixed	1.22	336.52	27.92
J-7382	282	Zone - 1	COV	Fixed	1.22	336.61	23.63
J-7383	250	Zone - 1	COV	Fixed	1.22	336.76	37.54
J-7384	250	Zone - 1	COV	Fixed	1.22	336.79	37.55
J-7385	250	Zone - 1	COV	Fixed	1.22	336.79	37.55
J-7386	250	Zone - 1	COV	Fixed	1.22	336.72	37.52
J-7387	250	Zone - 1	COV	Fixed	1.22	336.72	37.52
J-7388	260	Zone - 1	COV	Fixed	1.22	329.05	29.88
J-7389	241	Zone - 1	COV	Fixed	1.22	336.44	41.29
J-7390	250	Zone - 1	COV	Fixed	1.22	336.64	37.48
J-7391	248	Zone - 1	COV	Fixed	1.22	336.38	38.24
J-7392	248	Zone - 1	COV	Fixed	1.22	336.38	38.24
J-7393	280	Zone - 1	COV	Fixed	1.22	336.50	24.45
J-7394	280	Zone - 1	COV	Fixed	1.22	336.48	24.43
J-7395	260	Zone - 1	COV	Fixed	1.22	336.38	33.05
J-7396	256	Zone - 1	COV	Fixed	1.22	336.10	34.65
J-7397	250	Zone - 1	COV	Fixed	1.22	336.10	37.25
J-7398	247	Zone - 1	COV	Fixed	1.22	336.68	38.8
J-7399	247	Zone - 1	COV	Fixed	1.22	336.75	38.83
J-7400	246	Zone - 1	COV	Fixed	1.22	336.86	39.31
J-7401	243	Zone - 1	COV	Fixed	1.22	336.84	40.6
J-7402	242	Zone - 1	COV	Fixed	1.22	336.84	41.03
J-7403	241	Zone - 1	COV	Fixed	1.22	337.01	41.54
J-7404	243	Zone - 1	COV	Fixed	1.22	337.52	40.89
J-7405	247	Zone - 1	COV	Fixed	1.22	338.68	39.67
J-7406	249.8	Zone - 1	COV	Fixed	0.00	338.65	38.53
J-7407	244	Zone - 1	COV	Fixed	1.22	338.24	40.77
J-7408	247	Zone - 1	COV	Fixed	1.22	338.24	39.48
J-7409	244	Zone - 1	COV	Fixed	1.22	338.24	40.77
J-7410	244	Zone - 1	COV	Fixed	1.22	338.24	40.77
J-7411	244	Zone - 1	COV	Fixed	1.22	338.28	40.79
J-7412	250	Zone - 1	COV	Fixed	1.22	338.24	38.18
J-7413	236	Zone - 1	COV	Fixed	1.22	338.06	44.15
J-7414	228	Zone - 1	COV	Fixed	1.22	337.89	47.54
J-7415	247	Zone - 1	COV	Fixed	1.22	338.26	39.48
J-7416	255	Zone - 1	COV	Fixed	1.22	338.26	36.02
J-7417	270	Zone - 1	COV	Fixed	1.22	338.26	29.53
J-7418	273	Zone - 1	COV	Fixed	1.22	338.26	28.23
J-7419	260	Zone - 1	COV	Fixed	1.22	338.26	33.86
J-7420	254	Zone - 1	COV	Fixed	1.22	338.37	36.5
J-7421	245	Zone - 1	COV	Fixed	1.22	337.00	39.8
J-7422	240	Zone - 1	COV	Fixed	1.22	334.52	40.89
J-7423	245	Zone - 1	COV	Fixed	1.22	335.28	39.06
J-7424	249	Zone - 1	COV	Fixed	1.22	340.65	39.85
J-7425	250	Zone - 1	COV	Fixed	1.22	339.00	38.51
J-7426	254	Zone - 1	COV	Fixed	1.22	338.41	36.52
J-7427	246	Zone - 1	COV	Fixed	1.22	341.49	41.31
J-7428	246	Zone - 1	COV	Fixed	1.22	343.24	42.07
J-7429	251	Zone - 1	COV	Fixed	1.22	341.49	39.15
J-7430	251	Zone - 1	COV	Fixed	1.22	343.22	39.9

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7431	260	Zone - 1	COV	Fixed	1.22	343.04	35.93
J-7432	267	Zone - 1	COV	Fixed	1.22	343.22	32.98
J-7433	269	Zone - 1	COV	Fixed	1.22	343.22	32.11
J-7434	266	Zone - 1	COV	Fixed	1.22	343.22	33.41
J-7435	250	Zone - 1	COV	Fixed	1.22	344.71	40.98
J-7436	250	Zone - 1	COV	Fixed	1.22	346.96	41.95
J-7437	241	Zone - 1	COV	Fixed	1.22	347.38	46.02
J-7438	240	Zone - 1	COV	Fixed	1.22	348.44	46.92
J-7439	252	Zone - 1	COV	Fixed	1.22	348.44	41.72
J-7440	225	Zone - 1	COV	Fixed	1.22	347.89	53.17
J-7441	225	Zone - 1	COV	Fixed	1.22	347.44	52.98
J-7442	230	Zone - 1	COV	Fixed	1.22	347.28	50.74
J-7443	246	Zone - 1	COV	Fixed	1.22	339.00	40.24
J-7444	246	Zone - 1	COV	Fixed	1.22	339.00	40.24
J-7445	265	Zone - 1	COV	Fixed	1.22	338.99	32.01
J-7446	253	Zone - 1	COV	Fixed	1.22	338.99	37.21
J-7447	250	Zone - 1	COV	Fixed	1.22	338.99	38.5
J-7448	250	Zone - 1	COV	Fixed	1.22	338.99	38.5
J-7449	250	Zone - 1	COV	Fixed	1.22	339.70	38.81
J-7450	242	Zone - 1	COV	Fixed	1.22	339.48	42.17
J-7451	242	Zone - 1	COV	Fixed	1.22	342.61	43.53
J-7452	235	Zone - 1	COV	Fixed	1.22	340.57	45.68
J-7453	235	Zone - 1	COV	Fixed	1.22	340.76	45.76
J-7454	230	Zone - 1	COV	Fixed	1.22	340.76	47.92
J-7455	224	Zone - 1	COV	Fixed	1.22	339.79	50.1
J-7456	245	Zone - 1	COV	Fixed	1.22	340.57	41.35
J-7457	228	Zone - 1	COV	Fixed	1.22	337.52	47.39
J-7458	227	Zone - 1	COV	Fixed	1.22	337.21	47.68
J-7459	233	Zone - 1	COV	Fixed	1.22	334.03	43.71
J-7460	250	Zone - 1	COV	Fixed	1.22	333.64	36.19
J-7461	220	Zone - 1	COV	Fixed	1.22	337.52	50.85
J-7462	224	Zone - 1	COV	Fixed	1.22	337.20	48.98
J-7463	223	Zone - 1	COV	Fixed	1.22	337.20	49.41
J-7464	222	Zone - 1	COV	Fixed	1.22	337.20	49.84
J-7465	215	Zone - 1	COV	Fixed	1.22	337.20	52.87
J-7466	223	Zone - 1	COV	Fixed	1.22	337.20	49.41
J-7467	224	Zone - 1	COV	Fixed	1.22	337.20	48.98
J-7468	238	Zone - 1	COV	Fixed	1.22	336.65	42.68
J-7469	240	Zone - 1	COV	Fixed	1.22	336.00	41.53
J-7470	229	Zone - 1	COV	Fixed	1.22	335.79	46.2
J-7471	227	Zone - 1	COV	Fixed	1.22	335.31	46.86
J-7472	227	Zone - 1	COV	Fixed	1.22	335.28	46.85
J-7473	228	Zone - 1	COV	Fixed	1.22	335.34	46.44
J-7474	227	Zone - 1	COV	Fixed	1.22	337.89	47.97
J-7475	227	Zone - 1	COV	Fixed	1.22	337.89	47.97
J-7476	228	Zone - 1	COV	Fixed	1.22	334.63	46.14
J-7477	225	Zone - 1	COV	Fixed	1.22	334.63	47.43
J-7478	230	Zone - 1	COV	Fixed	1.22	335.59	45.69
J-7479	230	Zone - 1	COV	Fixed	1.22	334.94	45.4
J-7480	230	Zone - 1	COV	Fixed	1.22	335.66	45.72
J-7481	220	Zone - 1	COV	Fixed	1.22	334.37	49.48
J-7482	234	Zone - 1	COV	Fixed	1.22	349.61	50.02
J-7483	224	Zone - 1	COV	Fixed	1.22	352.27	55.5
J-7484	245	Zone - 1	COV	Fixed	1.22	336.12	39.42
J-7485	260	Zone - 1	COV	Fixed	1.22	336.12	32.93
J-7486	237	Zone - 1	COV	Fixed	1.22	335.82	42.75
J-7487	270	Zone - 1	COV	Fixed	1.22	335.73	28.44
J-7488	270	Zone - 1	COV	Fixed	1.22	335.73	28.44
J-7489	270	Zone - 1	COV	Fixed	1.22	335.73	28.44
J-7490	270	Zone - 1	COV	Fixed	1.22	335.73	28.44
J-7491	236	Zone - 1	COV	Fixed	1.22	335.60	43.09
J-7492	249	Zone - 1	COV	Fixed	1.22	335.80	37.55
J-7493	240	Zone - 1	COV	Fixed	1.22	335.80	41.45
J-7494	250	Zone - 1	COV	Fixed	1.22	336.08	37.24
J-7495	254	Zone - 1	COV	Fixed	1.22	336.50	35.69
J-7496	254	Zone - 1	COV	Fixed	1.22	336.72	35.79
J-7497	248	Zone - 1	COV	Fixed	1.22	336.86	38.45

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7498	260	Zone - 1	COV	Fixed	1.22	336.86	33.25
J-7499	249	Zone - 1	COV	Fixed	1.22	337.07	38.1
J-7500	250	Zone - 1	COV	Fixed	1.22	337.07	37.67
J-7501	245	Zone - 1	COV	Fixed	1.22	337.53	40.03
J-7502	250	Zone - 1	COV	Fixed	1.22	337.52	37.87
J-7503	250	Zone - 1	COV	Fixed	1.22	337.27	37.76
J-7504	250	Zone - 1	COV	Fixed	1.22	337.24	37.74
J-7505	250	Zone - 1	COV	Fixed	1.22	337.14	37.7
J-7506	260	Zone - 1	COV	Fixed	1.22	336.92	33.28
J-7507	250	Zone - 1	COV	Fixed	1.22	337.16	37.71
J-7508	249	Zone - 1	COV	Fixed	1.22	337.14	38.13
J-7509	260	Zone - 1	COV	Fixed	1.22	336.98	33.3
J-7510	250	Zone - 1	COV	Fixed	1.22	335.91	37.17
J-7511	250	Zone - 1	COV	Fixed	1.22	336.45	37.4
J-7512	248	Zone - 1	COV	Fixed	1.22	336.63	38.35
J-7513	250	Zone - 1	COV	Fixed	1.22	334.32	36.48
J-7514	250	Zone - 1	COV	Fixed	1.22	334.64	36.62
J-7515	247	Zone - 1	COV	Fixed	1.22	334.64	37.92
J-7516	260	Zone - 1	COV	Fixed	1.22	334.94	32.42
J-7517	260	Zone - 1	COV	Fixed	1.22	334.94	32.42
J-7518	264	Zone - 1	COV	Fixed	1.22	335.23	30.82
J-7519	271	Zone - 1	COV	Fixed	1.22	335.23	27.79
J-7520	250	Zone - 1	COV	Fixed	1.22	335.23	36.88
J-7521	250	Zone - 1	COV	Fixed	1.22	335.23	36.88
J-7522	275	Zone - 1	COV	Fixed	1.22	335.23	26.06
J-7523	275	Zone - 1	COV	Fixed	1.22	335.23	26.06
J-7524	250	Zone - 1	COV	Fixed	0.00	332.04	35.5
J-7525	250	Zone - 1	COV	Fixed	1.22	332.28	35.6
J-7526	245	Zone - 1	COV	Fixed	1.22	333.13	38.13
J-7527	240	Zone - 1	COV	Fixed	1.22	333.31	40.37
J-7528	236	Zone - 1	COV	Fixed	1.22	333.61	42.23
J-7529	250	Zone - 1	COV	Fixed	1.22	334.13	36.4
J-7530	245	Zone - 1	COV	Fixed	1.22	333.96	38.49
J-7531	230	Zone - 1	COV	Fixed	1.22	333.89	44.95
J-7532	230	Zone - 1	COV	Fixed	1.22	333.82	44.92
J-7533	240	Zone - 1	COV	Fixed	1.22	333.77	40.57
J-7534	236	Zone - 1	COV	Fixed	1.22	333.64	42.24
J-7535	233	Zone - 1	COV	Fixed	1.22	335.12	44.18
J-7536	235	Zone - 1	COV	Fixed	1.22	335.11	43.31
J-7537	230	Zone - 1	COV	Fixed	1.22	335.11	45.48
J-7538	235	Zone - 1	COV	Fixed	1.22	335.11	43.31
J-7539	230	Zone - 1	COV	Fixed	1.22	335.11	45.48
J-7540	241	Zone - 1	COV	Fixed	1.22	335.11	40.72
J-7541	230	Zone - 1	COV	Fixed	1.22	335.11	45.48
J-7542	234	Zone - 1	COV	Fixed	1.22	333.64	43.11
J-7543	248	Zone - 1	COV	Fixed	1.22	333.64	37.05
J-7544	234	Zone - 1	COV	Fixed	1.22	331.45	42.16
J-7545	234	Zone - 1	COV	Fixed	1.22	333.20	42.92
J-7546	245	Zone - 1	COV	Fixed	1.22	333.64	38.35
J-7547	243	Zone - 1	COV	Fixed	1.22	333.65	39.22
J-7548	268	Zone - 1	COV	Fixed	1.22	333.63	28.4
J-7549	270	Zone - 1	COV	Fixed	1.22	333.63	27.53
J-7550	270	Zone - 1	COV	Fixed	1.22	333.63	27.53
J-7551	261	Zone - 1	COV	Fixed	1.22	333.64	31.43
J-7552	250	Zone - 1	COV	Fixed	1.22	334.23	36.44
J-7553	250	Zone - 1	COV	Fixed	1.22	334.23	36.44
J-7554	250	Zone - 1	COV	Fixed	1.22	334.23	36.44
J-7555	280	Zone - 1	COV	Fixed	1.22	334.01	23.37
J-7556	270	Zone - 1	COV	Fixed	1.22	333.90	27.65
J-7557	272	Zone - 1	COV	Fixed	1.22	333.92	26.79
J-7558	280	Zone - 1	COV	Fixed	1.22	333.97	23.35
J-7559	280	Zone - 1	COV	Fixed	1.22	333.95	23.34
J-7560	279	Zone - 1	COV	Fixed	1.22	333.92	23.76
J-7561	280	Zone - 1	COV	Fixed	1.22	333.94	23.34
J-7562	280	Zone - 1	COV	Fixed	1.22	333.94	23.34
J-7563	290	Zone - 1	COV	Fixed	1.22	333.94	19.01
J-7564	279	Zone - 1	COV	Fixed	1.22	333.91	23.76

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7565	239	Zone - 1	COV	Fixed	1.22	333.73	40.98
J-7566	240	Zone - 1	COV	Fixed	1.22	333.73	40.55
J-7567	239	Zone - 1	COV	Fixed	1.22	333.66	40.95
J-7568	247	Zone - 1	COV	Fixed	1.22	333.66	37.49
J-7569	234	Zone - 1	COV	Fixed	1.22	333.66	43.12
J-7570	247	Zone - 1	COV	Fixed	1.22	333.66	37.49
J-7571	247	Zone - 1	COV	Fixed	1.22	333.66	37.49
J-7572	232	Zone - 1	COV	Fixed	1.22	333.66	43.98
J-7573	244	Zone - 1	COV	Fixed	1.22	333.65	38.79
J-7574	232	Zone - 1	COV	Fixed	1.22	333.65	43.98
J-7575	250	Zone - 1	COV	Fixed	1.22	333.65	36.19
J-7576	242	Zone - 1	COV	Fixed	1.22	333.65	39.65
J-7577	238	Zone - 1	COV	Fixed	1.22	333.65	41.38
J-7578	237	Zone - 1	COV	Fixed	1.22	333.65	41.82
J-7579	232	Zone - 1	COV	Fixed	1.22	333.65	43.98
J-7580	232	Zone - 1	COV	Fixed	1.22	333.65	43.98
J-7581	232	Zone - 1	COV	Fixed	1.22	333.65	43.98
J-7582	232	Zone - 1	COV	Fixed	1.22	333.32	43.84
J-7583	231	Zone - 1	COV	Fixed	1.22	333.32	44.27
J-7584	258	Zone - 1	COV	Fixed	1.22	333.65	32.73
J-7585	247	Zone - 1	COV	Fixed	1.22	333.65	37.49
J-7586	231	Zone - 1	COV	Fixed	1.22	333.65	44.41
J-7587	239	Zone - 1	COV	Fixed	1.22	333.65	40.95
J-7588	290	Zone - 1	COV	Fixed	1.22	333.65	18.89
J-7589	228	Zone - 1	COV	Fixed	1.22	337.59	47.41
J-7590	230	Zone - 1	COV	Fixed	1.22	337.89	46.68
J-7591	280	Zone - 1	COV	Fixed	1.22	337.89	25.04
J-7592	255	Zone - 1	COV	Fixed	1.22	333.59	34
J-7593	237	Zone - 1	COV	Fixed	1.22	333.52	41.76
J-7594	245	Zone - 1	COV	Fixed	1.22	333.26	38.19
J-7595	305	Zone - 1	COV	Fixed	1.22	333.26	12.23
J-7596	246	Zone - 1	COV	Fixed	1.22	333.19	37.72
J-7597	310	Zone - 1	COV	Fixed	1.22	333.05	9.97
J-7598	310	Zone - 1	COV	Fixed	1.22	333.05	9.97
J-7599	310	Zone - 1	COV	Fixed	1.22	333.05	9.97
J-7600	310	Zone - 1	COV	Fixed	1.22	333.05	9.97
J-7601	310	Zone - 1	COV	Fixed	1.22	333.05	9.97
J-7602	301	Zone - 1	COV	Fixed	1.22	333.01	13.85
J-7603	310	Zone - 1	COV	Fixed	0.00	333.00	9.95
J-7604	301	Zone - 1	COV	Fixed	1.22	332.99	13.84
J-7605	238	Zone - 1	COV	Fixed	1.22	333.18	41.18
J-7606	238	Zone - 1	COV	Fixed	1.22	333.18	41.18
J-7607	239	Zone - 1	COV	Fixed	1.22	332.52	40.46
J-7608	260	Zone - 1	COV	Fixed	1.22	332.52	31.37
J-7609	265	Zone - 1	COV	Fixed	1.22	332.52	29.21
J-7610	260	Zone - 1	COV	Fixed	1.22	332.51	31.37
J-7611	249	Zone - 1	COV	Fixed	1.22	332.51	36.13
J-7612	249	Zone - 1	COV	Fixed	1.22	332.51	36.13
J-7613	255	Zone - 1	COV	Fixed	1.22	332.51	33.54
J-7614	280	Zone - 1	COV	Fixed	1.22	332.54	22.73
J-7615	301	Zone - 1	COV	Fixed	1.22	332.94	13.82
J-7616	250	Zone - 1	COV	Fixed	1.22	332.43	35.67
J-7617	278	Zone - 1	COV	Fixed	1.22	332.43	23.55
J-7618	210	Zone - 1	COV	Fixed	1.22	332.43	52.97
J-7619	270	Zone - 1	COV	Fixed	1.22	332.43	27.01
J-7620	215	Zone - 1	COV	Fixed	1.22	332.43	50.81
J-7621	230	Zone - 1	COV	Fixed	1.22	332.43	44.32
J-7622	215	Zone - 1	COV	Fixed	1.22	332.07	50.65
J-7623	210	Zone - 1	COV	Fixed	1.22	332.07	52.81
J-7624	215	Zone - 1	COV	Fixed	1.22	332.04	50.64
J-7625	215	Zone - 1	COV	Fixed	1.22	331.98	50.61
J-7626	200	Zone - 1	COV	Fixed	1.22	331.90	57.07
J-7627	205	Zone - 1	COV	Fixed	1.22	331.98	54.94
J-7628	210	Zone - 1	COV	Fixed	1.22	331.98	52.77
J-7629	210	Zone - 1	COV	Fixed	1.22	331.98	52.77
J-7630	198	Zone - 1	COV	Fixed	1.22	331.96	57.96
J-7631	180	Zone - 1	COV	Fixed	1.22	331.93	65.73

