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City of Cold Lake

# Water Master Plan Update 2019

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Date: November 2020

Project #: 60609677-433

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| 1 | March 13, 2020 | Sean Frank | Draft 2 |
| 2 | April 20, 2020 | Nella Gulley | Draft 3 |
| 3 | November 20, 2020 | Nella Gulley | Final 1 |
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December 9, 2020

***Project #***
60609677-433

Dear Mr. Bhuiyan:

**Subject: City of Cold Lake**
**Water Master Plan Update 2019**

We are pleased to submit the final report for the Water Master Plan Update 2019 for the City of Cold Lake. All comments provided by the City of Cold Lake have been incorporated in this report.

Please let us know if you have any questions or require any additional information.

Sincerely,
**AECOM Canada Ltd.**

Nella Gulley, P.Eng.
Project Manager
Nella.Gulley@aecom.com

SF:blb
Encl.

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*AECOM: 2015-04-13*

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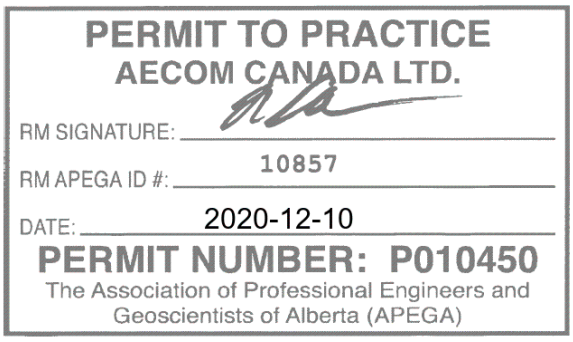

# Executive Summary

AECOM has been retained by the City of Cold Lake to provide an update to the 2016 Water Master Plan based on the recently approved annexed land, review the capacity of the current infrastructure, confirm required system upgrades, provide budgetary costs to satisfy current standards, and identify the infrastructure requirements for future developments within the City's boundaries and new annexation areas.

This study is comprised of two major sections which provide the existing system assessments and verifies the system improvements and evaluates the water servicing concept for the ultimate development within the City's boundaries and annexation area.

**Water Distribution System Improvements**

- There is no need for an immediate upgrade of the existing Building #5 reservoir and pumphouse.
- The existing Building #10 reservoir also has sufficient capacity to provide the required storage to Cold Lake South and does not require any upgrades.
- The City of Cold completed design for the pumphouse upgrading in Building #10 as the existing fire pump is not working. It is intended to remove the existing fire pump and one of the 20 HP pumps and replace with two new 100 HP pumps with a capacity of approximately 115 L/s each. It should be noted that the project for upgrades in Building #10 is ready for tender and not completed to date.
- Currently, the distribution pumps in the Building #10 pumphouse have adequate capacity to supply peak hour demand of 93 L/s, but not sufficient capacity to provide fire flow and maximum day demand of 292 L/s for Cold Lake South and Fort Kent/Ardmore. When the upgrades to the pumphouse are completed, the pumping capacity will increase from 277 L/s to 345 L/s and will be able to supply fire flows plus maximum day demand.
- As Indicated in Figure 3.1A, it is recommended to install three PRVs (#1, #2 and #3) in Cold Lake North to create three pressure zones and control high pressure within the City. The PRV #4 proposed for the Creekside subdivision is optional for the existing development but will be required for the ultimate system.
- The Cold Lake North and South water distribution systems are connected via a single 150 mm watermain with a valve which is closed during normal system operation. The portion of this water line has been recently replaced with 300 mm as well as the valve. In emergency, this valve can be open to feed the South or North system. With the installation of PRV#1, #2 and #3 and closing line on 12 Avenue, the City still will be able to back feed south to north.
- If the City of Cold Lake wishes to provide a level of service that is consistent with the design criteria and City's Engineering Servicing Standards, the upgrades shown in Figures 3.1A and 3.1B presented in Section 2 of this report are recommended to the distribution system network.
- The total cost for the proposed improvements within the existing system is approximately $14.8 million (including 45% contingency and engineering), which is less than the $17.0 million provided in the 2016 WMP as the City implemented some of the proposed upgrades.

**Ultimate Water Distribution System with Annexation Area**

- The total area of 1,059 ha designated for the residential use and 562 ha for the non-residential use has been identified for the ultimate development in Cold Lake. The approved annexation land of approximately 648 hectares is included in the total area for the ultimate development.

- The total projected ultimate population has been estimated at 63,368 people within the City of Cold Lake boundaries and annexation areas including existing population of 13,794. The total population has been split between Cold Lake North and South based on the designated development areas as follows:

    - Cold Lake North – 36,449 people
    - Cold Lake South - 26,919 people

- The pipe layout for the ultimate system was assumed based on the available land use plan and preliminary land use plan within the annexation area. The pipe sizes required to accommodate the ultimate development are indicated in Figures 4.1A and 4.1B presented in Section 3 of this report and have been adjusted due to the reduction of the approved annexation area.

- The three pressure zones are still recommended for the ultimate water distribution system. In addition to the three PRVs (#1, #2 and #3) recommended for the existing development scenario, it is proposed to install three PRVs to define pressure zones for the ultimate development scenario. PRV#4 will be required for the Creekside subdivision, PRV#5 will be required for the new development area north of 16 Avenue and east of Highway 28, and PRV #6 will be required for the new development south of 16 Avenue (Cold Lake South) as shown in Figures 4.1A.

- For the ultimate system, it is recommended to keep close the 300 mm isolation valve shown in Figure 4.1A to separate the pressure Zone1 and 2 during normal operation of the system. This valve can be opened in emergency to supplement North or South water distribution system.

The total existing storage and pumping capacity in Cold Lake is not adequate to accommodate the ultimate development including the annexation areas. Building #5 and Building #10 Reservoirs and Pumphouses are the critical infrastructure that requires the following upgrades to allow the development of the proposed future lands:

- The Building #5 Reservoir will require expansion to accommodate ultimate demands. The required storage capacity is 6,900 $m^3$. Population growth to 9,500 people in Cold Lake North will be the trigger for the reservoir expansion. At that time, it is recommended to conduct an analysis to determine the staging of sizing of the proposed reservoir expansion so that water turnover within the reservoir remains at less than two weeks.

- The upgrades to the existing pumping capacity in Building #5 will be required when the population in Cold Lake North reaches approximately 25,000 people. It is recommended to install an additional pump with a capacity of approximately 119 L/s to accommodate ultimate maximum day demands and fire flows of 539 L/s.

- The Building #10 Reservoir will require an additional storage capacity of 3,564 $m^3$ to accommodate ultimate demands when the population increases from 6,516 to approximately 19,500 people. It was assumed that the Building #7 Reservoir will only be used in an emergency.

- The upgraded pumping capacity from 277 L/s to 345 L/s in Building #10 is not sufficient to provide the maximum day demand plus fire flow of 508 L/s for the ultimate development in Cold Lake South, assuming Building #7 only operates at night filling the Building #10 reservoir.

- The upgrades to pumping capacity in Building #10 are recommended when the population in Cold Lake South increases to approximately 15,000 people. Installation of an additional pump with a capacity of approximately 163 L/s to accommodate ultimate maximum day demands and fire flows of 508 L/s will be required.

- The total conceptual estimate for the ultimate development with the annexation area is approximately $88.9 million (including 45% contingency and engineering), which is less than the $113.0 million provided in the 2016 WMP due to reduction of the approved annexation area.

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Appendix A. Water Modelling Results

# 1. Introduction

In February 2016, AECOM completed the City of Cold Lake Water Master Plan Update, which served as a complete study of the existing system identifying system deficiencies and recommending improvements, as well as provided a roadmap for water distribution system planning for future development areas.

In 2018, the City of Cold Lake completed the annexation of approximately five quarter sections west of Highway 28 and six quarter sections east of Highway 28 between Cold Lake North and South. The annexed area included approximately half the area originally anticipated for in the 2016 report, which is shown on Figure 1.1. As a result, an update to the ultimate development scenario has been requested providing an update to the Water Master Plan.

AECOM has been retained by the City of Cold Lake to provide an update to the 2016 Water Master Plan based on the recently annexed land, review the capacity of the current infrastructure, confirm required system upgrades, provide budgetary costs to satisfy current standards, and identify the infrastructure requirements for future developments within the City's boundaries and new annexation areas.

## 1.1 Scope of Work

The overall objective of this study is to provide an update to the model based on upgrades completed since the 2016 study and reassess the ultimate development servicing concept based on the recently annexed land between Cold Lake North and Cold Lake South adjacent to Highway 28. The scope of work includes the following:

- Update the water model based on upgrades completed since the 2016 study.
- Identify upgrades that still need to be completed for the Existing Development conditions.
- Update the water system demand based on the recently annexed area for the Ultimate Development.
- Provide an updated watermain servicing concept for the Existing System Improvements and the Ultimate Development.
- Assess the Existing System, Existing System with Improvements, and Ultimate Development servicing concepts based on average day demand, maximum day demand plus fire flow, and peak hour demand scenarios.
- Update the cost estimate for the remaining Existing System Improvements and Ultimate Development System.
- Prepare a report detailing the findings of the study and provide an updated implementation plan for the proposed upgrades.

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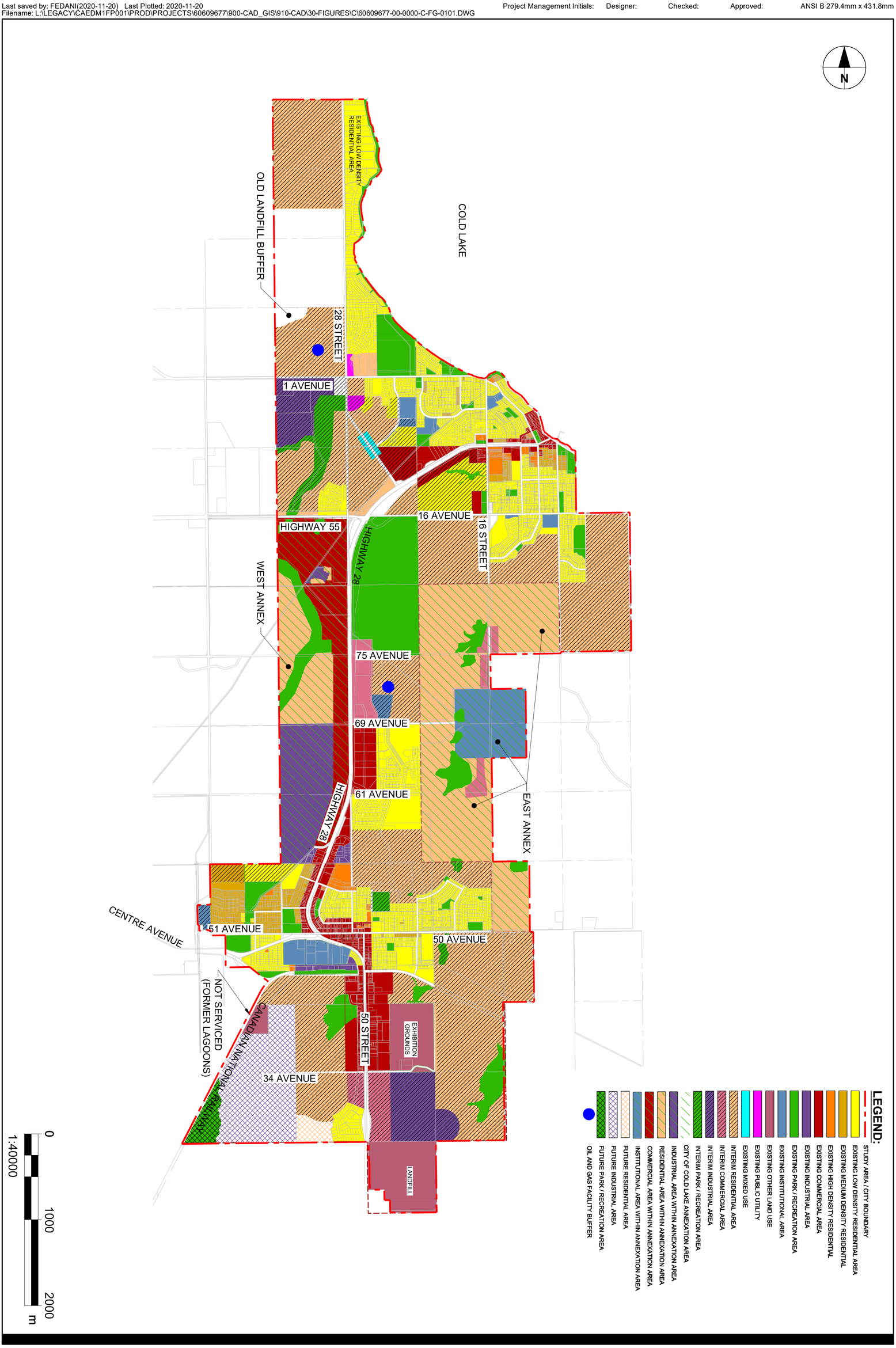


**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
FUTURE LAND USE PLAN WITH ANNEXATION AREAS
Project No.: 60609677

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**FIGURE 1.1**

# 2. Recent Upgrades to Existing System

Since the completion of the 2016 Water Master Plan Update (WMP), a few segments of pipe have been installed. The current existing system, with completed improvements, is shown on Figures 2.1A and 2.1B for Cold Lake North and South, respectively. The installation of 300 mm and 400 mm diameter watermains along Highway 28 and 25 Street in Cold Lake North have been completed in 2017, providing the recommended fire flow capacity of 225 L/s for adjacent areas and servicing for future development.

The upgrade in Cold Lake South includes upsizing a 150 mm diameter pipe to 250 mm diameter along Highway 28 between 51 Street and 47 Avenue and the installation of a 150 mm connection on 47 Avenue which increases fire flow in the south portion of Cold Lake South. In 2016, the City installed a 400 mm watermain on 69 Avenue providing service to the new subdivision and a 300 mm watermain on 61 Avenue for future development.

The remaining upgrades identified in the WMP are still required to meet the fire flow recommendation for the majority of the non-residential land use in Cold Lake South and residential area adjacent to the lake in Cold Lake North. It is understood that the PRV's proposed to turn the system into a three-pressure zone system have not been installed. Recently, the design of the PRV station proposed on 16 Street has been completed. However, the construction has been delayed due to conflict with the existing underground utilities. This PRV proposed to be installed in Building #5.

In the 2016 WMP, it was proposed to install 250 mm diameter pipe on 8 Avenue from 16 Street to 13 Street and upgrade the existing 150 mm with 250 mm diameter to improve fire flows in the residential and commercial area. These upgrades have been reviewed when it was proposed to install 200 mm watermain on 12 Street (from 8 Avenue to 11 Avenue) for the development of the Spinnaker subdivision. The installation of this 200 mm pipe and upgrades to the existing 150 mm watermain on 13 Street and 8 Avenue will eliminate the requirement for the 250 mm pipe along 8 Avenue from 13 Street to 16 Street. Figure 3.1A shows the revised upgrades in this area. The existing system with improvements development scenario has been updated accordingly.

It was also proposed to upgrade the existing 200 mm watermain with 300 mm watermain on 8 Avenue (from 16 Street to Jiffy Lube) or install a 300 mm pipe between Highway 28 and 16 Avenue including a PRV station as an alternative. With recently installed watermains in this area, the available fire flows vary from 207 L/s to 225 L/s under existing conditions. The lowest fire flows of 207 L/s and 210 L/s that have been noted adjacent to the Jiffy Lube meet the recommended fire flows of 183 L/s for light industrial. Therefore, it is not required to upgrade the existing 200 mm watermain located on 8 Avenue in order to improve fire flow in the area.

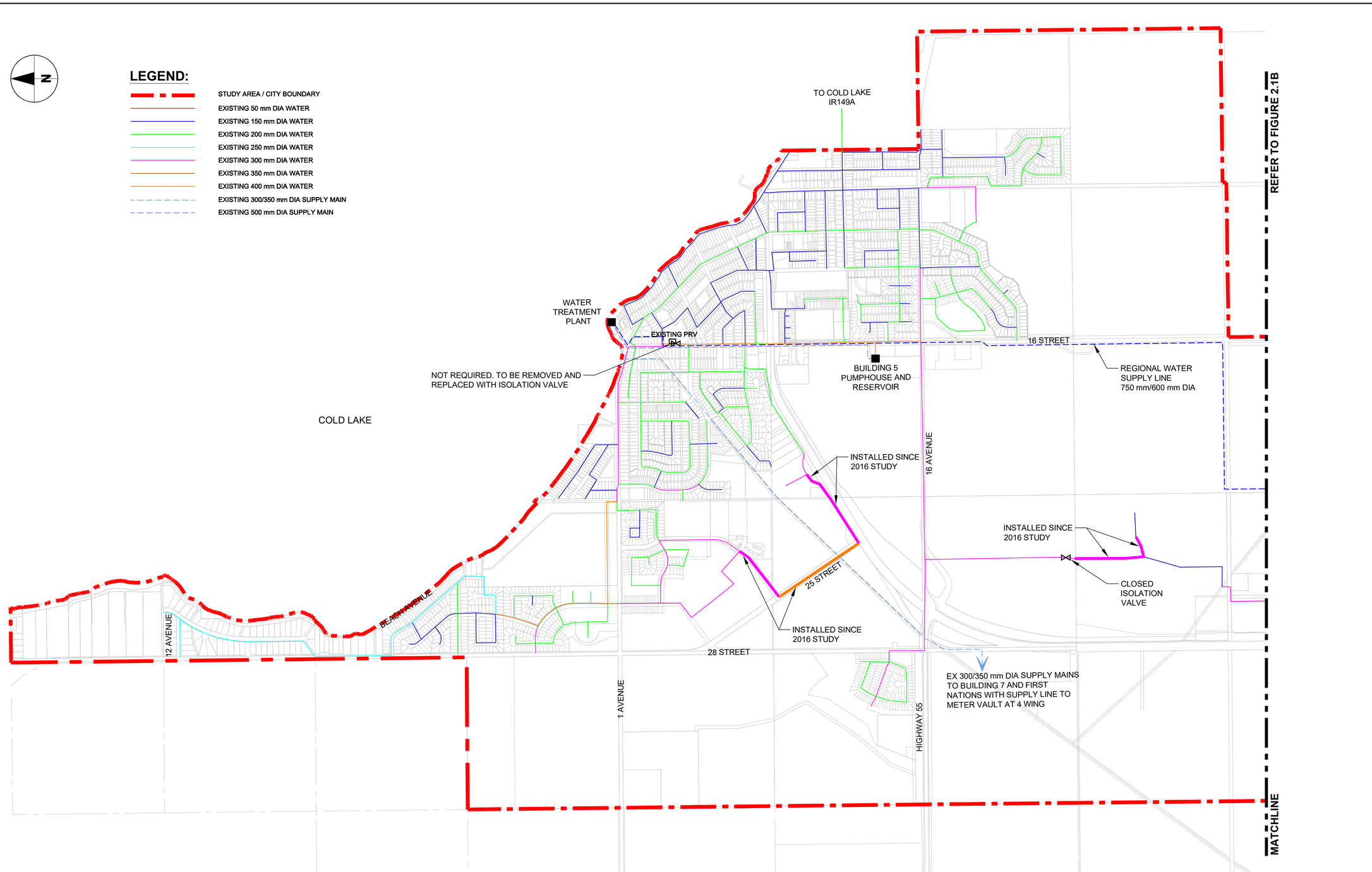


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FIGURE 2.1A

**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
EXISTING WATER DISTRIBUTION SYSTEM - COLD LAKE NORTH
Project No.: 60609677

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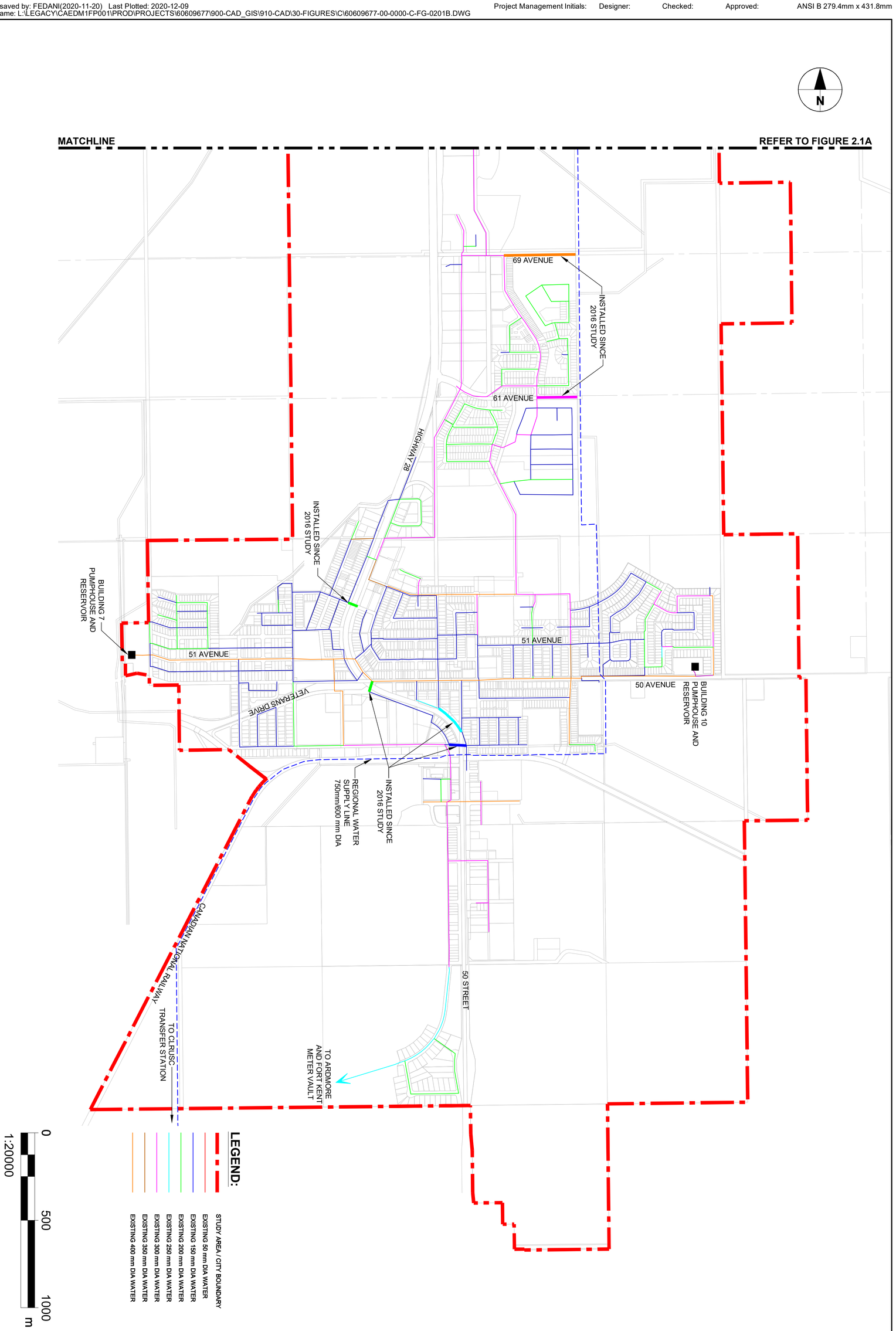


**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
EXISTING WATER DISTRIBUTION SYSTEM - COLD LAKE SOUTH
Project No.: 60609677

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**FIGURE 2.1B**

# 3. Required Upgrades to the Existing System

## 3.1 Water Distribution System Upgrades

The upgrades to the distribution system network within the City of Cold Lake recommended in the 2016 WMP are still required except for the watermains installed since 2016.

The recommended upgrades to the existing system are shown in Figures 3.1A and 3.1B and are required in order to improve the fire flows, to control high pressure within Cold Lake North and provide a level of service that is consistent with the design criteria and the City's Engineering Servicing Standards. The pipe sizes identified are preliminary and should be confirmed during subsequent design stages.

To control high pressure within Cold Lake North, it was recommended to create three pressure zones by installing three PRVs as shown in Figure 3.1A. The installation of PRVs will result in the reduction of excessive pressure in Cold Lake North and South and allow reduction of the water leakage and energy consumption. The proposed PRVs will be located at Building #5 (PRV#1), at 10 Street and 12 Avenue (PRV#2), at 7 Street and 12 Avenue (PRV#3).

The PRV#4 proposed for the Creekside subdivision is optional for the existing development but will be required for the ultimate system. The water main located on 8 Street between 11 Avenue and 12 Avenue needs to be closed when all three PRVs are installed which allows to keep pressure Zone1 separate from Zone 2.

The existing PRV on 16 Street adjacent to 3 Avenue does not work and not required to maintain separate pressure zones with installation of proposed PRV#1, #2 and #3. This PRV could be replaced with isolation valve.

Once the three pressure-zone system is implemented, the available fire flow along Highway 28 is slightly reduced below the recommended 225 L/s. However, this issue does not need to be addressed immediately. The development of the ultimate residential area north of 16 Avenue will be a trigger for the installation of a 300 mm diameter watermain connecting from Highway 28 to the south at 16 Avenue. This will improve the fire flows along Highway 28. Ultimately, an additional PRV #5 on the 300 mm watermain will be also required to maintain separate pressure zones.

The Cold Lake North and South water distribution systems are connected via a single 150 mm watermain with a valve which is closed during normal system operation. The portion of this water line has been recently replaced with 300 mm as well as the valve. In emergency, this valve can be open to feed the South or North system. With the installation of PRV#1, #2 and #3 and closing line on 12 Avenue, the City still will be able to back feed south to north.

The updated existing water distribution system was analyzed to verify the proposed improvements recommended in the 2016 WMP. The average day, maximum day plus fire flow, and peak hour scenarios were simulated with the intent of determining whether the existing system with upgrades will meet the minimum and maximum recommended pressures and provide the recommended fire flows to the existing and proposed development areas.

The system pressures during peak hour demand are presented in Figures 3.2A and 3.2B and are within the recommended limits. The results of fire flow analysis shown in Figures 3.3A and 3.3B indicate that the proposed upgrades will significantly improve the fire flows. The majority of the system meets the minimum recommended fire flows (225 L/s for commercial/industrial and 100 L/s for residential). The nodes that fail fire flow constraints are mostly located within the existing system at the dead ends with available fire flows from 91 L/s to 72 L/s.

### *3.1.1 Reservoir and Pumphouse Requirements - Cold Lake North*

As was indicated in the 2016 WMP, the existing Building #5 storage capacity of 4,500 $m^3$ is adequate to accommodate the required storage volume of 3,980 $m^3$ for the existing development in Cold Lake North and meets the Alberta Environment Standards.

The Building #5 existing pumping capacity of 420 L/s is sufficient to meet the existing maximum day plus fire flow demand of 274 L/s and peak hour demand of 74.22 L/s. Therefore, there is no need for immediate upgrades of the existing Building #5 Reservoir and Pumphouse.

### *3.1.2 Reservoir and Pumphouse Requirements - Cold Lake South*

The Building #10 Reservoir services the Cold Lake South distribution system during the day providing maximum day and peak hour demands. The total storage required for the existing system in Cold Lake South is approximately 4,311 $m^3$, which is significantly less than the available storage of 6,800 $m^3$ in Building #10. The storage capacity of the existing reservoir meets the Alberta Environment Standards and does not require any upgrades.

The City of Cold Lake completed design for the pumphouse upgrading in Building #10 as the existing fire pump is not working. It is intended to remove the existing fire pump and one of the 20 HP pumps and replace with two new 100 HP pumps with a capacity of approximately 115 L/s each. It should be noted that the project for upgrades in Building #10 is ready for tender and not completed to date.

When the upgrades to Building #10 are completed, the pumping capacity will be as presented in Table 3.1.

**Table 3.1: Building #10 Pumphouse – Updated Pumping Capacity**

| Pump Description | Flow (L/s) | TDH (m) |
|---|---|---|
| Existing - 100 HP Variable Speed Pump | 115 | 37.7 |
| New - 100 HP Variable Speed Pump | 115 | 37.7 |
| New - 100 HP Variable Speed Pump | 115 | 37.7 |
| Existing - 20 HP Constant Speed Pump (not used) | 23.5 | 37.7 |
| **Total (Excluding 20 HP Pump)** | **345** | |

Currently, the distribution pumps in the Building #10 Pumphouse have adequate capacity to supply the peak hour demand of 93 L/s, but are not sufficient to provide fire flow and maximum day demand of 292 L/s for Cold Lake South and Fort Kent/Ardmore. When the upgrades to the pumphouse are completed, the pumping capacity will increase from 277 L/s to 345 L/s and will be able to supply fire flows plus maximum day demand.

The pumphouse at Building #7 operates only at night to fill the Building #10 Reservoir and supply water demand to Cold Lake South if required during the night. The pumping capacity of 173 L/s is sufficient to supply maximum day and peak hour demands to Building #10.

The available storage of 2,273 $m^3$ in Building # 7 is not sufficient to meet the Alberta Environment Standards requirements for Cold Lake South.

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**LEGEND:**

- STUDY AREA / CITY BOUNDARY
- EXISTING 50 mm DIA WATER
- EXISTING 150 mm DIA WATER
- EXISTING 200 mm DIA WATER
- EXISTING 250 mm DIA WATER
- EXISTING 300 mm DIA WATER
- EXISTING 350 mm DIA WATER
- EXISTING 400 mm DIA WATER
- EXISTING 300/350 mm DIA SUPPLY MAIN
- EXISTING 500 mm DIA SUPPLY MAIN
- PROPOSED 150 mm DIA WATER
- PROPOSED 200 mm DIA WATER
- PROPOSED 250 mm DIA WATER
- PROPOSED 300 mm DIA WATER
- PROPOSED 400 mm DIA WATER
- PROPOSED PRV
- PRESSURE ZONE 1
- PRESSURE ZONE 2
- PRESSURE ZONE 3

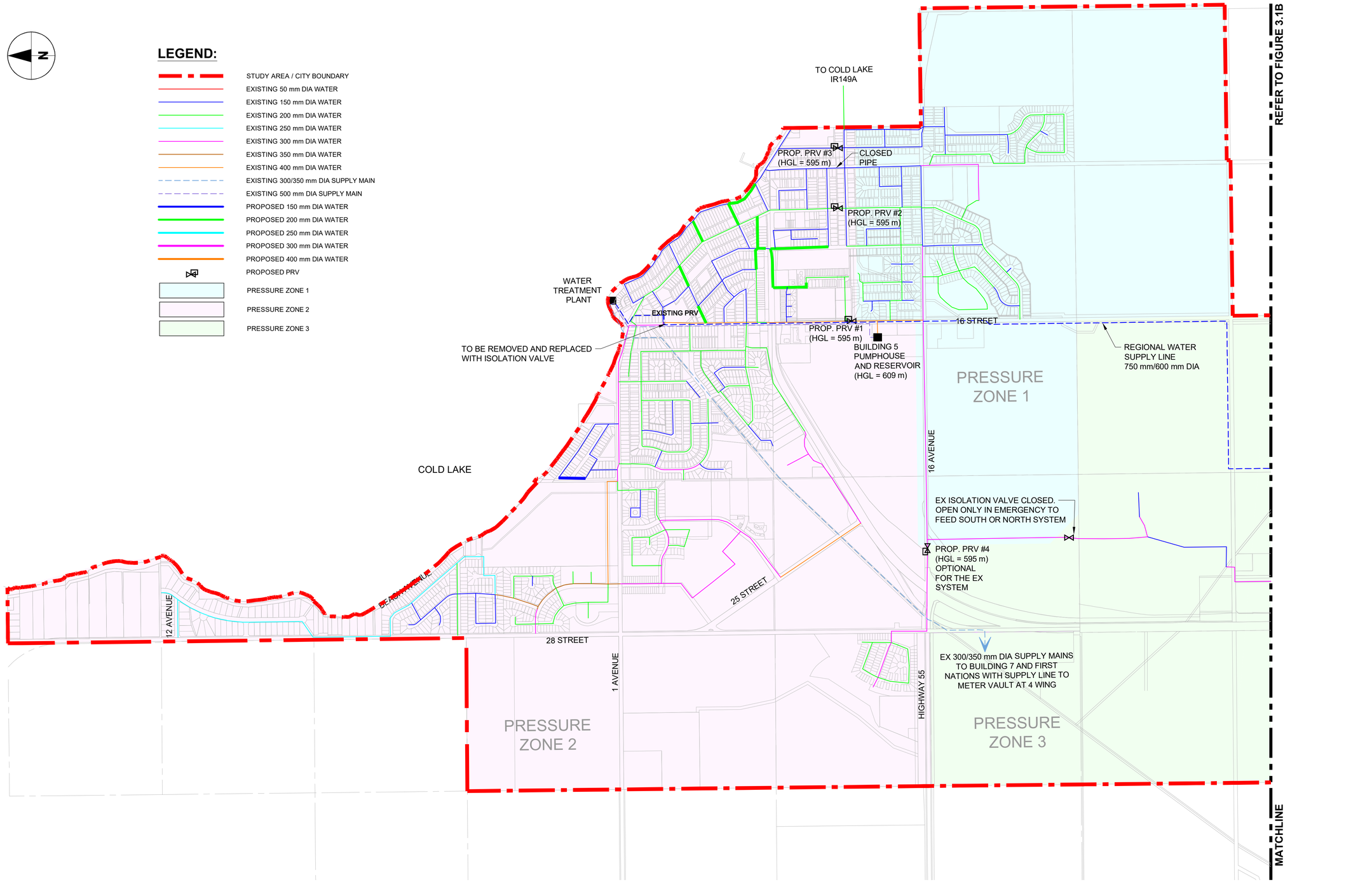


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**FIGURE 3.1A**

**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
EXISTING WATER DISTRIBUTION SYSTEM WITH UPGRADES - COLD LAKE NORTH
Project No.: 60609677

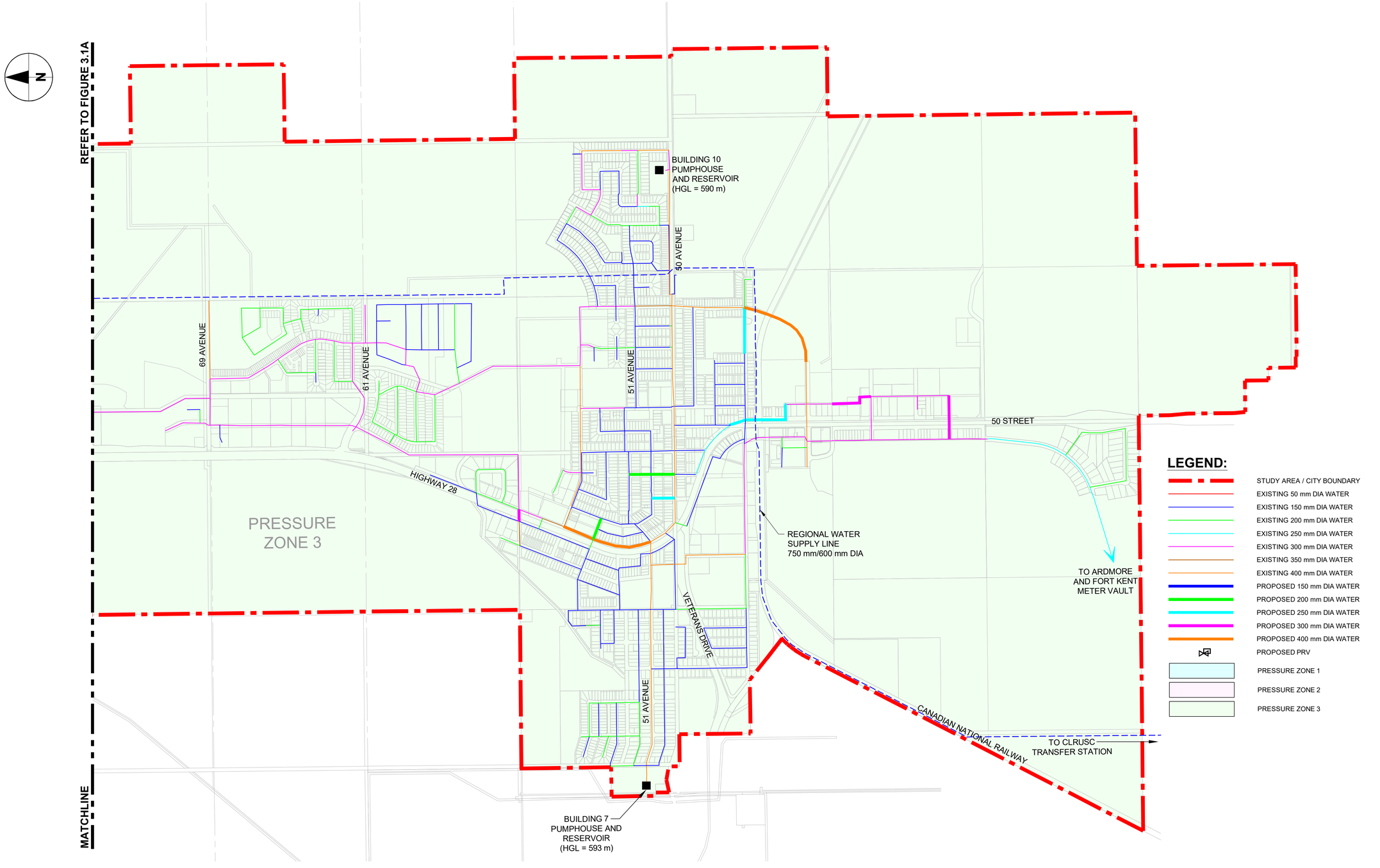


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**FIGURE 3.1B**

**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
EXISTING WATER DISTRIBUTION SYSTEM WITH UPGRADES - COLD LAKE SOUTH
Project No.: 60609677

**LEGEND:**

- STUDY AREA / CITY BOUNDARY
- EXISTING 50 mm DIA WATER
- EXISTING 150 mm DIA WATER
- EXISTING 200 mm DIA WATER
- EXISTING 250 mm DIA WATER
- EXISTING 300 mm DIA WATER
- EXISTING 350 mm DIA WATER
- EXISTING 400 mm DIA WATER
- EXISTING 300/350 mm DIA SUPPLY MAIN
- EXISTING 500 mm DIA SUPPLY MAIN
- PROPOSED 150 mm DIA WATER
- PROPOSED 200 mm DIA WATER
- PROPOSED 250 mm DIA WATER
- PROPOSED 300 mm DIA WATER
- PROPOSED 400 mm DIA WATER
- PROPOSED PRV
- < 280 kPa (40 psi)
- 280 - 345 kPa (40 - 50 psi)
- 345 -550 kPa (50 - 80 psi)
- 550 - 620 kPa (80 - 90 psi)
- > 620 kPa (90 psi)

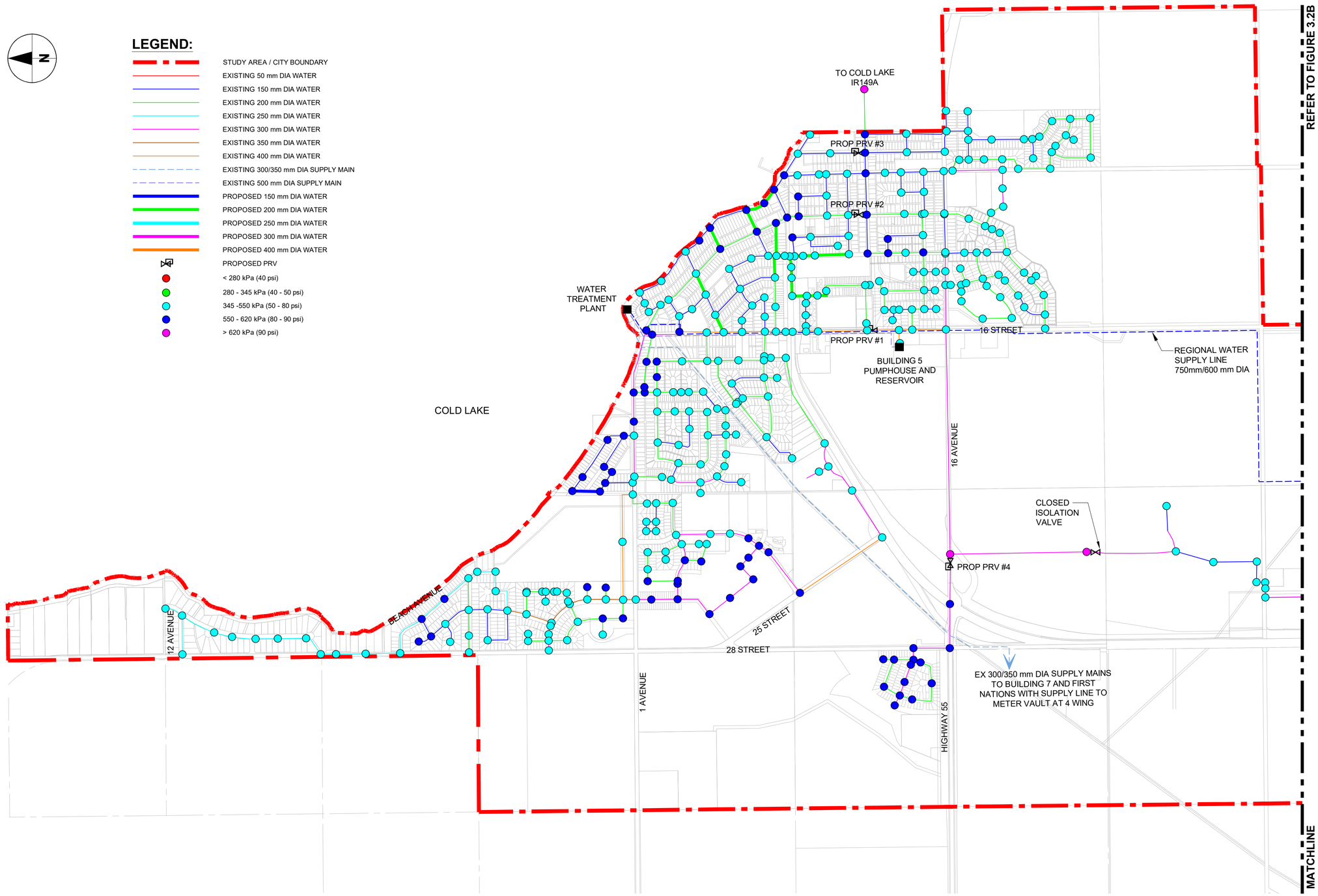


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**FIGURE 3.2A**

**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
EXISTING WATER DISTRIBUTION SYSTEM WITH UPGRADES - PEAK HOUR RESULTS - COLD LAKE NORTH
Project No.: 60609677

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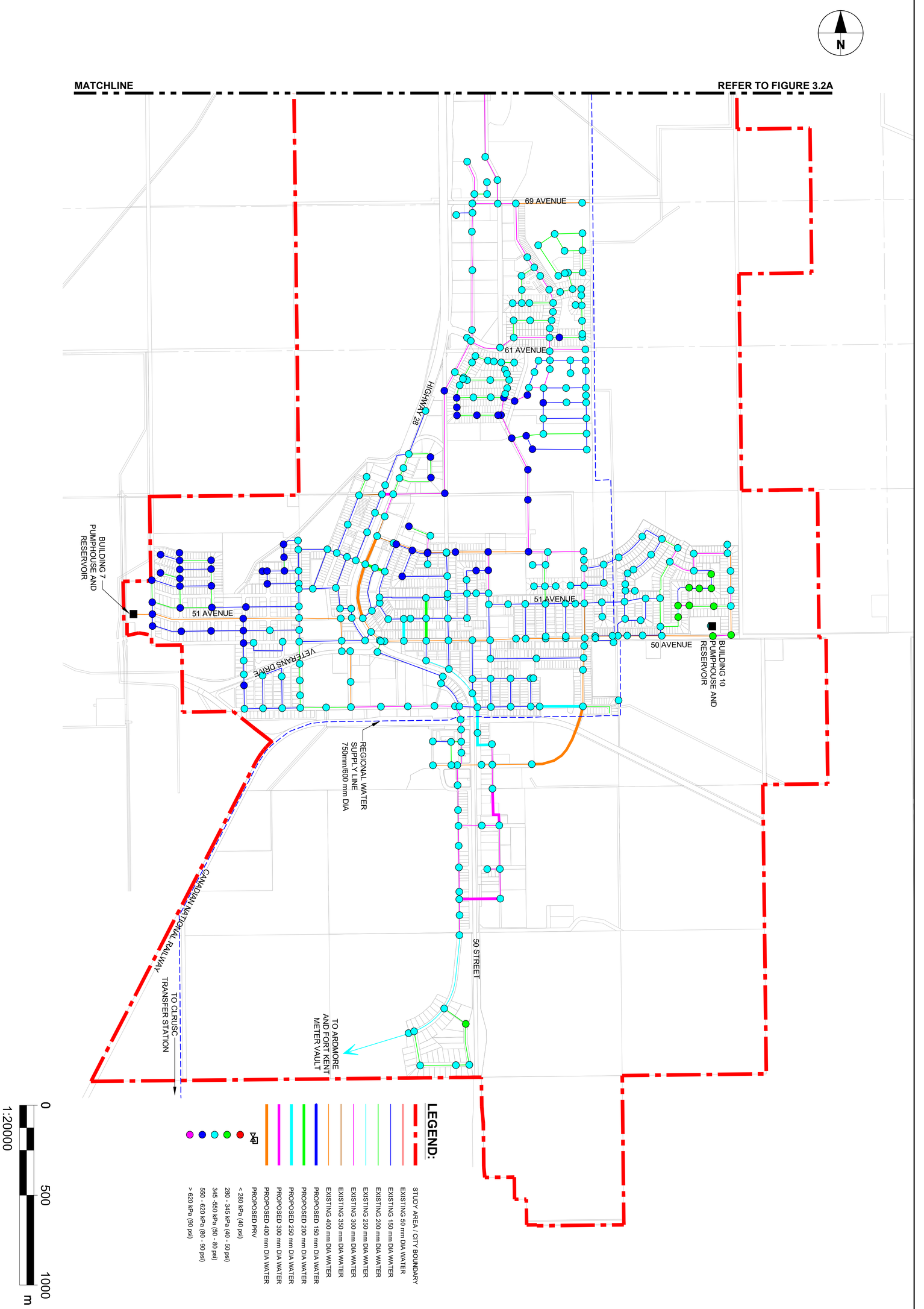


**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
EXISTING WATER DISTRIBUTION SYSTEM WITH UPGRADES - PEAK HOUR RESULTS - COLD LAKE SOUTH
Project No.: 60609677

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**FIGURE 3.2B**

## LEGEND:

- STUDY AREA / CITY BOUNDARY
- EXISTING 50 mm DIA WATER
- EXISTING 150 mm DIA WATER
- EXISTING 200 mm DIA WATER
- EXISTING 250 mm DIA WATER
- EXISTING 300 mm DIA WATER
- EXISTING 350 mm DIA WATER
- EXISTING 400 mm DIA WATER
- EXISTING 300/350 mm DIA SUPPLY MAIN
- EXISTING 500 mm DIA SUPPLY MAIN
- PROPOSED 150 mm DIA WATER
- PROPOSED 200 mm DIA WATER
- PROPOSED 250 mm DIA WATER
- PROPOSED 300 mm DIA WATER
- EXISTING 400 mm DIA WATER WITH UPGRADES
- PROPOSED PRV
- NODE - SATISFIED FIRE FLOW CONSTRAINTS
- NODE - FAILED FIRE FLOW CONSTRAINTS

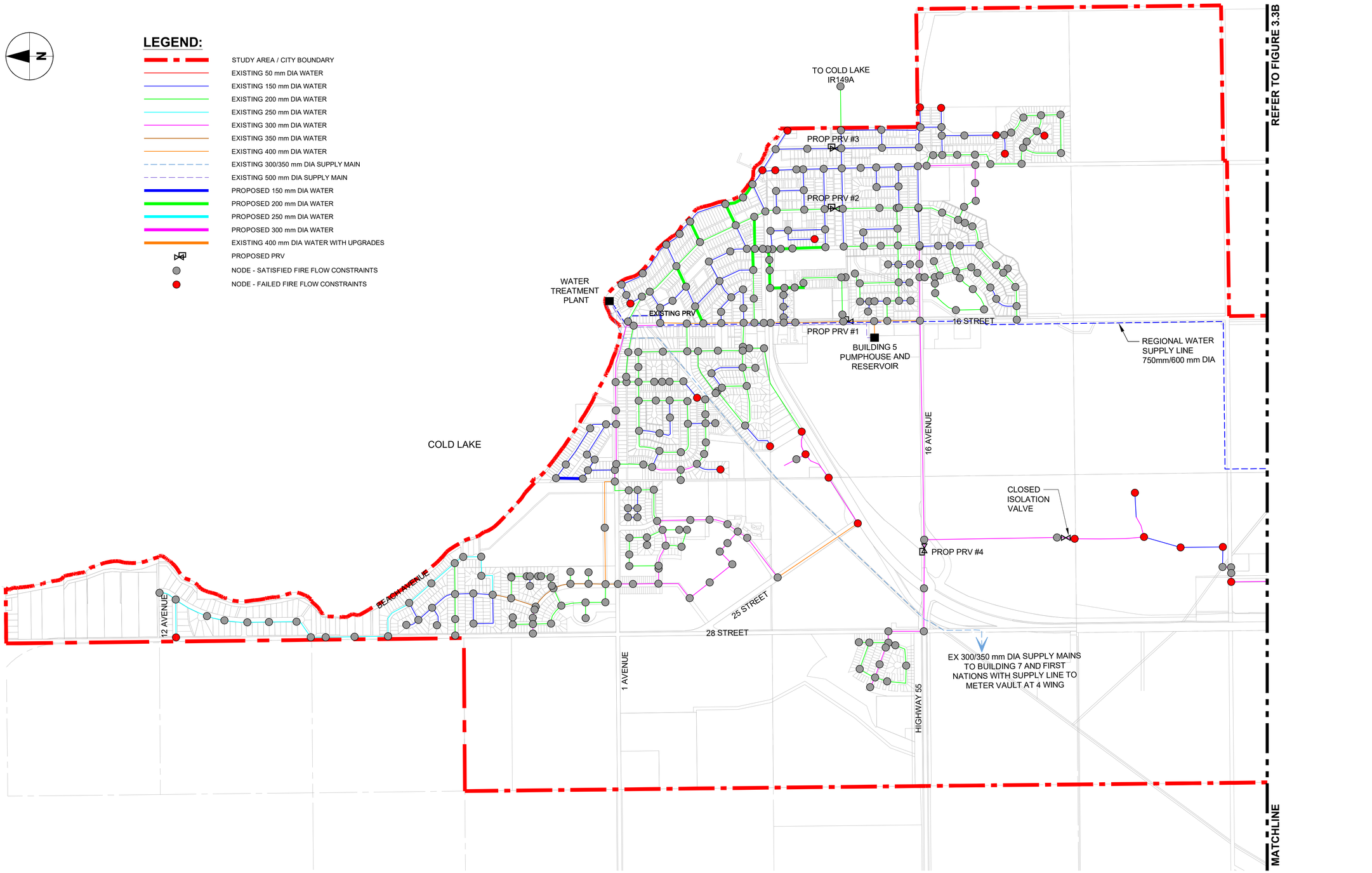


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**FIGURE 3.3A**

**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
EXISTING WATER DISTRIBUTION SYSTEM WITH UPGRADES - MAX DAY PLUS FIRE RESULTS- COLD LAKE NORTH
Project No.: 60609677

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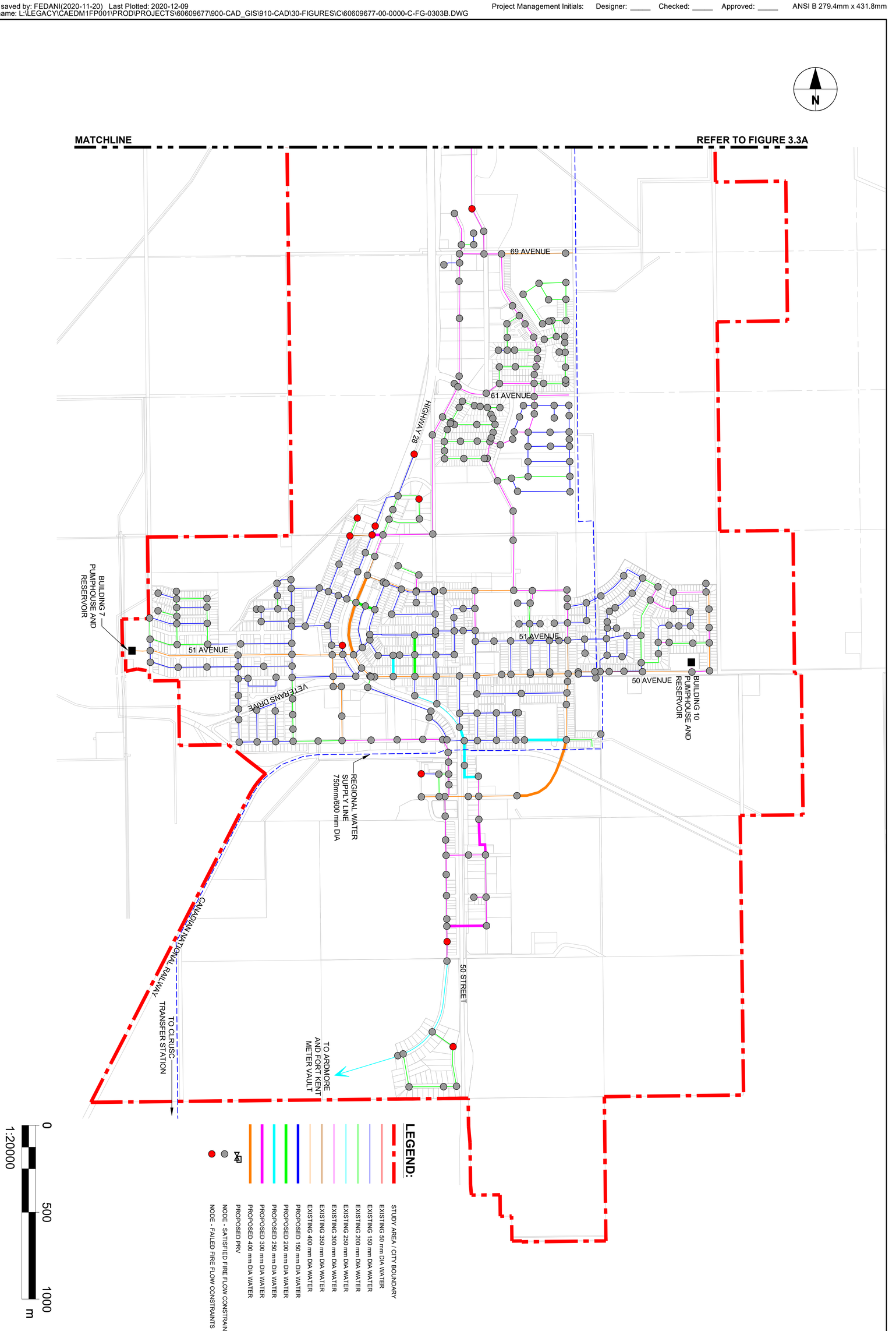


**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
EXISTING WATER DISTRIBUTION SYSTEM WITH UPGRADES - MAX DAY PLUS FIRE RESULTS - COLD LAKE SOUTH
Project No.: 60609677

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**FIGURE 3.3B**

# 4. Ultimate Development Condition with Updated Annex Area

## 4.1 Land Use / Population

In 2018, The City of Cold Lake completed the annexation of approximately five quarter sections west of Highway 28 and six quarter sections east of Highway 28 between Cold Lake North and South. The land was updated based on the City of Cold Lake 2018 Annexation Application report dated May 2018 completed by ISL Engineering. The approved annexation area with land use is shown on Figure 1.1.

The approved annex area is 706 ha which includes approximately 58 ha of natural area. The natural area is assumed not to be serviced. The approved land that will require servicing is approximately 648 hectares, which is almost two times less than was proposed in the 2016 Master Plan.

Based on the 2018 Annexation Report prepared by ISL Engineering, the additional area of approximately 123 ha within the City of Cold Lake limits has been included in the future development scenario. The annexation and future development areas designated for residential and non-residential land use, as well as projected population, are summarized in Table 4.1.

**Table 4.1: Ultimate Development with Approved Annexation Areas**

| Item | Description | Area (ha) | | Projected Population |
|---|---|---|---|---|
| | | Residential Land Use | Non-Residential Land Use | |
| | **COLD LAKE NORTH** | | | |
| 1 | Horseshoe Bay ASP | 27.0 | | 500 |
| 2 | Forest Heights ASP | 28.9 | | 1,828 |
| 3 | Uplands ASP | 59.8 | | 4,347 |
| 4 | North Shore ASP | 109.0 | 62.9 | 7,449 |
| 5 | Green Wood ASP | 4.0 | | 320 |
| 6 | Lot 2, Plan 982 1024 NASP | 37.0 | 5.0 | 1,369 |
| 7 | Lakewood Estates ASP (portion) | 20.9 | | 606 |
| 8 | Northwest of North Shore | 48.5 | | 1,800* |
| 9 | West of Horseshoe Bay | 93.0 | | 3,441* |
| 10 | Annexation Area (East of Highway 28) | 203 | 132 | 7,511* |
| | **Subtotal** | **631.1** | **199.9** | **29,171** |
| | **Existing Population** | | | **7,278** |
| | **TOTAL EXISTING AND PROJECTED POPULATION** | | | **36,449** |
| | **COLD LAKE SOUTH** | | | |
| 1 | Fischer Estates ASP | 30.9 | | 2,265 |
| 2 | Iron Horse ASP | 21.2 | | 1,265 |
| 3 | Cold Lake Central ASP | 77.8 | 43.5 | 2,878 |
| 4 | Golden Eagle Estates ASP | 24.5 | 12.9 | 1,712 |
| 5 | Deer Meadows ASP | 45.4 | | 4,142 |
| 6 | Southeast of Fischer Estates | 22.0 | 12.3 | 814* |
| 7 | Southeast ASP | 30.0 | 28 | 1,000* |
| 8 | Annexation Area (West of Highway 28) | 160 | 153 | 5,920* |
| 9 | Future Area | 11 | 112 | 407* |
| | **Subtotal** | **422.8** | **361.7** | **20,403** |
| | **Existing Population** | | | **6,516** |
| | **TOTAL EXISTING AND PROJECTED POPULATION** | | | **26,919** |
| | **TOTAL** | **1,059.3** | **561.6** | **63,368** |

*Note:* Projected population was calculated based on a minimum residential density of 37 people per gross hectare for the future areas which do not have an ASP.*

As shown in the table above, the total area of 1,059 ha designated for the residential use and 562 ha for the non-residential use has been identified for the ultimate development in Cold Lake, including annexation land.

Based on Table 4.1, the projected ultimate population within the City of Cold Lake and annex area including existing population is as follows:

- Cold Lake North – 36,449 people
- Cold Lake South - 26,919 people

This results in a total projected population of 63,368 people within the City of Cold Lake and approved annexation areas.

## 4.2 Water Demands

In accordance with the 2016 WMP, a rate of 350 L/person/day was applied to new residential areas and 6,000 L/ha/day was applied to all proposed non-residential land use. The demands for the ultimate water distribution system were determined based on approximately 1,059 ha designated for residential land use and 562 ha intended for non-residential area.

Tables 4.2 and 4.3 summarize the projected water demands for the ultimate system, including approved annexation areas in Cold Lake North and Cold Lake South.

**Table 4.2: Projected Ultimate Water Demands (Including Annexation Area) – Cold Lake North**

| Land Use Type | Development Area (ha) | Population | Average Day Demand (L/s) | Maximum Day Demand (L/s) | Peak Hour Demand (L/s) |
|---|---|---|---|---|---|
| Existing Development | | 7,278 | 24.74 | 49.48 | 74.22 |
| Residential Ultimate | 428.1 | 21,660 | 87.74 | 175.48 | 263.22 |
| Non-Residential Ultimate | 67.9 | - | 4.72 | 9.44 | 14.16 |
| Residential Ultimate – Annex Area | 203 | 7,511 | 30.43 | 60.85 | 91.28 |
| Non-Residential Ultimate – Annex Area | 132 | - | 9.17 | 18.33 | 27.50 |
| **Total** | **831** | **36,449** | **156.80** | **313.58** | **470.38** |

As indicated in Table 4.2, the ultimate development, including annexation areas, in Cold Lake North comprises from 631 ha designated for residential area and 200 ha designated for non-residential area. The total average day demand of 156.8 L/s has been estimated for the ultimate development with annex area including existing demand in Cold Lake North.

**Table 4.3: Projected Ultimate Water Demands (Including Annexation Area) – Cold Lake South**

| Land Use Type | Development Area (ha) | Population | Average Day Demand (L/s) | Maximum Day Demand (L/s) | Peak Hour Demand (L/s) |
|---|---|---|---|---|---|
| Existing Development | | 6,516 | 33.51 | 67.02 | 93.09 |
| Residential Ultimate | 262.8 | 14,483 | 58.67 | 117.34 | 176.01 |
| Non-Residential Ultimate | 208.7 | - | 14.5 | 29.00 | 43.49 |
| Residential Ultimate – Annex Area | 160 | 5,920 | 23.98 | 47.96 | 71.94 |
| Non-Residential Ultimate – Annex Area | 153 | - | 10.63 | 21.25 | 31.88 |
| **Total** | **784.5** | **26,919** | **141.29** | **282.57** | **416.41** |

As shown in Table 4.3, the ultimate development, including annexation areas, in Cold Lake South comprises from 422.8 ha designated for residential area and 361.7 ha designated for non-residential area. The total average day demand of 141.29 L/s has been estimated for the ultimate development with annex area including existing demand in Cold Lake South.

# 4.3 Ultimate Water Distribution System

## *4.3.1 Ultimate Water Distribution System Concept*

In the 2016 WMP, it was recommended to establish three pressure zones to control high pressure within the City of Cold Lake by installing PRVs. The City of Cold Lake expressed concerns regarding the number of PRVs that had been proposed. There is also concerns regarding losing ability to feed the north distribution system from South and utilization of the reservoirs due to the PRVs proposed for the ultimate system.

In this report, the proposed water distribution system concept has been revised to address the City's concerns. The recommended concept for the ultimate distribution system is described below.

The pipe layout for the ultimate system has been revised based on the Land Use Plan provided by the City of Cold Lake as shown on Figure 1.1. The pipe sizes for the ultimate scenario have also been revised due to the reduced service area and are presented in Figures 4.1A and 4.1B.

The three pressure zones are still recommended for the ultimate water distribution system. In addition to the three PRVs (#1, #2 and #3) recommended for the existing development scenario, it is proposed to install three PRVs to define pressure zones for the ultimate development scenario. PRV#4 will be required for the Creekside subdivision, PRV#5 will be required for the new development area north of 16 Avenue and east of Highway 28, and PRV #6 will be required for the new development south of 16 Avenue (Cold Lake South) as shown in Figures 4.1A.

Currently, the City of Cold Lake can feed the north distribution system from the south and south to north via the single watermain. The 300 mm valve on this watermain is typically closed. This valve can be opened to supply water to the North or South for emergency situations.

For the ultimate system, it is recommended to keep the existing 300 mm isolation valve closed during normal operation of the system. It is also proposed to provide the second connection between the north and south for the system redundancy which requires the installation of the PRV station #6 to separate the pressure Zone 1 and 2.

With the PRV#6, the Cold Lake North will be able to supplement Cold Lake South during fire event without opening the isolation valve. With open isolation valve, Cold Lake North will be able to feed Cold Lake South via two watermains in emergency situations.

In the case of emergency, the Cold Lake North could be fed from South via single watermain with open isolation valve as there would not be any reverse flow through PRV#6. In order to feed Cold Lake North via two watermains, it is recommended to open PRV station bypass valve.

For the ultimate development it is recommended to increase the Building #5 operating pressure from 425 kPa to 534 kPa (HGL of 618 m) to provide minimum recommended peak hour pressures of 280 kPa (40 psi) in Cold Lake North.

The outgoing pressure from the Building #10 Pumphouse should be set at 362 kPa (HGL of 593 m) in order to provide sufficient pressure within Cold Lake South during peak hour demands.

### *4.3.2 Ultimate Water Distribution System Assessment*

The water distribution system was evaluated for the updated ultimate development scenario including the approved annex areas. The average day, maximum day plus fire flow, and peak hour scenarios were simulated with the intent of determining whether the ultimate system will meet the minimum and maximum recommended pressures and provide the recommended fire flows to the existing and proposed development areas.

***Average Day Scenario***
During average day demand the pressures in the system will range from 324 kPa (47 psi) to 658 kPa (95 psi). The pressure in the system which exceeds the pressure of 620 kPa (90 psi) was noted at the few nodes along 12 Avenue, 16 Avenue and north of Energy Center. The pressures which are slightly lower than the minimum recommended pressure of 345 kPa (50 psi) were noted nearby the Building #10 Pumphouse. However, the pressure in the majority of the system meets the recommended operating pressure. The pressure difference of 334 kPa within the ultimate development is due to undulated topography in Cold Lake. Therefore, even with a number of pressure reducing stations, it is difficult to maintain the recommended operating pressure within the system.

***Peak Hour Scenario***
This scenario was simulated with the intent to determine that the pressure in the system would not drop below the minimum recommended pressures of 280 kPa during peak hour demand. The pressures within the system vary from 284 kPa (41 psi) to 578 kPa (84 psi) and are within the recommended range. The elevations for the ultimate development are based on the contours and may be different when the actual development occurs. No junctions within the system are below the minimum recommended pressure. The minimum pressure within the system is 284 kPa (41 psi), located in Lefebvre Place within pressure Zone 1.

Figures 4.2A and 4.2B show the pressure throughout the system during peak hour demand for the ultimate distribution system with updated annexation areas.

***Maximum Day Plus Fire Flow Scenario***
In this scenario, all but a few of the fire flow requirements are satisfied. Figures 4.3A and 4.3B show the available fire flows for the ultimate distribution system including updated annex areas. The available fire flows vary from 225 L/s for commercial areas and 100 L/s for the residential areas. The few nodes that fail fire flow constraints are mostly located within the existing system at the dead ends with available fire flow from 73 to 93 L/s.

The detailed simulation results for the ultimate system with updated annexation areas are enclosed in Appendix A.

# 4.4 Storage Requirement

## *4.4.1 Ultimate Storage Requirements – Cold Lake North*

The revised storage requirements for the Ultimate Development with approved annex area for Cold Lake North are summarized in Tables 4.4 and 4.5.

### Table 4.4: Ultimate Storage Requirements- Cold Lake North

| Description | Volume ($m^3$) |
|---|---|
| Equalization Storage: 25% of Maximum Day Demand (MDD=313.59 L/s) | 6,773 |
| Emergency Storage: 15% of Average Day Demand (ADD=156.80 L/s) | 2,032 |
| Truck Fill Storage (1.85 L/s for 24 hours) | 160 |
| Fire Flow Storage: (225 L/s for 3 hours) | 2430* |
| **Total** | **11,395** |

*Note*: Fire protection storage is calculated based on the fire duration of 3 hours for a single fire event and fire flow of 225 L/s as recommended by Fire Underwriters Survey (FUS).*

### Table 4.5: Proposed Ultimate Storage - Cold Lake North

| Description | Ultimate Storage Capacity ($m^3$) |
|---|---|
| Building #5 Reservoir – Existing | 4,500 |
| Proposed Building #5 Reservoir Expansion- Ultimate | 6,896 |
| **Total** | **11,396** |

As seen in Table 4.4, the total storage requirement for the ultimate development scenario with approved annex area in Cold Lake North is 11,395 $m^3$. Based on Table 4.5, the existing Building #5 storage capacity is 4,500 $m^3$, which is significantly less than required. As per discussion with the City of Cold Lake, the preferable option is to expand the existing reservoir at Building #5, compared to building a new reservoir at a different location.

Therefore, it is proposed to expand the existing reservoir with an additional storage **of 6,896 $m^3$** to meet the ultimate storage requirement.

The population growth in Cold Lake North from 7,278 to approximately 9,500 people will be the trigger for the expansion of the existing storage at Building #5. Once the expansion of the existing reservoir is required, it is recommended to conduct an analysis to determine the staging of sizing of the proposed reservoir so that water turnover within the reservoir remains less than two weeks.

### *4.4.2 Ultimate Storage Requirements – Cold Lake South*

The storage requirements for the Ultimate Development with approved annex area for Cold Lake South are summarized in Tables 4.6 and 4.7.

**Table 4.6: Ultimate Storage Requirements- Cold Lake South**

| Description | Volume ($m^3$) |
|---|---|
| Equalization Storage: 25% of Maximum Day Demand (MDD=282.57 L/s) | 6,103 |
| Emergency Storage: 15% of Average Day Demand (ADD=141.28 L/s) | 1,831 |
| Fire Flow Storage: (225 L/s for 3 hours) | 2430 |
| **Total** | **10,364** |

**Table 4.7: Cold Lake South – Proposed Ultimate Storage**

| Description | Ultimate Storage Capacity ($m^3$) |
|---|---|
| Building #7 Reservoir – Existing | 2,273 |
| Building #10 Reservoir - Existing | 6,800 |
| Proposed Building #10 Reservoir Expansion - Ultimate | 3,564 |
| **Total** | **12,637** |

Table 4.6 shows the total storage requirement of 10,364 $m^3$ for the ultimate development scenario with updated annex area in Cold Lake South. The existing storage capacity of the Building #7 and Building #10 Reservoirs is 2,273 $m^3$ and 6,800 $m^3$, respectively.

As discussed with the City, the following two options for the ultimate development in Cold Lake South have been considered:

- Reservoir expansion at Building #10 (Building #7 will be used only for emergency)
- Reservoir expansion at Building #7 (Building #10 will be used only for emergency)

The population increase from 6,516 to approximately 19,500 people in Cold Lake South will be the trigger to expand the existing storage at Building #10. An additional storage **of 3,564 $m^3$** will be required to allow future development in this area assuming that the Building #7 Reservoir will be used only for emergency.

However, if the City makes the decision to use Building #10 as emergency storage and expand the Building #7 Reservoir, the upgrades will be required immediately. The existing Building #7 storage capacity of 2,273 $m^3$ is significantly less the required storage of 4,311 $m^3$ for the existing development. An additional 2,038 $m^3$ of storage has to be provided immediately to accommodate the existing water demands and fire storage in Cold Lake South.

When the population increases from 6,516 to approximately 9,000 people, another expansion of the Building #7 Reservoir will be required. The additional storage of 6,053 $m^3$ will be required at Building #7 to accommodate the ultimate development.

It is recommended to expand the Building #10 Reservoir and keep Building #7 for emergency use, as this is the most cost-effective option.

Once an expansion of the existing reservoir is required, it is recommended to conduct an analysis to determine the staging of sizing of the proposed reservoir so that water turnover within the reservoir remains less than two weeks.

# 4.5 Pumping Requirements

## *4.5.1 Ultimate Pumping Capacity Requirements – Cold Lake North*

Pumping requirements for the ultimate development conditions in Cold Lake North are provided in the following Table 4.8:

### Table 4.8: Ultimate Pumping Capacity Requirements – Cold Lake North

| Pump Description | Distribution Pumping Capacity (L/s) | Existing Fire Pump Capacity (L/s) | Peak Hour Demand (L/s) | Maximum Day Demand Plus Fire Flow (L/s) |
|---|---|---|---|---|
| Ultimate Development | | | 470.38 | 538.59 |
| Building #5 Pumphouse (excluding backup pump) | 420 | | | |
| Total | **420** | | | |

Based on the above table, the existing pumping capacity at the Building #5 Pumphouse is not adequate to provide peak hour demands as well as maximum day demands plus fire flow for the ultimate development in Cold Lake North.

The upgrades to the existing pumping capacity in Building #5 will be required when the population in Cold Lake North reaches approximately 25,000 people. It is recommended to install an additional pump with a capacity of approximately 119 L/s to accommodate ultimate maximum day demands and fire flows of 539 L/s.

## *4.5.2 Ultimate Pumping Capacity Requirements – Cold Lake South*

Pumping requirements for the ultimate development conditions in Cold Lake South are provided in the following Table 4.9:

### Table 4.9: Ultimate Pumping Capacity Requirements – Cold Lake South

| Pump Description | Existing Distribution Pumping Capacity (L/s) | Existing Fire Pump Capacity (L/s) | Peak Hour Demand (L/s) | Maximum Day Demand Plus Fire Flow (L/s) |
|---|---|---|---|---|
| Ultimate Development | | | 416.41 | 507.57 |
| Building #10 Pumphouse | 345* | | | |
| Building #7 Pumphouse | 173.5 | 190 | | |
| Total | **518.50** | **190** | | |

*Note:*
*It was assumed that the proposed upgrades to Building #10 pumphouse described in Section 2.2 is completed and pumping capacity increased from 277 L/s to 345 L/s.*

As shown in Table 4.9, the upgraded pumping capacity in Building #10 is not sufficient to provide the maximum day demand plus fire flow of 508 L/s for the ultimate development in Cold Lake South, assuming Building #7 only operates at night filling the Building #10 Reservoir.

The upgrades of pumping capacity in Building #10 are recommended when the population in Cold Lake South increases to approximately 15,000 people. Installation of an additional pump with a capacity of approximately 163 L/s to accommodate ultimate maximum day demands and fire flows of 508 L/s will be required.

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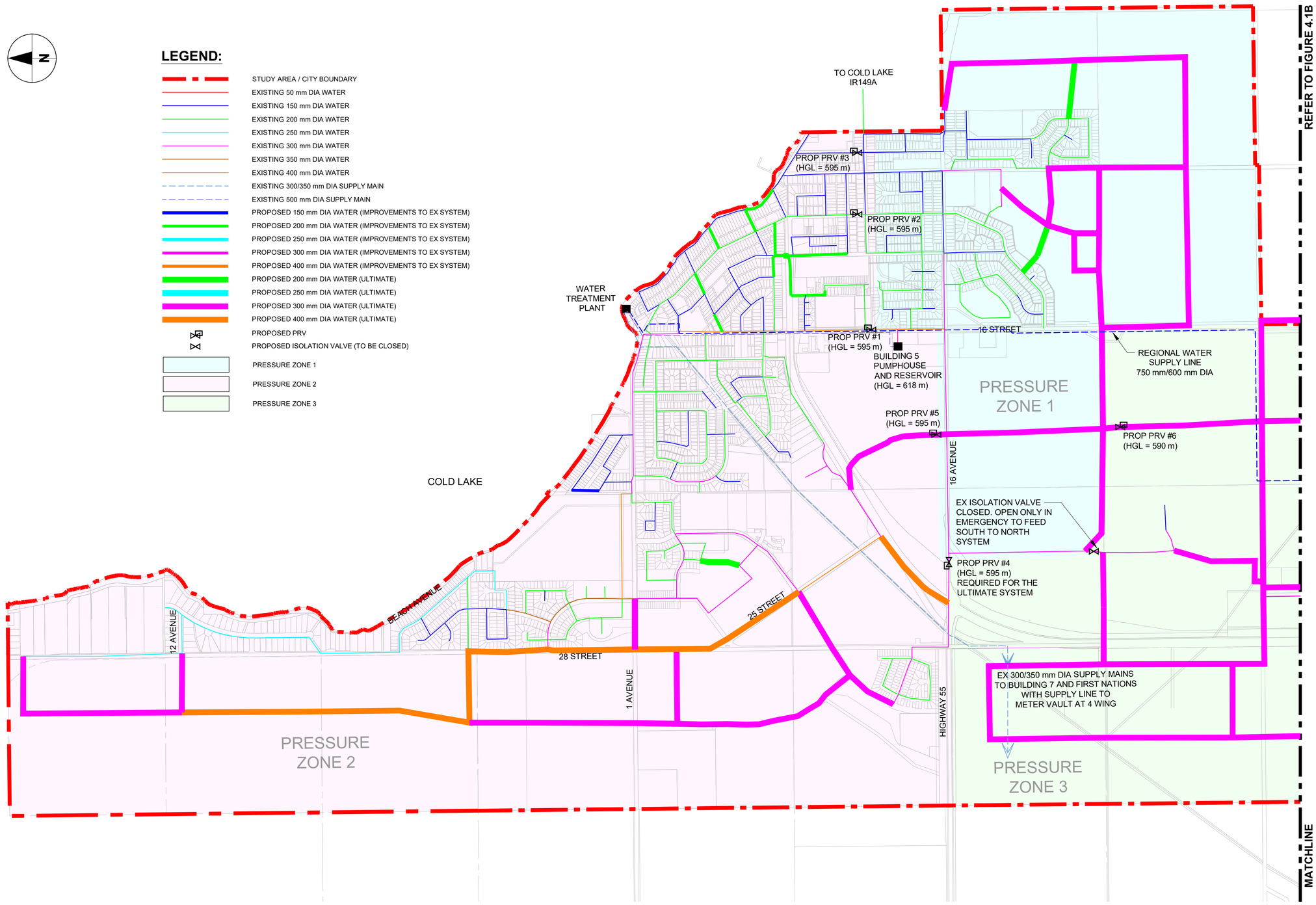
FIGURE 4.1A

## LEGEND:

- STUDY AREA / CITY BOUNDARY
- EXISTING 50 mm DIA WATER
- EXISTING 150 mm DIA WATER
- EXISTING 200 mm DIA WATER
- EXISTING 250 mm DIA WATER
- EXISTING 300 mm DIA WATER
- EXISTING 350 mm DIA WATER
- EXISTING 400 mm DIA WATER
- EXISTING 300/350 mm DIA SUPPLY MAIN
- EXISTING 500 mm DIA SUPPLY MAIN
- PROPOSED 150 mm DIA WATER (IMPROVEMENTS TO EX SYSTEM)
- PROPOSED 200 mm DIA WATER (IMPROVEMENTS TO EX SYSTEM)
- PROPOSED 250 mm DIA WATER (IMPROVEMENTS TO EX SYSTEM)
- PROPOSED 300 mm DIA WATER (IMPROVEMENTS TO EX SYSTEM)
- PROPOSED 400 mm DIA WATER (IMPROVEMENTS TO EX SYSTEM)
- PROPOSED 200 mm DIA WATER (ULTIMATE)
- PROPOSED 250 mm DIA WATER (ULTIMATE)
- PROPOSED 300 mm DIA WATER (ULTIMATE)
- PROPOSED 400 mm DIA WATER (ULTIMATE)
- PROPOSED PRV
- PROPOSED ISOLATION VALVE (TO BE CLOSED)
- PRESSURE ZONE 1
- PRESSURE ZONE 2
- PRESSURE ZONE 3

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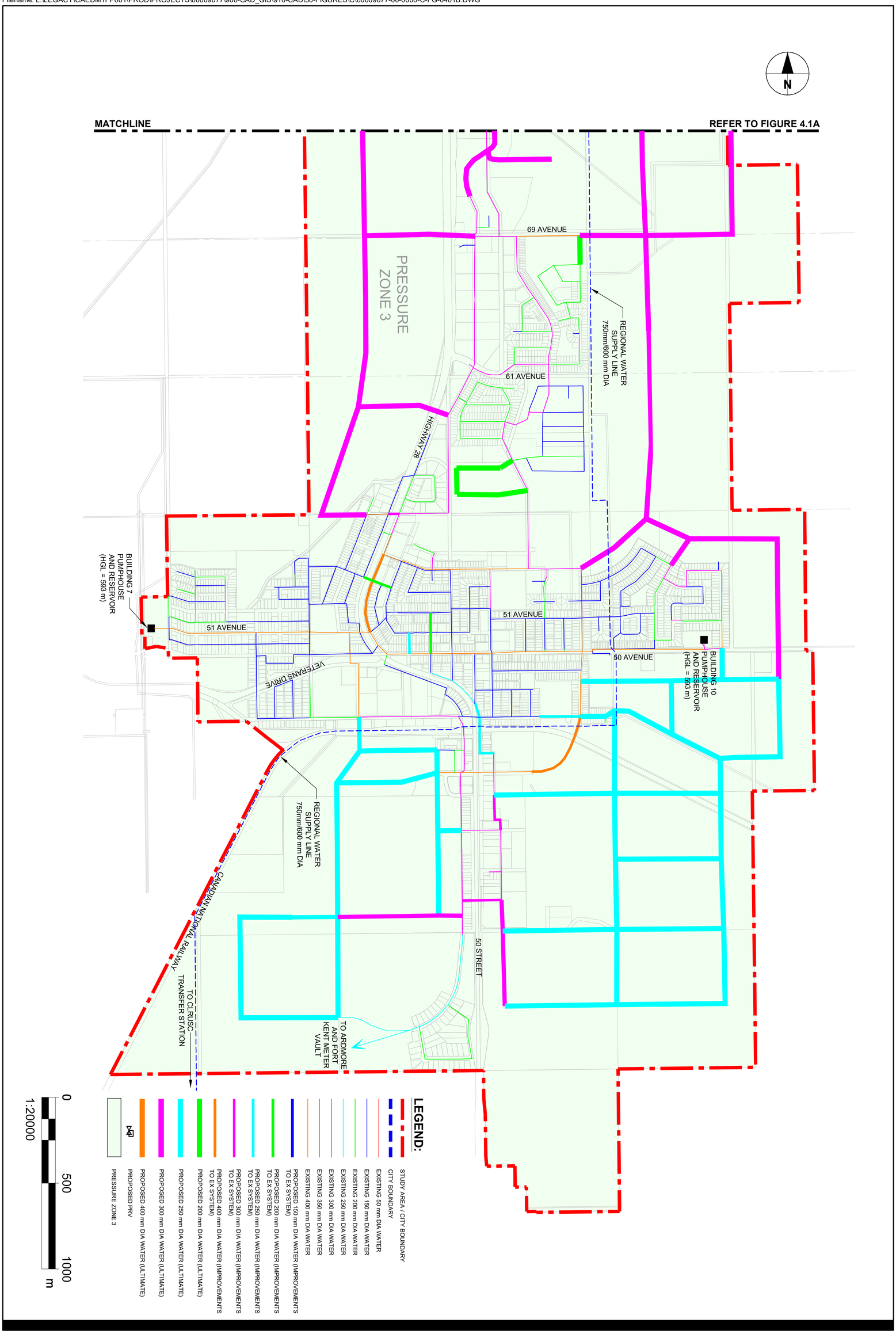


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**FIGURE 4.1B**

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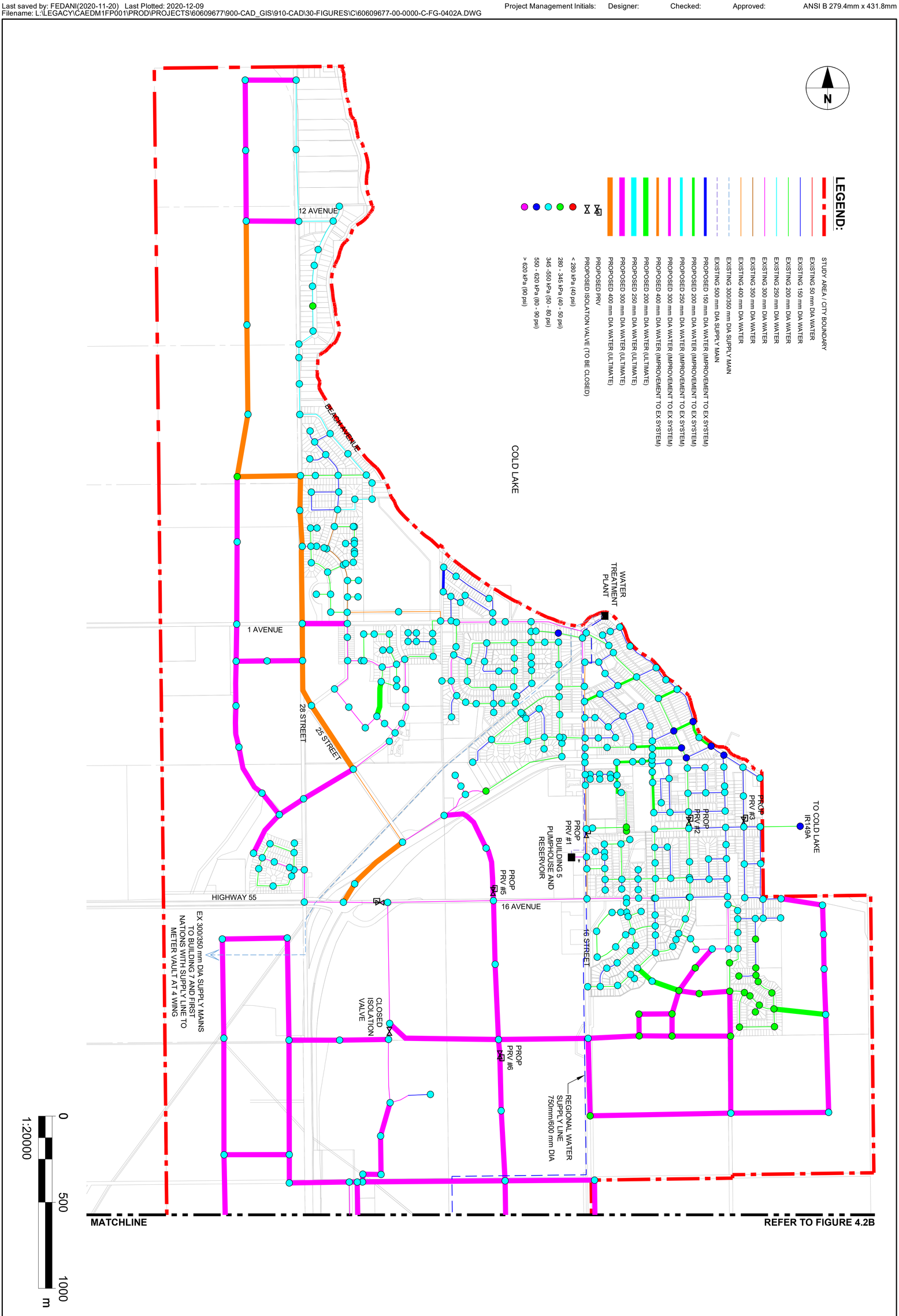


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**FIGURE 4.2A**

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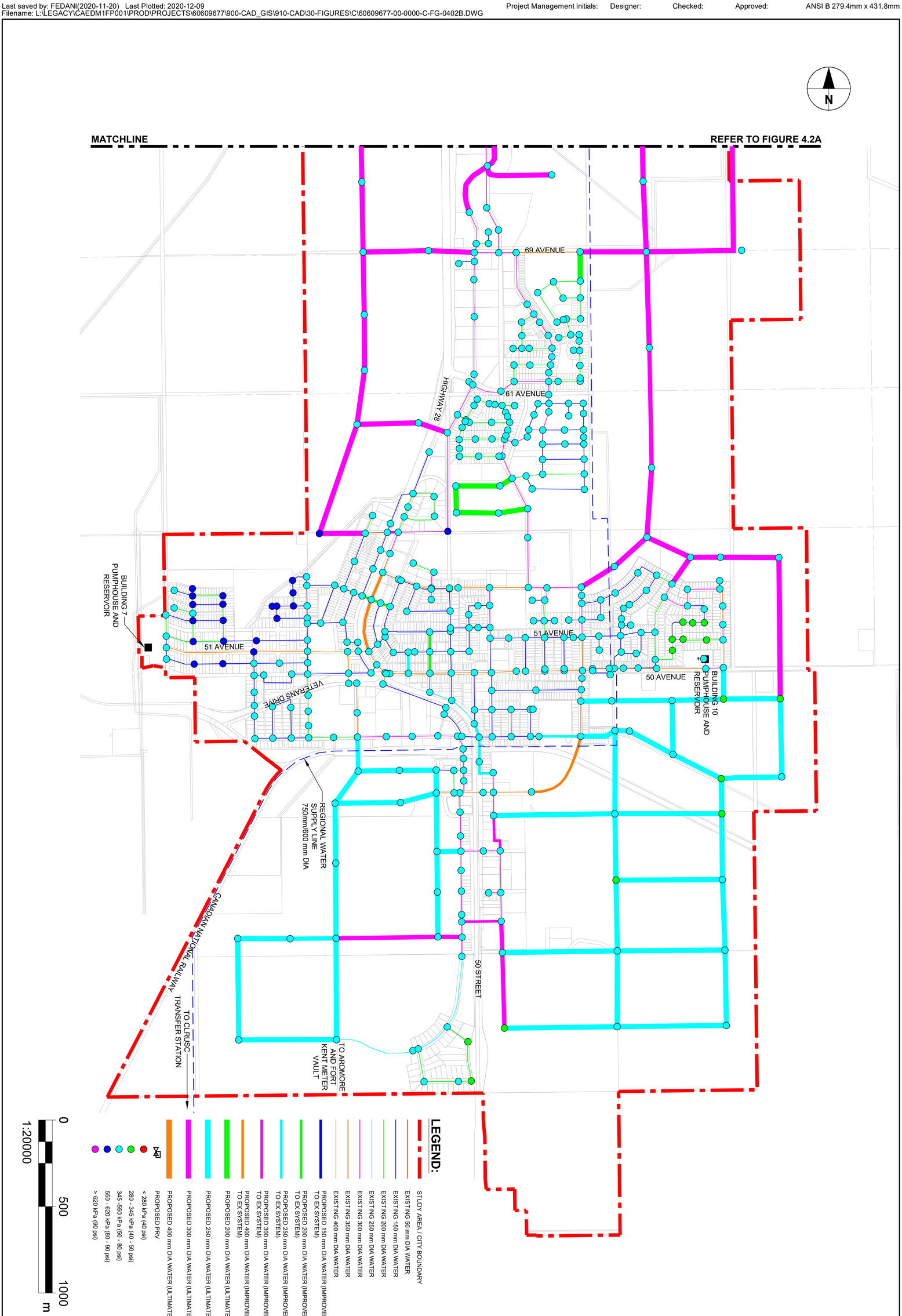


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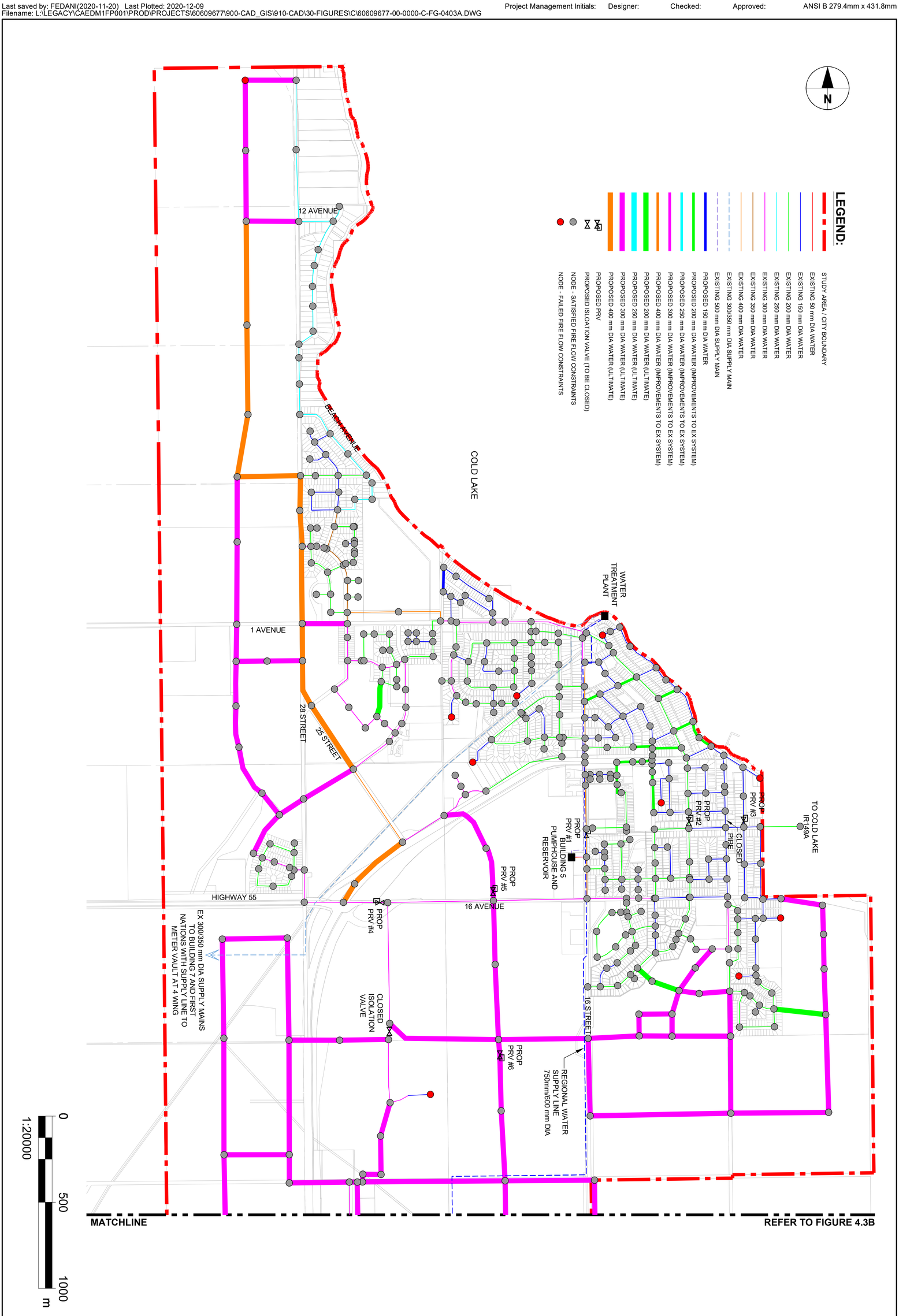
**FIGURE 4.2B**




**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
ULTIMATE WATER DISTRIBUTION SYSTEM MAX DAY PLUS FIRE RESULTS - COLD LAKE NORTH
Project No.: 60609677

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**FIGURE 4.3A**

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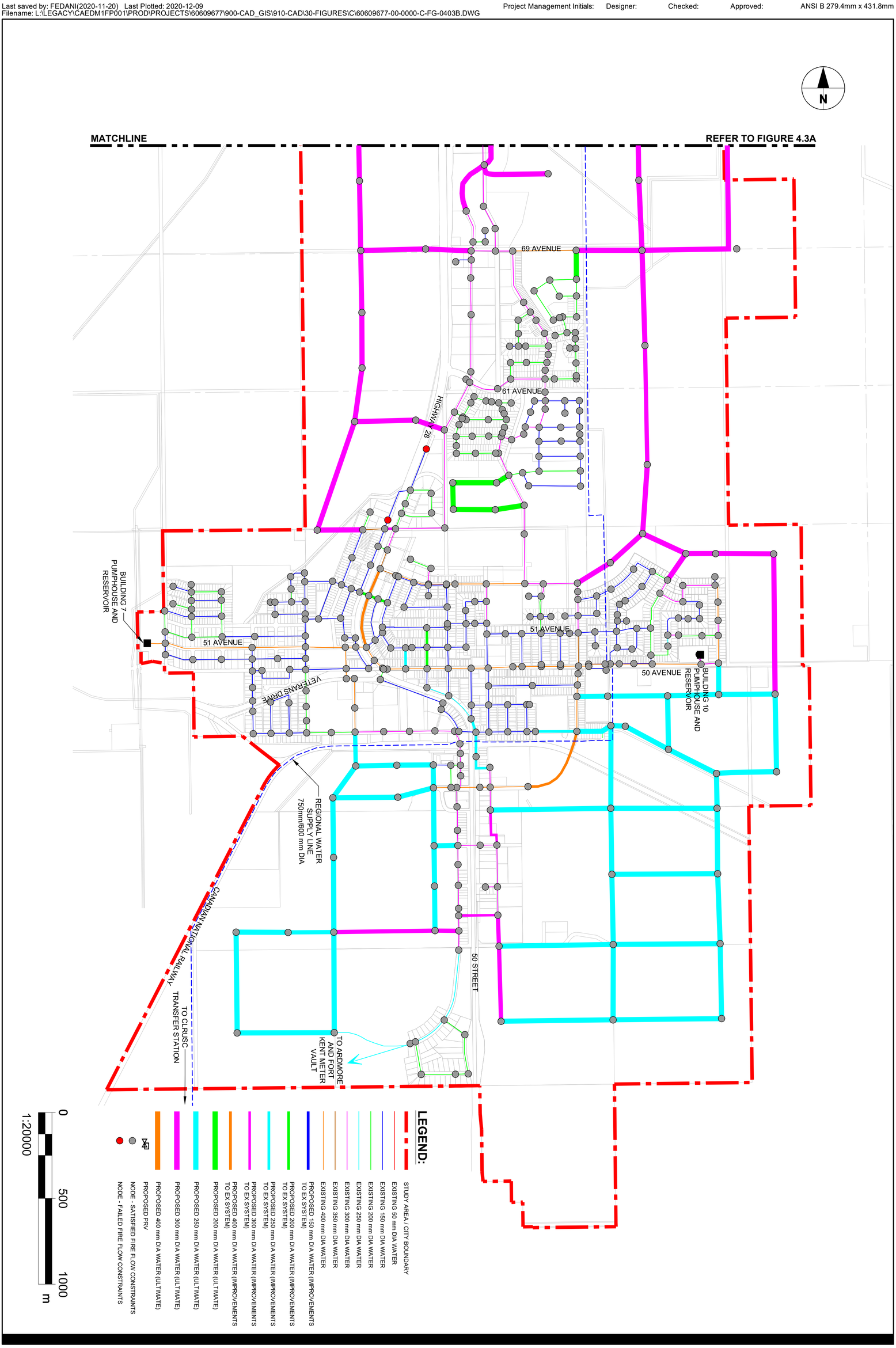


**CITY OF COLD LAKE**
**WATER MASTER PLAN UPDATE**
ULTIMATE WATER DISTRIBUTION SYSTEM MAX DAY PLUS FIRE RESULTS - COLD LAKE SOUTH
Project No.: 60609677

AECOM

**FIGURE 4.3B**

# 5. Cost Estimate Update

The overall cost estimate for the proposed upgrades to the Cold Lake water distribution system presented in the 2016 WMP has been updated based on the approved annexation areas and excludes the pipes that have been installed since the 2016 report. The cost estimate for the required storage and pumping capacity for each development condition has been also revised.

The updated cost estimate is shown in Table 5.1 and includes an allowance for overhead, engineering and contingency at 45%. The cost is based on 2019 dollars and unit prices have been obtained from recent tender prices and knowledge from similar projects within and near Cold Lake. The unit costs include the pipe costs as well as installation and surface restoration costs.

### Table 5.1: Cost Estimate Summary

| Item | Description | Unit | Quantity | Unit Cost | Total Cost |
|---|---|---|---|---|---|
| **1.0** | **EXISTING SYSTEM WITH IMPROVEMENTS** | | | | |
| **1.1** | **PVC Pipe (within existing development):** | | | | |
| | .1 150 mm diameter | lin.m. | 150 | $1,200 | $180,000 |
| | .2 200 mm diameter | lin.m. | 2,100 | $1,470 | $3,087,000 |
| | .3 250 mm diameter | lin.m. | 800 | $1,530 | $1,224,000 |
| | .4 300 mm diameter | lin.m. | 525 | $1,600 | $840,000 |
| | .5 400 mm diameter | lin.m. | 960 | $1,980 | $1,900,800 |
| **1.2** | **Pressure Reducing Valve Chamber:** | | | | |
| | .1 400 mm diameter (PRV#1) | ea | 1 | $850,000 | $850,000 |
| | .2 200 mm diameter (PRV#2) | ea | 1 | $650,000 | $650,000 |
| | .3 150 mm diameter (PRV#3) | ea | 1 | $650,000 | $650,000 |
| **1.3** | **Building #10 Pumphouse** | | | | |
| | .1 New 100 HP Pump with Capacity 115 L/s | ea | 2 | $400,000 | $800,000 |
| | | | | **Subtotal** | **$10,181,800** |
| | | | | **Engineering and Contingency (45%)** | **$4,581,810** |
| | | | | **TOTAL** | **$14,763,610** |

| Item | Description | Unit | Quantity | Unit Cost | Total Cost |
|---|---|---|---|---|---|
| **2.0** | **ULTIMATE DEVELOPMENT** | | | | |
| **2.1** | **PVC Pipe (within undeveloped area):** | | | | |
| | .1 200 mm diameter | lin.m. | 1,960 | $750 | $1,470,000 |
| | .2 250 mm diameter | lin.m. | 16,100 | $800 | $12,880,000 |
| | .3 300 mm diameter | lin.m. | 33,350 | $860 | $28,681,000 |
| | .4 400 mm diameter | lin.m. | 4,150 | $1,120 | $4,648,000 |
| **2.2** | **Pressure Reducing Valve Chamber:** | | | | |
| | .1 300 mm diameter (PRV#4, #5 and #6) | ea | 3 | $800,000 | $2,400,000 |
| **2.3** | **Building #5 Reservoir** | | | | |
| | .1 Additional Capacity - 6,900 m³ | m³ | 6,900 | $1,000 | $6,900,000 |
| **2.4** | **Building #5 Pumphouse** | | | | |
| | .1 New Pump with Capacity - 119 L/s | ea | 1 | $300,000 | $300,000 |
| **2.5** | **Building #10 Reservoir** | | | | |
| | .1 Additional Capacity - 3,600m³ | m³ | 3,600 | $1,000 | $3,600,000 |
| **2.6** | **Building #10 - Pumphouse** | | | | |
| | .1 New Pump with Capacity 163 L/s | ea | 1 | $400,000 | $400,000 |
| | | | | **Subtotal** | **$61,279,000** |
| | | | | **Engineering and Contingency (45%)** | **$27,575,550** |
| | | | | **TOTAL** | **$88,854,550** |

As shown in Table 5.1, the total cost for the proposed improvement within the existing system is approximately $14.8 million, which is less than compared to the $17.0 million provided in the 2016 WMP, as the City has implemented some of the proposed upgrades mentioned earlier. The cost estimate for the PRV chambers and pump upgrades has been also updated as per 2019 construction costs.

The total cost for the ultimate development with approved annex areas is approximately $88.9 million, which is significantly less than compared to the $113.0 million estimated in the 2016 WMP due to reduced annexation areas.

# 6. Conclusions and Recommendations

The primarily objective of this study was to review and update the critical infrastructure requirements for the ultimate development identified in the 2016 WMP due to the changes to the size of approved annexation area.

The existing water distribution system has been also updated to reflect the installation of a few segments of watermains since 2016.

The study includes the re-assessment of the ultimate pumping and storage requirements, as well as required watermain sizes and piping alignment as per the updated land use plan. Note that pipe sizing and alignment of watermains will likely need adjustment once ASPs for the future development areas are further developed.

## 6.1 Existing System with Upgrades

The upgrades to the existing system are recommended to improve the fire flows, control high pressure within the City of Cold Lake and a provide level of service that is consistent with the design criteria and the City's Engineering Servicing Standards.

The recommendations for the improvement of the existing water distribution system are as follows:

- Replace approximately 4.5 km of existing watermains as indicated in Figures 3.1A and 3.1B.
- Confirm the preliminary pipe sizes during subsequent design stages.
- Install three PRVs (#1, #2 and #3) to control high pressure within the City.
- Building #5 storage and pumping capacity is sufficient and does not require any upgrades.
- Building #10 storage capacity is sufficient and does not require upgrades.
- Building #10 pumping capacity is not sufficient to provide fire flows plus maximum day demand. Remove the existing fire pump and 20 HP pump and install two new 100 HP pumps with a capacity of 115 L/s each as per the recently completed design which is ready for tender.
- The total cost for the proposed improvement within the existing system is approximately $14.8 million (including 45% contingency and engineering) which is less compared to the $17.0 million provided in the 2016 WMP, as the City implemented some of the proposed upgrades mentioned earlier.

## 6.2 Ultimate System with Updated Annexation Area

In order to allow the development of the future land outlined in the Cold Lake Area Structure Plans and Approved Annexation Area, the critical infrastructure requirements have been identified. Based on the system analysis, it is recommended to:

- Install approximately 55.5 km of watermains to service the future areas identified in Figures 4.1A and 4.1B.
- Confirm the preliminary pipe sizes during subsequent design stages.

- Establish three pressure zones by installing three new PRVs (#4, #5 and #6) in addition to the three PRVs recommended for the existing system as shown in Figure 4.1A.

- Keep the existing 300 mm isolation valve closed during normal operation of the system. It is also proposed to provide the second connection between the north and south for the system redundancy which requires the installation of the PRV station #6 to separate the pressure Zone 1 and 2.

- Building #5 Reservoir Expansion

    - Provide an additional storage capacity of 6,900 $m^3$ to accommodate ultimate demands.
    - Population growth to 9,500 people in Cold Lake North will be the trigger for the reservoir expansion. At that time, it is recommended to conduct an analysis to determine the staging of sizing of the proposed reservoir expansion so that water turnover within the reservoir remains less than two weeks.

- Building #5 Pumphouse Upgrades

    - Install new pump with a capacity of approximately 119 L/s to accommodate ultimate maximum day demands and fire flows of 539 L/s when the population in Cold Lake North reaches approximately 25,000 people.

- Building #10 Reservoir Expansion

    - Provide an additional storage capacity of 3,564 $m^3$ to accommodate ultimate demands when the population increases from 6,516 to approximately 19,500 people in Cold Lake South. It is assumed that the Building #7 Reservoir will be used only for emergency.

- Building #10 Pumphouse Upgrades

    - Install a new pump with a capacity of approximately 163 L/s to accommodate ultimate maximum day demands and fire flows of 508 L/s when population in Cold Lake South increases to approximately 15,000 people.

- The total cost for the ultimate development with annexation area is approximately $88.9 million (including 45% contingency and engineering), which is less than compared to the $113.0 million provided in the 2016 WMP due to reduction of the approved annexation area.

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# Appendix A

## Water Modelling Results

## FIRE FLOW NODE TABLE: MDD+FF Existing System with Upgrades

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S1005E | False | 100.00 | 46.82 | 140.0 | 176.6 | J-S1004E |
| J-S1006E | False | 100.00 | 49.87 | 155.7 | 140.4 | J-S1004E |
| J-S1004E | False | 100.00 | 49.91 | 140.0 | 157.8 | J-S1005E |
| J-S1003E | False | 100.00 | 62.38 | 140.0 | 163.9 | J-S1004E |
| J-N1605E | False | 100.00 | 72.03 | 140.0 | 267.7 | J-N1600E |
| J-S890E | False | 225.00 | 74.71 | 140.0 | 292.8 | J-S260E |
| J-N835E | False | 100.00 | 74.79 | 140.0 | 344.4 | J-N900E |
| J-N465E | False | 100.00 | 84.39 | 140.0 | 345.0 | J-N900E |
| J-N1070E | False | 100.00 | 84.86 | 140.1 | 341.1 | J-N1080E |
| J-N1645E | False | 100.00 | 85.68 | 140.0 | 219.3 | J-N1651E |
| J-N1250E | False | 100.00 | 89.23 | 140.0 | 317.7 | J-N1645E |
| J-N1265E | False | 100.00 | 90.30 | 140.2 | 301.0 | J-N1645E |
| J-N1810E | False | 100.00 | 90.84 | 140.0 | 169.1 | J-N1771E |
| J-N432E | False | 225.00 | 91.09 | 140.0 | 344.8 | J-N900E |
| J-N340E | False | 100.00 | 94.21 | 140.0 | 344.2 | J-N436E |
| J-N1800E | False | 100.00 | 94.92 | 179.7 | 140.0 | J-N1810E |
| J-N1790E | False | 100.00 | 94.92 | 176.6 | 140.0 | J-N1810E |
| J-N1772E | False | 100.00 | 96.77 | 160.2 | 140.0 | J-N1771E |
| J-N1780E | False | 100.00 | 96.77 | 162.5 | 140.0 | J-N1771E |
| J-N1771E | False | 100.00 | 96.77 | 140.0 | 177.3 | J-N1772E |
| J-N1773E | False | 100.00 | 96.77 | 147.5 | 140.0 | J-N1771E |
| J-S1002E | False | 100.00 | 97.93 | 166.8 | 140.0 | J-S1003E |
| J-S2178E | False | 100.00 | 98.25 | 140.0 | 198.3 | J-S2177E |
| J-N1715E | False | 100.00 | 98.48 | 140.0 | 294.7 | J-N1771E |
| J-364 | True | 99.00 | 99.12 | 140.0 | 151.0 | J-366 |
| J-365 | True | 99.00 | 99.27 | 140.0 | 149.7 | J-366 |
| J-N1590E | False | 100.00 | 99.41 | 140.0 | 168.8 | J-N1605E |
| J-366 | True | 99.00 | 99.94 | 140.2 | 148.0 | J-365 |
| J-N1640E | True | 100.00 | 100.50 | 164.1 | 140.0 | J-N1645E |
| J-368 | True | 99.00 | 100.60 | 140.0 | 147.7 | J-366 |
| J-N1600E | True | 100.00 | 100.95 | 140.0 | 140.0 | J-N1605E |
| J-105 | True | 100.00 | 101.27 | 144.6 | 140.2 | J-366 |
| J-N1770E | True | 100.00 | 101.36 | 187.9 | 140.0 | J-N1771E |
| J-S2180E | True | 100.00 | 101.52 | 140.0 | 291.9 | J-S260E |
| J-N1655E | True | 100.00 | 102.09 | 140.0 | 146.9 | J-N1645E |
| J-N1610E | True | 100.00 | 102.15 | 140.0 | 142.1 | J-N1605E |
| J-N1651E | True | 100.00 | 102.65 | 143.0 | 140.0 | J-N1645E |
| J-N1630E | True | 100.00 | 102.72 | 179.0 | 140.0 | J-N1645E |
| J-S81E | True | 100.00 | 102.85 | 140.0 | 173.3 | J-S80E |
| J-S2177E | True | 100.00 | 103.04 | 151.3 | 140.0 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N1635E | True | 100.00 | 103.19 | 161.3 | 140.0 | J-N1645E |
| J-S80E | True | 100.00 | 103.69 | 140.0 | 178.3 | J-S81E |
| J-N1650E | True | 100.00 | 104.01 | 143.1 | 140.0 | J-N1645E |
| J-1152 | True | 100.00 | 104.04 | 161.9 | 140.0 | J-366 |
| J-S2279E | True | 100.00 | 104.26 | 163.8 | 140.0 | J-S2178E |
| J-N1620E | True | 100.00 | 104.66 | 169.7 | 140.0 | J-N1645E |
| J-S320E | True | 100.00 | 104.84 | 140.0 | 291.9 | J-S260E |
| J-367 | True | 100.00 | 105.14 | 142.4 | 140.3 | J-366 |
| J-1135 | True | 100.00 | 105.35 | 140.0 | 172.3 | J-1134 |
| J-N1760E | True | 100.00 | 105.62 | 152.0 | 140.0 | J-N1771E |
| J-88 | True | 100.00 | 105.99 | 143.9 | 140.2 | J-366 |
| J-87 | True | 100.00 | 106.55 | 154.7 | 140.0 | J-366 |
| J-S110E | True | 100.00 | 107.31 | 140.0 | 170.6 | J-S81E |
| J-S2176E | True | 100.00 | 107.32 | 210.6 | 140.0 | J-S2178E |
| J-N1657E | True | 100.00 | 107.92 | 140.0 | 141.1 | J-N1645E |
| J-1134 | True | 100.00 | 108.11 | 140.0 | 150.4 | J-1135 |
| J-S1710E | True | 100.00 | 108.38 | 140.0 | 233.0 | J-S1705E |
| J-1136 | True | 100.00 | 108.55 | 140.0 | 148.9 | J-1135 |
| J-N1692E | True | 100.00 | 108.77 | 157.9 | 140.0 | J-N1771E |
| J-N1275E | True | 100.00 | 108.99 | 140.0 | 192.1 | J-N1590E |
| J-S1705E | True | 100.00 | 109.59 | 140.0 | 225.1 | J-S1710E |
| J-Ardmore_FortKent | False | 225.00 | 110.59 | 145.8 | 140.1 | J-S2178E |
| J-S2175E | True | 100.00 | 110.62 | 249.7 | 140.0 | J-S2178E |
| J-S2174E | True | 100.00 | 110.62 | 257.3 | 140.0 | J-S2178E |
| J-N1245E | True | 100.00 | 111.85 | 140.0 | 260.0 | J-N1240E |
| J-1166 | True | 100.00 | 111.88 | 140.0 | 160.0 | J-366 |
| J-S2173E | True | 100.00 | 112.83 | 298.7 | 140.0 | J-S2178E |
| J-N1714E | True | 100.00 | 113.87 | 140.0 | 249.6 | J-N1771E |
| J-1150 | True | 100.00 | 115.45 | 169.4 | 140.0 | J-366 |
| J-S175E | True | 100.00 | 115.51 | 140.0 | 285.0 | J-S260E |
| J-N1691E | True | 100.00 | 115.66 | 177.3 | 140.0 | J-N1771E |
| J-1146 | True | 100.00 | 116.24 | 140.0 | 220.8 | J-366 |
| J-1133 | True | 100.00 | 116.29 | 146.9 | 140.0 | J-1135 |
| J-S271E | True | 100.00 | 116.92 | 140.0 | 288.2 | J-S260E |
| J-CLIR149A | True | 100.00 | 117.54 | 140.0 | 224.2 | J-N1060E |
| J-N1295E | True | 100.00 | 118.68 | 176.7 | 140.1 | J-N1645E |
| J-1149 | True | 100.00 | 120.92 | 159.6 | 140.0 | J-366 |
| J-N582E | True | 100.00 | 122.52 | 140.0 | 214.2 | J-N583E |
| J-S1650E | True | 100.00 | 123.18 | 140.0 | 231.7 | J-S1630E |
| J-N1080E | True | 100.00 | 123.28 | 140.4 | 140.0 | J-N1070E |
| J-N583E | True | 100.00 | 124.26 | 140.0 | 214.9 | J-N582E |
| J-331 | True | 100.00 | 124.48 | 140.0 | 290.0 | J-S2178E |
| J-S90E | True | 100.00 | 124.71 | 140.0 | 165.4 | J-S110E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-898 | True | 100.00 | 125.21 | 140.0 | 289.8 | J-S2178E |
| J-N1690E | True | 100.00 | 125.49 | 182.4 | 140.0 | J-N1771E |
| J-1147 | True | 100.00 | 125.54 | 159.6 | 140.0 | J-366 |
| J-S1690E | True | 100.00 | 125.65 | 140.0 | 257.0 | J-S1700E |
| J-N1085E | True | 100.00 | 126.36 | 140.3 | 271.1 | J-N1070E |
| J-N1055E | True | 100.00 | 127.42 | 140.0 | 180.6 | J-N1245E |
| J-N1290E | True | 100.00 | 128.50 | 202.1 | 140.0 | J-N1645E |
| J-N1056E | True | 100.00 | 128.83 | 140.0 | 192.7 | J-N1245E |
| J-S182E | True | 100.00 | 129.93 | 140.0 | 288.4 | J-S2178E |
| J-N1712E | True | 100.00 | 130.09 | 140.0 | 224.3 | J-N178E |
| J-N401E | True | 100.00 | 130.47 | 140.0 | 269.3 | J-373 |
| J-N1060E | True | 100.00 | 130.92 | 140.0 | 196.6 | J-N1056E |
| J-S1008E | True | 100.00 | 130.93 | 140.0 | 288.2 | J-S2178E |
| J-N1240E | True | 100.00 | 131.40 | 140.0 | 144.2 | J-N1250E |
| J-S2240E | False | 225.00 | 132.25 | 140.1 | 274.8 | J-S2178E |
| J-S1681E | True | 100.00 | 132.29 | 140.0 | 198.2 | J-S1680E |
| J-1117 | True | 100.00 | 132.50 | 140.0 | 317.8 | J-1116 |
| J-373 | True | 100.00 | 132.61 | 140.0 | 224.0 | J-N405E |
| J-S1010E | True | 133.00 | 133.50 | 511.5 | 287.4 | J-S2178E |
| J-S1680E | True | 100.00 | 133.72 | 140.0 | 205.6 | J-S1681E |
| J-1145 | True | 100.00 | 133.74 | 147.8 | 140.0 | J-366 |
| J-N1120E | True | 133.00 | 134.00 | 303.5 | 319.0 | J-N1092E |
| J-S700E | True | 133.00 | 134.00 | 239.4 | 272.8 | J-S1670E |
| J-N960E | True | 133.00 | 134.00 | 454.1 | 343.7 | J-N900E |
| J-N970E | True | 133.00 | 134.00 | 400.8 | 344.1 | J-N900E |
| J-N935E | True | 133.00 | 134.00 | 269.8 | 218.2 | J-N835E |
| J-S1030E | True | 133.00 | 134.00 | 509.2 | 287.3 | J-S2178E |
| J-S1035E | True | 133.00 | 134.00 | 509.3 | 287.3 | J-S2178E |
| J-S1036E | True | 133.00 | 134.00 | 513.5 | 287.4 | J-S2178E |
| J-N1092E | True | 133.00 | 134.00 | 248.1 | 322.7 | J-N1120E |
| J-S1425E | True | 100.00 | 134.92 | 140.1 | 256.2 | J-S1420E |
| J-S1700E | True | 100.00 | 135.90 | 140.0 | 191.1 | J-S1710E |
| J-N460E | True | 100.00 | 135.95 | 161.5 | 140.0 | J-N465E |
| J-S1620E | True | 100.00 | 137.57 | 140.0 | 219.6 | J-S1650E |
| J-N1756E | True | 100.00 | 137.82 | 140.1 | 269.4 | J-N1771E |
| J-S1282E | True | 100.00 | 138.05 | 140.0 | 200.7 | J-S1281E |
| J-N1090E | False | 225.00 | 138.50 | 140.0 | 192.5 | J-N1070E |
| J-N1279E | True | 100.00 | 139.86 | 210.2 | 140.0 | J-N1645E |
| J-N1260E | True | 100.00 | 139.95 | 140.1 | 140.1 | J-N1265E |
| J-S1630E | True | 100.00 | 140.29 | 140.1 | 140.0 | J-S1650E |
| J-S1460E | True | 100.00 | 140.32 | 140.0 | 283.7 | J-S2178E |
| J-N1510E | True | 100.00 | 141.75 | 140.0 | 288.5 | J-N1520E |
| J-N1091E | False | 200.00 | 141.83 | 140.1 | 214.6 | J-N1090E |
| J-N1716E | True | 100.00 | 142.50 | 140.1 | 140.1 | J-N1715E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N55E | True | 100.00 | 142.83 | 140.0 | 268.6 | J-N60E |
| J-N225E | True | 100.00 | 142.96 | 140.0 | 285.9 | J-N245E |
| J-S1970E | True | 100.00 | 143.05 | 140.0 | 284.9 | J-S2178E |
| J-N1700E | True | 100.00 | 143.31 | 286.0 | 140.0 | J-N1771E |
| J-S1281E | True | 100.00 | 143.62 | 140.0 | 171.0 | J-S1282E |
| J-S701E | True | 100.00 | 144.14 | 140.0 | 219.9 | J-S702E |
| J-N1050E | True | 100.00 | 144.19 | 140.0 | 173.8 | J-N1055E |
| J-N178E | True | 100.00 | 144.27 | 166.2 | 140.0 | J-N1712E |
| J-S1555E | True | 100.00 | 144.92 | 140.0 | 282.0 | J-S2178E |
| J-N60E | True | 100.00 | 145.39 | 140.0 | 231.4 | J-N65E |
| J-N1545E | True | 100.00 | 145.56 | 140.0 | 223.4 | J-N1540E |
| J-392 | True | 100.00 | 145.87 | 140.0 | 286.4 | J-S2178E |
| J-N581E | True | 100.00 | 146.32 | 140.0 | 242.5 | J-N582E |
| J-S702E | True | 100.00 | 146.88 | 140.0 | 227.6 | J-S701E |
| J-S1990E | True | 100.00 | 147.05 | 140.0 | 216.5 | J-S1980E |
| J-N1270E | True | 100.00 | 147.34 | 162.7 | 140.1 | J-N1275E |
| J-S2190E | True | 100.00 | 147.48 | 140.1 | 171.1 | J-S2180E |
| J-N562E | True | 100.00 | 147.53 | 140.1 | 201.1 | J-N583E |
| J-S1720E | True | 100.00 | 148.49 | 140.0 | 174.5 | J-S1705E |
| J-S177E | True | 100.00 | 148.77 | 140.0 | 195.6 | J-S160E |
| J-S1556E | True | 100.00 | 149.28 | 140.0 | 280.5 | J-S2178E |
| J-N910E | True | 133.00 | 150.00 | 302.5 | 337.9 | J-N900E |
| J-1144 | True | 100.00 | 150.05 | 149.8 | 140.0 | J-366 |
| J-S1679E | True | 100.00 | 150.56 | 140.0 | 178.5 | J-S1680E |
| J-1162 | True | 100.00 | 150.68 | 140.0 | 281.7 | J-S2178E |
| J-1121 | True | 100.00 | 150.89 | 140.0 | 371.9 | J-N1645E |
| J-N560E | True | 100.00 | 150.99 | 140.1 | 210.7 | J-N563E |
| J-N245E | True | 100.00 | 151.09 | 140.1 | 240.1 | J-N225E |
| J-S30E | True | 100.00 | 151.13 | 140.0 | 285.5 | J-S260E |
| J-S160E | True | 100.00 | 151.25 | 140.0 | 183.7 | J-S177E |
| J-N1713E | True | 100.00 | 151.80 | 140.1 | 140.1 | J-N1714E |
| J-N1705E | True | 100.00 | 152.47 | 286.2 | 140.0 | J-N1771E |
| J-1084 | True | 100.00 | 152.52 | 140.1 | 270.1 | J-N1771E |
| J-N405E | True | 100.00 | 153.29 | 147.0 | 140.0 | J-373 |
| J-S2200E | True | 100.00 | 154.05 | 147.7 | 140.0 | J-S2180E |
| J-N65E | True | 100.00 | 154.85 | 140.0 | 199.1 | J-N60E |
| J-N1195E | True | 100.00 | 154.89 | 140.0 | 263.0 | J-N1645E |
| J-S2205E | True | 100.00 | 154.91 | 140.0 | 161.6 | J-S1435E |
| J-N1280E | True | 100.00 | 155.20 | 252.0 | 140.0 | J-N1645E |
| J-N563E | True | 100.00 | 155.29 | 140.1 | 192.1 | J-N560E |
| J-N480E | True | 100.00 | 156.59 | 173.3 | 140.0 | J-N465E |
| J-N1140E | True | 100.00 | 156.92 | 140.0 | 519.7 | J-422 |
| J-S1435E | True | 100.00 | 157.84 | 140.0 | 145.1 | J-S2205E |
| J-S1430E | True | 100.00 | 158.53 | 155.4 | 140.0 | J-S2180E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N1530E | True | 100.00 | 158.82 | 140.0 | 286.1 | J-N1535E |
| J-S1910E | True | 100.00 | 160.30 | 140.0 | 278.6 | J-S2178E |
| J-S675E | True | 100.00 | 160.87 | 140.0 | 277.2 | J-S2178E |
| J-S1670E | True | 100.00 | 161.08 | 140.1 | 153.1 | J-S700E |
| J-S1420E | True | 100.00 | 161.34 | 143.2 | 140.0 | J-S1425E |
| J-310 | True | 100.00 | 162.78 | 140.1 | 277.6 | J-S2178E |
| J-N1165E | True | 100.00 | 163.26 | 140.0 | 255.1 | J-N1645E |
| J-S1440E | True | 100.00 | 163.35 | 140.0 | 154.2 | J-S1435E |
| J-S181E | True | 100.00 | 163.40 | 140.0 | 205.8 | J-S160E |
| J-328 | True | 100.00 | 163.49 | 140.0 | 278.8 | J-S2178E |
| J-S1380E | True | 100.00 | 164.09 | 140.0 | 232.9 | J-S1425E |
| J-N433E | True | 100.00 | 164.32 | 140.1 | 271.3 | J-N1900E |
| J-374 | True | 100.00 | 164.80 | 140.0 | 319.3 | J-N436E |
| J-S145E | True | 100.00 | 164.83 | 140.0 | 257.7 | J-S177E |
| J-816 | True | 100.00 | 165.57 | 140.0 | 357.9 | J-N1645E |
| J-N1710E | True | 100.00 | 166.46 | 266.6 | 140.0 | J-N1771E |
| J-S680E | True | 100.00 | 166.61 | 140.1 | 159.0 | J-S702E |
| J-S1980E | True | 100.00 | 167.02 | 140.1 | 140.0 | J-S1990E |
| J-N1540E | True | 100.00 | 167.71 | 140.1 | 140.1 | J-N1545E |
| J-S1390E | True | 100.00 | 168.18 | 143.5 | 140.0 | J-S1425E |
| J-S1001E | True | 100.00 | 168.38 | 169.8 | 140.0 | J-S1003E |
| J-326 | True | 100.00 | 168.65 | 140.0 | 277.3 | J-S2178E |
| J-854 | True | 100.00 | 168.67 | 140.0 | 341.5 | J-N1645E |
| J-327 | True | 100.00 | 168.76 | 140.0 | 277.3 | J-S2178E |
| J-1143 | True | 100.00 | 169.63 | 155.7 | 140.0 | J-366 |
| J-S308E | True | 100.00 | 169.63 | 140.0 | 263.7 | J-S260E |
| J-S1530E | True | 100.00 | 169.81 | 140.0 | 158.8 | J-S1440E |
| J-S585E | True | 100.00 | 169.96 | 140.1 | 205.8 | J-S702E |
| J-S1900E | True | 100.00 | 169.96 | 140.1 | 274.5 | J-S2178E |
| J-N1717E | True | 100.00 | 170.15 | 256.7 | 140.0 | J-N1771E |
| J-14 | True | 100.00 | 170.18 | 140.0 | 189.5 | J-13 |
| J-N1285E | True | 100.00 | 170.57 | 251.6 | 140.0 | J-N1645E |
| J-S725E | False | 225.00 | 170.62 | 140.2 | 273.8 | J-S2178E |
| J-S909E | True | 100.00 | 170.64 | 175.7 | 140.0 | J-S1003E |
| J-N1711E | True | 100.00 | 171.16 | 205.7 | 140.0 | J-N1771E |
| J-N400E | True | 100.00 | 171.25 | 160.2 | 140.0 | J-373 |
| J-N470E | True | 100.00 | 172.00 | 184.2 | 140.0 | J-N465E |
| J-S200E | True | 100.00 | 172.30 | 140.0 | 272.1 | J-S260E |
| J-343 | True | 100.00 | 172.31 | 178.1 | 140.0 | J-S1003E |
| J-1170 | True | 100.00 | 172.52 | 140.0 | 221.9 | J-1171 |
| J-S170E | True | 100.00 | 172.85 | 157.6 | 140.0 | J-S175E |
| J-S908E | False | 225.00 | 174.84 | 181.7 | 140.0 | J-S1003E |
| J-311 | True | 100.00 | 174.87 | 140.1 | 273.3 | J-S2178E |
| J-S1600E | True | 100.00 | 175.64 | 140.0 | 146.8 | J-S1425E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-1142 | True | 100.00 | 175.78 | 153.7 | 140.0 | J-366 |
| J-N710E | True | 100.00 | 176.09 | 140.0 | 318.1 | J-N720E |
| J-N1526E | True | 100.00 | 176.12 | 140.1 | 162.1 | J-N1540E |
| J-870 | True | 100.00 | 176.16 | 140.0 | 337.1 | J-N1645E |
| J-S605E | True | 100.00 | 176.18 | 140.1 | 270.5 | J-S2178E |
| J-S1525E | True | 100.00 | 176.23 | 140.1 | 270.4 | J-S2178E |
| J-N561E | True | 100.00 | 176.38 | 140.0 | 154.1 | J-N562E |
| J-S1520E | True | 100.00 | 176.47 | 140.1 | 270.4 | J-S2178E |
| J-402 | True | 100.00 | 177.01 | 243.7 | 140.0 | J-N1771E |
| J-1171 | True | 100.00 | 177.06 | 140.0 | 202.9 | J-1170 |
| J-N1757E | True | 100.00 | 178.37 | 140.0 | 173.8 | J-N1771E |
| J-S2085E | True | 100.00 | 178.90 | 140.1 | 264.8 | J-S2178E |
| J-S740E | False | 225.00 | 179.19 | 140.0 | 270.6 | J-S2178E |
| J-N1160E | True | 100.00 | 180.26 | 140.0 | 208.8 | J-N1050E |
| J-N70E | False | 200.00 | 181.23 | 140.0 | 158.6 | J-N65E |
| J-S150E | True | 100.00 | 181.96 | 140.0 | 278.6 | J-S260E |
| J-N436E | False | 225.00 | 182.17 | 140.0 | 173.5 | J-319 |
| J-N1190E | True | 100.00 | 182.54 | 140.0 | 204.0 | J-N1195E |
| J-13 | True | 100.00 | 183.65 | 143.9 | 140.0 | J-14 |
| J-S1300E | True | 183.00 | 184.00 | 422.6 | 265.7 | J-S2178E |
| J-N140E | True | 183.00 | 184.00 | 465.7 | 320.3 | J-N436E |
| J-S881E | True | 183.00 | 184.00 | 257.8 | 269.0 | J-S2178E |
| J-S1321E | True | 183.00 | 184.00 | 420.2 | 263.1 | J-S2178E |
| J-S1320E | True | 183.00 | 184.00 | 424.4 | 260.6 | J-S2178E |
| J-S1319E | True | 183.00 | 184.00 | 430.5 | 257.8 | J-S2178E |
| J-336 | True | 100.00 | 184.01 | 140.0 | 231.9 | J-N1771E |
| J-N720E | True | 100.00 | 184.56 | 140.0 | 294.5 | J-N710E |
| J-1169 | True | 100.00 | 184.77 | 141.1 | 140.1 | J-898 |
| J-320 | True | 100.00 | 185.79 | 183.2 | 140.0 | J-N436E |
| J-319 | False | 225.00 | 185.79 | 159.7 | 140.0 | J-N436E |
| J-N830E | True | 100.00 | 186.04 | 140.0 | 179.8 | J-N835E |
| J-N1880E | True | 100.00 | 186.07 | 231.4 | 140.0 | J-N1771E |
| J-N1520E | True | 100.00 | 186.28 | 145.1 | 140.0 | J-N1510E |
| J-N370E | True | 100.00 | 186.65 | 140.0 | 141.6 | J-373 |
| J-172 | True | 100.00 | 186.65 | 140.0 | 219.1 | J-166 |
| J-1175 | True | 100.00 | 186.99 | 140.0 | 268.7 | J-S2178E |
| J-N640E | True | 100.00 | 187.16 | 140.1 | 284.1 | J-N631E |
| J-S1580E | True | 100.00 | 189.21 | 140.0 | 143.2 | J-S1380E |
| J-S2172E | True | 100.00 | 189.30 | 282.3 | 140.0 | J-S2178E |
| J-S580E | True | 100.00 | 189.81 | 140.0 | 175.7 | J-S585E |
| J-S309E | True | 100.00 | 190.00 | 140.0 | 230.6 | J-S308E |
| J-S635E | True | 100.00 | 190.48 | 140.0 | 265.5 | J-S2178E |
| J-393 | True | 100.00 | 190.49 | 140.0 | 237.0 | J-N1900E |
| J-N1525E | True | 100.00 | 190.59 | 140.1 | 168.6 | J-N1510E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N330E | True | 100.00 | 191.28 | 140.0 | 216.0 | J-373 |
| J-S290E | True | 100.00 | 191.92 | 140.0 | 280.6 | J-S260E |
| J-394 | False | 225.00 | 192.14 | 181.7 | 140.0 | J-N436E |
| J-S800E | True | 100.00 | 192.30 | 140.0 | 265.3 | J-S2178E |
| J-S1540E | True | 100.00 | 192.58 | 140.0 | 257.4 | J-S1555E |
| J-N425E | True | 100.00 | 192.58 | 140.0 | 229.9 | J-N420E |
| J-N1535E | True | 100.00 | 192.78 | 140.0 | 187.9 | J-N1530E |
| J-N490E | True | 100.00 | 194.11 | 190.8 | 140.0 | J-N465E |
| J-N631E | True | 100.00 | 194.59 | 140.1 | 284.8 | J-N640E |
| J-316 | True | 100.00 | 194.97 | 140.0 | 207.3 | J-170 |
| J-1140 | True | 100.00 | 196.11 | 140.1 | 227.3 | J-N1307E |
| J-N431E | True | 100.00 | 196.29 | 140.0 | 158.3 | J-N432E |
| J-N1400E | True | 100.00 | 196.43 | 140.0 | 200.2 | J-N1195E |
| J-330 | True | 100.00 | 197.30 | 140.0 | 140.0 | J-331 |
| J-N360E | True | 100.00 | 197.87 | 140.0 | 145.1 | J-373 |
| J-S1160E | False | 200.00 | 197.94 | 140.0 | 263.2 | J-S2178E |
| J-1178 | True | 100.00 | 197.94 | 140.0 | 263.6 | J-S2178E |
| J-N1020E | True | 100.00 | 198.22 | 140.1 | 295.3 | J-N1645E |
| J-372 | True | 100.00 | 199.80 | 256.0 | 140.0 | J-N1645E |
| J-N1200E | True | 100.00 | 199.88 | 140.0 | 190.5 | J-N1645E |
| J-170 | True | 100.00 | 200.71 | 140.0 | 188.0 | J-316 |
| J-N1220E | True | 100.00 | 200.92 | 256.2 | 140.0 | J-N1645E |
| J-S970E | True | 200.00 | 201.00 | 437.4 | 261.9 | J-S2178E |
| J-N890E | True | 200.00 | 201.00 | 320.5 | 262.9 | J-N880E |
| J-S990E | True | 200.00 | 201.00 | 169.7 | 261.9 | J-S2178E |
| J-S1000E | True | 200.00 | 201.00 | 191.3 | 181.7 | J-S1008E |
| J-S930E | True | 200.00 | 201.00 | 464.3 | 261.4 | J-S2178E |
| J-S1140E | True | 200.00 | 201.00 | 334.2 | 262.6 | J-S2178E |
| J-N870E | True | 200.00 | 201.00 | 388.1 | 334.4 | J-N436E |
| J-S950E | True | 200.00 | 201.00 | 279.4 | 261.9 | J-S2178E |
| J-N900E | True | 133.00 | 201.00 | 142.8 | 184.6 | J-406 |
| J-S940E | True | 200.00 | 201.00 | 468.8 | 260.6 | J-S2178E |
| J-N775E | True | 200.00 | 201.00 | 485.2 | 337.0 | J-N900E |
| J-N81E | True | 200.00 | 201.00 | 449.3 | 299.7 | J-N436E |
| J-N435E | True | 200.00 | 201.00 | 270.7 | 257.7 | J-N437E |
| J-S1095E | True | 200.00 | 201.00 | 291.4 | 261.9 | J-S2178E |
| J-S935E | True | 200.00 | 201.00 | 468.9 | 261.8 | J-S2178E |
| J-N880E | True | 200.00 | 201.00 | 233.1 | 257.8 | J-N900E |
| J-S1775E | True | 200.00 | 201.00 | 277.7 | 257.9 | J-S2178E |
| J-S1141E | True | 200.00 | 201.00 | 445.8 | 262.3 | J-S2178E |
| J-94 | True | 200.00 | 201.00 | 328.6 | 261.6 | J-S2178E |
| J-95 | True | 200.00 | 201.00 | 319.5 | 261.6 | J-S2178E |
| J-1157 | True | 200.00 | 201.00 | 339.1 | 261.6 | J-S2178E |
| J-878 | True | 200.00 | 201.00 | 325.1 | 261.6 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-C235 | True | 200.00 | 201.00 | 306.7 | 246.9 | J-S1003E |
| J-406 | True | 133.00 | 201.00 | 184.6 | 180.9 | J-N900E |
| J-N421E | True | 100.00 | 201.15 | 140.0 | 201.7 | J-N420E |
| J-N1480E | True | 100.00 | 201.30 | 140.0 | 295.3 | J-N1645E |
| J-167 | True | 100.00 | 201.66 | 140.0 | 189.0 | J-172 |
| J-166 | True | 100.00 | 203.43 | 140.0 | 140.0 | J-172 |
| J-NS185 | False | 225.00 | 203.78 | 258.8 | 140.0 | J-N436E |
| J-N45E | True | 100.00 | 205.36 | 140.1 | 312.2 | J-N50E |
| J-S550E | True | 100.00 | 205.76 | 140.0 | 260.3 | J-S2178E |
| J-N420E | True | 100.00 | 205.96 | 140.0 | 179.5 | J-N425E |
| J-S2171E | False | 225.00 | 206.59 | 282.5 | 140.0 | J-S2178E |
| J-1116 | True | 100.00 | 206.91 | 146.8 | 140.0 | J-1117 |
| J-371 | True | 100.00 | 207.13 | 192.3 | 140.0 | J-N1645E |
| J-N790E | True | 100.00 | 207.33 | 140.1 | 338.8 | J-N900E |
| J-171 | True | 100.00 | 207.90 | 140.0 | 158.8 | J-168 |
| J-N1755E | True | 100.00 | 208.80 | 229.0 | 140.0 | J-N1771E |
| J-1196 | True | 100.00 | 209.05 | 140.0 | 256.6 | J-S2178E |
| J-S565E | True | 100.00 | 209.19 | 140.0 | 254.4 | J-S2178E |
| J-338 | True | 100.00 | 209.53 | 184.6 | 140.0 | J-N1645E |
| J-NS183 | False | 225.00 | 209.65 | 293.5 | 140.0 | J-N436E |
| J-S560E | True | 100.00 | 209.70 | 140.0 | 254.1 | J-S2178E |
| J-N580E | True | 100.00 | 209.95 | 140.0 | 175.4 | J-N581E |
| J-169 | True | 100.00 | 210.79 | 140.0 | 150.1 | J-316 |
| J-168 | True | 100.00 | 210.96 | 144.9 | 140.0 | J-171 |
| J-N165E | True | 100.00 | 211.95 | 140.0 | 309.4 | J-N436E |
| J-342 | True | 100.00 | 211.97 | 179.9 | 140.0 | J-N1645E |
| J-S1080E | True | 100.00 | 212.17 | 140.0 | 254.8 | J-S2178E |
| J-174 | True | 100.00 | 212.66 | 153.2 | 140.0 | J-171 |
| J-1108 | True | 100.00 | 212.68 | 140.0 | 181.0 | J-N436E |
| J-1114 | True | 100.00 | 213.65 | 140.0 | 203.4 | J-1117 |
| J-S685E | True | 100.00 | 214.24 | 140.0 | 249.9 | J-S680E |
| J-1079 | True | 100.00 | 214.27 | 239.8 | 140.0 | J-N1771E |
| J-N240E | True | 100.00 | 214.29 | 140.0 | 158.7 | J-N421E |
| J-S907E | False | 225.00 | 214.63 | 193.6 | 140.0 | J-S1003E |
| J-173 | True | 100.00 | 214.74 | 154.0 | 140.2 | J-171 |
| J-N190E | True | 100.00 | 215.23 | 140.0 | 146.6 | J-N425E |
| J-S720E | False | 225.00 | 215.34 | 140.0 | 140.0 | J-S725E |
| J-N1900E | True | 100.00 | 215.35 | 140.0 | 208.2 | J-N1890E |
| J-1173 | True | 100.00 | 215.58 | 140.0 | 224.4 | J-1172 |
| J-165 | True | 100.00 | 215.64 | 159.7 | 140.2 | J-171 |
| J-N350E | True | 100.00 | 215.67 | 147.0 | 140.0 | J-N340E |
| J-S270E | True | 100.00 | 215.84 | 147.0 | 140.0 | J-S271E |
| J-S780E | False | 225.00 | 215.86 | 140.0 | 148.1 | J-S725E |
| J-S2000E | True | 100.00 | 215.91 | 140.0 | 222.2 | J-S1990E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S1510E | True | 100.00 | 216.18 | 140.0 | 174.1 | J-S1679E |
| J-N220E | True | 100.00 | 216.35 | 140.0 | 144.0 | J-N225E |
| J-S260E | True | 100.00 | 216.41 | 140.0 | 157.5 | J-S250E |
| J-1181 | True | 100.00 | 216.73 | 140.0 | 251.6 | J-S2178E |
| J-N1451E | True | 100.00 | 217.22 | 140.1 | 301.4 | J-N1645E |
| J-1083 | True | 100.00 | 217.47 | 140.0 | 147.3 | J-N1771E |
| J-H1133 | True | 100.00 | 217.49 | 140.2 | 168.6 | J-1117 |
| J-1081 | True | 100.00 | 217.57 | 140.0 | 143.3 | J-N1771E |
| J-S365E | True | 100.00 | 217.64 | 140.0 | 261.2 | J-S2178E |
| J-1080 | True | 100.00 | 217.94 | 140.0 | 142.2 | J-N1771E |
| J-164 | True | 100.00 | 218.48 | 154.9 | 140.3 | J-171 |
| J-S882E | False | 225.00 | 218.96 | 140.0 | 202.0 | J-S881E |
| J-1083 | True | 100.00 | 219.12 | 140.0 | 144.2 | J-1083 |
| J-390 | True | 100.00 | 219.65 | 140.0 | 318.8 | J-162 |
| J-N265E | True | 100.00 | 219.68 | 140.0 | 169.5 | J-N240E |
| J-N50E | True | 100.00 | 219.85 | 140.0 | 252.3 | J-N55E |
| J-N1750E | True | 100.00 | 219.89 | 252.7 | 140.0 | J-N1771E |
| J-1091 | True | 100.00 | 219.97 | 254.8 | 140.0 | J-N1771E |
| J-1172 | True | 100.00 | 220.23 | 140.0 | 191.2 | J-1171 |
| J-171A | True | 100.00 | 220.29 | 140.1 | 140.0 | J-N1535E |
| J-11 | True | 100.00 | 220.39 | 244.4 | 140.0 | J-N1771E |
| J-S250E | True | 100.00 | 220.65 | 145.9 | 140.0 | J-S260E |
| J-1097 | True | 100.00 | 220.68 | 239.0 | 140.0 | J-N1771E |
| J-1099 | True | 100.00 | 220.68 | 223.5 | 140.0 | J-N1771E |
| J-S590E | True | 100.00 | 220.98 | 140.0 | 157.1 | J-S580E |
| J-N320E | True | 100.00 | 221.10 | 149.6 | 140.1 | J-373 |
| J-304 | True | 100.00 | 221.13 | 140.0 | 248.7 | J-S2178E |
| J-341 | True | 100.00 | 221.21 | 173.0 | 140.0 | J-N1645E |
| J-S240E | True | 100.00 | 221.65 | 140.0 | 150.1 | J-S260E |
| J-1085 | True | 100.00 | 221.99 | 150.4 | 140.0 | J-N1771E |
| J-1086 | True | 100.00 | 222.28 | 158.6 | 140.0 | J-N1771E |
| J-N671E | True | 100.00 | 222.30 | 140.0 | 307.2 | J-N436E |
| J-S220E | True | 100.00 | 222.44 | 140.0 | 248.5 | J-S260E |
| J-N1490E | True | 100.00 | 222.45 | 140.0 | 190.3 | J-N1525E |
| J-S1890E | True | 100.00 | 222.58 | 140.0 | 246.1 | J-S2178E |
| J-S2170E | False | 225.00 | 223.23 | 285.3 | 140.0 | J-S2178E |
| J-1087 | True | 100.00 | 223.39 | 189.7 | 140.0 | J-N1771E |
| J-N1890E | True | 100.00 | 223.40 | 140.0 | 147.5 | J-N1900E |
| J-NS184 | True | 100.00 | 224.03 | 285.4 | 140.0 | J-N436E |
| J-1098 | True | 100.00 | 224.04 | 192.3 | 140.0 | J-N1771E |
| J-S190E | True | 100.00 | 224.21 | 140.0 | 209.4 | J-S200E |
| J-1180 | True | 100.00 | 224.44 | 140.0 | 236.9 | J-1181 |
| J-313 | True | 100.00 | 224.51 | 140.0 | 174.4 | J-310 |
| J-1088 | True | 100.00 | 224.68 | 242.1 | 140.0 | J-N1771E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-1109 | True | 100.00 | 224.71 | 140.0 | 161.1 | J-N436E |
| J-1132 | True | 100.00 | 224.94 | 169.4 | 140.0 | J-1135 |
| J-1090 | True | 100.00 | 224.98 | 259.1 | 140.0 | J-N1771E |
| J-S630E | True | 225.00 | 225.00 | 140.0 | 209.6 | J-S635E |
| J-S2100E | True | 225.00 | 225.50 | 408.8 | 212.6 | J-S2178E |
| J-1174 | True | 100.00 | 225.60 | 140.0 | 196.1 | J-1173 |
| J-N1307E | True | 100.00 | 225.66 | 140.0 | 154.7 | J-1140 |
| J-S2165E | True | 225.00 | 225.67 | 284.2 | 140.0 | J-S2178E |
| J-S1820E | True | 225.00 | 226.00 | 441.6 | 243.2 | J-S2178E |
| J-S790E | True | 225.00 | 226.00 | 361.1 | 244.0 | J-S2178E |
| J-S1800E | True | 225.00 | 226.00 | 432.8 | 243.5 | J-S2178E |
| J-S1960E | True | 225.00 | 226.00 | 207.1 | 244.9 | J-S2178E |
| J-N30E | True | 225.00 | 226.00 | 364.7 | 315.7 | J-N436E |
| J-S1870E | True | 225.00 | 226.00 | 296.5 | 243.8 | J-S2178E |
| J-S1230E | True | 225.00 | 226.00 | 451.9 | 245.1 | J-S2178E |
| J-N860E | True | 225.00 | 226.00 | 355.1 | 325.0 | J-N900E |
| J-S1780E | True | 225.00 | 226.00 | 434.7 | 243.9 | J-S2178E |
| J-S1290E | True | 225.00 | 226.00 | 402.1 | 224.5 | J-S2178E |
| J-S2090E | True | 225.00 | 226.00 | 402.0 | 212.1 | J-S2178E |
| J-S1150E | True | 225.00 | 226.00 | 310.8 | 244.7 | J-S2178E |
| J-S900E | True | 225.00 | 226.00 | 173.4 | 206.3 | J-S905E |
| J-S2150E | True | 225.00 | 226.00 | 370.2 | 178.3 | J-S2178E |
| J-N740E | True | 225.00 | 226.00 | 233.5 | 293.7 | J-N750E |
| J-N770E | True | 225.00 | 226.00 | 442.2 | 326.6 | J-N436E |
| J-S2160E | True | 225.00 | 226.00 | 325.1 | 152.0 | J-S2178E |
| J-N800E | True | 225.00 | 226.00 | 403.0 | 335.7 | J-N900E |
| J-S1350E | True | 225.00 | 226.00 | 242.1 | 243.0 | J-S2178E |
| J-N760E | True | 225.00 | 226.00 | 363.1 | 326.9 | J-N436E |
| J-S1340E | True | 225.00 | 226.00 | 294.3 | 242.5 | J-S2178E |
| J-S1280E | True | 225.00 | 226.00 | 333.8 | 231.9 | J-S2178E |
| J-S880E | True | 225.00 | 226.00 | 238.4 | 236.6 | J-S900E |
| J-N840E | True | 225.00 | 226.00 | 412.9 | 331.4 | J-N900E |
| J-S1360E | True | 225.00 | 226.00 | 330.8 | 241.9 | J-S2178E |
| J-S1240E | True | 225.00 | 226.00 | 438.6 | 244.4 | J-S2178E |
| J-S1930E | True | 225.00 | 226.00 | 207.3 | 242.4 | J-S2178E |
| J-N120E | True | 225.00 | 226.00 | 472.2 | 290.8 | J-N436E |
| J-S1810E | True | 225.00 | 226.00 | 439.1 | 243.2 | J-S2178E |
| J-S1370E | True | 225.00 | 226.00 | 215.8 | 241.9 | J-S2178E |
| J-S820E | True | 225.00 | 226.00 | 429.2 | 244.1 | J-S2178E |
| J-N850E | True | 225.00 | 226.00 | 384.5 | 323.5 | J-N900E |
| J-S620E | True | 225.00 | 226.00 | 299.6 | 242.8 | J-S2178E |
| J-S2110E | True | 225.00 | 226.00 | 398.3 | 218.6 | J-S2178E |
| J-S1880E | True | 225.00 | 226.00 | 261.2 | 244.0 | J-S2178E |
| J-N810E | True | 225.00 | 226.00 | 441.6 | 335.5 | J-N900E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S2130E | True | 225.00 | 226.00 | 404.4 | 210.5 | J-S2178E |
| J-S2140E | True | 225.00 | 226.00 | 356.6 | 179.7 | J-S2178E |
| J-N40E | True | 225.00 | 226.00 | 318.2 | 315.8 | J-N436E |
| J-S1190E | True | 225.00 | 226.00 | 450.4 | 245.8 | J-S2178E |
| J-N635E | True | 225.00 | 226.00 | 383.1 | 307.3 | J-N436E |
| J-S1925E | True | 225.00 | 226.00 | 402.4 | 243.8 | J-S2178E |
| J-S1245E | True | 225.00 | 226.00 | 326.7 | 242.4 | J-S2178E |
| J-S945E | True | 225.00 | 226.00 | 434.1 | 243.9 | J-S2178E |
| J-S905E | True | 225.00 | 226.00 | 151.4 | 176.3 | J-S890E |
| J-S1151E | True | 225.00 | 226.00 | 341.9 | 244.1 | J-S2178E |
| J-S1152E | True | 225.00 | 226.00 | 246.5 | 243.9 | J-S2178E |
| J-S1885E | True | 225.00 | 226.00 | 359.4 | 243.9 | J-S2178E |
| J-S871E | True | 225.00 | 226.00 | 412.3 | 244.8 | J-S2178E |
| J-S872E | True | 225.00 | 226.00 | 382.5 | 245.3 | J-S2178E |
| J-S902E | True | 225.00 | 226.00 | 322.3 | 245.4 | J-S2178E |
| J-S903E | True | 225.00 | 226.00 | 256.6 | 197.7 | J-S1003E |
| J-S904E | True | 225.00 | 226.00 | 255.6 | 187.0 | J-S1003E |
| J-S873E | True | 225.00 | 226.00 | 328.6 | 245.4 | J-S2178E |
| J-S874E | True | 225.00 | 226.00 | 330.4 | 245.4 | J-S2178E |
| J-S875E | True | 225.00 | 226.00 | 313.5 | 245.4 | J-S2178E |
| J-S906E | True | 225.00 | 226.00 | 197.3 | 149.7 | J-S1003E |
| J-S625E | True | 225.00 | 226.00 | 414.0 | 241.7 | J-S2178E |
| J-S1855E | True | 225.00 | 226.00 | 446.4 | 243.0 | J-S2178E |
| J-S1825E | True | 225.00 | 226.00 | 441.7 | 243.2 | J-S2178E |
| J-S644E | True | 225.00 | 226.00 | 420.1 | 242.3 | J-S2178E |
| J-S1302E | True | 225.00 | 226.00 | 408.5 | 241.2 | J-S2178E |
| J-S2135E | True | 225.00 | 226.00 | 418.8 | 210.7 | J-S2178E |
| J-S1295E | True | 225.00 | 226.00 | 399.7 | 221.0 | J-S2178E |
| J-S2111E | True | 225.00 | 226.00 | 399.4 | 215.3 | J-S2178E |
| J-S2112E | True | 225.00 | 226.00 | 398.9 | 213.1 | J-S2178E |
| J-S2113E | True | 225.00 | 226.00 | 390.7 | 197.5 | J-S2178E |
| J-S2114E | True | 225.00 | 226.00 | 379.0 | 185.5 | J-S2178E |
| J-S2115E | True | 225.00 | 226.00 | 358.6 | 180.4 | J-S2178E |
| J-S2116E | True | 225.00 | 226.00 | 318.5 | 160.7 | J-S2178E |
| J-S2118E | True | 225.00 | 226.00 | 291.6 | 150.4 | J-S2178E |
| J-S2117E | True | 225.00 | 226.00 | 266.0 | 160.7 | J-S2178E |
| J-S2155E | True | 225.00 | 226.00 | 342.6 | 164.2 | J-S2178E |
| J-S2105E | True | 225.00 | 226.00 | 372.8 | 212.2 | J-S2178E |
| J-S2106E | True | 225.00 | 226.00 | 375.9 | 197.4 | J-S2178E |
| J-S640E | True | 225.00 | 226.00 | 427.5 | 242.7 | J-S2178E |
| J-S1301E | True | 225.00 | 226.00 | 396.6 | 240.3 | J-S2178E |
| J-N125E | True | 225.00 | 226.00 | 277.4 | 298.2 | J-N436E |
| J-N750E | True | 225.00 | 226.00 | 259.1 | 309.6 | J-N740E |
| J-N851E | True | 225.00 | 226.00 | 331.0 | 313.0 | J-N900E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N437E | True | 225.00 | 226.00 | 145.8 | 213.7 | J-N436E |
| J-S910E | True | 225.00 | 226.00 | 280.3 | 224.2 | J-S1003E |
| J-S2230E | True | 225.00 | 226.00 | 412.4 | 218.7 | J-S2178E |
| J-S2210E | True | 225.00 | 226.00 | 357.8 | 212.9 | J-S2178E |
| J-S2220E | True | 225.00 | 226.00 | 426.0 | 210.7 | J-S2178E |
| J-S1153E | True | 225.00 | 226.00 | 383.2 | 243.6 | J-S2178E |
| J-S1351E | True | 225.00 | 226.00 | 344.2 | 242.3 | J-S2178E |
| J-N634E | True | 225.00 | 226.00 | 400.9 | 338.3 | J-N900E |
| J-N846E | True | 225.00 | 226.00 | 388.4 | 326.5 | J-N900E |
| J-N891E | True | 225.00 | 226.00 | 316.6 | 282.2 | J-N880E |
| J-N161E | True | 225.00 | 226.00 | 258.2 | 304.6 | J-N436E |
| J-N141E | True | 225.00 | 226.00 | 404.7 | 298.3 | J-N436E |
| J-N852E | True | 225.00 | 226.00 | 323.5 | 302.9 | J-N900E |
| J-N632E | True | 225.00 | 226.00 | 398.7 | 338.1 | J-N900E |
| J-N633E | True | 225.00 | 226.00 | 481.5 | 339.8 | J-N900E |
| J-841 | True | 225.00 | 226.00 | 317.3 | 260.9 | J-N880E |
| J-350 | True | 225.00 | 226.00 | 252.8 | 154.1 | J-N436E |
| J-391 | True | 225.00 | 226.00 | 443.3 | 243.1 | J-S2178E |
| J-1110 | True | 100.00 | 226.25 | 140.0 | 158.5 | J-N436E |
| J-LW197 | True | 100.00 | 227.31 | 207.7 | 140.0 | J-N1771E |
| J-334 | True | 100.00 | 227.57 | 140.1 | 217.8 | J-333 |
| J-351 | True | 100.00 | 227.79 | 277.1 | 140.0 | J-N436E |
| J-S2030E | True | 100.00 | 228.00 | 140.0 | 240.4 | J-S2178E |
| J-163 | True | 100.00 | 228.26 | 154.9 | 140.2 | J-171 |
| J-N1550E | True | 100.00 | 228.43 | 140.0 | 184.1 | J-N1645E |
| J-337 | True | 100.00 | 228.45 | 140.0 | 151.6 | J-N1771E |
| J-305 | True | 100.00 | 228.67 | 140.0 | 243.7 | J-S2178E |
| J-S1745E | True | 100.00 | 228.79 | 140.0 | 192.9 | J-S1770E |
| J-912 | True | 100.00 | 229.23 | 264.0 | 140.0 | J-N1771E |
| J-911 | True | 100.00 | 229.23 | 151.8 | 140.0 | J-N1771E |
| J-N180E | True | 100.00 | 229.31 | 152.5 | 140.0 | J-373 |
| J-S1740E | True | 100.00 | 229.50 | 140.0 | 187.9 | J-S1745E |
| J-396 | True | 100.00 | 229.55 | 265.2 | 140.0 | J-N436E |
| J-352 | True | 100.00 | 229.62 | 283.8 | 140.0 | J-N436E |
| J-N510E | True | 100.00 | 229.69 | 160.1 | 140.0 | J-374 |
| J-N1030E | True | 100.00 | 229.77 | 140.1 | 241.9 | J-N1645E |
| J-1127 | True | 100.00 | 230.24 | 140.0 | 283.9 | J-N1645E |
| J-353 | True | 100.00 | 230.77 | 268.3 | 140.0 | J-N436E |
| J-333 | True | 100.00 | 231.61 | 140.1 | 200.0 | J-334 |
| J-1112 | True | 100.00 | 231.88 | 250.2 | 140.0 | J-N436E |
| J-354 | True | 100.00 | 232.31 | 261.7 | 140.0 | J-N436E |
| J-340 | True | 100.00 | 232.60 | 176.9 | 140.0 | J-N1645E |
| J-LW198 | True | 100.00 | 232.85 | 155.5 | 140.0 | J-N1771E |
| J-348 | True | 100.00 | 233.08 | 140.0 | 146.8 | J-N436E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N440E | True | 100.00 | 233.16 | 140.0 | 149.2 | J-N1900E |
| J-N542E | True | 100.00 | 233.83 | 140.0 | 156.4 | J-1135 |
| J-N1720E | True | 100.00 | 234.21 | 270.4 | 140.0 | J-N1771E |
| J-355 | True | 100.00 | 234.27 | 262.1 | 140.0 | J-N436E |
| J-S312E | True | 100.00 | 234.28 | 140.0 | 240.0 | J-S310E |
| J-N430E | True | 100.00 | 234.31 | 140.0 | 140.6 | J-N1900E |
| J-N1555E | True | 100.00 | 234.77 | 140.0 | 149.7 | J-N1645E |
| J-1161 | True | 100.00 | 234.98 | 144.9 | 140.0 | J-1162 |
| J-S1770E | True | 100.00 | 235.25 | 140.0 | 183.9 | J-S1745E |
| J-1222 | True | 100.00 | 235.25 | 140.0 | 176.9 | J-1162 |
| J-349 | True | 100.00 | 235.72 | 269.3 | 140.0 | J-N436E |
| J-1131 | True | 100.00 | 235.78 | 143.3 | 140.0 | J-N1535E |
| J-LW199 | True | 100.00 | 236.08 | 193.3 | 140.0 | J-N1771E |
| J-N1570E | True | 100.00 | 236.62 | 148.9 | 140.1 | J-N1645E |
| J-38 | True | 100.00 | 236.90 | 256.2 | 140.0 | J-N436E |
| J-1107 | True | 100.00 | 236.91 | 144.0 | 140.0 | J-N436E |
| J-1138 | True | 100.00 | 236.93 | 188.7 | 140.0 | J-N436E |
| J-323 | True | 100.00 | 236.95 | 156.0 | 140.0 | J-N436E |
| J-322 | True | 100.00 | 236.95 | 167.6 | 140.0 | J-N436E |
| J-1106 | True | 100.00 | 237.06 | 250.2 | 140.0 | J-N436E |
| J-N543E | True | 100.00 | 237.14 | 218.5 | 140.0 | J-N436E |
| J-N541E | True | 100.00 | 237.16 | 152.7 | 140.0 | J-1135 |
| J-1104 | True | 100.00 | 237.18 | 267.4 | 140.0 | J-N436E |
| J-1103 | True | 100.00 | 237.31 | 268.2 | 140.0 | J-N436E |
| J-318 | True | 100.00 | 238.28 | 140.0 | 161.5 | J-330 |
| J-1101 | True | 100.00 | 238.42 | 273.3 | 140.0 | J-N436E |
| J-N990E | True | 100.00 | 238.65 | 140.0 | 167.6 | J-N1645E |
| J-S1085E | True | 100.00 | 238.67 | 140.0 | 237.3 | J-S2178E |
| J-S1747E | True | 100.00 | 239.29 | 140.0 | 182.3 | J-S1740E |
| J-S670E | True | 100.00 | 239.91 | 140.0 | 224.4 | J-S685E |
| J-N1740E | True | 100.00 | 239.92 | 268.8 | 140.0 | J-N1771E |
| J-335 | True | 100.00 | 240.82 | 140.0 | 181.1 | J-334 |
| J-N1730E | True | 100.00 | 240.90 | 264.8 | 140.0 | J-N1771E |
| J-N930E | True | 100.00 | 241.59 | 140.0 | 254.4 | J-N835E |
| J-N1380E | True | 100.00 | 241.69 | 140.0 | 158.2 | J-N1645E |
| J-N185E | True | 100.00 | 241.90 | 140.0 | 146.6 | J-373 |
| J-825 | True | 100.00 | 242.08 | 140.0 | 148.1 | J-1162 |
| J-369 | True | 100.00 | 242.18 | 147.9 | 140.0 | J-171 |
| J-N1420E | True | 100.00 | 243.05 | 218.2 | 140.1 | J-N1645E |
| J-N1430E | True | 100.00 | 243.08 | 221.3 | 140.1 | J-N1645E |
| J-1100 | True | 100.00 | 243.25 | 257.8 | 140.0 | J-N1771E |
| J-N670E | True | 100.00 | 243.32 | 140.0 | 213.0 | J-N640E |
| J-N438E | True | 100.00 | 243.36 | 155.0 | 140.0 | J-N1900E |
| J-S310E | True | 100.00 | 244.52 | 140.0 | 176.9 | J-S309E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-1160 | True | 100.00 | 244.64 | 140.0 | 168.2 | J-1222 |
| J-S901E | True | 100.00 | 245.12 | 194.0 | 140.0 | J-366 |
| J-123 | True | 100.00 | 245.85 | 140.0 | 199.9 | J-1175 |
| J-N260E | True | 100.00 | 245.92 | 161.0 | 140.0 | J-N225E |
| J-N1741E | True | 100.00 | 246.38 | 253.7 | 140.0 | J-N1771E |
| J-N1370E | True | 100.00 | 246.42 | 235.5 | 140.1 | J-N1645E |
| J-329 | True | 100.00 | 247.00 | 148.8 | 140.0 | J-330 |
| J-S1040E | True | 100.00 | 247.34 | 140.0 | 230.5 | J-S2178E |
| J-N1390E | True | 100.00 | 248.29 | 233.9 | 140.0 | J-N1645E |
| J-S2040E | True | 100.00 | 249.75 | 140.0 | 222.7 | J-S2178E |
| J-N570E | True | 100.00 | 250.00 | 314.3 | 185.5 | J-N436E |
| J-N730E | True | 100.00 | 250.00 | 264.8 | 296.8 | J-N720E |
| J-S2060E | True | 100.00 | 250.00 | 403.5 | 224.1 | J-S2178E |
| J-N20E | True | 100.00 | 250.00 | 294.4 | 291.7 | J-N436E |
| J-S600E | True | 100.00 | 250.00 | 187.1 | 224.5 | J-S2178E |
| J-N700E | True | 100.00 | 250.00 | 202.3 | 298.3 | J-N710E |
| J-S2050E | True | 100.00 | 250.00 | 420.5 | 227.4 | J-S2178E |
| J-S1060E | True | 100.00 | 250.00 | 206.6 | 228.0 | J-S2178E |
| J-S140E | True | 100.00 | 250.00 | 238.7 | 246.5 | J-S260E |
| J-S50E | True | 100.00 | 250.00 | 314.5 | 279.4 | J-S260E |
| J-S540E | True | 100.00 | 250.00 | 151.0 | 231.2 | J-S2178E |
| J-N300E | True | 100.00 | 250.00 | 269.9 | 211.1 | J-N465E |
| J-S440E | True | 100.00 | 250.00 | 426.1 | 233.3 | J-S2178E |
| J-S280E | True | 100.00 | 250.00 | 180.1 | 234.3 | J-S290E |
| J-S480E | True | 100.00 | 250.00 | 428.4 | 230.6 | J-S2178E |
| J-N160E | True | 100.00 | 250.00 | 300.7 | 287.5 | J-N436E |
| J-S610E | True | 100.00 | 250.00 | 211.6 | 224.3 | J-S2178E |
| J-N940E | True | 100.00 | 250.00 | 345.0 | 334.6 | J-N900E |
| J-S120E | True | 100.00 | 250.00 | 277.1 | 243.6 | J-S260E |
| J-N1010E | True | 100.00 | 250.00 | 149.5 | 194.5 | J-N1030E |
| J-N100E | True | 100.00 | 250.00 | 249.3 | 282.7 | J-N436E |
| J-N620E | True | 100.00 | 250.00 | 262.3 | 161.9 | J-N436E |
| J-N1680E | True | 100.00 | 250.00 | 396.4 | 357.9 | J-N1645E |
| J-N500E | True | 100.00 | 250.00 | 258.2 | 237.2 | J-N436E |
| J-N1360E | True | 100.00 | 250.00 | 238.9 | 188.0 | J-N1645E |
| J-S1110E | True | 100.00 | 250.00 | 250.3 | 228.5 | J-S2178E |
| J-S180E | True | 100.00 | 250.00 | 156.0 | 186.7 | J-S175E |
| J-S1490E | True | 100.00 | 250.00 | 230.6 | 224.5 | J-S2178E |
| J-S510E | True | 100.00 | 250.00 | 425.4 | 231.8 | J-S2178E |
| J-N1300E | True | 100.00 | 250.00 | 346.5 | 220.4 | J-N1645E |
| J-S210E | True | 100.00 | 250.00 | 160.1 | 219.5 | J-S260E |
| J-S340E | True | 100.00 | 250.00 | 428.2 | 234.6 | J-S2178E |
| J-N530E | True | 100.00 | 250.00 | 262.1 | 238.3 | J-N1900E |
| J-S360E | True | 100.00 | 250.00 | 434.1 | 235.7 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S60E | True | 100.00 | 250.00 | 326.4 | 267.1 | J-S260E |
| J-S380E | True | 100.00 | 250.00 | 439.8 | 236.0 | J-S2178E |
| J-S660E | True | 100.00 | 250.00 | 183.3 | 226.0 | J-S2178E |
| J-S40E | True | 100.00 | 250.00 | 354.2 | 262.0 | J-S260E |
| J-N680E | True | 100.00 | 250.00 | 351.8 | 286.2 | J-N436E |
| J-S20E | True | 100.00 | 250.00 | 325.2 | 260.5 | J-S260E |
| J-N80E | True | 100.00 | 250.00 | 278.9 | 279.2 | J-N436E |
| J-S400E | True | 100.00 | 250.00 | 428.4 | 235.8 | J-S2178E |
| J-N600E | True | 100.00 | 250.00 | 272.0 | 167.1 | J-N436E |
| J-S10E | True | 100.00 | 250.00 | 271.7 | 251.2 | J-S80E |
| J-S1940E | True | 100.00 | 250.00 | 217.0 | 225.9 | J-S2178E |
| J-S230E | True | 100.00 | 250.00 | 190.1 | 171.1 | J-S240E |
| J-N1820E | True | 100.00 | 250.00 | 306.6 | 217.2 | J-N436E |
| J-N1450E | True | 100.00 | 250.00 | 355.6 | 263.9 | J-N1645E |
| J-S130E | True | 100.00 | 250.00 | 302.1 | 244.2 | J-S260E |
| J-S450E | True | 100.00 | 250.00 | 331.9 | 232.2 | J-S2178E |
| J-N540E | True | 100.00 | 250.00 | 233.8 | 148.0 | J-N1771E |
| J-S410E | True | 100.00 | 250.00 | 426.5 | 232.0 | J-S2178E |
| J-S370E | True | 100.00 | 250.00 | 208.2 | 234.8 | J-S2178E |
| J-N1440E | True | 100.00 | 250.00 | 327.9 | 248.2 | J-N1645E |
| J-S100E | True | 100.00 | 250.00 | 261.0 | 243.4 | J-S80E |
| J-S1330E | True | 100.00 | 250.00 | 387.2 | 223.7 | J-S2178E |
| J-S470E | True | 100.00 | 250.00 | 225.0 | 234.1 | J-S2178E |
| J-S1070E | True | 100.00 | 250.00 | 225.9 | 228.1 | J-S2178E |
| J-S430E | True | 100.00 | 250.00 | 405.6 | 233.3 | J-S2178E |
| J-S1560E | True | 100.00 | 250.00 | 357.2 | 224.7 | J-S2178E |
| J-S2080E | True | 100.00 | 250.00 | 388.0 | 215.7 | J-S2178E |
| J-S350E | True | 100.00 | 250.00 | 431.0 | 235.2 | J-S2178E |
| J-S520E | True | 100.00 | 250.00 | 405.4 | 231.8 | J-S2178E |
| J-N520E | True | 100.00 | 250.00 | 291.8 | 254.4 | J-N436E |
| J-S1470E | True | 100.00 | 250.00 | 408.6 | 224.7 | J-S2178E |
| J-N82E | True | 100.00 | 250.00 | 441.5 | 256.8 | J-N436E |
| J-N1305E | True | 100.00 | 250.00 | 297.5 | 256.4 | J-N1645E |
| J-N1455E | True | 100.00 | 250.00 | 370.2 | 332.2 | J-N1645E |
| J-N1825E | True | 100.00 | 250.00 | 394.5 | 213.7 | J-N436E |
| J-N434E | True | 100.00 | 250.00 | 242.7 | 231.5 | J-N437E |
| J-S45E | True | 100.00 | 250.00 | 316.6 | 281.2 | J-S260E |
| J-S311E | True | 100.00 | 250.00 | 418.2 | 241.7 | J-S2178E |
| J-S2045E | True | 100.00 | 250.00 | 303.8 | 218.7 | J-S2178E |
| J-S1283E | True | 100.00 | 250.00 | 279.5 | 224.6 | J-S2178E |
| J-S876E | True | 100.00 | 250.00 | 258.5 | 216.0 | J-S1003E |
| J-S878E | True | 100.00 | 250.00 | 291.0 | 215.2 | J-S1003E |
| J-S879E | True | 100.00 | 250.00 | 275.6 | 210.4 | J-S1003E |
| J-S877E | True | 100.00 | 250.00 | 169.0 | 213.8 | J-S1003E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S595E | True | 100.00 | 250.00 | 140.8 | 225.2 | J-S2178E |
| J-S1615E | True | 100.00 | 250.00 | 382.4 | 224.7 | J-S2178E |
| J-S485E | True | 100.00 | 250.00 | 430.7 | 230.1 | J-S2178E |
| J-S330E | True | 100.00 | 250.00 | 426.3 | 240.5 | J-S2178E |
| J-S41E | True | 100.00 | 250.00 | 333.4 | 263.4 | J-S260E |
| J-S70E | True | 100.00 | 250.00 | 159.1 | 188.2 | J-S260E |
| J-N305E | True | 100.00 | 250.00 | 254.1 | 230.4 | J-N436E |
| J-N525E | True | 100.00 | 250.00 | 209.2 | 246.5 | J-N436E |
| J-N575E | True | 100.00 | 250.00 | 327.5 | 194.0 | J-N436E |
| J-N636E | True | 100.00 | 250.00 | 260.5 | 305.0 | J-N436E |
| J-N1310E | True | 100.00 | 250.00 | 192.8 | 208.4 | J-N1645E |
| J-N1306E | True | 100.00 | 250.00 | 265.9 | 253.9 | J-1114 |
| J-S661E | True | 100.00 | 250.00 | 327.5 | 226.3 | J-S2178E |
| J-N1681E | True | 100.00 | 250.00 | 368.6 | 344.6 | J-N900E |
| J-N1454E | True | 100.00 | 250.00 | 395.9 | 271.1 | J-N1645E |
| J-77 | True | 100.00 | 250.00 | 185.4 | 277.3 | J-N880E |
| J-110 | True | 100.00 | 250.00 | 163.7 | 303.0 | J-77 |
| J-794 | True | 100.00 | 250.00 | 284.2 | 325.3 | J-N900E |
| J-796 | True | 100.00 | 250.00 | 439.3 | 337.3 | J-N900E |
| J-1120 | True | 100.00 | 250.00 | 231.6 | 223.8 | J-1121 |
| J-1118 | True | 100.00 | 250.00 | 272.7 | 267.6 | J-1117 |
| J-1119 | True | 100.00 | 250.00 | 387.6 | 348.8 | J-N1645E |
| J-1130 | True | 100.00 | 250.00 | 150.3 | 181.1 | J-N1480E |
| J-70 | True | 100.00 | 250.00 | 245.0 | 210.9 | J-N1535E |
| J-1129 | True | 100.00 | 250.00 | 195.0 | 196.7 | J-335 |
| J-1122 | True | 100.00 | 250.00 | 387.1 | 276.8 | J-N1645E |
| J-1124 | True | 100.00 | 250.00 | 288.9 | 258.0 | J-N1645E |
| J-1226 | True | 100.00 | 250.00 | 262.9 | 249.3 | J-N1535E |
| J-1123 | True | 100.00 | 250.00 | 343.1 | 268.9 | J-N1645E |
| J-1225 | True | 100.00 | 250.00 | 226.9 | 237.3 | J-332 |
| J-1163 | True | 100.00 | 250.00 | 169.9 | 211.3 | J-S877E |
| J-1154 | True | 100.00 | 250.00 | 263.8 | 206.6 | J-S1003E |
| J-1156 | True | 100.00 | 250.00 | 257.9 | 196.2 | J-S1003E |
| J-1155 | True | 100.00 | 250.00 | 260.6 | 201.4 | J-S1003E |
| J-1168 | True | 100.00 | 250.00 | 304.7 | 224.4 | J-S1003E |
| J-1167 | True | 100.00 | 250.00 | 302.5 | 220.7 | J-S1003E |
| J-1182 | True | 100.00 | 250.00 | 318.4 | 228.5 | J-S2178E |
| J-1177 | True | 100.00 | 250.00 | 314.4 | 228.5 | J-S2178E |
| J-1179 | True | 100.00 | 250.00 | 304.6 | 227.0 | J-S1003E |
| J-1216 | True | 100.00 | 250.00 | 331.9 | 228.4 | J-S2178E |
| J-1190 | True | 100.00 | 250.00 | 281.4 | 228.5 | J-S2178E |
| J-1191 | True | 100.00 | 250.00 | 182.4 | 194.6 | J-1192 |
| J-1192 | True | 100.00 | 250.00 | 161.3 | 196.5 | J-1193 |
| J-1193 | True | 100.00 | 250.00 | 148.7 | 172.1 | J-1194 |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-1194 | True | 100.00 | 250.00 | 151.8 | 171.4 | J-1193 |
| J-134 | True | 100.00 | 250.00 | 163.4 | 163.4 | J-1196 |
| J-1188 | True | 100.00 | 250.00 | 250.0 | 228.5 | J-S2178E |
| J-1187 | True | 100.00 | 250.00 | 198.6 | 228.5 | J-S2178E |
| J-1186 | True | 100.00 | 250.00 | 247.2 | 228.5 | J-S2178E |
| J-1197 | True | 100.00 | 250.00 | 189.7 | 201.8 | J-1196 |
| J-1185 | True | 100.00 | 250.00 | 338.3 | 228.5 | J-S2178E |
| J-1200 | True | 100.00 | 250.00 | 249.4 | 228.5 | J-S2178E |
| J-1202 | True | 100.00 | 250.00 | 274.8 | 228.5 | J-S2178E |
| J-143 | True | 100.00 | 250.00 | 220.9 | 228.5 | J-S2178E |
| J-144 | True | 100.00 | 250.00 | 349.3 | 228.6 | J-S2178E |
| J-1189 | True | 100.00 | 250.00 | 280.0 | 228.5 | J-S2178E |
| J-1198 | True | 100.00 | 250.00 | 209.8 | 215.5 | J-1197 |
| J-147 | True | 100.00 | 250.00 | 263.8 | 228.5 | J-S2178E |
| J-148 | True | 100.00 | 250.00 | 302.2 | 228.5 | J-S2178E |
| J-1201 | True | 100.00 | 250.00 | 216.2 | 228.5 | J-S2178E |
| J-1203 | True | 100.00 | 250.00 | 237.1 | 228.5 | J-S2178E |
| J-1205 | True | 100.00 | 250.00 | 220.4 | 228.5 | J-S2178E |
| J-1206 | True | 100.00 | 250.00 | 321.9 | 228.5 | J-S2178E |
| J-1202 | True | 100.00 | 250.00 | 250.6 | 228.5 | J-S2178E |
| J-1208 | True | 100.00 | 250.00 | 359.1 | 228.6 | J-S2178E |
| J-1209 | True | 100.00 | 250.00 | 365.8 | 228.8 | J-S2178E |
| J-941 | True | 100.00 | 250.00 | 395.1 | 229.1 | J-S2178E |
| J-1210 | True | 100.00 | 250.00 | 437.0 | 229.9 | J-S2178E |
| J-1184 | True | 100.00 | 250.00 | 329.7 | 228.5 | J-S2178E |
| J-159 | True | 100.00 | 250.00 | 322.3 | 228.5 | J-S2178E |
| J-160 | True | 100.00 | 250.00 | 435.3 | 229.5 | J-S2178E |
| J-1212 | True | 100.00 | 250.00 | 419.0 | 229.4 | J-S2178E |
| J-162 | True | 100.00 | 250.00 | 190.4 | 201.3 | J-390 |
| J-S9005E | True | 100.00 | 250.00 | 210.1 | 158.4 | J-S1003E |
| J-179 | True | 100.00 | 250.00 | 204.0 | 149.3 | J-S1003E |
| J-C228 | True | 100.00 | 250.00 | 427.9 | 234.0 | J-S2178E |
| J-C236 | True | 100.00 | 250.00 | 156.4 | 142.8 | J-S1003E |
| J-238 | True | 100.00 | 250.00 | 355.4 | 273.1 | J-S2178E |
| J-247 | True | 100.00 | 250.00 | 417.0 | 226.4 | J-S2178E |
| J-303 | True | 100.00 | 250.00 | 285.9 | 459.2 | J-N1140E |
| J-312 | True | 100.00 | 250.00 | 167.2 | 211.6 | J-313 |
| J-314 | True | 100.00 | 250.00 | 235.3 | 228.6 | J-S2178E |
| J-317 | True | 100.00 | 250.00 | 433.7 | 231.5 | J-S2178E |
| J-324 | True | 100.00 | 250.00 | 400.9 | 231.5 | J-S2178E |
| J-325 | True | 100.00 | 250.00 | 324.0 | 231.9 | J-S2178E |
| J-332 | True | 100.00 | 250.00 | 174.1 | 191.0 | J-333 |
| J-346 | True | 100.00 | 250.00 | 189.9 | 232.9 | J-N1900E |
| J-347 | True | 100.00 | 250.00 | 230.9 | 223.7 | J-N1900E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-407 | True | 100.00 | 250.00 | 292.6 | 293.4 | J-N900E |
| J-410 | True | 200.00 | 250.00 | 239.5 | 243.5 | J-411 |
| J-411 | True | 200.00 | 250.00 | 156.4 | 189.6 | J-N910E |
| J-S1920E | True | 225.00 | 295.23 | 140.1 | 190.2 | J-S2178E |
| J-N630E | True | 180.00 | 343.68 | 215.5 | 140.0 | J-N436E |
| J-S870E | True | 183.00 | 350.00 | 227.8 | 142.5 | J-S2178E |