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7632	185	Zone - 1	COV	Fixed	1.22	331.92	63.56
J-7633	213	Zone - 1	COV	Fixed	1.22	331.91	51.45
J-7634	210	Zone - 1	COV	Fixed	1.22	331.98	52.78
J-7635	195	Zone - 1	COV	Fixed	1.22	331.90	59.23
J-7636	180	Zone - 1	COV	Fixed	1.22	331.78	65.67
J-7637	163	Zone - 1	COV	Fixed	1.22	331.66	72.97
J-7638	163	Zone - 1	COV	Fixed	1.22	331.59	72.94
J-7639	180	Zone - 1	COV	Fixed	1.22	331.78	65.67
J-7640	278	Zone - 1	COV	Fixed	1.22	332.46	23.56
J-7641	301	Zone - 1	COV	Fixed	1.22	332.47	13.62
J-7642	270	Zone - 1	COV	Fixed	1.22	332.35	26.97
J-7643	291	Zone - 1	COV	Fixed	1.22	332.33	17.88
J-7644	240	Zone - 1	COV	Fixed	1.22	332.29	39.93
J-7645	259	Zone - 1	COV	Fixed	1.22	332.29	31.71
J-7646	280	Zone - 1	COV	Fixed	1.22	332.29	22.63
J-7647	235	Zone - 1	COV	Fixed	1.22	332.28	42.09
J-7648	260	Zone - 1	COV	Fixed	1.22	332.28	31.27
J-7649	277	Zone - 1	COV	Fixed	1.22	332.28	23.92
J-7650	242	Zone - 1	COV	Fixed	1.22	332.28	39.06
J-7651	276	Zone - 1	COV	Fixed	1.22	332.27	24.34
J-7652	295	Zone - 1	COV	Fixed	1.22	332.24	16.11
J-7653	302	Zone - 1	COV	Fixed	1.22	332.20	13.07
J-7654	250	Zone - 1	COV	Fixed	1.22	329.05	34.2
J-7655	300	Zone - 1	COV	Fixed	1.22	332.13	13.9
J-7656	290	Zone - 1	COV	Fixed	1.22	331.90	18.13
J-7657	305	Zone - 1	COV	Fixed	1.22	331.86	11.62
J-7658	290	Zone - 1	COV	Fixed	1.22	331.82	18.09
J-7659	290	Zone - 1	COV	Fixed	1.22	331.82	18.09
J-7660	300	Zone - 1	COV	Fixed	1.22	332.04	13.86
J-7661	267	Zone - 1	COV	Fixed	1.22	331.78	28.03
J-7662	270	Zone - 1	COV	Fixed	1.22	331.78	26.73
J-7663	282	Zone - 1	COV	Fixed	1.22	331.77	21.53
J-7664	240	Zone - 1	COV	Fixed	1.22	331.75	39.7
J-7665	255	Zone - 1	COV	Fixed	1.22	332.03	33.33
J-7666	230	Zone - 1	COV	Fixed	1.22	332.03	44.14
J-7667	265	Zone - 1	COV	Fixed	1.22	332.14	29.05
J-7668	230	Zone - 1	COV	Fixed	1.22	332.14	44.19
J-7669	233	Zone - 1	COV	Fixed	1.22	334.03	43.71
J-7670	244	Zone - 1	COV	Fixed	1.22	331.66	37.93
J-7671	260	Zone - 1	COV	Fixed	1.22	331.69	31.02
J-7672	269	Zone - 1	COV	Fixed	1.22	331.69	27.12
J-7673	250	Zone - 1	COV	Fixed	1.22	331.59	35.3
J-7674	243	Zone - 1	COV	Fixed	1.22	331.57	38.32
J-7675	249	Zone - 1	COV	Fixed	1.22	331.45	35.67
J-7676	244	Zone - 1	COV	Fixed	1.22	331.45	37.84
J-7677	244	Zone - 1	COV	Fixed	1.22	331.27	37.76
J-7678	255	Zone - 1	COV	Fixed	1.22	331.31	33.02
J-7679	230	Zone - 1	COV	Fixed	1.22	329.11	42.88
J-7680	245	Zone - 1	COV	Fixed	1.22	330.44	36.97
J-7681	253	Zone - 1	COV	Fixed	1.22	330.96	33.73
J-7682	251	Zone - 1	COV	Fixed	1.22	331.03	34.63
J-7683	250	Zone - 1	COV	Fixed	1.22	331.38	35.21
J-7684	228	Zone - 1	COV	Fixed	1.22	331.45	44.76
J-7685	265	Zone - 1	COV	Fixed	1.22	331.53	28.78
J-7686	265	Zone - 1	COV	Fixed	1.22	331.54	28.79
J-7687	267	Zone - 1	COV	Fixed	1.22	331.63	27.96
J-7688	267	Zone - 1	COV	Fixed	1.22	331.70	27.99
J-7689	250	Zone - 1	COV	Fixed	1.22	331.63	35.32
J-7690	234	Zone - 1	COV	Fixed	1.22	357.59	53.47
J-7691	234	Zone - 1	COV	Fixed	1.22	356.14	52.84
J-7692	255	Zone - 1	COV	Fixed	1.22	356.14	43.76
J-7693	254	Zone - 1	COV	Fixed	1.22	365.11	48.07
J-7694	273	Zone - 1	COV	Fixed	1.22	366.29	40.36
J-7695	254	Zone - 1	COV	Fixed	1.22	328.47	32.22
J-7696	239	Zone - 1	COV	Fixed	1.22	328.48	38.71
J-7697	239	Zone - 1	COV	Fixed	1.22	328.61	38.77
J-7698	248	Zone - 1	COV	Fixed	1.22	328.87	34.99

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7699	248	Zone - 1	COV	Fixed	1.22	328.47	34.82
J-7700	256	Zone - 1	COV	Fixed	1.22	328.47	31.36
J-7701	256	Zone - 1	COV	Fixed	1.22	328.47	31.36
J-7702	230	Zone - 1	COV	Fixed	1.22	328.87	42.78
J-7703	230	Zone - 1	COV	Fixed	1.22	329.03	42.84
J-7704	220	Zone - 1	COV	Fixed	1.22	328.47	46.93
J-7705	223	Zone - 1	COV	Fixed	1.22	328.47	45.63
J-7706	240	Zone - 7	COV	Fixed	1.22	468.46	98.84
J-7707	232	Zone - 7	COV	Fixed	1.22	468.46	102.3
J-7708	236	Zone - 7	COV	Fixed	1.22	468.46	100.57
J-7709	236	Zone - 7	COV	Fixed	1.22	468.46	100.57
J-7710	232	Zone - 7	COV	Fixed	1.22	468.46	102.3
J-7711	235	Zone - 7	COV	Fixed	1.22	468.28	100.93
J-7712	288	Zone - 1	COV	Fixed	1.22	368.47	34.82
J-7713	288	Zone - 1	COV	Fixed	1.22	368.47	34.82
J-7714	299	Zone - 1	COV	Fixed	1.22	369.98	30.71
J-7715	299	Zone - 1	COV	Fixed	1.22	370.20	30.81
J-7716	299	Zone - 7	COV	Fixed	1.22	474.70	76.02
J-7717	299	Zone - 7	COV	Fixed	1.22	474.50	75.93
J-7718	315	Zone - 1	COV	Fixed	1.22	374.70	25.83
J-7719	279	Zone - 1	COV	Fixed	1.22	374.70	41.4
J-7720	308	Zone - 1	COV	Fixed	1.22	380.91	31.54
J-7721	300	Zone - 1	COV	Fixed	1.22	382.96	35.89
J-7722	288	Zone - 1	COV	Fixed	1.22	382.96	41.09
J-7723	300	Zone - 1	COV	Fixed	1.22	382.96	35.89
J-7724	310	Zone - 1	COV	Fixed	1.22	382.96	31.57
J-7725	308	Zone - 1	COV	Fixed	1.22	382.83	32.38
J-7726	302	Zone - 1	COV	Fixed	1.22	382.83	34.97
J-7727	220	Zone - 1	COV	Fixed	1.22	397.67	76.87
J-7728	220	Zone - 1	COV	Fixed	1.22	399.60	77.7
J-7729	210	Zone - 1	COV	Fixed	1.22	399.63	82.04
J-7730	230	Zone - 1	COV	Fixed	1.22	399.63	73.39
J-7731	220	Zone - 1	COV	Fixed	1.22	399.66	77.73
J-7732	210	Zone - 1	COV	Fixed	1.22	399.66	82.06
J-7733	230	Zone - 1	COV	Fixed	1.22	399.66	73.4
J-7734	220	Zone - 1	COV	Fixed	1.22	399.70	77.75
J-7735	210	Zone - 1	COV	Fixed	1.22	399.70	82.07
J-7736	225	Zone - 1	COV	Fixed	1.22	399.70	75.58
J-7737	220	Zone - 1	COV	Fixed	1.22	399.79	77.79
J-7738	210	Zone - 1	COV	Fixed	1.22	400.19	82.29
J-7739	190	Zone - 1	COV	Fixed	1.22	400.19	90.94
J-7740	187	Zone - 1	COV	Fixed	1.22	401.57	92.84
J-7741	195	Zone - 1	COV	Fixed	1.22	401.57	89.37
J-7742	185	Zone - 1	COV	Fixed	1.22	402.36	94.04
J-7743	185	Zone - 1	COV	Fixed	1.22	401.64	93.73
J-7744	210	Zone - 1	COV	Fixed	1.22	400.89	82.59
J-7745	210	Zone - 1	COV	Fixed	1.22	400.34	82.35
J-7746	210	Zone - 1	COV	Fixed	1.22	400.34	82.35
J-7747	235	Zone - 1	COV	Fixed	1.22	400.89	71.77
J-7748	220	Zone - 1	COV	Fixed	1.22	401.64	78.59
J-7749	158	Zone - 1	COV	Fixed	1.22	406.62	107.57
J-7750	215	Zone - 1	COV	Fixed	1.22	399.49	79.82
J-7751	215	Zone - 1	COV	Fixed	1.22	399.49	79.82
J-7752	220	Zone - 1	COV	Fixed	1.22	399.37	77.61
J-7753	220	Zone - 1	COV	Fixed	1.22	399.37	77.61
J-7754	230	Zone - 1	COV	Fixed	1.22	399.02	73.13
J-7755	230	Zone - 1	COV	Fixed	1.22	399.02	73.13
J-7756	220	Zone - 1	COV	Fixed	1.22	398.47	77.21
J-7757	230	Zone - 1	COV	Fixed	1.22	398.47	72.89
J-7758	195	Zone - 1	COV	Fixed	1.22	397.99	87.83
J-7759	195	Zone - 1	COV	Fixed	1.22	397.99	87.83
J-7760	197	Zone - 1	COV	Fixed	1.22	397.78	86.87
J-7761	197	Zone - 1	COV	Fixed	1.22	397.78	86.87
J-7762	197	Zone - 1	COV	Fixed	1.22	397.09	86.57
J-7763	185	Zone - 1	COV	Fixed	1.22	393.58	90.24
J-7764	210	Zone - 1	COV	Fixed	1.22	393.58	79.43
J-7765	230	Zone - 1	COV	Fixed	1.22	393.58	70.77

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7766	235	Zone - 1	COV	Fixed	1.22	393.58	68.61
J-7767	232	Zone - 1	COV	Fixed	1.22	384.51	65.98
J-7768	238	Zone - 1	COV	Fixed	1.22	384.48	63.38
J-7769	245	Zone - 1	COV	Fixed	1.22	384.47	60.34
J-7770	242	Zone - 1	COV	Fixed	1.22	384.47	61.64
J-7771	234	Zone - 1	COV	Fixed	1.22	384.48	65.11
J-7772	240	Zone - 1	COV	Fixed	1.22	384.46	62.5
J-7773	240	Zone - 1	COV	Fixed	1.22	384.46	62.5
J-7774	230	Zone - 1	COV	Fixed	1.22	384.46	66.83
J-7775	234	Zone - 1	COV	Fixed	1.22	384.48	65.11
J-7776	234	Zone - 1	COV	Fixed	1.22	384.48	65.1
J-7777	238	Zone - 1	COV	Fixed	1.22	384.48	63.37
J-7778	232	Zone - 1	COV	Fixed	1.22	384.48	65.97
J-7779	265	Zone - 1	COV	Fixed	1.22	384.48	51.69
J-7780	234	Zone - 1	COV	Fixed	1.22	384.48	65.1
J-7781	234	Zone - 1	COV	Fixed	1.22	384.48	65.1
J-7782	240	Zone - 1	COV	Fixed	1.22	384.48	62.51
J-7783	100	Zone - 1	COV	Fixed	1.22	394.79	127.54
J-7784	272	Zone - 1	COV	Fixed	1.22	329.19	24.74
J-7785	240	Zone - 1	COV	Fixed	1.22	328.70	38.38
J-7786	241	Zone - 1	COV	Fixed	1.22	328.70	37.94
J-7787	245	Zone - 1	COV	Fixed	1.22	328.70	36.21
J-7788	244	Zone - 1	COV	Fixed	1.22	328.37	36.5
J-7789	245	Zone - 1	COV	Fixed	1.22	328.40	36.09
J-7790	245	Zone - 1	COV	Fixed	1.22	328.40	36.09
J-7791	260	Zone - 1	COV	Fixed	1.22	329.18	29.93
J-7792	230	Zone - 1	COV	Fixed	1.22	328.42	42.58
J-7793	230	Zone - 1	COV	Fixed	1.22	328.42	42.58
J-7794	209	Zone - 1	COV	Fixed	1.22	328.47	51.69
J-7795	209	Zone - 1	COV	Fixed	1.22	328.68	51.78
J-7796	205	Zone - 1	COV	Fixed	1.22	328.48	53.43
J-7797	222	Zone - 1	COV	Fixed	1.22	328.43	46.05
J-7798	245	Zone - 1	COV	Fixed	1.22	328.42	36.09
J-7799	243	Zone - 1	COV	Fixed	1.22	328.42	36.96
J-7801	244	Zone - 1	COV	Fixed	1.22	328.70	36.65
J-7802	270	Zone - 1	COV	Fixed	1.22	327.18	24.74
J-7803	270	Zone - 1	COV	Fixed	1.22	327.18	24.74
J-7804	240	Zone - 1	COV	Fixed	1.22	328.41	38.25
J-7805	240	Zone - 1	COV	Fixed	1.22	328.40	38.25
J-7806	245	Zone - 1	COV	Fixed	1.22	328.72	36.22
J-7807	245	Zone - 1	COV	Fixed	1.22	328.73	36.22
J-7808	243	Zone - 1	COV	Fixed	1.22	325.63	35.75
J-7809	250	Zone - 1	COV	Fixed	1.22	328.06	33.77
J-7810	250	Zone - 1	COV	Fixed	1.22	327.38	33.48
J-7811	261	Zone - 1	COV	Fixed	1.22	327.25	28.66
J-7812	261	Zone - 1	COV	Fixed	1.22	327.25	28.66
J-7813	225	Zone - 1	COV	Fixed	1.22	327.25	44.24
J-7814	220	Zone - 1	COV	Fixed	1.22	327.25	46.4
J-7815	231	Zone - 1	COV	Fixed	1.22	327.25	41.64
J-7816	213	Zone - 1	COV	Fixed	1.22	327.25	49.43
J-7817	222	Zone - 1	COV	Fixed	1.22	327.25	45.54
J-7818	272	Zone - 1	COV	Fixed	1.22	327.21	23.89
J-7819	271	Zone - 1	COV	Fixed	1.22	327.21	24.32
J-7820	271	Zone - 1	COV	Fixed	1.22	327.21	24.32
J-7821	271	Zone - 1	COV	Fixed	1.22	327.20	24.32
J-7822	267	Zone - 1	COV	Fixed	1.22	327.17	26.03
J-7823	249	Zone - 1	COV	Fixed	1.22	327.17	33.82
J-7824	273	Zone - 1	COV	Fixed	1.22	327.17	23.44
J-7825	273	Zone - 1	COV	Fixed	1.22	327.17	23.44
J-7826	272	Zone - 1	COV	Fixed	1.22	327.16	23.87
J-7827	272	Zone - 1	COV	Fixed	1.22	327.18	23.87
J-7828	260	Zone - 1	COV	Fixed	1.22	327.16	29.06
J-7829	261	Zone - 1	COV	Fixed	1.22	327.14	28.62
J-7830	261	Zone - 1	COV	Fixed	1.22	327.15	28.62
J-7831	273	Zone - 1	COV	Fixed	1.22	327.17	23.44
J-7832	216	Zone - 1	COV	Fixed	1.22	326.92	47.99
J-7833	216	Zone - 1	COV	Fixed	1.22	327.05	48.05

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7834	219	Zone - 1	COV	Fixed	1.22	326.24	46.4
J-7835	214	Zone - 1	COV	Fixed	1.22	314.95	43.68
J-7837	212	Zone - 1	COV	Fixed	1.22	314.98	44.55
J-7838	189	Zone - 1	COV	Fixed	1.22	314.97	54.5
J-7839	189	Zone - 1	COV	Fixed	1.22	314.95	54.49
J-7840	208	Zone - 1	COV	Fixed	1.22	315.10	46.34
J-7841	212	Zone - 1	COV	Fixed	1.22	315.07	44.6
J-7842	210	Zone - 1	COV	Fixed	1.22	315.28	45.55
J-7843	217	Zone - 1	COV	Fixed	1.22	326.24	47.26
J-7844	245	Zone - 1	COV	Fixed	1.22	326.14	35.11
J-7845	215	Zone - 1	COV	Fixed	1.22	326.24	48.13
J-7846	227	Zone - 1	COV	Fixed	1.22	326.26	42.95
J-7847	220	Zone - 1	COV	Fixed	1.22	326.19	45.94
J-7848	218	Zone - 1	COV	Fixed	1.22	326.29	46.85
J-7849	218	Zone - 1	COV	Fixed	1.22	326.29	46.85
J-7850	225	Zone - 1	COV	Fixed	1.22	326.51	43.92
J-7851	215	Zone - 1	COV	Fixed	1.22	326.51	48.25
J-7852	220	Zone - 1	COV	Fixed	1.22	326.59	46.11
J-7853	220	Zone - 1	COV	Fixed	1.22	326.19	45.94
J-7854	228	Zone - 1	COV	Fixed	1.22	326.65	42.68
J-7855	228	Zone - 1	COV	Fixed	1.22	326.68	42.69
J-7856	200	Zone - 1	COV	Fixed	1.22	326.68	54.81
J-7857	228	Zone - 1	COV	Fixed	1.22	326.64	42.68
J-7858	245	Zone - 1	COV	Fixed	1.22	326.64	35.32
J-7859	200	Zone - 1	COV	Fixed	1.22	326.79	54.86
J-7860	200	Zone - 1	COV	Fixed	1.22	326.41	54.69
J-7861	191	Zone - 1	COV	Fixed	1.22	327.04	58.86
J-7862	216	Zone - 1	COV	Fixed	1.22	327.37	48.18
J-7863	211	Zone - 1	COV	Fixed	1.22	327.36	50.34
J-7864	189	Zone - 1	COV	Fixed	1.22	327.05	59.73
J-7865	255	Zone - 1	COV	Fixed	1.22	329.03	32.03
J-7866	270	Zone - 1	COV	Fixed	1.22	328.67	25.39
J-7867	263	Zone - 1	COV	Fixed	1.22	328.75	28.45
J-7868	275	Zone - 1	COV	Fixed	1.22	328.80	23.28
J-7870	255	Zone - 1	COV	Fixed	1.22	328.89	31.97
J-7871	255	Zone - 1	COV	Fixed	1.22	328.86	31.96
J-7872	255	Zone - 1	COV	Fixed	1.22	328.86	31.96
J-7873	269	Zone - 1	COV	Fixed	1.22	328.76	25.85
J-7874	269	Zone - 1	COV	Fixed	1.22	328.76	25.85
J-7875	269	Zone - 1	COV	Fixed	1.22	328.76	25.85
J-7876	269	Zone - 1	COV	Fixed	1.22	328.76	25.85
J-7877	271	Zone - 1	COV	Fixed	1.22	328.76	24.99
J-7878	271	Zone - 1	COV	Fixed	1.22	328.76	24.99
J-7879	255	Zone - 1	COV	Fixed	1.22	328.91	31.98
J-7880	255	Zone - 1	COV	Fixed	1.22	328.88	31.97
J-7881	275	Zone - 1	COV	Fixed	1.22	328.88	23.31
J-7882	240	Zone - 1	COV	Fixed	1.22	328.86	38.44
J-7883	275	Zone - 1	COV	Fixed	1.22	328.61	23.19
J-7884	235	Zone - 1	COV	Fixed	1.22	328.84	40.6
J-7885	270	Zone - 1	COV	Fixed	1.22	328.84	25.46
J-7886	275	Zone - 1	COV	Fixed	1.22	328.84	23.29
J-7887	240	Zone - 1	COV	Fixed	1.22	328.84	38.44
J-7888	222	Zone - 1	COV	Fixed	1.22	328.80	46.21
J-7889	231	Zone - 1	COV	Fixed	1.22	328.78	42.31
J-7890	250	Zone - 1	COV	Fixed	1.22	328.79	34.09
J-7891	250	Zone - 1	COV	Fixed	1.22	328.79	34.09
J-7892	260	Zone - 1	COV	Fixed	1.22	329.39	30.02
J-7893	260	Zone - 1	COV	Fixed	1.22	329.46	30.05
J-7894	236	Zone - 1	COV	Fixed	1.22	330.01	40.67
J-7895	260	Zone - 1	COV	Fixed	1.22	329.89	30.24
J-7896	260	Zone - 1	COV	Fixed	1.22	329.95	30.27
J-7897	260	Zone - 1	COV	Fixed	1.22	330.11	30.33
J-7898	260	Zone - 1	COV	Fixed	1.22	330.11	30.33
J-7899	248	Zone - 1	COV	Fixed	1.22	330.09	35.52
J-7900	236	Zone - 1	COV	Fixed	1.22	330.09	40.71
J-7901	242	Zone - 1	COV	Fixed	1.22	330.08	38.11
J-7902	242	Zone - 1	COV	Fixed	1.22	330.08	38.11