## JUNCTION TABLE: PHD - Existing System with Upgrades

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S260E | 0.15 | 559.83 | 294.3 | 589.90 | Zone - 3 (South) |
| J-S250E | 0.20 | 558.69 | 305.3 | 589.89 | Zone - 3 (South) |
| J-S80E | 0.16 | 558.49 | 307.4 | 589.89 | Zone - 3 (South) |
| J-S240E | 0.20 | 558.39 | 308.2 | 589.88 | Zone - 3 (South) |
| J-S2178E | 0.09 | 557.00 | 313.7 | 589.05 | Zone - 3 (South) |
| J-S81E | 0.15 | 557.46 | 317.4 | 589.89 | Zone - 3 (South) |
| J-S70E | 0.19 | 556.77 | 324.7 | 589.95 | Zone - 3 (South) |
| J-S110E | 0.19 | 556.43 | 327.5 | 589.89 | Zone - 3 (South) |
| J-S45E | 0.00 | 556.28 | 330.1 | 590.01 | Zone - 3 (South) |
| J-S50E | 0.19 | 556.28 | 330.1 | 590.01 | Zone - 3 (South) |
| J-S90E | 0.11 | 554.92 | 342.3 | 589.90 | Zone - 3 (South) |
| J-N900E | 1.30 | 561.42 | 347.1 | 596.89 | Zone - 2 (North) |
| J-406 | 0.00 | 561.05 | 350.8 | 596.89 | Zone - 2 (North) |
| J-S30E | 0.00 | 554.00 | 351.9 | 589.96 | Zone - 3 (South) |
| J-S210E | 0.38 | 553.60 | 354.6 | 589.83 | Zone - 3 (South) |
| J-S60E | 0.19 | 553.70 | 355.2 | 589.99 | Zone - 3 (South) |
| J-S100E | 0.26 | 553.41 | 357.1 | 589.90 | Zone - 3 (South) |
| J-S10E | 0.26 | 553.21 | 359.3 | 589.92 | Zone - 3 (South) |
| J-S2177E | 0.22 | 552.00 | 362.4 | 589.03 | Zone - 3 (South) |
| J-407 | 0.00 | 559.29 | 368.9 | 596.98 | Zone - 2 (North) |
| J-N1681E | 0.00 | 559.00 | 371.9 | 597.00 | Zone - 2 (North) |
| J-N436E | 0.38 | 557.50 | 380.1 | 596.34 | Zone - 2 (North) |
| J-S2279E | 0.00 | 550.09 | 381.1 | 589.03 | Zone - 3 (South) |
| J-S41E | 0.19 | 550.96 | 381.8 | 589.97 | Zone - 3 (South) |
| J-S20E | 0.26 | 550.58 | 385.5 | 589.96 | Zone - 3 (South) |
| J-S120E | 0.26 | 550.20 | 388.3 | 589.87 | Zone - 3 (South) |
| J-N880E | 0.83 | 556.43 | 395.3 | 596.82 | Zone - 2 (North) |
| J-238 | 0.00 | 548.98 | 399.5 | 589.80 | Zone - 3 (South) |
| J-N1645E | 0.00 | 567.23 | 400.9 | 608.19 | Zone - 1 (North) |
| J-S230E | 0.29 | 548.62 | 403.4 | 589.84 | Zone - 3 (South) |
| J-319 | 0.00 | 555.00 | 404.5 | 596.33 | Zone - 2 (North) |
| J-9 | 0.00 | 556.00 | 405.4 | 597.42 | <None> |
| J-N1650E | 0.39 | 566.64 | 406.7 | 608.20 | Zone - 1 (North) |
| J-N1657E | 0.00 | 566.64 | 406.8 | 608.20 | Zone - 1 (North) |
| J-N1651E | 0.00 | 566.50 | 408.1 | 608.19 | Zone - 1 (North) |
| J-S40E | 0.26 | 548.21 | 408.7 | 589.97 | Zone - 3 (South) |
| J-S220E | 0.20 | 547.80 | 410.6 | 589.75 | Zone - 3 (South) |
| J-N437E | 0.29 | 554.50 | 410.8 | 596.47 | Zone - 2 (North) |
| J-N1771E | 0.28 | 553.83 | 414.2 | 596.15 | Zone - 2 (North) |
| J-N1900E | 0.00 | 554.00 | 415.9 | 596.50 | Zone - 2 (North) |
| J-N1605E | 0.28 | 564.86 | 424.1 | 608.19 | Zone - 1 (North) |
| J-N1600E | 0.28 | 564.86 | 424.1 | 608.19 | Zone - 1 (North) |
| J-N1640E | 0.39 | 564.76 | 425.0 | 608.19 | Zone - 1 (North) |
| J-N1610E | 0.22 | 564.64 | 426.2 | 608.19 | Zone - 1 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N1760E | 0.00 | 552.61 | 426.2 | 596.16 | Zone - 2 (North) |
| J-N1655E | 0.56 | 564.60 | 426.6 | 608.19 | Zone - 1 (North) |
| J-N1590E | 0.25 | 564.52 | 427.4 | 608.19 | Zone - 1 (North) |
| J-N632E | 0.00 | 553.00 | 429.5 | 596.89 | Zone - 2 (North) |
| J-N634E | 0.00 | 553.00 | 429.6 | 596.89 | Zone - 2 (North) |
| J-N435E | 0.66 | 552.50 | 430.6 | 596.50 | Zone - 2 (North) |
| J-N434E | 0.19 | 552.50 | 430.7 | 596.51 | Zone - 2 (North) |
| J-S2176E | 0.22 | 545.00 | 430.8 | 589.01 | Zone - 3 (South) |
| J-347 | 0.00 | 552.37 | 432.0 | 596.51 | Zone - 2 (North) |
| J-N1692E | 0.00 | 552.01 | 432.2 | 596.17 | Zone - 2 (North) |
| J-394 | 0.00 | 552.00 | 433.8 | 596.32 | Zone - 2 (North) |
| J-S130E | 0.16 | 545.45 | 434.6 | 589.86 | Zone - 3 (South) |
| J-320 | 0.00 | 551.50 | 438.8 | 596.33 | Zone - 2 (North) |
| J-N1680E | 0.00 | 563.70 | 443.5 | 609.01 | Zone - 1 (North) |
| J-1119 | 0.00 | 563.65 | 443.5 | 608.97 | Zone - 1 (North) |
| J-N1455E | 0.97 | 563.50 | 444.6 | 608.93 | Zone - 1 (North) |
| J-N438E | 1.06 | 551.00 | 445.3 | 596.50 | Zone - 2 (North) |
| J-393 | 0.00 | 551.00 | 445.3 | 596.50 | Zone - 2 (North) |
| J-S1003E | 0.00 | 543.76 | 445.8 | 589.31 | Zone - 3 (South) |
| J-N1630E | 0.17 | 562.41 | 448.1 | 608.19 | Zone - 1 (North) |
| J-N1635E | 0.81 | 562.41 | 448.1 | 608.19 | Zone - 1 (North) |
| J-1117 | 0.00 | 563.00 | 448.2 | 608.79 | Zone - 1 (North) |
| J-N680E | 0.00 | 550.68 | 449.5 | 596.60 | Zone - 2 (North) |
| J-N1275E | 0.00 | 562.23 | 449.8 | 608.19 | Zone - 1 (North) |
| J-N1295E | 0.00 | 562.22 | 450.2 | 608.22 | Zone - 1 (North) |
| J-N433E | 1.20 | 550.50 | 450.2 | 596.50 | Zone - 2 (North) |
| J-N1772E | 1.23 | 550.02 | 451.4 | 596.15 | Zone - 2 (North) |
| J-N1691E | 0.30 | 550.03 | 451.6 | 596.18 | Zone - 2 (North) |
| J-S2117E | 0.00 | 543.00 | 453.4 | 589.33 | Zone - 3 (South) |
| J-1116 | 0.45 | 562.30 | 455.0 | 608.79 | Zone - 1 (North) |
| J-346 | 0.00 | 550.00 | 455.1 | 596.51 | Zone - 2 (North) |
| J-S2172E | 0.00 | 542.68 | 456.0 | 589.27 | Zone - 3 (South) |
| J-S2171E | 0.30 | 542.68 | 456.2 | 589.29 | Zone - 3 (South) |
| J-N1773E | 0.25 | 549.50 | 456.5 | 596.14 | Zone - 2 (North) |
| J-N1690E | 0.00 | 549.51 | 456.8 | 596.19 | Zone - 2 (North) |
| J-S2175E | 0.00 | 542.30 | 456.9 | 588.99 | Zone - 3 (South) |
| J-S2174E | 0.15 | 542.30 | 457.1 | 589.00 | Zone - 3 (South) |
| J-1114 | 0.00 | 562.00 | 457.8 | 608.77 | Zone - 1 (North) |
| J-Ardmore_FortKent | 14.49 | 542.00 | 457.9 | 588.79 | Zone - 3 (South) |
| J-N630E | 0.00 | 549.82 | 458.0 | 596.61 | Zone - 2 (North) |
| J-N1890E | 0.00 | 549.70 | 458.0 | 596.50 | Zone - 2 (North) |
| J-1121 | 0.00 | 562.00 | 458.0 | 608.80 | Zone - 1 (North) |
| J-H1133 | 0.00 | 562.00 | 458.1 | 608.81 | Zone - 1 (North) |
| J-N635E | 0.16 | 549.82 | 458.1 | 596.63 | Zone - 2 (North) |
| J-N1140E | 0.30 | 550.03 | 458.5 | 596.88 | Zone-N1 |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N1620E | 0.47 | 561.32 | 458.7 | 608.19 | Zone - 1 (North) |
| J-S2170E | 0.00 | 542.42 | 458.9 | 589.31 | Zone - 3 (South) |
| J-S2165E | 0.27 | 542.33 | 459.8 | 589.31 | Zone - 3 (South) |
| J-N1490E | 0.39 | 561.36 | 461.2 | 608.48 | Zone - 1 (North) |
| J-S308E | 0.15 | 542.58 | 461.6 | 589.75 | Zone - 3 (South) |
| J-S190E | 0.16 | 542.51 | 461.8 | 589.69 | Zone - 3 (South) |
| J-S200E | 0.16 | 542.51 | 462.0 | 589.71 | Zone - 3 (South) |
| J-S175E | 0.00 | 542.50 | 462.0 | 589.71 | Zone - 3 (South) |
| J-N1770E | 0.30 | 548.94 | 462.1 | 596.16 | Zone - 2 (North) |
| J-1118 | 0.45 | 561.50 | 463.3 | 608.84 | Zone - 1 (North) |
| J-330 | 0.00 | 541.90 | 464.0 | 589.31 | Zone - 3 (South) |
| J-331 | 0.00 | 541.90 | 464.0 | 589.31 | Zone - 3 (South) |
| J-S1770E | 0.16 | 541.84 | 465.0 | 589.35 | Zone - 3 (South) |
| J-N671E | 0.39 | 549.07 | 465.2 | 596.60 | Zone - 2 (North) |
| J-N631E | 0.34 | 549.02 | 465.8 | 596.61 | Zone - 2 (North) |
| J-1120 | 0.45 | 561.20 | 465.9 | 608.80 | Zone - 1 (North) |
| J-S180E | 0.19 | 542.05 | 466.3 | 589.69 | Zone - 3 (South) |
| J-N890E | 3.69 | 549.14 | 466.5 | 596.81 | Zone - 2 (North) |
| J-S2118E | 0.38 | 541.53 | 467.7 | 589.32 | Zone - 3 (South) |
| J-796 | 0.00 | 549.09 | 468.0 | 596.91 | Zone - 2 (North) |
| J-794 | 0.17 | 549.00 | 468.7 | 596.89 | Zone - 2 (North) |
| J-S2085E | 1.27 | 541.50 | 469.0 | 589.42 | Zone - 3 (South) |
| J-S1004E | 0.00 | 541.32 | 469.7 | 589.31 | Zone - 3 (South) |
| J-N1530E | 0.24 | 560.57 | 470.0 | 608.60 | Zone - 1 (North) |
| J-N1535E | 0.24 | 560.57 | 470.5 | 608.64 | Zone - 1 (North) |
| J-N161E | 0.00 | 548.50 | 470.6 | 596.59 | Zone - 2 (North) |
| J-N1480E | 0.30 | 560.49 | 470.8 | 608.60 | Zone - 1 (North) |
| J-N431E | 1.27 | 548.38 | 471.0 | 596.50 | Zone - 2 (North) |
| J-N1757E | 0.24 | 548.09 | 471.3 | 596.24 | Zone - 2 (North) |
| J-N1756E | 0.27 | 548.09 | 471.3 | 596.25 | Zone - 2 (North) |
| J-110 | 0.03 | 548.70 | 471.4 | 596.86 | Zone - 2 (North) |
| J-N440E | 0.39 | 548.27 | 472.0 | 596.50 | Zone - 2 (North) |
| J-N1120E | 0.47 | 548.63 | 472.1 | 596.87 | Zone - 2 (North) |
| J-N430E | 0.58 | 548.25 | 472.2 | 596.50 | Zone - 2 (North) |
| J-N1307E | 0.45 | 560.50 | 472.4 | 608.76 | Zone - 1 (North) |
| J-S2173E | 0.20 | 540.80 | 472.4 | 589.06 | Zone - 3 (South) |
| J-S1002E | 0.00 | 541.02 | 472.6 | 589.31 | Zone - 3 (South) |
| J-329 | 0.00 | 541.00 | 472.8 | 589.31 | Zone - 3 (South) |
| J-338 | 0.00 | 560.00 | 472.9 | 608.32 | Zone - 1 (North) |
| J-342 | 0.00 | 560.00 | 473.0 | 608.33 | Zone - 1 (North) |
| J-N1550E | 0.00 | 560.09 | 473.0 | 608.42 | Zone - 1 (North) |
| J-77 | 0.03 | 548.40 | 474.0 | 596.83 | Zone - 2 (North) |
| J-S309E | 0.22 | 541.23 | 474.4 | 589.70 | Zone - 3 (South) |
| J-371 | 0.00 | 559.73 | 475.5 | 608.32 | Zone - 1 (North) |
| J-S1001E | 0.00 | 540.72 | 475.5 | 589.31 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-841 | 0.00 | 548.21 | 475.6 | 596.81 | Zone - 2 (North) |
| J-N465E | 0.00 | 547.78 | 475.8 | 596.40 | Zone - 2 (North) |
| J-N1290E | 0.58 | 559.58 | 476.1 | 608.23 | Zone - 1 (North) |
| J-373 | 0.00 | 547.64 | 476.4 | 596.32 | Zone - 2 (North) |
| J-N910E | 1.06 | 548.05 | 476.5 | 596.73 | Zone - 2 (North) |
| J-N100E | 0.30 | 547.86 | 476.6 | 596.57 | Zone - 2 (North) |
| J-423 | 0.00 | 540.56 | 477.1 | 589.31 | Zone -3 (South) |
| J-1130 | 0.00 | 559.90 | 477.3 | 608.66 | Zone - 1 (North) |
| J-N636E | 0.39 | 547.87 | 477.3 | 596.64 | Zone - 2 (North) |
| J-S1745E | 0.00 | 540.53 | 477.8 | 589.35 | Zone - 3 (South) |
| J-N1810E | 1.41 | 547.27 | 478.2 | 596.14 | Zone - 2 (North) |
| J-N1092E | 0.41 | 547.99 | 478.4 | 596.87 | Zone - 2 (North) |
| J-N1085E | 0.25 | 547.98 | 479.5 | 596.98 | Zone - 2 (North) |
| J-S170E | 0.20 | 540.70 | 479.6 | 589.71 | Zone - 3 (South) |
| J-N1555E | 0.41 | 559.37 | 479.8 | 608.40 | Zone - 1 (North) |
| J-N851E | 0.17 | 547.70 | 480.0 | 596.74 | Zone - 2 (North) |
| J-N1279E | 0.00 | 559.15 | 480.4 | 608.24 | Zone - 1 (North) |
| J-S909E | 0.00 | 540.11 | 481.5 | 589.31 | Zone - 3 (South) |
| J-171A | 0.00 | 559.40 | 482.1 | 608.66 | Zone - 1 (North) |
| J-N530E | 0.49 | 547.22 | 482.3 | 596.51 | Zone - 2 (North) |
| J-1135 | 0.29 | 547.00 | 482.4 | 596.29 | Zone - 2 (North) |
| J-341 | 0.00 | 559.00 | 483.0 | 608.35 | Zone - 1 (North) |
| J-S1775E | 0.19 | 540.00 | 483.0 | 589.35 | Zone - 3 (South) |
| J-N405E | 0.30 | 546.93 | 483.4 | 596.32 | Zone - 2 (North) |
| J-S312E | 0.22 | 540.23 | 483.5 | 589.64 | Zone - 3 (South) |
| J-343 | 0.00 | 539.86 | 483.9 | 589.31 | Zone - 3 (South) |
| J-N1451E | 0.28 | 559.18 | 484.4 | 608.68 | Zone - 1 (North) |
| J-N1712E | 0.64 | 546.68 | 484.8 | 596.22 | Zone - 2 (North) |
| J-N1780E | 0.25 | 546.55 | 485.3 | 596.14 | Zone - 2 (North) |
| J-S2116E | 0.24 | 539.70 | 485.7 | 589.33 | Zone - 3 (South) |
| J-N640E | 0.30 | 546.96 | 485.9 | 596.61 | Zone - 2 (North) |
| J-N520E | 0.22 | 546.84 | 486.1 | 596.51 | Zone - 2 (North) |
| J-S320E | 1.28 | 539.80 | 486.5 | 589.51 | Zone - 3 (South) |
| J-S181E | 0.00 | 540.00 | 486.5 | 589.71 | Zone - 3 (South) |
| J-1140 | 0.00 | 559.00 | 487.0 | 608.76 | Zone - 1 (North) |
| J-S310E | 0.00 | 539.89 | 487.3 | 589.67 | Zone - 3 (South) |
| J-1134 | 0.29 | 546.50 | 487.3 | 596.29 | Zone - 2 (North) |
| J-S908E | 0.00 | 539.50 | 487.5 | 589.31 | Zone - 3 (South) |
| J-S1005E | 0.00 | 539.50 | 487.5 | 589.31 | Zone - 3 (South) |
| J-340 | 0.00 | 558.53 | 487.8 | 608.38 | Zone - 1 (North) |
| J-N425E | 0.47 | 546.48 | 487.9 | 596.33 | Zone - 2 (North) |
| J-1131 | 0.24 | 558.80 | 488.0 | 608.67 | Zone - 1 (North) |
| J-N891E | 0.00 | 546.90 | 488.3 | 596.79 | Zone - 2 (North) |
| J-S2080E | 0.53 | 539.52 | 488.4 | 589.43 | Zone - 3 (South) |
| J-1136 | 0.29 | 546.30 | 489.2 | 596.29 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-1133 | 0.29 | 546.30 | 489.2 | 596.29 | Zone - 2 (North) |
| J-N432E | 0.16 | 546.50 | 489.3 | 596.50 | Zone - 2 (North) |
| J-S140E | 0.16 | 539.74 | 490.0 | 589.81 | Zone - 3 (South) |
| J-N141E | 0.00 | 546.50 | 490.2 | 596.59 | Zone - 2 (North) |
| J-N700E | 0.75 | 546.50 | 490.5 | 596.62 | Zone - 2 (North) |
| J-S1006E | 0.00 | 539.19 | 490.5 | 589.31 | Zone - 3 (South) |
| J-N225E | 0.36 | 546.22 | 490.5 | 596.34 | Zone - 2 (North) |
| J-S1740E | 0.15 | 539.22 | 490.6 | 589.35 | Zone - 3 (South) |
| J-411 | 0.96 | 546.60 | 490.6 | 596.73 | Zone - 2 (North) |
| J-S311E | 0.00 | 539.35 | 491.1 | 589.53 | Zone - 3 (South) |
| J-S145E | 0.20 | 539.58 | 491.2 | 589.77 | Zone - 3 (South) |
| J-N1525E | 0.34 | 558.23 | 491.9 | 608.49 | Zone - 1 (North) |
| J-N852E | 0.00 | 546.50 | 491.9 | 596.76 | Zone - 2 (North) |
| J-S177E | 0.00 | 539.45 | 492.2 | 589.74 | Zone - 3 (South) |
| J-S1300E | 0.08 | 539.04 | 492.4 | 589.36 | Zone - 3 (South) |
| J-S160E | 0.29 | 539.41 | 492.5 | 589.73 | Zone - 3 (South) |
| J-S2160E | 0.00 | 539.00 | 492.5 | 589.32 | Zone - 3 (South) |
| J-N835E | 0.00 | 546.41 | 492.6 | 596.74 | Zone - 2 (North) |
| J-S906E | 0.00 | 538.89 | 493.4 | 589.31 | Zone - 3 (South) |
| J-S2140E | 0.36 | 538.87 | 494.0 | 589.34 | Zone - 3 (South) |
| J-N670E | 0.00 | 546.08 | 494.5 | 596.61 | Zone - 2 (North) |
| J-S2060E | 0.47 | 538.88 | 495.0 | 589.45 | Zone - 3 (South) |
| J-410 | 0.96 | 546.09 | 495.6 | 596.72 | Zone - 2 (North) |
| J-N400E | 0.56 | 545.58 | 496.6 | 596.32 | Zone - 2 (North) |
| J-N940E | 0.36 | 546.16 | 496.6 | 596.90 | Zone - 2 (North) |
| J-N1306E | 0.56 | 558.00 | 496.7 | 608.75 | Zone - 1 (North) |
| J-816 | 0.00 | 558.00 | 496.7 | 608.75 | Zone - 1 (North) |
| J-1080 | 0.19 | 545.50 | 496.8 | 596.26 | Zone - 2 (North) |
| J-N460E | 0.25 | 545.58 | 497.3 | 596.40 | Zone - 2 (North) |
| J-N846E | 0.00 | 545.89 | 497.4 | 596.71 | Zone - 2 (North) |
| J-N850E | 0.00 | 545.89 | 497.5 | 596.72 | Zone - 2 (North) |
| J-N20E | 0.47 | 545.76 | 497.5 | 596.59 | Zone - 2 (North) |
| J-S2155E | 0.36 | 538.50 | 497.5 | 589.33 | Zone - 3 (South) |
| J-1081 | 0.00 | 545.40 | 497.8 | 596.26 | Zone - 2 (North) |
| J-S1321E | 0.06 | 538.41 | 498.6 | 589.36 | Zone - 3 (South) |
| J-S2106E | 0.19 | 538.37 | 499.0 | 589.36 | Zone - 3 (South) |
| J-N860E | 0.00 | 545.73 | 499.1 | 596.72 | Zone - 2 (North) |
| J-1160 | 0.22 | 538.30 | 499.2 | 589.31 | Zone - 3 (South) |
| J-S907E | 0.00 | 538.28 | 499.4 | 589.31 | Zone - 3 (South) |
| J-14 | 0.29 | 545.20 | 499.8 | 596.26 | Zone - 2 (North) |
| J-N1270E | 0.39 | 557.12 | 499.9 | 608.19 | Zone - 1 (North) |
| J-S1301E | 0.10 | 538.27 | 500.0 | 589.36 | Zone - 3 (South) |
| J-S330E | 0.00 | 538.39 | 500.4 | 589.52 | Zone - 3 (South) |
| J-S2115E | 0.34 | 538.19 | 500.6 | 589.34 | Zone - 3 (South) |
| J-S1747E | 0.00 | 538.19 | 500.7 | 589.35 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N420E | 0.53 | 545.15 | 500.9 | 596.33 | Zone - 2 (North) |
| J-335 | 0.00 | 557.50 | 500.9 | 608.69 | Zone - 1 (North) |
| J-334 | 0.00 | 557.50 | 501.0 | 608.69 | Zone - 1 (North) |
| J-S1370E | 0.03 | 538.13 | 501.7 | 589.39 | Zone - 3 (South) |
| J-S1940E | 0.12 | 538.14 | 501.7 | 589.40 | Zone - 3 (South) |
| J-S1930E | 0.16 | 538.12 | 501.8 | 589.40 | Zone - 3 (South) |
| J-366 | 0.00 | 538.00 | 501.9 | 589.29 | Zone - 3 (South) |
| J-1162 | 0.17 | 538.00 | 502.1 | 589.31 | Zone - 3 (South) |
| J-1222 | 0.00 | 538.00 | 502.1 | 589.31 | Zone - 3 (South) |
| J-S877E | 0.51 | 538.00 | 502.1 | 589.31 | Zone - 3 (South) |
| J-C236 | 0.00 | 538.00 | 502.2 | 589.31 | Zone - 3 (South) |
| J-318 | 0.00 | 538.00 | 502.2 | 589.31 | Zone - 3 (South) |
| J-S560E | 0.05 | 538.03 | 502.3 | 589.35 | Zone - 3 (South) |
| J-N401E | 0.00 | 545.00 | 502.3 | 596.32 | Zone - 2 (North) |
| J-N633E | 0.00 | 545.60 | 502.3 | 596.93 | Zone - 2 (North) |
| J-N421E | 0.00 | 545.00 | 502.4 | 596.34 | Zone - 2 (North) |
| J-S1360E | 0.03 | 538.05 | 502.4 | 589.39 | Zone - 3 (South) |
| J-N540E | 0.00 | 544.94 | 502.7 | 596.30 | Zone - 2 (North) |
| J-N525E | 0.00 | 545.10 | 502.8 | 596.47 | Zone - 2 (North) |
| J-N370E | 0.22 | 544.95 | 502.8 | 596.32 | Zone - 2 (North) |
| J-N160E | 0.50 | 545.20 | 502.9 | 596.59 | Zone - 2 (North) |
| J-13 | 0.29 | 544.80 | 503.7 | 596.26 | Zone - 2 (North) |
| J-N1755E | 0.24 | 544.77 | 503.9 | 596.26 | Zone - 2 (North) |
| J-N960E | 1.31 | 545.29 | 504.5 | 596.83 | Zone - 2 (North) |
| J-N840E | 0.07 | 545.15 | 504.5 | 596.70 | Zone - 2 (North) |
| J-365 | 0.10 | 537.70 | 504.9 | 589.29 | Zone - 3 (South) |
| J-S1320E | 0.06 | 537.77 | 504.9 | 589.36 | Zone - 3 (South) |
| J-S2090E | 0.05 | 537.76 | 505.1 | 589.37 | Zone - 3 (South) |
| J-S2040E | 0.31 | 537.72 | 505.8 | 589.41 | Zone - 3 (South) |
| J-364 | 0.10 | 537.60 | 505.9 | 589.29 | Zone - 3 (South) |
| J-368 | 0.10 | 537.60 | 505.9 | 589.29 | Zone - 3 (South) |
| J-S876E | 0.51 | 537.62 | 505.9 | 589.31 | Zone - 3 (South) |
| J-1146 | 0.24 | 537.60 | 505.9 | 589.29 | Zone - 3 (South) |
| J-333 | 0.00 | 557.00 | 506.0 | 608.70 | Zone - 1 (North) |
| J-N930E | 0.34 | 545.05 | 506.2 | 596.77 | Zone - 2 (North) |
| J-S1720E | 0.19 | 537.57 | 506.7 | 589.34 | Zone - 3 (South) |
| J-S400E | 0.22 | 537.71 | 506.7 | 589.48 | Zone - 3 (South) |
| J-S600E | 0.00 | 537.54 | 507.0 | 589.35 | Zone - 3 (South) |
| J-1161 | 0.17 | 537.50 | 507.0 | 589.31 | Zone - 3 (South) |
| J-S2150E | 0.00 | 537.50 | 507.4 | 589.34 | Zone - 3 (South) |
| J-N1570E | 0.50 | 556.53 | 507.4 | 608.38 | Zone - 1 (North) |
| J-S2105E | 0.17 | 537.52 | 507.5 | 589.37 | Zone - 3 (South) |
| J-S1330E | 0.00 | 537.49 | 507.6 | 589.36 | Zone - 3 (South) |
| J-S2111E | 0.13 | 537.50 | 507.6 | 589.37 | Zone - 3 (South) |
| J-S2210E | 0.00 | 537.50 | 507.6 | 589.37 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S2112E | 0.05 | 537.50 | 507.6 | 589.37 | Zone - 3 (South) |
| J-S1302E | 0.11 | 537.49 | 507.6 | 589.36 | Zone - 3 (South) |
| J-S2110E | 0.10 | 537.45 | 508.1 | 589.37 | Zone - 3 (South) |
| J-N1260E | 0.17 | 556.25 | 508.2 | 608.18 | Zone - 1 (North) |
| J-N1265E | 0.00 | 556.25 | 508.2 | 608.18 | Zone - 1 (North) |
| J-S2050E | 0.46 | 537.53 | 508.3 | 589.46 | Zone - 3 (South) |
| J-N870E | 0.03 | 544.73 | 508.3 | 596.66 | Zone - 2 (North) |
| J-N360E | 0.00 | 544.37 | 508.5 | 596.32 | Zone - 2 (North) |
| J-S1319E | 0.05 | 537.41 | 508.5 | 589.36 | Zone - 3 (South) |
| J-N1540E | 0.24 | 556.56 | 508.5 | 608.52 | Zone - 1 (North) |
| J-N1545E | 0.00 | 556.56 | 508.5 | 608.52 | Zone - 1 (North) |
| J-1083 | 0.00 | 544.30 | 508.6 | 596.26 | Zone - 2 (North) |
| J-S2130E | 0.00 | 537.39 | 508.7 | 589.37 | Zone - 3 (South) |
| J-S1245E | 0.07 | 537.40 | 508.8 | 589.39 | Zone - 3 (South) |
| J-N480E | 0.56 | 544.38 | 509.1 | 596.40 | Zone - 2 (North) |
| J-S2230E | 0.00 | 537.37 | 509.1 | 589.39 | Zone - 3 (South) |
| J-N1510E | 0.00 | 556.47 | 509.1 | 608.49 | Zone - 1 (North) |
| J-S410E | 0.22 | 537.44 | 509.3 | 589.47 | Zone - 3 (South) |
| J-S2030E | 0.31 | 537.36 | 509.3 | 589.40 | Zone - 3 (South) |
| J-S625E | 0.06 | 537.28 | 509.7 | 589.36 | Zone - 3 (South) |
| J-88 | 0.00 | 537.20 | 509.8 | 589.29 | Zone - 3 (South) |
| J-S1351E | 0.00 | 537.30 | 509.8 | 589.39 | Zone - 3 (South) |
| J-1145 | 0.24 | 537.20 | 509.8 | 589.29 | Zone - 3 (South) |
| J-N80E | 0.11 | 544.45 | 510.0 | 596.56 | Zone - 2 (North) |
| J-S1990E | 0.72 | 537.29 | 510.0 | 589.40 | Zone - 3 (South) |
| J-S1295E | 0.04 | 537.25 | 510.0 | 589.37 | Zone - 3 (South) |
| J-S1980E | 0.15 | 537.28 | 510.1 | 589.40 | Zone - 3 (South) |
| J-S2100E | 0.17 | 537.24 | 510.2 | 589.37 | Zone - 3 (South) |
| J-S440E | 0.15 | 537.31 | 510.5 | 589.46 | Zone - 3 (South) |
| J-N340E | 0.30 | 544.15 | 510.6 | 596.32 | Zone - 2 (North) |
| J-S610E | 0.13 | 537.16 | 510.7 | 589.35 | Zone - 3 (South) |
| J-S1525E | 0.39 | 537.16 | 510.7 | 589.34 | Zone - 3 (South) |
| J-N245E | 0.00 | 544.13 | 511.0 | 596.34 | Zone - 2 (North) |
| J-N178E | 0.00 | 544.00 | 511.1 | 596.22 | Zone - 2 (North) |
| J-N190E | 0.77 | 544.11 | 511.1 | 596.33 | Zone - 2 (North) |
| J-N1880E | 0.68 | 544.00 | 511.3 | 596.24 | Zone - 2 (North) |
| J-S1280E | 0.00 | 537.11 | 511.4 | 589.37 | Zone - 3 (South) |
| J-S2000E | 0.24 | 537.13 | 511.5 | 589.40 | Zone - 3 (South) |
| J-105 | 0.44 | 537.00 | 511.7 | 589.29 | Zone - 3 (South) |
| J-N543E | 0.00 | 544.00 | 511.8 | 596.29 | Zone - 2 (North) |
| J-N542E | 0.29 | 544.00 | 511.8 | 596.29 | Zone - 2 (North) |
| J-S635E | 0.02 | 537.06 | 511.8 | 589.35 | Zone - 3 (South) |
| J-1132 | 0.30 | 544.00 | 511.8 | 596.29 | Zone - 2 (North) |
| J-1144 | 0.15 | 537.00 | 511.8 | 589.29 | Zone - 3 (South) |
| J-N541E | 0.29 | 544.00 | 511.8 | 596.29 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S644E | 0.19 | 537.06 | 511.8 | 589.36 | Zone - 3 (South) |
| J-S630E | 0.00 | 537.06 | 511.8 | 589.36 | Zone - 3 (South) |
| J-825 | 0.17 | 537.00 | 511.9 | 589.31 | Zone - 3 (South) |
| J-878 | 0.22 | 537.00 | 511.9 | 589.31 | Zone - 3 (South) |
| J-1163 | 0.51 | 537.00 | 511.9 | 589.31 | Zone - 3 (South) |
| J-95 | 0.32 | 537.00 | 511.9 | 589.31 | Zone - 3 (South) |
| J-S150E | 0.26 | 537.38 | 511.9 | 589.69 | Zone - 3 (South) |
| J-C235 | 0.00 | 537.00 | 511.9 | 589.31 | Zone - 3 (South) |
| J-S182E | 0.00 | 537.00 | 511.9 | 589.31 | Zone - 3 (South) |
| J-S1290E | 0.05 | 537.05 | 512.0 | 589.37 | Zone - 3 (South) |
| J-S1960E | 0.37 | 537.09 | 512.0 | 589.41 | Zone - 3 (South) |
| J-S1350E | 0.10 | 537.07 | 512.1 | 589.40 | Zone - 3 (South) |
| J-S2114E | 0.30 | 537.00 | 512.3 | 589.35 | Zone - 3 (South) |
| J-S2113E | 0.10 | 537.00 | 512.4 | 589.36 | Zone - 3 (South) |
| J-1083 | 0.19 | 543.90 | 512.5 | 596.26 | Zone - 2 (North) |
| J-S2240E | 0.00 | 537.00 | 512.5 | 589.37 | Zone - 3 (South) |
| J-N1070E | 0.00 | 544.57 | 512.5 | 596.94 | Zone - 2 (North) |
| J-N65E | 0.00 | 544.17 | 512.8 | 596.56 | Zone - 2 (North) |
| J-N1080E | 0.00 | 544.53 | 512.9 | 596.94 | Zone - 2 (North) |
| J-S1615E | 0.00 | 536.91 | 513.2 | 589.35 | Zone - 3 (South) |
| J-N1526E | 0.34 | 556.04 | 513.5 | 608.51 | Zone - 1 (North) |
| J-70 | 0.49 | 556.20 | 513.6 | 608.68 | Zone - 1 (North) |
| J-367 | 0.00 | 536.80 | 513.7 | 589.29 | Zone - 3 (South) |
| J-N1440E | 0.50 | 556.16 | 513.8 | 608.66 | Zone - 1 (North) |
| J-S1340E | 0.05 | 536.89 | 513.8 | 589.39 | Zone - 3 (South) |
| J-S510E | 0.20 | 536.92 | 514.1 | 589.45 | Zone - 3 (South) |
| J-S430E | 0.00 | 536.94 | 514.1 | 589.46 | Zone - 3 (South) |
| J-S1281E | 0.00 | 536.83 | 514.2 | 589.37 | Zone - 3 (South) |
| J-N1520E | 0.34 | 555.95 | 514.3 | 608.49 | Zone - 1 (North) |
| J-S904E | 0.00 | 536.75 | 514.4 | 589.31 | Zone - 3 (South) |
| J-S903E | 0.38 | 536.75 | 514.4 | 589.31 | Zone - 3 (South) |
| J-S271E | 0.20 | 536.99 | 514.5 | 589.56 | Zone - 3 (South) |
| J-N165E | 0.36 | 543.99 | 514.6 | 596.57 | Zone - 2 (North) |
| J-1079 | 0.17 | 543.67 | 514.7 | 596.26 | Zone - 2 (North) |
| J-N1280E | 0.41 | 555.65 | 514.7 | 608.25 | Zone - 1 (North) |
| J-N710E | 0.45 | 544.03 | 514.8 | 596.63 | Zone - 2 (North) |
| J-S1282E | 0.16 | 536.74 | 515.1 | 589.37 | Zone - 3 (South) |
| J-N220E | 0.41 | 543.71 | 515.1 | 596.34 | Zone - 2 (North) |
| J-179 | 0.00 | 536.65 | 515.4 | 589.31 | Zone - 3 (South) |
| J-S1700E | 0.40 | 536.67 | 515.5 | 589.34 | Zone - 3 (South) |
| J-1129 | 0.00 | 556.00 | 515.6 | 608.68 | Zone - 1 (North) |
| J-1142 | 0.15 | 536.60 | 515.7 | 589.30 | Zone - 3 (South) |
| J-N720E | 0.36 | 543.95 | 515.8 | 596.66 | Zone - 2 (North) |
| J-1225 | 0.00 | 556.00 | 515.9 | 608.71 | Zone - 1 (North) |
| J-N1285E | 0.00 | 555.54 | 516.0 | 608.27 | Zone - 1 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N240E | 0.47 | 543.56 | 516.6 | 596.34 | Zone - 2 (North) |
| J-87 | 0.00 | 536.50 | 516.6 | 589.29 | Zone - 3 (South) |
| J-S1970E | 0.41 | 536.63 | 516.7 | 589.43 | Zone - 3 (South) |
| J-94 | 0.00 | 536.50 | 516.8 | 589.31 | Zone - 3 (South) |
| J-1154 | 0.00 | 536.50 | 516.8 | 589.31 | Zone - 3 (South) |
| J-S640E | 0.00 | 536.55 | 516.8 | 589.36 | Zone - 3 (South) |
| J-S740E | 0.05 | 536.53 | 516.9 | 589.35 | Zone - 3 (South) |
| J-S565E | 0.00 | 536.52 | 516.9 | 589.33 | Zone - 3 (South) |
| J-422 | 0.00 | 536.53 | 517.0 | 589.36 | Zone-N1 |
| J-S660E | 0.05 | 536.50 | 517.2 | 589.35 | Zone - 3 (South) |
| J-S661E | 0.00 | 536.50 | 517.3 | 589.36 | Zone - 3 (South) |
| J-S875E | 0.00 | 536.45 | 517.3 | 589.31 | Zone - 3 (South) |
| J-N620E | 0.00 | 543.45 | 517.4 | 596.31 | Zone - 2 (North) |
| J-S9005E | 0.00 | 536.44 | 517.5 | 589.31 | Zone - 3 (South) |
| J-S1153E | 0.00 | 536.50 | 517.5 | 589.38 | Zone - 3 (South) |
| J-S1152E | 0.09 | 536.50 | 517.5 | 589.38 | Zone - 3 (South) |
| J-S1151E | 0.10 | 536.50 | 517.6 | 589.38 | Zone - 3 (South) |
| J-S1800E | 0.07 | 536.49 | 517.6 | 589.38 | Zone - 3 (South) |
| J-N1450E | 0.00 | 555.82 | 517.6 | 608.70 | Zone - 1 (North) |
| J-S1780E | 0.06 | 536.50 | 517.6 | 589.39 | Zone - 3 (South) |
| J-N350E | 0.28 | 543.43 | 517.6 | 596.32 | Zone - 2 (North) |
| J-1143 | 0.15 | 536.40 | 517.7 | 589.30 | Zone - 3 (South) |
| J-S520E | 0.00 | 536.55 | 517.7 | 589.45 | Zone - 3 (South) |
| J-N1800E | 0.50 | 543.21 | 518.0 | 596.14 | Zone - 2 (North) |
| J-N970E | 0.41 | 543.83 | 518.8 | 596.83 | Zone - 2 (North) |
| J-N265E | 0.50 | 543.32 | 519.0 | 596.35 | Zone - 2 (North) |
| J-S595E | 0.29 | 536.28 | 519.1 | 589.32 | Zone - 3 (South) |
| J-S905E | 0.11 | 536.30 | 519.2 | 589.35 | Zone - 3 (South) |
| J-S1240E | 0.07 | 536.29 | 519.7 | 589.39 | Zone - 3 (South) |
| J-N180E | 0.58 | 543.22 | 519.7 | 596.32 | Zone - 2 (North) |
| J-N470E | 0.00 | 543.27 | 520.0 | 596.40 | Zone - 2 (North) |
| J-S900E | 0.00 | 536.20 | 520.2 | 589.35 | Zone - 3 (South) |
| J-S480E | 0.38 | 536.26 | 520.5 | 589.43 | Zone - 3 (South) |
| J-1226 | 0.00 | 555.50 | 520.7 | 608.70 | Zone - 1 (North) |
| J-332 | 0.00 | 555.50 | 520.7 | 608.71 | Zone - 1 (North) |
| J-S780E | 0.07 | 536.12 | 520.9 | 589.35 | Zone - 3 (South) |
| J-372 | 0.00 | 555.08 | 520.9 | 608.30 | Zone - 1 (North) |
| J-N600E | 0.22 | 543.05 | 521.3 | 596.32 | Zone - 2 (North) |
| J-S1690E | 0.26 | 536.06 | 521.5 | 589.34 | Zone - 3 (South) |
| J-1166 | 0.27 | 536.00 | 521.5 | 589.29 | Zone - 3 (South) |
| J-S270E | 0.16 | 536.28 | 521.5 | 589.56 | Zone - 3 (South) |
| J-1149 | 0.19 | 536.00 | 521.5 | 589.29 | Zone - 3 (South) |
| J-1147 | 0.00 | 536.00 | 521.5 | 589.29 | Zone - 3 (South) |
| J-N185E | 0.00 | 543.03 | 521.5 | 596.32 | Zone - 2 (North) |
| J-S365E | 0.22 | 536.17 | 521.7 | 589.48 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N320E | 0.41 | 543.01 | 521.7 | 596.32 | Zone - 2 (North) |
| J-1157 | 0.22 | 536.00 | 521.7 | 589.31 | Zone - 3 (South) |
| J-1155 | 0.19 | 536.00 | 521.7 | 589.31 | Zone - 3 (South) |
| J-S910E | 0.50 | 536.00 | 521.7 | 589.31 | Zone - 3 (South) |
| J-NS185 | 0.00 | 543.00 | 521.8 | 596.31 | Zone - 2 (North) |
| J-1193 | 0.00 | 536.00 | 521.8 | 589.32 | Zone - 3 (South) |
| J-1194 | 0.41 | 536.00 | 521.8 | 589.32 | Zone - 3 (South) |
| J-1196 | 0.19 | 536.00 | 521.8 | 589.32 | Zone - 3 (South) |
| J-1192 | 0.39 | 536.00 | 521.8 | 589.32 | Zone - 3 (South) |
| J-134 | 0.17 | 536.00 | 521.8 | 589.32 | Zone - 3 (South) |
| J-1202 | 0.27 | 536.00 | 521.8 | 589.32 | Zone - 3 (South) |
| J-S2045E | 0.44 | 536.10 | 521.8 | 589.42 | Zone - 3 (South) |
| J-1123 | 0.00 | 555.40 | 522.1 | 608.74 | Zone - 1 (North) |
| J-N330E | 0.32 | 542.97 | 522.1 | 596.32 | Zone - 2 (North) |
| J-1122 | 0.00 | 555.40 | 522.2 | 608.76 | Zone - 1 (North) |
| J-S290E | 0.24 | 536.16 | 522.5 | 589.55 | Zone - 3 (South) |
| J-S620E | 0.00 | 535.96 | 522.6 | 589.36 | Zone - 3 (South) |
| J-1124 | 0.00 | 555.30 | 522.7 | 608.71 | Zone - 1 (North) |
| J-402 | 0.00 | 542.80 | 523.0 | 596.23 | Zone - 2 (North) |
| J-1085 | 0.00 | 542.80 | 523.3 | 596.27 | Zone - 2 (North) |
| J-S874E | 0.00 | 535.84 | 523.3 | 589.31 | Zone - 3 (South) |
| J-1127 | 0.39 | 555.20 | 523.6 | 608.70 | Zone - 1 (North) |
| J-S870E | 0.07 | 535.84 | 523.6 | 589.35 | Zone - 3 (South) |
| J-S879E | 0.00 | 535.80 | 523.7 | 589.31 | Zone - 3 (South) |
| J-1191 | 0.00 | 535.80 | 523.8 | 589.32 | Zone - 3 (South) |
| J-1190 | 0.39 | 535.80 | 523.8 | 589.32 | Zone - 3 (South) |
| J-S485E | 0.12 | 535.87 | 524.2 | 589.43 | Zone - 3 (South) |
| J-N1360E | 0.41 | 554.88 | 524.6 | 608.48 | Zone - 1 (North) |
| J-1197 | 0.00 | 535.70 | 524.7 | 589.32 | Zone - 3 (South) |
| J-N1220E | 0.00 | 554.65 | 525.1 | 608.30 | Zone - 1 (North) |
| J-S450E | 0.24 | 535.76 | 525.2 | 589.43 | Zone - 3 (South) |
| J-S1810E | 0.04 | 535.70 | 525.3 | 589.37 | Zone - 3 (South) |
| J-S880E | 0.04 | 535.67 | 525.3 | 589.35 | Zone - 3 (South) |
| J-S1150E | 0.02 | 535.70 | 525.4 | 589.38 | Zone - 3 (South) |
| J-N1715E | 0.44 | 542.51 | 525.5 | 596.20 | Zone - 2 (North) |
| J-N1716E | 0.22 | 542.51 | 525.5 | 596.21 | Zone - 2 (North) |
| J-1198 | 0.00 | 535.60 | 525.7 | 589.32 | Zone - 3 (South) |
| J-1189 | 0.00 | 535.60 | 525.7 | 589.32 | Zone - 3 (South) |
| J-1099 | 0.27 | 542.50 | 526.2 | 596.27 | Zone - 2 (North) |
| J-N1711E | 0.32 | 542.45 | 526.2 | 596.22 | Zone - 2 (North) |
| J-S902E | 0.50 | 535.53 | 526.3 | 589.31 | Zone - 3 (South) |
| J-S790E | 0.05 | 535.55 | 526.6 | 589.35 | Zone - 3 (South) |
| J-N490E | 0.53 | 542.59 | 526.6 | 596.40 | Zone - 2 (North) |
| J-1156 | 0.19 | 535.50 | 526.6 | 589.31 | Zone - 3 (South) |
| J-N1400E | 0.47 | 554.49 | 526.7 | 608.30 | Zone - 1 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-1187 | 0.39 | 535.50 | 526.7 | 589.32 | Zone - 3 (South) |
| J-1186 | 0.17 | 535.50 | 526.7 | 589.32 | Zone - 3 (South) |
| J-N70E | 0.34 | 542.74 | 526.7 | 596.56 | Zone - 2 (North) |
| J-N1245E | 0.50 | 554.27 | 527.1 | 608.13 | Zone - 1 (North) |
| J-1086 | 0.19 | 542.40 | 527.2 | 596.27 | Zone - 2 (North) |
| J-S1283E | 0.00 | 535.50 | 527.2 | 589.37 | Zone - 3 (South) |
| J-S725E | 0.08 | 535.46 | 527.4 | 589.35 | Zone - 3 (South) |
| J-S720E | 0.49 | 535.46 | 527.4 | 589.35 | Zone - 3 (South) |
| J-328 | 0.00 | 535.50 | 527.6 | 589.41 | Zone - 3 (South) |
| J-1188 | 0.00 | 535.40 | 527.7 | 589.32 | Zone - 3 (South) |
| J-325 | 0.00 | 535.50 | 527.7 | 589.42 | Zone - 3 (South) |
| J-326 | 0.00 | 535.50 | 527.7 | 589.42 | Zone - 3 (South) |
| J-N60E | 0.00 | 542.64 | 527.8 | 596.57 | Zone - 2 (North) |
| J-N1750E | 0.27 | 542.34 | 527.8 | 596.27 | Zone - 2 (North) |
| J-S1190E | 0.47 | 535.48 | 527.8 | 589.41 | Zone - 3 (South) |
| J-S1825E | 0.00 | 535.42 | 528.0 | 589.37 | Zone - 3 (South) |
| J-S1820E | 0.00 | 535.42 | 528.0 | 589.37 | Zone - 3 (South) |
| J-11 | 0.27 | 542.30 | 528.1 | 596.27 | Zone - 2 (North) |
| J-1097 | 0.27 | 542.30 | 528.1 | 596.27 | Zone - 2 (North) |
| J-N1790E | 0.41 | 542.17 | 528.2 | 596.14 | Zone - 2 (North) |
| J-S470E | 0.24 | 535.47 | 528.4 | 589.46 | Zone - 3 (South) |
| J-S800E | 0.03 | 535.35 | 528.5 | 589.35 | Zone - 3 (South) |
| J-324 | 0.00 | 535.40 | 528.6 | 589.41 | Zone - 3 (South) |
| J-N1420E | 0.56 | 554.36 | 528.7 | 608.38 | Zone - 1 (North) |
| J-N140E | 0.56 | 542.53 | 528.9 | 596.58 | Zone - 2 (North) |
| J-S873E | 0.00 | 535.22 | 529.4 | 589.31 | Zone - 3 (South) |
| J-S540E | 0.27 | 535.28 | 529.9 | 589.42 | Zone - 3 (South) |
| J-S945E | 0.01 | 535.20 | 530.0 | 589.36 | Zone - 3 (South) |
| J-N260E | 0.47 | 542.18 | 530.2 | 596.36 | Zone - 2 (North) |
| J-391 | 0.00 | 535.18 | 530.3 | 589.37 | Zone - 3 (South) |
| J-350 | 0.00 | 542.10 | 530.4 | 596.29 | Zone - 2 (North) |
| J-1091 | 0.00 | 542.00 | 531.1 | 596.27 | Zone - 2 (North) |
| J-S1230E | 0.18 | 535.14 | 531.1 | 589.40 | Zone - 3 (South) |
| J-1087 | 0.19 | 542.00 | 531.1 | 596.27 | Zone - 2 (North) |
| J-1088 | 0.00 | 542.00 | 531.1 | 596.27 | Zone - 2 (North) |
| J-LW197 | 0.00 | 542.00 | 531.1 | 596.27 | Zone - 2 (North) |
| J-S380E | 0.26 | 535.21 | 531.1 | 589.48 | Zone - 3 (South) |
| J-1152 | 0.24 | 535.00 | 531.3 | 589.29 | Zone - 3 (South) |
| J-1150 | 0.19 | 535.00 | 531.3 | 589.29 | Zone - 3 (South) |
| J-N1741E | 0.00 | 542.00 | 531.4 | 596.29 | Zone - 2 (North) |
| J-S1710E | 0.20 | 535.05 | 531.4 | 589.34 | Zone - 3 (South) |
| J-247 | 0.00 | 535.06 | 531.4 | 589.36 | Zone - 3 (South) |
| J-S370E | 0.00 | 535.17 | 531.4 | 589.47 | Zone - 3 (South) |
| J-S1705E | 0.24 | 535.04 | 531.4 | 589.34 | Zone - 3 (South) |
| J-S878E | 0.26 | 535.00 | 531.5 | 589.31 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-1170 | 0.24 | 535.00 | 531.5 | 589.31 | Zone - 3 (South) |
| J-1171 | 0.24 | 535.00 | 531.5 | 589.31 | Zone - 3 (South) |
| J-S590E | 0.22 | 535.01 | 531.6 | 589.32 | Zone - 3 (South) |
| J-147 | 0.00 | 535.00 | 531.6 | 589.32 | Zone - 3 (South) |
| J-N730E | 0.00 | 542.36 | 531.6 | 596.68 | Zone - 2 (North) |
| J-1201 | 0.00 | 535.00 | 531.6 | 589.32 | Zone - 3 (South) |
| J-S1890E | 0.00 | 535.02 | 531.9 | 589.37 | Zone - 3 (South) |
| J-S675E | 0.33 | 534.98 | 532.0 | 589.34 | Zone - 3 (South) |
| J-S2135E | 0.04 | 535.00 | 532.1 | 589.37 | Zone - 3 (South) |
| J-S2220E | 0.00 | 535.00 | 532.1 | 589.37 | Zone - 3 (South) |
| J-N1430E | 0.00 | 554.00 | 532.2 | 608.38 | Zone - 1 (North) |
| J-N1240E | 0.25 | 553.76 | 532.2 | 608.14 | Zone - 1 (North) |
| J-S580E | 0.31 | 534.92 | 532.4 | 589.32 | Zone - 3 (South) |
| J-N125E | 0.17 | 542.16 | 532.5 | 596.57 | Zone - 2 (North) |
| J-327 | 0.00 | 535.00 | 532.6 | 589.42 | Zone - 3 (South) |
| J-1109 | 0.22 | 541.80 | 533.3 | 596.29 | Zone - 2 (North) |
| J-S1160E | 0.30 | 534.89 | 533.3 | 589.38 | Zone - 3 (South) |
| J-S1900E | 0.33 | 534.86 | 533.5 | 589.37 | Zone - 3 (South) |
| J-N1717E | 0.45 | 541.68 | 533.8 | 596.22 | Zone - 2 (North) |
| J-S1060E | 0.26 | 534.83 | 533.9 | 589.38 | Zone - 3 (South) |
| J-S1855E | 0.00 | 534.81 | 533.9 | 589.36 | Zone - 3 (South) |
| J-S1070E | 0.00 | 534.82 | 533.9 | 589.38 | Zone - 3 (South) |
| J-1090 | 0.19 | 541.69 | 534.1 | 596.27 | Zone - 2 (North) |
| J-N1195E | 0.47 | 553.69 | 534.2 | 608.28 | Zone - 1 (North) |
| J-S280E | 0.22 | 534.88 | 534.4 | 589.49 | Zone - 3 (South) |
| J-S820E | 0.09 | 534.74 | 534.5 | 589.35 | Zone - 3 (South) |
| J-N300E | 0.25 | 541.77 | 534.6 | 596.40 | Zone - 2 (North) |
| J-870 | 0.00 | 554.00 | 535.0 | 608.66 | Zone - 1 (North) |
| J-1107 | 0.22 | 541.60 | 535.2 | 596.29 | Zone - 2 (North) |
| J-N1200E | 0.34 | 553.55 | 535.7 | 608.29 | Zone - 1 (North) |
| J-S360E | 0.09 | 534.71 | 535.9 | 589.47 | Zone - 3 (South) |
| J-1098 | 0.27 | 541.50 | 536.0 | 596.27 | Zone - 2 (North) |
| J-392 | 0.00 | 534.70 | 536.0 | 589.47 | Zone - 3 (South) |
| J-336 | 0.00 | 541.50 | 536.1 | 596.28 | Zone - 2 (North) |
| J-N1380E | 0.41 | 553.50 | 536.2 | 608.29 | Zone - 1 (North) |
| J-N1250E | 0.00 | 553.33 | 536.4 | 608.14 | Zone - 1 (North) |
| J-898 | 0.24 | 534.50 | 536.4 | 589.31 | Zone - 3 (South) |
| J-1175 | 0.24 | 534.50 | 536.4 | 589.31 | Zone - 3 (South) |
| J-S670E | 0.42 | 534.50 | 536.7 | 589.34 | Zone - 3 (South) |
| J-N1390E | 0.45 | 553.52 | 536.8 | 608.37 | Zone - 1 (North) |
| J-S1680E | 0.00 | 534.47 | 537.0 | 589.34 | Zone - 3 (South) |
| J-N1165E | 0.34 | 553.33 | 537.1 | 608.21 | Zone - 1 (North) |
| J-S1110E | 0.27 | 534.48 | 537.3 | 589.38 | Zone - 3 (South) |
| J-1169 | 0.24 | 534.40 | 537.4 | 589.31 | Zone - 3 (South) |
| J-N1370E | 0.00 | 553.45 | 537.5 | 608.37 | Zone - 1 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S1920E | 0.10 | 534.40 | 537.9 | 589.36 | Zone - 3 (South) |
| J-1108 | 0.22 | 541.30 | 538.2 | 596.29 | Zone - 2 (North) |
| J-S1040E | 0.31 | 534.36 | 538.5 | 589.37 | Zone - 3 (South) |
| J-S550E | 0.19 | 534.38 | 538.6 | 589.41 | Zone - 3 (South) |
| J-S1095E | 0.33 | 534.31 | 538.9 | 589.38 | Zone - 3 (South) |
| J-N50E | 0.28 | 541.50 | 539.2 | 596.59 | Zone - 2 (North) |
| J-S350E | 0.11 | 534.37 | 539.2 | 589.46 | Zone - 3 (South) |
| J-912 | 0.00 | 541.18 | 539.2 | 596.27 | Zone - 2 (North) |
| J-S605E | 0.27 | 534.24 | 539.3 | 589.34 | Zone - 3 (South) |
| J-N55E | 0.25 | 541.44 | 539.6 | 596.57 | Zone - 2 (North) |
| J-S585E | 0.29 | 534.17 | 539.7 | 589.32 | Zone - 3 (South) |
| J-N1305E | 0.56 | 553.50 | 539.9 | 608.66 | Zone - 1 (North) |
| J-S340E | 0.00 | 534.26 | 540.1 | 589.45 | Zone - 3 (South) |
| J-N1190E | 0.00 | 553.06 | 540.3 | 608.26 | Zone - 1 (North) |
| J-1084 | 0.19 | 541.00 | 540.9 | 596.26 | Zone - 2 (North) |
| J-S1008E | 0.15 | 534.10 | 541.0 | 589.37 | Zone - 3 (South) |
| J-S1885E | 0.03 | 534.08 | 541.0 | 589.36 | Zone - 3 (South) |
| J-323 | 0.00 | 541.00 | 541.1 | 596.29 | Zone - 2 (North) |
| J-322 | 0.00 | 541.00 | 541.1 | 596.29 | Zone - 2 (North) |
| J-1112 | 0.15 | 541.00 | 541.1 | 596.29 | Zone - 2 (North) |
| J-1167 | 0.00 | 534.00 | 541.3 | 589.31 | Zone - 3 (South) |
| J-1168 | 0.24 | 534.00 | 541.3 | 589.31 | Zone - 3 (South) |
| J-1180 | 0.24 | 534.00 | 541.3 | 589.31 | Zone - 3 (South) |
| J-1179 | 0.24 | 534.00 | 541.3 | 589.31 | Zone - 3 (South) |
| J-1172 | 0.24 | 534.00 | 541.3 | 589.31 | Zone - 3 (South) |
| J-1178 | 0.00 | 534.00 | 541.3 | 589.31 | Zone - 3 (South) |
| J-1173 | 0.24 | 534.00 | 541.3 | 589.31 | Zone - 3 (South) |
| J-1174 | 0.24 | 534.00 | 541.3 | 589.31 | Zone - 3 (South) |
| J-1200 | 0.00 | 534.00 | 541.4 | 589.32 | Zone - 3 (South) |
| J-S685E | 0.09 | 534.00 | 541.5 | 589.33 | Zone - 3 (South) |
| J-N1710E | 0.00 | 540.86 | 541.8 | 596.22 | Zone - 2 (North) |
| J-S1141E | 0.00 | 534.00 | 542.0 | 589.38 | Zone - 3 (South) |
| J-S1080E | 0.37 | 533.98 | 542.2 | 589.38 | Zone - 3 (South) |
| J-C228 | 0.00 | 534.00 | 542.6 | 589.44 | Zone - 3 (South) |
| J-1110 | 0.22 | 540.80 | 543.1 | 596.29 | Zone - 2 (North) |
| J-N1310E | 0.00 | 553.02 | 543.3 | 608.53 | Zone - 1 (North) |
| J-N1740E | 0.00 | 540.72 | 543.8 | 596.28 | Zone - 2 (North) |
| J-S1140E | 0.00 | 533.82 | 544.0 | 589.40 | Zone - 3 (South) |
| J-S890E | 0.24 | 533.76 | 544.0 | 589.35 | Zone - 3 (South) |
| J-1106 | 0.22 | 540.70 | 544.1 | 596.29 | Zone - 2 (North) |
| J-N1730E | 0.78 | 540.68 | 544.2 | 596.28 | Zone - 2 (North) |
| J-N935E | 0.50 | 541.13 | 544.2 | 596.74 | Zone - 2 (North) |
| J-1181 | 0.24 | 533.70 | 544.3 | 589.31 | Zone - 3 (South) |
| J-854 | 0.00 | 553.00 | 544.8 | 608.66 | Zone - 1 (North) |
| J-N1091E | 0.11 | 541.22 | 544.9 | 596.89 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S970E | 0.44 | 533.70 | 544.9 | 589.37 | Zone - 3 (South) |
| J-S1880E | 0.31 | 533.69 | 544.9 | 589.36 | Zone - 3 (South) |
| J-N570E | 0.00 | 540.65 | 545.2 | 596.35 | Zone - 2 (North) |
| J-304 | 0.00 | 533.60 | 545.3 | 589.32 | Zone - 3 (South) |
| J-312 | 0.00 | 533.60 | 545.3 | 589.32 | Zone - 3 (South) |
| J-N1454E | 0.00 | 553.00 | 545.5 | 608.73 | Zone - 1 (North) |
| J-N1720E | 0.00 | 540.53 | 545.6 | 596.28 | Zone - 2 (North) |
| J-S1870E | 0.00 | 533.60 | 545.8 | 589.36 | Zone - 3 (South) |
| J-313 | 0.00 | 533.55 | 545.8 | 589.32 | Zone - 3 (South) |
| J-1177 | 0.24 | 533.50 | 546.2 | 589.31 | Zone - 3 (South) |
| J-148 | 0.00 | 533.50 | 546.3 | 589.32 | Zone - 3 (South) |
| J-310 | 0.00 | 533.50 | 546.3 | 589.32 | Zone - 3 (South) |
| J-S1925E | 0.00 | 533.50 | 546.7 | 589.36 | Zone - 3 (South) |
| J-S1679E | 0.27 | 533.47 | 546.8 | 589.34 | Zone - 3 (South) |
| J-1100 | 0.78 | 540.40 | 546.9 | 596.29 | Zone - 2 (North) |
| J-N1055E | 0.45 | 552.23 | 547.0 | 608.12 | Zone - 1 (North) |
| J-N1056E | 0.22 | 552.23 | 547.0 | 608.12 | Zone - 1 (North) |
| J-1216 | 0.00 | 533.42 | 547.1 | 589.32 | Zone - 3 (South) |
| J-S702E | 0.00 | 533.42 | 547.1 | 589.32 | Zone - 3 (South) |
| J-S680E | 1.22 | 533.42 | 547.1 | 589.32 | Zone - 3 (South) |
| J-317 | 0.00 | 533.50 | 547.2 | 589.41 | Zone - 3 (South) |
| J-1182 | 0.24 | 533.40 | 547.2 | 589.31 | Zone - 3 (South) |
| J-S1030E | 0.15 | 533.39 | 547.9 | 589.38 | Zone - 3 (South) |
| J-S1035E | 0.30 | 533.39 | 547.9 | 589.38 | Zone - 3 (South) |
| J-N575E | 0.30 | 540.37 | 548.1 | 596.37 | Zone - 2 (North) |
| J-305 | 0.00 | 533.30 | 548.2 | 589.32 | Zone - 3 (South) |
| J-396 | 0.00 | 540.22 | 548.8 | 596.29 | Zone - 2 (North) |
| J-S940E | 0.14 | 533.28 | 548.9 | 589.36 | Zone - 3 (South) |
| J-159 | 0.00 | 533.20 | 549.2 | 589.31 | Zone - 3 (South) |
| J-S1520E | 0.00 | 533.23 | 549.2 | 589.34 | Zone - 3 (South) |
| J-S1910E | 0.41 | 533.20 | 549.8 | 589.37 | Zone - 3 (South) |
| J-N45E | 0.00 | 540.42 | 549.9 | 596.61 | Zone - 2 (North) |
| J-303 | 0.00 | 552.71 | 550.1 | 608.92 | Zone-N1 |
| J-S1000E | 0.00 | 533.12 | 550.6 | 589.37 | Zone - 3 (South) |
| J-S930E | 0.27 | 533.11 | 550.6 | 589.37 | Zone - 3 (South) |
| J-S935E | 0.21 | 533.11 | 550.6 | 589.37 | Zone - 3 (South) |
| J-LW198 | 0.00 | 540.00 | 550.8 | 596.28 | Zone - 2 (North) |
| J-337 | 0.00 | 540.00 | 550.8 | 596.28 | Zone - 2 (North) |
| J-348 | 0.00 | 540.00 | 550.9 | 596.29 | Zone - 2 (North) |
| J-38 | 0.15 | 540.00 | 550.9 | 596.29 | Zone - 2 (North) |
| J-S1010E | 0.21 | 533.08 | 551.0 | 589.37 | Zone - 3 (South) |
| J-123 | 0.24 | 533.00 | 551.1 | 589.31 | Zone - 3 (South) |
| J-1184 | 0.00 | 533.00 | 551.2 | 589.32 | Zone - 3 (South) |
| J-1202 | 0.02 | 533.00 | 551.2 | 589.32 | Zone - 3 (South) |
| J-1205 | 0.37 | 533.00 | 551.2 | 589.32 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-1209 | 0.00 | 533.00 | 551.4 | 589.34 | Zone - 3 (South) |
| J-S1036E | 0.00 | 533.00 | 551.7 | 589.38 | Zone - 3 (South) |
| J-S1085E | 0.00 | 533.00 | 551.8 | 589.38 | Zone - 3 (South) |
| J-160 | 0.00 | 533.00 | 551.8 | 589.38 | Zone - 3 (South) |
| J-1212 | 0.00 | 533.00 | 551.8 | 589.38 | Zone - 3 (South) |
| J-1210 | 0.24 | 533.00 | 551.8 | 589.38 | Zone - 3 (South) |
| J-N30E | 0.56 | 540.23 | 551.9 | 596.62 | Zone - 2 (North) |
| J-N562E | 0.00 | 539.90 | 552.2 | 596.32 | Zone - 2 (North) |
| J-S990E | 0.88 | 532.89 | 552.8 | 589.37 | Zone - 3 (South) |
| J-S1540E | 0.31 | 532.85 | 552.8 | 589.33 | Zone - 3 (South) |
| J-S1560E | 0.00 | 532.82 | 553.0 | 589.33 | Zone - 3 (South) |
| J-171 | 0.45 | 540.50 | 553.0 | 597.01 | Zone - 3 (South) |
| J-1185 | 0.00 | 532.80 | 553.1 | 589.32 | Zone - 3 (South) |
| J-1203 | 0.00 | 532.80 | 553.1 | 589.32 | Zone - 3 (South) |
| J-314 | 0.00 | 532.75 | 553.7 | 589.32 | Zone - 3 (South) |
| J-S1580E | 0.00 | 532.62 | 553.8 | 589.20 | Zone - 3 (South) |
| J-N830E | 0.65 | 540.14 | 553.9 | 596.73 | Zone - 2 (North) |
| J-351 | 0.00 | 539.70 | 553.9 | 596.29 | Zone - 2 (North) |
| J-N1160E | 0.34 | 551.54 | 554.1 | 608.15 | Zone - 1 (North) |
| J-143 | 0.34 | 532.60 | 555.1 | 589.32 | Zone - 3 (South) |
| J-N561E | 0.62 | 539.60 | 555.1 | 596.32 | Zone - 2 (North) |
| J-N800E | 0.10 | 540.05 | 555.1 | 596.77 | Zone - 2 (North) |
| J-311 | 0.00 | 532.60 | 555.1 | 589.32 | Zone - 3 (South) |
| J-S1380E | 0.00 | 532.45 | 555.4 | 589.19 | Zone - 3 (South) |
| J-N1010E | 0.47 | 551.70 | 555.7 | 608.48 | Zone - 1 (North) |
| J-S901E | 0.49 | 532.49 | 556.0 | 589.30 | Zone - 3 (South) |
| J-N583E | 0.00 | 539.50 | 556.1 | 596.32 | Zone - 2 (North) |
| J-S1510E | 0.00 | 532.46 | 556.7 | 589.34 | Zone - 3 (South) |
| J-S950E | 0.20 | 532.46 | 557.0 | 589.37 | Zone - 3 (South) |
| J-S1490E | 0.24 | 532.41 | 557.2 | 589.34 | Zone - 3 (South) |
| J-N305E | 0.00 | 539.43 | 557.7 | 596.42 | Zone - 2 (North) |
| J-1101 | 0.78 | 539.30 | 557.7 | 596.29 | Zone - 2 (North) |
| J-1103 | 0.00 | 539.30 | 557.7 | 596.29 | Zone - 2 (North) |
| J-1104 | 0.00 | 539.30 | 557.7 | 596.29 | Zone - 2 (North) |
| J-S1425E | 0.00 | 532.13 | 557.9 | 589.14 | Zone - 3 (South) |
| J-168 | 0.45 | 540.00 | 557.9 | 597.01 | Zone - 3 (South) |
| J-170 | 0.45 | 540.00 | 557.9 | 597.01 | Zone - 3 (South) |
| J-S1681E | 0.20 | 532.27 | 558.5 | 589.34 | Zone - 3 (South) |
| J-S872E | 0.00 | 532.20 | 559.0 | 589.32 | Zone - 3 (South) |
| J-S2180E | 2.91 | 531.94 | 559.3 | 589.09 | Zone - 3 (South) |
| J-N1820E | 0.45 | 539.18 | 560.0 | 596.40 | Zone - 2 (North) |
| J-N1700E | 0.39 | 538.94 | 560.4 | 596.20 | Zone - 2 (North) |
| J-N563E | 0.28 | 539.04 | 560.6 | 596.32 | Zone - 2 (North) |
| J-1138 | 0.15 | 539.00 | 560.7 | 596.29 | Zone - 2 (North) |
| J-354 | 0.00 | 539.00 | 560.7 | 596.29 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-353 | 0.00 | 539.00 | 560.7 | 596.29 | Zone - 2 (North) |
| J-NS184 | 0.00 | 539.00 | 560.8 | 596.30 | Zone - 2 (North) |
| J-N790E | 0.28 | 539.49 | 560.8 | 596.79 | Zone - 2 (North) |
| J-NS183 | 0.00 | 539.00 | 560.9 | 596.31 | Zone - 2 (North) |
| J-N1714E | 0.22 | 538.89 | 560.9 | 596.20 | Zone - 2 (North) |
| J-N1713E | 0.22 | 538.89 | 560.9 | 596.20 | Zone - 2 (North) |
| J-369 | 0.00 | 539.70 | 561.0 | 597.02 | Zone - 3 (South) |
| J-1206 | 0.00 | 532.00 | 561.0 | 589.32 | Zone - 3 (South) |
| J-144 | 0.34 | 532.00 | 561.0 | 589.32 | Zone - 3 (South) |
| J-1208 | 0.00 | 532.00 | 561.1 | 589.33 | Zone - 3 (South) |
| J-S1420E | 0.33 | 531.80 | 561.2 | 589.14 | Zone - 3 (South) |
| J-N1300E | 0.39 | 551.24 | 561.2 | 608.58 | Zone - 1 (North) |
| J-S882E | 0.07 | 532.00 | 561.2 | 589.35 | Zone - 3 (South) |
| J-941 | 0.00 | 532.00 | 561.3 | 589.36 | Zone - 3 (South) |
| J-N1705E | 0.67 | 538.78 | 562.0 | 596.21 | Zone - 2 (North) |
| J-911 | 0.00 | 538.80 | 562.5 | 596.27 | Zone - 2 (North) |
| J-S881E | 0.13 | 531.85 | 562.7 | 589.35 | Zone - 3 (South) |
| J-167 | 0.45 | 539.50 | 562.8 | 597.01 | Zone - 3 (South) |
| J-374 | 0.00 | 539.00 | 563.0 | 596.53 | Zone - 2 (North) |
| J-N1020E | 0.41 | 550.95 | 563.1 | 608.48 | Zone - 1 (North) |
| J-S1470E | 0.00 | 531.78 | 563.4 | 589.34 | Zone - 3 (South) |
| J-S1390E | 0.16 | 531.54 | 563.8 | 589.15 | Zone - 3 (South) |
| J-N750E | 0.04 | 539.04 | 564.1 | 596.68 | Zone - 2 (North) |
| J-S2205E | 0.47 | 531.47 | 564.3 | 589.13 | Zone - 3 (South) |
| J-S1435E | 0.26 | 531.47 | 564.3 | 589.13 | Zone - 3 (South) |
| J-S1440E | 0.46 | 531.47 | 564.4 | 589.14 | Zone - 3 (South) |
| J-N580E | 0.00 | 538.64 | 564.7 | 596.34 | Zone - 2 (North) |
| J-355 | 0.00 | 538.50 | 565.6 | 596.29 | Zone - 2 (North) |
| J-S1600E | 0.24 | 531.34 | 565.9 | 589.16 | Zone - 3 (South) |
| J-S871E | 0.00 | 531.50 | 566.1 | 589.34 | Zone - 3 (South) |
| J-N560E | 0.00 | 538.48 | 566.1 | 596.32 | Zone - 2 (North) |
| J-S1530E | 0.37 | 531.30 | 566.3 | 589.16 | Zone - 3 (South) |
| J-N1050E | 0.50 | 550.19 | 566.9 | 608.12 | Zone - 1 (North) |
| J-S2200E | 0.42 | 531.17 | 567.1 | 589.12 | Zone - 3 (South) |
| J-S1555E | 0.27 | 531.34 | 567.6 | 589.33 | Zone - 3 (South) |
| J-172 | 0.23 | 539.00 | 567.7 | 597.01 | Zone - 3 (South) |
| J-166 | 0.45 | 539.00 | 567.7 | 597.01 | Zone - 3 (South) |
| J-174 | 0.45 | 539.00 | 567.7 | 597.01 | Zone - 3 (South) |
| J-316 | 0.00 | 539.00 | 567.7 | 597.01 | Zone - 3 (South) |
| J-173 | 0.00 | 539.00 | 567.7 | 597.01 | Zone - 3 (South) |
| J-S1670E | 0.00 | 531.31 | 567.7 | 589.32 | Zone - 3 (South) |
| J-164 | 0.00 | 539.00 | 567.7 | 597.01 | Zone - 3 (South) |
| J-163 | 0.00 | 539.00 | 567.8 | 597.01 | Zone - 3 (South) |
| J-S1556E | 0.20 | 531.30 | 568.0 | 589.34 | Zone - 3 (South) |
| J-N120E | 0.13 | 538.52 | 568.1 | 596.57 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S2190E | 4.66 | 530.90 | 569.7 | 589.11 | Zone - 3 (South) |
| J-N40E | 0.22 | 538.39 | 569.9 | 596.62 | Zone - 2 (North) |
| J-S1460E | 0.26 | 530.98 | 570.0 | 589.22 | Zone - 3 (South) |
| J-LW199 | 0.00 | 538.00 | 570.4 | 596.28 | Zone - 2 (North) |
| J-349 | 0.00 | 538.00 | 570.5 | 596.29 | Zone - 2 (North) |
| J-352 | 0.00 | 538.00 | 570.5 | 596.29 | Zone - 2 (North) |
| J-S701E | 0.00 | 530.95 | 571.3 | 589.32 | Zone - 3 (South) |
| J-S700E | 0.29 | 530.95 | 571.3 | 589.32 | Zone - 3 (South) |
| J-N582E | 0.58 | 537.89 | 571.8 | 596.32 | Zone - 2 (North) |
| J-S1620E | 0.28 | 530.87 | 572.1 | 589.32 | Zone - 3 (South) |
| J-165 | 0.45 | 538.50 | 572.6 | 597.01 | Zone - 3 (South) |
| J-169 | 0.45 | 538.40 | 573.6 | 597.01 | Zone - 3 (South) |
| J-N1090E | 0.03 | 538.29 | 573.7 | 596.91 | Zone - 2 (North) |
| J-N760E | 0.10 | 537.97 | 574.5 | 596.68 | Zone - 2 (North) |
| J-N810E | 0.06 | 538.02 | 574.6 | 596.72 | Zone - 2 (North) |
| J-S1650E | 0.00 | 530.57 | 575.0 | 589.32 | Zone - 3 (South) |
| J-S1630E | 0.15 | 530.56 | 575.1 | 589.32 | Zone - 3 (South) |
| J-N775E | 0.38 | 537.83 | 576.1 | 596.70 | Zone - 2 (North) |
| J-N770E | 0.06 | 537.76 | 576.6 | 596.68 | Zone - 2 (North) |
| J-N500E | 0.45 | 537.51 | 576.7 | 596.44 | Zone - 2 (North) |
| J-N81E | 0.34 | 537.50 | 577.7 | 596.53 | Zone - 2 (North) |
| J-S1430E | 0.00 | 530.00 | 578.7 | 589.13 | Zone - 3 (South) |
| J-N1030E | 0.30 | 549.21 | 579.7 | 608.44 | Zone - 1 (North) |
| J-N82E | 0.50 | 537.20 | 580.6 | 596.53 | Zone - 2 (North) |
| J-N581E | 0.53 | 536.80 | 582.6 | 596.33 | Zone - 2 (North) |
| J-N510E | 0.34 | 536.95 | 583.1 | 596.53 | Zone - 2 (North) |
| J-N1825E | 0.00 | 536.42 | 587.1 | 596.41 | Zone - 2 (North) |
| J-N740E | 0.07 | 536.33 | 590.7 | 596.69 | Zone - 2 (North) |
| J-N990E | 0.36 | 547.58 | 592.7 | 608.15 | Zone - 1 (North) |
| J-N1060E | 0.95 | 545.00 | 617.7 | 608.12 | Zone - 1 (North) |
| J-162 | 0.00 | 540.50 | 669.5 | 608.91 | Zone - 1 (North) |
| J-CLIR149A | 0.35 | 539.00 | 676.4 | 608.12 | Zone - 1 (North) |
| J-390 | 0.00 | 539.39 | 680.4 | 608.91 | Zone - 1 (North) |

# PIPE TABLE: PHD - Existing System with Upgrades

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-40 | J-N630E | J-N680E | 118 | 400.0 | Asbestos Cement | 114.0 | 21.07 | 0.1677 |
| PN-50 | J-N141E | J-N140E | 87 | 400.0 | Asbestos Cement | 114.0 | 23.40 | 0.1862 |
| PN-30 | J-N635E | J-N630E | 57 | 400.0 | Asbestos Cement | 114.0 | 32.99 | 0.2625 |
| PN-90 | J-N870E | J-N700E | 195 | 150.0 | Asbestos Cement | 114.0 | 2.32 | 0.1313 |
| PN-100 | J-N700E | J-N160E | 185 | 150.0 | Asbestos Cement | 114.0 | 1.98 | 0.1120 |
| PN-110 | J-N161E | J-N165E | 103 | 150.0 | Asbestos Cement | 114.0 | 1.74 | 0.0985 |
| PN-130 | J-N640E | J-N670E | 75 | 150.0 | Asbestos Cement | 114.0 | -0.03 | 0.0018 |
| PN-160 | J-N700E | J-N710E | 117 | 150.0 | Asbestos Cement | 114.0 | -1.83 | 0.1038 |
| PN-180 | J-N730E | J-N770E | 138 | 150.0 | Asbestos Cement | 114.0 | -0.20 | 0.0113 |
| PN-220 | J-N840E | J-N775E | 169 | 200.0 | PVC | 150.0 | -2.30 | 0.0731 |
| PN-400 | J-N100E | J-N80E | 49 | 200.0 | Asbestos Cement | 114.0 | 3.79 | 0.1208 |
| PN-230 | J-N80E | J-N70E | 71 | 150.0 | Asbestos Cement | 114.0 | -0.80 | 0.0454 |
| PN-380 | J-N80E | J-N81E | 151 | 200.0 | Asbestos Cement | 114.0 | 4.48 | 0.1427 |
| PN-370 | J-N81E | J-N82E | 37 | 200.0 | Asbestos Cement | 114.0 | 4.15 | 0.1320 |
| PN-360 | J-N82E | J-N120E | 153 | 300.0 | Asbestos Cement | 114.0 | -15.66 | 0.2215 |
| PN-250 | J-N60E | J-N55E | 128 | 150.0 | Asbestos Cement | 114.0 | -1.14 | 0.0644 |
| PN-260 | J-N55E | J-N50E | 198 | 150.0 | Asbestos Cement | 114.0 | -1.38 | 0.0783 |
| PN-420 | J-N100E | J-N20E | 196 | 200.0 | Asbestos Cement | 114.0 | -3.59 | 0.1144 |
| PN-290 | J-N40E | J-N760E | 216 | 150.0 | Asbestos Cement | 114.0 | -2.61 | 0.1480 |
| PN-270 | J-N20E | J-N50E | 125 | 150.0 | Asbestos Cement | 114.0 | -0.63 | 0.0354 |
| PN-320 | J-N740E | J-N1090E | 91 | 150.0 | PVC | 120.0 | -4.12 | 0.2330 |
| PN-330 | J-N1090E | J-N1080E | 131 | 150.0 | Asbestos Cement | 114.0 | -3.38 | 0.1912 |
| PN-340 | J-N1080E | J-N1070E | 116 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0001 |
| PN-310 | J-N740E | J-N810E | 159 | 150.0 | Asbestos Cement | 114.0 | -0.57 | 0.0321 |
| PN-430 | J-N20E | J-N30E | 178 | 200.0 | Asbestos Cement | 114.0 | -5.04 | 0.1603 |
| PN-440 | J-N30E | J-N770E | 209 | 200.0 | Asbestos Cement | 114.0 | -5.50 | 0.1750 |
| PN-450 | J-N770E | J-N775E | 108 | 200.0 | Asbestos Cement | 114.0 | -3.90 | 0.1241 |
| PN-460 | J-N775E | J-N810E | 64 | 200.0 | Asbestos Cement | 114.0 | -6.57 | 0.2093 |
| PN-480 | J-N800E | J-N960E | 146 | 200.0 | Asbestos Cement | 114.0 | -5.78 | 0.1841 |
| PN-490 | J-N960E | J-N940E | 108 | 200.0 | Asbestos Cement | 114.0 | -8.79 | 0.2797 |
| PN-520 | J-N1390E | J-N1370E | 12 | 200.0 | Asbestos Cement | 114.0 | 1.06 | 0.0337 |
| PN-530 | J-N1370E | J-N1420E | 102 | 200.0 | Asbestos Cement | 114.0 | -3.03 | 0.0965 |
| PN-540 | J-N1430E | J-N1570E | 128 | 200.0 | Asbestos Cement | 114.0 | 0.14 | 0.0044 |
| PN-560 | J-N1550E | J-N1490E | 109 | 200.0 | Asbestos Cement | 114.0 | -8.26 | 0.2630 |
| PN-580 | J-N1520E | J-N1510E | 32 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PN-600 | J-N1540E | J-N1545E | 72 | 200.0 | Asbestos Cement | 114.0 | 0.01 | 0.0003 |
| PN-610 | J-N1540E | J-N1530E | 123 | 150.0 | Asbestos Cement | 114.0 | -4.15 | 0.2350 |
| PN-620 | J-N1530E | J-N1535E | 68 | 150.0 | Asbestos Cement | 114.0 | -4.40 | 0.2488 |
| PN-670 | J-N1590E | J-N1600E | 43 | 150.0 | Asbestos Cement | 114.0 | 0.13 | 0.0073 |
| PN-680 | J-N1600E | J-N1605E | 99 | 150.0 | Asbestos Cement | 114.0 | 0.28 | 0.0159 |
| PN-690 | J-N1600E | J-N1610E | 40 | 200.0 | Asbestos Cement | 114.0 | -0.43 | 0.0137 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-700 | J-N1610E | J-N1620E | 104 | 200.0 | PVC | 130.0 | -0.66 | 0.0209 |
| PN-710 | J-N1620E | J-N1630E | 96 | 200.0 | PVC | 130.0 | -1.13 | 0.0359 |
| PN-720 | J-N1630E | J-N1640E | 89 | 200.0 | PVC | 130.0 | -1.34 | 0.0427 |
| PN-740 | J-N1630E | J-N1635E | 103 | 200.0 | PVC | 130.0 | 0.05 | 0.0015 |
| PN-750 | J-N1635E | J-N1655E | 203 | 200.0 | PVC | 130.0 | -0.76 | 0.0242 |
| PN-760 | J-N1655E | J-N1650E | 207 | 200.0 | PVC | 130.0 | -1.32 | 0.0420 |
| PN-650 | J-N1240E | J-N1260E | 111 | 150.0 | Asbestos Cement | 114.0 | -3.40 | 0.1922 |
| PN-780 | J-N1657E | J-N1295E | 165 | 200.0 | PVC | 130.0 | -3.45 | 0.1097 |
| PN-770 | J-N1650E | J-N1657E | 87 | 200.0 | PVC | 130.0 | -3.45 | 0.1097 |
| PN-790 | J-N1295E | J-N1290E | 115 | 200.0 | PVC | 130.0 | -3.45 | 0.1097 |
| PN-820 | J-N1220E | J-N1200E | 104 | 150.0 | Asbestos Cement | 114.0 | 1.65 | 0.0934 |
| PN-830 | J-N1200E | J-N1190E | 116 | 150.0 | Asbestos Cement | 114.0 | 2.63 | 0.1487 |
| PN-860 | J-N1140E | J-N1120E | 108 | 150.0 | Asbestos Cement | 114.0 | 2.28 | 0.1289 |
| PN-900 | J-N850E | J-N860E | 26 | 200.0 | PVC | 120.0 | -0.74 | 0.0236 |
| PN-910 | J-N860E | J-N830E | 98 | 150.0 | Asbestos Cement | 114.0 | -0.74 | 0.0416 |
| PN-950 | J-N1120E | J-N970E | 110 | 150.0 | Asbestos Cement | 114.0 | 0.52 | 0.0293 |
| PN-960 | J-N970E | J-N960E | 103 | 150.0 | Asbestos Cement | 114.0 | -1.70 | 0.0959 |
| PN-980 | J-N1140E | J-N940E | 213 | 150.0 | Asbestos Cement | 114.0 | -2.58 | 0.1460 |
| PN-990 | J-N940E | J-N930E | 107 | 150.0 | Asbestos Cement | 114.0 | 5.21 | 0.2950 |
| PN-1000 | J-N930E | J-N910E | 94 | 150.0 | Asbestos Cement | 114.0 | 2.99 | 0.1691 |
| PN-920 | J-N830E | J-N935E | 93 | 150.0 | Asbestos Cement | 114.0 | -1.38 | 0.0783 |
| PN-930 | J-N935E | J-N930E | 196 | 150.0 | Asbestos Cement | 114.0 | -1.89 | 0.1068 |
| PN-940 | J-N935E | J-N835E | 188 | 150.0 | Asbestos Cement | 114.0 | 0.00 | 0.0000 |
| PN-1010 | J-N1060E | J-N1050E | 95 | 150.0 | Asbestos Cement | 114.0 | -0.23 | 0.0128 |
| PN-1020 | J-N1050E | J-N1160E | 105 | 150.0 | Asbestos Cement | 114.0 | -3.47 | 0.1962 |
| PN-1030 | J-N1160E | J-N990E | 213 | 150.0 | Asbestos Cement | 114.0 | 0.32 | 0.0183 |
| PN-1040 | J-N990E | J-N1030E | 200 | 150.0 | PVC | 120.0 | -7.00 | 0.3964 |
| PN-1050 | J-N1030E | J-N1010E | 106 | 200.0 | Asbestos Cement | 114.0 | -7.31 | 0.2326 |
| PN-1070 | J-N1300E | J-N1440E | 114 | 200.0 | Asbestos Cement | 114.0 | -9.10 | 0.2898 |
| PN-1075 | J-N1480E | J-N1490E | 103 | 150.0 | Asbestos Cement | 114.0 | 5.79 | 0.3276 |
| PN-1100 | J-N1190E | J-N1195E | 104 | 150.0 | Asbestos Cement | 114.0 | -1.84 | 0.1039 |
| PN-1110 | J-N1195E | J-N1400E | 116 | 150.0 | Asbestos Cement | 114.0 | -2.31 | 0.1305 |
| PN-635 | J-N1050E | J-N1055E | 215 | 150.0 | Asbestos Cement | 114.0 | -0.89 | 0.0503 |
| PN-640 | J-N1055E | J-N1245E | 195 | 150.0 | Asbestos Cement | 114.0 | -1.00 | 0.0566 |
| PN-1120 | J-N1056E | J-N1055E | 95 | 150.0 | Asbestos Cement | 114.0 | 0.34 | 0.0190 |
| PN-1130 | J-N1200E | J-N1400E | 104 | 150.0 | Asbestos Cement | 114.0 | -1.31 | 0.0743 |
| PN-1140 | J-N1400E | J-N1370E | 111 | 150.0 | Asbestos Cement | 114.0 | -4.09 | 0.2315 |
| PN-1150 | J-N1390E | J-N1360E | 108 | 200.0 | Asbestos Cement | 114.0 | -11.89 | 0.3784 |
| PN-1160 | J-N1360E | J-N1300E | 88 | 200.0 | Asbestos Cement | 114.0 | -12.23 | 0.3892 |
| PN-1180 | J-N1300E | J-N1305E | 101 | 200.0 | PVC | 130.0 | -11.78 | 0.3750 |
| PN-1200 | J-N1250E | J-N1240E | 105 | 150.0 | Asbestos Cement | 114.0 | -0.01 | 0.0006 |
| PN-1210 | J-N1240E | J-N1245E | 107 | 150.0 | Asbestos Cement | 114.0 | 1.51 | 0.0852 |
| PN-1240 | J-N1220E | J-N1420E | 218 | 150.0 | Asbestos Cement | 114.0 | -2.95 | 0.1671 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| 106 | J-N1420E | J-N1430E | 15 | 200.0 | PVC | 130.0 | -6.55 | 0.2083 |
| PN-1260 | J-N1430E | J-N1440E | 185 | 150.0 | Asbestos Cement | 114.0 | -6.68 | 0.3782 |
| PN-1270 | J-N1440E | J-N1450E | 6 | 150.0 | Asbestos Cement | 114.0 | -16.29 | 0.9219 |
| PN-1300 | J-N1265E | J-N1260E | 101 | 150.0 | Asbestos Cement | 114.0 | -0.01 | 0.0006 |
| PN-1310 | J-N1260E | J-N1270E | 45 | 150.0 | Asbestos Cement | 114.0 | -3.57 | 0.2023 |
| 79 | J-N1270E | J-N1280E | 102 | 150.0 | PVC | 130.0 | -4.34 | 0.2457 |
| PN-1370 | J-N570E | J-N600E | 211 | 300.0 | PVC | 120.0 | 12.76 | 0.1805 |
| PN-1380 | J-N600E | J-N620E | 38 | 300.0 | PVC | 120.0 | 12.47 | 0.1764 |
| PN-1390 | J-N620E | J-N540E | 61 | 300.0 | Asbestos Cement | 114.0 | 13.20 | 0.1868 |
| PN-1400 | J-N540E | J-N1741E | 298 | 400.0 | Asbestos Cement | 114.0 | 10.38 | 0.0826 |
| PN-1410 | J-N1740E | J-N1730E | 65 | 350.0 | PVC | 130.0 | -2.82 | 0.0294 |
| PN-1460 | J-N1700E | J-N1690E | 236 | 250.0 | PVC | 130.0 | 4.94 | 0.1005 |
| PN-1480 | J-N1760E | J-N1770E | 118 | 250.0 | PVC | 130.0 | 4.63 | 0.0944 |
| PN-1500 | J-N1780E | J-N1800E | 187 | 250.0 | PVC | 130.0 | 2.33 | 0.0474 |
| PN-1510 | J-N1800E | J-N1790E | 96 | 250.0 | PVC | 130.0 | 0.41 | 0.0084 |
| PN-1520 | J-N1800E | J-N1810E | 200 | 250.0 | PVC | 130.0 | 1.41 | 0.0287 |
| PN-1530 | J-N1820E | J-N300E | 64 | 200.0 | Asbestos Cement | 114.0 | 2.72 | 0.0866 |
| PN-1590 | J-N530E | J-N440E | 250 | 200.0 | Asbestos Cement | 114.0 | 1.59 | 0.0506 |
| PN-1610 | J-N400E | J-N370E | 101 | 200.0 | Asbestos Cement | 114.0 | 0.58 | 0.0185 |
| PN-1620 | J-N370E | J-N360E | 62 | 200.0 | Asbestos Cement | 114.0 | 0.36 | 0.0113 |
| PN-1630 | J-N360E | J-N350E | 65 | 200.0 | Asbestos Cement | 114.0 | 0.36 | 0.0113 |
| PN-1640 | J-N350E | J-N320E | 93 | 300.0 | Asbestos Cement | 114.0 | -0.23 | 0.0032 |
| PN-1650 | J-N320E | J-N180E | 154 | 300.0 | Asbestos Cement | 114.0 | -0.96 | 0.0136 |
| PN-1591 | J-N440E | J-N430E | 14 | 200.0 | Asbestos Cement | 114.0 | 1.20 | 0.0381 |
| PN-1592 | J-N430E | J-N431E | 233 | 200.0 | Asbestos Cement | 114.0 | 0.60 | 0.0192 |
| PN-1670 | J-N300E | J-N260E | 99 | 200.0 | Asbestos Cement | 114.0 | 6.92 | 0.2203 |
| PN-1680 | J-N260E | J-N220E | 159 | 200.0 | Asbestos Cement | 114.0 | 3.12 | 0.0994 |
| PN-1700 | J-N220E | J-N190E | 191 | 200.0 | Asbestos Cement | 114.0 | 2.44 | 0.0778 |
| PN-1730 | J-N421E | J-N240E | 94 | 200.0 | Asbestos Cement | 114.0 | -2.26 | 0.0719 |
| PN-1451 | J-N1710E | J-N1711E | 163 | 200.0 | PVC | 130.0 | 0.03 | 0.0010 |
| PN-1651 | J-N330E | J-N320E | 55 | 200.0 | Asbestos Cement | 114.0 | -0.32 | 0.0102 |
| PN-1555 | J-N460E | J-N465E | 113 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PN-1750 | J-N420E | J-N400E | 93 | 150.0 | Asbestos Cement | 114.0 | 1.45 | 0.0822 |
| PN-1760 | J-N180E | J-N190E | 93 | 150.0 | Asbestos Cement | 114.0 | -1.48 | 0.0838 |
| PN-1770 | J-N220E | J-N225E | 110 | 150.0 | Asbestos Cement | 114.0 | 0.26 | 0.0150 |
| PN-1780 | J-N225E | J-N245E | 148 | 150.0 | Asbestos Cement | 114.0 | -0.09 | 0.0053 |
| PN-1790 | J-N245E | J-N240E | 91 | 150.0 | Asbestos Cement | 114.0 | -0.09 | 0.0053 |
| PN-1800 | J-N350E | J-N340E | 135 | 150.0 | Asbestos Cement | 114.0 | 0.30 | 0.0171 |
| PN-1810 | J-N570E | J-N580E | 53 | 150.0 | Asbestos Cement | 114.0 | 2.74 | 0.1548 |
| PN-1820 | J-N580E | J-N581E | 95 | 150.0 | Asbestos Cement | 114.0 | 1.46 | 0.0828 |
| PN-1830 | J-N581E | J-N582E | 230 | 150.0 | Asbestos Cement | 114.0 | 0.94 | 0.0531 |
| PN-1840 | J-N582E | J-N583E | 89 | 150.0 | Asbestos Cement | 114.0 | 0.36 | 0.0201 |
| PN-1850 | J-N580E | J-N560E | 189 | 150.0 | Asbestos Cement | 114.0 | 1.27 | 0.0720 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-1870 | J-N561E | J-N562E | 52 | 150.0 | Asbestos Cement | 114.0 | -0.36 | 0.0201 |
| PN-1880 | J-N561E | J-N620E | 142 | 150.0 | Asbestos Cement | 114.0 | 0.73 | 0.0414 |
| PN-1455 | J-N1713E | J-N1700E | 102 | 150.0 | PVC | 130.0 | 0.61 | 0.0345 |
| PN-1454 | J-N1713E | J-N1714E | 72 | 150.0 | PVC | 130.0 | 0.22 | 0.0124 |
| PN-1453 | J-N1711E | J-N1716E | 145 | 150.0 | PVC | 130.0 | 1.71 | 0.0966 |
| PN-1456 | J-N1716E | J-N1713E | 98 | 150.0 | PVC | 130.0 | 1.05 | 0.0594 |
| PN-1457 | J-N1715E | J-N1716E | 103 | 150.0 | PVC | 130.0 | -0.44 | 0.0248 |
| PN-1436 | J-N1755E | J-N1756E | 255 | 150.0 | PVC | 130.0 | 1.08 | 0.0610 |
| PN-1437 | J-N1756E | J-N1757E | 159 | 150.0 | PVC | 130.0 | 0.81 | 0.0458 |
| PN-1593 | J-N431E | J-N432E | 187 | 150.0 | PVC | 130.0 | 0.16 | 0.0091 |
| PN-1596 | J-N434E | J-N435E | 34 | 200.0 | PVC | 130.0 | 7.26 | 0.2312 |
| PS-1020 | J-S45E | J-S50E | 102 | 600.0 | Steel | 100.0 | 22.34 | 0.0790 |
| PS-1030 | J-S50E | J-S60E | 161 | 400.0 | Asbestos Cement | 120.0 | 22.16 | 0.1763 |
| PS-1060 | J-S40E | J-S20E | 115 | 400.0 | Asbestos Cement | 114.0 | 14.58 | 0.1160 |
| 106 | J-S30E | J-S20E | 49 | 150.0 | PVC | 130.0 | -0.01 | 0.0006 |
| PS-1080 | J-S20E | J-S10E | 187 | 300.0 | Asbestos Cement | 114.0 | 14.31 | 0.2025 |
| PS-1090 | J-S10E | J-S100E | 95 | 300.0 | Asbestos Cement | 114.0 | 14.05 | 0.1988 |
| PS-1100 | J-S100E | J-S120E | 146 | 300.0 | Asbestos Cement | 114.0 | 12.99 | 0.1838 |
| PS-1150 | J-S80E | J-S250E | 153 | 150.0 | Asbestos Cement | 114.0 | 0.19 | 0.0109 |
| PS-1180 | J-S260E | J-S250E | 62 | 300.0 | Asbestos Cement | 114.0 | 6.61 | 0.0936 |
| PS-1210 | J-S230E | J-S210E | 158 | 200.0 | Asbestos Cement | 114.0 | 2.11 | 0.0671 |
| PS-1220 | J-S210E | J-S120E | 219 | 200.0 | Asbestos Cement | 114.0 | -4.33 | 0.1377 |
| PS-1230 | J-S120E | J-S130E | 88 | 300.0 | Asbestos Cement | 114.0 | 8.41 | 0.1190 |
| PS-1240 | J-S130E | J-S140E | 102 | 200.0 | Asbestos Cement | 114.0 | 8.25 | 0.2625 |
| PS-1250 | J-S150E | J-S290E | 177 | 150.0 | PVC | 130.0 | 5.08 | 0.2877 |
| PS-1260 | J-S290E | J-S280E | 93 | 150.0 | PVC | 130.0 | 4.85 | 0.2744 |
| PS-1270 | J-S280E | J-S350E | 112 | 150.0 | PVC | 130.0 | 2.95 | 0.1667 |
| 117 | J-S350E | J-S340E | 46 | 300.0 | PVC | 120.0 | 13.11 | 0.1855 |
| PS-1290 | J-S350E | J-S360E | 95 | 300.0 | PVC | 130.0 | -10.27 | 0.1453 |
| PS-1300 | J-S360E | J-S380E | 100 | 300.0 | PVC | 130.0 | -8.90 | 0.1259 |
| PS-1360 | J-S170E | J-S175E | 55 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PS-1370 | J-S180E | J-S170E | 64 | 150.0 | Asbestos Cement | 114.0 | -2.04 | 0.1152 |
| PS-1380 | J-S220E | J-S180E | 119 | 150.0 | Asbestos Cement | 114.0 | 3.41 | 0.1927 |
| PS-1400 | J-S270E | J-S380E | 97 | 150.0 | Asbestos Cement | 114.0 | 4.92 | 0.2784 |
| PS-1420 | J-S380E | J-S370E | 50 | 150.0 | Asbestos Cement | 114.0 | 2.00 | 0.1130 |
| PS-1430 | J-S370E | J-S470E | 55 | 150.0 | Asbestos Cement | 114.0 | 2.00 | 0.1130 |
| PS-1440 | J-S470E | J-S450E | 112 | 150.0 | Asbestos Cement | 114.0 | 2.61 | 0.1478 |
| PS-1450 | J-S450E | J-S540E | 111 | 150.0 | Asbestos Cement | 114.0 | 0.84 | 0.0474 |
| PS-1460 | J-S540E | J-S550E | 96 | 150.0 | Asbestos Cement | 114.0 | 1.72 | 0.0972 |
| PS-1480 | J-S1140E | J-S1190E | 200 | 150.0 | Asbestos Cement | 114.0 | -1.23 | 0.0695 |
| PS-1490 | J-S540E | J-S480E | 193 | 150.0 | Asbestos Cement | 114.0 | -1.15 | 0.0653 |
| PS-1500 | J-S450E | J-S520E | 182 | 150.0 | Asbestos Cement | 114.0 | -1.65 | 0.0932 |
| PS-1510 | J-S520E | J-S510E | 11 | 200.0 | PVC | 130.0 | -1.65 | 0.0524 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-1520 | J-S470E | J-S430E | 182 | 150.0 | Asbestos Cement | 114.0 | -0.85 | 0.0482 |
| PS-1530 | J-S430E | J-S440E | 12 | 200.0 | PVC | 130.0 | -0.85 | 0.0271 |
| PS-1540 | J-S380E | J-S400E | 193 | 350.0 | Asbestos Cement | 114.0 | -6.24 | 0.0648 |
| PS-1550 | J-S270E | J-S271E | 81 | 150.0 | Asbestos Cement | 114.0 | 0.20 | 0.0113 |
| PS-1570 | J-S180E | J-S190E | 96 | 150.0 | Asbestos Cement | 114.0 | -0.03 | 0.0016 |
| PS-1600 | J-S190E | J-S310E | 115 | 150.0 | Asbestos Cement | 114.0 | 2.09 | 0.1185 |
| PS-1660 | J-S330E | J-S320E | 127 | 150.0 | Asbestos Cement | 114.0 | 1.28 | 0.0727 |
| PS-1670 | J-S1190E | J-S1960E | 104 | 150.0 | Asbestos Cement | 114.0 | 0.67 | 0.0382 |
| PS-1680 | J-S1960E | J-S1970E | 255 | 150.0 | Asbestos Cement | 114.0 | -1.23 | 0.0699 |
| PS-1690 | J-S1970E | J-S2050E | 263 | 150.0 | Asbestos Cement | 114.0 | -1.64 | 0.0929 |
| PS-1700 | J-S1230E | J-S1350E | 216 | 150.0 | Asbestos Cement | 114.0 | 0.80 | 0.0453 |
| PS-1710 | J-S1351E | J-S1360E | 85 | 250.0 | PVC | 120.0 | 1.01 | 0.0207 |
| PS-1830 | J-S1360E | J-S1930E | 76 | 150.0 | Asbestos Cement | 114.0 | -1.37 | 0.0777 |
| PS-1810 | J-S1930E | J-S2030E | 110 | 150.0 | Asbestos Cement | 114.0 | -0.85 | 0.0479 |
| PS-1790 | J-S2030E | J-S2040E | 112 | 150.0 | Asbestos Cement | 114.0 | -1.24 | 0.0700 |
| PS-1770 | J-S2040E | J-S2045E | 49 | 150.0 | Asbestos Cement | 114.0 | -2.57 | 0.1453 |
| PS-1720 | J-S1360E | J-S1370E | 142 | 250.0 | PVC | 120.0 | 0.03 | 0.0006 |
| PS-1780 | J-S2040E | J-S1980E | 157 | 150.0 | Asbestos Cement | 114.0 | 1.02 | 0.0578 |
| PS-1800 | J-S2030E | J-S2000E | 157 | 150.0 | Asbestos Cement | 114.0 | 0.08 | 0.0046 |
| PS-1820 | J-S1930E | J-S1940E | 157 | 150.0 | Asbestos Cement | 114.0 | -0.69 | 0.0391 |
| PS-1760 | J-S1350E | J-S1940E | 101 | 150.0 | Asbestos Cement | 114.0 | -0.73 | 0.0411 |
| PS-1750 | J-S1940E | J-S2000E | 110 | 150.0 | Asbestos Cement | 114.0 | 0.00 | 0.0000 |
| PS-1740 | J-S2000E | J-S1980E | 111 | 150.0 | Asbestos Cement | 114.0 | -0.16 | 0.0088 |
| PS-1730 | J-S1980E | J-S1990E | 16 | 150.0 | Asbestos Cement | 114.0 | 0.72 | 0.0405 |
| PS-1840 | J-S1360E | J-S1280E | 100 | 150.0 | new PVC | 120.0 | 2.33 | 0.1320 |
| PS-1870 | J-S1283E | J-S1282E | 389 | 150.0 | Asbestos Cement | 114.0 | 0.10 | 0.0057 |
| PS-1860 | J-S1282E | J-S1281E | 39 | 150.0 | Asbestos Cement | 114.0 | -0.06 | 0.0036 |
| PS-1850 | J-S1281E | J-S1280E | 169 | 150.0 | Asbestos Cement | 114.0 | -0.06 | 0.0036 |
| PS-1880 | J-S1283E | J-S1825E | 63 | 200.0 | PVC | 120.0 | -0.10 | 0.0032 |
| PS-1920 | J-S1920E | J-S1925E | 249 | 150.0 | Asbestos Cement | 114.0 | 0.29 | 0.0166 |
| PS-1930 | J-S1920E | J-S1870E | 62 | 150.0 | Asbestos Cement | 114.0 | -0.96 | 0.0544 |
| PS-1940 | J-S1240E | J-S1245E | 159 | 150.0 | Asbestos Cement | 114.0 | 0.64 | 0.0360 |
| PS-1950 | J-S1240E | J-S1150E | 123 | 150.0 | Asbestos Cement | 114.0 | 1.45 | 0.0823 |
| PS-1960 | J-S1150E | J-S1060E | 118 | 150.0 | Asbestos Cement | 114.0 | 1.06 | 0.0602 |
| PS-1970 | J-S1060E | J-S1070E | 20 | 150.0 | Asbestos Cement | 114.0 | -0.18 | 0.0101 |
| PS-1980 | J-S1070E | J-S1040E | 98 | 150.0 | Asbestos Cement | 114.0 | 0.43 | 0.0243 |
| PS-1990 | J-S1040E | J-S1030E | 129 | 150.0 | Asbestos Cement | 114.0 | -0.28 | 0.0159 |
| PS-2040 | J-S930E | J-S940E | 12 | 150.0 | Asbestos Cement | 114.0 | 4.16 | 0.2355 |
| PS-2050 | J-S940E | J-S945E | 104 | 350.0 | Asbestos Cement | 114.0 | 4.02 | 0.0418 |
| PS-2060 | J-S945E | J-S820E | 117 | 350.0 | Asbestos Cement | 114.0 | 7.65 | 0.0796 |
| PS-2070 | J-S820E | J-S870E | 133 | 300.0 | Asbestos Cement | 114.0 | 6.58 | 0.0931 |
| PS-2080 | J-S870E | J-S880E | 96 | 200.0 | Asbestos Cement | 114.0 | 0.77 | 0.0247 |
| PS-2090 | J-S880E | J-S900E | 60 | 200.0 | Asbestos Cement | 114.0 | 0.42 | 0.0133 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-2100 | J-S900E | J-S905E | 84 | 200.0 | Asbestos Cement | 114.0 | 0.42 | 0.0133 |
| PS-2110 | J-S905E | J-S890E | 258 | 150.0 | Asbestos Cement | 114.0 | 0.24 | 0.0137 |
| PS-2120 | J-S1340E | J-S1780E | 111 | 150.0 | Asbestos Cement | 114.0 | 0.92 | 0.0522 |
| PS-2130 | J-S1085E | J-S1080E | 105 | 150.0 | Asbestos Cement | 114.0 | 0.43 | 0.0244 |
| PS-2140 | J-S1080E | J-S1110E | 77 | 150.0 | Asbestos Cement | 114.0 | 0.06 | 0.0035 |
| PS-2150 | J-S1110E | J-S1160E | 136 | 150.0 | Asbestos Cement | 114.0 | -0.43 | 0.0242 |
| PS-2160 | J-S1160E | J-S1150E | 107 | 150.0 | Asbestos Cement | 114.0 | -0.73 | 0.0413 |
| PS-2170 | J-S1150E | J-S1151E | 121 | 150.0 | Asbestos Cement | 114.0 | -0.36 | 0.0206 |
| PS-2180 | J-S1151E | J-S1152E | 87 | 150.0 | Asbestos Cement | 114.0 | 0.97 | 0.0549 |
| PS-2200 | J-S1890E | J-S1870E | 104 | 150.0 | Asbestos Cement | 114.0 | 1.21 | 0.0685 |
| PS-2210 | J-S1870E | J-S1880E | 31 | 150.0 | Asbestos Cement | 114.0 | 0.25 | 0.0141 |
| PS-2220 | J-S1880E | J-S1885E | 148 | 150.0 | Asbestos Cement | 114.0 | 0.59 | 0.0335 |
| PS-2230 | J-S1885E | J-S930E | 165 | 150.0 | Asbestos Cement | 114.0 | -0.84 | 0.0477 |
| PS-2240 | J-S1110E | J-S1070E | 109 | 150.0 | Asbestos Cement | 114.0 | 0.61 | 0.0343 |
| PS-2260 | J-S1060E | J-S1900E | 121 | 150.0 | Asbestos Cement | 114.0 | 0.98 | 0.0556 |
| PS-2270 | J-S1900E | J-S1880E | 262 | 150.0 | Asbestos Cement | 114.0 | 0.65 | 0.0369 |
| PS-2280 | J-S1040E | J-S1910E | 251 | 150.0 | Asbestos Cement | 114.0 | 0.40 | 0.0226 |
| PS-2290 | J-S1910E | J-S950E | 150 | 150.0 | Asbestos Cement | 114.0 | -0.01 | 0.0004 |
| PS-2250 | J-S1110E | J-S1095E | 50 | 150.0 | Asbestos Cement | 114.0 | -0.39 | 0.0220 |
| PS-2300 | J-S1000E | J-S1008E | 61 | 150.0 | Asbestos Cement | 114.0 | 0.15 | 0.0084 |
| PS-2000 | J-S1030E | J-S1000E | 106 | 150.0 | Asbestos Cement | 114.0 | 0.59 | 0.0332 |
| PS-2320 | J-S1010E | J-S1035E | 104 | 400.0 | Asbestos Cement | 114.0 | -6.79 | 0.0541 |
| PS-2360 | J-S1035E | J-S1030E | 4 | 400.0 | Asbestos Cement | 114.0 | 1.02 | 0.0081 |
| PS-2310 | J-S1035E | J-S1036E | 50 | 400.0 | Asbestos Cement | 114.0 | -8.11 | 0.0646 |
| PS-2010 | J-S1000E | J-S950E | 86 | 150.0 | Asbestos Cement | 114.0 | 0.44 | 0.0248 |
| PS-2020 | J-S950E | J-S935E | 97 | 150.0 | Asbestos Cement | 114.0 | 0.23 | 0.0131 |
| PS-2030 | J-S935E | J-S930E | 5 | 150.0 | Asbestos Cement | 114.0 | 5.28 | 0.2986 |
| PS-2350 | J-S1010E | J-S935E | 188 | 400.0 | Asbestos Cement | 114.0 | 5.26 | 0.0418 |
| PS-2380 | J-S880E | J-S881E | 192 | 200.0 | Asbestos Cement | 114.0 | 0.31 | 0.0099 |
| PS-2390 | J-S881E | J-S882E | 114 | 200.0 | Asbestos Cement | 114.0 | 0.18 | 0.0057 |
| PS-2400 | J-S882E | J-S905E | 132 | 200.0 | Asbestos Cement | 114.0 | 0.10 | 0.0033 |
| PS-2430 | J-S903E | J-S904E | 141 | 300.0 | PVC | 130.0 | 0.93 | 0.0132 |
| PS-2440 | J-S907E | J-S908E | 545 | 300.0 | PVC | 130.0 | 0.06 | 0.0008 |
| PS-2460 | J-S909E | J-S1001E | 44 | 300.0 | PVC | 130.0 | 0.05 | 0.0007 |
| PS-2470 | J-S1001E | J-S1002E | 107 | 150.0 | PVC | 130.0 | 0.04 | 0.0023 |
| PS-2480 | J-S1002E | J-S1003E | 223 | 150.0 | PVC | 130.0 | 0.04 | 0.0023 |
| PS-2490 | J-S1003E | J-S1004E | 250 | 150.0 | PVC | 130.0 | 0.04 | 0.0023 |
| PS-2540 | J-S874E | J-S902E | 62 | 300.0 | PVC | 130.0 | 2.31 | 0.0327 |
| PS-2550 | J-S873E | J-S874E | 28 | 300.0 | PVC | 130.0 | -0.01 | 0.0001 |
| PS-2560 | J-S874E | J-S875E | 173 | 300.0 | PVC | 130.0 | 2.79 | 0.0395 |
| PS-2570 | J-S875E | J-S876E | 94 | 300.0 | PVC | 130.0 | 2.79 | 0.0395 |
| PS-2580 | J-S876E | J-S878E | 200 | 300.0 | PVC | 130.0 | 1.45 | 0.0205 |
| PS-2590 | J-S878E | J-S879E | 51 | 300.0 | PVC | 130.0 | 1.20 | 0.0170 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-2600 | J-S878E | J-S901E | 54 | 200.0 | PVC | 130.0 | 3.05 | 0.0969 |
| PS-2610 | J-S876E | J-S877E | 95 | 200.0 | PVC | 130.0 | 0.83 | 0.0266 |
| PS-2620 | J-S904E | J-S906E | 131 | 300.0 | PVC | 130.0 | 0.06 | 0.0008 |
| PS-2630 | J-S906E | J-S907E | 145 | 300.0 | PVC | 130.0 | 0.06 | 0.0008 |
| PS-2640 | J-391 | J-S620E | 58 | 150.0 | Asbestos Cement | 114.0 | 1.31 | 0.0739 |
| PS-2650 | J-S620E | J-S625E | 130 | 150.0 | Asbestos Cement | 114.0 | 0.80 | 0.0453 |
| PS-2680 | J-S630E | J-S635E | 62 | 150.0 | Asbestos Cement | 114.0 | 1.13 | 0.0639 |
| PS-2700 | J-S560E | J-S660E | 183 | 150.0 | Asbestos Cement | 114.0 | -0.39 | 0.0223 |
| PS-2720 | J-S800E | J-S790E | 117 | 150.0 | Asbestos Cement | 114.0 | 0.33 | 0.0189 |
| PS-2730 | J-S790E | J-S780E | 109 | 150.0 | Asbestos Cement | 114.0 | 1.27 | 0.0717 |
| PS-2740 | J-S780E | J-S740E | 54 | 150.0 | Asbestos Cement | 114.0 | -0.12 | 0.0069 |
| PS-2750 | J-S660E | J-S670E | 61 | 150.0 | Asbestos Cement | 114.0 | 1.61 | 0.0909 |
| PS-2760 | J-S670E | J-S675E | 169 | 150.0 | Asbestos Cement | 114.0 | -0.41 | 0.0232 |
| PS-2770 | J-S675E | J-S720E | 174 | 150.0 | Asbestos Cement | 114.0 | -0.74 | 0.0419 |
| PS-2790 | J-S670E | J-S685E | 56 | 150.0 | Asbestos Cement | 114.0 | 1.59 | 0.0902 |
| PS-2800 | J-S685E | J-S565E | 234 | 150.0 | Asbestos Cement | 114.0 | 0.18 | 0.0103 |
| PS-2810 | J-S560E | J-S565E | 129 | 150.0 | Asbestos Cement | 114.0 | 1.45 | 0.0823 |
| PS-2820 | J-S565E | J-S590E | 78 | 150.0 | Asbestos Cement | 114.0 | 1.64 | 0.0926 |
| PS-2830 | J-S685E | J-S680E | 161 | 150.0 | Asbestos Cement | 114.0 | 1.32 | 0.0750 |
| PS-2840 | J-S590E | J-S580E | 31 | 150.0 | Asbestos Cement | 114.0 | 1.22 | 0.0693 |
| PS-2850 | J-S580E | J-S585E | 71 | 150.0 | Asbestos Cement | 114.0 | 0.54 | 0.0308 |
| PS-2860 | J-S585E | J-S680E | 117 | 150.0 | Asbestos Cement | 114.0 | 0.03 | 0.0016 |
| PS-2870 | J-S702E | J-S701E | 90 | 150.0 | Asbestos Cement | 114.0 | 0.14 | 0.0076 |
| PS-2880 | J-S700E | J-S1670E | 76 | 200.0 | Asbestos Cement | 114.0 | -0.15 | 0.0049 |
| PS-2890 | J-S1670E | J-S585E | 79 | 150.0 | Asbestos Cement | 114.0 | -0.22 | 0.0125 |
| PS-2900 | J-S1670E | J-S1630E | 96 | 150.0 | Asbestos Cement | 114.0 | 0.07 | 0.0039 |
| PS-2910 | J-S1630E | J-S1650E | 26 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PS-2920 | J-S1630E | J-S1620E | 71 | 150.0 | Asbestos Cement | 114.0 | -0.09 | 0.0051 |
| PS-2930 | J-S1620E | J-S580E | 175 | 150.0 | Asbestos Cement | 114.0 | -0.37 | 0.0209 |
| PS-2940 | J-S590E | J-S595E | 97 | 150.0 | Asbestos Cement | 114.0 | 0.19 | 0.0108 |
| PS-2970 | J-S600E | J-S610E | 65 | 150.0 | Asbestos Cement | 114.0 | -0.22 | 0.0127 |
| PS-2980 | J-S610E | J-S1747E | 123 | 200.0 | Asbestos Cement | 114.0 | -0.17 | 0.0055 |
| PS-2990 | J-S1747E | J-S1740E | 92 | 200.0 | Asbestos Cement | 114.0 | -0.17 | 0.0055 |
| PS-3000 | J-S1740E | J-S1745E | 83 | 200.0 | Asbestos Cement | 114.0 | -0.32 | 0.0102 |
| PS-3010 | J-S1745E | J-S1770E | 70 | 200.0 | Asbestos Cement | 114.0 | -0.32 | 0.0102 |
| PS-3020 | J-S1770E | J-S1720E | 100 | 150.0 | Asbestos Cement | 114.0 | 1.20 | 0.0681 |
| PS-3050 | J-S1710E | J-S1700E | 183 | 150.0 | Asbestos Cement | 114.0 | -0.02 | 0.0011 |
| PS-3060 | J-S1700E | J-S1720E | 107 | 150.0 | Asbestos Cement | 114.0 | -0.60 | 0.0340 |
| PS-3070 | J-S1700E | J-S1690E | 103 | 150.0 | Asbestos Cement | 114.0 | 0.18 | 0.0104 |
| PS-3080 | J-S1690E | J-S1681E | 130 | 150.0 | Asbestos Cement | 114.0 | -0.08 | 0.0042 |
| PS-3090 | J-S1681E | J-S1680E | 61 | 150.0 | Asbestos Cement | 114.0 | -0.27 | 0.0156 |
| PS-3100 | J-S1680E | J-S1679E | 78 | 150.0 | Asbestos Cement | 114.0 | -0.27 | 0.0156 |
| PS-3110 | J-S1679E | J-S1510E | 97 | 150.0 | Asbestos Cement | 114.0 | -0.55 | 0.0310 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-3120 | J-S1510E | J-S1520E | 56 | 150.0 | Asbestos Cement | 114.0 | -0.48 | 0.0271 |
| PS-3130 | J-S1520E | J-S1525E | 255 | 150.0 | Asbestos Cement | 114.0 | -0.48 | 0.0271 |
| PS-3140 | J-S1510E | J-S1490E | 70 | 150.0 | Asbestos Cement | 114.0 | -0.07 | 0.0039 |
| PS-3150 | J-S600E | J-S605E | 164 | 150.0 | Asbestos Cement | 114.0 | 0.74 | 0.0421 |
| PS-3160 | J-S605E | J-S1490E | 147 | 150.0 | Asbestos Cement | 114.0 | 0.47 | 0.0266 |
| PS-3170 | J-S1615E | J-S1470E | 311 | 400.0 | Asbestos Cement | 114.0 | 8.18 | 0.0651 |
| PS-3180 | J-S1470E | J-S1490E | 67 | 150.0 | Asbestos Cement | 114.0 | 0.56 | 0.0317 |
| PS-3190 | J-S1490E | J-S1556E | 180 | 150.0 | Asbestos Cement | 114.0 | 0.73 | 0.0410 |
| PS-3220 | J-S1470E | J-S1560E | 511 | 400.0 | Asbestos Cement | 114.0 | 7.62 | 0.0606 |
| PS-3230 | J-S595E | J-S1460E | 295 | 150.0 | Asbestos Cement | 114.0 | 2.99 | 0.1689 |
| PS-3240 | J-S1460E | J-S1530E | 190 | 150.0 | Asbestos Cement | 114.0 | 2.73 | 0.1543 |
| PS-3250 | J-S1530E | J-S1600E | 176 | 200.0 | Asbestos Cement | 114.0 | -1.29 | 0.0412 |
| PS-3260 | J-S1600E | J-S1580E | 161 | 200.0 | Asbestos Cement | 114.0 | -5.01 | 0.1596 |
| PS-3270 | J-S1600E | J-S1390E | 121 | 200.0 | Asbestos Cement | 114.0 | 3.48 | 0.1109 |
| PS-3280 | J-S1440E | J-S1530E | 120 | 200.0 | Asbestos Cement | 114.0 | -3.65 | 0.1163 |
| PS-3290 | J-S1440E | J-S1390E | 175 | 150.0 | Asbestos Cement | 114.0 | -0.73 | 0.0411 |
| PS-3300 | J-S1390E | J-S1380E | 162 | 150.0 | Asbestos Cement | 114.0 | -2.55 | 0.1441 |
| PS-3310 | J-S1580E | J-S1380E | 122 | 200.0 | Asbestos Cement | 114.0 | 2.55 | 0.0811 |
| PS-3320 | J-S1390E | J-S1420E | 43 | 200.0 | Asbestos Cement | 114.0 | 5.14 | 0.1637 |
| PS-3330 | J-S1420E | J-S1430E | 50 | 200.0 | Asbestos Cement | 114.0 | 4.81 | 0.1531 |
| PS-3340 | J-S1425E | J-S1420E | 112 | 200.0 | Asbestos Cement | 114.0 | 0.00 | 0.0000 |
| PS-3350 | J-S2180E | J-S2200E | 111 | 150.0 | PVC | 130.0 | -2.91 | 0.1649 |
| PS-3360 | J-S1430E | J-S1435E | 174 | 150.0 | Asbestos Cement | 114.0 | -0.57 | 0.0323 |
| PS-3370 | J-S1435E | J-S1440E | 93 | 200.0 | Asbestos Cement | 114.0 | -3.92 | 0.1248 |
| PS-3380 | J-S1435E | J-S2205E | 49 | 200.0 | PVC | 130.0 | 3.09 | 0.0984 |
| PS-3390 | J-S2205E | J-S2200E | 175 | 200.0 | PVC | 130.0 | 2.62 | 0.0834 |
| PS-3400 | J-S2200E | J-S1430E | 50 | 200.0 | PVC | 130.0 | -5.38 | 0.1713 |
| PS-3410 | J-S2200E | J-S2190E | 43 | 200.0 | PVC | 130.0 | 4.66 | 0.1485 |
| PS-3430 | J-S1825E | J-S1810E | 21 | 400.0 | PVC | 130.0 | -17.09 | 0.1360 |
| PS-3440 | J-S1810E | J-S1800E | 108 | 400.0 | PVC | 130.0 | -17.13 | 0.1363 |
| PS-3450 | J-S1800E | J-S1780E | 125 | 400.0 | PVC | 130.0 | -17.53 | 0.1395 |
| PS-3460 | J-S1780E | J-S1240E | 124 | 400.0 | PVC | 130.0 | -18.10 | 0.1440 |
| PS-3470 | J-S1240E | J-S1230E | 133 | 400.0 | PVC | 130.0 | -20.26 | 0.1612 |
| PS-3480 | J-S1230E | J-S1190E | 99 | 400.0 | PVC | 130.0 | -21.24 | 0.1690 |
| PS-3500 | J-S485E | J-S480E | 54 | 400.0 | PVC | 130.0 | -23.73 | 0.1888 |
| PS-3510 | J-S480E | J-S510E | 112 | 400.0 | PVC | 130.0 | -25.27 | 0.2011 |
| PS-3520 | J-S510E | J-S440E | 112 | 400.0 | PVC | 130.0 | -27.12 | 0.2158 |
| PS-3530 | J-S440E | J-S400E | 105 | 400.0 | PVC | 130.0 | -28.12 | 0.2237 |
| PS-3550 | J-S330E | J-S311E | 12 | 400.0 | Asbestos Cement | 114.0 | -63.55 | 0.5057 |
| PS-3590 | J-S1615E | J-S644E | 232 | 400.0 | Asbestos Cement | 114.0 | -11.79 | 0.0938 |
| PS-3630 | J-S625E | J-S1330E | 58 | 400.0 | Asbestos Cement | 114.0 | -1.03 | 0.0082 |
| PS-3640 | J-S1330E | J-S1302E | 47 | 400.0 | Asbestos Cement | 114.0 | -1.03 | 0.0082 |
| PS-3650 | J-S2130E | J-S2090E | 135 | 400.0 | PVC | 130.0 | -10.42 | 0.0829 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-3660 | J-S2090E | J-S2100E | 60 | 400.0 | PVC | 130.0 | -10.47 | 0.0833 |
| PS-3690 | J-S1300E | J-S1321E | 167 | 300.0 | Asbestos Cement | 114.0 | -3.19 | 0.0451 |
| PS-3700 | J-S1321E | J-S1320E | 150 | 300.0 | Asbestos Cement | 114.0 | -3.25 | 0.0460 |
| PS-3710 | J-S1320E | J-S1319E | 148 | 300.0 | Asbestos Cement | 114.0 | -3.31 | 0.0468 |
| PS-3720 | J-S1319E | J-S1290E | 115 | 300.0 | Asbestos Cement | 114.0 | -3.36 | 0.0475 |
| PS-3730 | J-S1290E | J-S1295E | 80 | 300.0 | PVC | 130.0 | -1.14 | 0.0161 |
| PS-3740 | J-S1295E | J-S2110E | 56 | 300.0 | PVC | 130.0 | -1.17 | 0.0166 |
| PS-3750 | J-S2110E | J-S2111E | 68 | 300.0 | PVC | 130.0 | -1.27 | 0.0180 |
| PS-3760 | J-S2111E | J-S2112E | 61 | 300.0 | PVC | 130.0 | -1.08 | 0.0153 |
| PS-3770 | J-S2112E | J-S2130E | 84 | 300.0 | PVC | 130.0 | -1.13 | 0.0160 |
| PS-3780 | J-S2130E | J-S2113E | 112 | 300.0 | PVC | 130.0 | 8.92 | 0.1262 |
| PS-3790 | J-S2113E | J-S2114E | 138 | 300.0 | PVC | 130.0 | 8.81 | 0.1247 |
| PS-3800 | J-S2114E | J-S2150E | 88 | 300.0 | PVC | 130.0 | 8.52 | 0.1205 |
| PS-3810 | J-S2150E | J-S2115E | 130 | 300.0 | PVC | 130.0 | -0.90 | 0.0127 |
| PS-3820 | J-S2115E | J-S2140E | 98 | 300.0 | PVC | 130.0 | -1.24 | 0.0175 |
| PS-3830 | J-S2140E | J-S2116E | 243 | 300.0 | PVC | 130.0 | 7.50 | 0.1061 |
| PS-3840 | J-S2116E | J-S2118E | 165 | 300.0 | PVC | 130.0 | 7.26 | 0.1028 |
| PS-3850 | J-S2116E | J-S2117E | 71 | 300.0 | PVC | 130.0 | 0.00 | 0.0000 |
| PS-3860 | J-S2150E | J-S2155E | 111 | 300.0 | PVC | 130.0 | 9.41 | 0.1332 |
| PS-3870 | J-S2155E | J-S2160E | 121 | 300.0 | PVC | 130.0 | 9.05 | 0.1281 |
| PS-3880 | J-S2160E | J-S2165E | 135 | 300.0 | PVC | 130.0 | 9.05 | 0.1281 |
| PS-3890 | J-S2165E | J-S2170E | 41 | 300.0 | PVC | 130.0 | 8.79 | 0.1243 |
| PS-3900 | J-S2170E | J-S2171E | 89 | 300.0 | PVC | 130.0 | 15.67 | 0.2217 |
| PS-3910 | J-S2171E | J-S2172E | 111 | 300.0 | PVC | 130.0 | 15.37 | 0.2174 |
| PS-3920 | J-S2172E | J-S2173E | 422 | 250.0 | PVC | 130.0 | 15.37 | 0.3131 |
| PN-1890 | J-S2173E | J-S2178E | 148 | 200.0 | PVC | 130.0 | 3.36 | 0.1071 |
| PN-1900 | J-S2178E | J-S2177E | 230 | 200.0 | PVC | 130.0 | 3.28 | 0.1043 |
| PS-3930 | J-S2173E | J-S2174E | 213 | 250.0 | PVC | 130.0 | 11.80 | 0.2405 |
| PS-3940 | J-S2174E | J-S2175E | 33 | 250.0 | PVC | 130.0 | 14.49 | 0.2951 |
| PN-1920 | J-S2176E | J-S2174E | 193 | 200.0 | PVC | 130.0 | 2.83 | 0.0902 |
| PS-3950 | J-S2105E | J-S2100E | 115 | 300.0 | PVC | 130.0 | -0.17 | 0.0024 |
| PS-3960 | J-S2100E | J-S2106E | 133 | 300.0 | PVC | 130.0 | 9.28 | 0.1313 |
| PS-3970 | J-S410E | J-S2050E | 66 | 400.0 | Asbestos Cement | 114.0 | 27.47 | 0.2186 |
| PS-4000 | J-S2080E | J-S2085E | 208 | 200.0 | PVC | 130.0 | 1.27 | 0.0404 |
| 78 | J-S60E | J-S41E | 88 | 300.0 | PVC | 130.0 | 15.02 | 0.2125 |
| PS-1050 | J-S41E | J-S40E | 107 | 400.0 | Asbestos Cement | 114.0 | 14.84 | 0.1181 |
| PS-1160 | J-S60E | J-S70E | 95 | 200.0 | Asbestos Cement | 114.0 | 6.95 | 0.2212 |
| PS-1170 | J-S70E | J-S260E | 139 | 200.0 | Asbestos Cement | 114.0 | 6.76 | 0.2153 |
| PS-1130 | J-S110E | J-S81E | 67 | 150.0 | Asbestos Cement | 114.0 | 0.50 | 0.0286 |
| PS-1140 | J-S81E | J-S80E | 58 | 150.0 | Asbestos Cement | 114.0 | 0.36 | 0.0202 |
| PS-1110 | J-S100E | J-S90E | 116 | 150.0 | Asbestos Cement | 114.0 | 0.80 | 0.0453 |
| PS-1120 | J-S90E | J-S110E | 79 | 150.0 | Asbestos Cement | 114.0 | 0.69 | 0.0391 |
| PS-1330 | J-S140E | J-S145E | 107 | 150.0 | Asbestos Cement | 114.0 | 2.74 | 0.1550 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-1590 | J-S220E | J-S200E | 140 | 150.0 | Asbestos Cement | 114.0 | 2.45 | 0.1386 |
| PS-1580 | J-S200E | J-S190E | 89 | 150.0 | Asbestos Cement | 114.0 | 2.29 | 0.1294 |
| PS-1190 | J-S250E | J-S240E | 64 | 250.0 | Asbestos Cement | 114.0 | 6.61 | 0.1346 |
| 72 | J-S240E | J-S230E | 151 | 200.0 | PVC | 130.0 | 6.41 | 0.2040 |
| PS-1610 | J-S230E | J-S308E | 148 | 150.0 | Asbestos Cement | 114.0 | 4.00 | 0.2266 |
| PS-1620 | J-S308E | J-S309E | 85 | 150.0 | Asbestos Cement | 114.0 | 3.86 | 0.2182 |
| PS-1630 | J-S309E | J-S310E | 52 | 150.0 | Asbestos Cement | 114.0 | 3.63 | 0.2056 |
| PS-1640 | J-S310E | J-S312E | 30 | 150.0 | Asbestos Cement | 114.0 | 5.73 | 0.3241 |
| PS-1650 | J-S312E | J-S311E | 96 | 150.0 | Asbestos Cement | 114.0 | 5.51 | 0.3116 |
| PS-1310 | J-S280E | J-S365E | 102 | 150.0 | Asbestos Cement | 114.0 | 1.68 | 0.0951 |
| PS-1320 | J-S365E | J-S360E | 122 | 150.0 | PVC | 130.0 | 1.46 | 0.0825 |
| PS-2670 | J-S620E | J-S640E | 146 | 150.0 | Asbestos Cement | 114.0 | 0.51 | 0.0286 |
| PS-2660 | J-S640E | J-S630E | 52 | 150.0 | Asbestos Cement | 114.0 | 1.13 | 0.0639 |
| PS-3600 | J-S644E | J-S640E | 61 | 400.0 | Asbestos Cement | 114.0 | -11.26 | 0.0896 |
| PS-3610 | J-S640E | J-S1855E | 61 | 400.0 | PVC | 130.0 | -11.88 | 0.0945 |
| PS-2780 | J-S720E | J-S725E | 111 | 200.0 | PVC | 130.0 | 0.08 | 0.0026 |
| PS-2330 | J-S1010E | J-S970E | 95 | 300.0 | Asbestos Cement | 114.0 | 1.32 | 0.0187 |
| PS-2340 | J-S970E | J-S990E | 130 | 200.0 | Asbestos Cement | 114.0 | 0.88 | 0.0279 |
| PS-3680 | J-S1302E | J-S1301E | 171 | 400.0 | Asbestos Cement | 114.0 | -1.14 | 0.0091 |
| PS-3670 | J-S1301E | J-S1300E | 140 | 400.0 | Asbestos Cement | 114.0 | -1.23 | 0.0098 |
| PS-3210 | J-S1556E | J-S1555E | 165 | 150.0 | Asbestos Cement | 114.0 | 0.53 | 0.0297 |
| PS-3200 | J-S1555E | J-S1540E | 165 | 150.0 | Asbestos Cement | 114.0 | 0.25 | 0.0143 |
| PS-3030 | J-S1720E | J-S1705E | 177 | 150.0 | Asbestos Cement | 114.0 | 0.42 | 0.0236 |
| PS-3040 | J-S1705E | J-S1710E | 161 | 150.0 | Asbestos Cement | 114.0 | 0.18 | 0.0102 |
| PS-3980 | J-S2050E | J-S2060E | 67 | 400.0 | PVC | 130.0 | 25.37 | 0.2019 |
| PS-3990 | J-S2060E | J-S2080E | 203 | 400.0 | PVC | 130.0 | 24.90 | 0.1982 |
| PN-275 | J-N50E | J-N45E | 91 | 150.0 | Asbestos Cement | 114.0 | -2.29 | 0.1296 |
| PN-280 | J-N45E | J-N40E | 86 | 150.0 | Asbestos Cement | 114.0 | -2.29 | 0.1296 |
| PN-235 | J-N70E | J-N65E | 50 | 150.0 | Asbestos Cement | 114.0 | -1.14 | 0.0644 |
| PN-240 | J-N65E | J-N60E | 60 | 150.0 | Asbestos Cement | 114.0 | -1.14 | 0.0644 |
| PN-405 | J-N120E | J-N125E | 81 | 150.0 | Asbestos Cement | 114.0 | -0.71 | 0.0403 |
| PN-410 | J-N125E | J-N100E | 101 | 150.0 | Asbestos Cement | 114.0 | 0.50 | 0.0284 |
| PN-1655 | J-N180E | J-N185E | 49 | 200.0 | Asbestos Cement | 114.0 | -0.06 | 0.0020 |
| PN-1660 | J-N185E | J-N600E | 142 | 200.0 | Asbestos Cement | 114.0 | -0.06 | 0.0020 |
| PN-1735 | J-N240E | J-N265E | 73 | 200.0 | Asbestos Cement | 114.0 | -2.82 | 0.0898 |
| PN-1740 | J-N265E | J-N260E | 90 | 200.0 | Asbestos Cement | 114.0 | -3.33 | 0.1059 |
| PN-1559 | J-N300E | J-N305E | 79 | 200.0 | PVC | 130.0 | -5.79 | 0.1842 |
| PN-1560 | J-N305E | J-N500E | 79 | 200.0 | PVC | 130.0 | -5.79 | 0.1842 |
| PN-1605 | J-N405E | J-N400E | 47 | 200.0 | Asbestos Cement | 114.0 | -0.30 | 0.0096 |
| PN-1720 | J-N190E | J-N425E | 115 | 200.0 | Asbestos Cement | 114.0 | 0.19 | 0.0061 |
| PN-1725 | J-N425E | J-N420E | 172 | 200.0 | Asbestos Cement | 114.0 | -0.28 | 0.0089 |
| PN-1545 | J-N470E | J-N480E | 39 | 200.0 | Asbestos Cement | 114.0 | 0.82 | 0.0260 |
| PN-1550 | J-N480E | J-N460E | 74 | 200.0 | Asbestos Cement | 114.0 | 0.26 | 0.0082 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-1535 | J-N300E | J-N490E | 83 | 200.0 | Asbestos Cement | 114.0 | 1.34 | 0.0427 |