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7903	242	Zone - 1	COV	Fixed	1.22	330.08	38.11
J-7904	236	Zone - 1	COV	Fixed	1.22	333.93	42.37
J-7905	236	Zone - 1	COV	Fixed	1.22	334.12	42.45
J-7906	260	Zone - 1	COV	Fixed	1.22	330.42	30.47
J-7907	248	Zone - 1	COV	Fixed	1.22	329.91	35.44
J-7908	248	Zone - 1	COV	Fixed	1.22	329.94	35.45
J-7909	232	Zone - 1	COV	Fixed	1.22	380.27	64.15
J-7910	241	Zone - 1	COV	Fixed	1.22	379.85	60.07
J-7911	245	Zone - 1	COV	Fixed	1.22	379.85	58.34
J-7912	232	Zone - 1	COV	Fixed	1.22	379.34	63.75
J-7913	210	Zone - 1	COV	Fixed	1.22	374.93	71.36
J-7914	240	Zone - 1	COV	Fixed	1.22	336.36	41.69
J-7915	242	Zone - 1	COV	Fixed	1.22	336.36	40.82
J-7916	245	Zone - 1	COV	Fixed	1.22	336.36	39.53
J-7917	242	Zone - 1	COV	Fixed	1.22	336.36	40.82
J-7918	245	Zone - 1	COV	Fixed	1.22	336.36	39.53
J-7919	242	Zone - 1	COV	Fixed	1.22	336.36	40.82
J-7920	240	Zone - 1	COV	Fixed	1.22	333.12	40.29
J-7921	210	Zone - 1	COV	Fixed	1.22	385.74	76.04
J-7922	190	Zone - 1	COV	Fixed	1.22	385.32	84.51
J-7923	178	Zone - 1	COV	Fixed	1.22	396.65	94.6
J-7924	178	Zone - 1	COV	Fixed	1.22	396.55	94.56
J-7925	137	Zone - 1	COV	Fixed	1.22	396.45	112.25
J-7926	145	Zone - 1	COV	Fixed	1.22	397.43	109.21
J-7927	133	Zone - 1	COV	Fixed	1.22	397.29	114.34
J-7928	145	Zone - 1	COV	Fixed	1.22	397.57	109.28
J-7929	135	Zone - 1	COV	Fixed	1.22	397.76	113.68
J-7930	201	Zone - 1	COV	Fixed	1.22	399.82	86.02
J-7931	201	Zone - 1	COV	Fixed	1.22	400.29	86.22
J-7932	191	Zone - 1	COV	Fixed	1.22	402.01	91.29
J-7933	191	Zone - 1	COV	Fixed	1.22	402.36	91.44
J-7934	155	Zone - 1	COV	Fixed	1.22	404.58	107.98
J-7935	155	Zone - 1	COV	Fixed	1.22	404.59	107.99
J-7936	155	Zone - 1	COV	Fixed	1.22	404.63	108
J-7937	155	Zone - 1	COV	Fixed	1.22	404.66	108.02
J-7938	155	Zone - 1	COV	Fixed	1.22	404.58	107.98
J-7939	155	Zone - 1	COV	Fixed	1.22	404.65	108.01
J-7940	155	Zone - 1	COV	Fixed	1.22	404.64	108.01
J-7941	155	Zone - 1	COV	Fixed	1.22	404.63	108
J-7942	155	Zone - 1	COV	Fixed	1.22	404.63	108
J-7943	215	Zone - 1	COV	Fixed	1.22	400.29	80.17
J-7944	190	Zone - 1	COV	Fixed	1.22	399.74	90.75
J-7945	190	Zone - 1	COV	Fixed	1.22	399.74	90.75
J-7946	189	Zone - 1	COV	Fixed	1.22	399.74	91.18
J-7947	165	Zone - 1	COV	Fixed	1.22	399.73	101.56
J-7948	190	Zone - 1	COV	Fixed	1.22	399.73	90.74
J-7949	185	Zone - 1	COV	Fixed	1.22	399.73	92.9
J-7950	180	Zone - 1	COV	Fixed	1.22	399.73	95.07
J-7951	135	Zone - 1	COV	Fixed	1.22	398.56	114.03
J-7952	185	Zone - 1	COV	Fixed	1.22	401.96	93.87
J-7953	185	Zone - 1	COV	Fixed	1.22	400.26	93.13
J-7954	210	Zone - 1	COV	Fixed	1.22	400.26	82.31
J-7955	210	Zone - 1	COV	Fixed	1.22	400.26	82.31
J-7956	185	Zone - 1	COV	Fixed	1.22	400.09	93.06
J-7957	175	Zone - 1	COV	Fixed	1.22	400.09	97.38
J-7958	201	Zone - 1	COV	Fixed	1.22	399.73	85.98
J-7959	135	Zone - 1	COV	Fixed	1.22	398.34	113.94
J-7960	150	Zone - 1	COV	Fixed	1.22	401.68	108.89
J-7961	150	Zone - 1	COV	Fixed	1.22	400.96	108.58
J-7962	150	Zone - 1	COV	Fixed	1.22	401.49	108.81
J-7963	165	Zone - 1	COV	Fixed	1.22	401.49	102.32
J-7964	151	Zone - 1	COV	Fixed	1.22	401.49	108.37
J-7965	165	Zone - 1	COV	Fixed	1.22	401.49	102.32
J-7966	150	Zone - 1	COV	Fixed	1.22	399.73	108.05
J-7967	130	Zone - 1	COV	Fixed	1.22	398.23	116.05
J-7968	130	Zone - 1	COV	Fixed	1.22	401.26	117.36
J-7969	128	Zone - 1	COV	Fixed	1.22	399.08	117.28

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Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-7970	132	Zone - 1	COV	Fixed	1.22	397.39	114.82
J-7971	270	Zone - 2	COV	Fixed	1.22	488.51	94.54
J-7972	241	Zone - 2	COV	Fixed	1.22	488.52	107.09
J-7973	245	Zone - 2	COV	Fixed	1.22	488.53	105.36
J-7974	250	Zone - 2	COV	Fixed	1.22	488.52	103.2
J-7975	250	Zone - 2	COV	Fixed	1.22	488.52	103.2
J-7976	245	Zone - 2	COV	Fixed	1.22	488.52	105.36
J-7977	225	Zone - 2	COV	Fixed	1.22	488.51	114.01
J-7978	230	Zone - 2	COV	Fixed	1.22	488.51	111.84
J-7979	260	Zone - 2	COV	Fixed	1.22	488.50	98.86
J-7980	251	Zone - 2	COV	Fixed	1.22	488.54	102.77
J-7981	250	Zone - 2	COV	Fixed	1.22	488.55	103.21
J-7982	250	Zone - 2	COV	Fixed	1.22	488.55	103.21
J-7983	238	Zone - 2	COV	Fixed	1.22	488.55	108.4
J-7984	238	Zone - 2	COV	Fixed	1.22	488.56	108.4
J-7985	238	Zone - 2	COV	Fixed	1.22	488.55	108.4
J-7986	256	Zone - 2	COV	Fixed	1.22	488.55	100.61
J-7987	250	Zone - 2	COV	Fixed	1.22	488.55	103.21
J-7988	250	Zone - 2	COV	Fixed	1.22	488.55	103.21
J-7989	260	Zone - 2	COV	Fixed	1.22	488.56	98.89
J-7990	259	Zone - 2	COV	Fixed	1.22	488.56	99.32
J-7991	255	Zone - 2	COV	Fixed	1.22	488.57	101.05
J-7992	255	Zone - 2	COV	Fixed	1.22	488.58	101.06
J-7993	250	Zone - 2	COV	Fixed	1.22	488.50	103.19
J-7994	250	Zone - 2	COV	Fixed	1.22	488.50	103.19
J-7995	225	Zone - 2	COV	Fixed	1.22	488.50	114.01
J-7996	264	Zone - 2	COV	Fixed	1.22	488.66	97.2
J-7997	264	Zone - 2	COV	Fixed	1.22	488.66	97.2
J-7998	338	Zone - 2	COV	Fixed	1.22	488.81	65.25
J-7999	338	Zone - 2	COV	Fixed	1.22	489.16	65.4
J-8000	338	Zone - 2	COV	Fixed	1.22	489.16	65.4
J-8001	338	Zone - 2	COV	Fixed	1.22	490.37	65.92
J-8002	338	Zone - 2	COV	Fixed	1.22	490.47	65.97
J-8003	335	Zone - 2	COV	Fixed	1.22	490.53	67.29
J-8004	340	Zone - 2	COV	Fixed	1.22	489.16	64.53
J-8005	340	Zone - 2	COV	Fixed	1.22	490.74	65.22
J-8006	334	Zone - 2	COV	Fixed	1.22	489.45	67.26
J-8007	335	Zone - 2	COV	Fixed	1.22	489.73	66.94
J-8008	335	Zone - 2	COV	Fixed	1.22	489.73	66.94
J-8009	335	Zone - 2	COV	Fixed	1.22	490.05	67.08
J-8010	333	Zone - 2	COV	Fixed	1.22	490.22	68.02
J-8012	334	Zone - 2	COV	Fixed	1.22	490.53	67.72
J-8013	335	Zone - 2	COV	Fixed	1.22	490.53	67.29
J-8014	250	Zone - 2	COV	Fixed	1.22	490.53	104.07
J-8015	258	Zone - 2	COV	Fixed	1.22	490.53	100.6
J-8016	250	Zone - 2	COV	Fixed	1.22	517.67	115.81
J-8017	240	Zone - 2	COV	Fixed	1.22	517.67	120.13
J-8018	240	Zone - 2	COV	Fixed	1.22	517.67	120.13
J-8019	245	Zone - 2	COV	Fixed	1.22	517.67	117.97
J-8020	250	Zone - 2	COV	Fixed	1.22	517.67	115.81
J-8021	264	Zone - 2	COV	Fixed	1.22	516.67	109.32
J-8022	256	Zone - 2	COV	Fixed	1.22	516.50	112.71
J-8023	260	Zone - 2	COV	Fixed	1.22	514.82	110.25
J-8024	260	Zone - 2	COV	Fixed	1.22	513.55	109.7
J-8025	260	Zone - 2	COV	Fixed	1.22	513.55	109.7
J-8026	268	Zone - 2	COV	Fixed	1.22	512.72	105.88
J-8027	280	Zone - 2	COV	Fixed	1.22	512.72	100.69
J-8028	211	Zone - 1	COV	Fixed	1.22	315.56	45.24
J-8029	210	Zone - 1	COV	Fixed	1.22	315.57	45.67
J-8030	210	Zone - 1	COV	Fixed	1.22	315.57	45.67
J-8031	215	Zone - 1	COV	Fixed	1.22	315.57	43.51
J-8032	212	Zone - 1	COV	Fixed	1.22	315.57	44.81
J-8033	195	Zone - 1	COV	Fixed	1.22	315.57	52.17
J-8034	190	Zone - 1	COV	Fixed	1.22	315.58	54.33
J-8035	200	Zone - 1	COV	Fixed	1.22	315.58	50.01
J-8036	194	Zone - 1	COV	Fixed	1.22	315.60	52.61
J-8037	250	Zone - 2	COV	Fixed	0.00	517.98	115.94

KCWA Model
Junction Node Database
Average Day

Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-8038	250	Zone - 1	COV	Fixed	0.00	331.94	35.45
J-8039	250	Zone - 2	COV	Fixed	0.00	518.08	115.99
J-8040	250	Zone - 1	COV	Fixed	0.00	331.94	35.45
J-8041	250	Zone - 2	COV	Fixed	0.00	518.08	115.99
J-8042	250	Zone - 1	COV	Fixed	0.00	331.94	35.45
J-8043	250	Zone - 2	COV	Fixed	0.00	518.08	115.99
J-8044	275	Zone - 7	COV	Fixed	1.22	502.89	98.6
J-8045	254	Zone - 7	COV	Fixed	1.22	502.89	107.68
J-8046	254	Zone - 1	COV	Fixed	1.22	328.47	32.22
J-8047	273	Zone - 1	COV	Fixed	0.00	359.70	37.51
J-8048	273	Zone - 1	COV	Fixed	0.00	505.43	100.56
J-8049	273	Zone - 1	COV	Fixed	0.00	362.11	38.56
J-8050	275	Zone - 1	COV	Fixed	1.22	365.55	39.17
J-8051	273	Zone - 1	COV	Fixed	0.00	363.61	39.2
J-8052	259	Zone - 1	COV	Fixed	0.00	338.13	34.24
J-8053	259	Zone - 1	COV	Fixed	0.00	338.13	34.24
J-8054	330	Zone - 4	COV	Fixed	1.22	434.80	45.34
J-8055	330	Zone - 2	COV	Fixed	1.22	498.35	72.84
J-8056	280	Zone - 4	COV	Fixed	1.22	430.05	64.92
J-8057	280	Zone - 2	COV	Fixed	1.22	513.54	101.04
J-8058	360	Zone - 7	COV	Fixed	1.22	467.56	46.54
J-8059	300	Zone - 7	COV	Fixed	1.22	461.78	70
J-8060	300	Zone - 7	COV	Fixed	1.22	461.78	70
J-8061	250	Zone - 7	COV	Fixed	1.22	446.63	85.07
J-8062	254	Zone - 7	COV	Fixed	1.22	449.37	84.53
J-8063	250	Zone - 7	COV	Fixed	1.22	447.44	85.42
J-8064	250	Zone - 7	COV	Fixed	1.22	447.44	85.42
J-8065	245	Zone - 1	COV	Fixed	1.22	326.23	35.14
J-8066	217	Zone - 1	COV	Fixed	1.22	326.24	47.26
J-8067	270	Zone - 1	COV	Fixed	1.22	326.93	24.63
J-8068	245	Zone - 1	COV	Fixed	1.22	328.28	36.03
J-8069	222	Zone - 1	COV	Fixed	1.22	328.42	46.04
J-8070	222	Zone - 1	COV	Fixed	1.22	328.42	46.04
J-8071	255	Zone - 1	COV	Fixed	1.22	331.50	33.1
J-8072	205	Zone - 1	COV	Fixed	1.22	331.98	54.94
J-8073	239	Zone - 1	COV	Fixed	1.22	333.18	40.75
J-8074	248	Zone - 1	COV	Fixed	1.22	328.47	34.82
J-8075	248	Zone - 1	COV	Fixed	1.22	328.47	34.82
J-8076	248	Zone - 1	COV	Fixed	1.22	328.47	34.82
J-8077	227	Zone - 1	COV	Fixed	1.22	337.89	47.97
J-8078	227	Zone - 1	COV	Fixed	1.22	337.89	47.97
J-8079	228	Zone - 1	COV	Fixed	1.22	337.21	47.25
J-8080	228	Zone - 1	COV	Fixed	1.22	337.15	47.22
J-8081	270	Zone - 1	COV	Fixed	1.22	335.73	28.44
J-8082	234	Zone - 1	COV	Fixed	1.22	333.29	42.96
J-8083	268	Zone - 1	COV	Fixed	1.22	333.64	28.4
J-8084	270	Zone - 1	COV	Fixed	1.22	333.64	27.53
J-8085	245	Zone - 1	COV	Fixed	1.22	333.65	38.35
J-8086	234	Zone - 1	COV	Fixed	1.22	333.65	43.11
J-8087	234	Zone - 1	COV	Fixed	1.22	333.65	43.11
J-8088	243	Zone - 1	COV	Fixed	1.22	333.65	39.22
J-8089	335	Zone - 2	COV	Fixed	1.22	490.05	67.08
J-8090	330	Zone - 2	COV	Fixed	1.22	488.75	68.68
J-8091	264	Zone - 2	COV	Fixed	1.22	488.68	97.21
J-8092	256	Zone - 2	COV	Fixed	1.22	488.56	100.62
J-8093	250	Zone - 2	COV	Fixed	1.22	488.54	103.21
J-8094	250	Zone - 2	COV	Fixed	1.22	488.50	103.19
J-8095	260	Zone - 2	COV	Fixed	1.22	514.82	110.25
J-8096	254	Zone - 1	COV	Fixed	1.22	336.50	35.69
J-8097	228	Zone - 1	COV	Fixed	1.22	337.51	47.38
J-8098	238	Zone - 1	COV	Fixed	1.22	337.51	43.92
J-8099	246	Zone - 1	COV	Fixed	1.22	338.99	40.23
J-8100	246	Zone - 1	COV	Fixed	1.22	339.00	40.24
J-8101	251	Zone - 1	COV	Fixed	1.22	341.49	39.15
J-8102	255	Zone - 1	COV	Fixed	1.22	340.47	36.98
J-8103	251	Zone - 1	COV	Fixed	1.22	343.22	39.9
J-8104	268	Zone - 7	COV	Fixed	1.22	469.44	87.15

KCWA Model
 Junction Node Database
 Average Day

Label	Elevation (ft)	Zone	Notes	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-8105	268	Zone - 7	COV	Fixed	1.22	469.00	86.96
J-8106	268	Zone - 7	COV	Fixed	1.22	468.93	86.93
J-8107	270	Zone - 7	COV	Fixed	1.22	468.79	86.01
J-8108	252	Zone - 7	COV	Fixed	1.22	468.12	93.5
J-8109	256	Zone - 7	COV	Fixed	1.22	468.01	91.73
J-8110	268	Zone - 7	COV	Fixed	1.22	468.88	86.91
J-8111	255	Zone - 7	COV	Fixed	1.22	468.88	92.54
J-8112	270	Zone - 7	COV	Fixed	1.22	468.80	86.01
J-8113	270	Zone - 7	COV	Fixed	1.22	468.80	86.01
J-8114	270	Zone - 7	COV	Fixed	1.22	468.81	86.02
J-8115	270	Zone - 7	COV	Fixed	1.22	468.81	86.02
J-8116	270	Zone - 7	COV	Fixed	1.22	468.83	86.02
J-8117	270	Zone - 7	COV	Fixed	1.22	468.83	86.02
J-8118	270	Zone - 7	COV	Fixed	1.22	468.85	86.03
J-8119	270	Zone - 7	COV	Fixed	1.22	468.86	86.04
J-8120	256	Zone - 7	COV	Fixed	1.22	466.52	91.08
J-8121	280	Zone - 4	COV	Fixed	1.22	430.02	64.91
J-8122	280	Zone - 4	COV	Fixed	1.22	430.02	64.91
J-8123	280	Zone - 4	COV	Fixed	1.22	430.02	64.91
J-8124	256	Zone - 4	COV	Fixed	1.22	430.02	75.29
J-8125	256	Zone - 4	COV	Fixed	1.22	430.02	75.29
J-8126	256	Zone - 1	COV	Fixed	1.22	338.18	35.56
J-8127	265	Zone - 4	COV	Fixed	1.22	429.88	71.34
J-8128	294	Zone - 4	COV	Fixed	1.22	429.87	58.79
J-8129	294	Zone - 4	COV	Fixed	1.22	429.87	58.79
J-8130	295	Zone - 4	COV	Fixed	1.22	429.87	58.35
J-8131	140	Zone - 1	COV	Fixed	1.22	397.47	111.39
J-8132	135	Zone - 1	COV	Fixed	1.22	396.79	113.26
J-8133	150	Zone - 1	COV	Fixed	1.22	402.10	109.07
J-8134	252	Zone - 7	COV	Fixed	1.22	468.51	93.67
J-8135	260	Zone - 7	COV	Fixed	1.22	468.56	90.23
J-8136	245	Zone - 1	COV	Fixed	1.22	384.47	60.34
J-8137	242	Zone - 1	COV	Fixed	1.22	384.47	61.64
J-8138	242	Zone - 1	COV	Fixed	1.22	384.47	61.64
J-8139	279	Zone - 4	COV	Fixed	1.22	430.04	65.35
J-8140	205	Zone - 1	COV Clariant	Fixed	330.25	301.88	41.91
J-8141	257	Zone - 4	COV Westwood Trailer Park	Fixed	55.67	429.86	74.79
J-8142	260	Zone - 1	COV Mapleroot Trailer Park	Fixed	16.02	338.07	33.78
J-8143	259	Zone - 1	COV Brookside Villa	Fixed	20.10	338.14	34.24
J-8144	299	Zone - 4	COV Sherwood Valley Trailer Park	Fixed	18.99	432.22	57.64

Appendix B
Maximum Day Summary Results

Calculation Results Summary

Scenario: MD Run 1

[Analysis Started]

[Steady State]

0:00:00 Balanced after 7 trials; relative flow change = 0.000321

Flow Summary

Flow Supplied 13,386.69 gpm

Flow Demanded 13,776.96 gpm

Flow Stored -390.33 gpm

0:00:00 Reservoir R-1 is closed

0:00:00 Reservoir R-3 is closed

0:00:00 Reservoir R-2 is closed

0:00:00 Reservoir R-5 is emptying

0:00:00 Reservoir R-6 is emptying

0:00:00 Reservoir R-7 is emptying

0:00:00 Reservoir R-8 is emptying

0:00:00 Reservoir R-9 is emptying

0:00:00 Reservoir R-10 is emptying

0:00:00 Tank T-1 is filling at 37.00 ft

0:00:00 Tank T-2 is emptying at 23.00 ft

0:00:00 Tank T-3 is emptying at 48.00 ft

0:00:00 Tank T-4 is emptying at 147.00 ft

0:00:00 Tank T-6 is closed at 44.00 ft

0:00:00 Tank T-7 is filling at 18.00 ft

0:00:00 Tank T-8 is emptying at 63.00 ft

0:00:00 Tank T-9 is closed at 11.00 ft

0:00:00 Tank T-10 is closed at 11.00 ft

0:00:00 Tank T-5 is emptying at 69.00 ft

0:00:00 PRV PRV-7 active

0:00:00 PRV PRV-2 active

0:00:00 PRV PRV-3 active

0:00:00 PRV PRV-4 active

0:00:00 PRV PRV-8 active

0:00:00 PRV PRV-6 active

0:00:00 PRV PRV-1 active

0:00:00 PRV PRV-5 active

[Analysis Ended]