| PN-1540 | J-N490E | J-N470E | 41 | 200.0 | Asbestos Cement | 114.0 | 0.82 | 0.0260 |
| PN-1565 | J-N500E | J-N525E | 130 | 200.0 | PVC | 130.0 | -6.24 | 0.1985 |
| PN-1570 | J-N525E | J-N520E | 129 | 200.0 | PVC | 130.0 | -6.24 | 0.1985 |
| PN-1580 | J-N520E | J-N530E | 57 | 200.0 | Asbestos Cement | 114.0 | 1.30 | 0.0415 |
| PN-1855 | J-N560E | J-N563E | 48 | 150.0 | Asbestos Cement | 114.0 | 1.27 | 0.0720 |
| PN-1860 | J-N563E | J-N561E | 66 | 150.0 | Asbestos Cement | 114.0 | 0.99 | 0.0561 |
| PN-1360 | J-N1825E | J-N575E | 150 | 300.0 | PVC | 120.0 | 15.80 | 0.2235 |
| PN-1365 | J-N575E | J-N570E | 72 | 300.0 | PVC | 120.0 | 15.50 | 0.2192 |
| PN-80 | J-N870E | J-N636E | 151 | 200.0 | Asbestos Cement | 114.0 | 3.90 | 0.1240 |
| PN-75 | J-N636E | J-N635E | 128 | 200.0 | Asbestos Cement | 114.0 | 3.50 | 0.1115 |
| PN-119 | J-N630E | J-N631E | 77 | 150.0 | Asbestos Cement | 114.0 | 0.61 | 0.0344 |
| PN-120 | J-N631E | J-N640E | 99 | 150.0 | Asbestos Cement | 114.0 | 0.27 | 0.0153 |
| PN-145 | J-N670E | J-N671E | 99 | 150.0 | Asbestos Cement | 114.0 | 1.39 | 0.0788 |
| PN-150 | J-N671E | J-N680E | 59 | 150.0 | Asbestos Cement | 114.0 | 1.00 | 0.0566 |
| PN-165 | J-N710E | J-N720E | 125 | 150.0 | Asbestos Cement | 114.0 | -2.28 | 0.1291 |
| PN-170 | J-N720E | J-N730E | 90 | 150.0 | Asbestos Cement | 114.0 | -2.64 | 0.1494 |
| PN-200 | J-N730E | J-N840E | 42 | 150.0 | Asbestos Cement | 114.0 | -2.44 | 0.1381 |
| PN-295 | J-N760E | J-N750E | 102 | 200.0 | PVC | 120.0 | -4.58 | 0.1457 |
| PN-300 | J-N750E | J-N740E | 86 | 200.0 | PVC | 120.0 | -4.62 | 0.1470 |
| PN-970 | J-N970E | J-N790E | 147 | 150.0 | Asbestos Cement | 114.0 | 1.80 | 0.1018 |
| PN-965 | J-N790E | J-N800E | 102 | 150.0 | Asbestos Cement | 114.0 | 1.52 | 0.0859 |
| PN-880 | J-N850E | J-N851E | 57 | 200.0 | PVC | 120.0 | -5.72 | 0.1821 |
| PN-1170 | J-N1360E | J-N1020E | 196 | 150.0 | Asbestos Cement | 114.0 | -0.08 | 0.0042 |
| PN-1175 | J-N1020E | J-N1010E | 74 | 150.0 | Asbestos Cement | 114.0 | -0.49 | 0.0277 |
| PN-625 | J-N1080E | J-N1085E | 167 | 150.0 | Asbestos Cement | 114.0 | -3.38 | 0.1912 |
| PN-1940 | J-N1091E | J-N1090E | 69 | 150.0 | PVC | 120.0 | 0.76 | 0.0432 |
| PN-1930 | J-N1120E | J-N1092E | 36 | 150.0 | Asbestos Cement | 114.0 | 1.29 | 0.0730 |
| PN-1950 | J-N1092E | J-N1091E | 111 | 150.0 | Asbestos Cement | 114.0 | 0.88 | 0.0496 |
| PN-835 | J-N1190E | J-N1165E | 82 | 150.0 | Asbestos Cement | 114.0 | 4.46 | 0.2526 |
| PN-840 | J-N1165E | J-N1160E | 100 | 150.0 | Asbestos Cement | 114.0 | 4.13 | 0.2336 |
| PN-660 | J-N1270E | J-N1275E | 120 | 150.0 | Asbestos Cement | 114.0 | 0.37 | 0.0212 |
| PN-655 | J-N1275E | J-N1590E | 167 | 150.0 | Asbestos Cement | 114.0 | 0.37 | 0.0212 |
| PN-810 | J-N1280E | J-N1285E | 48 | 200.0 | PVC | 130.0 | -8.78 | 0.2796 |
| PN-779 | J-N1290E | J-N1279E | 94 | 200.0 | PVC | 130.0 | -4.03 | 0.1282 |
| PN-800 | J-N1279E | J-N1280E | 79 | 200.0 | PVC | 130.0 | -4.03 | 0.1282 |
| PN-1060 | J-N1010E | J-N1310E | 90 | 200.0 | Asbestos Cement | 114.0 | -8.27 | 0.2631 |
| PN-1065 | J-N1310E | J-N1300E | 91 | 200.0 | Asbestos Cement | 114.0 | -8.27 | 0.2631 |
| PN-510 | J-N990E | J-N1380E | 194 | 200.0 | Asbestos Cement | 114.0 | -9.97 | 0.3172 |
| PN-515 | J-N1380E | J-N1390E | 92 | 200.0 | Asbestos Cement | 114.0 | -10.38 | 0.3304 |
| PN-1080 | J-N1450E | J-N1451E | 98 | 150.0 | Asbestos Cement | 114.0 | 2.54 | 0.1436 |
| PN-570 | J-N1490E | J-N1525E | 139 | 200.0 | Asbestos Cement | 114.0 | -2.87 | 0.0912 |
| PN-565 | J-N1525E | J-N1520E | 55 | 200.0 | Asbestos Cement | 114.0 | -3.21 | 0.1021 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-585 | J-N1520E | J-N1526E | 99 | 200.0 | Asbestos Cement | 114.0 | -3.56 | 0.1132 |
| PN-590 | J-N1526E | J-N1540E | 102 | 200.0 | Asbestos Cement | 114.0 | -3.90 | 0.1241 |
| PN-555 | J-N1555E | J-N1550E | 45 | 200.0 | Asbestos Cement | 114.0 | -8.26 | 0.2630 |
| PN-721 | J-N1640E | J-N1645E | 46 | 150.0 | PVC | 130.0 | 0.00 | 0.0000 |
| PN-725 | J-N1640E | J-N1651E | 76 | 200.0 | PVC | 130.0 | -1.73 | 0.0552 |
| PN-730 | J-N1651E | J-N1650E | 38 | 200.0 | PVC | 130.0 | -1.73 | 0.0552 |
| PN-1445 | J-N1710E | J-N1705E | 164 | 250.0 | PVC | 130.0 | 5.39 | 0.1097 |
| PN-1450 | J-N1705E | J-N1700E | 156 | 250.0 | PVC | 130.0 | 4.72 | 0.0961 |
| PN-1461 | J-N1690E | J-N1691E | 177 | 250.0 | PVC | 130.0 | 4.94 | 0.1005 |
| PN-1462 | J-N1691E | J-N1692E | 152 | 250.0 | PVC | 130.0 | 4.63 | 0.0944 |
| PN-1470 | J-N1692E | J-N1760E | 79 | 250.0 | PVC | 130.0 | 4.63 | 0.0944 |
| PN-1481 | J-N1770E | J-N1771E | 145 | 250.0 | PVC | 130.0 | 4.33 | 0.0882 |
| PN-1482 | J-N1771E | J-N1772E | 115 | 250.0 | PVC | 130.0 | 4.05 | 0.0825 |
| PN-1483 | J-N1772E | J-N1773E | 122 | 250.0 | PVC | 130.0 | 2.82 | 0.0575 |
| PN-1490 | J-N1773E | J-N1780E | 95 | 250.0 | PVC | 130.0 | 2.57 | 0.0525 |
| PN-1441 | J-N1717E | J-N1710E | 58 | 250.0 | PVC | 130.0 | 5.42 | 0.1104 |
| PN-1599 | J-N435E | J-N437E | 78 | 200.0 | PVC | 130.0 | 6.60 | 0.2102 |
| PN-1598 | J-N437E | J-N436E | 492 | 200.0 | PVC | 130.0 | 6.32 | 0.2011 |
| PS-4240 | J-S902E | J-S910E | 333 | 300.0 | PVC | 130.0 | 1.81 | 0.0256 |
| PS-4260 | J-S1770E | J-S1775E | 144 | 200.0 | Asbestos Cement | 114.0 | -1.69 | 0.0537 |
| PS-4270 | J-S1775E | J-S1300E | 138 | 200.0 | Asbestos Cement | 114.0 | -1.88 | 0.0598 |
| PN-2040 | J-N540E | J-N541E | 121 | 200.0 | PVC | 130.0 | 2.82 | 0.0897 |
| PN-2070 | J-N1305E | J-N1306E | 93 | 200.0 | PVC | 130.0 | -12.36 | 0.3935 |
| PN-2080 | J-N1306E | J-N1307E | 206 | 200.0 | PVC | 130.0 | -3.34 | 0.1065 |
| PN-2090 | J-N400E | J-N401E | 51 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| PN-2100 | J-N433E | J-N438E | 174 | 150.0 | PVC | 130.0 | -0.67 | 0.0377 |
| PS-4300 | J-Ardmore _FortKent | J-S2175E | 460 | 250.0 | PVC | 130.0 | -14.49 | 0.2951 |
| PS-4290 | J-S720E | J-S780E | 128 | 350.0 | Asbestos Cement | 114.0 | -1.32 | 0.0137 |
| PN-2130 | J-N1060E | J-CLIR149A | 233 | 200.0 | PVC | 130.0 | 0.35 | 0.0111 |
| PS-4310 | J-S610E | J-S625E | 236 | 150.0 | PVC | 130.0 | -1.06 | 0.0597 |
| PS-4320 | J-S220E | J-S210E | 81 | 150.0 | PVC | 130.0 | -6.05 | 0.3426 |
| PS-4340 | J-S740E | J-S905E | 245 | 150.0 | Asbestos Cement | 114.0 | -0.17 | 0.0096 |
| PS-4350 | J-S1290E | J-S1280E | 24 | 150.0 | PVC | 130.0 | -2.27 | 0.1284 |
| PS-4360 | J-S2100E | J-S2230E | 220 | 400.0 | PVC | 130.0 | -20.09 | 0.1599 |
| PS-4370 | J-S2111E | J-S2210E | 57 | 200.0 | PVC | 130.0 | -0.32 | 0.0103 |
| PS-4380 | J-S2135E | J-S2220E | 103 | 400.0 | PVC | 130.0 | -0.04 | 0.0003 |
| PS-4390 | J-S2220E | J-S2130E | 33 | 400.0 | PVC | 130.0 | -0.37 | 0.0030 |
| PS-4400 | J-S2210E | J-S2220E | 129 | 200.0 | PVC | 130.0 | -0.33 | 0.0106 |
| PS-4410 | J-S2210E | J-S2240E | 102 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| PS-4420 | J-S1820E | J-S1825E | 8 | 400.0 | PVC | 130.0 | -16.99 | 0.1352 |
| PN-2160 | J-N670E | J-N700E | 107 | 150.0 | Asbestos Cement | 114.0 | -1.42 | 0.0806 |
| PN-2210 | J-N1160E | J-N1140E | 96 | 150.0 | Asbestos Cement | 114.0 | Closed | 0.0000 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-2220 | J-N1060E | J-N1056E | 213 | 150.0 | PVC | 130.0 | -1.07 | 0.0608 |
| PN-2230 | J-N1056E | J-N1240E | 211 | 150.0 | PVC | 130.0 | -1.64 | 0.0926 |
| PN-2240 | J-N1755E | J-N1757E | 103 | 150.0 | PVC | 130.0 | 2.07 | 0.1172 |
| PN-2250 | J-N1757E | J-N1711E | 97 | 150.0 | PVC | 130.0 | 2.64 | 0.1492 |
| PN-2260 | J-N1755E | J-N1880E | 161 | 250.0 | PVC | 130.0 | 6.55 | 0.1334 |
| PN-2280 | J-N430E | J-N1890E | 30 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| PN-2290 | J-N1890E | J-N433E | 94 | 150.0 | PVC | 130.0 | 0.53 | 0.0300 |
| PN-2300 | J-N1890E | J-N1900E | 132 | 200.0 | PVC | 130.0 | -0.52 | 0.0166 |
| PN-2310 | J-N1900E | J-N438E | 100 | 200.0 | PVC | 130.0 | -1.35 | 0.0430 |
| PS-20010 | J-S1151E | J-S1780E | 124 | 200.0 | PVC | 120.0 | -1.43 | 0.0456 |
| PS-2195 | J-S1890E | J-S1153E | 86 | 150.0 | Asbestos Cement | 114.0 | -1.21 | 0.0685 |
| PS-2190 | J-S1153E | J-S1152E | 38 | 150.0 | Asbestos Cement | 114.0 | -0.88 | 0.0498 |
| PS-20030 | J-S1800E | J-S1153E | 123 | 250.0 | PVC | 120.0 | 0.33 | 0.0067 |
| PS-2735 | J-S790E | J-S820E | 58 | 200.0 | PVC | 130.0 | -0.98 | 0.0313 |
| PS-2710 | J-S660E | J-S661E | 53 | 150.0 | Asbestos Cement | 114.0 | -2.05 | 0.1162 |
| PS-20230 | J-S780E | J-S870E | 63 | 300.0 | PVC | 130.0 | 0.00 | 0.0000 |
| PS-20460 | J-S2080E | J-S2230E | 479 | 400.0 | PVC | 130.0 | 20.09 | 0.1599 |
| PS-20470 | J-S2106E | J-S2140E | 235 | 300.0 | PVC | 130.0 | 9.10 | 0.1287 |
| PS-20480 | J-S2170E | J-S2118E | 228 | 300.0 | PVC | 130.0 | -6.89 | 0.0974 |
| PS-20490 | J-S1370E | J-S2105E | 150 | 250.0 | PVC | 130.0 | 0.00 | 0.0000 |
| PS-20500 | J-S1340E | J-S1245E | 136 | 250.0 | PVC | 120.0 | -0.98 | 0.0199 |
| PS-20530 | J-S2045E | J-S2080E | 242 | 250.0 | PVC | 130.0 | -3.01 | 0.0613 |
| PS-20540 | J-S1245E | J-S1351E | 188 | 250.0 | PVC | 120.0 | -0.41 | 0.0083 |
| PS-1711 | J-S1351E | J-S1350E | 80 | 150.0 | Asbestos Cement | 114.0 | -1.42 | 0.0806 |
| PS-4330 | J-S1141E | J-S1140E | 63 | 150.0 | Asbestos Cement | 114.0 | -2.76 | 0.1562 |
| PS-4335 | J-S1095E | J-S1141E | 69 | 150.0 | Asbestos Cement | 114.0 | -0.72 | 0.0408 |
| PS-1910 | J-S1855E | J-S1920E | 66 | 150.0 | Asbestos Cement | 114.0 | -0.57 | 0.0323 |
| PS-2875 | J-S700E | J-S701E | 72 | 150.0 | Asbestos Cement | 114.0 | -0.14 | 0.0076 |
| PS-2871 | J-S680E | J-S702E | 51 | 150.0 | Asbestos Cement | 114.0 | 0.14 | 0.0076 |
| PS-20740 | J-S1525E | J-S610E | 92 | 150.0 | PVC | 130.0 | -0.87 | 0.0492 |
| PN-210 | J-N846E | J-N850E | 25 | 200.0 | PVC | 120.0 | -6.46 | 0.2057 |
| PN-211 | J-N840E | J-N846E | 42 | 200.0 | PVC | 120.0 | -6.46 | 0.2057 |
| PN-886 | J-N852E | J-N851E | 55 | 200.0 | PVC | 120.0 | 5.89 | 0.1874 |
| PN-115 | J-N160E | J-N161E | 115 | 150.0 | Asbestos Cement | 114.0 | 0.14 | 0.0080 |
| PN-45 | J-N141E | J-N680E | 95 | 400.0 | Asbestos Cement | 114.0 | -22.07 | 0.1756 |
| PN-20950 | J-N141E | J-N160E | 99 | 200.0 | PVC | 120.0 | -1.33 | 0.0424 |
| PN-20970 | J-N161E | J-N20E | 119 | 200.0 | PVC | 120.0 | -1.60 | 0.0509 |
| PN-21030 | J-N770E | J-N760E | 125 | 200.0 | PVC | 130.0 | -1.86 | 0.0593 |
| PN-884 | J-N891E | J-N852E | 94 | 200.0 | PVC | 120.0 | 5.89 | 0.1874 |
| 6 | J-N632E | J-N635E | 50 | 200.0 | PVC | 130.0 | 29.64 | 0.9435 |
| PN-41 | J-N632E | J-N634E | 36 | 400.0 | Asbestos Cement | 114.0 | -29.64 | 0.2359 |
| PN-1285 | J-N1454E | J-N1450E | 92 | 300.0 | Asbestos Cement | 114.0 | 18.83 | 0.2664 |
| PN-1736 | J-N420E | J-N421E | 119 | 200.0 | Asbestos Cement | 114.0 | -2.26 | 0.0719 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-1401 | J-N1740E | J-N1741E | 298 | 400.0 | Asbestos Cement | 114.0 | -10.38 | 0.0826 |
| P-3 | 5-PMP-2 | J-1 | 31 | 400.0 | Asbestos Cement | 114.0 | 89.53 | 0.7125 |
| P-4 | J-1 | PRV-1 | 21 | 400.0 | Asbestos Cement | 114.0 | 89.53 | 0.7125 |
| P-19 | J-9 | PRV-8 | 16 | 600.0 | AC | 114.0 | 80.39 | 0.2843 |
| P-1191 | J-N1750E | J-1091 | 17 | 350.0 | PVC | 130.0 | -0.12 | 0.0012 |
| P-1192a | J-1091 | J-11 | 44 | 300.0 | PVC | 130.0 | -0.12 | 0.0017 |
| P-1192 | J-11 | J-1097 | 34 | 300.0 | PVC | 130.0 | -0.39 | 0.0055 |
| P-1246a | J-1097 | J-13 | 107 | 200.0 | PVC | 130.0 | 0.58 | 0.0186 |
| P-1246 | J-13 | J-14 | 38 | 200.0 | PVC | 130.0 | 0.29 | 0.0093 |
| P-1248 | J-1097 | J-1098 | 95 | 200.0 | PVC | 130.0 | -1.51 | 0.0480 |
| P-1245 | J-1097 | J-1099 | 49 | 300.0 | PVC | 130.0 | 0.27 | 0.0038 |
| P-27 | J-N1750E | J-1079 | 136 | 350.0 | PVC | 130.0 | 8.88 | 0.0923 |
| P-28 | J-1079 | J-N1755E | 99 | 350.0 | PVC | 130.0 | 9.94 | 0.1033 |
| P-27 | J-1081 | J-1080 | 6 | 200.0 | PVC | 130.0 | 1.43 | 0.0454 |
| P-891 | J-1080 | J-1079 | 109 | 200.0 | PVC | 130.0 | 1.23 | 0.0392 |
| P-890 | J-1081 | J-1083 | 81 | 200.0 | PVC | 130.0 | -1.43 | 0.0454 |
| P-35 | J-1090 | J-N1750E | 136 | 350.0 | PVC | 130.0 | 9.03 | 0.0939 |
| P-1194 | J-1083 | J-1083 | 17 | 200.0 | PVC | 130.0 | -1.43 | 0.0454 |
| P-1194a | J-1083 | J-1085 | 43 | 200.0 | PVC | 130.0 | -1.82 | 0.0578 |
| P-1198 | J-1085 | J-1086 | 16 | 200.0 | PVC | 130.0 | -1.82 | 0.0578 |
| P-1189 | J-1086 | J-1087 | 58 | 200.0 | PVC | 130.0 | -2.01 | 0.0640 |
| P-1189a | J-1087 | J-1088 | 45 | 200.0 | PVC | 130.0 | -2.21 | 0.0702 |
| P-1089b | J-1088 | J-1090 | 16 | 200.0 | PVC | 130.0 | -2.21 | 0.0702 |
| P-1195 | J-1083 | J-1084 | 51 | 150.0 | PVC | 130.0 | 0.19 | 0.0110 |
| P-46 | J-N1720E | J-912 | 96 | 350.0 | PVC | 130.0 | 11.08 | 0.1151 |
| P-47 | J-912 | J-1090 | 94 | 350.0 | PVC | 130.0 | 11.08 | 0.1151 |
| P-1188 | J-912 | J-911 | 64 | 200.0 | PVC | 130.0 | 0.00 | 0.0000 |
| P-955 | J-N1730E | J-1100 | 80 | 300.0 | PVC | 130.0 | -3.60 | 0.0510 |
| P-898 | J-1100 | J-1101 | 135 | 300.0 | PVC | 130.0 | -4.38 | 0.0620 |
| P-1315 | J-N543E | J-1106 | 55 | 300.0 | PVC | 130.0 | 3.67 | 0.0519 |
| P-53 | J-1106 | J-1107 | 92 | 200.0 | PVC | 130.0 | 0.93 | 0.0295 |
| P-1301 | J-1107 | J-1108 | 41 | 200.0 | PVC | 130.0 | 0.22 | 0.0070 |
| P-1298 | J-1107 | J-1109 | 92 | 200.0 | PVC | 130.0 | 0.49 | 0.0156 |
| P-1296 | J-1109 | J-1110 | 88 | 200.0 | PVC | 130.0 | 0.27 | 0.0086 |
| P-1317 | J-1106 | J-38 | 87 | 300.0 | PVC | 130.0 | 2.12 | 0.0299 |
| P-1320 | J-1103 | J-1101 | 79 | 300.0 | PVC | 130.0 | 2.28 | 0.0322 |
| P-1318 | J-38 | J-1104 | 114 | 300.0 | PVC | 130.0 | 2.23 | 0.0315 |
| P-1319 | J-1104 | J-1103 | 15 | 300.0 | PVC | 130.0 | 2.28 | 0.0322 |
| P-1308 | J-38 | J-1138 | 85 | 200.0 | PVC | 130.0 | -0.26 | 0.0082 |
| P-63 | J-N541E | J-1132 | 47 | 200.0 | PVC | 130.0 | 2.53 | 0.0804 |
| P-64 | J-1132 | J-N542E | 86 | 200.0 | PVC | 130.0 | 1.05 | 0.0335 |
| P-274 | J-1132 | J-1133 | 95 | 150.0 | PVC | 130.0 | 1.17 | 0.0662 |
| P-274 a | J-1133 | J-1136 | 49 | 150.0 | PVC | 130.0 | 0.44 | 0.0249 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-274b | J-1136 | J-1135 | 51 | 150.0 | PVC | 130.0 | 0.15 | 0.0084 |
| P-274c | J-1135 | J-1134 | 48 | 150.0 | PVC | 130.0 | -0.14 | 0.0082 |
| P-274d | J-1134 | J-1133 | 50 | 150.0 | PVC | 130.0 | -0.44 | 0.0247 |
| P-70 | J-N891E | J-841 | 76 | 200.0 | PVC | 150.0 | -5.89 | 0.1874 |
| P-71 | J-841 | J-N890E | 54 | 200.0 | PVC | 150.0 | -1.79 | 0.0570 |
| P-1020 | J-841 | J-77 | 39 | 150.0 | PVC | 130.0 | -4.10 | 0.2318 |
| P-1013 | J-77 | J-110 | 62 | 150.0 | PVC | 130.0 | -4.12 | 0.2334 |
| P-1008 | J-110 | J-794 | 56 | 150.0 | PVC | 130.0 | -4.15 | 0.2350 |
| P-75 | J-N633E | J-796 | 62 | 400.0 | Asbestos Cement | 114.0 | 33.96 | 0.2703 |
| P-1004 | J-794 | J-796 | 29 | 150.0 | PVC | 130.0 | -4.32 | 0.2446 |
| P-550 | J-N1306E | J-816 | 56 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-346 | J-N1305E | J-870 | 54 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-347 | J-N1305E | J-854 | 62 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-46 | J-N1306E | J-1120 | 97 | 200.0 | PVC | 130.0 | -9.58 | 0.3049 |
| P-627 | J-1120 | J-1118 | 63 | 200.0 | PVC | 130.0 | -10.03 | 0.3192 |
| P-944a | J-1116 | J-1114 | 47 | 150.0 | PVC | 130.0 | 3.79 | 0.2147 |
| P-944 | J-1114 | J-N1307E | 97 | 200.0 | PVC | 130.0 | 3.79 | 0.1208 |
| P-948 | J-N1307E | J-1140 | 65 | 200.0 | PVC | 130.0 | 0.01 | 0.0003 |
| P-91 | J-N1680E | J-1119 | 69 | 400.0 | Asbestos Cement | 114.0 | 47.96 | 0.3816 |
| P-92 | J-1119 | J-N1455E | 173 | 400.0 | Asbestos Cement | 114.0 | 33.23 | 0.2645 |
| P-1250 | J-1118 | J-1119 | 105 | 200.0 | PVC | 130.0 | -14.72 | 0.4687 |
| P-626 | J-1120 | J-1121 | 61 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-943 | J-1118 | J-H1133 | 66 | 150.0 | PVC | 130.0 | 4.24 | 0.2402 |
| P-943a | J-H1133 | J-1116 | 28 | 150.0 | PVC | 130.0 | 4.24 | 0.2402 |
| P-946 | J-1116 | J-1117 | 55 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-98 | J-N1451E | J-1130 | 63 | 150.0 | Asbestos Cement | 114.0 | 2.26 | 0.1277 |
| P-99 | J-1130 | J-N1480E | 53 | 150.0 | Asbestos Cement | 114.0 | 6.09 | 0.3447 |
| P-1234 | J-1130 | J-70 | 139 | 200.0 | PVC | 130.0 | -3.83 | 0.1221 |
| P-1238 | J-1131 | J-70 | 83 | 200.0 | PVC | 130.0 | -4.88 | 0.1554 |
| P-1257 | J-N1535E | J-171A | 103 | 200.0 | PVC | 130.0 | -4.64 | 0.1477 |
| P-1256 | J-171A | J-1131 | 44 | 200.0 | PVC | 130.0 | -4.64 | 0.1477 |
| P-1235 | J-70 | J-1129 | 42 | 200.0 | PVC | 130.0 | -2.64 | 0.0841 |
| P-106 | J-N1454E | J-1122 | 70 | 300.0 | Asbestos Cement | 114.0 | -18.83 | 0.2664 |
| P-107 | J-1122 | J-N1455E | 230 | 300.0 | Asbestos Cement | 114.0 | -28.42 | 0.4021 |
| P-1221 | J-1124 | J-1226 | 26 | 200.0 | PVC | 130.0 | 6.95 | 0.2213 |
| P-1239 | J-1226 | J-70 | 89 | 200.0 | PVC | 130.0 | 6.56 | 0.2089 |
| P-1220 | J-1122 | J-1123 | 27 | 200.0 | PVC | 130.0 | 9.60 | 0.3054 |
| P-1227 | J-1123 | J-1124 | 54 | 200.0 | PVC | 130.0 | 9.60 | 0.3054 |
| P-1222 | J-1124 | J-1225 | 35 | 200.0 | PVC | 130.0 | 2.64 | 0.0841 |
| P-1229 | J-1226 | J-1127 | 81 | 200.0 | PVC | 130.0 | 0.39 | 0.0124 |
| P-751 | J-S877E | J-1163 | 92 | 200.0 | PVC | 130.0 | 0.32 | 0.0103 |
| P-833 | J-1163 | J-1154 | 120 | 200.0 | PVC | 130.0 | -0.19 | 0.0060 |
| P-117 | J-S879E | J-1154 | 46 | 300.0 | PVC | 130.0 | 1.20 | 0.0170 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-873 | J-1161 | J-1162 | 51 | 150.0 | PVC | 130.0 | 0.17 | 0.0097 |
| P-542 | J-S901E | J-1142 | 128 | 200.0 | PVC | 130.0 | 2.56 | 0.0814 |
| P-124 | J-87 | J-88 | 19 | 200.0 | PVC | 130.0 | 0.36 | 0.0115 |
| P-870 | J-1160 | J-94 | 85 | 200.0 | PVC | 130.0 | -0.38 | 0.0122 |
| P-888 | J-94 | J-95 | 69 | 300.0 | PVC | 130.0 | -0.55 | 0.0078 |
| P-879 | J-1142 | J-1143 | 18 | 200.0 | PVC | 130.0 | 2.41 | 0.0768 |
| P-1254 | J-1143 | J-1144 | 73 | 200.0 | PVC | 130.0 | 2.27 | 0.0721 |
| P-1253 | J-1144 | J-1145 | 86 | 200.0 | PVC | 130.0 | 2.12 | 0.0675 |
| P-1252 | J-1145 | J-1146 | 35 | 150.0 | PVC | 130.0 | 0.24 | 0.0138 |
| P-1255 | J-1145 | J-1147 | 56 | 200.0 | PVC | 130.0 | 1.63 | 0.0520 |
| P-1289 | J-1147 | J-1149 | 36 | 200.0 | PVC | 130.0 | 1.63 | 0.0520 |
| P-1271 | J-1149 | J-1150 | 48 | 200.0 | PVC | 130.0 | 1.44 | 0.0458 |
| P-1269 | J-1150 | J-1166 | 71 | 200.0 | PVC | 130.0 | 0.27 | 0.0085 |
| P-1276 | J-1150 | J-87 | 95 | 200.0 | PVC | 130.0 | 0.97 | 0.0310 |
| P-1278 | J-87 | J-1152 | 81 | 200.0 | PVC | 130.0 | 0.61 | 0.0195 |
| P-1280 | J-1152 | J-105 | 122 | 200.0 | PVC | 130.0 | 0.37 | 0.0118 |
| P-861 | J-1154 | J-1155 | 47 | 300.0 | PVC | 130.0 | 1.01 | 0.0143 |
| P-862 | J-1155 | J-1156 | 50 | 300.0 | PVC | 130.0 | 0.82 | 0.0116 |
| P-149 | J-1156 | J-825 | 133 | 200.0 | PVC | 130.0 | 0.35 | 0.0111 |
| P-865 | J-825 | J-1161 | 42 | 200.0 | PVC | 130.0 | 0.18 | 0.0056 |
| P-868 | J-1161 | J-1222 | 73 | 200.0 | PVC | 130.0 | -0.16 | 0.0052 |
| P-868 | J-1222 | J-1160 | 79 | 200.0 | PVC | 130.0 | -0.16 | 0.0052 |
| P-883 | J-1157 | J-1156 | 77 | 300.0 | PVC | 130.0 | -0.27 | 0.0039 |
| P-886 | J-94 | J-878 | 58 | 300.0 | PVC | 130.0 | 0.16 | 0.0023 |
| P-885 | J-878 | J-1157 | 92 | 300.0 | PVC | 130.0 | -0.05 | 0.0008 |
| P-1052 | J-S878E | J-1167 | 76 | 300.0 | PVC | 130.0 | -3.06 | 0.0432 |
| P-1053 | J-1167 | J-1168 | 51 | 300.0 | PVC | 130.0 | -3.06 | 0.0432 |
| P-1037a | J-1168 | J-1180 | 64 | 150.0 | PVC | 130.0 | -0.29 | 0.0166 |
| P-1037b | J-1180 | J-1181 | 69 | 150.0 | PVC | 130.0 | -0.54 | 0.0303 |
| P-1037c | J-1181 | J-1182 | 92 | 150.0 | PVC | 130.0 | -0.78 | 0.0441 |
| P-1023 | J-1168 | J-1169 | 113 | 150.0 | PVC | 130.0 | 0.36 | 0.0202 |
| P-1023a | J-1169 | J-1170 | 85 | 150.0 | PVC | 130.0 | -0.13 | 0.0073 |
| P-1147 | J-1170 | J-1171 | 59 | 150.0 | PVC | 130.0 | -0.37 | 0.0211 |
| P-1024 | J-1171 | J-1172 | 94 | 150.0 | PVC | 130.0 | -0.62 | 0.0349 |
| P-1030 | J-1172 | J-1178 | 110 | 150.0 | PVC | 130.0 | -0.29 | 0.0164 |
| P-1031 | J-1178 | J-1177 | 125 | 150.0 | PVC | 130.0 | -0.29 | 0.0164 |
| P-1054 | J-1177 | J-1179 | 111 | 300.0 | PVC | 130.0 | 3.61 | 0.0511 |
| P-1054a | J-1179 | J-1168 | 49 | 300.0 | PVC | 130.0 | 3.37 | 0.0476 |
| P-1038 | J-1177 | J-1182 | 81 | 300.0 | PVC | 130.0 | -3.59 | 0.0507 |
| P-1029 | J-1177 | J-123 | 82 | 150.0 | PVC | 130.0 | -0.56 | 0.0315 |
| P-1028 | J-123 | J-1175 | 129 | 150.0 | PVC | 130.0 | 0.23 | 0.0132 |
| P-1070 | J-1175 | J-1174 | 109 | 150.0 | PVC | 130.0 | -0.01 | 0.0006 |
| P-1026 | J-1174 | J-1173 | 40 | 150.0 | PVC | 130.0 | 0.81 | 0.0461 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-1025 | J-1173 | J-1172 | 43 | 150.0 | PVC | 130.0 | 0.57 | 0.0323 |
| P-1032 | J-1169 | J-898 | 71 | 150.0 | PVC | 130.0 | 0.24 | 0.0138 |
| P-179 | J-S872E | J-1216 | 119 | 300.0 | PVC | 130.0 | 5.74 | 0.0811 |
| P-180 | J-1216 | J-S874E | 195 | 300.0 | PVC | 130.0 | 5.11 | 0.0723 |
| P-919 | J-1216 | J-1190 | 57 | 200.0 | PVC | 130.0 | 0.62 | 0.0198 |
| P-912 | J-1190 | J-1191 | 95 | 200.0 | PVC | 130.0 | 0.56 | 0.0180 |
| P-911 | J-1191 | J-1192 | 40 | 200.0 | PVC | 130.0 | 0.56 | 0.0180 |
| P-910 | J-1192 | J-1193 | 74 | 200.0 | PVC | 130.0 | 0.18 | 0.0056 |
| P-909 | J-1193 | J-1194 | 34 | 200.0 | PVC | 130.0 | 0.18 | 0.0056 |
| P-908 | J-1194 | J-134 | 42 | 200.0 | PVC | 130.0 | -0.24 | 0.0076 |
| P-608 | J-134 | J-1196 | 72 | 200.0 | PVC | 130.0 | 0.19 | 0.0062 |
| P-916 | J-1188 | J-1187 | 129 | 200.0 | PVC | 130.0 | 0.23 | 0.0075 |
| P-1112 | J-1187 | J-1186 | 105 | 200.0 | PVC | 130.0 | -0.16 | 0.0049 |
| P-920 | J-1197 | J-134 | 45 | 200.0 | PVC | 130.0 | 0.60 | 0.0192 |
| P-1200b | J-1185 | J-1200 | 73 | 200.0 | PVC | 130.0 | 0.24 | 0.0076 |
| P-198 | J-144 | J-1185 | 98 | 300.0 | PVC | 130.0 | 5.78 | 0.0818 |
| P-915 | J-1190 | J-1189 | 9 | 200.0 | PVC | 130.0 | -0.33 | 0.0106 |
| P-914 | J-1189 | J-1188 | 26 | 200.0 | PVC | 130.0 | 0.23 | 0.0075 |
| P-1113 | J-1186 | J-1198 | 37 | 200.0 | PVC | 130.0 | 0.60 | 0.0192 |
| P-1114 | J-1198 | J-1197 | 26 | 200.0 | PVC | 130.0 | 0.60 | 0.0192 |
| P-1135 | J-1186 | J-147 | 48 | 200.0 | PVC | 130.0 | -0.93 | 0.0296 |
| P-1200 | J-147 | J-148 | 33 | 200.0 | PVC | 130.0 | -0.93 | 0.0296 |
| P-1200a | J-148 | J-1185 | 23 | 200.0 | PVC | 130.0 | -0.93 | 0.0296 |
| P-1199 | J-1200 | J-1201 | 96 | 200.0 | PVC | 130.0 | 0.24 | 0.0076 |
| P-1199a | J-1201 | J-1202 | 93 | 200.0 | PVC | 130.0 | 0.24 | 0.0076 |
| P-1206a | J-1202 | J-1203 | 53 | 200.0 | PVC | 130.0 | -0.62 | 0.0197 |
| P-1206b | J-1203 | J-143 | 45 | 200.0 | PVC | 130.0 | -0.62 | 0.0197 |
| P-1261 | J-143 | J-1205 | 111 | 200.0 | PVC | 130.0 | -0.96 | 0.0306 |
| P-1259 | J-1205 | J-1206 | 118 | 200.0 | PVC | 130.0 | -1.33 | 0.0422 |
| P-1259a | J-1206 | J-144 | 17 | 200.0 | PVC | 130.0 | -1.33 | 0.0422 |
| P-1206 | J-1202 | J-1202 | 72 | 200.0 | PVC | 130.0 | 0.83 | 0.0266 |
| P-1045 | J-144 | J-1208 | 142 | 300.0 | PVC | 130.0 | -7.45 | 0.1054 |
| P-1046 | J-1208 | J-1209 | 196 | 300.0 | PVC | 130.0 | -9.55 | 0.1351 |
| P-1075 | J-1185 | J-1184 | 63 | 300.0 | PVC | 130.0 | 4.61 | 0.0652 |
| P-1040 | J-1184 | J-159 | 78 | 300.0 | PVC | 130.0 | 4.61 | 0.0652 |
| P-1039 | J-159 | J-1182 | 42 | 300.0 | PVC | 130.0 | 4.61 | 0.0652 |
| P-225 | J-160 | J-S1036E | 182 | 400.0 | PVC | 130.0 | 8.11 | 0.0646 |
| P-430a | J-S1141E | J-1212 | 128 | 300.0 | PVC | 130.0 | 2.04 | 0.0289 |
| P-430 | J-1212 | J-160 | 102 | 300.0 | PVC | 130.0 | 1.61 | 0.0228 |
| P-929 | J-S1085E | J-1212 | 68 | 150.0 | PVC | 130.0 | -0.43 | 0.0244 |
| P-987 | J-164 | J-165 | 59 | 300.0 | PVC | 130.0 | 3.83 | 0.0541 |
| P-985 | J-165 | J-166 | 100 | 200.0 | PVC | 130.0 | 0.83 | 0.0265 |
| P-977 | J-166 | J-167 | 148 | 200.0 | PVC | 130.0 | 0.16 | 0.0050 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-975 | J-167 | J-168 | 93 | 200.0 | PVC | 130.0 | -0.29 | 0.0093 |
| P-960 | J-165 | J-169 | 39 | 200.0 | PVC | 130.0 | 0.76 | 0.0243 |
| P-988 | J-168 | J-170 | 67 | 200.0 | PVC | 130.0 | 0.14 | 0.0043 |
| P-969 | J-168 | J-171 | 57 | 300.0 | PVC | 130.0 | 0.45 | 0.0064 |
| P-981 | J-166 | J-172 | 55 | 200.0 | PVC | 130.0 | 0.23 | 0.0072 |
| P-963 | J-173 | J-165 | 29 | 300.0 | PVC | 130.0 | -1.78 | 0.0252 |
| P-966 | J-168 | J-174 | 73 | 300.0 | PVC | 130.0 | -1.33 | 0.0188 |
| P-965 | J-174 | J-173 | 95 | 300.0 | PVC | 130.0 | -1.78 | 0.0252 |
| P-247 | 10-PMP-3 | J-9 | 16 | 600.0 | Ductile Iron | 130.0 | 0.00 | 0.0000 |
| P-248 | 10-PMP-1 | J-9 | 15 | 600.0 | Ductile Iron | 130.0 | 0.00 | 0.0000 |
| P-249 | J-S910E | J-S9005E | 214 | 300.0 | PVC | 130.0 | 1.31 | 0.0185 |
| P-251 | J-S2177E | J-S2279E | 74 | 200.0 | PVC | 130.0 | 3.05 | 0.0972 |
| P-252 | J-S2279E | J-S2176E | 199 | 200.0 | PVC | 130.0 | 3.05 | 0.0972 |
| P-253 | J-S145E | J-S177E | 129 | 150.0 | Asbestos Cement | 114.0 | 2.54 | 0.1437 |
| P-254 | J-S177E | J-S160E | 39 | 150.0 | Asbestos Cement | 114.0 | 2.54 | 0.1437 |
| P-255 | J-N1711E | J-N178E | 132 | 200.0 | PVC | 130.0 | 0.64 | 0.0203 |
| P-256 | J-N178E | J-N1712E | 86 | 200.0 | PVC | 130.0 | 0.64 | 0.0203 |
| P-257 | J-S9005E | J-179 | 105 | 300.0 | PVC | 130.0 | 1.31 | 0.0185 |
| P-258 | J-179 | J-S903E | 52 | 300.0 | PVC | 130.0 | 1.30 | 0.0184 |
| P-936 | J-179 | J-S182E | 93 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-260 | J-S160E | J-S181E | 67 | 150.0 | Asbestos Cement | 114.0 | 2.24 | 0.1270 |
| P-261 | J-S181E | J-S170E | 37 | 150.0 | Asbestos Cement | 114.0 | 2.24 | 0.1270 |
| P-264 | J-NS183 | J-NS184 | 264 | 300.0 | PVC | 120.0 | 5.94 | 0.0840 |
| P-266 | J-NS183 | J-NS185 | 511 | 400.0 | PVC | 120.0 | -5.94 | 0.0473 |
| P-285 | J-1098 | J-LW197 | 116 | 200.0 | PVC | 130.0 | -1.78 | 0.0565 |
| P-286 | J-LW197 | J-LW198 | 130 | 200.0 | PVC | 120.0 | -2.13 | 0.0678 |
| P-287 | J-LW198 | J-LW199 | 105 | 200.0 | PVC | 120.0 | -2.13 | 0.0678 |
| P-288 | J-LW199 | J-N1740E | 95 | 200.0 | PVC | 120.0 | -2.13 | 0.0678 |
| P-337 | J-S340E | J-C228 | 49 | 300.0 | PVC | 120.0 | 13.11 | 0.1855 |
| P-339 | J-95 | J-C235 | 315 | 300.0 | PVC | 120.0 | -0.86 | 0.0122 |
| P-340 | J-C235 | J-C236 | 393 | 400.0 | PVC | 130.0 | 0.01 | 0.0001 |
| P-345 | J-S311E | J-238 | 370 | 400.0 | Asbestos Cement | 114.0 | -58.05 | 0.4619 |
| P-346 | J-238 | J-S45E | 284 | 400.0 | Asbestos Cement | 114.0 | -58.05 | 0.4619 |
| P-362 | J-C235 | J-S904E | 100 | 300.0 | PVC | 120.0 | -0.87 | 0.0124 |
| P-364 | J-S1855E | J-247 | 310 | 400.0 | PVC | 120.0 | 4.37 | 0.0348 |
| P-365 | J-247 | J-S945E | 170 | 400.0 | PVC | 120.0 | 3.65 | 0.0290 |
| P-366 | J-S661E | J-247 | 57 | 200.0 | PVC | 120.0 | -2.42 | 0.0771 |
| P-367 | J-247 | J-S1925E | 57 | 200.0 | PVC | 120.0 | -1.70 | 0.0540 |
| P-368 | J-S1925E | J-S1885E | 59 | 200.0 | PVC | 120.0 | -1.40 | 0.0446 |
| P-369 | J-N542E | J-N543E | 169 | 200.0 | PVC | 130.0 | 0.76 | 0.0242 |
| P-489 | J-N1740E | J-N1720E | 89 | 350.0 | PVC | 130.0 | 11.08 | 0.1151 |
| P-491 | J-N82E | J-N510E | 143 | 200.0 | PVC | 130.0 | 0.34 | 0.0107 |
| P-493 | J-N630E | J-N434E | 127 | 200.0 | PVC | 130.0 | 11.31 | 0.3601 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-495 | J-796 | J-N634E | 69 | 400.0 | Asbestos Cement | 114.0 | 29.64 | 0.2359 |
| P-497 | J-N810E | J-N800E | 61 | 200.0 | Asbestos Cement | 114.0 | -7.20 | 0.2292 |
| P-501 | J-N940E | PRV-25 | 55 | 200.0 | Asbestos Cement | 114.0 | -16.94 | 0.5391 |
| P-502 | PRV-25 | J-N990E | 41 | 200.0 | Asbestos Cement | 114.0 | -16.94 | 0.5391 |
| P-503 | J-N1085E | PRV-26 | 146 | 150.0 | Asbestos Cement | 114.0 | -3.63 | 0.2052 |
| P-504 | PRV-26 | J-N1050E | 34 | 150.0 | Asbestos Cement | 114.0 | -3.63 | 0.2052 |
| P-505 | J-N30E | J-N40E | 120 | 200.0 | PVC | 120.0 | -0.10 | 0.0032 |
| P-508 | J-S1004E | J-S1006E | 319 | 300.0 | PVC | 130.0 | 0.01 | 0.0001 |
| P-511 | J-163 | J-164 | 187 | 300.0 | PVC | 130.0 | 3.83 | 0.0541 |
| P-512 | J-S150E | J-S140E | 142 | 150.0 | PVC | 130.0 | -5.34 | 0.3024 |
| P-514 | J-S180E | J-S270E | 126 | 150.0 | Asbestos Cement | 114.0 | 5.28 | 0.2990 |
| P-516 | J-S400E | J-S330E | 59 | 400.0 | PVC | 130.0 | -62.27 | 0.4955 |
| P-523 | J-S410E | J-S400E | 45 | 400.0 | Asbestos Cement | 114.0 | -27.70 | 0.2204 |
| P-534 | J-N1455E | J-303 | 543 | 300.0 | PVC | 130.0 | 3.84 | 0.0543 |
| P-535 | J-303 | J-162 | 614 | 300.0 | PVC | 130.0 | 3.84 | 0.0543 |
| P-541 | J-S1580E | J-S1560E | 66 | 150.0 | Asbestos Cement | 114.0 | -7.56 | 0.4278 |
| P-542 | J-S1560E | J-S1540E | 67 | 150.0 | Asbestos Cement | 114.0 | 0.06 | 0.0032 |
| P-544 | J-S595E | J-S1615E | 64 | 150.0 | Asbestos Cement | 114.0 | -3.09 | 0.1749 |
| P-546 | J-S1615E | J-S600E | 67 | 150.0 | Asbestos Cement | 114.0 | 0.52 | 0.0294 |
| P-548 | J-S635E | J-S560E | 125 | 150.0 | Asbestos Cement | 114.0 | 1.11 | 0.0627 |
| P-551 | J-S644E | J-S625E | 125 | 400.0 | Asbestos Cement | 114.0 | -0.72 | 0.0057 |
| P-552 | J-941 | J-1210 | 289 | 300.0 | PVC | 130.0 | -9.55 | 0.1351 |
| P-554 | J-S870E | J-S871E | 287 | 300.0 | PVC | 130.0 | 5.74 | 0.0811 |
| P-560 | J-S871E | J-S872E | 570 | 300.0 | PVC | 130.0 | 5.74 | 0.0811 |
| P-561 | J-1209 | J-941 | 168 | 300.0 | PVC | 130.0 | -9.55 | 0.1351 |
| P-571 | J-1174 | J-304 | 87 | 150.0 | PVC | 120.0 | -1.07 | 0.0604 |
| P-572 | J-304 | J-305 | 241 | 150.0 | PVC | 120.0 | -0.08 | 0.0044 |
| P-573 | J-305 | J-123 | 88 | 150.0 | PVC | 120.0 | 1.03 | 0.0585 |
| P-581 | J-310 | J-311 | 302 | 150.0 | PVC | 120.0 | -0.40 | 0.0225 |
| P-582 | J-305 | J-312 | 86 | 150.0 | PVC | 120.0 | -1.11 | 0.0629 |
| P-584 | J-311 | J-314 | 83 | 150.0 | PVC | 120.0 | -0.40 | 0.0225 |
| P-585 | J-304 | J-313 | 85 | 150.0 | PVC | 120.0 | -0.99 | 0.0560 |
| P-586 | J-313 | J-310 | 89 | 150.0 | PVC | 120.0 | -0.40 | 0.0225 |
| P-587 | J-312 | J-313 | 240 | 200.0 | PVc | 120.0 | 0.59 | 0.0189 |
| P-588 | J-312 | J-314 | 96 | 200.0 | PVC | 120.0 | -1.70 | 0.0542 |
| P-589 | J-314 | J-1208 | 81 | 200.0 | PVC | 120.0 | -2.10 | 0.0669 |
| P-590 | J-N140E | J-N520E | 147 | 200.0 | PVC | 120.0 | 7.76 | 0.2471 |
| P-592 | J-LW197 | J-1090 | 101 | 200.0 | PVC | 120.0 | 0.36 | 0.0113 |
| P-593 | J-170 | J-316 | 191 | 200.0 | PVC | 120.0 | -0.31 | 0.0100 |
| P-594 | J-316 | J-169 | 142 | 200.0 | PVC | 120.0 | -0.31 | 0.0100 |
| P-595 | J-1210 | J-317 | 108 | 300.0 | PVC | 120.0 | -16.30 | 0.2305 |
| P-596 | J-317 | J-C228 | 199 | 300.0 | PVC | 120.0 | -13.11 | 0.1855 |
| P-597 | J-N120E | PRV-Existing | 43 | 400.0 | Asbestos Cement | 114.0 | -15.08 | 0.1200 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-598 | PRV-Existing | J-N140E | 98 | 400.0 | Asbestos Cement | 114.0 | -15.08 | 0.1200 |
| P-601 | J-N436E | J-319 | 127 | 300.0 | PVC | 130.0 | 5.94 | 0.0840 |
| P-602 | J-319 | J-320 | 55 | 300.0 | PVC | 130.0 | 0.00 | 0.0000 |
| P-605 | J-1106 | J-322 | 88 | 200.0 | PVC | 130.0 | 0.40 | 0.0128 |
| P-606 | J-322 | J-323 | 40 | 200.0 | PVC | 130.0 | 0.40 | 0.0128 |
| P-607 | J-317 | J-324 | 74 | 300.0 | PVC | 130.0 | -3.19 | 0.0451 |
| P-608 | J-324 | J-325 | 119 | 200.0 | PVC | 130.0 | -3.19 | 0.1014 |
| P-609 | J-325 | J-326 | 60 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-610 | J-325 | J-327 | 61 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-611 | J-325 | J-S450E | 98 | 200.0 | PVC | 130.0 | -3.19 | 0.1014 |
| P-612 | J-324 | J-328 | 72 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-613 | J-S903E | J-329 | 55 | 300.0 | PVC | 130.0 | 0.02 | 0.0003 |
| P-614 | J-329 | J-318 | 190 | 300.0 | PVC | 130.0 | 0.01 | 0.0001 |
| P-615 | J-329 | J-330 | 71 | 200.0 | PVC | 130.0 | 0.01 | 0.0003 |
| P-616 | J-330 | J-331 | 66 | 150.0 | PVC | 130.0 | 0.00 | 0.0000 |
| P-617 | J-1225 | J-332 | 51 | 200.0 | PVC | 130.0 | 2.64 | 0.0841 |
| P-618 | J-332 | J-333 | 146 | 200.0 | PVC | 130.0 | 2.64 | 0.0841 |
| P-619 | J-333 | J-334 | 149 | 200.0 | PVC | 130.0 | 2.64 | 0.0841 |
| P-620 | J-334 | J-335 | 126 | 200.0 | PVC | 130.0 | 2.64 | 0.0841 |
| P-621 | J-335 | J-1129 | 91 | 200.0 | PVC | 130.0 | 2.64 | 0.0841 |
| P-622 | J-LW198 | J-336 | 83 | 200.0 | PVC | 120.0 | 0.01 | 0.0003 |
| P-623 | J-N1720E | J-337 | 61 | 200.0 | PVC | 120.0 | 0.01 | 0.0003 |
| P-626 | J-N1570E | J-340 | 93 | 200.0 | Asbestos Cement | 114.0 | -0.37 | 0.0116 |
| P-627 | J-340 | J-N1555E | 39 | 200.0 | Asbestos Cement | 114.0 | -7.85 | 0.2498 |
| P-628 | J-340 | J-341 | 75 | 200.0 | PVC | 130.0 | 7.48 | 0.2382 |
| P-629 | J-341 | J-342 | 71 | 200.0 | PVC | 130.0 | 7.48 | 0.2382 |
| P-630 | J-338 | J-342 | 95 | 300.0 | PVC | 130.0 | -7.48 | 0.1059 |
| P-631 | J-S908E | J-343 | 46 | 300.0 | PVC | 130.0 | 0.05 | 0.0007 |
| P-632 | J-343 | J-S909E | 31 | 300.0 | PVC | 130.0 | 0.05 | 0.0007 |
| P-637 | J-N530E | J-346 | 105 | 200.0 | PVC | 130.0 | -0.78 | 0.0248 |
| P-638 | J-N438E | J-347 | 89 | 200.0 | PVC | 130.0 | -3.08 | 0.0980 |
| P-639 | J-347 | J-N434E | 21 | 200.0 | PVC | 130.0 | -3.86 | 0.1228 |
| P-640 | J-346 | J-347 | 131 | 200.0 | PVC | 130.0 | -0.78 | 0.0248 |
| P-641 | J-1110 | J-348 | 61 | 200.0 | PVC | 130.0 | 0.05 | 0.0016 |
| P-642 | J-348 | J-1104 | 155 | 200.0 | PVC | 130.0 | 0.05 | 0.0016 |
| P-643 | J-1101 | J-349 | 202 | 300.0 | PVC | 130.0 | -2.89 | 0.0409 |
| P-645 | J-N543E | J-350 | 176 | 300.0 | PVC | 130.0 | -2.90 | 0.0411 |
| P-646 | J-350 | J-1112 | 102 | 300.0 | PVC | 130.0 | -2.90 | 0.0411 |
| P-648 | J-NS184 | J-351 | 60 | 300.0 | PVC | 120.0 | 5.94 | 0.0840 |
| P-650 | J-351 | J-352 | 82 | 300.0 | PVC | 130.0 | 2.89 | 0.0409 |
| P-651 | J-352 | J-353 | 60 | 300.0 | PVC | 130.0 | 2.89 | 0.0409 |
| P-653 | J-353 | J-354 | 94 | 300.0 | PVC | 130.0 | 2.89 | 0.0409 |
| P-654 | J-354 | J-355 | 153 | 300.0 | PVC | 130.0 | 2.89 | 0.0409 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-655 | J-355 | J-349 | 134 | 300.0 | PVC | 130.0 | 2.89 | 0.0409 |
| P-664 | J-105 | J-364 | 97 | 200.0 | PVC | 130.0 | -0.02 | 0.0008 |
| P-665 | J-105 | J-365 | 100 | 200.0 | PVC | 130.0 | -0.04 | 0.0014 |
| P-666 | J-364 | J-366 | 155 | 200.0 | PVC | 130.0 | -0.12 | 0.0039 |
| P-667 | J-365 | J-366 | 109 | 200.0 | PVC | 130.0 | -0.14 | 0.0045 |
| P-668 | J-88 | J-367 | 39 | 200.0 | PVC | 130.0 | 0.36 | 0.0115 |
| P-669 | J-367 | J-368 | 204 | 200.0 | PVC | 130.0 | 0.36 | 0.0115 |
| P-670 | J-368 | J-366 | 111 | 200.0 | PVC | 130.0 | 0.26 | 0.0084 |
| P-671 | J-1210 | J-160 | 224 | 400.0 | PVC | 130.0 | 6.50 | 0.0518 |
| P-673 | J-S550E | J-S1140E | 107 | 150.0 | Asbestos Cement | 114.0 | 1.53 | 0.0867 |
| P-676 | J-S1190E | J-S485E | 144 | 400.0 | PVC | 130.0 | -23.61 | 0.1879 |
| P-686 | J-369 | J-163 | 227 | 300.0 | PVC | 130.0 | 3.83 | 0.0541 |
| P-690 | J-371 | J-338 | 95 | 300.0 | PVC | 130.0 | -7.48 | 0.1059 |
| P-691 | J-N1285E | J-372 | 76 | 200.0 | PVC | 130.0 | -8.78 | 0.2796 |
| P-692 | J-372 | J-N1220E | 46 | 300.0 | PVC | 120.0 | -1.30 | 0.0184 |
| P-693 | J-371 | J-372 | 257 | 300.0 | PVC | 120.0 | 7.48 | 0.1059 |
| P-695 | J-373 | J-N405E | 79 | 200.0 | Asbestos Cement | 114.0 | -0.01 | 0.0003 |
| P-696 | J-N165E | J-N125E | 76 | 150.0 | AC | 114.0 | 1.38 | 0.0782 |
| P-697 | J-N82E | J-N1825E | 344 | 300.0 | PVC | 120.0 | 18.97 | 0.2683 |
| P-698 | J-N870E | J-N840E | 117 | 200.0 | PVC | 120.0 | -6.24 | 0.1987 |
| P-699 | J-N510E | J-374 | 131 | 200.0 | AC | 114.0 | 0.00 | 0.0000 |
| P-701 | J-N1820E | J-N1825E | 57 | 200.0 | AC | 114.0 | -3.17 | 0.1009 |
| P-702 | J-N880E | J-N890E | 69 | 200.0 | PVC | 150.0 | 5.48 | 0.1745 |
| P-703 | J-162 | PRV-62 | 45 | 300.0 | PVC | 130.0 | 3.83 | 0.0541 |
| P-704 | PRV-62 | J-369 | 211 | 300.0 | PVC | 130.0 | 3.83 | 0.0541 |
| P-739 | J-162 | J-390 | 702 | 300.0 | PVC | 130.0 | 0.01 | 0.0001 |
| P-742 | J-S1940E | J-S1960E | 111 | 150.0 | PVC | 120.0 | -1.54 | 0.0872 |
| P-743 | J-S1855E | J-391 | 89 | 400.0 | PVC | 130.0 | -15.68 | 0.1248 |
| P-744 | J-391 | J-S1820E | 66 | 400.0 | PVC | 130.0 | -16.99 | 0.1352 |
| P-745 | J-S360E | J-392 | 76 | 150.0 | AC | 114.0 | 0.00 | 0.0000 |
| P-746 | J-N1900E | J-N431E | 221 | 200.0 | PVC | 130.0 | 0.83 | 0.0264 |
| P-747 | J-1138 | J-323 | 95 | 200.0 | PVC | 130.0 | -0.40 | 0.0128 |
| P-748 | J-N438E | J-393 | 68 | 200.0 | PVC | 120.0 | 0.00 | 0.0000 |
| P-749 | J-1202 | J-1189 | 40 | 200.0 | PVC | 130.0 | 0.57 | 0.0180 |
| P-750 | J-319 | J-394 | 179 | 300.0 | PVC | 120.0 | 5.94 | 0.0840 |
| P-752 | J-351 | J-396 | 66 | 300.0 | PVC | 130.0 | 3.05 | 0.0432 |
| P-753 | J-396 | J-1112 | 99 | 300.0 | PVC | 130.0 | 3.05 | 0.0432 |
| P-762 | J-394 | J-NS185 | 286 | 300.0 | PVC | 120.0 | 5.94 | 0.0840 |
| P-763 | J-N1880E | J-402 | 102 | 250.0 | PVC | 130.0 | 5.87 | 0.1195 |
| P-764 | J-402 | J-N1717E | 95 | 250.0 | PVC | 130.0 | 5.87 | 0.1195 |
| P-768 | J-N880E | J-406 | 229 | 200.0 | PVC | 130.0 | -6.31 | 0.2009 |
| P-769 | J-406 | J-N900E | 23 | 200.0 | PVC | 130.0 | 1.30 | 0.0413 |
| P-770 | J-N1680E | PRV-65 | 135 | 400.0 | Asbestos Cement | 114.0 | 41.57 | 0.3308 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-771 | PRV-65 | J-N1681E | 28 | 400.0 | Asbestos Cement | 114.0 | 41.57 | 0.3308 |
| P-772 | J-N1681E | J-407 | 36 | 200.0 | PVC | 120.0 | 7.61 | 0.2422 |
| P-773 | J-407 | J-406 | 197 | 200.0 | PVC | 120.0 | 7.61 | 0.2422 |
| P-777 | J-N860E | J-410 | 44 | 200.0 | PVC | 120.0 | -0.01 | 0.0002 |
| P-779 | J-410 | J-411 | 62 | 200.0 | PVC | 120.0 | -0.97 | 0.0308 |
| P-780 | J-411 | J-N910E | 175 | 200.0 | PVC | 120.0 | -1.93 | 0.0613 |
| P-806 | J-S800E | J-S661E | 169 | 150.0 | Asbestos Cement | 114.0 | -0.37 | 0.0208 |
| P-810 | J-N583E | J-N562E | 142 | 150.0 | PVC | 120.0 | 0.36 | 0.0201 |
| P-826 | J-N633E | J-N1681E | 253 | 400.0 | Asbestos Cement | 114.0 | -33.96 | 0.2703 |
| P-828 | J-S1004E | J-423 | 87 | 300.0 | PVC | 130.0 | 0.02 | 0.0003 |
| P-829 | J-423 | J-S1005E | 118 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-830 | J-390 | J-S1006E | 93 | 300.0 | PVC | 130.0 | 0.00 | 0.0000 |

# FIRE FLOW NODE TABLE: Ultimate-AnxUpd-MDD+FF

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N835E | False | 100.00 | 72.60 | 140.0 | 348.1 | J-407 |
| J-S890E | False | 225.00 | 74.57 | 140.1 | 301.6 | J-S2178E |
| J-N1605E | False | 100.00 | 82.30 | 140.1 | 303.4 | J-N1600E |
| J-N465E | False | 100.00 | 82.78 | 140.0 | 348.3 | J-407 |
| J-N432E | False | 225.00 | 90.05 | 140.0 | 348.2 | J-407 |
| J-N1070E | False | 100.00 | 90.33 | 140.0 | 348.4 | J-407 |
| J-N340E | False | 100.00 | 93.38 | 140.0 | 348.3 | J-407 |
| J-N1265E | False | 100.00 | 96.49 | 140.0 | 321.7 | J-N1645E |
| J-364 | True | 99.00 | 100.00 | 402.8 | 299.3 | J-S2178E |
| J-365 | True | 99.00 | 100.00 | 403.0 | 299.3 | J-S2178E |
| J-366 | True | 99.00 | 100.00 | 401.9 | 299.2 | J-S2178E |
| J-368 | True | 99.00 | 101.00 | 393.3 | 299.1 | J-S2178E |
| J-S2180E | True | 100.00 | 101.73 | 140.0 | 293.4 | J-S2178E |
| J-S81E | True | 100.00 | 105.38 | 140.0 | 175.7 | J-S80E |
| J-S320E | True | 100.00 | 105.52 | 140.0 | 297.9 | J-S2178E |
| J-N1715E | True | 100.00 | 105.58 | 140.0 | 335.7 | J-N1771E |
| J-S80E | True | 100.00 | 106.59 | 140.0 | 179.3 | J-S81E |
| J-1135 | True | 100.00 | 106.91 | 140.0 | 173.1 | J-1134 |
| J-S1710E | True | 100.00 | 108.63 | 140.0 | 233.4 | J-S1705E |
| J-S110E | True | 100.00 | 109.63 | 140.0 | 172.7 | J-S81E |
| J-S1705E | True | 100.00 | 109.86 | 140.0 | 225.5 | J-S1710E |
| J-1134 | True | 100.00 | 110.06 | 140.0 | 150.9 | J-1135 |
| J-1136 | True | 100.00 | 110.55 | 140.0 | 149.5 | J-1135 |
| J-S175E | True | 100.00 | 115.95 | 140.0 | 297.3 | J-S260E |
| J-S271E | True | 100.00 | 117.22 | 140.0 | 296.8 | J-S2178E |
| J-N1645E | True | 100.00 | 118.91 | 140.0 | 278.3 | J-N1651E |
| J-1133 | True | 100.00 | 119.71 | 146.9 | 140.0 | J-1135 |
| J-S1650E | True | 100.00 | 123.84 | 140.0 | 232.6 | J-S1630E |
| J-N582E | True | 100.00 | 124.47 | 140.0 | 216.9 | J-N583E |
| J-S1690E | True | 100.00 | 126.31 | 140.0 | 258.2 | J-S1700E |
| J-N1275E | True | 100.00 | 126.34 | 140.0 | 238.9 | J-N1590E |
| J-N583E | True | 100.00 | 126.53 | 140.0 | 216.9 | J-N582E |
| J-N1714E | True | 100.00 | 126.79 | 140.0 | 318.6 | J-N1771E |
| J-S90E | True | 100.00 | 127.16 | 140.0 | 167.2 | J-S110E |
| J-N1590E | True | 100.00 | 128.37 | 140.0 | 206.7 | J-N1605E |
| J-898 | True | 100.00 | 129.26 | 140.0 | 293.3 | J-S2178E |
| J-CLIR149A | True | 100.00 | 129.45 | 140.2 | 252.2 | J-N1060E |
| J-S1008E | True | 100.00 | 131.86 | 140.0 | 289.5 | J-S2178E |
| J-N401E | True | 100.00 | 132.97 | 140.0 | 274.9 | J-373 |
| J-S1681E | True | 100.00 | 133.05 | 140.0 | 199.0 | J-S1680E |
| J-S1010E | True | 133.00 | 133.50 | 516.4 | 289.1 | J-S2178E |
| J-N1120E | True | 133.00 | 134.00 | 313.8 | 337.2 | J-N1092E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S700E | True | 133.00 | 134.00 | 245.2 | 278.6 | J-S1670E |
| J-N960E | True | 133.00 | 134.00 | 436.3 | 347.9 | J-407 |
| J-N970E | True | 133.00 | 134.00 | 386.1 | 347.9 | J-407 |
| J-N935E | True | 133.00 | 134.00 | 253.3 | 201.6 | J-N835E |
| J-S1030E | True | 133.00 | 134.00 | 514.2 | 289.1 | J-S2178E |
| J-S1035E | True | 133.00 | 134.00 | 514.3 | 289.1 | J-S2178E |
| J-S1036E | True | 133.00 | 134.00 | 518.6 | 289.2 | J-S2178E |
| J-N1092E | True | 133.00 | 134.00 | 285.3 | 337.8 | J-N1120E |
| J-S1680E | True | 100.00 | 134.55 | 140.0 | 206.2 | J-S1681E |
| J-FH211 | True | 133.00 | 135.00 | 317.4 | 286.2 | J-N1645E |
| J-FH214 | True | 133.00 | 135.00 | 307.7 | 288.8 | J-N1645E |
| J-AN277 | True | 133.00 | 135.00 | 409.9 | 304.1 | J-S2178E |
| J-S1282E | True | 100.00 | 135.38 | 140.0 | 201.3 | J-S1281E |
| J-373 | True | 100.00 | 135.68 | 140.0 | 227.3 | J-N405E |
| J-331 | True | 100.00 | 135.75 | 140.1 | 293.1 | J-S2178E |
| J-S1425E | True | 100.00 | 135.90 | 140.1 | 257.8 | J-S1420E |
| J-S1700E | True | 100.00 | 136.93 | 140.0 | 191.7 | J-S1710E |
| J-S2178E | True | 100.00 | 136.99 | 140.0 | 209.2 | J-S2177E |
| J-N1245E | True | 100.00 | 137.88 | 140.0 | 283.3 | J-N1645E |
| J-N460E | True | 100.00 | 138.33 | 161.5 | 140.0 | J-N465E |
| J-S1620E | True | 100.00 | 138.70 | 140.0 | 220.8 | J-S1650E |
| J-S182E | True | 100.00 | 139.93 | 140.1 | 292.2 | J-S2178E |
| J-1117 | True | 100.00 | 141.11 | 140.1 | 327.7 | J-N900E |
| J-S1460E | True | 100.00 | 141.41 | 140.1 | 284.1 | J-S2178E |
| J-S1281E | True | 100.00 | 141.52 | 140.0 | 168.4 | J-S1282E |
| J-S1630E | True | 100.00 | 141.53 | 140.1 | 140.0 | J-S1650E |
| J-N55E | True | 100.00 | 142.51 | 140.0 | 268.0 | J-N60E |
| J-N1085E | True | 100.00 | 142.56 | 140.0 | 324.8 | J-N1070E |
| J-N1600E | True | 100.00 | 142.58 | 140.0 | 140.0 | J-N1605E |
| J-S2177E | True | 100.00 | 143.42 | 140.0 | 153.8 | J-S2178E |
| J-S1970E | True | 100.00 | 144.25 | 140.0 | 287.0 | J-S2178E |
| J-N60E | True | 100.00 | 145.27 | 140.0 | 231.3 | J-N65E |
| J-S701E | True | 100.00 | 145.55 | 140.1 | 221.8 | J-S702E |
| J-S1555E | True | 100.00 | 146.11 | 140.1 | 282.5 | J-S2178E |
| J-N225E | True | 100.00 | 146.99 | 140.0 | 292.5 | J-N245E |
| J-392 | True | 100.00 | 147.36 | 140.0 | 288.9 | J-S2178E |
| J-S1990E | True | 100.00 | 148.04 | 140.1 | 217.5 | J-S1980E |
| J-S702E | True | 100.00 | 148.51 | 140.1 | 228.9 | J-S701E |
| J-S2190E | True | 100.00 | 148.93 | 140.1 | 171.8 | J-S2180E |
| J-N1610E | True | 100.00 | 149.01 | 140.0 | 141.7 | J-N1605E |
| J-S177E | True | 100.00 | 149.46 | 140.0 | 196.1 | J-S160E |
| J-N910E | True | 133.00 | 150.00 | 287.1 | 346.9 | J-407 |
| J-S1720E | True | 100.00 | 150.10 | 140.1 | 174.7 | J-S1705E |
| J-S2279E | True | 100.00 | 150.21 | 140.1 | 140.1 | J-S2177E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S1556E | True | 100.00 | 150.63 | 140.1 | 281.3 | J-S2178E |
| J-N1060E | True | 100.00 | 151.17 | 140.0 | 198.7 | J-CLIR149A |
| J-N581E | True | 100.00 | 151.82 | 140.1 | 250.6 | J-N582E |
| J-S160E | True | 100.00 | 151.90 | 140.0 | 184.0 | J-S177E |
| J-S1679E | True | 100.00 | 151.94 | 140.1 | 179.5 | J-S1680E |
| J-N562E | True | 100.00 | 153.87 | 140.1 | 205.6 | J-N583E |
| J-N1080E | True | 100.00 | 154.37 | 140.4 | 140.0 | J-N1070E |
| J-S30E | True | 100.00 | 155.26 | 140.0 | 295.8 | J-S260E |
| J-N65E | True | 100.00 | 155.40 | 140.0 | 199.3 | J-N60E |
| J-N1756E | True | 100.00 | 155.47 | 140.0 | 320.0 | J-AN295 |
| J-S2200E | True | 100.00 | 155.85 | 147.7 | 140.0 | J-S2180E |
| J-N245E | True | 100.00 | 156.26 | 140.1 | 247.9 | J-N225E |
| J-N1140E | True | 100.00 | 156.60 | 140.0 | 337.8 | J-N1120E |
| J-N1055E | True | 100.00 | 156.67 | 140.0 | 234.1 | J-N1056E |
| J-S2205E | True | 100.00 | 156.71 | 140.0 | 162.1 | J-S1435E |
| J-N1545E | True | 100.00 | 157.27 | 140.0 | 236.2 | J-N1540E |
| J-N560E | True | 100.00 | 157.73 | 140.1 | 217.2 | J-N563E |
| J-N1510E | True | 100.00 | 157.77 | 140.0 | 284.0 | J-N1645E |
| J-S1435E | True | 100.00 | 159.79 | 140.0 | 145.2 | J-S2205E |
| J-1121 | True | 100.00 | 159.94 | 140.0 | 327.7 | J-N900E |
| J-N1195E | True | 100.00 | 160.38 | 140.0 | 281.4 | J-N1645E |
| J-N405E | True | 100.00 | 160.46 | 147.0 | 140.0 | J-373 |
| J-S1430E | True | 100.00 | 160.55 | 155.3 | 140.0 | J-S2180E |
| J-N1056E | True | 100.00 | 160.87 | 140.0 | 218.9 | J-N1055E |
| J-N480E | True | 100.00 | 162.49 | 173.3 | 140.0 | J-N465E |
| J-1162 | True | 100.00 | 162.76 | 140.0 | 287.5 | J-S2178E |
| J-N563E | True | 100.00 | 163.17 | 140.1 | 196.5 | J-N560E |
| J-S1910E | True | 100.00 | 163.17 | 140.1 | 282.5 | J-S2178E |
| J-S1670E | True | 100.00 | 163.35 | 140.0 | 153.2 | J-S700E |
| J-S1420E | True | 100.00 | 163.50 | 143.2 | 140.0 | J-S1425E |
| J-S181E | True | 100.00 | 164.06 | 140.1 | 206.2 | J-S160E |
| J-1146 | True | 100.00 | 164.76 | 140.0 | 287.4 | J-S2178E |
| J-S1440E | True | 100.00 | 165.58 | 140.0 | 154.6 | J-S1435E |
| J-328 | True | 100.00 | 165.96 | 140.1 | 283.6 | J-S2178E |
| J-S145E | True | 100.00 | 166.29 | 140.0 | 259.0 | J-S177E |
| J-S1380E | True | 100.00 | 166.36 | 140.0 | 235.3 | J-S1425E |
| J-N1530E | True | 100.00 | 166.41 | 140.0 | 296.5 | J-N1535E |
| J-S2176E | True | 100.00 | 167.31 | 172.8 | 140.0 | J-S2178E |
| J-S1980E | True | 100.00 | 168.72 | 140.0 | 140.0 | J-S1990E |
| J-1084 | True | 100.00 | 168.92 | 140.0 | 316.6 | J-AN295 |
| J-S680E | True | 100.00 | 169.39 | 140.0 | 159.5 | J-S702E |
| J-N1050E | True | 100.00 | 169.74 | 140.0 | 224.9 | J-N1055E |
| J-N1165E | True | 100.00 | 169.76 | 140.0 | 270.8 | J-N1645E |
| J-N433E | True | 100.00 | 170.37 | 140.0 | 282.6 | J-N1900E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N1655E | True | 100.00 | 170.49 | 140.0 | 198.7 | J-N1645E |
| J-S1390E | True | 100.00 | 170.72 | 143.4 | 140.0 | J-S1425E |
| J-310 | True | 100.00 | 170.73 | 140.0 | 284.6 | J-S2178E |
| J-S308E | True | 100.00 | 170.90 | 140.1 | 275.6 | J-S260E |
| J-326 | True | 100.00 | 171.05 | 140.0 | 282.3 | J-S2178E |
| J-327 | True | 100.00 | 171.13 | 140.0 | 282.3 | J-S2178E |
| J-N1620E | True | 100.00 | 171.33 | 165.7 | 140.1 | J-N1610E |
| J-S1900E | True | 100.00 | 172.30 | 140.0 | 279.1 | J-S2178E |
| J-S1530E | True | 100.00 | 172.38 | 140.0 | 159.4 | J-S1440E |
| J-816 | True | 100.00 | 172.60 | 140.0 | 327.7 | J-N900E |
| J-S1525E | True | 100.00 | 172.66 | 140.0 | 275.2 | J-S2178E |
| J-S585E | True | 100.00 | 172.97 | 140.0 | 207.7 | J-S702E |
| J-854 | True | 100.00 | 172.99 | 140.0 | 327.7 | J-N900E |
| J-S200E | True | 100.00 | 173.20 | 140.0 | 284.3 | J-S260E |
| J-S170E | True | 100.00 | 173.61 | 157.6 | 140.0 | J-S175E |
| J-S675E | True | 100.00 | 174.21 | 140.0 | 278.9 | J-S2178E |
| J-N1260E | True | 100.00 | 174.49 | 140.0 | 140.0 | J-N1265E |
| J-146 | True | 100.00 | 176.12 | 140.0 | 284.0 | J-110 |
| J-N710E | True | 100.00 | 176.46 | 140.0 | 317.5 | J-N720E |
| J-N1716E | True | 100.00 | 177.89 | 140.0 | 140.0 | J-N1715E |
| J-S1520E | True | 100.00 | 178.44 | 140.0 | 273.7 | J-S2178E |
| J-S1600E | True | 100.00 | 178.57 | 140.0 | 147.3 | J-S1425E |
| J-S605E | True | 100.00 | 179.15 | 140.0 | 273.6 | J-S2178E |
| J-374 | True | 100.00 | 179.42 | 140.0 | 333.0 | J-N510E |
| J-870 | True | 100.00 | 180.82 | 140.0 | 325.3 | J-N1645E |
| J-S2173E | True | 100.00 | 180.83 | 296.9 | 140.0 | J-S2178E |
| J-N470E | True | 100.00 | 181.47 | 184.2 | 140.0 | J-N465E |
| J-S150E | True | 100.00 | 182.21 | 140.0 | 286.6 | J-S2178E |
| J-N830E | True | 100.00 | 182.56 | 140.0 | 176.2 | J-N835E |
| J-N1640E | True | 100.00 | 183.18 | 164.1 | 140.0 | J-N1645E |
| J-N400E | True | 100.00 | 183.43 | 160.2 | 140.0 | J-373 |
| J-S1300E | True | 183.00 | 184.00 | 438.4 | 268.3 | J-S2178E |
| J-N140E | True | 183.00 | 184.00 | 482.1 | 347.1 | J-407 |
| J-S881E | True | 183.00 | 184.00 | 278.1 | 278.7 | J-S2178E |
| J-S1321E | True | 183.00 | 184.00 | 431.0 | 267.1 | J-S2178E |
| J-S1320E | True | 183.00 | 184.00 | 433.2 | 266.8 | J-S2178E |
| J-S1319E | True | 183.00 | 184.00 | 438.8 | 266.3 | J-S2178E |
| J-N70E | False | 200.00 | 184.26 | 140.0 | 159.5 | J-N65E |
| J-311 | True | 100.00 | 184.66 | 140.0 | 281.6 | J-S2178E |
| J-N720E | True | 100.00 | 184.82 | 140.0 | 296.0 | J-N710E |
| J-1170 | True | 100.00 | 184.93 | 140.0 | 232.7 | J-1171 |
| J-S2174E | True | 100.00 | 186.37 | 263.2 | 140.0 | J-S2178E |
| J-N1540E | True | 100.00 | 186.88 | 140.0 | 140.0 | J-N1545E |
| J-N1771E | True | 100.00 | 187.28 | 140.0 | 188.2 | J-N1760E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N900E | True | 133.00 | 187.45 | 140.0 | 173.5 | J-406 |
| J-HSB221 | True | 100.00 | 187.45 | 140.0 | 163.1 | J-AN227 |
| J-N1635E | True | 100.00 | 187.87 | 140.0 | 162.1 | J-N1655E |
| J-S2175E | True | 100.00 | 188.68 | 257.6 | 140.0 | J-S2178E |
| J-1171 | True | 100.00 | 190.45 | 140.0 | 212.4 | J-1170 |
| J-N561E | True | 100.00 | 190.59 | 140.1 | 156.7 | J-N562E |
| J-133 | True | 100.00 | 190.63 | 140.0 | 273.2 | J-77 |
| J-N1190E | True | 100.00 | 190.98 | 140.0 | 208.3 | J-N1195E |
| J-S309E | True | 100.00 | 191.14 | 140.0 | 232.8 | J-S308E |
| J-1166 | True | 100.00 | 191.30 | 140.0 | 256.5 | J-1150 |
| J-N640E | True | 100.00 | 191.44 | 140.1 | 292.0 | J-N631E |
| J-AN227 | False | 200.00 | 191.54 | 140.0 | 152.9 | J-HSB221 |
| J-S290E | True | 100.00 | 192.43 | 140.0 | 283.1 | J-S2178E |
| J-S1580E | True | 100.00 | 193.18 | 140.0 | 143.3 | J-S1380E |
| J-N1713E | True | 100.00 | 194.14 | 140.0 | 140.0 | J-N1714E |
| J-S580E | True | 100.00 | 194.36 | 140.0 | 177.1 | J-S585E |
| J-N1760E | True | 100.00 | 194.50 | 140.0 | 157.8 | J-N1771E |
| J-N1772E | True | 100.00 | 194.71 | 162.1 | 140.0 | J-N1771E |
| J-S635E | True | 100.00 | 194.84 | 140.0 | 271.3 | J-S2178E |
| J-N1651E | True | 100.00 | 194.84 | 140.0 | 147.2 | J-N1645E |
| J-N1270E | True | 100.00 | 195.57 | 140.0 | 143.9 | J-N1275E |
| J-N1770E | True | 100.00 | 195.64 | 169.3 | 140.0 | J-N1771E |
| J-S1540E | True | 100.00 | 196.60 | 140.0 | 261.4 | J-S1555E |
| J-381 | True | 183.00 | 196.90 | 140.0 | 188.2 | J-S2178E |
| J-S800E | True | 100.00 | 197.62 | 140.0 | 272.8 | J-S2178E |
| J-HSB220 | True | 100.00 | 198.41 | 140.0 | 164.6 | J-HSB221 |
| J-N1692E | True | 100.00 | 198.81 | 140.0 | 142.7 | J-N1760E |
| J-N1240E | True | 100.00 | 198.90 | 140.0 | 153.6 | J-N1245E |
| J-123 | True | 100.00 | 199.47 | 140.0 | 315.3 | J-794 |
| J-N1160E | True | 100.00 | 199.57 | 140.0 | 232.2 | J-N1165E |
| J-S10670U | True | 183.00 | 200.00 | 326.5 | 204.3 | J-S2178E |
| J-N1535E | True | 100.00 | 200.02 | 140.0 | 193.2 | J-N1530E |
| J-1169 | True | 100.00 | 200.68 | 141.1 | 140.1 | J-898 |
| J-N631E | True | 100.00 | 200.84 | 140.1 | 291.4 | J-N640E |
| J-N1091E | True | 200.00 | 200.93 | 140.0 | 264.4 | J-N1092E |
| J-S970E | True | 200.00 | 201.00 | 455.8 | 273.8 | J-S2178E |
| J-N890E | True | 200.00 | 201.00 | 282.8 | 233.8 | J-N880E |
| J-S990E | True | 200.00 | 201.00 | 188.1 | 273.8 | J-S2178E |
| J-S1000E | True | 200.00 | 201.00 | 210.7 | 201.1 | J-S1008E |
| J-S930E | True | 200.00 | 201.00 | 482.4 | 273.1 | J-S2178E |
| J-S1140E | True | 200.00 | 201.00 | 350.1 | 273.9 | J-S2178E |
| J-S1160E | True | 200.00 | 201.00 | 144.6 | 272.5 | J-S2178E |
| J-N870E | True | 200.00 | 201.00 | 392.2 | 346.5 | J-407 |
| J-S950E | True | 200.00 | 201.00 | 296.3 | 273.7 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S940E | True | 200.00 | 201.00 | 487.8 | 272.1 | J-S2178E |
| J-N775E | True | 200.00 | 201.00 | 479.9 | 346.9 | J-407 |
| J-N81E | True | 200.00 | 201.00 | 476.5 | 347.1 | J-407 |
| J-N435E | True | 200.00 | 201.00 | 312.4 | 303.1 | J-N437E |
| J-S1095E | True | 200.00 | 201.00 | 308.8 | 273.5 | J-S2178E |
| J-S935E | True | 200.00 | 201.00 | 487.1 | 273.6 | J-S2178E |
| J-N880E | True | 200.00 | 201.00 | 191.9 | 308.9 | J-N890E |
| J-S1775E | True | 200.00 | 201.00 | 297.2 | 265.5 | J-S2178E |
| J-S1141E | True | 200.00 | 201.00 | 463.7 | 274.0 | J-S2178E |
| J-S10660U | True | 183.00 | 201.00 | 252.8 | 198.9 | J-S2178E |
| J-S10680U | True | 200.00 | 201.00 | 363.8 | 217.1 | J-S2178E |
| J-S10690U | True | 200.00 | 201.00 | 329.8 | 227.2 | J-S2178E |
| J-S10700U | True | 200.00 | 201.00 | 388.3 | 233.2 | J-S2178E |
| J-94 | True | 200.00 | 201.00 | 420.7 | 280.0 | J-S2178E |
| J-95 | True | 200.00 | 201.00 | 415.5 | 280.1 | J-S2178E |
| J-1157 | True | 200.00 | 201.00 | 425.6 | 279.8 | J-S2178E |
| J-878 | True | 200.00 | 201.00 | 414.8 | 279.9 | J-S2178E |
| J-NS182 | True | 200.00 | 201.00 | 468.0 | 303.4 | J-AN295 |
| J-NS87 | True | 200.00 | 201.00 | 457.9 | 309.8 | J-AN295 |
| J-C235 | True | 200.00 | 201.00 | 432.4 | 281.0 | J-S2178E |
| J-406 | True | 133.00 | 201.00 | 152.6 | 152.6 | J-N900E |
| J-1175 | True | 100.00 | 201.42 | 140.0 | 278.3 | J-S2178E |
| J-S1283E | True | 100.00 | 202.43 | 140.0 | 268.3 | J-S2178E |
| J-N1630E | True | 100.00 | 202.44 | 166.5 | 140.0 | J-N1645E |
| J-393 | True | 100.00 | 202.51 | 140.0 | 252.1 | J-N1900E |
| J-N370E | True | 100.00 | 203.07 | 140.0 | 146.0 | J-373 |
| J-N1773E | True | 100.00 | 203.33 | 152.3 | 140.0 | J-N1771E |
| J-382 | True | 183.00 | 203.49 | 140.0 | 192.0 | J-S2178E |
| J-14 | True | 100.00 | 203.50 | 140.0 | 207.4 | J-13 |
| J-N1020E | True | 100.00 | 203.71 | 140.0 | 285.8 | J-N1645E |
| J-N790E | True | 100.00 | 205.16 | 140.0 | 347.2 | J-407 |
| J-1140 | True | 100.00 | 205.70 | 140.0 | 236.7 | J-N1307E |
| J-N1526E | True | 100.00 | 205.96 | 140.0 | 163.7 | J-N1540E |
| J-N1400E | True | 100.00 | 207.14 | 140.0 | 207.2 | J-N1195E |
| J-N1650E | True | 100.00 | 207.86 | 140.0 | 144.9 | J-N1645E |
| J-N1480E | True | 100.00 | 208.27 | 140.0 | 268.7 | J-N1645E |
| J-N431E | True | 100.00 | 208.67 | 140.0 | 158.3 | J-N432E |
| J-N330E | True | 100.00 | 208.76 | 140.0 | 236.2 | J-373 |
| J-N45E | True | 100.00 | 209.84 | 140.0 | 319.8 | J-N50E |
| J-N1250E | True | 100.00 | 210.15 | 140.0 | 192.6 | J-N1645E |
| J-AN226 | True | 200.00 | 210.40 | 140.0 | 142.0 | J-AN227 |
| J-N490E | True | 100.00 | 210.41 | 190.9 | 140.1 | J-N465E |
| J-N425E | True | 100.00 | 210.71 | 140.0 | 243.8 | J-N420E |
| J-N1780E | True | 100.00 | 210.75 | 170.7 | 140.0 | J-N1771E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N1691E | True | 100.00 | 210.85 | 143.8 | 140.0 | J-N1692E |
| J-S550E | True | 100.00 | 210.90 | 140.0 | 272.1 | J-S2178E |
| J-336 | True | 100.00 | 212.15 | 140.0 | 291.6 | J-AN295 |
| J-N1295E | True | 100.00 | 213.14 | 140.0 | 204.5 | J-N1645E |
| J-S1006E | True | 100.00 | 214.59 | 140.0 | 201.6 | J-S1004E |
| J-367 | True | 100.00 | 215.53 | 140.0 | 177.2 | J-88 |
| J-N1200E | True | 100.00 | 215.64 | 140.0 | 233.6 | J-N1645E |
| J-S565E | True | 100.00 | 217.14 | 140.0 | 265.6 | J-S2178E |
| J-1178 | True | 100.00 | 217.30 | 140.0 | 275.1 | J-S2178E |
| J-S560E | True | 100.00 | 217.83 | 140.0 | 265.4 | J-S2178E |
| J-N360E | True | 100.00 | 218.06 | 140.0 | 150.9 | J-N370E |
| J-S270E | True | 100.00 | 218.79 | 147.0 | 140.0 | J-S271E |
| J-1116 | True | 100.00 | 219.03 | 146.8 | 140.0 | J-1117 |
| J-S1080E | True | 100.00 | 219.06 | 140.0 | 269.0 | J-S2178E |
| J-N165E | True | 100.00 | 219.53 | 140.0 | 346.7 | J-407 |
| J-N1290E | True | 100.00 | 219.82 | 140.0 | 169.9 | J-N1295E |
| J-N421E | True | 100.00 | 220.76 | 140.0 | 214.2 | J-N420E |
| J-UL204 | True | 100.00 | 221.23 | 182.9 | 140.0 | J-N1250E |
| J-S2000E | True | 100.00 | 222.28 | 140.0 | 226.6 | J-S1990E |
| J-N1451E | True | 100.00 | 222.64 | 140.0 | 285.7 | J-N1645E |
| J-S1510E | True | 100.00 | 223.26 | 140.0 | 176.3 | J-S1520E |
| J-S740E | False | 225.00 | 223.28 | 140.0 | 269.2 | J-S2178E |
| J-S685E | True | 100.00 | 223.60 | 140.0 | 257.2 | J-S680E |
| J-S365E | True | 100.00 | 223.61 | 140.0 | 274.0 | J-S2178E |
| J-N1790E | True | 100.00 | 224.13 | 140.0 | 147.2 | J-N1771E |
| J-88 | True | 100.00 | 224.60 | 140.0 | 151.2 | J-367 |
| J-S1005E | True | 100.00 | 224.82 | 140.0 | 162.8 | J-423 |
| J-388 | True | 183.00 | 225.00 | 254.9 | 228.2 | J-387 |
| J-N1690E | True | 100.00 | 225.39 | 140.0 | 145.3 | J-N1692E |
| J-S2100E | True | 225.00 | 225.50 | 440.9 | 245.8 | J-S2178E |
| J-1114 | True | 100.00 | 225.82 | 140.0 | 214.6 | J-1117 |
| J-S2135E | True | 225.00 | 226.00 | 455.4 | 244.0 | J-S2178E |
| J-S2240E | True | 225.00 | 226.00 | 404.1 | 244.5 | J-S2178E |
| J-AN276 | True | 225.00 | 226.00 | 425.4 | 270.5 | J-N1645E |
| J-S1820E | True | 225.00 | 226.00 | 469.4 | 263.0 | J-S2178E |
| J-S780E | True | 225.00 | 226.00 | 436.4 | 268.6 | J-S2178E |
| J-S790E | True | 225.00 | 226.00 | 400.5 | 266.5 | J-S2178E |
| J-S1800E | True | 225.00 | 226.00 | 459.9 | 263.6 | J-S2178E |
| J-S1960E | True | 225.00 | 226.00 | 231.2 | 266.4 | J-S2178E |
| J-N30E | True | 225.00 | 226.00 | 384.4 | 346.7 | J-407 |
| J-S1870E | True | 225.00 | 226.00 | 324.4 | 264.2 | J-S2178E |
| J-S1230E | True | 225.00 | 226.00 | 477.2 | 265.4 | J-S2178E |
| J-N860E | True | 225.00 | 226.00 | 344.2 | 338.5 | J-N910E |
| J-S1780E | True | 225.00 | 226.00 | 461.1 | 264.1 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S1290E | True | 225.00 | 226.00 | 426.5 | 250.9 | J-S2178E |
| J-S630E | True | 225.00 | 226.00 | 166.4 | 236.7 | J-S635E |
| J-S2090E | True | 225.00 | 226.00 | 434.5 | 245.3 | J-S2178E |
| J-S1150E | True | 225.00 | 226.00 | 337.6 | 265.5 | J-S2178E |
| J-S900E | True | 225.00 | 226.00 | 214.6 | 247.9 | J-S905E |
| J-S2150E | True | 225.00 | 226.00 | 414.1 | 224.8 | J-S2178E |
| J-S720E | True | 225.00 | 226.00 | 434.7 | 268.9 | J-S2178E |
| J-N740E | True | 225.00 | 226.00 | 371.1 | 346.9 | J-407 |
| J-S2170E | True | 225.00 | 226.00 | 351.2 | 209.3 | J-S2178E |
| J-N770E | True | 225.00 | 226.00 | 456.4 | 346.6 | J-407 |
| J-S2160E | True | 225.00 | 226.00 | 381.5 | 216.5 | J-S2178E |
| J-N800E | True | 225.00 | 226.00 | 402.6 | 346.9 | J-407 |
| J-S1350E | True | 225.00 | 226.00 | 266.3 | 264.7 | J-S2178E |
| J-N760E | True | 225.00 | 226.00 | 398.2 | 346.8 | J-407 |
| J-S1340E | True | 225.00 | 226.00 | 320.8 | 264.0 | J-S2178E |
| J-S1280E | True | 225.00 | 226.00 | 354.6 | 255.8 | J-S2178E |
| J-S880E | True | 225.00 | 226.00 | 279.0 | 268.5 | J-S2178E |
| J-N840E | True | 225.00 | 226.00 | 411.1 | 345.7 | J-407 |
| J-S1360E | True | 225.00 | 226.00 | 354.0 | 263.5 | J-S2178E |
| J-S1240E | True | 225.00 | 226.00 | 464.4 | 264.7 | J-S2178E |
| J-S1930E | True | 225.00 | 226.00 | 230.9 | 264.3 | J-S2178E |
| J-N120E | True | 225.00 | 226.00 | 508.2 | 346.7 | J-407 |
| J-S1810E | True | 225.00 | 226.00 | 466.8 | 263.2 | J-S2178E |
| J-S1370E | True | 225.00 | 226.00 | 239.0 | 263.5 | J-S2178E |
| J-S820E | True | 225.00 | 226.00 | 463.3 | 266.6 | J-S2178E |
| J-N850E | True | 225.00 | 226.00 | 373.7 | 341.0 | J-N880E |
| J-S620E | True | 225.00 | 226.00 | 328.2 | 262.2 | J-S2178E |
| J-S2110E | True | 225.00 | 226.00 | 425.7 | 248.2 | J-S2178E |
| J-S1880E | True | 225.00 | 226.00 | 289.2 | 264.5 | J-S2178E |
| J-N810E | True | 225.00 | 226.00 | 442.1 | 346.8 | J-407 |
| J-S2130E | True | 225.00 | 226.00 | 437.2 | 244.0 | J-S2178E |
| J-S2140E | True | 225.00 | 226.00 | 400.8 | 228.8 | J-S2178E |
| J-N40E | True | 225.00 | 226.00 | 338.3 | 346.7 | J-407 |
| J-N1090E | True | 225.00 | 226.00 | 220.9 | 249.7 | J-N1070E |
| J-S1190E | True | 225.00 | 226.00 | 475.4 | 266.1 | J-S2178E |
| J-N635E | True | 225.00 | 226.00 | 414.0 | 346.2 | J-407 |
| J-N436E | True | 225.00 | 226.00 | 248.1 | 294.2 | J-319 |
| J-S1925E | True | 225.00 | 226.00 | 431.7 | 264.5 | J-S2178E |
| J-S1245E | True | 225.00 | 226.00 | 353.7 | 264.0 | J-S2178E |
| J-S945E | True | 225.00 | 226.00 | 465.4 | 265.4 | J-S2178E |
| J-S905E | True | 225.00 | 226.00 | 194.1 | 218.9 | J-S890E |
| J-S1151E | True | 225.00 | 226.00 | 368.5 | 264.4 | J-S2178E |
| J-S1152E | True | 225.00 | 226.00 | 273.3 | 264.1 | J-S2178E |
| J-S1885E | True | 225.00 | 226.00 | 388.5 | 264.7 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S882E | True | 225.00 | 226.00 | 155.3 | 220.7 | J-S881E |
| J-S871E | True | 225.00 | 226.00 | 460.8 | 269.7 | J-S2178E |
| J-S872E | True | 225.00 | 226.00 | 467.8 | 272.3 | J-S2178E |
| J-S902E | True | 225.00 | 226.00 | 425.5 | 273.9 | J-S2178E |
| J-S903E | True | 225.00 | 226.00 | 416.2 | 275.5 | J-S2178E |
| J-S904E | True | 225.00 | 226.00 | 418.5 | 275.8 | J-S2178E |
| J-S907E | True | 225.00 | 226.00 | 375.7 | 276.1 | J-S2178E |
| J-S908E | True | 225.00 | 226.00 | 373.3 | 276.8 | J-S2178E |
| J-S873E | True | 225.00 | 226.00 | 427.5 | 273.7 | J-S2178E |
| J-S874E | True | 225.00 | 226.00 | 429.3 | 273.7 | J-S2178E |
| J-S875E | True | 225.00 | 226.00 | 415.4 | 273.9 | J-S2178E |
| J-S906E | True | 225.00 | 226.00 | 380.2 | 275.9 | J-S2178E |
| J-S625E | True | 225.00 | 226.00 | 444.1 | 259.5 | J-S2178E |
| J-S1855E | True | 225.00 | 226.00 | 475.3 | 262.5 | J-S2178E |
| J-S1825E | True | 225.00 | 226.00 | 469.4 | 263.1 | J-S2178E |
| J-S644E | True | 225.00 | 226.00 | 449.5 | 260.9 | J-S2178E |
| J-S1302E | True | 225.00 | 226.00 | 439.4 | 258.4 | J-S2178E |
| J-S1295E | True | 225.00 | 226.00 | 425.6 | 249.4 | J-S2178E |
| J-S2111E | True | 225.00 | 226.00 | 429.2 | 246.5 | J-S2178E |
| J-S2112E | True | 225.00 | 226.00 | 429.7 | 245.5 | J-S2178E |
| J-S2113E | True | 225.00 | 226.00 | 426.2 | 236.1 | J-S2178E |
| J-S2114E | True | 225.00 | 226.00 | 419.2 | 229.2 | J-S2178E |
| J-S2115E | True | 225.00 | 226.00 | 402.9 | 227.0 | J-S2178E |
| J-S2116E | True | 225.00 | 226.00 | 376.7 | 224.1 | J-S2178E |
| J-S2118E | True | 225.00 | 226.00 | 361.3 | 221.6 | J-S2178E |
| J-S2117E | True | 225.00 | 226.00 | 324.2 | 224.1 | J-S2178E |
| J-S2155E | True | 225.00 | 226.00 | 391.6 | 220.8 | J-S2178E |
| J-S2165E | True | 225.00 | 226.00 | 350.2 | 211.2 | J-S2178E |
| J-S2171E | True | 225.00 | 226.00 | 338.2 | 198.1 | J-S2178E |
| J-S2105E | True | 225.00 | 226.00 | 405.1 | 245.6 | J-S2178E |
| J-S2106E | True | 225.00 | 226.00 | 417.5 | 240.1 | J-S2178E |
| J-S640E | True | 225.00 | 226.00 | 456.5 | 261.8 | J-S2178E |
| J-S725E | True | 225.00 | 226.00 | 206.3 | 268.9 | J-S2178E |
| J-S1301E | True | 225.00 | 226.00 | 429.1 | 256.4 | J-S2178E |
| J-N125E | True | 225.00 | 226.00 | 306.6 | 346.6 | J-407 |
| J-N750E | True | 225.00 | 226.00 | 345.2 | 346.9 | J-407 |
| J-N851E | True | 225.00 | 226.00 | 314.3 | 323.0 | J-N880E |
| J-N437E | True | 225.00 | 226.00 | 217.9 | 311.7 | J-N435E |
| J-S910E | True | 225.00 | 226.00 | 405.7 | 274.6 | J-S2178E |
| J-S2230E | True | 225.00 | 226.00 | 441.4 | 249.1 | J-S2178E |
| J-S2210E | True | 225.00 | 226.00 | 403.3 | 245.1 | J-S2178E |
| J-S2220E | True | 225.00 | 226.00 | 459.4 | 244.1 | J-S2178E |
| J-S1153E | True | 225.00 | 226.00 | 410.3 | 263.8 | J-S2178E |
| J-S1351E | True | 225.00 | 226.00 | 368.4 | 263.8 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N634E | True | 225.00 | 226.00 | 385.6 | 346.1 | J-407 |
| J-N846E | True | 225.00 | 226.00 | 380.6 | 345.0 | J-407 |
| J-N891E | True | 225.00 | 226.00 | 284.7 | 276.6 | J-N880E |
| J-N161E | True | 225.00 | 226.00 | 283.3 | 346.6 | J-407 |
| J-N141E | True | 225.00 | 226.00 | 437.4 | 346.5 | J-407 |
| J-N852E | True | 225.00 | 226.00 | 301.5 | 306.2 | J-N880E |
| J-N632E | True | 225.00 | 226.00 | 384.3 | 346.2 | J-407 |
| J-N633E | True | 225.00 | 226.00 | 463.4 | 346.0 | J-407 |
| J-841 | True | 225.00 | 226.00 | 289.1 | 245.5 | J-N880E |
| J-NS183 | True | 225.00 | 226.00 | 453.9 | 295.5 | J-AN295 |
| J-NS185 | True | 225.00 | 226.00 | 430.4 | 310.3 | J-AN295 |
| J-NS190 | True | 225.00 | 226.00 | 436.8 | 281.0 | J-AN295 |
| J-NS191 | True | 225.00 | 226.00 | 447.9 | 282.7 | J-AN295 |
| J-319 | True | 225.00 | 226.00 | 288.4 | 266.1 | J-N436E |
| J-350 | True | 225.00 | 226.00 | 383.7 | 292.4 | J-AN295 |
| J-391 | True | 225.00 | 226.00 | 471.6 | 262.8 | J-S2178E |
| J-394 | True | 225.00 | 226.00 | 347.7 | 297.4 | J-N436E |
| J-Ardmore_FortKent | True | 225.00 | 226.13 | 204.1 | 140.0 | J-S2178E |
| J-N50E | True | 100.00 | 226.73 | 140.0 | 259.4 | J-N55E |
| J-S220E | True | 100.00 | 227.91 | 140.0 | 267.2 | J-S260E |
| J-N420E | True | 100.00 | 228.05 | 140.0 | 190.5 | J-N425E |
| J-N1800E | True | 100.00 | 228.05 | 186.5 | 140.0 | J-N1771E |
| J-S190E | True | 100.00 | 228.29 | 140.0 | 211.9 | J-S200E |
| J-13 | True | 100.00 | 228.55 | 144.0 | 140.1 | J-14 |
| J-S260E | True | 100.00 | 228.69 | 140.0 | 157.8 | J-S250E |
| J-1152 | True | 100.00 | 229.33 | 140.0 | 170.6 | J-88 |
| J-S10650U | True | 183.00 | 230.00 | 304.6 | 209.4 | J-S2178E |
| J-S10710U | True | 225.00 | 230.00 | 338.2 | 224.1 | J-S2178E |
| J-S10720U | True | 183.00 | 230.00 | 166.9 | 226.9 | J-S2178E |
| J-AN253 | True | 225.00 | 230.00 | 143.3 | 197.5 | J-AN254 |
| J-AN254 | True | 225.00 | 230.00 | 166.9 | 175.5 | J-AN253 |
| J-AN255 | True | 225.00 | 230.00 | 208.4 | 225.5 | J-AN253 |
| J-AN256 | True | 225.00 | 230.00 | 241.3 | 275.0 | J-S2178E |
| J-AN260 | True | 225.00 | 230.00 | 409.4 | 271.3 | J-S2178E |
| J-AN261 | True | 225.00 | 230.00 | 433.9 | 270.9 | J-S2178E |
| J-AN262 | True | 225.00 | 230.00 | 373.8 | 271.9 | J-S2178E |
| J-263 | True | 225.00 | 230.00 | 344.2 | 272.7 | J-S2178E |
| J-AN278 | True | 225.00 | 230.00 | 309.5 | 279.2 | J-S2178E |
| J-AN280 | True | 225.00 | 230.00 | 331.8 | 276.0 | J-S2178E |
| J-283 | True | 225.00 | 230.00 | 350.8 | 273.6 | J-S2178E |
| J-AN284 | True | 225.00 | 230.00 | 310.2 | 274.1 | J-S2178E |
| J-285 | True | 225.00 | 230.00 | 297.8 | 257.6 | J-AN256 |
| J-AN286 | True | 225.00 | 230.00 | 317.1 | 280.8 | J-AN287 |
| J-AN287 | True | 225.00 | 230.00 | 204.8 | 247.8 | J-AN289 |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-AN288 | True | 225.00 | 230.00 | 375.3 | 272.7 | J-AN289 |
| J-AN289 | True | 225.00 | 230.00 | 199.0 | 251.7 | J-AN287 |
| J-AN290 | True | 225.00 | 230.00 | 375.4 | 277.0 | J-S2178E |
| J-292 | True | 225.00 | 230.00 | 348.5 | 261.6 | J-244 |
| J-298 | True | 225.00 | 230.00 | 210.7 | 199.7 | J-AN253 |
| J-299 | True | 225.00 | 230.00 | 368.2 | 274.1 | J-S2178E |
| J-300 | True | 225.00 | 230.00 | 268.3 | 262.9 | J-AN256 |
| J-302 | True | 225.00 | 230.00 | 447.0 | 268.9 | J-S2178E |
| J-386 | True | 183.00 | 230.00 | 199.3 | 231.0 | J-S2178E |
| J-421 | True | 225.00 | 230.00 | 382.8 | 275.2 | J-N1645E |
| J-309 | True | 100.00 | 230.51 | 140.0 | 226.1 | J-308 |
| J-UL203 | True | 100.00 | 230.55 | 158.3 | 140.0 | J-N1250E |
| J-S590E | True | 100.00 | 230.95 | 140.0 | 158.7 | J-S580E |
| J-S1890E | True | 100.00 | 231.32 | 140.0 | 262.6 | J-S2178E |
| J-308 | True | 100.00 | 231.46 | 140.0 | 231.7 | J-309 |
| J-1150 | True | 100.00 | 231.49 | 149.8 | 140.0 | J-1166 |
| J-87 | True | 100.00 | 231.70 | 144.4 | 140.0 | J-88 |
| J-1145 | True | 100.00 | 231.78 | 143.9 | 140.0 | J-1146 |
| J-1149 | True | 100.00 | 232.02 | 140.0 | 163.5 | J-1147 |
| J-N1279E | True | 100.00 | 232.08 | 140.0 | 168.2 | J-N1290E |
| J-H1133 | True | 100.00 | 232.41 | 140.0 | 172.4 | J-1117 |
| J-171A | True | 100.00 | 232.83 | 140.0 | 142.0 | J-N1535E |
| J-1147 | True | 100.00 | 233.44 | 140.0 | 158.6 | J-1149 |
| J-1196 | True | 100.00 | 233.57 | 140.0 | 271.1 | J-S2178E |
| J-N671E | True | 100.00 | 233.94 | 140.0 | 346.3 | J-407 |
| J-S240E | True | 100.00 | 233.96 | 140.0 | 153.8 | J-S260E |
| J-S250E | True | 100.00 | 234.30 | 145.0 | 140.0 | J-S260E |
| J-N580E | True | 100.00 | 235.16 | 140.0 | 179.7 | J-N581E |
| J-S2030E | True | 100.00 | 236.53 | 140.0 | 261.4 | J-S2178E |
| J-N1757E | True | 100.00 | 237.03 | 140.0 | 202.0 | J-N1756E |
| J-N240E | True | 100.00 | 237.45 | 140.0 | 165.4 | J-N245E |
| J-N1520E | True | 100.00 | 237.76 | 145.1 | 140.0 | J-N1510E |
| J-105 | True | 100.00 | 237.80 | 145.1 | 140.0 | J-366 |
| J-N1900E | True | 100.00 | 237.96 | 140.0 | 213.4 | J-N431E |
| J-334 | True | 100.00 | 238.86 | 140.0 | 225.0 | J-333 |
| J-S312E | True | 100.00 | 239.49 | 140.0 | 243.9 | J-S310E |
| J-385 | True | 100.00 | 240.27 | 140.0 | 217.6 | J-387 |
| J-N190E | True | 100.00 | 240.39 | 140.0 | 153.3 | J-N425E |
| J-N220E | True | 100.00 | 240.46 | 140.0 | 150.2 | J-N225E |
| J-1127 | True | 100.00 | 241.32 | 140.0 | 272.8 | J-N1645E |
| J-1173 | True | 100.00 | 241.84 | 140.0 | 245.7 | J-1172 |
| J-S1745E | True | 100.00 | 242.13 | 140.0 | 200.4 | J-S1770E |
| J-202 | True | 100.00 | 242.19 | 140.0 | 146.0 | J-N1250E |
| J-S1740E | True | 100.00 | 242.39 | 140.0 | 194.5 | J-S1745E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S1004E | True | 100.00 | 242.59 | 140.0 | 147.5 | J-423 |
| J-N1307E | True | 100.00 | 243.60 | 140.0 | 154.7 | J-1140 |
| J-N350E | True | 100.00 | 243.61 | 147.0 | 140.0 | J-N340E |
| J-333 | True | 100.00 | 243.66 | 140.0 | 206.1 | J-334 |
| J-N930E | True | 100.00 | 244.06 | 140.0 | 254.8 | J-N835E |
| J-N265E | True | 100.00 | 244.53 | 140.0 | 176.8 | J-N240E |
| J-N1890E | True | 100.00 | 245.27 | 140.0 | 156.9 | J-N1900E |
| J-1144 | True | 100.00 | 245.51 | 140.0 | 167.3 | J-1146 |
| J-1181 | True | 100.00 | 246.06 | 140.0 | 268.8 | J-S2178E |
| J-N510E | True | 100.00 | 246.16 | 158.0 | 140.0 | J-374 |
| J-N1810E | True | 100.00 | 247.47 | 148.6 | 140.0 | J-HSB221 |
| J-110 | True | 100.00 | 247.64 | 140.0 | 140.0 | J-146 |
| J-304 | True | 100.00 | 247.84 | 140.0 | 267.6 | J-S2178E |
| J-1172 | True | 100.00 | 249.82 | 140.0 | 208.5 | J-1171 |
| J-N670E | True | 100.00 | 250.00 | 156.4 | 234.5 | J-N640E |
| J-N570E | True | 100.00 | 250.00 | 417.7 | 300.3 | J-AN295 |
| J-S1770E | True | 100.00 | 250.00 | 143.1 | 190.6 | J-S1745E |
| J-N730E | True | 100.00 | 250.00 | 281.4 | 314.3 | J-N720E |
| J-S1040E | True | 100.00 | 250.00 | 173.0 | 260.7 | J-S2178E |
| J-N1700E | True | 100.00 | 250.00 | 247.8 | 157.5 | J-N1760E |
| J-S2060E | True | 100.00 | 250.00 | 440.4 | 259.3 | J-S2178E |
| J-N20E | True | 100.00 | 250.00 | 329.1 | 339.6 | J-N161E |
| J-S600E | True | 100.00 | 250.00 | 229.2 | 252.7 | J-S2178E |
| J-N430E | True | 100.00 | 250.00 | 159.7 | 167.6 | J-N1900E |
| J-N700E | True | 100.00 | 250.00 | 230.2 | 323.2 | J-N710E |
| J-S2050E | True | 100.00 | 250.00 | 455.9 | 261.3 | J-S2178E |
| J-S1060E | True | 100.00 | 250.00 | 246.1 | 259.7 | J-S2178E |
| J-S140E | True | 100.00 | 250.00 | 279.3 | 275.3 | J-S2178E |
| J-N440E | True | 100.00 | 250.00 | 156.4 | 170.3 | J-N430E |
| J-S50E | True | 100.00 | 250.00 | 349.2 | 304.6 | J-S260E |
| J-S540E | True | 100.00 | 250.00 | 187.0 | 262.6 | J-S2178E |
| J-N300E | True | 100.00 | 250.00 | 346.9 | 288.2 | J-N465E |
| J-S440E | True | 100.00 | 250.00 | 459.6 | 264.1 | J-S2178E |
| J-N1570E | True | 100.00 | 250.00 | 206.8 | 218.1 | J-N1645E |
| J-N260E | True | 100.00 | 250.00 | 232.3 | 212.9 | J-N225E |
| J-S280E | True | 100.00 | 250.00 | 205.9 | 256.4 | J-S290E |
| J-S480E | True | 100.00 | 250.00 | 463.4 | 261.4 | J-S2178E |
| J-N160E | True | 100.00 | 250.00 | 340.1 | 346.2 | J-407 |
| J-S610E | True | 100.00 | 250.00 | 253.5 | 252.3 | J-S2178E |
| J-S310E | True | 100.00 | 250.00 | 142.3 | 181.7 | J-S309E |
| J-N1730E | True | 100.00 | 250.00 | 405.6 | 267.9 | J-AN295 |
| J-N940E | True | 100.00 | 250.00 | 371.4 | 346.9 | J-407 |
| J-S120E | True | 100.00 | 250.00 | 330.9 | 277.9 | J-S260E |
| J-N1010E | True | 100.00 | 250.00 | 258.8 | 259.7 | J-N1645E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-N100E | True | 100.00 | 250.00 | 288.2 | 346.4 | J-407 |
| J-N620E | True | 100.00 | 250.00 | 388.0 | 286.2 | J-AN295 |
| J-N1430E | True | 100.00 | 250.00 | 301.2 | 231.2 | J-N1645E |
| J-N1680E | True | 100.00 | 250.00 | 530.7 | 327.7 | J-N900E |
| J-N1750E | True | 100.00 | 250.00 | 373.8 | 255.9 | J-AN295 |
| J-N500E | True | 100.00 | 250.00 | 326.6 | 330.8 | J-AN295 |
| J-N320E | True | 100.00 | 250.00 | 153.8 | 144.9 | J-N340E |
| J-N1360E | True | 100.00 | 250.00 | 312.6 | 256.8 | J-N1645E |
| J-S1110E | True | 100.00 | 250.00 | 290.1 | 260.4 | J-S2178E |
| J-S180E | True | 100.00 | 250.00 | 173.5 | 204.1 | J-S175E |
| J-S1490E | True | 100.00 | 250.00 | 272.3 | 252.8 | J-S2178E |
| J-S510E | True | 100.00 | 250.00 | 459.7 | 262.6 | J-S2178E |
| J-N1300E | True | 100.00 | 250.00 | 412.0 | 270.0 | J-N1645E |
| J-S210E | True | 100.00 | 250.00 | 186.4 | 250.4 | J-S260E |
| J-N1740E | True | 100.00 | 250.00 | 406.3 | 267.1 | J-AN295 |
| J-S340E | True | 100.00 | 250.00 | 473.9 | 266.6 | J-S2178E |
| J-N990E | True | 100.00 | 250.00 | 255.9 | 244.4 | J-N1645E |
| J-N530E | True | 100.00 | 250.00 | 321.5 | 299.2 | J-N1900E |
| J-N1030E | True | 100.00 | 250.00 | 217.5 | 254.4 | J-N1645E |
| J-S2040E | True | 100.00 | 250.00 | 169.2 | 254.5 | J-S1990E |
| J-S360E | True | 100.00 | 250.00 | 471.7 | 266.5 | J-S2178E |
| J-N1710E | True | 100.00 | 250.00 | 298.5 | 213.4 | J-N1771E |
| J-N1490E | True | 100.00 | 250.00 | 166.0 | 209.2 | J-N1645E |
| J-S60E | True | 100.00 | 250.00 | 353.7 | 290.9 | J-S260E |
| J-S380E | True | 100.00 | 250.00 | 474.0 | 266.4 | J-S2178E |
| J-N1390E | True | 100.00 | 250.00 | 327.4 | 239.3 | J-N1645E |
| J-S660E | True | 100.00 | 250.00 | 229.4 | 257.1 | J-S2178E |
| J-S670E | True | 100.00 | 250.00 | 161.5 | 249.2 | J-S685E |
| J-S40E | True | 100.00 | 250.00 | 381.9 | 285.7 | J-S260E |
| J-N680E | True | 100.00 | 250.00 | 394.6 | 346.1 | J-407 |
| J-S20E | True | 100.00 | 250.00 | 353.8 | 284.8 | J-S260E |
| J-N1280E | True | 100.00 | 250.00 | 194.2 | 176.5 | J-N1645E |
| J-N1550E | True | 100.00 | 250.00 | 161.0 | 205.7 | J-N1645E |
| J-N80E | True | 100.00 | 250.00 | 319.6 | 323.5 | J-N100E |
| J-S400E | True | 100.00 | 250.00 | 461.3 | 266.0 | J-S2178E |
| J-N600E | True | 100.00 | 250.00 | 392.6 | 289.3 | J-AN295 |
| J-N1420E | True | 100.00 | 250.00 | 299.2 | 231.1 | J-N1645E |
| J-S10E | True | 100.00 | 250.00 | 308.0 | 280.0 | J-S260E |
| J-S1940E | True | 100.00 | 250.00 | 251.5 | 258.6 | J-S2178E |
| J-S230E | True | 100.00 | 250.00 | 213.5 | 198.1 | J-S240E |
| J-N1820E | True | 100.00 | 250.00 | 387.6 | 315.1 | J-AN295 |
| J-N1220E | True | 100.00 | 250.00 | 270.3 | 189.2 | J-N1645E |
| J-N1450E | True | 100.00 | 250.00 | 399.6 | 285.7 | J-N1645E |
| J-S130E | True | 100.00 | 250.00 | 372.1 | 277.2 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S450E | True | 100.00 | 250.00 | 368.3 | 263.7 | J-S2178E |
| J-N540E | True | 100.00 | 250.00 | 370.9 | 280.3 | J-AN295 |
| J-S410E | True | 100.00 | 250.00 | 460.5 | 263.9 | J-S2178E |
| J-S370E | True | 100.00 | 250.00 | 242.8 | 265.6 | J-S2178E |
| J-N1440E | True | 100.00 | 250.00 | 372.4 | 274.7 | J-N1645E |
| J-S100E | True | 100.00 | 250.00 | 302.5 | 277.5 | J-S80E |
| J-N180E | True | 100.00 | 250.00 | 187.5 | 178.4 | J-373 |
| J-S1330E | True | 100.00 | 250.00 | 430.3 | 251.4 | J-S2178E |
| J-S470E | True | 100.00 | 250.00 | 259.4 | 265.0 | J-S2178E |
| J-S1070E | True | 100.00 | 250.00 | 265.5 | 259.9 | J-S2178E |
| J-N1720E | True | 100.00 | 250.00 | 400.8 | 263.6 | J-AN295 |
| J-N1370E | True | 100.00 | 250.00 | 325.3 | 237.3 | J-N1645E |
| J-S430E | True | 100.00 | 250.00 | 439.2 | 264.1 | J-S2178E |
| J-S1560E | True | 100.00 | 250.00 | 399.2 | 253.3 | J-S2178E |
| J-S2080E | True | 100.00 | 250.00 | 426.7 | 252.7 | J-S2178E |
| J-S350E | True | 100.00 | 250.00 | 473.1 | 266.6 | J-S2178E |
| J-S520E | True | 100.00 | 250.00 | 439.8 | 262.7 | J-S2178E |
| J-N520E | True | 100.00 | 250.00 | 349.6 | 330.7 | J-N1900E |
| J-S1470E | True | 100.00 | 250.00 | 450.6 | 253.4 | J-S2178E |
| J-N82E | True | 100.00 | 250.00 | 498.3 | 337.8 | J-AN295 |
| J-N1657E | True | 100.00 | 250.00 | 162.0 | 161.2 | J-N1645E |
| J-N1305E | True | 100.00 | 250.00 | 356.0 | 281.5 | J-N1645E |
| J-N1455E | True | 100.00 | 250.00 | 447.2 | 327.7 | J-N900E |
| J-N1825E | True | 100.00 | 250.00 | 476.8 | 314.2 | J-AN295 |
| J-N1711E | True | 100.00 | 250.00 | 284.1 | 229.2 | J-N1771E |
| J-N1712E | True | 100.00 | 250.00 | 312.9 | 232.0 | J-AN295 |
| J-N1755E | True | 100.00 | 250.00 | 329.9 | 251.8 | J-N1771E |
| J-N434E | True | 100.00 | 250.00 | 304.6 | 299.9 | J-N437E |
| J-S45E | True | 100.00 | 250.00 | 353.6 | 307.5 | J-S260E |
| J-S311E | True | 100.00 | 250.00 | 448.5 | 269.1 | J-S2178E |
| J-S2045E | True | 100.00 | 250.00 | 326.1 | 255.1 | J-S2178E |
| J-S1085E | True | 100.00 | 250.00 | 142.9 | 261.5 | J-S2178E |
| J-S909E | True | 100.00 | 250.00 | 348.9 | 272.3 | J-S2178E |
| J-S1001E | True | 100.00 | 250.00 | 327.9 | 272.3 | J-S2178E |
| J-S1002E | True | 100.00 | 250.00 | 288.1 | 261.3 | J-S1003E |
| J-S1003E | True | 100.00 | 250.00 | 184.6 | 208.5 | J-S1004E |
| J-S876E | True | 100.00 | 250.00 | 388.5 | 268.7 | J-S2178E |
| J-S878E | True | 100.00 | 250.00 | 421.4 | 268.7 | J-S2178E |
| J-S879E | True | 100.00 | 250.00 | 408.7 | 268.9 | J-S2178E |
| J-S901E | True | 100.00 | 250.00 | 359.5 | 269.1 | J-S2178E |
| J-S877E | True | 100.00 | 250.00 | 300.1 | 268.7 | J-S2178E |
| J-S595E | True | 100.00 | 250.00 | 183.3 | 254.9 | J-S2178E |
| J-S1615E | True | 100.00 | 250.00 | 424.3 | 253.4 | J-S2178E |
| J-S1747E | True | 100.00 | 250.00 | 150.9 | 197.8 | J-S1740E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-S485E | True | 100.00 | 250.00 | 465.9 | 260.9 | J-S2178E |
| J-S330E | True | 100.00 | 250.00 | 457.2 | 268.4 | J-S2178E |
| J-S2172E | True | 100.00 | 250.00 | 290.8 | 157.5 | J-S2178E |
| J-S2085E | True | 100.00 | 250.00 | 365.8 | 249.7 | J-240 |
| J-S41E | True | 100.00 | 250.00 | 360.3 | 286.7 | J-S260E |
| J-S70E | True | 100.00 | 250.00 | 185.2 | 209.6 | J-S260E |
| J-N185E | True | 100.00 | 250.00 | 216.8 | 222.8 | J-373 |
| J-N305E | True | 100.00 | 250.00 | 326.0 | 317.7 | J-N465E |
| J-N525E | True | 100.00 | 250.00 | 273.5 | 338.9 | J-AN295 |
| J-N575E | True | 100.00 | 250.00 | 423.8 | 304.9 | J-AN295 |
| J-N636E | True | 100.00 | 250.00 | 287.1 | 345.8 | J-407 |
| J-N1285E | True | 100.00 | 250.00 | 208.4 | 180.1 | J-N1645E |
| J-N1310E | True | 100.00 | 250.00 | 276.5 | 264.0 | J-N1645E |
| J-N1380E | True | 100.00 | 250.00 | 222.5 | 240.0 | J-N1645E |
| J-N1525E | True | 100.00 | 250.00 | 174.1 | 201.5 | J-N1510E |
| J-N1555E | True | 100.00 | 250.00 | 186.7 | 203.5 | J-N1550E |
| J-N1705E | True | 100.00 | 250.00 | 272.8 | 186.0 | J-N1760E |
| J-N1717E | True | 100.00 | 250.00 | 288.5 | 218.8 | J-N1771E |
| J-N541E | True | 100.00 | 250.00 | 259.6 | 249.0 | J-1135 |
| J-N542E | True | 100.00 | 250.00 | 238.7 | 258.9 | J-1135 |
| J-N543E | True | 100.00 | 250.00 | 349.6 | 275.6 | J-AN295 |
| J-N1306E | True | 100.00 | 250.00 | 332.4 | 304.5 | J-N1645E |
| J-N438E | True | 100.00 | 250.00 | 201.6 | 187.2 | J-N1900E |
| J-N1880E | True | 100.00 | 250.00 | 283.0 | 235.7 | J-N1771E |
| J-S661E | True | 100.00 | 250.00 | 371.1 | 257.8 | J-S2178E |
| J-N1681E | True | 100.00 | 250.00 | 348.5 | 324.4 | J-N900E |
| J-N1454E | True | 100.00 | 250.00 | 440.1 | 292.8 | J-N1645E |
| J-S10610U | True | 100.00 | 250.00 | 337.5 | 222.4 | J-S2178E |
| J-S10620U | True | 100.00 | 250.00 | 342.4 | 228.9 | J-S2178E |
| J-S10630U | True | 100.00 | 250.00 | 372.6 | 234.3 | J-S2178E |
| J-S10640U | True | 100.00 | 250.00 | 341.4 | 234.5 | J-S2178E |
| J-N1741E | True | 100.00 | 250.00 | 394.4 | 273.4 | J-AN295 |
| J-1091 | True | 100.00 | 250.00 | 376.8 | 255.8 | J-AN295 |
| J-11 | True | 100.00 | 250.00 | 372.9 | 254.9 | J-AN295 |
| J-1097 | True | 100.00 | 250.00 | 373.9 | 254.1 | J-AN295 |
| J-1098 | True | 100.00 | 250.00 | 300.3 | 257.7 | J-AN295 |
| J-1099 | True | 100.00 | 250.00 | 373.8 | 251.6 | J-AN295 |
| J-1081 | True | 100.00 | 250.00 | 226.4 | 231.7 | J-1080 |
| J-1079 | True | 100.00 | 250.00 | 349.8 | 254.2 | J-AN295 |
| J-1080 | True | 100.00 | 250.00 | 228.3 | 231.9 | J-1081 |
| J-1083 | True | 100.00 | 250.00 | 220.4 | 236.1 | J-1083 |
| J-1087 | True | 100.00 | 250.00 | 295.7 | 257.6 | J-AN295 |
| J-1090 | True | 100.00 | 250.00 | 382.8 | 258.5 | J-AN295 |
| J-1083 | True | 100.00 | 250.00 | 225.2 | 231.9 | J-1083 |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-1085 | True | 100.00 | 250.00 | 245.4 | 255.5 | J-1083 |
| J-1086 | True | 100.00 | 250.00 | 255.3 | 257.3 | J-AN295 |
| J-1088 | True | 100.00 | 250.00 | 362.6 | 258.2 | J-AN295 |
| J-912 | True | 100.00 | 250.00 | 390.0 | 260.9 | J-AN295 |
| J-911 | True | 100.00 | 250.00 | 254.2 | 260.9 | J-AN295 |
| J-1100 | True | 100.00 | 250.00 | 400.7 | 270.3 | J-AN295 |
| J-1101 | True | 100.00 | 250.00 | 406.3 | 273.4 | J-AN295 |
| J-1106 | True | 100.00 | 250.00 | 382.8 | 275.3 | J-AN295 |
| J-1112 | True | 100.00 | 250.00 | 370.8 | 275.7 | J-AN295 |
| J-1107 | True | 100.00 | 250.00 | 265.5 | 268.4 | J-1108 |
| J-1108 | True | 100.00 | 250.00 | 167.3 | 265.5 | J-1107 |
| J-1109 | True | 100.00 | 250.00 | 218.2 | 274.5 | J-1110 |
| J-1110 | True | 100.00 | 250.00 | 222.0 | 265.9 | J-1109 |
| J-38 | True | 100.00 | 250.00 | 389.1 | 275.0 | J-AN295 |
| J-1103 | True | 100.00 | 250.00 | 399.8 | 274.3 | J-AN295 |
| J-1104 | True | 100.00 | 250.00 | 399.0 | 274.4 | J-AN295 |
| J-1138 | True | 100.00 | 250.00 | 358.6 | 275.0 | J-AN295 |
| J-1132 | True | 100.00 | 250.00 | 241.9 | 212.5 | J-1135 |
| J-77 | True | 100.00 | 250.00 | 157.7 | 161.6 | J-133 |
| J-794 | True | 100.00 | 250.00 | 248.4 | 248.4 | J-123 |
| J-796 | True | 100.00 | 250.00 | 423.7 | 345.6 | J-407 |
| J-1120 | True | 100.00 | 250.00 | 307.5 | 299.6 | J-1121 |
| J-1118 | True | 100.00 | 250.00 | 354.6 | 327.7 | J-N900E |
| J-1119 | True | 100.00 | 250.00 | 502.5 | 327.7 | J-N900E |
| J-1130 | True | 100.00 | 250.00 | 210.7 | 240.5 | J-N1480E |
| J-70 | True | 100.00 | 250.00 | 301.7 | 261.6 | J-N1645E |
| J-1131 | True | 100.00 | 250.00 | 155.8 | 154.9 | J-171A |
| J-1129 | True | 100.00 | 250.00 | 250.2 | 252.2 | J-335 |
| J-1122 | True | 100.00 | 250.00 | 431.7 | 298.8 | J-N1645E |
| J-1124 | True | 100.00 | 250.00 | 338.2 | 269.2 | J-N1645E |
| J-1226 | True | 100.00 | 250.00 | 313.6 | 267.5 | J-N1645E |
| J-1123 | True | 100.00 | 250.00 | 388.4 | 284.2 | J-N1645E |
| J-1225 | True | 100.00 | 250.00 | 276.9 | 268.2 | J-N1645E |
| J-1163 | True | 100.00 | 250.00 | 302.1 | 268.8 | J-S2178E |
| J-1154 | True | 100.00 | 250.00 | 399.3 | 269.0 | J-S2178E |
| J-1156 | True | 100.00 | 250.00 | 400.4 | 269.2 | J-S2178E |
| J-1161 | True | 100.00 | 250.00 | 245.5 | 240.6 | J-1162 |
| J-1142 | True | 100.00 | 250.00 | 189.0 | 196.2 | J-1143 |
| J-1160 | True | 100.00 | 250.00 | 273.7 | 269.4 | J-S2178E |
| J-1143 | True | 100.00 | 250.00 | 177.6 | 194.4 | J-1144 |
| J-1155 | True | 100.00 | 250.00 | 399.5 | 269.1 | J-S2178E |
| J-825 | True | 100.00 | 250.00 | 261.9 | 269.3 | J-S2178E |
| J-1222 | True | 100.00 | 250.00 | 242.6 | 269.4 | J-S2178E |
| J-1168 | True | 100.00 | 250.00 | 425.0 | 268.1 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-1167 | True | 100.00 | 250.00 | 426.6 | 268.4 | J-S2178E |
| J-1180 | True | 100.00 | 250.00 | 164.2 | 267.9 | J-S2178E |
| J-1182 | True | 100.00 | 250.00 | 428.1 | 267.6 | J-S2178E |
| J-1177 | True | 100.00 | 250.00 | 427.2 | 267.7 | J-S2178E |
| J-1179 | True | 100.00 | 250.00 | 422.1 | 268.0 | J-S2178E |
| J-123 | True | 100.00 | 250.00 | 230.3 | 267.3 | J-S2178E |
| J-1174 | True | 100.00 | 250.00 | 157.5 | 226.6 | J-1173 |
| J-1216 | True | 100.00 | 250.00 | 443.0 | 267.4 | J-S2178E |
| J-1190 | True | 100.00 | 250.00 | 389.1 | 267.4 | J-S2178E |
| J-1191 | True | 100.00 | 250.00 | 289.4 | 267.4 | J-S2178E |
| J-1192 | True | 100.00 | 250.00 | 268.1 | 267.4 | J-S2178E |
| J-1193 | True | 100.00 | 250.00 | 255.1 | 267.4 | J-S2178E |
| J-1194 | True | 100.00 | 250.00 | 258.0 | 267.4 | J-S2178E |
| J-134 | True | 100.00 | 250.00 | 269.2 | 267.3 | J-S2178E |
| J-1188 | True | 100.00 | 250.00 | 356.8 | 267.4 | J-S2178E |
| J-1187 | True | 100.00 | 250.00 | 304.6 | 267.3 | J-S2178E |
| J-1186 | True | 100.00 | 250.00 | 351.7 | 267.3 | J-S2178E |
| J-1197 | True | 100.00 | 250.00 | 295.1 | 267.3 | J-S2178E |
| J-1185 | True | 100.00 | 250.00 | 439.6 | 267.1 | J-S2178E |
| J-1200 | True | 100.00 | 250.00 | 351.0 | 267.1 | J-S2178E |
| J-1202 | True | 100.00 | 250.00 | 377.2 | 267.2 | J-S2178E |
| J-143 | True | 100.00 | 250.00 | 321.9 | 267.1 | J-S2178E |
| J-144 | True | 100.00 | 250.00 | 446.4 | 266.9 | J-S2178E |
| J-1189 | True | 100.00 | 250.00 | 387.2 | 267.4 | J-S2178E |
| J-1198 | True | 100.00 | 250.00 | 314.9 | 267.3 | J-S2178E |
| J-147 | True | 100.00 | 250.00 | 366.9 | 267.2 | J-S2178E |
| J-148 | True | 100.00 | 250.00 | 404.6 | 267.2 | J-S2178E |
| J-1201 | True | 100.00 | 250.00 | 318.0 | 267.1 | J-S2178E |
| J-1203 | True | 100.00 | 250.00 | 338.5 | 267.1 | J-S2178E |
| J-1205 | True | 100.00 | 250.00 | 320.5 | 267.1 | J-S2178E |
| J-1206 | True | 100.00 | 250.00 | 419.9 | 266.9 | J-S2178E |
| J-1202 | True | 100.00 | 250.00 | 355.8 | 267.3 | J-S2178E |
| J-1208 | True | 100.00 | 250.00 | 447.5 | 266.2 | J-S2178E |
| J-1209 | True | 100.00 | 250.00 | 438.0 | 265.3 | J-S2178E |
| J-941 | True | 100.00 | 250.00 | 455.5 | 264.5 | J-S2178E |
| J-1210 | True | 100.00 | 250.00 | 480.4 | 262.9 | J-S2178E |
| J-1184 | True | 100.00 | 250.00 | 433.9 | 267.2 | J-S2178E |
| J-159 | True | 100.00 | 250.00 | 430.0 | 267.4 | J-S2178E |
| J-160 | True | 100.00 | 250.00 | 477.6 | 262.1 | J-S2178E |
| J-1212 | True | 100.00 | 250.00 | 460.4 | 261.8 | J-S2178E |
| J-162 | True | 100.00 | 250.00 | 405.1 | 274.2 | J-N1645E |
| J-163 | True | 100.00 | 250.00 | 416.1 | 289.6 | J-AN295 |
| J-164 | True | 100.00 | 250.00 | 400.5 | 286.3 | J-AN295 |
| J-165 | True | 100.00 | 250.00 | 402.3 | 285.3 | J-AN295 |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-166 | True | 100.00 | 250.00 | 298.5 | 284.8 | J-AN295 |
| J-167 | True | 100.00 | 250.00 | 296.8 | 284.6 | J-AN295 |
| J-168 | True | 100.00 | 250.00 | 384.6 | 283.8 | J-AN295 |
| J-169 | True | 100.00 | 250.00 | 343.2 | 285.0 | J-AN295 |
| J-170 | True | 100.00 | 250.00 | 296.7 | 284.4 | J-AN295 |
| J-171 | True | 100.00 | 250.00 | 379.0 | 282.9 | J-AN295 |
| J-172 | True | 100.00 | 250.00 | 162.6 | 284.8 | J-AN295 |
| J-173 | True | 100.00 | 250.00 | 394.3 | 285.0 | J-AN295 |
| J-174 | True | 100.00 | 250.00 | 391.1 | 284.5 | J-AN295 |
| J-S9005E | True | 100.00 | 250.00 | 389.3 | 269.9 | J-S2178E |
| J-N178E | True | 100.00 | 250.00 | 267.9 | 238.5 | J-AN295 |
| J-179 | True | 100.00 | 250.00 | 396.2 | 270.2 | J-S2178E |
| J-NS184 | True | 100.00 | 250.00 | 406.9 | 276.8 | J-AN295 |
| J-188 | True | 100.00 | 250.00 | 404.1 | 277.2 | J-AN295 |
| J-LW197 | True | 100.00 | 250.00 | 320.7 | 260.0 | J-AN295 |
| J-LW198 | True | 100.00 | 250.00 | 263.9 | 249.2 | J-336 |
| J-LW199 | True | 100.00 | 250.00 | 311.4 | 265.1 | J-AN295 |
| J-UL201 | True | 100.00 | 250.00 | 153.9 | 142.4 | J-N1645E |
| J-206 | True | 100.00 | 250.00 | 184.3 | 170.4 | J-N1645E |
| J-UL207 | True | 100.00 | 250.00 | 228.8 | 171.4 | J-N1645E |
| J-UL208 | True | 100.00 | 250.00 | 143.8 | 156.1 | J-N1645E |
| J-FH210 | True | 100.00 | 250.00 | 190.5 | 171.9 | J-N1645E |
| J-FH212 | True | 100.00 | 250.00 | 140.1 | 194.4 | J-N1645E |
| J-FH215 | True | 100.00 | 250.00 | 211.9 | 181.1 | J-N1645E |
| J-FH216 | True | 100.00 | 250.00 | 275.4 | 203.2 | J-N1645E |
| J-FH217 | True | 100.00 | 250.00 | 221.1 | 184.5 | J-N1645E |
| J-FH218 | True | 100.00 | 250.00 | 220.5 | 182.8 | J-N1645E |
| J-FH219 | True | 100.00 | 250.00 | 234.7 | 180.9 | J-N1645E |
| J-222 | True | 100.00 | 250.00 | 347.2 | 240.4 | J-AN295 |
| J-C228 | True | 100.00 | 250.00 | 482.6 | 266.6 | J-S2178E |
| J-C231 | True | 100.00 | 250.00 | 386.9 | 273.6 | J-S2178E |
| J-C232 | True | 100.00 | 250.00 | 412.7 | 271.2 | J-S2178E |
| J-C233 | True | 100.00 | 250.00 | 466.3 | 268.9 | J-S2178E |
| J-C234 | True | 100.00 | 250.00 | 316.2 | 269.8 | J-244 |
| J-C236 | True | 100.00 | 250.00 | 390.1 | 271.7 | J-S2178E |
| J-237 | True | 100.00 | 250.00 | 320.0 | 262.1 | J-240 |
| J-238 | True | 100.00 | 250.00 | 379.7 | 289.8 | J-S2178E |
| J-240 | True | 100.00 | 250.00 | 192.2 | 250.2 | J-S2178E |
| J-241 | True | 100.00 | 250.00 | 284.5 | 239.8 | J-240 |
| J-242 | True | 100.00 | 250.00 | 343.3 | 261.1 | J-S2178E |
| J-243 | True | 100.00 | 250.00 | 269.5 | 271.0 | J-244 |
| J-244 | True | 100.00 | 250.00 | 207.1 | 263.0 | J-240 |
| J-245 | True | 100.00 | 250.00 | 187.4 | 228.4 | J-240 |
| J-247 | True | 100.00 | 250.00 | 459.7 | 257.8 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-303 | True | 100.00 | 250.00 | 365.3 | 276.6 | J-N1645E |
| J-305 | True | 100.00 | 250.00 | 164.3 | 267.1 | J-S2178E |
| J-306 | True | 100.00 | 250.00 | 192.0 | 265.6 | J-S2178E |
| J-307 | True | 100.00 | 250.00 | 280.4 | 265.9 | J-S2178E |
| J-312 | True | 100.00 | 250.00 | 263.9 | 266.9 | J-S2178E |
| J-313 | True | 100.00 | 250.00 | 146.0 | 187.5 | J-310 |
| J-314 | True | 100.00 | 250.00 | 330.2 | 266.7 | J-S2178E |
| J-316 | True | 100.00 | 250.00 | 235.6 | 284.8 | J-AN295 |
| J-317 | True | 100.00 | 250.00 | 479.5 | 264.1 | J-S2178E |
| J-318 | True | 100.00 | 250.00 | 356.6 | 270.8 | J-S2178E |
| J-320 | True | 100.00 | 250.00 | 279.9 | 242.6 | J-N436E |
| J-321 | True | 100.00 | 250.00 | 305.3 | 242.6 | J-N436E |
| J-322 | True | 100.00 | 250.00 | 304.2 | 275.1 | J-AN295 |
| J-323 | True | 100.00 | 250.00 | 298.2 | 275.1 | J-AN295 |
| J-324 | True | 100.00 | 250.00 | 442.7 | 264.0 | J-S2178E |
| J-325 | True | 100.00 | 250.00 | 362.1 | 263.7 | J-S2178E |
| J-329 | True | 100.00 | 250.00 | 388.7 | 270.5 | J-S2178E |
| J-330 | True | 100.00 | 250.00 | 164.4 | 164.4 | J-331 |
| J-332 | True | 100.00 | 250.00 | 224.5 | 241.3 | J-333 |
| J-335 | True | 100.00 | 250.00 | 158.8 | 203.3 | J-334 |
| J-337 | True | 100.00 | 250.00 | 232.0 | 263.6 | J-AN295 |
| J-338 | True | 100.00 | 250.00 | 238.1 | 185.2 | J-N1645E |
| J-340 | True | 100.00 | 250.00 | 227.5 | 207.1 | J-N1645E |
| J-341 | True | 100.00 | 250.00 | 210.0 | 197.6 | J-N1645E |
| J-342 | True | 100.00 | 250.00 | 227.9 | 187.5 | J-N1645E |
| J-343 | True | 100.00 | 250.00 | 354.4 | 272.1 | J-S2178E |
| J-344 | True | 100.00 | 250.00 | 345.9 | 271.4 | J-S2178E |
| J-345 | True | 100.00 | 250.00 | 163.2 | 271.4 | J-S2178E |
| J-346 | True | 100.00 | 250.00 | 250.3 | 293.7 | J-N1900E |
| J-347 | True | 100.00 | 250.00 | 292.2 | 284.6 | J-N1900E |
| J-348 | True | 100.00 | 250.00 | 245.8 | 265.4 | J-1110 |
| J-349 | True | 100.00 | 250.00 | 396.9 | 274.4 | J-AN295 |
| J-351 | True | 100.00 | 250.00 | 401.8 | 276.1 | J-AN295 |
| J-352 | True | 100.00 | 250.00 | 409.4 | 275.6 | J-AN295 |
| J-353 | True | 100.00 | 250.00 | 396.8 | 275.3 | J-AN295 |
| J-354 | True | 100.00 | 250.00 | 388.4 | 275.0 | J-AN295 |
| J-355 | True | 100.00 | 250.00 | 388.4 | 274.8 | J-AN295 |
| J-369 | True | 100.00 | 250.00 | 446.2 | 297.1 | J-AN295 |
| J-371 | True | 100.00 | 250.00 | 233.1 | 185.6 | J-N1645E |
| J-372 | True | 100.00 | 250.00 | 271.5 | 187.8 | J-N1645E |
| J-375 | True | 100.00 | 250.00 | 439.0 | 297.0 | J-AN295 |
| J-383 | True | 100.00 | 250.00 | 228.6 | 210.1 | J-387 |
| J-384 | True | 100.00 | 250.00 | 226.7 | 205.5 | J-387 |
| J-387 | True | 100.00 | 250.00 | 159.3 | 231.7 | J-S2178E |