Scenario: MD Run 1
Steady State Analysis
Pump Report

Label	Elevation (ft)	Control Status	Intake Pump Grade (ft)	Discharge Pump Grade (ft)	Discharge (gpm)	Pump Head (ft)	Description	Notes
PMP-1	259.00	Off	235.00	334.80	0.00	0.00	Mishnock Well 1	COV
PMP-2	259.00	Off	259.00	334.80	0.00	0.00	Mishnock Well 2 (Abandoned)	COV
PMP-3	259.00	Off	246.24	334.80	0.00	0.00	Mishnock Well 3	COV
PMP-4	249.80	On	229.75	336.60	298.83	106.85	Coventry/Spring Lake Well	COV
PMP-5	15.50	On	15.44	333.91	1,143.66	318.47	EG Well Station 1	EG
PMP-6	273.00	On	360.41	508.05	1,433.89	147.64	Pump 1 Knotty Oak Rd. PS	COV
PMP-9	250.00	On	327.29	511.04	1,107.88	183.75	Pump 3 Johnson Blvd. PS	COV
PMP-10	250.00	Off	328.09	510.11	0.00	0.00	Pump 2 Johnson Blvd. PS	COV
PMP-11	250.00	Off	328.09	510.11	0.00	0.00	Pump 1 Johnson Blvd. PS	COV
PMP-12	273.00	Off	366.91	499.79	0.00	0.00	Pump 2 Knotty Oak Rd. PS	COV
PMP-13	182.00	On	232.63	433.86	2,133.00	201.23	Pump 4 Clinton Ave. PS	SCIT
PMP-14	182.00	On	232.63	433.86	2,132.95	201.23	Pump 3 Clinton Ave. PS	SCIT
PMP-15	182.00	On	232.63	433.86	2,133.00	201.23	Pump 2 Clinton Ave. PS	SCIT
PMP-16	182.00	Off	233.75	430.89	0.00	0.00	Pump 1 Clinton Ave. PS	SCIT
PMP-17	130.00	On	224.04	363.51	1,641.04	139.48	Pump 1 Bald Hill Rd. PS	WAR
PMP-18	130.00	On	223.79	363.66	1,625.32	139.87	Pump 2 Bald Hill Rd. PS	WAR
PMP-19	130.00	On	220.65	356.60	1,771.17	135.95	Pump 4 Bald Hill Rd. PS	WAR
PMP-20	130.00	Off	226.69	350.13	0.00	0.00	Pump 3 Bald Hill Rd. PS	WAR

**Scenario: MD Run 1
Steady State Analysis
Reservoir Report**

Label	Elevation (ft)	Zone	Inflow (gpm)	Calculated Hydraulic Grade (ft)	Description	Notes
R-1	235.00	Zone - 1	0.00	235.00	Mishnock Well 1	COV
R-2	259.00	Zone - 1	0.00	259.00	Mishnock Well 2 (Abandoned)	COV
R-3	246.24	Zone - 1	0.00	246.24	Mishnock Well 3	COV
R-5	229.80	Zone - 1	-298.83	229.80	Coventry/Spring Lake Well	COV
R-6	15.50	Zone - 1	-1,143.66	15.50	EG Well Station 1	EG
R-7	231.00	Zone - 5	-500.54	231.00	Master Meter from Providence	CRA
R-8	234.00	Zone - 1	-6,398.95	234.00	Providence Water Aqueduct	SCIT
R-9	232.00	Zone - 6	-2,093.88	232.00	Warwick Tanks	WAR
R-10	232.00	Zone - 6	-2,950.83	232.00	Warwick Tanks	WAR

**Scenario: MD Run 1
Steady State Analysis
Tank Report**

Label	Zone	Base Elevation (ft)	Minimum Elevation (ft)	Initial HGL (ft)	Maximum Elevation (ft)	Tank Diameter (ft)	Inflow (gpm)	Current Status	Calculated Hydraulic Grade (ft)	Calculated Percent Full (%)	Description	Notes
T-1	Zone - 7	390.00	410.00	427.00	430.00	80.00	873.18	Filling	427.00	85.0	Read School House Rd. Tank 1.5 MG	COV
T-2	Zone - 1	310.00	330.00	333.00	355.00	58.00	-757.65	Draining	333.00	12.0	Tiogue Tank 0.771 MG	COV
T-3	Zone - 1	284.00	304.00	332.00	334.00	73.00	-140.60	Draining	332.00	93.3	Frenchtown Rd. Tank 1.5 MG	EG
T-4	Zone - 2	350.00	370.00	497.00	500.00	85.25	-691.75	Draining	497.00	97.7	Technology Park Tank	WG
T-5	Zone - 2	418.00	438.00	487.00	500.00	80.00	-394.64	Draining	487.00	79.0	Carrs Pond Rd. Tank	WG
T-6	Zone - 1	284.00	304.00	328.00	334.00	58.00	0.00	Steady	328.00	80.0	West Street Tank 1 MG	WW
T-7	Zone - 1	314.00	324.00	332.00	334.00	160.00	1,414.52	Filling	332.00	80.0	Crompton Tank	WW
T-8	Zone - 1	264.00	284.00	327.00	334.00	70.00	-693.39	Draining	327.00	86.0	Wakefield St. Tank	WW
T-9	Zone - 1	323.00	328.00	334.00	334.00	N/A	0.00	Full	334.00	100.0	Seven Mile Rd. Underground Tank 1, 0.5 MG	CRA
T-10	Zone - 1	323.00	328.00	334.00	334.00	N/A	0.00	Full	334.00	100.0	Seven Mile Rd. Underground Tank 2, 1 MG	CRA

**Scenario: MD Run 1
Steady State Analysis
Valve Report**

Label	Elevation (ft)	Diameter (in)	Initial HGL (ft)	Initial Valve Status	Control Status	Discharge (gpm)	From Pressure (psi)	To Pressure (psi)	From HGL (ft)	To HGL (ft)	Headloss (ft)	Description
PRV-1	204.00	6.0	268.00	Active	Throttling	273.51	55.15	27.70	331.47	268.02	63.45	Love Ln. PRV
PRV-2	201.00	6.0	270.00	Active	Throttling	366.31	55.38	29.86	329.01	270.02	58.99	Middle Rd. PRV
PRV-3	30.00	6.0	272.00	Active	Throttling	536.08	129.51	104.74	329.33	272.09	57.25	Post Rd. PRV
PRV-4	148.00	6.0	270.00	Active	Throttling	482.68	79.28	52.80	331.23	270.04	61.19	Division St. PRV
PRV-5	35.00	6.0	268.00	Active	Throttling	425.17	103.95	100.84	275.26	268.08	7.18	Centerville Rd. PRV
PRV-6	125.00	6.0	268.00	Active	Throttling	530.97	64.97	61.89	275.16	268.05	7.11	Cowesett Rd. PRV
PRV-7	280.00	6.0	440.00	Active	Throttling	343.21	97.35	69.25	505.01	440.06	64.95	Helen Ave. PRV
PRV-8	330.00	6.0	440.00	Active	Throttling	293.03	72.12	47.61	496.70	440.04	56.66	Mishnock Rd. PRV
PRV-9	281.00	6.0	510.00	Active	Inactive	9.04	63.77	63.77	428.39	428.39	0.00	Hope Rd. Booster PS

Appendix C
Peak Hour Summary Results

Calculation Results Summary

Scenario: PH Run 1

[Analysis Started]

[Steady State]

0:00:00 Balanced after 7 trials; relative flow change = 0.000629

Flow Summary

Flow Supplied 13,654.56 gpm

Flow Demanded 15,582.92 gpm

Flow Stored -1,928.86 gpm

0:00:00 Reservoir R-1 is closed

0:00:00 Reservoir R-3 is closed

0:00:00 Reservoir R-2 is closed

0:00:00 Reservoir R-5 is emptying

0:00:00 Reservoir R-6 is emptying

0:00:00 Reservoir R-7 is emptying

0:00:00 Reservoir R-8 is emptying

0:00:00 Reservoir R-9 is emptying

0:00:00 Reservoir R-10 is emptying

0:00:00 Tank T-1 is filling at 37.00 ft

0:00:00 Tank T-2 is emptying at 23.00 ft

0:00:00 Tank T-3 is emptying at 48.00 ft

0:00:00 Tank T-4 is emptying at 147.00 ft

0:00:00 Tank T-6 is closed at 44.00 ft

0:00:00 Tank T-7 is filling at 18.00 ft

0:00:00 Tank T-8 is emptying at 63.00 ft

0:00:00 Tank T-9 is closed at 11.00 ft

0:00:00 Tank T-10 is closed at 11.00 ft

0:00:00 Tank T-5 is emptying at 69.00 ft

0:00:00 PRV PRV-7 active

0:00:00 PRV PRV-2 active

0:00:00 PRV PRV-3 active

0:00:00 PRV PRV-4 active

0:00:00 PRV PRV-8 active

0:00:00 PRV PRV-1 active

[Analysis Ended]

Scenario: PH Run 1
Steady State Analysis
Pump Report

Label	Elevation (ft)	Control Status	Intake Pump Grade (ft)	Discharge Pump Grade (ft)	Discharge (gpm)	Pump Head (ft)	Description	Notes
PMP-1	259.00	Off	235.00	332.87	0.00	0.00	Mishnock Well 1	COV
PMP-2	259.00	Off	259.00	332.87	0.00	0.00	Mishnock Well 2 (Abandoned)	COV
PMP-3	259.00	Off	246.24	332.87	0.00	0.00	Mishnock Well 3	COV
PMP-4	249.80	On	229.75	334.92	302.07	105.17	Coventry/Spring Lake Well	COV
PMP-5	15.50	On	15.44	332.29	1,149.34	316.85	EG Well Station 1	EG
PMP-6	273.00	On	358.27	504.99	1,444.29	146.73	Pump 1 Knotty Oak Rd. PS	COV
PMP-9	250.00	On	325.44	509.44	1,106.26	184.01	Pump 3 Johnson Blvd. PS	COV
PMP-10	250.00	Off	326.23	508.52	0.00	0.00	Pump 2 Johnson Blvd. PS	COV
PMP-11	250.00	Off	326.23	508.52	0.00	0.00	Pump 1 Johnson Blvd. PS	COV
PMP-12	273.00	Off	364.85	496.62	0.00	0.00	Pump 2 Knotty Oak Rd. PS	COV
PMP-13	182.00	On	232.58	432.62	2,175.83	200.04	Pump 4 Clinton Ave. PS	SCIT
PMP-14	182.00	On	232.58	432.62	2,175.78	200.04	Pump 3 Clinton Ave. PS	SCIT
PMP-15	182.00	On	232.58	432.62	2,175.83	200.04	Pump 2 Clinton Ave. PS	SCIT
PMP-16	182.00	Off	233.74	429.53	0.00	0.00	Pump 1 Clinton Ave. PS	SCIT
PMP-17	130.00	On	223.86	362.84	1,660.49	138.98	Pump 1 Bald Hill Rd. PS	WAR
PMP-18	130.00	On	223.61	362.99	1,644.68	139.39	Pump 2 Bald Hill Rd. PS	WAR
PMP-19	130.00	On	220.40	355.77	1,791.34	135.37	Pump 4 Bald Hill Rd. PS	WAR
PMP-20	130.00	Off	226.58	349.15	0.00	0.00	Pump 3 Bald Hill Rd. PS	WAR

**Scenario: PH Run 1
Steady State Analysis
Reservoir Report**

Label	Elevation (ft)	Zone	Inflow (gpm)	Calculated Hydraulic Grade (ft)	Description	Notes
R-1	235.00	Zone - 1	0.00	235.00	Mishnock Well 1	COV
R-2	259.00	Zone - 1	0.00	259.00	Mishnock Well 2 (Abandoned)	COV
R-3	246.24	Zone - 1	0.00	246.24	Mishnock Well 3	COV
R-5	229.80	Zone - 1	-302.07	229.80	Coventry/Spring Lake Well	COV
R-6	15.50	Zone - 1	-1,149.34	15.50	EG Well Station 1	EG
R-7	231.00	Zone - 5	-571.01	231.00	Master Meter from Providence	CRA
R-8	234.00	Zone - 1	-6,527.44	234.00	Providence Water Aqueduct	SCIT
R-9	232.00	Zone - 6	-2,118.78	232.00	Warwick Tanks	WAR
R-10	232.00	Zone - 6	-2,985.92	232.00	Warwick Tanks	WAR

Scenario: PH Run 1
Steady State Analysis
Tank Report

Label	Zone	Base Elevation (ft)	Minimum Elevation (ft)	Initial HGL (ft)	Maximum Elevation (ft)	Tank Diameter (ft)	Inflow (gpm)	Current Status	Calculated Hydraulic Grade (ft)	Calculated Percent Full (%)	Description	Notes
T-1	Zone - 7	390.00	410.00	427.00	430.00	80.00	804.61	Filling	427.00	85.0	Read School House Rd. Tank 1.5 MG	COV
T-2	Zone - 1	310.00	330.00	333.00	355.00	58.00	-1,030.97	Draining	333.00	12.0	Tiogue Tank 0.771 MG	COV
T-3	Zone - 1	284.00	304.00	332.00	334.00	73.00	-567.63	Draining	332.00	93.3	Frenchtown Rd. Tank 1.5 MG	EG
T-4	Zone - 2	350.00	370.00	497.00	500.00	85.25	-819.21	Draining	497.00	97.7	Technology Park Tank	WG
T-5	Zone - 2	418.00	438.00	487.00	500.00	80.00	-567.14	Draining	487.00	79.0	Carrs Pond Rd. Tank	WG
T-6	Zone - 1	284.00	304.00	328.00	334.00	58.00	0.00	Steady	328.00	80.0	West Street Tank 1 MG	WW
T-7	Zone - 1	314.00	324.00	332.00	334.00	160.00	1,200.61	Filling	332.00	80.0	Crompton Tank	WW
T-8	Zone - 1	264.00	284.00	327.00	334.00	70.00	-949.14	Draining	327.00	86.0	Wakefield St. Tank	WW
T-9	Zone - 1	323.00	328.00	334.00	334.00	N/A	0.00	Full	334.00	100.0	Seven Mile Rd. Underground Tank 1, 0.5 MG	CRA
T-10	Zone - 1	323.00	328.00	334.00	334.00	N/A	0.00	Full	334.00	100.0	Seven Mile Rd. Underground Tank 2, 1 MG	CRA

Scenario: PH Run 1
Steady State Analysis
Valve Report

Label	Elevation (ft)	Diameter (in)	Initial HGL (ft)	Initial Valve Status	Control Status	Discharge (gpm)	From Pressure (psi)	To Pressure (psi)	From HGL (ft)	To HGL (ft)	Headloss (ft)	Description
PRV-1	204.00	6.0	268.00	Active	Throttling	432.96	54.13	27.70	329.11	268.02	61.09	Love Ln. PRV
PRV-2	201.00	6.0	270.00	Active	Throttling	447.41	54.50	29.86	326.97	270.02	56.95	Middle Rd. PRV
PRV-3	30.00	6.0	272.00	Active	Throttling	615.50	128.46	104.74	326.91	272.09	54.82	Post Rd. PRV
PRV-4	148.00	6.0	270.00	Active	Throttling	581.94	78.02	52.80	328.33	270.04	58.28	Division St. PRV
PRV-5	35.00	6.0	268.00	Active	Inactive	428.63	99.62	99.62	265.24	265.24	0.00	Centerville Rd. PRV
PRV-6	125.00	6.0	268.00	Active	Inactive	515.68	60.66	60.66	265.21	265.21	0.00	Cowesett Rd. PRV
PRV-7	280.00	6.0	440.00	Active	Throttling	399.64	96.61	69.25	503.30	440.06	63.25	Helen Ave. PRV
PRV-8	330.00	6.0	440.00	Active	Throttling	340.17	71.89	47.61	496.16	440.04	56.12	Mishnock Rd. PRV
PRV-9	281.00	6.0	510.00	Active	Inactive	10.31	63.01	63.01	426.64	426.64	0.00	Hope Rd. Booster PS

Appendix D
Hydrant C-Value Test Results

HYDRANT FLOW TEST REPORT

Location: Baker St. WAR Date: 12-16-03

Test Made By: RH / NIM Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 500 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 120 psi

"Pitot" Reading: 8 psi

Flow Rate: 480 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 124 psi

Residual Reading: 75 psi

Remarks: (size of main, material, age, etc.) 6" CI 1922

HYDRANT FLOW TEST REPORT

Location: Main St. EG Date: 12-16-03

Test Made By: RH / NM Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 296 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 87 psi

"Pitot" Reading: 50 psi

Flow Rate: 1180.9 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 92 psi Residual Reading: 88 psi

Remarks: (size of main, material, age, etc.) 8" CI 1886

HYDRANT FLOW TEST REPORT

Location: Burlingame T.d. WW Date: 12-16-03

Test Made By: RH / NM Time of Test: 1:00 PM

Representative of: C + E Engineering Partners

Purpose of Test: C-Value Calculations

Consumption Rate During Test: N/A

If Pumps Affect Test, Indicate Pumps Operating: N/A

Length Between Flow & Residual Hydrant: 1048 feet

Flow Hydrant:

Size Nozzle: 2 1/2"
Static Reading: 34 psi
"Pitot" Reading: 20 psi
Flow Rate: 750 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"
Static Reading: 44 psi Residual Reading: 38 psi

Remarks: (size of main, material, age, etc.) 8" PVC 1981

HYDRANT FLOW TEST REPORT

Location: Mill St. SCIT Date: 12-16-03

Test Made By: RH / NIA Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 414 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 83 psi

"Pitot" Reading: 15 psi

Flow Rate: 650 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 80 psi

Residual Reading: 62 psi

Remarks: (size of main, material, age, etc.) 6" CI 1887

HYDRANT FLOW TEST REPORT

Location: Eleanor Dr.* COV Date: 12-16-03

Test Made By: RH / NM Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 510 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 72 psi

"Pitot" Reading: 32 psi

Flow Rate: 950 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 80 psi

Residual Reading: 48 psi

Remarks: (size of main, material, age, etc.) *Dead end

6" AC 1960

HYDRANT FLOW TEST REPORT

Location: South County Trail EG Date: 12-16-03

Test Made By: RH / NM Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 900 feet

Flow Hydrant:

Size Nozzle: 2 1/2"
Static Reading: 96 psi
"Pitot" Reading: 78 psi
Flow Rate: 1474.9 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"
Static Reading: 97 psi Residual Reading: 95 psi

Remarks: (size of main, material, age, etc.) 12" AC 1963

HYDRANT FLOW TEST REPORT

Location: Potter Ave.* WW Date: 12-16-03

Test Made By: RH/NM Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 380 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 86 psi

"Pitot" Reading: 116 psi

Flow Rate: 670 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 70 psi Residual Reading: 6 psi

Remarks: (size of main, material, age, etc.) *Flowed hydrant at bottom of hill

6" CI 1885

HYDRANT FLOW TEST REPORT

Location: Potter Ave.* WW Date: 12-17-03

Test Made By: RE / NIM Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 380 feet

Flow Hydrant:

Size Nozzle: 2 1/2"
Static Reading: 86 psi
"Pitot" Reading: 6 psi
Flow Rate: 410 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"
Static Reading: 90 psi Residual Reading: 72 psi

Remarks: (size of main, material, age, etc.) *Flowed hydrant at top of old
6" CI 1885

HYDRANT FLOW TEST REPORT

Location: Hope Rd. CRA Date: 12-16-03

Test Made By: RH / NM Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 1800 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 52 psi

"Pitot" Reading: 1 psi

Flow Rate: 170 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 57 psi

Residual Reading: 56 psi

Remarks: (size of main, material, age, etc.) 6" CI 1942

HYDRANT FLOW TEST REPORT

Location: Cochran Rd. WAB Date: 12-17-03

Test Made By: RH / N/A Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 742 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 42 psi

"Pilot" Reading: 20 psi

Flow Rate: 750 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 58 psi Residual Reading: 55 psi

Remarks: (size of main, material, age, etc.) 6" AC 1039

HYDRANT FLOW TEST REPORT

Location: St. John St. WW Date: 12-17-03

Test Made By: RH / NM Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 298 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 10 psi 22 psi (open valve)

"Pitot" Reading: 10 psi 22 psi (open valve)

Flow Rate: 530 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 76 psi Residual Reading: 52 psi

55 psi (open valve)

Remarks: (size of main, material, age, etc.) 6" CI 1890

HYDRANT FLOW TEST REPORT

Location: 2400th Ave. NW Date: 12-1-82

Test Made By: W. J. J. Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 538 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 81 psi

"Pitot" Reading: 24 psi

Flow Rate: 880 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: _____

89 psi

Residual Reading: _____

50 psi

Remarks: (size of main, material, age, etc.) 8" CI 1982

HYDRANT FLOW TEST REPORT

Location: COMMERCIAL DISTRICT - 1000 W. AR Date: 12-17-08

Test Made By: EA / JH Time of Test: _____

Representative of: _____

Purpose of Test: _____

Consumption Rate During Test: _____

If Pumps Affect Test, Indicate Pumps Operating: _____

Length Between Flow & Residual Hydrant: 840 feet

Flow Hydrant:

Size Nozzle: 2 1/2"

Static Reading: 98 psi

"Pitot" Reading: 52 psi

Flow Rate: 1204.3 gpm

Residual Hydrant:

Size Nozzle: 2 1/2"