| Label | Satisfies Fire Flow Constraints? | Fire Flow (Needed) (L/s) | Fire Flow (Available) (L/s) | Pressure (Calculated Residual) (kPa) | Pressure (Calculated Zone Lower Limit) (kPa) | Junction w/ Minimum Pressure (Zone) |
|---|---|---|---|---|---|---|
| J-389 | True | 100.00 | 250.00 | 304.1 | 246.2 | J-240 |
| J-390 | True | 100.00 | 250.00 | 393.5 | 270.2 | J-N1645E |
| J-396 | True | 100.00 | 250.00 | 386.7 | 275.9 | J-AN295 |
| J-402 | True | 100.00 | 250.00 | 281.0 | 227.1 | J-N1771E |
| J-407 | True | 100.00 | 250.00 | 271.0 | 340.5 | J-N880E |
| J-410 | True | 200.00 | 250.00 | 241.0 | 245.3 | J-411 |
| J-411 | True | 200.00 | 250.00 | 159.1 | 192.3 | J-N910E |
| J-417 | True | 100.00 | 250.00 | 158.5 | 187.1 | J-N1645E |
| J-419 | True | 100.00 | 250.00 | 274.5 | 233.9 | J-387 |
| J-420 | True | 100.00 | 250.00 | 209.5 | 225.7 | J-240 |
| J-AN225 | True | 200.00 | 254.59 | 160.2 | 140.0 | J-AN227 |
| J-AN224 | True | 200.00 | 279.12 | 140.2 | 140.1 | J-AN227 |
| J-NS192 | True | 200.00 | 300.00 | 350.0 | 214.4 | J-AN295 |
| J-NS193 | True | 200.00 | 300.00 | 334.0 | 211.8 | J-AN295 |
| J-NS194 | True | 200.00 | 300.00 | 293.1 | 219.5 | J-AN295 |
| J-NS195 | True | 200.00 | 300.00 | 298.5 | 225.3 | J-AN295 |
| J-NS196 | True | 200.00 | 300.00 | 330.6 | 232.8 | J-AN295 |
| J-248 | True | 225.00 | 300.00 | 328.8 | 271.1 | J-N436E |
| J-AN271 | True | 200.00 | 300.00 | 273.1 | 200.7 | J-AN295 |
| J-AN295 | True | 200.00 | 300.00 | 155.4 | 182.3 | J-N1771E |
| J-AN296 | True | 200.00 | 300.00 | 182.9 | 179.5 | J-AN295 |
| J-297 | True | 200.00 | 300.00 | 158.8 | 154.0 | J-N1771E |
| J-S1920E | True | 225.00 | 327.55 | 140.0 | 233.2 | J-S2178E |
| J-N630E | True | 180.00 | 350.00 | 387.6 | 339.7 | J-N436E |
| J-S870E | True | 183.00 | 350.00 | 372.1 | 234.1 | J-S2178E |

# JUNCTION TABLE: Ultimate-AnxUpd-PHD

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S2178E | 0.09 | 557.00 | 280.8 | 585.69 | Zone - 3 (South) |
| J-240 | 7.08 | 557.00 | 292.8 | 586.92 | Zone - 3 (South) |
| J-N1645E | 0.01 | 567.23 | 293.0 | 597.17 | Zone - 1 (North) |
| J-N1650E | 0.39 | 566.64 | 299.2 | 597.21 | Zone - 1 (North) |
| J-S260E | 0.15 | 559.83 | 299.4 | 590.42 | Zone - 3 (South) |
| J-N1657E | 0.00 | 566.64 | 299.9 | 597.29 | Zone - 1 (North) |
| J-N1651E | 0.00 | 566.50 | 300.4 | 597.19 | Zone - 1 (North) |
| J-244 | 7.08 | 557.00 | 303.0 | 587.96 | Zone - 3 (South) |
| J-387 | 5.46 | 555.00 | 305.6 | 586.23 | Zone - 3 (South) |
| J-S250E | 0.20 | 558.69 | 309.8 | 590.35 | Zone - 3 (South) |
| J-S80E | 0.16 | 558.49 | 310.8 | 590.24 | Zone - 3 (South) |
| J-S240E | 0.20 | 558.39 | 311.7 | 590.24 | Zone - 3 (South) |
| J-N1605E | 0.28 | 564.86 | 316.6 | 597.20 | Zone - 1 (North) |
| J-N1600E | 0.28 | 564.86 | 316.6 | 597.21 | Zone - 1 (North) |
| J-N1640E | 0.39 | 564.76 | 317.2 | 597.17 | Zone - 1 (North) |
| J-N1610E | 0.22 | 564.64 | 318.6 | 597.19 | Zone - 1 (North) |
| J-N1655E | 0.56 | 564.60 | 318.8 | 597.18 | Zone - 1 (North) |
| J-S81E | 0.15 | 557.46 | 320.4 | 590.20 | Zone - 3 (South) |
| J-N1590E | 0.25 | 564.52 | 320.6 | 597.28 | Zone - 1 (North) |
| J-420 | 0.00 | 553.74 | 321.6 | 586.60 | Zone - 3 (South) |
| J-206 | 0.00 | 564.00 | 322.8 | 596.98 | Zone - 1 (North) |
| J-FH214 | 2.01 | 565.00 | 324.1 | 598.11 | Zone - 1 (North) |
| J-243 | 7.08 | 556.00 | 324.6 | 589.17 | Zone - 3 (South) |
| J-N900E | 1.30 | 561.42 | 326.3 | 594.76 | Zone - 1 (North) |
| J-406 | 0.00 | 561.42 | 326.3 | 594.77 | Zone - 1 (North) |
| J-FH210 | 2.01 | 564.00 | 327.6 | 597.47 | Zone - 1 (North) |
| J-FH211 | 2.01 | 564.00 | 328.7 | 597.59 | Zone - 1 (North) |
| J-S2177E | 0.22 | 552.00 | 329.5 | 585.67 | Zone - 3 (South) |
| J-S110E | 0.18 | 556.43 | 330.1 | 590.16 | Zone - 3 (South) |
| J-S10720U | 4.86 | 552.00 | 332.9 | 586.02 | Zone - 3 (South) |
| J-AN289 | 13.29 | 552.00 | 333.9 | 586.11 | Zone - 3 (South) |
| J-AN287 | 0.00 | 552.00 | 335.8 | 586.31 | Zone - 3 (South) |
| J-S70E | 0.18 | 556.77 | 339.3 | 591.44 | Zone - 3 (South) |
| J-N1630E | 0.17 | 562.41 | 339.9 | 597.14 | Zone - 1 (North) |
| J-N1635E | 0.81 | 562.41 | 340.0 | 597.15 | Zone - 1 (North) |
| J-417 | 28.83 | 561.00 | 340.4 | 595.78 | Zone - 1 (North) |
| J-FH215 | 2.01 | 562.00 | 342.2 | 596.97 | Zone - 1 (North) |
| J-S90E | 0.11 | 554.92 | 344.4 | 590.11 | Zone - 3 (South) |
| J-N1275E | 0.00 | 562.23 | 345.9 | 597.58 | Zone - 1 (North) |
| J-N1295E | 0.00 | 562.22 | 346.1 | 597.58 | Zone - 1 (North) |
| J-AN295 | 0.00 | 555.00 | 348.0 | 590.56 | Zone - 2 (North) |
| J-S2279E | 0.00 | 550.09 | 348.1 | 585.67 | Zone - 3 (South) |
| J-407 | 0.00 | 559.35 | 348.3 | 594.94 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S210E | 0.38 | 553.60 | 348.9 | 589.25 | Zone - 3 (South) |
| J-FH217 | 2.01 | 561.00 | 350.0 | 596.77 | Zone - 1 (North) |
| J-N1620E | 0.47 | 561.32 | 350.8 | 597.16 | Zone - 1 (North) |
| J-N1681E | 0.00 | 559.00 | 352.0 | 594.97 | Zone - 1 (North) |
| J-N436E | 0.38 | 557.50 | 352.6 | 593.53 | Zone - 2 (North) |
| J-S50E | 0.18 | 556.28 | 354.6 | 592.50 | Zone - 3 (South) |
| J-245 | 7.08 | 551.00 | 354.6 | 587.24 | Zone - 3 (South) |
| J-N1771E | 0.28 | 553.83 | 355.2 | 590.12 | Zone - 2 (North) |
| J-S45E | 0.00 | 556.28 | 355.9 | 592.65 | Zone - 3 (South) |
| J-S100E | 0.26 | 553.41 | 358.5 | 590.04 | Zone - 3 (South) |
| J-9 | 0.00 | 556.00 | 359.1 | 592.69 | Zone - 3 (South) |
| J-FH218 | 2.01 | 560.00 | 361.0 | 596.88 | Zone - 1 (North) |
| J-FH219 | 2.01 | 560.00 | 362.9 | 597.08 | Zone - 1 (North) |
| J-S10E | 0.26 | 553.21 | 365.3 | 590.53 | Zone - 3 (South) |
| J-S30E | 0.01 | 554.00 | 367.0 | 591.50 | Zone - 3 (South) |
| J-N1760E | 0.00 | 552.61 | 368.5 | 590.26 | Zone - 2 (North) |
| J-419 | 0.00 | 548.86 | 368.7 | 586.53 | Zone - 3 (South) |
| J-386 | 4.86 | 548.00 | 372.2 | 586.03 | Zone - 3 (South) |
| J-388 | 3.00 | 548.00 | 372.6 | 586.07 | Zone - 3 (South) |
| J-241 | 7.08 | 549.00 | 372.6 | 587.07 | Zone - 3 (South) |
| J-N880E | 0.83 | 556.43 | 373.9 | 594.63 | Zone - 2 (North) |
| J-N1290E | 0.58 | 559.58 | 373.9 | 597.78 | Zone - 1 (North) |
| J-N1692E | 0.00 | 552.01 | 374.8 | 590.30 | Zone - 2 (North) |
| J-S60E | 0.18 | 553.70 | 376.2 | 592.14 | Zone - 3 (South) |
| J-AN286 | 0.00 | 548.00 | 376.3 | 586.45 | Zone - 3 (South) |
| J-319 | 0.00 | 555.00 | 377.0 | 593.52 | Zone - 2 (North) |
| J-338 | 0.00 | 560.00 | 377.9 | 598.62 | Zone - 1 (North) |
| J-342 | 0.00 | 560.00 | 379.6 | 598.79 | Zone - 1 (North) |
| J-N1279E | 0.00 | 559.15 | 379.8 | 597.96 | Zone - 1 (North) |
| J-371 | 0.00 | 559.73 | 380.8 | 598.64 | Zone - 1 (North) |
| J-S120E | 0.26 | 550.20 | 382.0 | 589.23 | Zone - 3 (South) |
| J-383 | 8.46 | 547.00 | 383.9 | 586.23 | Zone - 3 (South) |
| J-AN227 | 26.09 | 550.00 | 385.2 | 589.36 | Zone - 2 (North) |
| J-N437E | 0.28 | 554.50 | 385.3 | 593.87 | Zone - 2 (North) |
| J-HSB221 | 2.87 | 550.00 | 385.5 | 589.39 | Zone - 2 (North) |
| J-UL208 | 6.45 | 557.00 | 387.0 | 596.55 | Zone - 1 (North) |
| J-FH216 | 18.03 | 556.00 | 389.2 | 595.77 | Zone - 1 (North) |
| J-N1490E | 0.39 | 561.36 | 389.8 | 601.18 | Zone - 1 (North) |
| J-N1900E | 0.00 | 554.00 | 390.5 | 593.90 | Zone - 2 (North) |
| J-AN226 | 13.47 | 549.50 | 391.1 | 589.47 | Zone - 2 (North) |
| J-AN224 | 10.03 | 550.00 | 391.8 | 590.03 | Zone - 2 (North) |
| J-N1772E | 0.00 | 550.02 | 391.9 | 590.07 | Zone - 2 (North) |
| J-297 | 0.00 | 550.00 | 394.8 | 590.34 | Zone - 2 (North) |
| J-N1691E | 0.30 | 550.03 | 395.0 | 590.39 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-AN256 | 0.00 | 545.00 | 395.5 | 585.41 | Zone - 3 (South) |
| J-FH212 | 2.01 | 559.00 | 395.8 | 599.44 | Zone - 1 (North) |
| J-N1773E | 0.25 | 549.50 | 396.4 | 590.01 | Zone - 2 (North) |
| J-UL207 | 6.45 | 556.00 | 396.5 | 596.52 | Zone - 1 (North) |
| J-237 | 7.08 | 547.00 | 397.6 | 587.63 | Zone - 3 (South) |
| J-S2176E | 0.22 | 545.00 | 397.8 | 585.65 | Zone - 3 (South) |
| J-N1270E | 0.39 | 557.12 | 398.1 | 597.79 | Zone - 1 (North) |
| J-341 | 0.00 | 559.00 | 398.5 | 599.72 | Zone - 1 (North) |
| J-N1550E | 0.00 | 560.09 | 399.5 | 600.91 | Zone - 1 (North) |
| J-S41E | 0.18 | 550.96 | 399.5 | 591.78 | Zone - 3 (South) |
| J-C234 | 4.90 | 547.00 | 400.4 | 587.92 | Zone - 3 (South) |
| J-S20E | 0.26 | 550.58 | 400.5 | 591.50 | Zone - 3 (South) |
| J-N1690E | 0.36 | 549.51 | 401.0 | 590.48 | Zone - 2 (North) |
| J-S230E | 0.29 | 548.62 | 401.1 | 589.60 | Zone - 3 (South) |
| J-S220E | 0.20 | 547.80 | 401.9 | 588.86 | Zone - 3 (South) |
| J-AN278 | 19.71 | 545.00 | 402.7 | 586.15 | Zone - 3 (South) |
| J-N1770E | 0.30 | 548.94 | 403.8 | 590.20 | Zone - 2 (North) |
| J-N435E | 0.66 | 552.50 | 405.4 | 593.92 | Zone - 2 (North) |
| J-N1555E | 0.41 | 559.37 | 405.4 | 600.79 | Zone - 1 (North) |
| J-389 | 0.00 | 545.59 | 405.5 | 587.03 | Zone - 3 (South) |
| J-N632E | 0.00 | 553.00 | 405.6 | 594.45 | Zone - 2 (North) |
| J-N434E | 0.19 | 552.50 | 405.6 | 593.95 | Zone - 2 (North) |
| J-N634E | 0.00 | 553.00 | 406.1 | 594.49 | Zone - 2 (North) |
| J-394 | 0.00 | 552.00 | 406.2 | 593.50 | Zone - 2 (North) |
| J-N1260E | 0.17 | 556.25 | 406.3 | 597.77 | Zone - 1 (North) |
| J-N1265E | 0.01 | 556.25 | 406.4 | 597.77 | Zone - 1 (North) |
| J-HSB220 | 2.87 | 548.00 | 406.6 | 589.55 | Zone - 2 (North) |
| J-347 | 0.00 | 552.37 | 406.8 | 593.93 | Zone - 2 (North) |
| J-300 | 0.00 | 544.00 | 406.9 | 585.57 | Zone - 3 (South) |
| J-238 | 0.00 | 548.98 | 408.0 | 590.67 | Zone - 3 (South) |
| J-AN225 | 13.19 | 548.00 | 409.0 | 589.79 | Zone - 2 (North) |
| J-320 | 0.00 | 551.50 | 411.3 | 593.52 | Zone - 2 (North) |
| J-385 | 4.86 | 544.00 | 411.4 | 586.03 | Zone - 3 (South) |
| J-340 | 0.00 | 558.53 | 412.6 | 600.70 | Zone - 1 (North) |
| J-S1003E | 0.00 | 543.76 | 413.1 | 585.96 | Zone - 3 (South) |
| J-381 | 16.71 | 543.00 | 413.3 | 585.23 | Zone - 3 (South) |
| J-382 | 9.00 | 543.00 | 413.7 | 585.27 | Zone - 3 (South) |
| J-N1280E | 0.41 | 555.65 | 415.5 | 598.11 | Zone - 1 (North) |
| J-N1810E | 0.00 | 547.27 | 416.1 | 589.79 | Zone - 2 (North) |
| J-N1525E | 0.34 | 558.23 | 416.9 | 600.83 | Zone - 1 (North) |
| J-UL201 | 6.45 | 554.00 | 417.3 | 596.64 | Zone - 1 (North) |
| J-N1285E | 0.00 | 555.54 | 418.9 | 598.34 | Zone - 1 (North) |
| J-N1757E | 0.24 | 548.09 | 418.9 | 590.89 | Zone - 2 (North) |
| J-N1756E | 0.27 | 548.09 | 419.1 | 590.91 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N438E | 1.11 | 551.00 | 420.0 | 593.91 | Zone - 2 (North) |
| J-393 | 0.01 | 551.00 | 420.0 | 593.91 | Zone - 2 (North) |
| J-384 | 4.86 | 543.00 | 421.6 | 586.07 | Zone - 3 (South) |
| J-S2117E | 0.01 | 543.00 | 421.8 | 586.10 | Zone - 3 (South) |
| J-S2172E | 0.00 | 542.68 | 423.1 | 585.91 | Zone - 3 (South) |
| J-S2171E | 0.30 | 542.68 | 423.3 | 585.93 | Zone - 3 (South) |
| J-S130E | 0.16 | 545.45 | 423.3 | 588.71 | Zone - 3 (South) |
| J-S2175E | 0.00 | 542.30 | 424.0 | 585.62 | Zone - 3 (South) |
| J-S2174E | 0.15 | 542.30 | 424.1 | 585.64 | Zone - 3 (South) |
| J-N433E | 1.19 | 550.50 | 424.7 | 593.90 | Zone - 2 (North) |
| J-N1780E | 0.25 | 546.55 | 424.8 | 589.96 | Zone - 2 (North) |
| J-Ardmore_FortKent | 14.88 | 542.00 | 425.0 | 585.42 | Zone - 3 (South) |
| J-AN277 | 26.16 | 545.00 | 425.0 | 588.43 | Zone - 3 (South) |
| J-S40E | 0.26 | 548.21 | 425.1 | 591.64 | Zone - 3 (South) |
| J-N1250E | 0.00 | 553.33 | 425.1 | 596.76 | Zone - 1 (North) |
| J-AN296 | 21.00 | 547.00 | 426.3 | 590.56 | Zone - 2 (North) |
| J-N680E | 0.00 | 550.68 | 426.3 | 594.24 | Zone - 2 (North) |
| J-S2170E | 0.00 | 542.42 | 426.6 | 586.01 | Zone - 3 (South) |
| J-N1245E | 0.50 | 554.27 | 426.6 | 597.86 | Zone - 1 (North) |
| J-372 | 0.00 | 555.08 | 426.8 | 598.69 | Zone - 1 (North) |
| J-S2165E | 0.27 | 542.33 | 427.6 | 586.02 | Zone - 3 (South) |
| J-346 | 0.00 | 550.00 | 429.7 | 593.91 | Zone - 2 (North) |
| J-N1240E | 0.25 | 553.76 | 430.3 | 597.73 | Zone - 1 (North) |
| J-330 | 0.00 | 541.90 | 431.1 | 585.95 | Zone - 3 (South) |
| J-331 | 0.01 | 541.90 | 431.1 | 585.95 | Zone - 3 (South) |
| J-N1712E | 0.64 | 546.68 | 431.3 | 590.75 | Zone - 2 (North) |
| J-N1220E | 0.00 | 554.65 | 431.8 | 598.77 | Zone - 1 (North) |
| J-N1890E | 0.00 | 549.70 | 432.6 | 593.90 | Zone - 2 (North) |
| J-N1530E | 0.24 | 560.57 | 434.0 | 604.92 | Zone - 1 (North) |
| J-AN280 | 29.31 | 542.00 | 434.6 | 586.40 | Zone - 3 (South) |
| J-N630E | 0.00 | 549.82 | 435.5 | 594.32 | Zone - 2 (North) |
| J-1135 | 0.29 | 547.00 | 435.5 | 591.50 | Zone - 2 (North) |
| J-S2118E | 0.38 | 541.53 | 435.6 | 586.04 | Zone - 3 (South) |
| J-S10710U | 11.61 | 541.50 | 435.7 | 586.02 | Zone - 3 (South) |
| J-N635E | 0.16 | 549.82 | 436.2 | 594.39 | Zone - 2 (North) |
| J-373 | 0.00 | 547.64 | 436.4 | 592.23 | Zone - 2 (North) |
| J-N1480E | 0.30 | 560.49 | 436.5 | 605.09 | Zone - 1 (North) |
| J-S10670U | 4.30 | 541.00 | 436.8 | 585.63 | Zone - 3 (South) |
| J-303 | 5.73 | 552.71 | 436.8 | 597.34 | Zone - 1 (North) |
| J-N1510E | 0.01 | 556.47 | 436.9 | 601.11 | Zone - 1 (North) |
| J-S1004E | 0.00 | 541.32 | 436.9 | 585.96 | Zone - 3 (South) |
| J-202 | 6.45 | 552.00 | 437.0 | 596.65 | Zone - 1 (North) |
| J-N1140E | 0.30 | 550.03 | 437.2 | 594.70 | Zone - 2 (North) |
| J-S1770E | 0.16 | 541.84 | 438.4 | 586.63 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N1570E | 0.50 | 556.53 | 439.0 | 601.39 | Zone - 1 (North) |
| J-S10680U | 4.30 | 541.00 | 439.4 | 585.89 | Zone - 3 (South) |
| J-S2173E | 0.20 | 540.80 | 439.5 | 585.70 | Zone - 3 (South) |
| J-C231 | 4.90 | 543.00 | 439.8 | 587.94 | Zone - 3 (South) |
| J-S1002E | 0.01 | 541.02 | 439.9 | 585.96 | Zone - 3 (South) |
| J-S10690U | 4.30 | 541.00 | 439.9 | 585.95 | Zone - 3 (South) |
| J-1134 | 0.29 | 546.50 | 440.4 | 591.50 | Zone - 2 (North) |
| J-AN253 | 12.09 | 540.00 | 440.9 | 585.05 | Zone - 3 (South) |
| J-N465E | 0.01 | 547.78 | 441.3 | 592.88 | Zone - 2 (North) |
| J-AN288 | 0.00 | 541.00 | 441.5 | 586.11 | Zone - 3 (South) |
| J-N1520E | 0.34 | 555.95 | 442.0 | 601.11 | Zone - 1 (North) |
| J-N671E | 0.39 | 549.07 | 442.2 | 594.25 | Zone - 2 (North) |
| J-1136 | 0.29 | 546.30 | 442.4 | 591.50 | Zone - 2 (North) |
| J-1133 | 0.29 | 546.30 | 442.4 | 591.50 | Zone - 2 (North) |
| J-S1001E | 0.01 | 540.72 | 442.8 | 585.96 | Zone - 3 (South) |
| J-N631E | 0.34 | 549.02 | 443.2 | 594.30 | Zone - 2 (North) |
| J-N405E | 0.30 | 546.93 | 443.3 | 592.23 | Zone - 2 (North) |
| J-423 | 0.01 | 540.56 | 444.4 | 585.96 | Zone - 3 (South) |
| J-242 | 7.08 | 542.00 | 444.6 | 587.43 | Zone - 3 (South) |
| J-N890E | 3.69 | 549.14 | 444.8 | 594.59 | Zone - 2 (North) |
| J-796 | 0.00 | 549.09 | 445.2 | 594.58 | Zone - 2 (North) |
| J-1080 | 0.19 | 545.50 | 445.4 | 591.01 | Zone - 2 (North) |
| J-N431E | 1.27 | 548.38 | 445.5 | 593.89 | Zone - 2 (North) |
| J-S2085E | 1.27 | 541.50 | 445.5 | 587.02 | Zone - 3 (South) |
| J-794 | 0.17 | 549.00 | 446.1 | 594.58 | Zone - 2 (North) |
| J-123 | 0.00 | 549.00 | 446.1 | 594.58 | Zone - 2 (North) |
| J-N1526E | 0.34 | 556.04 | 446.2 | 601.63 | Zone - 1 (North) |
| J-1081 | 0.00 | 545.40 | 446.3 | 591.01 | Zone - 2 (North) |
| J-N440E | 0.39 | 548.27 | 446.5 | 593.89 | Zone - 2 (North) |
| J-N1540E | 0.24 | 556.56 | 446.5 | 602.18 | Zone - 1 (North) |
| J-N1545E | 0.01 | 556.56 | 446.5 | 602.18 | Zone - 1 (North) |
| J-N161E | 0.00 | 548.50 | 446.7 | 594.14 | Zone - 2 (North) |
| J-N430E | 0.58 | 548.25 | 446.7 | 593.89 | Zone - 2 (North) |
| J-14 | 0.29 | 545.20 | 448.2 | 590.99 | Zone - 2 (North) |
| J-S909E | 0.00 | 540.11 | 448.8 | 585.96 | Zone - 3 (South) |
| J-110 | 0.03 | 548.70 | 449.0 | 594.58 | Zone - 2 (North) |
| J-146 | 0.00 | 548.70 | 449.0 | 594.58 | Zone - 2 (North) |
| J-N425E | 0.47 | 546.48 | 449.2 | 592.38 | Zone - 2 (North) |
| J-N1056E | 0.22 | 552.23 | 449.2 | 598.13 | Zone - 1 (North) |
| J-292 | 14.91 | 542.00 | 449.2 | 587.90 | Zone - 3 (South) |
| J-N1535E | 0.24 | 560.57 | 449.2 | 606.47 | Zone - 1 (North) |
| J-N1055E | 0.45 | 552.23 | 449.3 | 598.14 | Zone - 1 (North) |
| J-345 | 0.05 | 540.00 | 449.7 | 585.95 | Zone - 3 (South) |
| J-N1120E | 0.47 | 548.63 | 450.5 | 594.66 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-343 | 0.00 | 539.86 | 451.0 | 585.95 | Zone - 3 (South) |
| J-S175E | 0.00 | 542.50 | 451.0 | 588.59 | Zone - 3 (South) |
| J-S1745E | 0.00 | 540.53 | 451.2 | 586.64 | Zone - 3 (South) |
| J-S190E | 0.16 | 542.51 | 451.4 | 588.63 | Zone - 3 (South) |
| J-N100E | 0.30 | 547.86 | 451.9 | 594.03 | Zone - 2 (North) |
| J-77 | 0.03 | 548.40 | 451.9 | 594.58 | Zone - 2 (North) |
| J-13 | 0.29 | 544.80 | 452.1 | 590.99 | Zone - 2 (North) |
| J-N1755E | 0.24 | 544.77 | 452.1 | 590.97 | Zone - 2 (North) |
| J-S200E | 0.16 | 542.51 | 452.2 | 588.72 | Zone - 3 (South) |
| J-N225E | 0.36 | 546.22 | 452.9 | 592.50 | Zone - 2 (North) |
| J-248 | 5.30 | 548.00 | 453.3 | 594.31 | Zone - 2 (North) |
| J-N1400E | 0.47 | 554.49 | 453.7 | 600.85 | Zone - 1 (North) |
| J-841 | 0.00 | 548.21 | 453.8 | 594.58 | Zone - 2 (North) |
| J-S2116E | 0.24 | 539.70 | 454.1 | 586.10 | Zone - 3 (South) |
| J-S908E | 0.00 | 539.50 | 454.3 | 585.92 | Zone - 3 (South) |
| J-S1005E | 0.01 | 539.50 | 454.7 | 585.96 | Zone - 3 (South) |
| J-S308E | 0.15 | 542.58 | 455.1 | 589.08 | Zone - 3 (South) |
| J-N910E | 1.06 | 548.05 | 455.1 | 594.55 | Zone - 2 (North) |
| J-S10610U | 4.30 | 539.50 | 455.4 | 586.03 | Zone - 3 (South) |
| J-N636E | 0.39 | 547.87 | 455.4 | 594.40 | Zone - 2 (North) |
| J-S180E | 0.18 | 542.05 | 455.4 | 588.59 | Zone - 3 (South) |
| J-N1200E | 0.34 | 553.55 | 455.6 | 600.11 | Zone - 1 (North) |
| J-133 | 0.00 | 548.00 | 455.8 | 594.58 | Zone - 2 (North) |
| J-S1775E | 0.19 | 540.00 | 456.4 | 586.63 | Zone - 3 (South) |
| J-N400E | 0.56 | 545.58 | 456.5 | 592.23 | Zone - 2 (North) |
| J-N1800E | 0.50 | 543.21 | 456.6 | 589.87 | Zone - 2 (North) |
| J-N1092E | 0.41 | 547.99 | 456.7 | 594.65 | Zone - 2 (North) |
| J-N530E | 0.49 | 547.22 | 456.7 | 593.89 | Zone - 2 (North) |
| J-UL203 | 0.00 | 550.00 | 456.8 | 596.67 | Zone - 1 (North) |
| J-283 | 0.00 | 539.00 | 456.9 | 585.68 | Zone - 3 (South) |
| J-N540E | 0.00 | 544.94 | 456.9 | 591.62 | Zone - 2 (North) |
| J-1083 | 0.00 | 544.30 | 457.2 | 591.02 | Zone - 2 (North) |
| J-N178E | 0.00 | 544.00 | 457.6 | 590.75 | Zone - 2 (North) |
| J-S1006E | 0.01 | 539.19 | 457.8 | 585.96 | Zone - 3 (South) |
| J-N851E | 0.17 | 547.70 | 458.3 | 594.53 | Zone - 2 (North) |
| J-N1195E | 0.47 | 553.69 | 458.3 | 600.52 | Zone - 1 (North) |
| J-222 | 0.00 | 544.00 | 458.6 | 590.86 | Zone - 2 (North) |
| J-N1880E | 0.68 | 544.00 | 458.8 | 590.88 | Zone - 2 (North) |
| J-N1085E | 0.25 | 547.98 | 459.0 | 594.88 | Zone - 2 (North) |
| J-N1165E | 0.34 | 553.33 | 459.0 | 600.23 | Zone - 1 (North) |
| J-N520E | 0.22 | 546.84 | 460.3 | 593.87 | Zone - 2 (North) |
| J-S10630U | 4.30 | 539.00 | 460.6 | 586.06 | Zone - 3 (South) |
| J-S906E | 0.00 | 538.89 | 460.6 | 585.96 | Zone - 3 (South) |
| J-S2160E | 0.00 | 539.00 | 460.7 | 586.07 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-AN254 | 6.51 | 538.00 | 460.7 | 585.07 | Zone - 3 (South) |
| J-1083 | 0.19 | 543.90 | 461.2 | 591.02 | Zone - 2 (North) |
| J-AN255 | 6.51 | 538.00 | 461.8 | 585.19 | Zone - 3 (South) |
| J-N1190E | 0.00 | 553.06 | 461.9 | 600.26 | Zone - 1 (North) |
| J-N401E | 0.01 | 545.00 | 462.2 | 592.23 | Zone - 2 (North) |
| J-N420E | 0.53 | 545.15 | 462.3 | 592.38 | Zone - 2 (North) |
| J-1130 | 0.00 | 559.90 | 462.4 | 607.15 | Zone - 1 (North) |
| J-N370E | 0.22 | 544.95 | 462.4 | 592.20 | Zone - 2 (North) |
| J-N460E | 0.25 | 545.58 | 462.9 | 592.88 | Zone - 2 (North) |
| J-S2140E | 0.36 | 538.87 | 463.1 | 586.18 | Zone - 3 (South) |
| J-1079 | 0.17 | 543.67 | 463.1 | 590.99 | Zone - 2 (North) |
| J-N640E | 0.30 | 546.96 | 463.2 | 594.29 | Zone - 2 (North) |
| J-285 | 0.00 | 538.00 | 463.3 | 585.34 | Zone - 3 (South) |
| J-AN284 | 21.69 | 538.00 | 463.7 | 585.38 | Zone - 3 (South) |
| J-N543E | 0.00 | 544.00 | 463.7 | 591.38 | Zone - 2 (North) |
| J-N432E | 0.16 | 546.50 | 463.8 | 593.89 | Zone - 2 (North) |
| J-S1740E | 0.15 | 539.22 | 464.0 | 586.64 | Zone - 3 (South) |
| J-S10660U | 4.30 | 538.00 | 464.1 | 585.42 | Zone - 3 (South) |
| J-N421E | 0.00 | 545.00 | 464.3 | 592.44 | Zone - 2 (North) |
| J-N542E | 0.29 | 544.00 | 464.5 | 591.46 | Zone - 2 (North) |
| J-1132 | 0.30 | 544.00 | 464.9 | 591.50 | Zone - 2 (North) |
| J-321 | 0.01 | 546.00 | 465.1 | 593.52 | Zone - 2 (North) |
| J-171A | 0.00 | 559.40 | 465.2 | 606.93 | Zone - 1 (North) |
| J-N541E | 0.29 | 544.00 | 465.2 | 591.54 | Zone - 2 (North) |
| J-S309E | 0.22 | 541.23 | 465.5 | 588.79 | Zone - 3 (South) |
| J-421 | 0.00 | 548.50 | 465.6 | 596.08 | Zone - 1 (North) |
| J-S1300E | 0.08 | 539.04 | 465.8 | 586.63 | Zone - 3 (South) |
| J-S2080E | 0.53 | 539.52 | 465.8 | 587.12 | Zone - 3 (South) |
| J-S2155E | 0.36 | 538.50 | 466.0 | 586.12 | Zone - 3 (South) |
| J-N891E | 0.00 | 546.90 | 466.4 | 594.56 | Zone - 2 (North) |
| J-N141E | 0.00 | 546.50 | 466.5 | 594.17 | Zone - 2 (North) |
| J-S907E | 0.00 | 538.28 | 466.5 | 585.95 | Zone - 3 (South) |
| J-N1790E | 0.41 | 542.17 | 466.9 | 589.87 | Zone - 2 (North) |
| J-263 | 13.77 | 538.00 | 466.9 | 585.71 | Zone - 3 (South) |
| J-1160 | 0.22 | 538.30 | 467.1 | 586.03 | Zone - 3 (South) |
| J-N700E | 0.75 | 546.50 | 467.8 | 594.30 | Zone - 2 (North) |
| J-N360E | 0.00 | 544.37 | 467.9 | 592.18 | Zone - 2 (North) |
| J-299 | 0.00 | 538.00 | 468.2 | 585.84 | Zone - 3 (South) |
| J-S170E | 0.20 | 540.70 | 468.7 | 588.59 | Zone - 3 (South) |
| J-411 | 0.00 | 546.60 | 469.1 | 594.53 | Zone - 2 (North) |
| J-344 | 0.00 | 538.00 | 469.3 | 585.95 | Zone - 3 (South) |
| J-318 | 0.00 | 538.00 | 469.3 | 585.95 | Zone - 3 (South) |
| J-S2115E | 0.34 | 538.19 | 469.6 | 586.17 | Zone - 3 (South) |
| J-C236 | 4.90 | 538.00 | 469.9 | 586.01 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N1420E | 0.56 | 554.36 | 469.9 | 602.37 | Zone - 1 (North) |
| J-N340E | 0.30 | 544.15 | 469.9 | 592.16 | Zone - 2 (North) |
| J-366 | 0.00 | 538.00 | 469.9 | 586.01 | Zone - 3 (South) |
| J-1222 | 0.00 | 538.00 | 470.0 | 586.03 | Zone - 3 (South) |
| J-1162 | 0.17 | 538.00 | 470.1 | 586.03 | Zone - 3 (South) |
| J-S2106E | 0.19 | 538.37 | 470.1 | 586.40 | Zone - 3 (South) |
| J-402 | 0.00 | 542.80 | 470.1 | 590.83 | Zone - 2 (North) |
| J-N852E | 0.00 | 546.50 | 470.2 | 594.54 | Zone - 2 (North) |
| J-S877E | 0.51 | 538.00 | 470.3 | 586.05 | Zone - 3 (South) |
| J-N835E | 0.01 | 546.41 | 471.1 | 594.55 | Zone - 2 (North) |
| J-S10640U | 4.30 | 538.00 | 471.2 | 586.15 | Zone - 3 (South) |
| J-N1715E | 0.44 | 542.51 | 471.5 | 590.68 | Zone - 2 (North) |
| J-N1716E | 0.22 | 542.51 | 471.5 | 590.69 | Zone - 2 (North) |
| J-S1321E | 0.06 | 538.41 | 471.6 | 586.60 | Zone - 3 (South) |
| J-S320E | 1.28 | 539.80 | 471.7 | 588.00 | Zone - 3 (South) |
| J-N670E | 0.00 | 546.08 | 471.8 | 594.29 | Zone - 2 (North) |
| J-1085 | 0.00 | 542.80 | 472.0 | 591.03 | Zone - 2 (North) |
| J-C232 | 4.90 | 539.00 | 472.0 | 587.23 | Zone - 3 (South) |
| J-S312E | 0.22 | 540.23 | 472.3 | 588.49 | Zone - 3 (South) |
| J-N190E | 0.77 | 544.11 | 472.4 | 592.38 | Zone - 2 (North) |
| J-N1711E | 0.32 | 542.45 | 472.8 | 590.76 | Zone - 2 (North) |
| J-365 | 0.00 | 537.70 | 472.8 | 586.01 | Zone - 3 (South) |
| J-1131 | 0.24 | 558.80 | 473.0 | 607.13 | Zone - 1 (North) |
| J-N245E | 0.00 | 544.13 | 473.4 | 592.50 | Zone - 2 (North) |
| J-N1430E | 0.00 | 554.00 | 473.4 | 602.37 | Zone - 1 (North) |
| J-S1301E | 0.09 | 538.27 | 473.4 | 586.64 | Zone - 3 (South) |
| J-N620E | 0.00 | 543.45 | 473.5 | 591.83 | Zone - 2 (North) |
| J-N20E | 0.47 | 545.76 | 473.6 | 594.15 | Zone - 2 (North) |
| J-364 | 0.00 | 537.60 | 473.8 | 586.01 | Zone - 3 (South) |
| J-368 | 0.00 | 537.60 | 473.8 | 586.01 | Zone - 3 (South) |
| J-1146 | 0.24 | 537.60 | 473.9 | 586.02 | Zone - 3 (South) |
| J-S876E | 0.51 | 537.62 | 474.0 | 586.06 | Zone - 3 (South) |
| J-410 | 0.00 | 546.09 | 474.1 | 594.53 | Zone - 2 (North) |
| J-S1747E | 0.00 | 538.19 | 474.2 | 586.64 | Zone - 3 (South) |
| J-N525E | 0.00 | 545.10 | 474.3 | 593.56 | Zone - 2 (North) |
| J-N1050E | 0.50 | 550.19 | 474.3 | 598.65 | Zone - 1 (North) |
| J-1099 | 0.27 | 542.50 | 474.5 | 590.98 | Zone - 2 (North) |
| J-N1451E | 0.28 | 559.18 | 474.5 | 607.67 | Zone - 1 (North) |
| J-N480E | 0.56 | 544.38 | 474.6 | 592.88 | Zone - 2 (North) |
| J-S2060E | 0.47 | 538.88 | 474.9 | 587.40 | Zone - 3 (South) |
| J-1161 | 0.17 | 537.50 | 475.0 | 586.03 | Zone - 3 (South) |
| J-S560E | 0.05 | 538.03 | 475.5 | 586.61 | Zone - 3 (South) |
| J-S181E | 0.00 | 540.00 | 475.5 | 588.59 | Zone - 3 (South) |
| J-N846E | 0.00 | 545.89 | 475.7 | 594.50 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-N850E | 0.00 | 545.89 | 475.9 | 594.52 | Zone - 2 (North) |
| J-1086 | 0.19 | 542.40 | 476.0 | 591.04 | Zone - 2 (North) |
| J-N940E | 0.36 | 546.16 | 476.1 | 594.80 | Zone - 2 (North) |
| J-S2150E | 0.00 | 537.50 | 476.3 | 586.16 | Zone - 3 (South) |
| J-N1750E | 0.27 | 542.34 | 476.3 | 591.01 | Zone - 2 (North) |
| J-N1160E | 0.34 | 551.54 | 476.3 | 600.21 | Zone - 1 (North) |
| J-S2090E | 0.05 | 537.76 | 476.4 | 586.44 | Zone - 3 (South) |
| J-UL204 | 6.45 | 548.00 | 476.6 | 596.69 | Zone - 1 (North) |
| J-1097 | 0.27 | 542.30 | 476.6 | 590.99 | Zone - 2 (North) |
| J-11 | 0.27 | 542.30 | 476.6 | 591.00 | Zone - 2 (North) |
| J-N350E | 0.28 | 543.43 | 476.9 | 592.16 | Zone - 2 (North) |
| J-S310E | 0.00 | 539.89 | 477.0 | 588.62 | Zone - 3 (South) |
| J-S311E | 0.00 | 539.35 | 477.1 | 588.10 | Zone - 3 (South) |
| J-S1370E | 0.03 | 538.13 | 477.5 | 586.92 | Zone - 3 (South) |
| J-N220E | 0.41 | 543.71 | 477.5 | 592.50 | Zone - 2 (North) |
| J-N860E | 0.00 | 545.73 | 477.5 | 594.52 | Zone - 2 (North) |
| J-S10650U | 4.30 | 537.00 | 477.6 | 585.80 | Zone - 3 (South) |
| J-S1320E | 0.06 | 537.77 | 477.6 | 586.57 | Zone - 3 (South) |
| J-88 | 0.00 | 537.20 | 477.7 | 586.01 | Zone - 3 (South) |
| J-1145 | 0.24 | 537.20 | 477.8 | 586.02 | Zone - 3 (South) |
| J-S140E | 0.16 | 539.74 | 478.2 | 588.60 | Zone - 3 (South) |
| J-S1360E | 0.03 | 538.05 | 478.2 | 586.92 | Zone - 3 (South) |
| J-S1930E | 0.16 | 538.12 | 478.3 | 586.99 | Zone - 3 (South) |
| J-N600E | 0.22 | 543.05 | 478.4 | 591.93 | Zone - 2 (North) |
| J-N1455E | 0.97 | 563.50 | 478.4 | 612.38 | Zone - 1 (North) |
| J-S2210E | 0.00 | 537.50 | 478.4 | 586.39 | Zone - 3 (South) |
| J-S1940E | 0.12 | 538.14 | 478.5 | 587.03 | Zone - 3 (South) |
| J-S2112E | 0.05 | 537.50 | 478.6 | 586.40 | Zone - 3 (South) |
| J-S2111E | 0.13 | 537.50 | 478.7 | 586.42 | Zone - 3 (South) |
| J-N240E | 0.47 | 543.56 | 478.9 | 592.50 | Zone - 2 (North) |
| J-N180E | 0.58 | 543.22 | 479.0 | 592.16 | Zone - 2 (North) |
| J-S2105E | 0.17 | 537.52 | 479.0 | 586.46 | Zone - 3 (South) |
| J-329 | 0.00 | 537.00 | 479.1 | 585.95 | Zone - 3 (South) |
| J-S182E | 0.01 | 537.00 | 479.1 | 585.96 | Zone - 3 (South) |
| J-N160E | 0.50 | 545.20 | 479.2 | 594.17 | Zone - 2 (North) |
| J-C235 | 4.90 | 537.00 | 479.5 | 585.99 | Zone - 3 (South) |
| J-S2130E | 0.00 | 537.39 | 479.5 | 586.39 | Zone - 3 (South) |
| J-S2110E | 0.10 | 537.45 | 479.6 | 586.45 | Zone - 3 (South) |
| J-1091 | 0.00 | 542.00 | 479.6 | 591.01 | Zone - 2 (North) |
| J-105 | 0.44 | 537.00 | 479.7 | 586.01 | Zone - 3 (South) |
| J-S145E | 0.20 | 539.58 | 479.7 | 588.59 | Zone - 3 (South) |
| J-95 | 0.32 | 537.00 | 479.7 | 586.02 | Zone - 3 (South) |
| J-878 | 0.22 | 537.00 | 479.8 | 586.03 | Zone - 3 (South) |
| J-1144 | 0.15 | 537.00 | 479.9 | 586.03 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-825 | 0.17 | 537.00 | 479.9 | 586.03 | Zone - 3 (South) |
| J-1087 | 0.19 | 542.00 | 480.0 | 591.05 | Zone - 2 (North) |
| J-1163 | 0.51 | 537.00 | 480.0 | 586.05 | Zone - 3 (South) |
| J-N633E | 0.00 | 545.60 | 480.1 | 594.65 | Zone - 2 (North) |
| J-LW197 | 2.32 | 542.00 | 480.1 | 591.06 | Zone - 2 (North) |
| J-S10700U | 4.30 | 537.00 | 480.1 | 586.06 | Zone - 3 (South) |
| J-1088 | 0.00 | 542.00 | 480.1 | 591.06 | Zone - 2 (North) |
| J-S1720E | 0.18 | 537.57 | 480.1 | 586.63 | Zone - 3 (South) |
| J-298 | 16.08 | 536.00 | 480.2 | 585.07 | Zone - 3 (South) |
| J-N185E | 0.00 | 543.03 | 480.2 | 592.10 | Zone - 2 (North) |
| J-S600E | 0.00 | 537.54 | 480.5 | 586.64 | Zone - 3 (South) |
| J-N1717E | 0.45 | 541.68 | 480.6 | 590.79 | Zone - 2 (North) |
| J-S1319E | 0.05 | 537.41 | 480.8 | 586.54 | Zone - 3 (South) |
| J-S177E | 0.00 | 539.45 | 480.9 | 588.59 | Zone - 3 (South) |
| J-N320E | 0.41 | 543.01 | 481.0 | 592.16 | Zone - 2 (North) |
| J-S1302E | 0.11 | 537.49 | 481.1 | 586.65 | Zone - 3 (South) |
| J-S1330E | 0.00 | 537.49 | 481.1 | 586.65 | Zone - 3 (South) |
| J-S160E | 0.29 | 539.41 | 481.3 | 588.59 | Zone - 3 (South) |
| J-N330E | 0.32 | 542.97 | 481.4 | 592.16 | Zone - 2 (North) |
| J-S10620U | 4.30 | 537.00 | 481.5 | 586.20 | Zone - 3 (South) |
| J-S903E | 0.38 | 536.75 | 481.5 | 585.95 | Zone - 3 (South) |
| J-S904E | 0.00 | 536.75 | 481.6 | 585.96 | Zone - 3 (South) |
| J-367 | 0.00 | 536.80 | 481.7 | 586.01 | Zone - 3 (South) |
| J-S2114E | 0.30 | 537.00 | 481.7 | 586.22 | Zone - 3 (South) |
| J-N265E | 0.50 | 543.32 | 481.8 | 592.54 | Zone - 2 (North) |
| J-S2100E | 0.17 | 537.24 | 481.8 | 586.46 | Zone - 3 (South) |
| J-S1295E | 0.04 | 537.25 | 481.8 | 586.48 | Zone - 3 (South) |
| J-S2230E | 0.00 | 537.37 | 482.3 | 586.65 | Zone - 3 (South) |
| J-S2240E | 4.30 | 537.00 | 482.3 | 586.28 | Zone - 3 (South) |
| J-350 | 0.00 | 542.10 | 482.4 | 591.39 | Zone - 2 (North) |
| J-179 | 0.00 | 536.65 | 482.5 | 585.96 | Zone - 3 (South) |
| J-S2113E | 0.12 | 537.00 | 482.6 | 586.31 | Zone - 3 (South) |
| J-N840E | 0.07 | 545.15 | 482.7 | 594.47 | Zone - 2 (North) |
| J-S2040E | 0.31 | 537.72 | 482.8 | 587.06 | Zone - 3 (South) |
| J-1090 | 0.19 | 541.69 | 483.2 | 591.06 | Zone - 2 (North) |
| J-N1370E | 0.00 | 553.45 | 483.2 | 602.83 | Zone - 1 (North) |
| J-S625E | 0.06 | 537.28 | 483.2 | 586.66 | Zone - 3 (South) |
| J-N960E | 1.31 | 545.29 | 483.4 | 594.68 | Zone - 2 (North) |
| J-N1741E | 0.00 | 542.00 | 483.7 | 591.43 | Zone - 2 (North) |
| J-1142 | 0.15 | 536.60 | 483.8 | 586.04 | Zone - 3 (South) |
| J-N1380E | 0.41 | 553.50 | 484.1 | 602.97 | Zone - 1 (North) |
| J-S1290E | 0.05 | 537.05 | 484.2 | 586.52 | Zone - 3 (South) |
| J-S610E | 0.13 | 537.16 | 484.2 | 586.64 | Zone - 3 (South) |
| J-S1525E | 0.39 | 537.16 | 484.2 | 586.64 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S1280E | 0.00 | 537.11 | 484.4 | 586.61 | Zone - 3 (South) |
| J-N1390E | 0.45 | 553.52 | 484.5 | 603.02 | Zone - 1 (North) |
| J-87 | 0.00 | 536.50 | 484.6 | 586.01 | Zone - 3 (South) |
| J-1098 | 0.27 | 541.50 | 484.6 | 591.02 | Zone - 2 (North) |
| J-S1245E | 0.07 | 537.40 | 484.7 | 586.92 | Zone - 3 (South) |
| J-94 | 0.00 | 536.50 | 484.7 | 586.02 | Zone - 3 (South) |
| J-S9005E | 0.00 | 536.44 | 484.8 | 585.97 | Zone - 3 (South) |
| J-N80E | 0.11 | 544.45 | 484.9 | 593.99 | Zone - 2 (North) |
| J-1154 | 0.00 | 536.50 | 484.9 | 586.05 | Zone - 3 (South) |
| J-N930E | 0.34 | 545.05 | 485.0 | 594.61 | Zone - 2 (North) |
| J-1109 | 0.22 | 541.80 | 485.0 | 591.36 | Zone - 2 (North) |
| J-AN276 | 16.03 | 545.00 | 485.2 | 594.58 | Zone - 1 (North) |
| J-S635E | 0.02 | 537.06 | 485.3 | 586.64 | Zone - 3 (South) |
| J-1117 | 0.01 | 563.00 | 485.3 | 612.58 | Zone - 1 (North) |
| J-336 | 0.01 | 541.50 | 485.4 | 591.09 | Zone - 2 (North) |
| J-S630E | 0.00 | 537.06 | 485.5 | 586.66 | Zone - 3 (South) |
| J-S644E | 0.18 | 537.06 | 485.5 | 586.66 | Zone - 3 (South) |
| J-S875E | 0.00 | 536.45 | 485.5 | 586.06 | Zone - 3 (South) |
| J-N470E | 0.00 | 543.27 | 485.5 | 592.88 | Zone - 2 (North) |
| J-NS185 | 7.71 | 543.00 | 485.5 | 592.61 | Zone - 2 (North) |
| J-S330E | 0.00 | 538.39 | 485.6 | 588.01 | Zone - 3 (South) |
| J-S1351E | 0.00 | 537.30 | 485.7 | 586.92 | Zone - 3 (South) |
| J-1143 | 0.15 | 536.40 | 485.8 | 586.04 | Zone - 3 (South) |
| J-S2030E | 0.31 | 537.36 | 486.1 | 587.03 | Zone - 3 (South) |
| J-N870E | 0.03 | 544.73 | 486.4 | 594.42 | Zone - 2 (North) |
| J-S1615E | 0.00 | 536.91 | 486.8 | 586.65 | Zone - 3 (South) |
| J-S1990E | 0.72 | 537.29 | 486.9 | 587.03 | Zone - 3 (South) |
| J-S1980E | 0.15 | 537.28 | 486.9 | 587.03 | Zone - 3 (South) |
| J-S740E | 0.05 | 536.53 | 487.0 | 586.29 | Zone - 3 (South) |
| J-1107 | 0.22 | 541.60 | 487.0 | 591.37 | Zone - 2 (North) |
| J-S1281E | 0.00 | 536.83 | 487.5 | 586.64 | Zone - 3 (South) |
| J-AN262 | 0.00 | 536.00 | 487.9 | 585.85 | Zone - 3 (South) |
| J-N65E | 0.00 | 544.17 | 487.9 | 594.02 | Zone - 2 (North) |
| J-S2000E | 0.24 | 537.13 | 488.3 | 587.03 | Zone - 3 (South) |
| J-N1710E | 0.00 | 540.86 | 488.3 | 590.76 | Zone - 2 (North) |
| J-S1282E | 0.16 | 536.74 | 488.5 | 586.65 | Zone - 3 (South) |
| J-S1350E | 0.10 | 537.07 | 488.6 | 587.00 | Zone - 3 (South) |
| J-912 | 0.00 | 541.18 | 488.7 | 591.12 | Zone - 2 (North) |
| J-S2050E | 0.46 | 537.53 | 488.8 | 587.47 | Zone - 3 (South) |
| J-S400E | 0.22 | 537.71 | 488.8 | 587.65 | Zone - 3 (South) |
| J-S1700E | 0.40 | 536.67 | 488.9 | 586.63 | Zone - 3 (South) |
| J-S910E | 0.50 | 536.00 | 489.3 | 586.00 | Zone - 3 (South) |
| J-1166 | 0.27 | 536.00 | 489.5 | 586.02 | Zone - 3 (South) |
| J-1149 | 0.19 | 536.00 | 489.5 | 586.02 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-1147 | 0.00 | 536.00 | 489.6 | 586.02 | Zone - 3 (South) |
| J-1084 | 0.19 | 541.00 | 489.6 | 591.02 | Zone - 2 (North) |
| J-S1960E | 0.37 | 537.09 | 489.6 | 587.12 | Zone - 3 (South) |
| J-S1340E | 0.05 | 536.89 | 489.7 | 586.92 | Zone - 3 (South) |
| J-1157 | 0.22 | 536.00 | 489.7 | 586.03 | Zone - 3 (South) |
| J-1155 | 0.19 | 536.00 | 489.8 | 586.04 | Zone - 3 (South) |
| J-S565E | 0.00 | 536.52 | 489.9 | 586.58 | Zone - 3 (South) |
| J-1108 | 0.22 | 541.30 | 490.0 | 591.37 | Zone - 2 (North) |
| J-AN260 | 0.00 | 536.00 | 490.0 | 586.07 | Zone - 3 (South) |
| J-N165E | 0.36 | 543.99 | 490.3 | 594.08 | Zone - 2 (North) |
| J-S660E | 0.05 | 536.50 | 490.4 | 586.60 | Zone - 3 (South) |
| J-1192 | 0.39 | 536.00 | 490.5 | 586.11 | Zone - 3 (South) |
| J-1193 | 0.00 | 536.00 | 490.5 | 586.11 | Zone - 3 (South) |
| J-1194 | 0.41 | 536.00 | 490.5 | 586.12 | Zone - 3 (South) |
| J-1196 | 0.19 | 536.00 | 490.5 | 586.12 | Zone - 3 (South) |
| J-134 | 0.17 | 536.00 | 490.5 | 586.12 | Zone - 3 (South) |
| J-1202 | 0.27 | 536.00 | 490.5 | 586.12 | Zone - 3 (South) |
| J-AN290 | 15.84 | 536.00 | 490.6 | 586.12 | Zone - 3 (South) |
| J-S640E | 0.00 | 536.55 | 490.6 | 586.68 | Zone - 3 (South) |
| J-S661E | 0.00 | 536.50 | 490.7 | 586.64 | Zone - 3 (South) |
| J-S780E | 0.07 | 536.12 | 490.7 | 586.26 | Zone - 3 (South) |
| J-S905E | 0.11 | 536.30 | 490.7 | 586.44 | Zone - 3 (South) |
| J-S410E | 0.22 | 537.44 | 490.8 | 587.58 | Zone - 3 (South) |
| J-1114 | 0.00 | 562.00 | 490.9 | 612.16 | Zone - 1 (North) |
| J-335 | 0.00 | 557.50 | 491.0 | 607.67 | Zone - 1 (North) |
| J-N1070E | 0.01 | 544.57 | 491.0 | 594.74 | Zone - 2 (North) |
| J-N1080E | 0.00 | 544.53 | 491.4 | 594.74 | Zone - 2 (North) |
| J-S874E | 0.00 | 535.84 | 491.5 | 586.06 | Zone - 3 (South) |
| J-S440E | 0.15 | 537.31 | 491.5 | 587.53 | Zone - 3 (South) |
| J-S879E | 0.00 | 535.80 | 491.8 | 586.05 | Zone - 3 (South) |
| J-S900E | 0.00 | 536.20 | 491.8 | 586.45 | Zone - 3 (South) |
| J-1116 | 0.45 | 562.30 | 492.1 | 612.58 | Zone - 1 (North) |
| J-N490E | 0.53 | 542.59 | 492.1 | 592.88 | Zone - 2 (North) |
| J-N710E | 0.45 | 544.03 | 492.4 | 594.34 | Zone - 2 (North) |
| J-1190 | 0.39 | 535.80 | 492.4 | 586.11 | Zone - 3 (South) |
| J-S595E | 0.29 | 536.28 | 492.4 | 586.59 | Zone - 3 (South) |
| J-1191 | 0.00 | 535.80 | 492.4 | 586.11 | Zone - 3 (South) |
| J-S1153E | 0.00 | 536.50 | 492.5 | 586.82 | Zone - 3 (South) |
| J-334 | 0.00 | 557.50 | 492.6 | 607.83 | Zone - 1 (North) |
| J-S1800E | 0.07 | 536.49 | 492.6 | 586.82 | Zone - 3 (South) |
| J-S1152E | 0.09 | 536.50 | 492.6 | 586.84 | Zone - 3 (South) |
| J-S1151E | 0.10 | 536.50 | 493.0 | 586.87 | Zone - 3 (South) |
| J-323 | 0.00 | 541.00 | 493.0 | 591.37 | Zone - 2 (North) |
| J-322 | 0.00 | 541.00 | 493.0 | 591.37 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S1780E | 0.06 | 536.50 | 493.2 | 586.89 | Zone - 3 (South) |
| J-1112 | 0.15 | 541.00 | 493.2 | 591.39 | Zone - 2 (North) |
| J-1197 | 0.00 | 535.70 | 493.4 | 586.12 | Zone - 3 (South) |
| J-N260E | 0.47 | 542.18 | 493.5 | 592.61 | Zone - 2 (North) |
| J-N720E | 0.36 | 543.95 | 493.7 | 594.39 | Zone - 2 (North) |
| J-S510E | 0.20 | 536.92 | 494.1 | 587.41 | Zone - 3 (South) |
| J-N1360E | 0.41 | 554.88 | 494.1 | 605.37 | Zone - 1 (North) |
| J-1189 | 0.00 | 535.60 | 494.4 | 586.11 | Zone - 3 (South) |
| J-N1740E | 0.00 | 540.72 | 494.4 | 591.23 | Zone - 2 (North) |
| J-S902E | 0.50 | 535.53 | 494.4 | 586.05 | Zone - 3 (South) |
| J-1198 | 0.00 | 535.60 | 494.4 | 586.12 | Zone - 3 (South) |
| J-1156 | 0.19 | 535.50 | 494.6 | 586.04 | Zone - 3 (South) |
| J-N1730E | 0.78 | 540.68 | 494.7 | 591.23 | Zone - 2 (North) |
| J-1110 | 0.22 | 540.80 | 494.8 | 591.36 | Zone - 2 (North) |
| J-S1690E | 0.26 | 536.06 | 494.9 | 586.63 | Zone - 3 (South) |
| J-S430E | 0.00 | 536.94 | 495.1 | 587.53 | Zone - 3 (South) |
| J-1187 | 0.39 | 535.50 | 495.4 | 586.12 | Zone - 3 (South) |
| J-1186 | 0.17 | 535.50 | 495.4 | 586.12 | Zone - 3 (South) |
| J-S870E | 0.07 | 535.84 | 495.5 | 586.47 | Zone - 3 (South) |
| J-N1720E | 0.00 | 540.53 | 495.6 | 591.18 | Zone - 2 (North) |
| J-S1970E | 0.41 | 536.63 | 495.7 | 587.28 | Zone - 3 (South) |
| J-S1240E | 0.07 | 536.29 | 495.9 | 586.96 | Zone - 3 (South) |
| J-1106 | 0.22 | 540.70 | 495.9 | 591.37 | Zone - 2 (North) |
| J-1121 | 0.01 | 562.00 | 496.1 | 612.69 | Zone - 1 (North) |
| J-1188 | 0.00 | 535.40 | 496.3 | 586.11 | Zone - 3 (South) |
| J-S620E | 0.00 | 535.96 | 496.5 | 586.69 | Zone - 3 (South) |
| J-AN271 | 6.51 | 540.00 | 496.7 | 590.75 | Zone - 2 (North) |
| J-S880E | 0.04 | 535.67 | 497.0 | 586.46 | Zone - 3 (South) |
| J-S725E | 0.08 | 535.46 | 497.1 | 586.25 | Zone - 3 (South) |
| J-S720E | 0.49 | 535.46 | 497.1 | 586.25 | Zone - 3 (South) |
| J-N970E | 0.41 | 543.83 | 497.4 | 594.65 | Zone - 2 (North) |
| J-S150E | 0.26 | 537.38 | 497.5 | 588.21 | Zone - 3 (South) |
| J-S873E | 0.00 | 535.22 | 497.5 | 586.06 | Zone - 3 (South) |
| J-H1133 | 0.00 | 562.00 | 497.7 | 612.85 | Zone - 1 (North) |
| J-S520E | 0.00 | 536.55 | 497.7 | 587.40 | Zone - 3 (South) |
| J-1100 | 0.78 | 540.40 | 497.8 | 591.27 | Zone - 2 (North) |
| J-S2045E | 0.44 | 536.10 | 499.1 | 587.10 | Zone - 3 (South) |
| J-S790E | 0.05 | 535.55 | 499.2 | 586.56 | Zone - 3 (South) |
| J-S271E | 0.20 | 536.99 | 499.2 | 588.00 | Zone - 3 (South) |
| J-1152 | 0.24 | 535.00 | 499.3 | 586.01 | Zone - 3 (South) |
| J-333 | 0.00 | 557.00 | 499.3 | 608.02 | Zone - 1 (North) |
| J-1150 | 0.19 | 535.00 | 499.3 | 586.02 | Zone - 3 (South) |
| J-S480E | 0.38 | 536.26 | 499.5 | 587.30 | Zone - 3 (South) |
| J-S878E | 0.26 | 535.00 | 499.7 | 586.06 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S1810E | 0.04 | 535.70 | 499.8 | 586.77 | Zone - 3 (South) |
| J-1170 | 0.24 | 535.00 | 500.0 | 586.09 | Zone - 3 (South) |
| J-1171 | 0.24 | 535.00 | 500.0 | 586.09 | Zone - 3 (South) |
| J-LW198 | 2.32 | 540.00 | 500.1 | 591.09 | Zone - 2 (North) |
| J-N300E | 0.25 | 541.77 | 500.2 | 592.88 | Zone - 2 (North) |
| J-147 | 0.00 | 535.00 | 500.4 | 586.13 | Zone - 3 (South) |
| J-1201 | 0.00 | 535.00 | 500.4 | 586.13 | Zone - 3 (South) |
| J-S1150E | 0.02 | 535.70 | 500.8 | 586.86 | Zone - 3 (South) |
| J-337 | 0.01 | 540.00 | 500.9 | 591.18 | Zone - 2 (North) |
| J-S800E | 0.03 | 535.35 | 501.5 | 586.59 | Zone - 3 (South) |
| J-S1283E | 0.00 | 535.50 | 501.5 | 586.74 | Zone - 3 (South) |
| J-N70E | 0.34 | 542.74 | 501.8 | 594.01 | Zone - 2 (North) |
| J-396 | 0.00 | 540.12 | 501.8 | 591.40 | Zone - 2 (North) |
| J-70 | 0.49 | 556.20 | 502.1 | 607.51 | Zone - 1 (North) |
| J-S365E | 0.22 | 536.17 | 502.4 | 587.50 | Zone - 3 (South) |
| J-S1825E | 0.00 | 535.42 | 502.4 | 586.76 | Zone - 3 (South) |
| J-S1820E | 0.00 | 535.42 | 502.4 | 586.75 | Zone - 3 (South) |
| J-S2135E | 4.30 | 535.00 | 502.6 | 586.35 | Zone - 3 (South) |
| J-348 | 0.00 | 540.00 | 502.6 | 591.35 | Zone - 2 (North) |
| J-38 | 0.15 | 540.00 | 502.7 | 591.36 | Zone - 2 (North) |
| J-S2220E | 0.00 | 535.00 | 502.8 | 586.38 | Zone - 3 (South) |
| J-S485E | 0.12 | 535.87 | 502.9 | 587.25 | Zone - 3 (South) |
| J-N60E | 0.00 | 542.64 | 503.1 | 594.04 | Zone - 2 (North) |
| J-S675E | 0.33 | 534.98 | 503.2 | 586.40 | Zone - 3 (South) |
| J-171 | 0.45 | 540.50 | 503.4 | 591.94 | Zone - 2 (North) |
| J-S945E | 0.01 | 535.20 | 503.4 | 586.64 | Zone - 3 (South) |
| J-N1307E | 0.45 | 560.50 | 503.4 | 611.94 | Zone - 1 (North) |
| J-S450E | 0.24 | 535.76 | 503.5 | 587.21 | Zone - 3 (South) |
| J-1120 | 0.45 | 561.20 | 503.9 | 612.69 | Zone - 1 (North) |
| J-328 | 0.01 | 535.50 | 504.3 | 587.02 | Zone - 3 (South) |
| J-391 | 0.00 | 535.18 | 504.5 | 586.72 | Zone - 3 (South) |
| J-1129 | 0.00 | 556.00 | 504.6 | 607.56 | Zone - 1 (North) |
| J-N140E | 0.56 | 542.53 | 504.7 | 594.10 | Zone - 2 (North) |
| J-S590E | 0.22 | 535.01 | 504.7 | 586.58 | Zone - 3 (South) |
| J-898 | 0.24 | 534.50 | 504.8 | 586.08 | Zone - 3 (South) |
| J-S1710E | 0.20 | 535.05 | 504.8 | 586.63 | Zone - 3 (South) |
| J-S1705E | 0.24 | 535.04 | 504.9 | 586.63 | Zone - 3 (South) |
| J-247 | 0.00 | 535.06 | 504.9 | 586.66 | Zone - 3 (South) |
| J-S290E | 0.24 | 536.16 | 505.0 | 587.76 | Zone - 3 (South) |
| J-1175 | 0.24 | 534.50 | 505.2 | 586.12 | Zone - 3 (South) |
| J-324 | 0.00 | 535.40 | 505.2 | 587.02 | Zone - 3 (South) |
| J-325 | 0.00 | 535.50 | 505.2 | 587.13 | Zone - 3 (South) |
| J-326 | 0.01 | 535.50 | 505.2 | 587.13 | Zone - 3 (South) |
| J-S1190E | 0.46 | 535.48 | 505.4 | 587.13 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S580E | 0.31 | 534.92 | 505.5 | 586.57 | Zone - 3 (South) |
| J-N570E | 0.00 | 540.65 | 505.8 | 592.33 | Zone - 2 (North) |
| J-1169 | 0.24 | 534.40 | 505.8 | 586.08 | Zone - 3 (South) |
| J-N1700E | 0.39 | 538.94 | 505.8 | 590.62 | Zone - 2 (North) |
| J-S270E | 0.16 | 536.28 | 506.2 | 588.00 | Zone - 3 (South) |
| J-N1440E | 0.50 | 556.16 | 506.4 | 607.90 | Zone - 1 (North) |
| J-S1890E | 0.00 | 535.02 | 506.5 | 586.78 | Zone - 3 (South) |
| J-N1714E | 0.22 | 538.89 | 506.6 | 590.65 | Zone - 2 (North) |
| J-N1713E | 0.22 | 538.89 | 506.6 | 590.65 | Zone - 2 (North) |
| J-S820E | 0.09 | 534.74 | 507.3 | 586.58 | Zone - 3 (South) |
| J-351 | 0.00 | 539.53 | 507.6 | 591.40 | Zone - 2 (North) |
| J-S1855E | 0.00 | 534.81 | 507.7 | 586.69 | Zone - 3 (South) |
| J-N125E | 0.17 | 542.16 | 507.8 | 594.05 | Zone - 2 (North) |
| J-N1705E | 0.67 | 538.78 | 508.0 | 590.69 | Zone - 2 (North) |
| J-S1230E | 0.18 | 535.14 | 508.1 | 587.05 | Zone - 3 (South) |
| J-S540E | 0.27 | 535.28 | 508.1 | 587.19 | Zone - 3 (South) |
| J-S1900E | 0.36 | 534.86 | 508.1 | 586.78 | Zone - 3 (South) |
| J-NS194 | 7.71 | 539.00 | 508.5 | 590.95 | Zone - 2 (North) |
| J-S1160E | 0.30 | 534.89 | 508.5 | 586.84 | Zone - 3 (South) |
| J-1118 | 0.45 | 561.50 | 508.7 | 613.48 | Zone - 1 (North) |
| J-S1060E | 0.26 | 534.83 | 508.8 | 586.81 | Zone - 3 (South) |
| J-S1070E | 0.00 | 534.82 | 508.8 | 586.81 | Zone - 3 (South) |
| J-S470E | 0.24 | 535.47 | 508.9 | 587.46 | Zone - 3 (South) |
| J-168 | 0.45 | 540.00 | 509.0 | 592.01 | Zone - 2 (North) |
| J-170 | 0.45 | 540.00 | 509.2 | 592.03 | Zone - 2 (North) |
| J-1101 | 0.78 | 539.30 | 509.2 | 591.33 | Zone - 2 (North) |
| J-1103 | 0.00 | 539.30 | 509.4 | 591.35 | Zone - 2 (North) |
| J-1104 | 0.00 | 539.30 | 509.4 | 591.35 | Zone - 2 (North) |
| J-S670E | 0.42 | 534.50 | 509.5 | 586.56 | Zone - 3 (South) |
| J-1167 | 0.00 | 534.00 | 509.6 | 586.07 | Zone - 3 (South) |
| J-1168 | 0.24 | 534.00 | 509.7 | 586.08 | Zone - 3 (South) |
| J-N730E | 0.00 | 542.36 | 509.7 | 594.44 | Zone - 2 (North) |
| J-1180 | 0.24 | 534.00 | 509.8 | 586.09 | Zone - 3 (South) |
| J-1179 | 0.24 | 534.00 | 509.8 | 586.09 | Zone - 3 (South) |
| J-NS190 | 7.71 | 539.00 | 509.8 | 591.09 | Zone - 2 (North) |
| J-1178 | 0.00 | 534.00 | 509.9 | 586.10 | Zone - 3 (South) |
| J-1172 | 0.24 | 534.00 | 509.9 | 586.10 | Zone - 3 (South) |
| J-1173 | 0.24 | 534.00 | 510.0 | 586.11 | Zone - 3 (South) |
| J-N562E | 0.00 | 539.90 | 510.1 | 592.02 | Zone - 2 (North) |
| J-1174 | 0.24 | 534.00 | 510.1 | 586.12 | Zone - 3 (South) |
| J-327 | 0.01 | 535.00 | 510.1 | 587.13 | Zone - 3 (South) |
| J-1200 | 0.00 | 534.00 | 510.2 | 586.13 | Zone - 3 (South) |
| J-N575E | 0.30 | 540.37 | 510.2 | 592.50 | Zone - 2 (North) |
| J-S1680E | 0.00 | 534.47 | 510.5 | 586.63 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-308 | 4.30 | 534.00 | 511.1 | 586.22 | Zone - 3 (South) |
| J-307 | 0.00 | 534.00 | 511.1 | 586.22 | Zone - 3 (South) |
| J-1225 | 0.00 | 556.00 | 511.5 | 608.26 | Zone - 1 (North) |
| J-S1920E | 0.10 | 534.40 | 511.8 | 586.69 | Zone - 3 (South) |
| J-1119 | 0.00 | 563.65 | 511.9 | 615.95 | Zone - 1 (North) |
| J-911 | 0.01 | 538.80 | 512.0 | 591.12 | Zone - 2 (North) |
| J-S1110E | 0.30 | 534.48 | 512.2 | 586.82 | Zone - 3 (South) |
| J-S370E | 0.00 | 535.17 | 512.4 | 587.52 | Zone - 3 (South) |
| J-1138 | 0.15 | 539.00 | 512.5 | 591.37 | Zone - 2 (North) |
| J-S380E | 0.26 | 535.21 | 512.6 | 587.58 | Zone - 3 (South) |
| J-354 | 0.00 | 539.00 | 512.6 | 591.37 | Zone - 2 (North) |
| J-353 | 0.00 | 539.00 | 512.6 | 591.38 | Zone - 2 (North) |
| J-1181 | 0.24 | 533.70 | 512.8 | 586.10 | Zone - 3 (South) |
| J-S605E | 0.27 | 534.24 | 512.8 | 586.64 | Zone - 3 (South) |
| J-S585E | 0.29 | 534.17 | 512.8 | 586.57 | Zone - 3 (South) |
| J-N561E | 0.62 | 539.60 | 512.9 | 592.01 | Zone - 2 (North) |
| J-NS184 | 7.71 | 539.00 | 513.0 | 591.42 | Zone - 2 (North) |
| J-S1040E | 0.31 | 534.36 | 513.2 | 586.80 | Zone - 3 (South) |
| J-S1095E | 0.33 | 534.31 | 513.9 | 586.82 | Zone - 3 (South) |
| J-167 | 0.45 | 539.50 | 514.2 | 592.04 | Zone - 2 (North) |
| J-304 | 0.00 | 533.60 | 514.3 | 586.15 | Zone - 3 (South) |
| J-N583E | 0.00 | 539.50 | 514.3 | 592.05 | Zone - 2 (North) |
| J-S685E | 0.09 | 534.00 | 514.4 | 586.56 | Zone - 3 (South) |
| J-NS183 | 7.71 | 539.00 | 514.6 | 591.58 | Zone - 2 (North) |
| J-312 | 0.00 | 533.60 | 514.6 | 586.18 | Zone - 3 (South) |
| J-1177 | 0.24 | 533.50 | 514.8 | 586.10 | Zone - 3 (South) |
| J-S1885E | 0.03 | 534.08 | 514.8 | 586.69 | Zone - 3 (South) |
| J-313 | 0.00 | 533.55 | 515.0 | 586.17 | Zone - 3 (South) |
| J-1226 | 0.00 | 555.50 | 515.0 | 608.12 | Zone - 1 (North) |
| J-375 | 0.00 | 540.18 | 515.0 | 592.80 | Zone - 2 (North) |
| J-148 | 0.00 | 533.50 | 515.1 | 586.13 | Zone - 3 (South) |
| J-N55E | 0.25 | 541.44 | 515.2 | 594.08 | Zone - 2 (North) |
| J-S280E | 0.22 | 534.88 | 515.3 | 587.53 | Zone - 3 (South) |
| J-N50E | 0.28 | 541.50 | 515.3 | 594.15 | Zone - 2 (North) |
| J-310 | 0.00 | 533.50 | 515.5 | 586.18 | Zone - 3 (South) |
| J-1216 | 0.00 | 533.42 | 515.6 | 586.10 | Zone - 3 (South) |
| J-S890E | 0.24 | 533.76 | 515.6 | 586.44 | Zone - 3 (South) |
| J-S1008E | 0.15 | 534.10 | 515.6 | 586.79 | Zone - 3 (South) |
| J-N1450E | 0.00 | 555.82 | 515.7 | 608.51 | Zone - 1 (North) |
| J-332 | 0.00 | 555.50 | 515.8 | 608.20 | Zone - 1 (North) |
| J-1182 | 0.24 | 533.40 | 515.9 | 586.11 | Zone - 3 (South) |
| J-S550E | 0.18 | 534.38 | 515.9 | 587.10 | Zone - 3 (South) |
| J-S360E | 0.09 | 534.71 | 516.5 | 587.48 | Zone - 3 (South) |
| J-392 | 0.01 | 534.70 | 516.6 | 587.48 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S1141E | 0.00 | 534.00 | 517.0 | 586.82 | Zone - 3 (South) |
| J-S1080E | 0.37 | 533.98 | 517.1 | 586.82 | Zone - 3 (South) |
| J-305 | 0.00 | 533.30 | 517.2 | 586.15 | Zone - 3 (South) |
| J-355 | 0.00 | 538.50 | 517.3 | 591.36 | Zone - 2 (North) |
| J-NS193 | 7.71 | 538.00 | 517.7 | 590.90 | Zone - 2 (North) |
| J-159 | 0.00 | 533.20 | 517.9 | 586.12 | Zone - 3 (South) |
| J-1127 | 0.39 | 555.20 | 517.9 | 608.12 | Zone - 1 (North) |
| J-1140 | 0.01 | 559.00 | 518.1 | 611.94 | Zone - 1 (North) |
| J-AN261 | 9.57 | 533.00 | 518.6 | 585.99 | Zone - 3 (South) |
| J-1124 | 0.00 | 555.30 | 518.8 | 608.31 | Zone - 1 (North) |
| J-N563E | 0.28 | 539.04 | 518.8 | 592.05 | Zone - 2 (North) |
| J-S350E | 0.11 | 534.37 | 518.8 | 587.38 | Zone - 3 (South) |
| J-188 | 7.71 | 538.50 | 519.0 | 591.53 | Zone - 2 (North) |
| J-S1880E | 0.31 | 533.69 | 519.0 | 586.72 | Zone - 3 (South) |
| J-S340E | 0.00 | 534.26 | 519.2 | 587.32 | Zone - 3 (South) |
| J-174 | 0.45 | 539.00 | 519.3 | 592.06 | Zone - 2 (North) |
| J-NS195 | 7.71 | 538.00 | 519.4 | 591.07 | Zone - 2 (North) |
| J-S970E | 0.44 | 533.70 | 519.6 | 586.78 | Zone - 3 (South) |
| J-316 | 0.00 | 539.00 | 519.6 | 592.09 | Zone - 2 (North) |
| J-172 | 0.22 | 539.00 | 519.7 | 592.10 | Zone - 2 (North) |
| J-166 | 0.45 | 539.00 | 519.7 | 592.10 | Zone - 2 (North) |
| J-NS191 | 7.71 | 538.00 | 519.7 | 591.11 | Zone - 2 (North) |
| J-123 | 0.24 | 533.00 | 519.9 | 586.12 | Zone - 3 (South) |
| J-S1870E | 0.00 | 533.60 | 519.9 | 586.72 | Zone - 3 (South) |
| J-1184 | 0.00 | 533.00 | 519.9 | 586.13 | Zone - 3 (South) |
| J-173 | 0.00 | 539.00 | 520.0 | 592.13 | Zone - 2 (North) |
| J-1202 | 0.02 | 533.00 | 520.0 | 586.13 | Zone - 3 (South) |
| J-S702E | 0.00 | 533.42 | 520.1 | 586.56 | Zone - 3 (South) |
| J-S680E | 1.22 | 533.42 | 520.1 | 586.56 | Zone - 3 (South) |
| J-1205 | 0.37 | 533.00 | 520.2 | 586.15 | Zone - 3 (South) |
| J-LW199 | 2.32 | 538.00 | 520.2 | 591.15 | Zone - 2 (North) |
| J-S1679E | 0.27 | 533.47 | 520.3 | 586.63 | Zone - 3 (South) |
| J-369 | 0.00 | 539.70 | 520.4 | 592.87 | Zone - 2 (North) |
| J-S1925E | 0.00 | 533.50 | 520.4 | 586.67 | Zone - 3 (South) |
| J-S1140E | 0.00 | 533.82 | 520.5 | 587.00 | Zone - 3 (South) |
| J-309 | 0.00 | 533.00 | 521.0 | 586.24 | Zone - 3 (South) |
| J-164 | 0.00 | 539.00 | 521.0 | 592.24 | Zone - 2 (North) |
| J-NS182 | 7.71 | 538.00 | 521.2 | 591.26 | Zone - 2 (North) |
| J-306 | 4.30 | 533.00 | 521.3 | 586.26 | Zone - 3 (South) |
| J-N1310E | 0.00 | 553.02 | 521.5 | 606.30 | Zone - 1 (North) |
| J-1203 | 0.00 | 532.80 | 522.0 | 586.13 | Zone - 3 (South) |
| J-1185 | 0.00 | 532.80 | 522.0 | 586.14 | Zone - 3 (South) |
| J-349 | 0.00 | 538.00 | 522.1 | 591.35 | Zone - 2 (North) |
| J-1209 | 0.00 | 533.00 | 522.1 | 586.35 | Zone - 3 (South) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S940E | 0.14 | 533.28 | 522.3 | 586.65 | Zone - 3 (South) |
| J-352 | 0.00 | 538.00 | 522.5 | 591.39 | Zone - 2 (North) |
| J-S1030E | 0.15 | 533.39 | 522.6 | 586.79 | Zone - 3 (South) |
| J-S1035E | 0.30 | 533.39 | 522.6 | 586.79 | Zone - 3 (South) |
| J-S1520E | 0.00 | 533.23 | 522.7 | 586.63 | Zone - 3 (South) |
| J-N1091E | 0.11 | 541.22 | 522.8 | 594.64 | Zone - 2 (North) |
| J-N935E | 0.50 | 541.13 | 522.8 | 594.55 | Zone - 2 (North) |
| J-N1060E | 0.95 | 545.00 | 522.8 | 598.42 | Zone - 1 (North) |
| J-314 | 0.00 | 532.75 | 523.1 | 586.20 | Zone - 3 (South) |
| J-N1306E | 0.56 | 558.00 | 523.6 | 611.50 | Zone - 1 (North) |
| J-816 | 0.01 | 558.00 | 523.6 | 611.50 | Zone - 1 (North) |
| J-163 | 0.00 | 539.00 | 523.8 | 592.52 | Zone - 2 (North) |
| J-NS87 | 7.71 | 538.00 | 523.9 | 591.53 | Zone - 2 (North) |
| J-143 | 0.34 | 532.60 | 524.0 | 586.14 | Zone - 3 (South) |
| J-S901E | 0.49 | 532.49 | 524.2 | 586.05 | Zone - 3 (South) |
| J-N580E | 0.00 | 538.64 | 524.3 | 592.21 | Zone - 2 (North) |
| J-S1910E | 0.41 | 533.20 | 524.4 | 586.78 | Zone - 3 (South) |
| J-311 | 0.00 | 532.60 | 524.5 | 586.19 | Zone - 3 (South) |
| J-N560E | 0.00 | 538.48 | 524.6 | 592.08 | Zone - 2 (North) |
| J-1123 | 0.00 | 555.40 | 524.7 | 609.01 | Zone - 1 (North) |
| J-S930E | 0.30 | 533.11 | 524.8 | 586.73 | Zone - 3 (South) |
| J-N305E | 0.00 | 539.43 | 524.9 | 593.06 | Zone - 2 (North) |
| J-165 | 0.45 | 538.50 | 525.1 | 592.15 | Zone - 2 (North) |
| J-S935E | 0.21 | 533.11 | 525.2 | 586.77 | Zone - 3 (South) |
| J-S1000E | 0.00 | 533.12 | 525.3 | 586.79 | Zone - 3 (South) |
| J-N1820E | 0.45 | 539.18 | 525.5 | 592.88 | Zone - 2 (North) |
| J-N1010E | 0.47 | 551.70 | 525.6 | 605.40 | Zone - 1 (North) |
| J-S1010E | 0.21 | 533.08 | 525.6 | 586.78 | Zone - 3 (South) |
| J-C228 | 4.90 | 533.50 | 525.9 | 587.24 | Zone - 3 (South) |
| J-169 | 0.45 | 538.40 | 525.9 | 592.14 | Zone - 2 (North) |
| J-S1540E | 0.31 | 532.85 | 526.4 | 586.63 | Zone - 3 (South) |
| J-N45E | 0.00 | 540.42 | 526.5 | 594.21 | Zone - 2 (North) |
| J-S1036E | 0.00 | 533.00 | 526.5 | 586.80 | Zone - 3 (South) |
| J-S1560E | 0.00 | 532.82 | 526.6 | 586.63 | Zone - 3 (South) |
| J-160 | 0.00 | 533.00 | 526.6 | 586.81 | Zone - 3 (South) |
| J-1210 | 0.24 | 533.00 | 526.7 | 586.81 | Zone - 3 (South) |
| J-1212 | 0.00 | 533.00 | 526.7 | 586.82 | Zone - 3 (South) |
| J-S1085E | 0.00 | 533.00 | 526.7 | 586.82 | Zone - 3 (South) |
| J-NS196 | 7.71 | 537.50 | 526.8 | 591.33 | Zone - 2 (North) |
| J-317 | 0.00 | 533.18 | 526.9 | 587.02 | Zone - 3 (South) |
| J-S1580E | 0.00 | 532.62 | 527.3 | 586.49 | Zone - 3 (South) |
| J-S990E | 0.88 | 532.89 | 527.5 | 586.78 | Zone - 3 (South) |
| J-S872E | 0.00 | 532.20 | 527.5 | 586.10 | Zone - 3 (South) |
| J-162 | 0.00 | 540.50 | 527.6 | 594.41 | Zone - 1 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-1122 | 0.00 | 555.40 | 528.1 | 609.36 | Zone - 1 (North) |
| J-NS192 | 7.71 | 537.00 | 528.1 | 590.96 | Zone - 2 (North) |
| J-390 | 0.01 | 540.50 | 528.4 | 594.49 | Zone - 1 (North) |
| J-S1380E | 0.00 | 532.45 | 528.9 | 586.49 | Zone - 3 (South) |
| J-N30E | 0.56 | 540.23 | 528.9 | 594.27 | Zone - 2 (North) |
| J-1206 | 0.00 | 532.00 | 530.1 | 586.16 | Zone - 3 (South) |
| J-144 | 0.34 | 532.00 | 530.1 | 586.16 | Zone - 3 (South) |
| J-S1510E | 0.00 | 532.46 | 530.2 | 586.63 | Zone - 3 (South) |
| J-N582E | 0.58 | 537.89 | 530.3 | 592.08 | Zone - 2 (North) |
| J-1208 | 0.00 | 532.00 | 530.6 | 586.22 | Zone - 3 (South) |
| J-S1490E | 0.24 | 532.41 | 530.7 | 586.63 | Zone - 3 (South) |
| J-C233 | 4.90 | 533.00 | 530.8 | 587.23 | Zone - 3 (South) |
| J-N1680E | 0.00 | 563.70 | 530.9 | 617.94 | Zone - 1 (North) |
| J-S1425E | 0.01 | 532.13 | 531.4 | 586.43 | Zone - 3 (South) |
| J-S950E | 0.20 | 532.46 | 531.6 | 586.78 | Zone - 3 (South) |
| J-S1681E | 0.20 | 532.27 | 532.0 | 586.63 | Zone - 3 (South) |
| J-N830E | 0.65 | 540.14 | 532.4 | 594.53 | Zone - 2 (North) |
| J-N1020E | 0.41 | 550.95 | 532.8 | 605.39 | Zone - 1 (North) |
| J-S2180E | 2.91 | 531.94 | 532.8 | 586.38 | Zone - 3 (South) |
| J-S882E | 0.07 | 532.00 | 532.9 | 586.45 | Zone - 3 (South) |
| J-941 | 0.00 | 532.00 | 533.6 | 586.52 | Zone - 3 (South) |
| J-N800E | 0.10 | 540.05 | 533.8 | 594.59 | Zone - 2 (North) |
| J-S881E | 0.13 | 531.85 | 534.4 | 586.45 | Zone - 3 (South) |
| J-S1420E | 0.33 | 531.80 | 534.7 | 586.43 | Zone - 3 (South) |
| J-S871E | 0.00 | 531.50 | 536.8 | 586.35 | Zone - 3 (South) |
| J-S1470E | 0.00 | 531.78 | 537.0 | 586.64 | Zone - 3 (South) |
| J-S1390E | 0.16 | 531.54 | 537.3 | 586.44 | Zone - 3 (South) |
| J-S2205E | 0.47 | 531.47 | 537.8 | 586.42 | Zone - 3 (South) |
| J-S1435E | 0.26 | 531.47 | 537.8 | 586.42 | Zone - 3 (South) |
| J-S1440E | 0.46 | 531.47 | 537.9 | 586.44 | Zone - 3 (South) |
| J-374 | 0.00 | 538.79 | 538.1 | 593.77 | Zone - 2 (North) |
| J-S1600E | 0.24 | 531.34 | 539.4 | 586.45 | Zone - 3 (South) |
| J-N790E | 0.28 | 539.49 | 539.5 | 594.61 | Zone - 2 (North) |
| J-S1530E | 0.37 | 531.30 | 539.8 | 586.45 | Zone - 3 (South) |
| J-302 | 0.00 | 531.00 | 540.0 | 586.18 | Zone - 3 (South) |
| J-S2200E | 0.42 | 531.17 | 540.6 | 586.41 | Zone - 3 (South) |
| J-N1030E | 0.30 | 549.21 | 540.7 | 604.46 | Zone - 1 (North) |
| J-S1670E | 0.00 | 531.31 | 540.8 | 586.56 | Zone - 3 (South) |
| J-N990E | 0.36 | 547.58 | 541.0 | 602.86 | Zone - 1 (North) |
| J-S1555E | 0.27 | 531.34 | 541.1 | 586.63 | Zone - 3 (South) |
| J-S1556E | 0.20 | 531.30 | 541.5 | 586.63 | Zone - 3 (South) |
| J-N581E | 0.53 | 536.80 | 541.8 | 592.16 | Zone - 2 (North) |
| J-870 | 0.01 | 554.00 | 542.5 | 609.43 | Zone - 1 (North) |
| J-N750E | 0.04 | 539.04 | 542.7 | 594.49 | Zone - 2 (North) |