Static Reading: _____

95 psi Residual Reading: 60 psi

Remarks: (size of main, material, age, etc.) 8" AC 1959

Appendix E
Booster Pump Station / Well Station Pump Curves

Model: 2SV General Pump Descriptions

Performance Curves

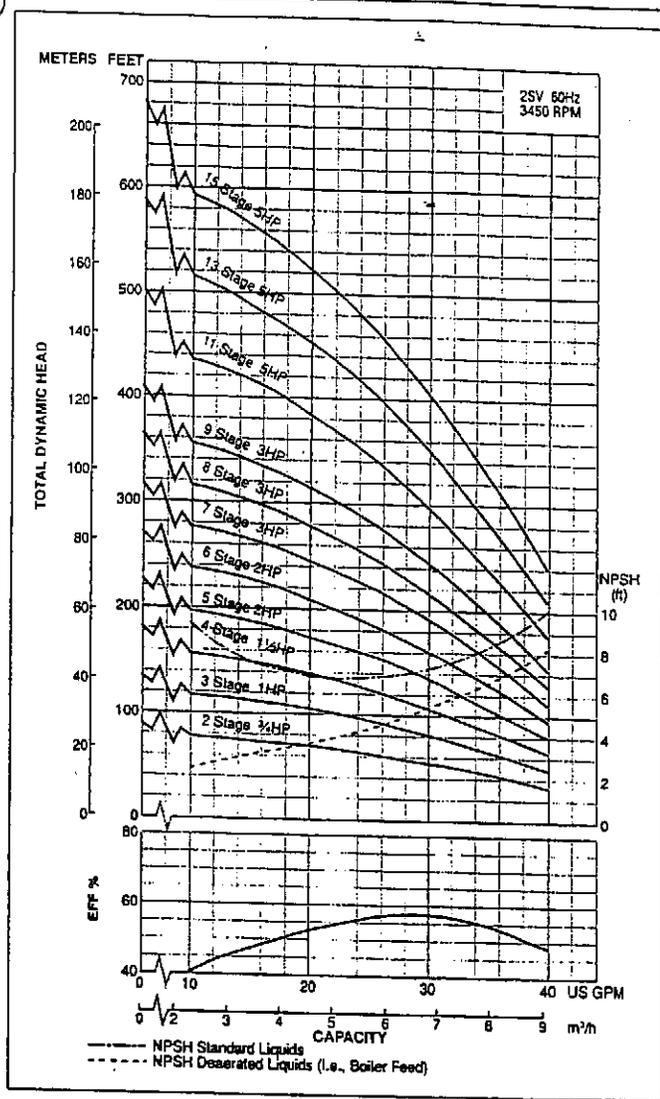
HOPE

Construction: 304 or 316 stainless steel
 Capacities: 10-40 gallons per minute (2.2-9 m³/hr)
 Heads: 40-590 feet TDH (12-180 meters)
 Staging: 2-15
 Maximum working pressure: 230 PSI (16 bar) for the NPT version and 360 PSI (25 bar) for the ANSI flange version
 Temperatures: Standard liquid temperature from -13°F (-25°C) to 250°F (120°C)

Design options:	Material:		Stages	Connections	Location
	Type	304			
2SVA	x		2-11	NPT	In-line
2SVB	x		2-15	ANSI flange	In-line
2SVC	x		5-15	ANSI flange	Top/bottom
2SVD		x	2-15	ANSI flange	In-line

Flange Connections: Suction and discharge openings are 1/4" NPT. ANSI flanges are class 300, 1/4" flanges.

Component	304 Version	316 Version
Materials	304	316
Case	Cast aluminum	Same
Body	304 stainless steel	316L SS
G O-rings	EPR	Same
Bolts and nuts	Zinc-coated steel	Same
Impeller shaft	304 stainless steel	316L SS
Impeller casing	304 stainless steel	316L SS
Impeller seal housing	304 stainless steel	316L SS
Impeller bowls	304 stainless steel	316L SS
Diffusers	304 stainless steel	316L SS
Impellers	316L stainless steel	Same
Impeller O-rings	EPR	Same
Shaft spacers	316L stainless steel	Same
Shaft bushing	Ceramic	Same
Shaft sleeve	Tungsten carbide	Same
Seal spring and retainer clip	316L stainless steel	Same
Mechanical seal	Standard with tungsten carbide/carbon faces, 316L stainless steel sleeve and EPR elastomers	Same
Drain plugs	316L stainless steel	Same
NEMA motor adapter	Cast iron	Same
Coupling guards	304 stainless steel	Same
Motor shaft coupling	Cast aluminum	Same



2SV Motors

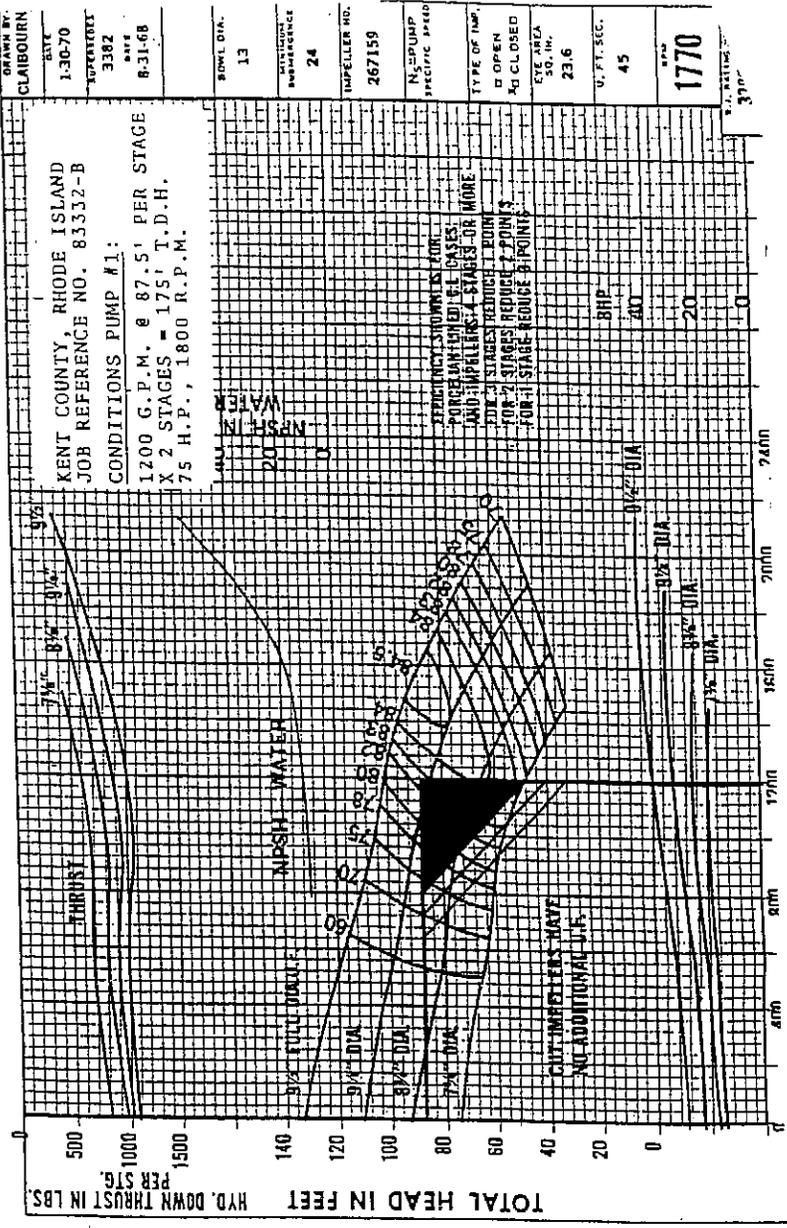
NEMA standard TC frame vertical motors with open drip proof, or totally enclosed fan cooled enclosures. 60 Hz, 3500 RPM, single phase (115/230 V) and three phase (208-230/460 V). 2SV horsepower from 1/4 to 5. For other motor options, contact the factory. Above motors are 1.25 S.F. for 1/4 and 1 HP, 1.15 S.F. for 1 1/2 - 5 HP.

Eff. Nov. 1984
Super. July 72

Byron Jackson Pump Division
BORG-WARNER CORPORATION



Section 2-210
Page 2-10-25



KENT COUNTY, RHODE ISLAND
JOB REFERENCE NO. 85332-B
CONDITIONS PUMP #1:
1200 G.P.M. @ 87.5' PER STAGE
X 2 STAGES = 175' T.D.H.
75 H.P., 1800 R.P.M.

ORIGIN BY CLAIBOURN	DATE 1.30.70	IMPELLER NO. 3382	ROWL DIA. 13	IMPELLER NO. 267159	N _s PUMP SPECIFIC SPEED
	DATE 8-31-68		IMPELLER NO. 24		TYPE OF IMP. □ OPEN X □ CLOSED
					EYE AREA SQ. IN. 23.6
					U. FT. SEC. 45
					HP 1770

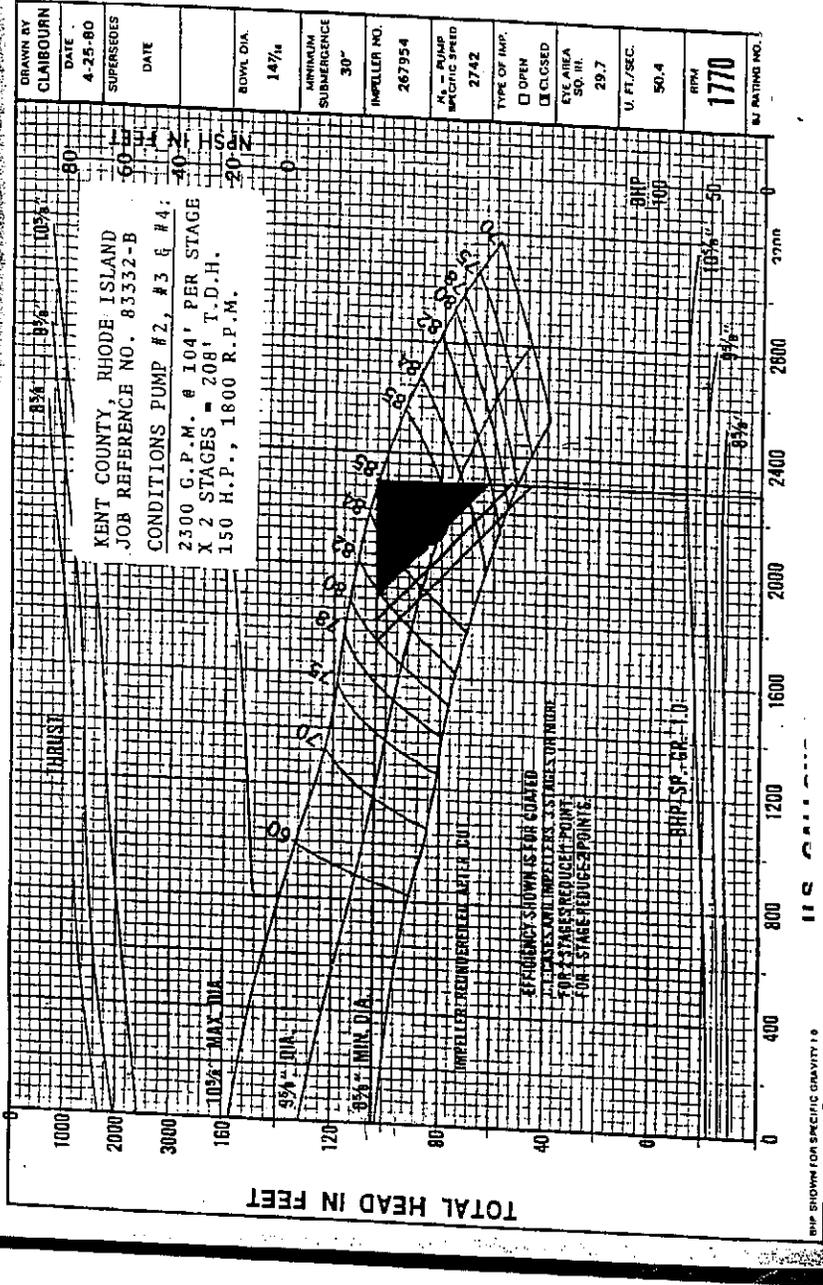
Johnson Blvd.

11. Nov. 1987
Super. May 80

Byron Jackson Pump Division
BORG-WARNER CORPORATION



Section 2-210
Page 2-210-27

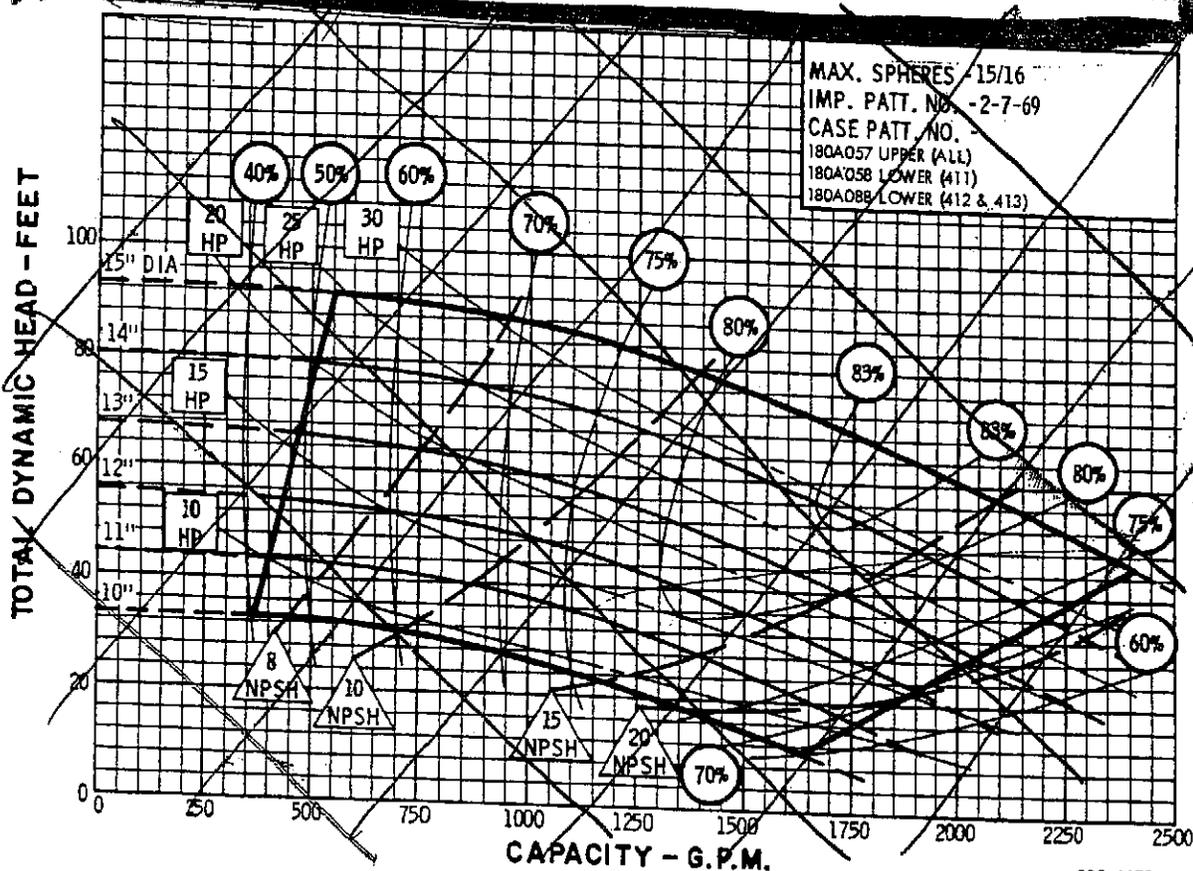
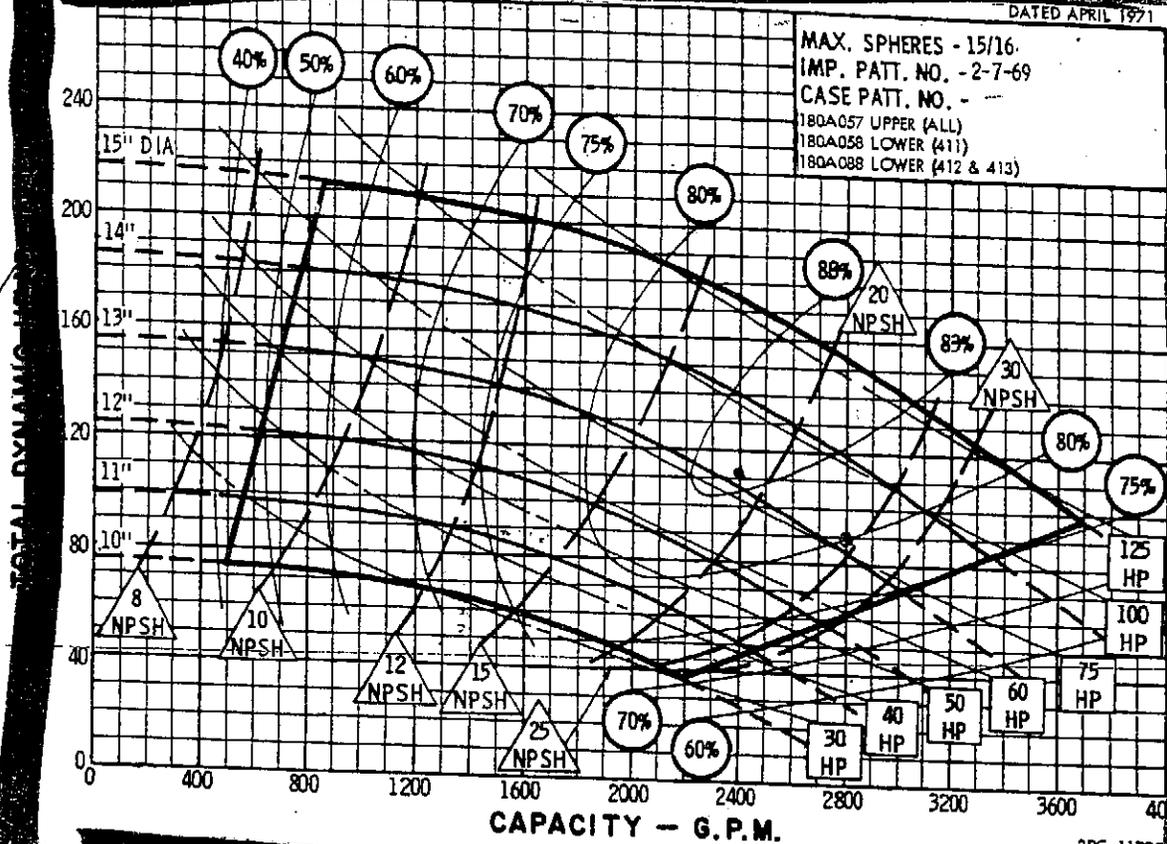


Johnson Blvd.

8x10x15A SERIES 410

ENCLOSED IMPELLER

DATED APRIL 1971



AURORA PUMP
 A UNIT OF GENERAL SIGNAL CORPORATION
 AURORA - ILLINOIS

Bald Hill Rd.



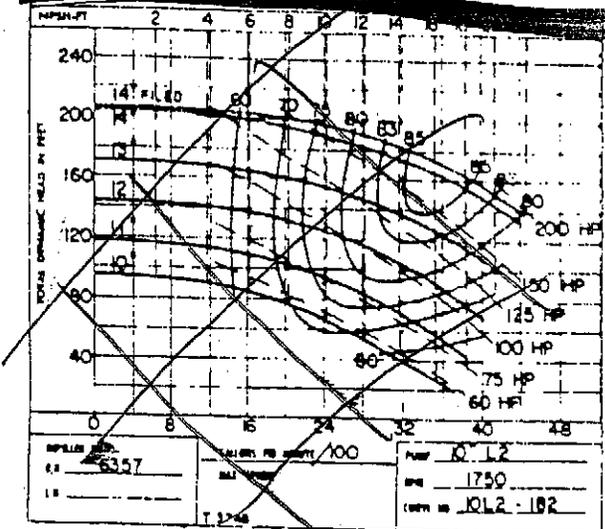
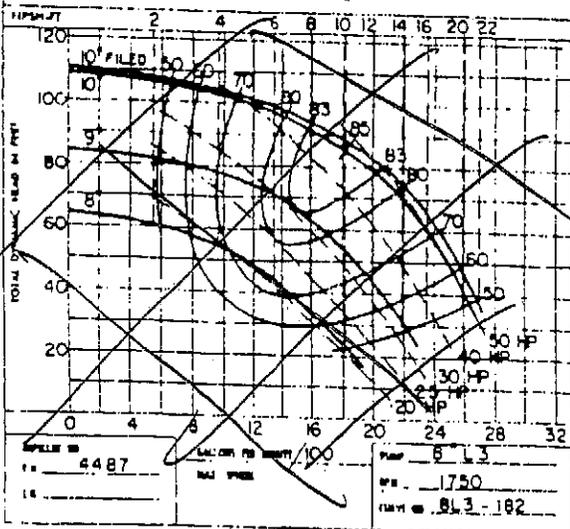
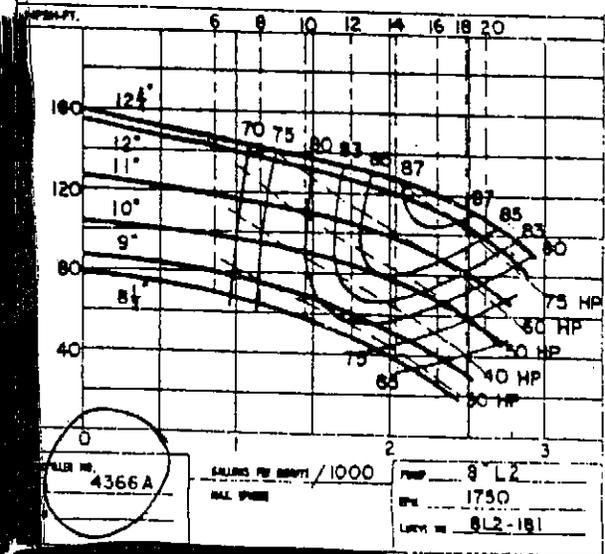
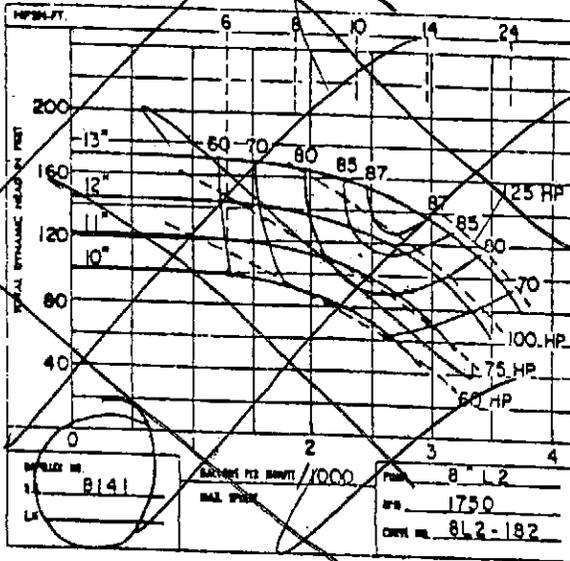
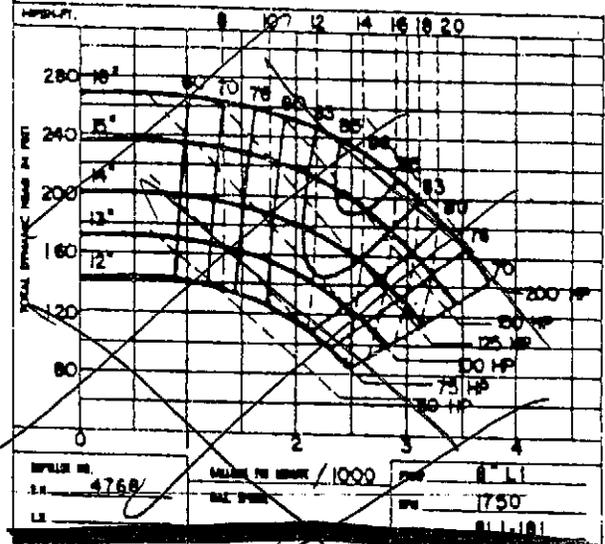
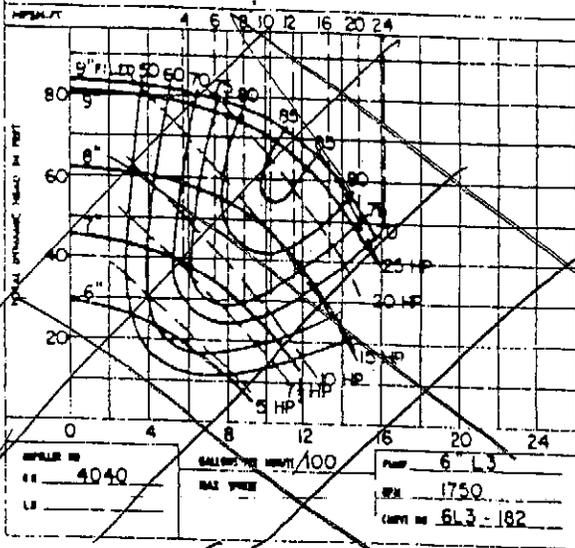
VALLEY PUMP GROUP

WEINMAN ENGINEERED PRODUCTS

Commerce & Exchange Sts. Conway, AR 72032
(501) 329-9811

Section No. 1200
Page 11
November 15, 1972

1750 R.P.M.



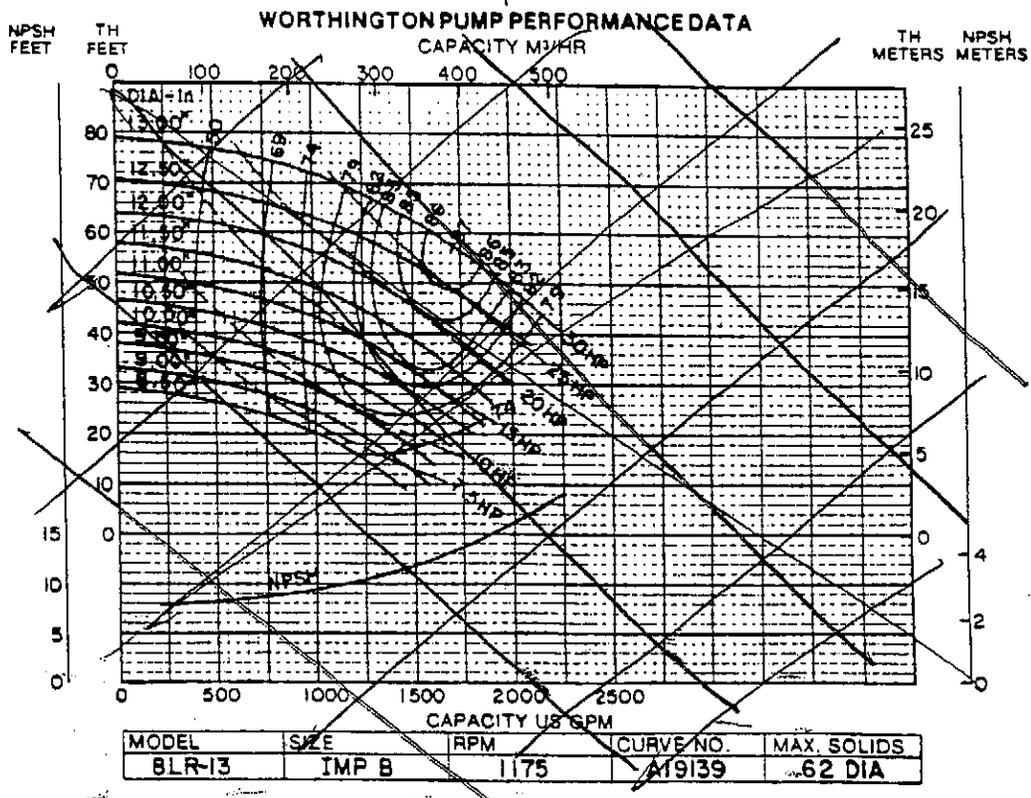
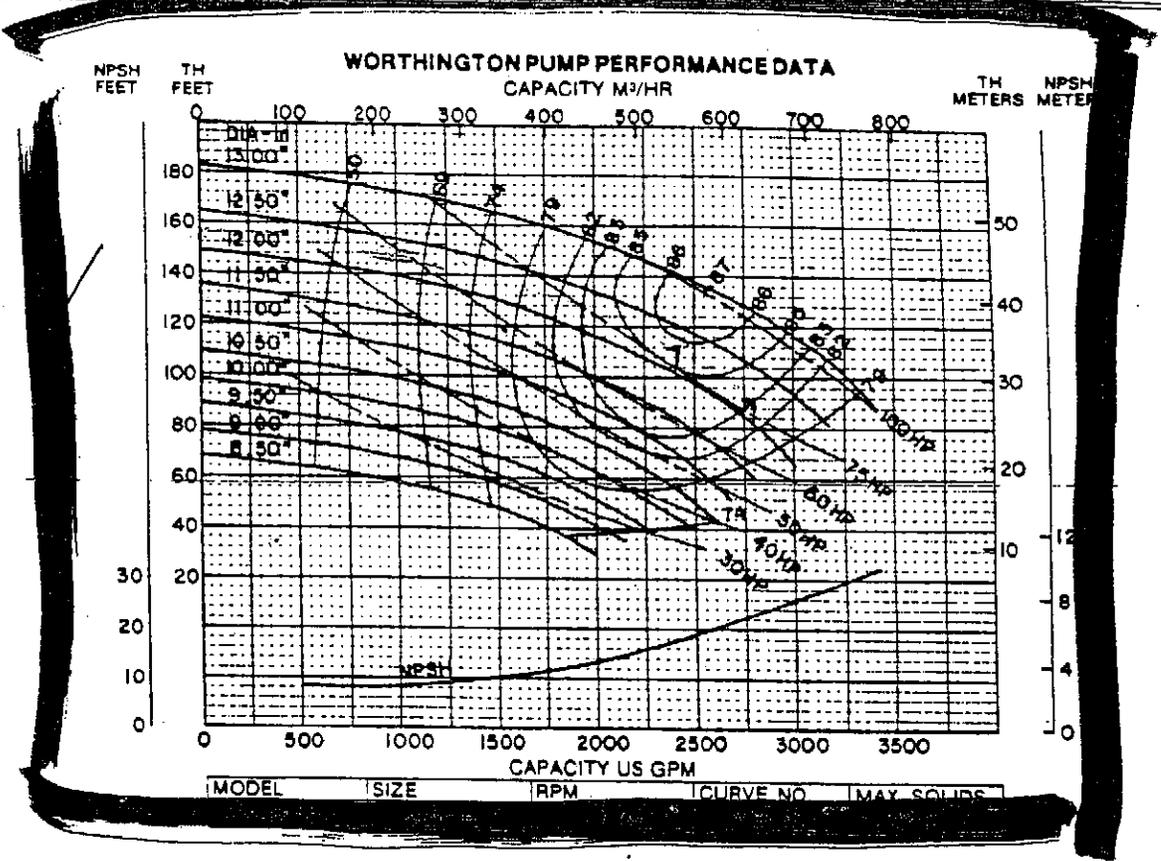
Supersedes Section No. 1200, Page 11
Dated January 1972

D HILL ROAD P.S. Coventry R.I.

Customer _____ Worthington S.O. _____
 Project _____ Proposal/Order No. _____
 Cust. Proposal/Order No. _____ Certified By _____
 Customer Item No. _____ Date _____

2036-8 Page 39
 October 1980
 Supersedes
 March 1971 Issue
 8 LR-13
 60 Cycle

Liquid/Service _____ Sp. Gr. _____ Visc. _____ SSU
 Capacity _____ Head _____ Temp. _____ °F/°C Consistency _____ %



Clinton Ave Pump

DUMP #1
SECTION 50 C2
TURBINE PUMPS
LINESHAFT DESIGN



CURVE PAGE PC3137Z-155
NOVEMBER 1, 1987
SUPERSEDES PC3137B

SIZE H16 SINGLE STAGE PERFORMANCE 1770 R.P.M.

EFFICIENCY CHANGE:			SEM-ENCLOSED IMPELLER		
3	STAGE DEDUCT	0	POINTS	IMP. NO.	4692
2	STAGE DEDUCT	1.5	POINTS	CURVE	A
1	STAGE DEDUCT	2.5	POINTS	IMPELLER DIAMETER	12.125
				B	11.500
				C	11.000

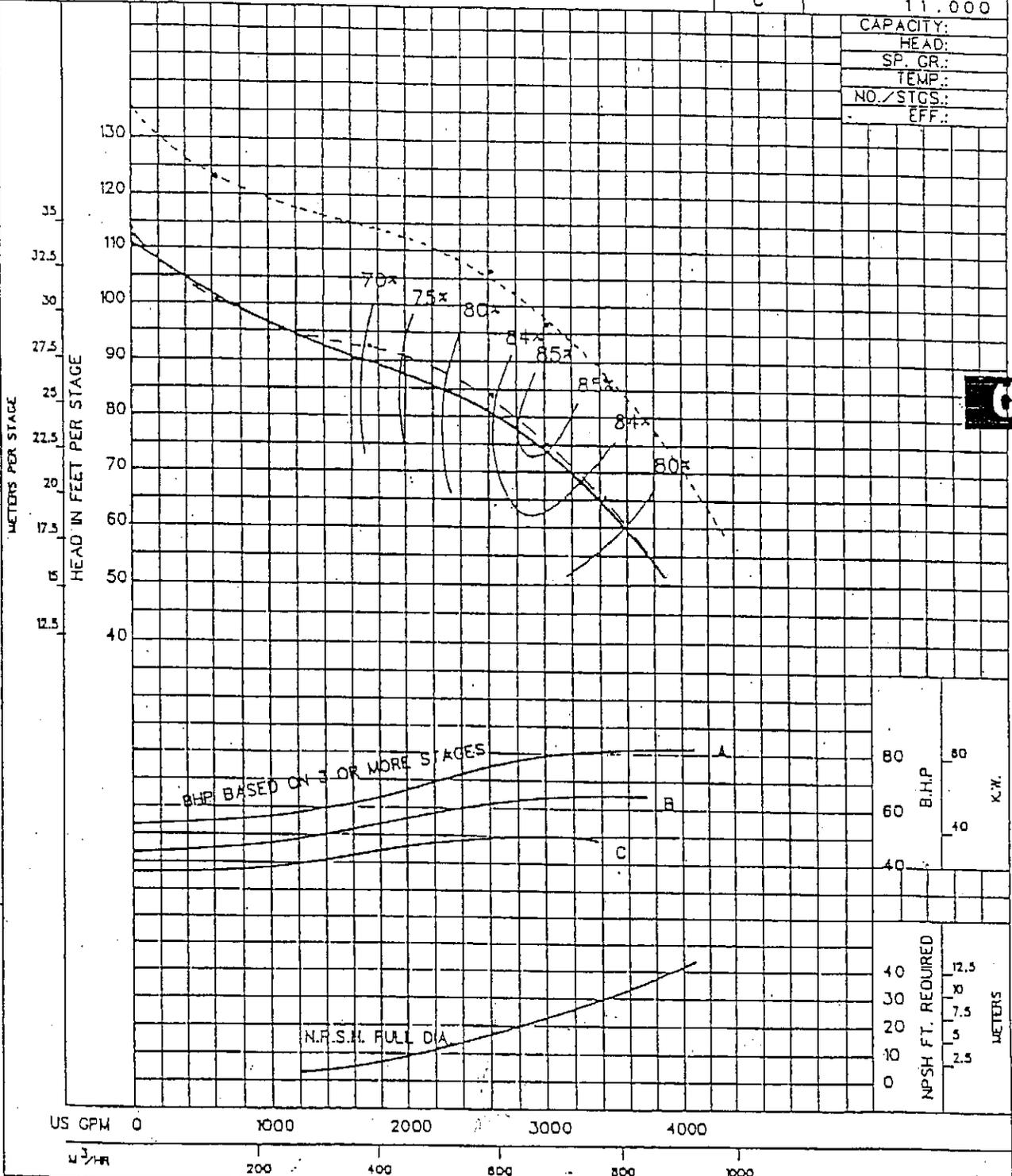
KEY:

MEASURED HEAD*
VS.
VARIABLE FLOW

TOTAL DYNAMIC
HEAD
VS.
VARIABLE FLOW

THEORETICAL
TOTAL DYNAMIC
HEAD
VS.
VARIABLE FLOW

* INCLUDES
INCOMING PRESSURE
HEAD OF 19 PSI



CUSTOMER:		JOB:	
ENGINEER:		CONTRACTOR:	
P.O.:	S.O.:	SUBMITTED BY/DATE:	CERTIFIED BY/DATE:

PUMP #2
SECTION 50 C2
TURBINE PUMPS
LINESHAFT DESIGN



Clinton Ave.

CURVE PAGE PC3137Z-155
NOVEMBER 1, 1987
SUPERSEDES PC3137B

SIZE H16 SINGLE STAGE PERFORMANCE 1770 R.P.M.

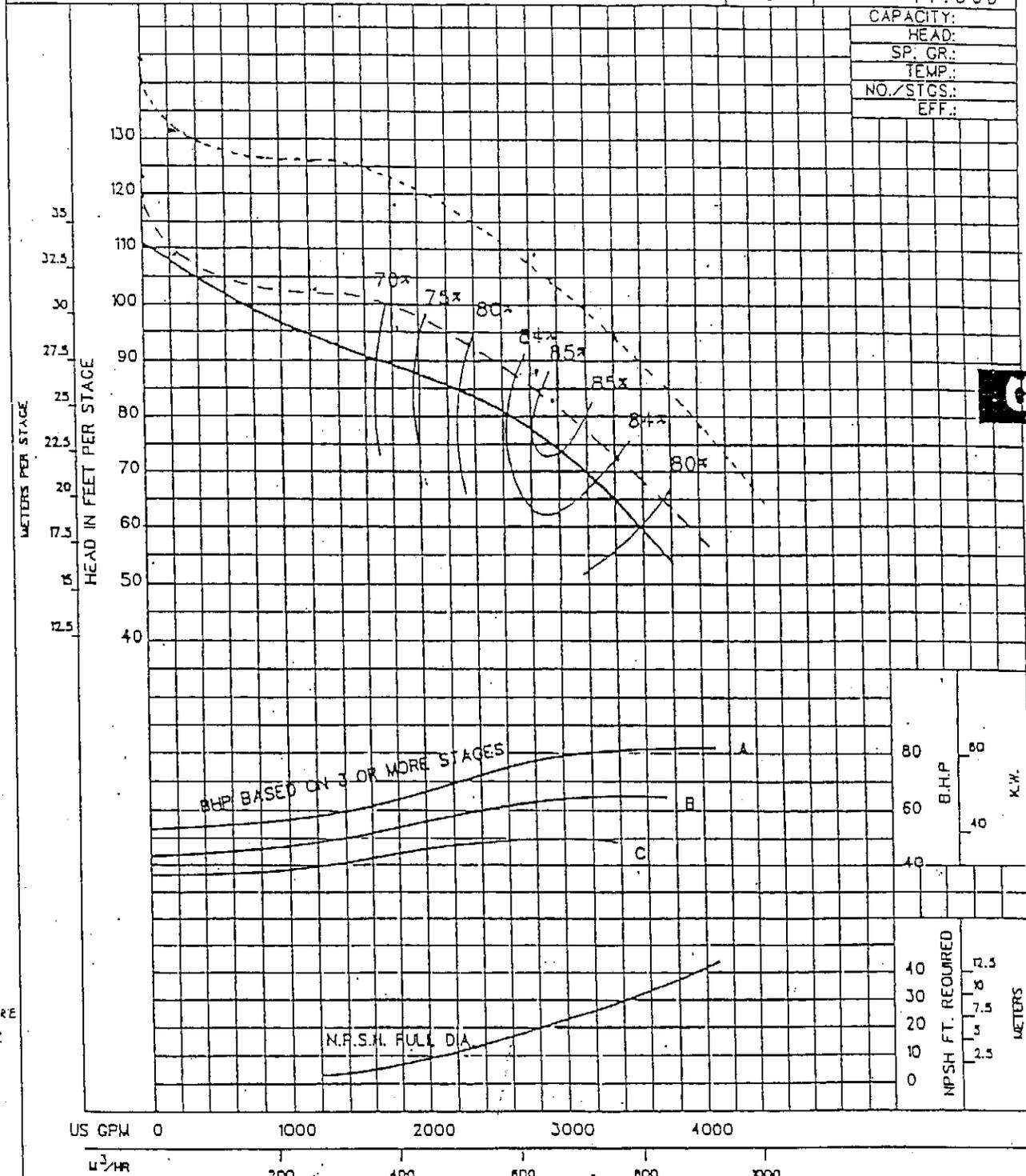
EFFICIENCY CHANGE:				SEMI-ENCLOSED IMPELLER		
3	STAGE DEDUCT	0	POINTS	IMP. NO.	4692	CURVE
2	STAGE DEDUCT	1.5	POINTS	BOWL NO.	4671	A
1	STAGE DEDUCT	2.5	POINTS			B
						C
						IMPELLER DIAMETER
						12.125
						11.500
						11.000

KEY:

-----*
MEASURED HEAD
VS.
VARIABLE FLOW

TOTAL DYNAMIC
HEAD
VS.
VARIABLE FLOW

THEORETICAL
TOTAL DYNAMIC
HEAD
VS.
VARIABLE FLOW



CAPACITY:	
HEAD:	
SP. GR.:	
TEMP.:	
NO./STGS.:	
EFF.:	

* INCLUDES
INCOMING PRESSURE
HEAD OF 19 PSI

CUSTOMER:		JOB:	
ENGINEER:		CONTRACTOR:	
P.O.:	S.O.:	SUBMITTED BY/DATE:	CERTIFIED BY/DATE:

PUMP # 3
SECTION 50 C2
TURBINE PUMPS
LINESHAFT DESIGN



Clinton Ave.

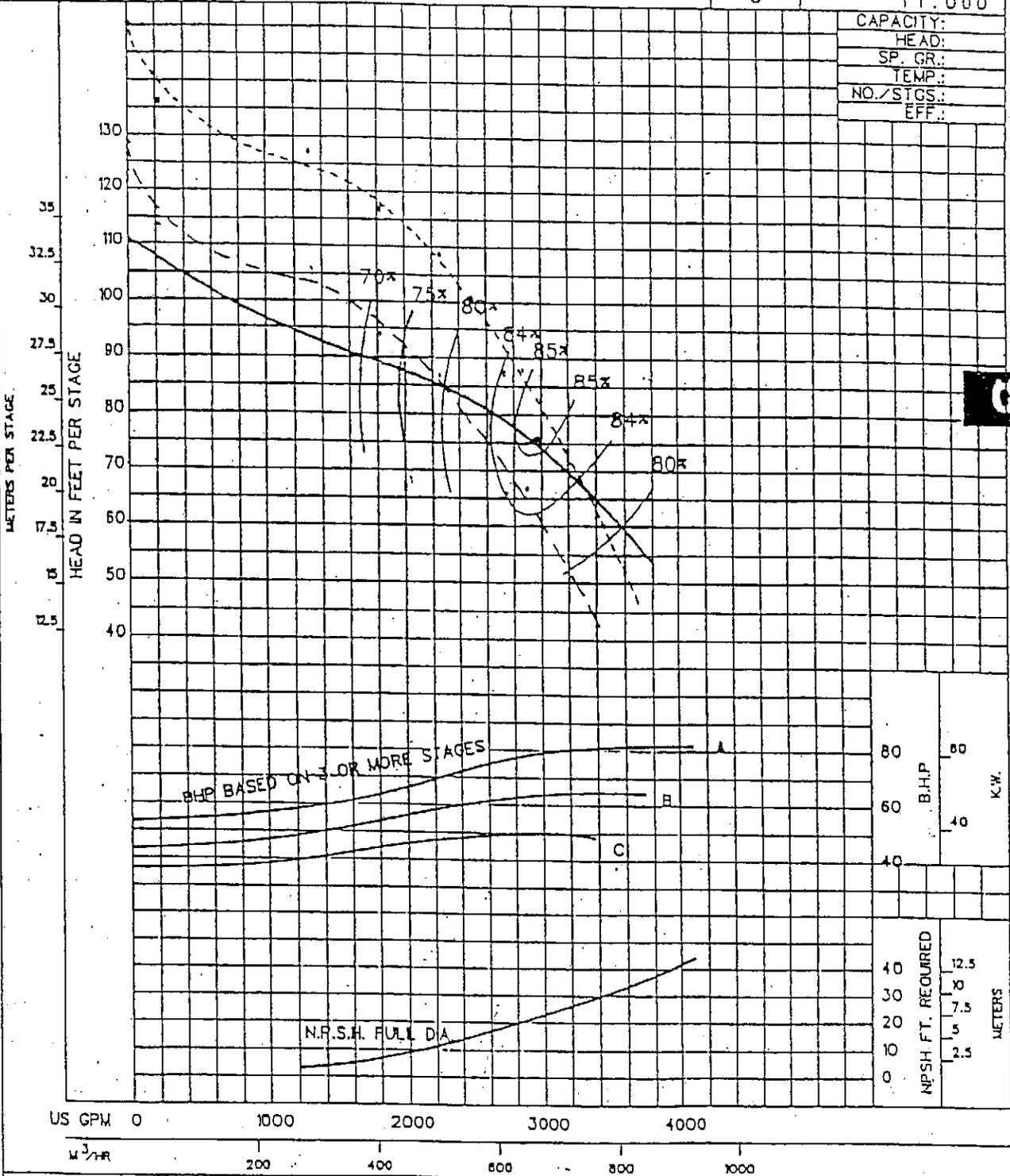
CURVE PAGE PC3137Z-155
NOVEMBER 1, 1987
SUPERSEDES PC3137B

SIZE H16 SINGLE STAGE PERFORMANCE 1770 R.P.M.

EFFICIENCY CHANGE:				SEMI-ENCLOSED IMPELLER		
3	STAGE DEDUCT	0	POINTS	IMP. NO.	4692	CURVE
2	STAGE DEDUCT	1.5	POINTS	BOWL NO.	4671	IMPELLER DIAMETER
1	STAGE DEDUCT	2.5	POINTS			A 12.125
						B 11.500
						C 11.000

KEY:

- - - - - MEASURED HEAD* VS. VARIABLE FLOW
- — — — — TOTAL DYNAMIC HEAD VS. VARIABLE FLOW
- — — — — THEORETICAL TOTAL DYNAMIC HEAD VS. VARIABLE FLOW



* INCLUDES
INCOMING PRESSURE
HEAD OF 19 PSI

CUSTOMER:		JOB:	
ENGINEER:		CONTRACTOR:	
P.O.:	S.O.:	SUBMITTED BY/DATE:	CERTIFIED BY/DATE:

751-6499

Coventry Spring Lake Well

PAGE 96
12 P.C. 3200
SEDES P.C. 2548

CATALOG - SECTION C - 1750 RPM
VERTICAL TURBINE PUMP CURVES
PERFORMANCE PER STAGE

CRANE-DEMING PUMPS
CRANE CO.
SALEM, OHIO, U.S.A.

TYPE M-12 SINGLE STAGE PERFORMANCE 1770 R.P.M.

EFFICIENCY CHANGE:

3	STAGE DEDUCT	0	POINTS
2	STAGE DEDUCT	2	POINTS
1	STAGE DEDUCT	6	POINTS
	STAGE DEDUCT		POINTS

ENAMELED BOWLS 4-BOWLS

DIMENSIONS

FIG. 4700	FIG. 4750	
BOWL DIAMETER	1 1/2	1 1/2
IMPELLER SHAFT DIA.	1/2	1/2
LENGTH FIRST STAGE	27	30
ADDITIONAL STAGE	11	
THRUST FACTOR =	12.5	12.5

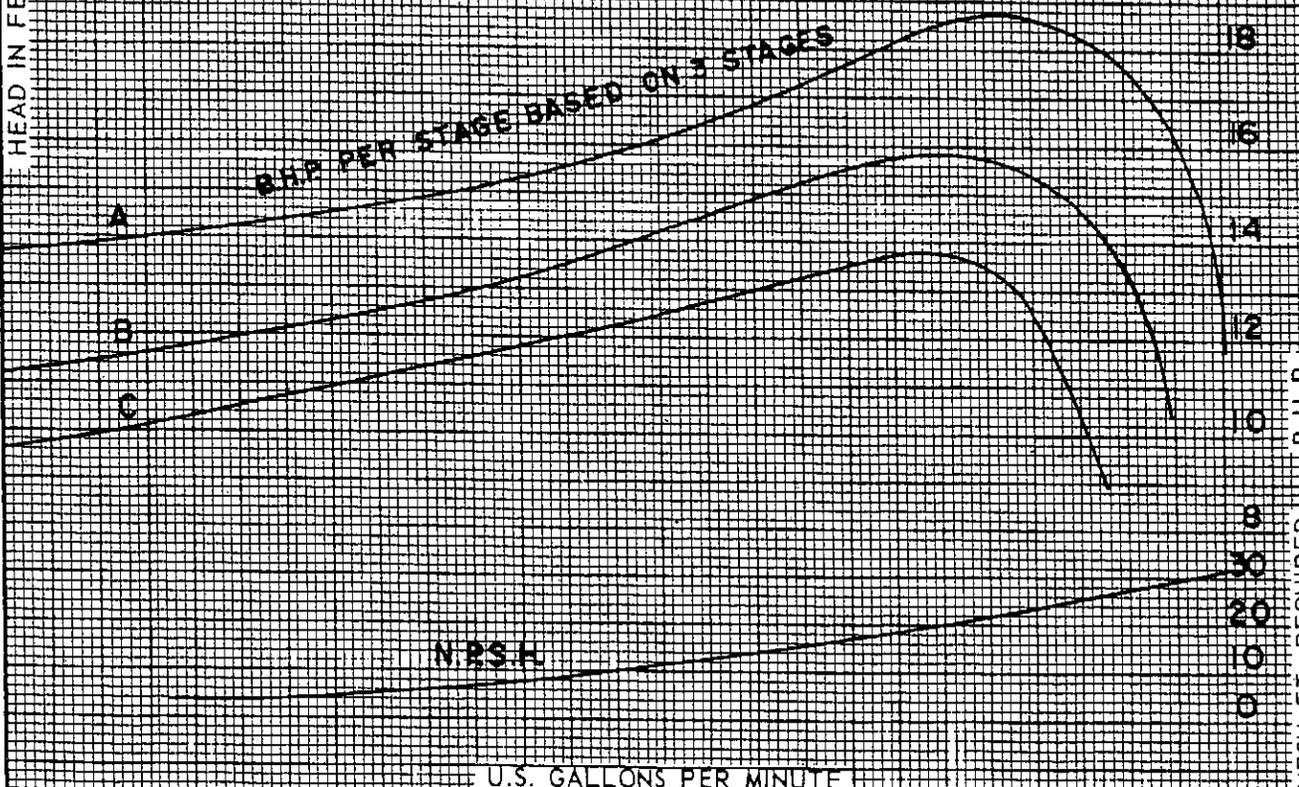
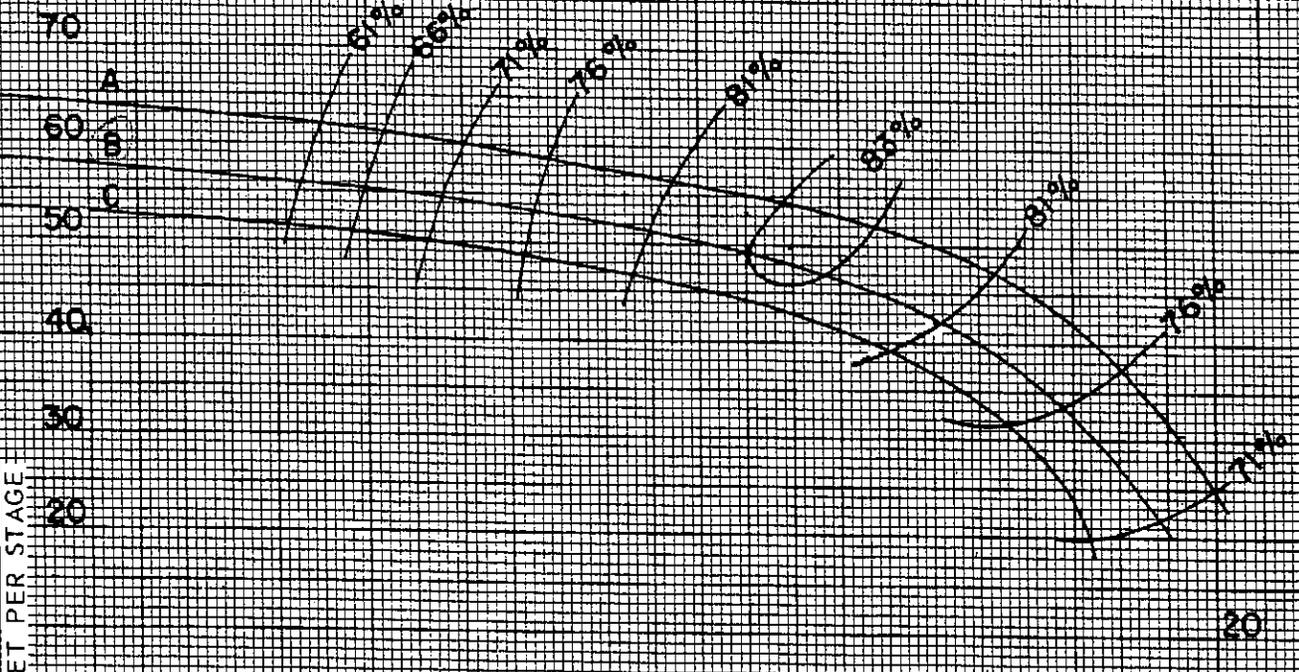
SUCTION - I.D. PIPE SIZE 8" SIZE COLUMN ADAPTER 6" 8" OR 10" SEMI-ENC. IMPELLER NO. 3982

FOR OVER 10 STAGES CHECK BOWL LIMITATION ENGINEERING SECTION

CURVE	IMPELLER DIAMETER
A	8 3/4
B	8 3/8
C	8

SHUT OFF HEAD PER STAGE

A=67 FT.
B=61.2 FT.
C=56 FT.



twenty nine - pump - out

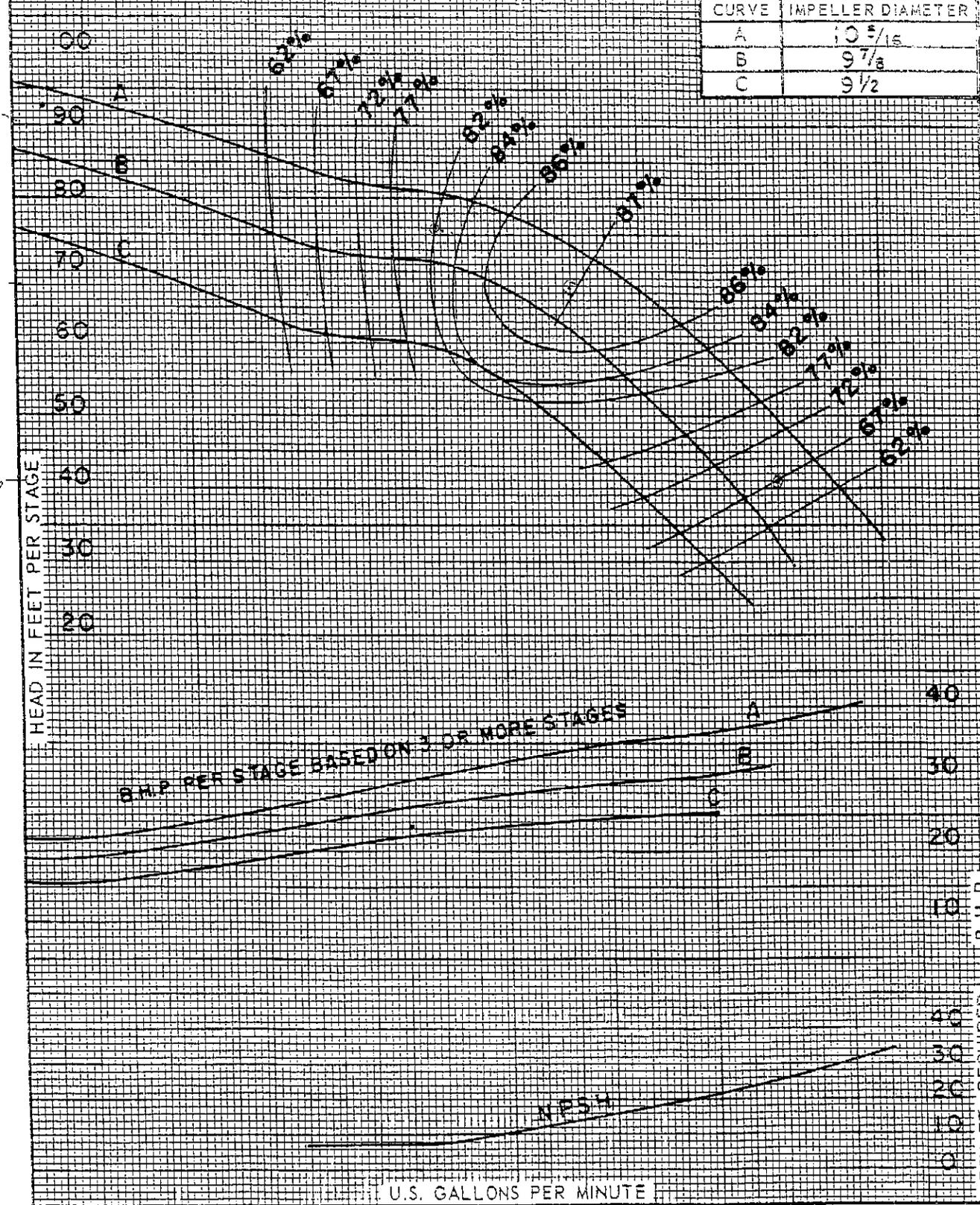
N.P.S.H. REQUIRED B.H.P.

200 400 600 800 1000 1200 1400 1600

PRINTED IN U.S.A.

SIZE M14		SINGLE STAGE PERFORMANCE		1770 R.P.M.	
EFFICIENCY CHANGE:			DIMENSIONS		FIG. 4700
ENAMELED BOWLS			THRUST FACTOR =		19.0
3	STAGE DEDUCT	0	POINTS	BOWL DIAMETER	13 1/2
2	STAGE DEDUCT	1	POINTS	IMPELLER SHAFT DIA.	2 1/8
1	STAGE DEDUCT	2	POINTS	LENGTH FIRST STAGE	27 3/8
				ADDITIONAL STAGE	10 3/4
					10 3/4

SUCTION - I.D. PIPE SIZE 10 " SIZE COLUMN ADAPTER " 10 " OR 12 " SEMI-ENC. IMPELLER
FOR OVER 6 STAGES CHECK BOWL LIMITATION ENGINEERING SECTION NO. 25597



*East
Increase*

0 400 800 1200 1600 2000 2400 2800 U.S. GALLONS PER MINUTE

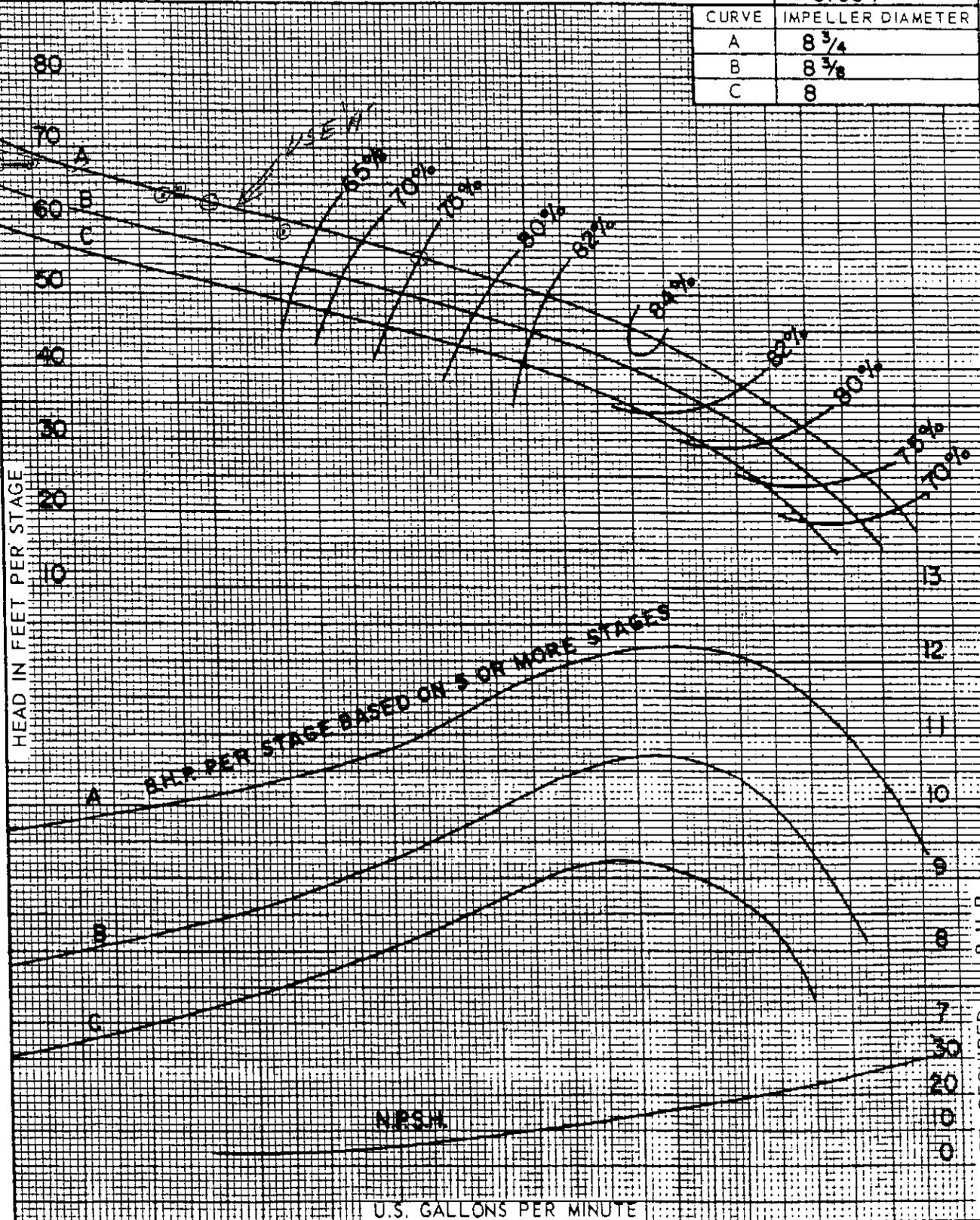
MISHNOCK #1

MISHNOCK #1 stage

T = 1968
 (1492)
 T = 1968
 4:2
 1973

SIZE L-12		SINGLE STAGE PERFORMANCE		1770 R.P.M.	
EFFICIENCY CHANGE:			DIMENSIONS		FIG. 4700
4 STAGE DEDUCT			1 POINTS		FIG. 4750
3 STAGE DEDUCT			2 POINTS		
2 STAGE DEDUCT			3 POINTS		
1 STAGE DEDUCT			6 POINTS		
ENAMELED BOWLS			BOWL DIAMETER		1 1/2
			IMPELLER SHAFT DIA.		1 1/2
			LENGTH FIRST STAGE		27
			ADDITIONAL STAGE		30
			THRUST FACTOR =		3.1
SUCTION - I.D. PIPE SIZE			8"	SIZE COLUMN ADAPTER	6" 8" OR 10"
FOR OVER 9 STAGES CHECK BOWL LIMITATION ENGINEERING SECTION					SEMI-ENC. IMPELLER NO. 31054

CURVE	IMPELLER DIAMETER
A	8 3/4
B	8 3/8
C	8



NPSH FT. REQUIRED B.H.P.

200 400 600 800 1000 1200 1400

Appendix F
KCWA Historic Hydrant Test Results

EAST GREENWICH RE DISTRICT
HYDRANT FLOW DATA

STREET LOCATION	HYD NO	POLE #	HOUSE #	MAKE	SIZE OF PORTS	SIZE OF MAIN	VALVE ON BRANCH	DIST FROM VALVE TO HYDT	1) 2-1/2" PORT FULL OPEN (G.P.M.)	STATIC PRES.	RES. PRES.	DATE FLOWED	TIME FLOWED	HYD DATE
ADIRONDACK DR/MONROE DR	EG 263		30	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1300	75	64	10/30/00	11:00 AM	1974
ADIRONDACK DRIVE	EG 305	LOT 58	4248	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8' 6"	1010	52	45	10/30/00	12:35 PM	1985
ADIRONDACK DRIVE	EG 306	LOT 55	205	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8'	1060	50	43	10/30/00	11:45 AM	1985
ADIRONDACK DRIVE	EG 307	LOT 52	195	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	9'	980	45	37	10/30/00	11:40 AM	1985
ADIRONDACK DRIVE	EG 272		155	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	12'	1125	57	49	10/30/00	11:25 AM	1980
ADIRONDACK DRIVE	EG 251		100	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	12'	1190	65	56	10/30/00	11:15 AM	1980
ALLEN DRIVE/HANAFORD DR	EG 040	5	56	MATHEW	2-2 1/2" 1-4 1/2"	8"	YES	3'	1300	80	70	10/26/00	2:45 PM	UNK
ARROWHEAD TRAIL	EG 237	1		MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	5'	1635	134	105	11/2/00	2:00 PM	1972
ASHBROOK RUN/OAKCREST DR	EG 327	LOT 5		KENNEDY	2-2 1/2" 1-4 1/2"	8"	YES	8'	1300	76	64	10/23/00	9:18 AM	1988
ATHERTON RD/HANAFORD DR	EG 038	3	10	DARLING	2-2 1/2" 1-4 1/2"	6"	YES	2' 6"	1190	64	50	10/23/00	11:10 AM	1956
ATHERTON ROAD/MIDDLE RD	EG 039	1	555	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	6' 6"	1240	83	58	10/20/00	12:01 AM	1959
BALSAM DRIVE	EG 225	3	40	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	3' 6"	1350	86	68	10/23/00	10:20 AM	1971
BARROWS DR/BLUEBERRY DR	EG 031	3	58	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	12'	1300	80	60	10/23/00	9:30 AM	1960
BEAR SWAMP ROAD	EG 271		T. GARAGE	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8'	1350	93	70	10/31/00	1:20 PM	1980
BICKNELL AVE/WINE ST	EG 113	3	26	MUELLER	2-2 1/2" 1-4 1/2"	4"	NO	NO	380	118	0	10/19/00	3:00 AM	1966
BIRCHWOOD WAY/BAYBERRY LN	EG 046	1	11	DARLING	2-2 1/2" 1-4 1/2"	6"	YES	2'	1455	96	82	10/27/00	8:55 AM	UNK
BIRCHWOOD WAY/WESTWOOD WY	EG 047	6	79	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	11'	1350	95	70	10/27/00	9:52 AM	1978
BOULDER WAY DRIVE	EG 296	N E EASE	50	MUELLER	2-2 1/2" 1-4 1/2"	20"	YES	4'	920	40	35	10/27/00	3:06 PM	1982
BOULDER WAY/ROUNDHILL CT	EG 299	4137		MUELLER	2-2 1/2" 1-4 1/2"	20"	YES	5'	840	35	30	10/27/00	3:13 PM	1984
BOW ST/DEVON CT	EG 245	10	125	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	9' 6"	1100	60	38	10/23/00	1:40 PM	1974
BOW STREET	EG 229	6	60	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	UNK	1060	66	38	10/23/00	1:56 PM	1972
BOXWOOD DRIVE	EG 006	2	23	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4' 6"	1300	73	60	10/23/00	3:20 PM	1963

STREET LOCATION	HYD NO	POLE #	HOUSE #	MAKE	SIZE OF PORTS	SIZE OF MAIN	VALVE ON BRANCH	DIST FROM VALVE TO HYDT	1) 2-1/2" PORT FULL OPEN FLOW (G.P.M.)	STATIC PRES.	RES. PRES.	DATE FLOWED	TIME FLOWED	HYD DATE
BRAYTON STREET	EG 071	C & 3	51	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	1' 6"	380	68	5	10/18/00	10:56 PM	1979
BRIDGE ST/LINCOLN ST	EG 127	5	GRAHAM	MUELLER	2-2 1/2" 1-4 1/2"	6"	NO	NO	410	114	6	10/19/00	1:40 AM	1964
BRISAS CIRCLE	EG 203	5	90	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1405	94	78	10/19/00	9:15 PM	1969
BRISAS CIRCLE	EG 204		40	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8' 6"	1405	94	76	10/19/00	9:20 PM	1969
BROOKFIELD COURT	EG 359		LOT 15	MUELLER	2-2 1/2" 1-4 1/2"	16"	YES	7' 6"	1500	98	85	10/23/00	9:10 AM	1991
CARDINAL LN/ROBIN CIRCLE	EG 228		20	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3' 6"	1465	101	80	11/2/00	1:45 PM	1972
CARTIER COURT	EG 308	LOT 38 & 39	FR. HIGHL	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	7' 6"	1040	52	43	10/30/00	12:45 PM	1985
CASTLE STREET	EG 120	4 & 5	42	MUELLER	2-2 1/2" 1-4 1/2"	4"	YES	12' 6"	1060	98	46	5/17/01	11:35 AM	2000
CAVALIER DR/REMY PLACE	EG 274			MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	7'	1125	57	50	10/30/00	1:00 PM	1980
CAVALIER DRIVE	EG 309	LOT 46	FR. HIGHL	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	7'	1090	56	48	10/30/00	1:30 PM	1985
CAVALIER DRIVE	EG 273		15	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	7'	1220	66	57	10/30/00	1:10 PM	1980
CEDAR AVE/DIVISION ST	EG 142	36	181	DARLING	2-2 1/2" 1-4 1/2"	8"	YES	3'	1445	80	75	11/6/00	2:17 PM	UNK
CEDAR AVE/SYLVAN DR	EG 140	36	429	DARLING	2-2 1/2" 1-4 1/2"	8"	YES	3' 6"	1500	106	84	10/20/00	12:10 AM	UNK
CEDAR AVENUE	EG 141	42	536	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1405	82	76	10/19/00	11:45 AM	1988
CEDAR AVENUE	EG 139	30	342	DARLING	2-2 1/2" 1-4 1/2"	8"	YES	4'	1500	95	80	10/23/00	8:53 AM	UNK
CEDAR AVENUE	EG 138	9	JR HIGH	DARLING	2-2 1/2" 1-4 1/2"	8"	YES	12'	1545	95	85	10/26/00	1:26 PM	UNK
CHESTNUT DRIVE	EG 191	6 & 7	LOT 38	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3' 6"	1405	85	70	10/26/00	9:32 AM	1967
CHESTNUT DRIVE	EG 190	1	220	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1500	95	80	10/24/00	3:29 PM	1967
CHESTNUT DRIVE	EG 012	17	2	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	7'	1300	80	60	10/24/00	12:47 PM	1965
CHIEF BOTELHO CT	EG 386		LOT 55	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	9'	1300	75	62	11/3/00	10:55 AM	1999
CINDYANN DR/BUNKERHILL LN	EG 019	4	221	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	7'	840	32	26	10/23/00	1:20 PM	1946
CINDYANN DR/GREAT RD	EG 020	10	165	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	995	45	34	10/23/00	1:10 PM	1965

WEST GREENWICH FIRE DISTRICT - MISHNOCK
HYDRANT FLOW DATA

STREET LOCATION	HYDT NO	POLE #	HOUSE #	MAKE	SIZE OF PORTS	SIZE OF MAIN	VALVE ON BRANCH	DIST FROM VALVE TO HYDT	PORT FULL OPEN FLOW (G.P.M.)	STATIC PRES.	RES. PRES.	DATE FLOWED	TIME FLOWED	HYD DATE
BAILEY DRIVE	WG 011	7	36	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4'	1280	72	60	11/30/00	12:25 PM	1988
CARRS POND RD	WG 041	5	21	DARLING	2-2 1/2" 1-4 1/2"	20"	YES	5'	1080	44	42	5/7/01	11:10 AM	2000
CARRS POND RD	WG 042	11	TERR DR	DARLING	2-2 1/2" 1-4 1/2"	20"	YES	6'	840	28	26	5/7/01	10:55 AM	2000
CARRS POND RD	WG 043	34		DARLING	2-2 1/2" 1-4 1/2"	20"	YES	7'	1000	38	36	5/7/01	10:40 AM	2000
CARRS POND RD	WG 044	26	TANK ENTR	DARLING	2-2 1/2" 1-4 1/2"	20"	YES	8'	1060	40	36	5/7/01	10:25 AM	2000
CARRS POND RD	WG 045	19	DEER RUN	DARLING	2-2 1/2" 1-4 1/2"	20"	YES	7'	920	30	26	5/7/01	10:00 AM	2000
CLUB HOUSE ROAD	WG 027	14	90	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	11'	1110	72	42	11/30/00	1:08 PM	1976
CLUB HOUSE ROAD	WG 016	901	22	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	7'	1190	70	50	11/30/00	12:53 PM	1971
CLUB HOUSE ROAD	WG 026	10	62	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4'	1190	69	44	11/30/00	1:00 PM	1976
COMANCHE TRAIL	WG 015	3	22	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	4'	1110	64	50	11/30/00	1:15 PM	1971
DIVISION RD	WG 046	242	12	DARLING	2-2 1/2" 1-4 1/2"	16"	YES	5'	1150	52	48	5/7/01	9:10 AM	2000
DIVISION RD	WG 047	507	N.L. TPK	DARLING	2-2 1/2" 1-4 1/2"	20"	YES	18'	1350	68	60	5/7/01	8:30 AM	2000
HOPKINS HILL RD	WG 039	15	CENTREX	DARLING	2-2 1/2" 1-4 1/2"	20"	YES	11'	1275	68	60	5/7/01	11:50 AM	2000
HOPKINS HILL RD	WG 040	3	UNNINGHAM	DARLING	2-2 1/2" 1-4 1/2"	20"	YES	9'	1350	70	62	5/7/01	11:40 AM	2000
HOPKINS HILL RD/TECH PARK	WG 030	#1		MUELLER	2-2 1/2" 1-4 1/2"	16"	YES	5'	1300	74	64	11/30/00	1:25 PM	1988
HOPKINS HILL ROAD	WG 035	12	CONEAULT	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	6'	1280	72	62	11/30/00	1:34 PM	1988
LAKE DR	WG 021	12	70	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1090	70	44	11/30/00	2:07 PM	1976
LAKE DR	WG 023	26	168	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	920	44	32	11/30/00	2:32 PM	1976
LAKE DR	WG 024	15	#1 HY P. STA	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4'	1110	56	42	11/30/00	2:15 PM	1976
LAKE DR	WG 025	15	#2 HY P. STA	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1140	55	42	11/30/00	2:20 PM	1976
LAKE DR/CAMBIO CT	WG 022	23	LOT 12	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4	980	44	34	11/30/00	2:26 PM	1976
LAKE DRIVE/PINE TREE LANE	WG 017	879	44	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	12'	1190	68	50	11/30/00	1:55 PM	1976

WEST GREENWICH FIRE DISTRICT - MISHNOCK

HYDRANT FLOW DATA

STREET LOCATION	HYDT NO	POLE #	HOUSE #	MAKE	SIZE OF PORTS	SIZE OF MAIN	VALVE ON BRANCH	DIST FROM VALVE TO HYDT	1) 2 - 1/2" PORT FLOW FULL OPEN (G.P.M.)	STATIC PRES.	RES. PRES.	DATE FLOWED	TIME FLOWED	HYD DATE
MISHNOCK RD/BAILEY DR	WG 009	47	173	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	6'	1320	70	60	11/30/00	2:55 PM	1970
MISHNOCK RD/LAKE DRIVE	WG 005	14	333	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	15' 6"	1300	74	60	11/30/00	1:45 PM	1969
MISHNOCK RD/PINE TREE LN	WG 019	1	4	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	7'	1320	74	60	11/30/00	3:05 PM	1974
MISHNOCK RD/RAGNELL RD	WG 006	23	289	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	MAINLINE	1275	71	58	4/23/01	9:00 AM	1970
MISHNOCK ROAD	WG 020	41	201	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	6'	1300	72	62	4/25/01	1:10 PM	UNK
MISHNOCK ROAD	WG 036	65	57	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	8'	1060	50	42	4/25/01	9:20 AM	1988
MISHNOCK ROAD	WG 028	59	107	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	8'	1250	60	58	4/23/01	10:20 AM	1981
MISHNOCK ROAD	WG 037	10	79	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	7'	1200	60	58	4/25/01	1:40 PM	1988
MISHNOCK ROAD	WG 010	56	135	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	3'	1325	72	62	4/25/01	1:20 PM	1970
MISHNOCK ROAD	WG 008	158	215	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	4'	1285	68	62	4/23/01	9:40 AM	1982
MISHNOCK ROAD	WG 004	138	382	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	7'	1275	68	54	4/23/01	9:30 AM	1969
MISHNOCK ROAD	WG 007	151	259	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	6'	1325	73	62	4/23/01	9:15 AM	1970
MOHAWK TRAIL	WG 014	5	38	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	2'	1190	62	50	4/23/01	11:00 AM	1971
NOOSENECK HILL ROAD	WG 029	156	65	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4'	920	54	32	4/23/01	1:30 PM	1981
NOOSENECK HILL ROAD	WG 002	158	ELKS	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1000	50	34	4/23/01	1:40 PM	UNK
NOOSENECK HILL ROAD	WG 003	165	12	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	1'	1150	62	48	4/23/01	1:50 PM	1966
NOOSENECK HILL ROAD	WG 001	P17 1426	TEX. STA	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	2'	880	52	24	4/23/01	1:00 PM	1966
OLD HICKORY RD	WG 038	5	32	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8' 5"	1075	61	52	4/23/01	11:20 AM	1997
PINE TREE LANE/POND VIEW	WG 018	1	28	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	4' 6"	1300	70	58	11/30/00	1:55 PM	1973
ROLAND DRIVE	WG 012	4 1/2	17 A	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	2' 6"	1300	70	61	4/23/01	10:30 AM	1969
ROLAND DRIVE	WG 013	1349	51	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1325	71	62	4/23/01	10:40 AM	1969

WASHINGTON FIRE DISTRICT
HYDRANT FLOW DATA

STREET LOCATION	HYD NO	POLE #	HOUSE #	MAKE	SIZE OF PORTS	SIZE OF MAIN	VALVE ON BRANCH	DIST FROM VALVE TO HYDT	1) 2-1/2" PORT OPEN FLOW (G.P.M.)	STATIC PRES.	RES. PRES.	DATE FLOWED	TIME FLOWED	HYD. DATE
ABBOTTS CROSSING ROAD	WA 042	8	93	DARLING	2-2 1/2" 1-4 1/2"	6"	YES		860	70	28	5/10/01	9:30 AM	UNK
ABBOTTS CROSSING ROAD	WA 041	4 & 5	46	DARLING	2-2 1/2" 1-4 1/2"	6"	YES		1060	80	40	5/10/01	9:45 AM	UNK
AIRPORT RD/RESERVOIR RD	WA 095	21		MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	8' 6"	1190	70	52	5/22/01	1:00 PM	1988
BANK STREET	WA 092	3	GARLAND	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	2' 3"	1040	54	40	5/22/01	12:32 PM	1984
BATTEY STREET	WA 102	5		MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	7'	950	56	38	6/13/01	9:10 PM	1989
BOULDER DRIVE	WA 101	2	2	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8' 6"	1090	58	42	5/22/01	11:30 AM	1988
BOULDER DRIVE	WA 100	6	8	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	7' 6"	950	48	38	5/22/01	11:35 AM	1988
BUTTERNUT DRIVE	WA 083	2	5	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1090	57	46	5/22/01	12:51 PM	1978
CATALPA WAY	WA 114		21	DARLING	2-2 1/2" 1-4 1/2"	8"	YES	7'	980	52	40	5/22/01	1:22 PM	1996
CHANDLER DRIVE	WA 070	7	25	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	900	54	44	5/17/01	11:00 AM	1973
CHANDLER DRIVE/DANIEL DR	WA 068	2	4	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	1160	62	52	5/22/01	3:10 PM	1973
COBBLESTONE TERRACE	WA 108		21	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	8' 6"	1000	46	40	5/17/01	10:05 AM	1992
COBBLESTONE TERRACE	WA 031		37	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	5'	950	43	35	5/17/01	10:15 AM	1993
COBBLESTONE TERRACE	WA 109		11	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	6'	1130	58	52	5/17/01	9:55 AM	1993
COBBLESTONE TERRACE	WA 110		1	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	6'	1250	64	60	5/17/01	9:45 AM	1993
COLVINTOWN ROAD	WA 046	68 1/2	11	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8' 6"	1060	80	68	5/10/01	10:30 AM	1965
COLVINTOWN ROAD	WA 078	44	88	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	2'	950	35	30	6/7/01	9:50 AM	1976
COLVINTOWN ROAD	WA 058	65	21	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4'	1230	68	56	5/10/01	10:40 AM	1970
COLVINTOWN ROAD	WA 066	51	55	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	5'	1090	64	44	5/10/01	11:05 AM	1983
COLVINTOWN ROAD	WA 065	55	48	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	6' 10"	1190	64	48	5/10/01	11:00 AM	1972
COLVINTOWN ROAD	WA 064	61	35	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8' 6"	1160	67	52	5/10/01	10:50 AM	1972
COLVINTOWN ROAD	WA 067	47	74	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4'	750	38	20	5/10/01	11:25 AM	1972

WASHINGTON FIRE DISTRICT
HYDRANT FLOW DATA

STREET LOCATION	HYDT NO	POLE #	HOUSE #	MAKE	SIZE OF PORTS	SIZE OF MAIN	VALVE ON BRANCH	DIST FROM VALVE TO HYDT	1) 2-1/2" PORT OPEN FLOW (G.P.M.)	STATIC PRES.	RES. PRES.	DATE FLOWED	TIME FLOWED	HYD. DATE
CYNTHIA DR/LINDA COURT	WA 053	8	1	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	7' 6"	950	54	32	6/7/01	9:05 AM	1969
CYNTHIA DRIVE	WA 044	2 & 3	8	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	12'	1150	79	46	6/7/01	8:50 AM	1966
DIANE DRIVE	WA 082	6 & 7	32	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3' 6"	820	67	34	5/25/01	8:45 AM	1978
DONNA'S WAY	WA 094	2	9	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	8'	805	58	38	5/25/01	9:30 AM	1988
FERNCREST DR/KILTON	WA 054	3	23	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	6' 6"	1000	54	36	6/6/01	9:35 AM	1968
FIRST STREET/SECOND ST	WA 056	2	4	DARLING	2-2 1/2" 1-4 1/2"	6"	YES	1'	1060	80	42	5/25/01	9:50 AM	UNK
FLAT RIVER ROAD	WA 047	055	GLASS PLANT	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	2'	1350	80	69	5/25/01	10:15 AM	1966
FLAT RIVER ROAD/TOWN HALL	WA 048	150 1/2	1670	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	3'	1210	75	60	5/25/01	11:30 AM	1966
GAIL COURT	WA 051	3	8	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	6'	1300	82	60	6/6/01	8:35 AM	1968
HOLDEN STREET/PARK ST	WA 050	7	40	MATHEWS	2-2 1/2" 1-4 1/2"	6"	NO	NO	840	76	26	6/6/01	2:35 AM	1941
HOMESTEAD RD/MANOR DR	WA 055	5	2	MUELLER	2-2 1/2" 1-4 1/2"	6"	YES	13'	920	60	30	6/6/01	2:15 PM	1968
INDUSTRIAL LANE	WA 043	64	GREEN PRIN	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	2' 6"	1160	80	60	5/25/01	11:15 AM	1981
IRONWOOD DRIVE	WA 093	4	5	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	3'	890	50	30	5/10/01	2:15 PM	1985
JEFFERSON DRIVE	WA 096	3	COV. LUMBR	MUELLER	2-2 1/2" 1-4 1/2"	12"	YES	10'	1030	46	37	6/7/01	8:15 AM	1973
JEFFERSON DRIVE	WA 080	2	COL.PLMBG	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4' 6"	1350	77	67	8/7/01	8:30 AM	1989
KILEY WAY	WA 116		5	DARLING	2-2 1/2" 1-4 1/2"	8"	YES	8'	1130	60	46	6/6/01	1:05 PM	1999
KILEY WAY	WA 117		13	DARLING	2-2 1/2" 1-4 1/2"	8"	YES	7'	1000	52	36	6/6/01	1:14 PM	1999
LEUBA ROAD	WA 107	7	17	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	4'	1250	78	62	5/17/01	8:10 PM	1993
LEUBA ROAD	WA 075	20	75	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	2'	1100	58	45	5/17/01	8:45 PM	1976
LEUBA ROAD	WA 076	18	54	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	2'	1190	65	52	5/17/01	8:30 AM	1976
LEUBA ROAD	WA 113	13 & 14	41	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	5'	1250	78	62	5/17/01	8:20 AM	1989
LLOYD DRIVE/ALVERO ROAD	WA 040	4	2	MUELLER	2-2 1/2" 1-4 1/2"	8"	YES	39'	1200	76	60	6/7/01	9:35 AM	1963