| Label | Demand (L/s) | Elevation (m) | Pressure (kPa) | Hydraulic Grade (m) | Zone |
|---|---|---|---|---|---|
| J-S2190E | 4.66 | 530.90 | 543.2 | 586.40 | Zone - 3 (South) |
| J-S1460E | 0.26 | 530.98 | 543.4 | 586.50 | Zone - 3 (South) |
| J-N120E | 0.13 | 538.52 | 543.4 | 594.04 | Zone - 2 (North) |
| J-S701E | 0.00 | 530.95 | 544.3 | 586.56 | Zone - 3 (South) |
| J-S700E | 0.29 | 530.95 | 544.3 | 586.56 | Zone - 3 (South) |
| J-S1620E | 0.28 | 530.87 | 545.1 | 586.57 | Zone - 3 (South) |
| J-N500E | 0.45 | 537.51 | 545.4 | 593.24 | Zone - 2 (North) |
| J-N40E | 0.22 | 538.39 | 546.9 | 594.27 | Zone - 2 (North) |
| J-N1305E | 0.56 | 553.50 | 547.4 | 609.43 | Zone - 1 (North) |
| J-N1300E | 0.39 | 551.24 | 547.8 | 607.22 | Zone - 1 (North) |
| J-N1454E | 0.00 | 553.00 | 548.0 | 608.99 | Zone - 1 (North) |
| J-S1650E | 0.00 | 530.57 | 548.0 | 586.57 | Zone - 3 (South) |
| J-S1630E | 0.15 | 530.56 | 548.1 | 586.57 | Zone - 3 (South) |
| J-N81E | 0.34 | 537.50 | 551.1 | 593.81 | Zone - 2 (North) |
| J-N1090E | 0.03 | 538.29 | 551.4 | 594.63 | Zone - 2 (North) |
| J-S1430E | 0.00 | 530.00 | 552.2 | 586.42 | Zone - 3 (South) |
| J-854 | 0.01 | 553.00 | 552.3 | 609.43 | Zone - 1 (North) |
| J-N1825E | 0.00 | 536.42 | 552.6 | 592.88 | Zone - 2 (North) |
| J-N760E | 0.10 | 537.97 | 552.7 | 594.45 | Zone - 2 (North) |
| J-N810E | 0.06 | 538.02 | 553.1 | 594.53 | Zone - 2 (North) |
| J-N82E | 0.50 | 537.20 | 553.7 | 593.77 | Zone - 2 (North) |
| J-N775E | 0.38 | 537.83 | 554.4 | 594.48 | Zone - 2 (North) |
| J-N770E | 0.06 | 537.76 | 554.7 | 594.44 | Zone - 2 (North) |
| J-N510E | 0.34 | 536.95 | 556.1 | 593.77 | Zone - 2 (North) |
| J-N740E | 0.07 | 536.33 | 569.5 | 594.52 | Zone - 2 (North) |
| J-CLIR149A | 0.44 | 539.00 | 581.5 | 598.42 | Zone - 1 (North) |

# PIPE TABLE: Ultimate-AnxUpd-PHD

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-40 | J-N630E | J-N680E | 118 | 400.0 | Asbestos Cement | 114.0 | 55.44 | 0.4412 |
| PN-50 | J-N141E | J-N140E | 87 | 400.0 | Asbestos Cement | 114.0 | 59.61 | 0.4744 |
| PN-30 | J-N635E | J-N630E | 57 | 400.0 | Asbestos Cement | 114.0 | 79.70 | 0.6343 |
| PN-90 | J-N870E | J-N700E | 195 | 150.0 | Asbestos Cement | 114.0 | 3.98 | 0.2250 |
| PN-100 | J-N700E | J-N160E | 185 | 150.0 | Asbestos Cement | 114.0 | 4.35 | 0.2460 |
| PN-110 | J-N161E | J-N165E | 103 | 150.0 | Asbestos Cement | 114.0 | 3.84 | 0.2174 |
| PN-130 | J-N640E | J-N670E | 75 | 150.0 | Asbestos Cement | 114.0 | 1.25 | 0.0709 |
| PN-160 | J-N700E | J-N710E | 117 | 150.0 | Asbestos Cement | 114.0 | -2.86 | 0.1617 |
| PN-180 | J-N730E | J-N770E | 138 | 150.0 | AC | 114.0 | 0.66 | 0.0372 |
| PN-220 | J-N840E | J-N775E | 169 | 200.0 | PVC | 120.0 | -2.48 | 0.0789 |
| PN-400 | J-N100E | J-N80E | 49 | 200.0 | Asbestos Cement | 114.0 | 9.82 | 0.3125 |
| PN-230 | J-N80E | J-N70E | 71 | 150.0 | Asbestos Cement | 114.0 | -2.38 | 0.1347 |
| PN-380 | J-N80E | J-N81E | 151 | 200.0 | Asbestos Cement | 114.0 | 12.09 | 0.3848 |
| PN-370 | J-N81E | J-N82E | 37 | 200.0 | Asbestos Cement | 114.0 | 11.75 | 0.3741 |
| PN-360 | J-N82E | J-N120E | 153 | 300.0 | PVC | 120.0 | -45.67 | 0.6460 |
| PN-250 | J-N60E | J-N55E | 128 | 150.0 | Asbestos Cement | 114.0 | -2.72 | 0.1537 |
| PN-260 | J-N55E | J-N50E | 198 | 150.0 | Asbestos Cement | 114.0 | -2.96 | 0.1676 |
| PN-420 | J-N100E | J-N20E | 196 | 200.0 | Asbestos Cement | 114.0 | -8.23 | 0.2620 |
| PN-290 | J-N40E | J-N760E | 216 | 150.0 | Asbestos Cement | 114.0 | -4.57 | 0.2588 |
| PN-270 | J-N20E | J-N50E | 125 | 150.0 | Asbestos Cement | 114.0 | -1.00 | 0.0567 |
| PN-320 | J-N740E | J-N1090E | 91 | 150.0 | Asbestos Cement | 120.0 | -6.10 | 0.3454 |
| PN-330 | J-N1090E | J-N1080E | 131 | 150.0 | Asbestos Cement | 114.0 | -4.70 | 0.2657 |
| PN-340 | J-N1080E | J-N1070E | 116 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PN-310 | J-N740E | J-N810E | 159 | 150.0 | Asbestos Cement | 114.0 | -1.10 | 0.0621 |
| PN-430 | J-N20E | J-N30E | 178 | 200.0 | Asbestos Cement | 114.0 | -9.26 | 0.2949 |
| PN-440 | J-N30E | J-N770E | 209 | 200.0 | Asbestos Cement | 114.0 | -9.72 | 0.3094 |
| PN-450 | J-N770E | J-N775E | 108 | 200.0 | Asbestos Cement | 114.0 | -6.71 | 0.2134 |
| PN-460 | J-N775E | J-N810E | 64 | 200.0 | Asbestos Cement | 114.0 | -9.56 | 0.3045 |
| PN-480 | J-N800E | J-N960E | 146 | 200.0 | Asbestos Cement | 114.0 | -8.45 | 0.2690 |
| PN-490 | J-N960E | J-N940E | 108 | 200.0 | Asbestos Cement | 114.0 | -12.06 | 0.3838 |
| PN-520 | J-N1390E | J-N1370E | 12 | 200.0 | Asbestos Cement | 114.0 | 49.33 | 1.5702 |
| PN-530 | J-N1370E | J-N1420E | 102 | 200.0 | Asbestos Cement | 114.0 | 24.81 | 0.7898 |
| PN-540 | J-N1430E | J-N1570E | 128 | 200.0 | Asbestos Cement | 114.0 | 33.13 | 1.0545 |
| PN-560 | J-N1550E | J-N1490E | 109 | 200.0 | Asbestos Cement | 114.0 | -18.29 | 0.5821 |
| PN-580 | J-N1520E | J-N1510E | 32 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PN-600 | J-N1540E | J-N1545E | 72 | 200.0 | Asbestos Cement | 114.0 | 0.01 | 0.0003 |
| PN-610 | J-N1540E | J-N1530E | 123 | 150.0 | Asbestos Cement | 114.0 | -27.76 | 1.5708 |
| PN-620 | J-N1530E | J-N1535E | 68 | 150.0 | Asbestos Cement | 114.0 | -28.00 | 1.5845 |
| PN-670 | J-N1590E | J-N1600E | 43 | 150.0 | Asbestos Cement | 114.0 | 6.87 | 0.3889 |
| PN-680 | J-N1600E | J-N1605E | 99 | 150.0 | Asbestos Cement | 114.0 | 0.28 | 0.0158 |
| PN-690 | J-N1600E | J-N1610E | 40 | 200.0 | Asbestos Cement | 114.0 | 6.31 | 0.2009 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-700 | J-N1610E | J-N1620E | 104 | 200.0 | PVC | 130.0 | 6.09 | 0.1938 |
| PN-710 | J-N1620E | J-N1630E | 96 | 200.0 | PVC | 130.0 | 5.62 | 0.1788 |
| PN-720 | J-N1630E | J-N1640E | 89 | 200.0 | PVC | 130.0 | -6.58 | 0.2093 |
| PN-740 | J-N1630E | J-N1635E | 103 | 200.0 | PVC | 130.0 | -3.23 | 0.1027 |
| PN-750 | J-N1635E | J-N1655E | 203 | 200.0 | PVC | 130.0 | -4.03 | 0.1284 |
| PN-760 | J-N1655E | J-N1650E | 207 | 200.0 | PVC | 130.0 | -4.59 | 0.1462 |
| PN-650 | J-N1240E | J-N1260E | 111 | 150.0 | Asbestos Cement | 114.0 | -3.22 | 0.1822 |
| PN-780 | J-N1657E | J-N1295E | 165 | 200.0 | PVC | 130.0 | -17.19 | 0.5471 |
| PN-770 | J-N1650E | J-N1657E | 87 | 200.0 | PVC | 130.0 | -11.96 | 0.3808 |
| PN-790 | J-N1295E | J-N1290E | 115 | 200.0 | PVC | 130.0 | -17.19 | 0.5471 |
| PN-820 | J-N1220E | J-N1200E | 104 | 150.0 | Asbestos Cement | 114.0 | -20.59 | 1.1650 |
| PN-830 | J-N1200E | J-N1190E | 116 | 150.0 | Asbestos Cement | 114.0 | -5.94 | 0.3362 |
| PN-860 | J-N1140E | J-N1120E | 108 | 150.0 | Asbestos Cement | 114.0 | 3.19 | 0.1806 |
| PN-900 | J-N850E | J-N860E | 26 | 200.0 | PVC | 120.0 | -4.61 | 0.1467 |
| PN-910 | J-N860E | J-N830E | 98 | 150.0 | AC | 114.0 | -1.52 | 0.0861 |
| PN-950 | J-N1120E | J-N970E | 110 | 150.0 | Asbestos Cement | 114.0 | 0.76 | 0.0432 |
| PN-960 | J-N970E | J-N960E | 103 | 150.0 | Asbestos Cement | 114.0 | -2.30 | 0.1302 |
| PN-980 | J-N1140E | J-N940E | 213 | 150.0 | Asbestos Cement | 114.0 | -3.49 | 0.1977 |
| PN-990 | J-N940E | J-N930E | 107 | 150.0 | Asbestos Cement | 114.0 | 7.17 | 0.4055 |
| PN-1000 | J-N930E | J-N910E | 94 | 150.0 | Asbestos Cement | 114.0 | 4.15 | 0.2347 |
| PN-920 | J-N830E | J-N935E | 93 | 150.0 | Asbestos Cement | 114.0 | -2.17 | 0.1227 |
| PN-930 | J-N935E | J-N930E | 196 | 150.0 | Asbestos Cement | 114.0 | -2.68 | 0.1518 |
| PN-940 | J-N935E | J-N835E | 188 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PN-1010 | J-N1060E | J-N1050E | 95 | 150.0 | Asbestos Cement | 114.0 | -8.42 | 0.4763 |
| PN-1020 | J-N1050E | J-N1160E | 105 | 150.0 | Asbestos Cement | 114.0 | -22.20 | 1.2560 |
| PN-1030 | J-N1160E | J-N990E | 213 | 150.0 | Asbestos Cement | 114.0 | -20.21 | 1.1436 |
| PN-1040 | J-N990E | J-N1030E | 200 | 200.0 | PVC | 120.0 | -35.71 | 1.1365 |
| PN-1050 | J-N1030E | J-N1010E | 106 | 200.0 | Asbestos Cement | 114.0 | -36.01 | 1.1461 |
| PN-1070 | J-N1300E | J-N1440E | 114 | 200.0 | Asbestos Cement | 114.0 | -29.23 | 0.9305 |
| PN-1075 | J-N1480E | J-N1490E | 103 | 150.0 | Asbestos Cement | 114.0 | 37.02 | 2.0948 |
| PN-1100 | J-N1190E | J-N1195E | 104 | 150.0 | Asbestos Cement | 114.0 | -8.60 | 0.4866 |
| PN-1110 | J-N1195E | J-N1400E | 116 | 150.0 | Asbestos Cement | 114.0 | -9.07 | 0.5131 |
| PN-635 | J-N1050E | J-N1055E | 215 | 150.0 | Asbestos Cement | 114.0 | 8.32 | 0.4709 |
| PN-640 | J-N1055E | J-N1245E | 195 | 150.0 | Asbestos Cement | 114.0 | 6.30 | 0.3568 |
| PN-1120 | J-N1056E | J-N1055E | 95 | 150.0 | Asbestos Cement | 114.0 | -1.57 | 0.0888 |
| PN-1130 | J-N1200E | J-N1400E | 104 | 150.0 | Asbestos Cement | 114.0 | -14.98 | 0.8478 |
| PN-1140 | J-N1400E | J-N1370E | 111 | 150.0 | Asbestos Cement | 114.0 | -24.52 | 1.3875 |
| PN-1150 | J-N1390E | J-N1360E | 108 | 200.0 | Asbestos Cement | 114.0 | -58.14 | 1.8506 |
| PN-1160 | J-N1360E | J-N1300E | 88 | 200.0 | Asbestos Cement | 114.0 | -57.04 | 1.8156 |
| PN-1180 | J-N1300E | J-N1305E | 101 | 200.0 | PVC | 130.0 | -66.60 | 2.1201 |
| PN-1200 | J-N1250E | J-N1240E | 105 | 150.0 | Asbestos Cement | 114.0 | -17.15 | 0.9704 |
| PN-1210 | J-N1240E | J-N1245E | 107 | 150.0 | Asbestos Cement | 114.0 | -5.80 | 0.3283 |
| PN-1240 | J-N1220E | J-N1420E | 218 | 150.0 | Asbestos Cement | 114.0 | -23.59 | 1.3350 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| 106 | J-N1420E | J-N1430E | 15 | 200.0 | PVC | 130.0 | 0.66 | 0.0210 |
| PN-1260 | J-N1430E | J-N1440E | 185 | 150.0 | Asbestos Cement | 114.0 | -32.47 | 1.8373 |
| PN-1270 | J-N1440E | J-N1450E | 6 | 150.0 | Asbestos Cement | 114.0 | -62.20 | 3.5200 |
| PN-1300 | J-N1265E | J-N1260E | 101 | 150.0 | Asbestos Cement | 114.0 | -0.01 | 0.0006 |
| PN-1310 | J-N1260E | J-N1270E | 45 | 150.0 | Asbestos Cement | 114.0 | -3.40 | 0.1923 |
| 79 | J-N1270E | J-N1280E | 102 | 150.0 | PVC | 130.0 | -10.91 | 0.6172 |
| PN-1370 | J-N570E | J-N600E | 211 | 300.0 | PVC | 120.0 | 47.29 | 0.6690 |
| PN-1380 | J-N600E | J-N620E | 38 | 300.0 | PVC | 120.0 | 59.01 | 0.8348 |
| PN-1390 | J-N620E | J-N540E | 61 | 300.0 | PVC | 120.0 | 64.87 | 0.9178 |
| PN-1400 | J-N540E | J-N1741E | 298 | 400.0 | Asbestos Cement | 114.0 | 54.41 | 0.4330 |
| PN-1410 | J-N1740E | J-N1730E | 65 | 350.0 | PVC | 130.0 | 1.65 | 0.0171 |
| PN-1460 | J-N1700E | J-N1690E | 236 | 250.0 | PVC | 130.0 | 16.82 | 0.3427 |
| PN-1480 | J-N1760E | J-N1770E | 118 | 250.0 | PVC | 130.0 | 16.16 | 0.3293 |
| PN-1500 | J-N1780E | J-N1800E | 187 | 250.0 | PVC | 130.0 | 15.09 | 0.3074 |
| PN-1510 | J-N1800E | J-N1790E | 96 | 250.0 | PVC | 130.0 | 0.41 | 0.0084 |
| PN-1520 | J-N1800E | J-N1810E | 200 | 250.0 | PVC | 130.0 | 14.17 | 0.2887 |
| PN-1530 | J-N1820E | J-N300E | 64 | 200.0 | Asbestos Cement | 114.0 | 0.67 | 0.0215 |
| PN-1590 | J-N530E | J-N440E | 250 | 200.0 | Asbestos Cement | 114.0 | -1.28 | 0.0407 |
| PN-1610 | J-N400E | J-N370E | 101 | 200.0 | Asbestos Cement | 114.0 | 5.81 | 0.1848 |
| PN-1620 | J-N370E | J-N360E | 62 | 200.0 | Asbestos Cement | 114.0 | 5.58 | 0.1777 |
| PN-1630 | J-N360E | J-N350E | 65 | 200.0 | Asbestos Cement | 114.0 | 5.58 | 0.1777 |
| PN-1640 | J-N350E | J-N320E | 93 | 300.0 | Asbestos Cement | 114.0 | 5.00 | 0.0707 |
| PN-1650 | J-N320E | J-N180E | 154 | 300.0 | Asbestos Cement | 114.0 | 4.27 | 0.0603 |
| PN-1591 | J-N440E | J-N430E | 14 | 200.0 | Asbestos Cement | 114.0 | -1.67 | 0.0532 |
| PN-1592 | J-N430E | J-N431E | 233 | 200.0 | Asbestos Cement | 114.0 | -0.39 | 0.0123 |
| PN-1670 | J-N300E | J-N260E | 99 | 200.0 | Asbestos Cement | 114.0 | 18.92 | 0.6022 |
| PN-1680 | J-N260E | J-N220E | 159 | 200.0 | Asbestos Cement | 114.0 | 9.19 | 0.2926 |
| PN-1700 | J-N220E | J-N190E | 191 | 200.0 | Asbestos Cement | 114.0 | 8.63 | 0.2746 |
| PN-1730 | J-N421E | J-N240E | 94 | 200.0 | Asbestos Cement | 114.0 | -8.08 | 0.2571 |
| PN-1451 | J-N1710E | J-N1711E | 163 | 200.0 | PVC | 130.0 | 0.06 | 0.0019 |
| PN-1651 | J-N330E | J-N320E | 55 | 200.0 | Asbestos Cement | 114.0 | -0.32 | 0.0102 |
| PN-1555 | J-N460E | J-N465E | 113 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PN-1750 | J-N420E | J-N400E | 93 | 150.0 | Asbestos Cement | 114.0 | 6.68 | 0.3779 |
| PN-1760 | J-N180E | J-N190E | 93 | 150.0 | Asbestos Cement | 114.0 | -8.26 | 0.4675 |
| PN-1770 | J-N220E | J-N225E | 110 | 150.0 | Asbestos Cement | 114.0 | 0.15 | 0.0086 |
| PN-1780 | J-N225E | J-N245E | 148 | 150.0 | Asbestos Cement | 114.0 | -0.21 | 0.0116 |
| PN-1790 | J-N245E | J-N240E | 91 | 150.0 | Asbestos Cement | 114.0 | -0.21 | 0.0116 |
| PN-1800 | J-N350E | J-N340E | 135 | 150.0 | Asbestos Cement | 114.0 | 0.30 | 0.0171 |
| PN-1810 | J-N570E | J-N580E | 53 | 150.0 | Asbestos Cement | 114.0 | 7.87 | 0.4451 |
| PN-1820 | J-N580E | J-N581E | 95 | 150.0 | Asbestos Cement | 114.0 | 3.60 | 0.2040 |
| PN-1830 | J-N581E | J-N582E | 230 | 150.0 | Asbestos Cement | 114.0 | 3.08 | 0.1743 |
| PN-1840 | J-N582E | J-N583E | 89 | 150.0 | Asbestos Cement | 114.0 | 2.50 | 0.1413 |
| PN-1850 | J-N580E | J-N560E | 189 | 150.0 | Asbestos Cement | 114.0 | 4.26 | 0.2411 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-1870 | J-N561E | J-N562E | 52 | 150.0 | Asbestos Cement | 114.0 | -2.50 | 0.1413 |
| PN-1880 | J-N561E | J-N620E | 142 | 150.0 | Asbestos Cement | 114.0 | 5.86 | 0.3318 |
| PN-1455 | J-N1713E | J-N1700E | 102 | 150.0 | PVC | 130.0 | 3.04 | 0.1720 |
| PN-1454 | J-N1713E | J-N1714E | 72 | 150.0 | PVC | 130.0 | 0.22 | 0.0124 |
| PN-1453 | J-N1711E | J-N1716E | 145 | 150.0 | PVC | 130.0 | 4.13 | 0.2340 |
| PN-1456 | J-N1716E | J-N1713E | 98 | 150.0 | PVC | 130.0 | 3.48 | 0.1968 |
| PN-1457 | J-N1715E | J-N1716E | 103 | 150.0 | PVC | 130.0 | -0.44 | 0.0248 |
| PN-1436 | J-N1755E | J-N1756E | 255 | 150.0 | PVC | 130.0 | 2.49 | 0.1408 |
| PN-1437 | J-N1756E | J-N1757E | 159 | 150.0 | PVC | 130.0 | 2.22 | 0.1256 |
| PN-1593 | J-N431E | J-N432E | 187 | 150.0 | PVC | 130.0 | 0.16 | 0.0091 |
| PN-1596 | J-N434E | J-N435E | 34 | 200.0 | PVC | 130.0 | 11.14 | 0.3547 |
| PS-1020 | J-S45E | J-S50E | 102 | 600.0 | Steel | 100.0 | 212.11 | 0.7502 |
| PS-1030 | J-S50E | J-S60E | 161 | 400.0 | Asbestos Cement | 120.0 | 111.49 | 0.8872 |
| PS-1060 | J-S40E | J-S20E | 115 | 400.0 | Asbestos Cement | 114.0 | 78.20 | 0.6223 |
| 106 | J-S30E | J-S20E | 49 | 150.0 | PVC | 130.0 | -0.01 | 0.0006 |
| PS-1080 | J-S20E | J-S10E | 187 | 300.0 | Asbestos Cement | 114.0 | 77.93 | 1.1025 |
| PS-1090 | J-S10E | J-S100E | 95 | 300.0 | Asbestos Cement | 114.0 | 77.67 | 1.0988 |
| PS-1100 | J-S100E | J-S120E | 146 | 300.0 | Asbestos Cement | 114.0 | 81.23 | 1.1492 |
| PS-1150 | J-S80E | J-S250E | 153 | 150.0 | Asbestos Cement | 114.0 | -4.42 | 0.2504 |
| PS-1180 | J-S260E | J-S250E | 62 | 300.0 | Asbestos Cement | 114.0 | 32.33 | 0.4573 |
| PS-1210 | J-S230E | J-S210E | 158 | 200.0 | Asbestos Cement | 114.0 | 17.01 | 0.5415 |
| PS-1220 | J-S210E | J-S120E | 219 | 200.0 | Asbestos Cement | 114.0 | 2.93 | 0.0933 |
| PS-1230 | J-S120E | J-S130E | 88 | 300.0 | Asbestos Cement | 114.0 | 83.91 | 1.1870 |
| PS-1240 | J-S130E | J-S140E | 102 | 200.0 | Asbestos Cement | 114.0 | 11.34 | 0.3611 |
| PS-1250 | J-S150E | J-S290E | 177 | 150.0 | PVC | 130.0 | 9.87 | 0.5585 |
| PS-1260 | J-S290E | J-S280E | 93 | 150.0 | PVC | 130.0 | 9.63 | 0.5452 |
| PS-1270 | J-S280E | J-S350E | 112 | 150.0 | PVC | 130.0 | 6.88 | 0.3892 |
| 117 | J-S350E | J-S340E | 46 | 300.0 | PVC | 130.0 | 44.32 | 0.6270 |
| PS-1290 | J-S350E | J-S360E | 95 | 300.0 | PVC | 130.0 | -37.55 | 0.5313 |
| PS-1300 | J-S360E | J-S380E | 100 | 300.0 | PVC | 130.0 | -35.34 | 0.4999 |
| PS-1360 | J-S170E | J-S175E | 55 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0006 |
| PS-1370 | J-S180E | J-S170E | 64 | 150.0 | Asbestos Cement | 114.0 | -0.36 | 0.0203 |
| PS-1380 | J-S220E | J-S180E | 119 | 150.0 | Asbestos Cement | 114.0 | 8.21 | 0.4647 |
| PS-1400 | J-S270E | J-S380E | 97 | 150.0 | Asbestos Cement | 114.0 | 11.50 | 0.6508 |
| PS-1420 | J-S380E | J-S370E | 50 | 150.0 | Asbestos Cement | 114.0 | 5.38 | 0.3044 |
| PS-1430 | J-S370E | J-S470E | 55 | 150.0 | Asbestos Cement | 114.0 | 5.38 | 0.3044 |
| PS-1440 | J-S470E | J-S450E | 112 | 150.0 | Asbestos Cement | 114.0 | 8.12 | 0.4594 |
| PS-1450 | J-S450E | J-S540E | 111 | 150.0 | Asbestos Cement | 114.0 | 1.73 | 0.0980 |
| PS-1460 | J-S540E | J-S550E | 96 | 150.0 | Asbestos Cement | 114.0 | 5.17 | 0.2924 |
| PS-1480 | J-S1140E | J-S1190E | 200 | 150.0 | Asbestos Cement | 114.0 | -4.03 | 0.2281 |
| PS-1490 | J-S540E | J-S480E | 193 | 150.0 | Asbestos Cement | 114.0 | -3.71 | 0.2098 |
| PS-1500 | J-S450E | J-S520E | 182 | 150.0 | Asbestos Cement | 114.0 | -5.39 | 0.3051 |
| PS-1510 | J-S520E | J-S510E | 11 | 200.0 | PVC | 130.0 | -5.39 | 0.1716 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-1520 | J-S470E | J-S430E | 182 | 150.0 | Asbestos Cement | 114.0 | -2.97 | 0.1683 |
| PS-1530 | J-S430E | J-S440E | 12 | 200.0 | PVC | 130.0 | -2.97 | 0.0947 |
| PS-1540 | J-S380E | J-S400E | 193 | 350.0 | Asbestos Cement | 114.0 | -29.47 | 0.3064 |
| PS-1550 | J-S270E | J-S271E | 81 | 150.0 | Asbestos Cement | 114.0 | 0.20 | 0.0113 |
| PS-1570 | J-S180E | J-S190E | 96 | 150.0 | Asbestos Cement | 114.0 | -3.48 | 0.1967 |
| PS-1600 | J-S190E | J-S310E | 115 | 150.0 | Asbestos Cement | 114.0 | 1.48 | 0.0840 |
| PS-1660 | J-S330E | J-S320E | 127 | 150.0 | Asbestos Cement | 114.0 | 1.28 | 0.0726 |
| PS-1670 | J-S1190E | J-S1960E | 104 | 150.0 | Asbestos Cement | 114.0 | 1.24 | 0.0701 |
| PS-1680 | J-S1960E | J-S1970E | 255 | 150.0 | Asbestos Cement | 114.0 | -4.03 | 0.2279 |
| PS-1690 | J-S1970E | J-S2050E | 263 | 150.0 | Asbestos Cement | 114.0 | -4.43 | 0.2509 |
| PS-1700 | J-S1230E | J-S1350E | 216 | 150.0 | Asbestos Cement | 114.0 | 2.44 | 0.1380 |
| PS-1710 | J-S1351E | J-S1360E | 85 | 250.0 | PVC | 120.0 | 4.61 | 0.0939 |
| PS-1830 | J-S1360E | J-S1930E | 76 | 150.0 | Asbestos Cement | 114.0 | -5.06 | 0.2862 |
| PS-1810 | J-S1930E | J-S2030E | 110 | 150.0 | Asbestos Cement | 114.0 | -2.83 | 0.1603 |
| PS-1790 | J-S2030E | J-S2040E | 112 | 150.0 | Asbestos Cement | 114.0 | -2.64 | 0.1494 |
| PS-1770 | J-S2040E | J-S2045E | 49 | 150.0 | Asbestos Cement | 114.0 | -4.84 | 0.2741 |
| PS-1720 | J-S1360E | J-S1370E | 142 | 250.0 | PVC | 120.0 | 0.03 | 0.0006 |
| PS-1780 | J-S2040E | J-S1980E | 157 | 150.0 | Asbestos Cement | 114.0 | 1.89 | 0.1072 |
| PS-1800 | J-S2030E | J-S2000E | 157 | 150.0 | Asbestos Cement | 114.0 | -0.50 | 0.0283 |
| PS-1820 | J-S1930E | J-S1940E | 157 | 150.0 | Asbestos Cement | 114.0 | -2.39 | 0.1352 |
| PS-1760 | J-S1350E | J-S1940E | 101 | 150.0 | Asbestos Cement | 114.0 | -2.68 | 0.1516 |
| PS-1750 | J-S1940E | J-S2000E | 110 | 150.0 | Asbestos Cement | 114.0 | -0.29 | 0.0166 |
| PS-1740 | J-S2000E | J-S1980E | 111 | 150.0 | Asbestos Cement | 114.0 | -1.03 | 0.0583 |
| PS-1730 | J-S1980E | J-S1990E | 16 | 150.0 | Asbestos Cement | 114.0 | 0.72 | 0.0405 |
| PS-1840 | J-S1360E | J-S1280E | 100 | 150.0 | Asbestos Cement | 114.0 | 9.61 | 0.5437 |
| PS-1870 | J-S1283E | J-S1282E | 389 | 150.0 | Asbestos Cement | 114.0 | 2.38 | 0.1346 |
| PS-1860 | J-S1282E | J-S1281E | 39 | 150.0 | Asbestos Cement | 114.0 | 2.21 | 0.1253 |
| PS-1850 | J-S1281E | J-S1280E | 169 | 150.0 | Asbestos Cement | 114.0 | 2.21 | 0.1253 |
| PS-1880 | J-S1283E | J-S1825E | 63 | 150.0 | Asbestos Cement | 114.0 | -2.38 | 0.1346 |
| PS-1920 | J-S1920E | J-S1925E | 249 | 150.0 | Asbestos Cement | 114.0 | 1.42 | 0.0803 |
| PS-1930 | J-S1920E | J-S1870E | 62 | 150.0 | Asbestos Cement | 114.0 | -3.29 | 0.1859 |
| PS-1940 | J-S1240E | J-S1245E | 159 | 150.0 | Asbestos Cement | 114.0 | 2.32 | 0.1313 |
| PS-1950 | J-S1240E | J-S1150E | 123 | 150.0 | Asbestos Cement | 114.0 | 4.52 | 0.2557 |
| PS-1960 | J-S1150E | J-S1060E | 118 | 150.0 | Asbestos Cement | 114.0 | 3.36 | 0.1903 |
| PS-1970 | J-S1060E | J-S1070E | 20 | 150.0 | Asbestos Cement | 114.0 | 0.45 | 0.0256 |
| PS-1980 | J-S1070E | J-S1040E | 98 | 150.0 | Asbestos Cement | 114.0 | 1.91 | 0.1082 |
| PS-1990 | J-S1040E | J-S1030E | 129 | 150.0 | Asbestos Cement | 114.0 | 0.60 | 0.0340 |
| PS-2040 | J-S930E | J-S940E | 12 | 150.0 | Asbestos Cement | 114.0 | 14.70 | 0.8320 |
| PS-2050 | J-S940E | J-S945E | 104 | 350.0 | Asbestos Cement | 114.0 | 14.56 | 0.1514 |
| PS-2060 | J-S945E | J-S820E | 117 | 350.0 | Asbestos Cement | 114.0 | 36.40 | 0.3784 |
| PS-2070 | J-S820E | J-S870E | 133 | 300.0 | Asbestos Cement | 114.0 | 32.88 | 0.4652 |
| PS-2080 | J-S870E | J-S880E | 96 | 200.0 | Asbestos Cement | 114.0 | 1.14 | 0.0364 |
| PS-2090 | J-S880E | J-S900E | 60 | 200.0 | Asbestos Cement | 114.0 | 0.65 | 0.0208 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-2100 | J-S900E | J-S905E | 84 | 200.0 | Asbestos Cement | 114.0 | 0.65 | 0.0208 |
| PS-2110 | J-S905E | J-S890E | 258 | 150.0 | Asbestos Cement | 114.0 | 0.24 | 0.0136 |
| PS-2120 | J-S1340E | J-S1780E | 111 | 150.0 | Asbestos Cement | 114.0 | 2.61 | 0.1476 |
| PS-2130 | J-S1085E | J-S1080E | 105 | 150.0 | Asbestos Cement | 114.0 | -0.40 | 0.0226 |
| PS-2140 | J-S1080E | J-S1110E | 77 | 150.0 | Asbestos Cement | 114.0 | -0.77 | 0.0434 |
| PS-2150 | J-S1110E | J-S1160E | 136 | 150.0 | Asbestos Cement | 114.0 | -1.89 | 0.1068 |
| PS-2160 | J-S1160E | J-S1150E | 107 | 150.0 | Asbestos Cement | 114.0 | -2.19 | 0.1238 |
| PS-2170 | J-S1150E | J-S1151E | 121 | 150.0 | Asbestos Cement | 114.0 | -1.06 | 0.0598 |
| PS-2180 | J-S1151E | J-S1152E | 87 | 150.0 | Asbestos Cement | 114.0 | 3.10 | 0.1755 |
| PS-2200 | J-S1890E | J-S1870E | 104 | 150.0 | Asbestos Cement | 114.0 | 3.74 | 0.2115 |
| PS-2210 | J-S1870E | J-S1880E | 31 | 150.0 | Asbestos Cement | 114.0 | 0.45 | 0.0256 |
| PS-2220 | J-S1880E | J-S1885E | 148 | 150.0 | Asbestos Cement | 114.0 | 2.44 | 0.1379 |
| PS-2230 | J-S1885E | J-S930E | 165 | 150.0 | Asbestos Cement | 114.0 | -2.58 | 0.1462 |
| PS-2240 | J-S1110E | J-S1070E | 109 | 150.0 | Asbestos Cement | 114.0 | 1.46 | 0.0825 |
| PS-2260 | J-S1060E | J-S1900E | 121 | 150.0 | Asbestos Cement | 114.0 | 2.65 | 0.1501 |
| PS-2270 | J-S1900E | J-S1880E | 262 | 150.0 | Asbestos Cement | 114.0 | 2.29 | 0.1297 |
| PS-2280 | J-S1040E | J-S1910E | 251 | 150.0 | Asbestos Cement | 114.0 | 1.00 | 0.0566 |
| PS-2290 | J-S1910E | J-S950E | 150 | 150.0 | Asbestos Cement | 114.0 | 0.59 | 0.0337 |
| PS-2250 | J-S1110E | J-S1095E | 50 | 150.0 | Asbestos Cement | 114.0 | -0.64 | 0.0361 |
| PS-2300 | J-S1000E | J-S1008E | 61 | 150.0 | Asbestos Cement | 114.0 | 0.15 | 0.0084 |
| PS-2000 | J-S1030E | J-S1000E | 106 | 150.0 | Asbestos Cement | 114.0 | 1.24 | 0.0702 |
| PS-2320 | J-S1010E | J-S1035E | 104 | 400.0 | Asbestos Cement | 114.0 | -17.85 | 0.1420 |
| PS-2360 | J-S1035E | J-S1030E | 4 | 400.0 | Asbestos Cement | 114.0 | 0.79 | 0.0063 |
| PS-2310 | J-S1035E | J-S1036E | 50 | 400.0 | Asbestos Cement | 114.0 | -18.94 | 0.1507 |
| PS-2010 | J-S1000E | J-S950E | 86 | 150.0 | Asbestos Cement | 114.0 | 1.09 | 0.0618 |
| PS-2020 | J-S950E | J-S935E | 97 | 150.0 | Asbestos Cement | 114.0 | 1.49 | 0.0841 |
| PS-2030 | J-S935E | J-S930E | 5 | 150.0 | Asbestos Cement | 114.0 | 17.59 | 0.9952 |
| PS-2350 | J-S1010E | J-S935E | 188 | 400.0 | Asbestos Cement | 114.0 | 16.31 | 0.1298 |
| PS-2380 | J-S880E | J-S881E | 192 | 200.0 | Asbestos Cement | 114.0 | 0.45 | 0.0142 |
| PS-2390 | J-S881E | J-S882E | 114 | 200.0 | Asbestos Cement | 114.0 | 0.31 | 0.0099 |
| PS-2400 | J-S882E | J-S905E | 132 | 200.0 | Asbestos Cement | 114.0 | 0.24 | 0.0076 |
| PS-2430 | J-S903E | J-S904E | 141 | 300.0 | PVC | 130.0 | -9.98 | 0.1411 |
| PS-2440 | J-S907E | J-S908E | 545 | 300.0 | PVC | 130.0 | 7.14 | 0.1010 |
| PS-2460 | J-S909E | J-S1001E | 44 | 300.0 | PVC | 130.0 | 0.05 | 0.0007 |
| PS-2470 | J-S1001E | J-S1002E | 107 | 300.0 | PVC | 130.0 | 0.04 | 0.0006 |
| PS-2480 | J-S1002E | J-S1003E | 223 | 300.0 | PVC | 130.0 | 0.03 | 0.0004 |
| PS-2490 | J-S1003E | J-S1004E | 250 | 300.0 | PVC | 130.0 | 0.03 | 0.0004 |
| PS-2540 | J-S874E | J-S902E | 62 | 300.0 | PVC | 130.0 | 13.25 | 0.1875 |
| PS-2550 | J-S873E | J-S874E | 28 | 300.0 | PVC | 130.0 | 0.00 | 0.0000 |
| PS-2560 | J-S874E | J-S875E | 173 | 300.0 | PVC | 130.0 | 1.92 | 0.0271 |
| PS-2570 | J-S875E | J-S876E | 94 | 300.0 | PVC | 130.0 | 1.92 | 0.0271 |
| PS-2580 | J-S876E | J-S878E | 200 | 300.0 | PVC | 130.0 | -0.84 | 0.0120 |
| PS-2590 | J-S878E | J-S879E | 51 | 300.0 | PVC | 130.0 | 9.57 | 0.1354 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-2600 | J-S878E | J-S901E | 54 | 200.0 | PVC | 130.0 | 3.94 | 0.1255 |
| PS-2610 | J-S876E | J-S877E | 95 | 200.0 | PVC | 130.0 | 2.25 | 0.0717 |
| PS-2620 | J-S904E | J-S906E | 131 | 300.0 | PVC | 130.0 | 7.14 | 0.1010 |
| PS-2630 | J-S906E | J-S907E | 145 | 300.0 | PVC | 130.0 | 7.14 | 0.1010 |
| PS-2640 | J-391 | J-S620E | 58 | 150.0 | Asbestos Cement | 114.0 | 3.85 | 0.2177 |
| PS-2650 | J-S620E | J-S625E | 130 | 150.0 | Asbestos Cement | 114.0 | 2.40 | 0.1359 |
| PS-2680 | J-S630E | J-S635E | 62 | 150.0 | Asbestos Cement | 114.0 | 2.47 | 0.1395 |
| PS-2700 | J-S560E | J-S660E | 183 | 150.0 | Asbestos Cement | 114.0 | 0.44 | 0.0250 |
| PS-2720 | J-S800E | J-S790E | 117 | 150.0 | Asbestos Cement | 114.0 | 2.54 | 0.1438 |
| PS-2730 | J-S790E | J-S780E | 109 | 150.0 | Asbestos Cement | 114.0 | 5.92 | 0.3352 |
| PS-2740 | J-S780E | J-S740E | 54 | 150.0 | Asbestos Cement | 114.0 | -0.49 | 0.0278 |
| PS-2750 | J-S660E | J-S670E | 61 | 150.0 | Asbestos Cement | 114.0 | 3.70 | 0.2096 |
| PS-2760 | J-S670E | J-S675E | 169 | 150.0 | Asbestos Cement | 114.0 | 3.83 | 0.2166 |
| PS-2770 | J-S675E | J-S720E | 174 | 150.0 | Asbestos Cement | 114.0 | 3.50 | 0.1979 |
| PS-2790 | J-S670E | J-S685E | 56 | 150.0 | Asbestos Cement | 114.0 | -0.54 | 0.0308 |
| PS-2800 | J-S685E | J-S565E | 234 | 150.0 | Asbestos Cement | 114.0 | -1.08 | 0.0609 |
| PS-2810 | J-S560E | J-S565E | 129 | 150.0 | Asbestos Cement | 114.0 | 1.96 | 0.1107 |
| PS-2820 | J-S565E | J-S590E | 78 | 150.0 | Asbestos Cement | 114.0 | 0.88 | 0.0498 |
| PS-2830 | J-S685E | J-S680E | 161 | 150.0 | Asbestos Cement | 114.0 | 0.44 | 0.0251 |
| PS-2840 | J-S590E | J-S580E | 31 | 150.0 | Asbestos Cement | 114.0 | 2.09 | 0.1184 |
| PS-2850 | J-S580E | J-S585E | 71 | 150.0 | Asbestos Cement | 114.0 | 1.13 | 0.0637 |
| PS-2860 | J-S585E | J-S680E | 117 | 150.0 | Asbestos Cement | 114.0 | 0.51 | 0.0289 |
| PS-2870 | J-S702E | J-S701E | 90 | 150.0 | Asbestos Cement | 114.0 | -0.26 | 0.0149 |
| PS-2880 | J-S700E | J-S1670E | 76 | 200.0 | Asbestos Cement | 114.0 | -0.55 | 0.0175 |
| PS-2890 | J-S1670E | J-S585E | 79 | 150.0 | Asbestos Cement | 114.0 | -0.32 | 0.0182 |
| PS-2900 | J-S1670E | J-S1630E | 96 | 150.0 | Asbestos Cement | 114.0 | -0.23 | 0.0129 |
| PS-2910 | J-S1630E | J-S1650E | 26 | 150.0 | Asbestos Cement | 114.0 | 0.00 | 0.0000 |
| PS-2920 | J-S1630E | J-S1620E | 71 | 150.0 | Asbestos Cement | 114.0 | -0.38 | 0.0213 |
| PS-2930 | J-S1620E | J-S580E | 175 | 150.0 | Asbestos Cement | 114.0 | -0.66 | 0.0372 |
| PS-2940 | J-S590E | J-S595E | 97 | 150.0 | Asbestos Cement | 114.0 | -1.43 | 0.0811 |
| PS-2970 | J-S600E | J-S610E | 65 | 150.0 | Asbestos Cement | 114.0 | 0.77 | 0.0436 |
| PS-2980 | J-S610E | J-S1747E | 123 | 200.0 | Asbestos Cement | 114.0 | 1.17 | 0.0373 |
| PS-2990 | J-S1747E | J-S1740E | 92 | 200.0 | Asbestos Cement | 114.0 | 1.17 | 0.0373 |
| PS-3000 | J-S1740E | J-S1745E | 83 | 200.0 | Asbestos Cement | 114.0 | 1.02 | 0.0326 |
| PS-3010 | J-S1745E | J-S1770E | 70 | 200.0 | Asbestos Cement | 114.0 | 1.02 | 0.0326 |
| PS-3020 | J-S1770E | J-S1720E | 100 | 150.0 | Asbestos Cement | 114.0 | 1.05 | 0.0593 |
| PS-3050 | J-S1710E | J-S1700E | 183 | 150.0 | Asbestos Cement | 114.0 | -0.07 | 0.0040 |
| PS-3060 | J-S1700E | J-S1720E | 107 | 150.0 | Asbestos Cement | 114.0 | -0.50 | 0.0282 |
| PS-3070 | J-S1700E | J-S1690E | 103 | 150.0 | Asbestos Cement | 114.0 | 0.03 | 0.0016 |
| PS-3080 | J-S1690E | J-S1681E | 130 | 150.0 | Asbestos Cement | 114.0 | -0.23 | 0.0129 |
| PS-3090 | J-S1681E | J-S1680E | 61 | 150.0 | Asbestos Cement | 114.0 | -0.43 | 0.0242 |
| PS-3100 | J-S1680E | J-S1679E | 78 | 150.0 | Asbestos Cement | 114.0 | -0.43 | 0.0242 |
| PS-3110 | J-S1679E | J-S1510E | 97 | 150.0 | Asbestos Cement | 114.0 | -0.70 | 0.0397 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-3120 | J-S1510E | J-S1520E | 56 | 150.0 | Asbestos Cement | 114.0 | -0.52 | 0.0293 |
| PS-3130 | J-S1520E | J-S1525E | 255 | 150.0 | Asbestos Cement | 114.0 | -0.52 | 0.0293 |
| PS-3140 | J-S1510E | J-S1490E | 70 | 150.0 | Asbestos Cement | 114.0 | -0.18 | 0.0104 |
| PS-3150 | J-S600E | J-S605E | 164 | 150.0 | Asbestos Cement | 114.0 | 0.90 | 0.0512 |
| PS-3160 | J-S605E | J-S1490E | 147 | 150.0 | Asbestos Cement | 114.0 | 0.63 | 0.0358 |
| PS-3170 | J-S1615E | J-S1470E | 311 | 400.0 | Asbestos Cement | 114.0 | 8.29 | 0.0659 |
| PS-3180 | J-S1470E | J-S1490E | 67 | 150.0 | Asbestos Cement | 114.0 | 1.04 | 0.059 |
| PS-3190 | J-S1490E | J-S1556E | 180 | 150.0 | Asbestos Cement | 114.0 | 0.21 | 0.0121 |
| PS-3220 | J-S1470E | J-S1560E | 511 | 400.0 | Asbestos Cement | 114.0 | 8.29 | 0.0659 |
| PS-3230 | J-S595E | J-S1460E | 295 | 150.0 | Asbestos Cement | 114.0 | 2.82 | 0.1597 |
| PS-3240 | J-S1460E | J-S1530E | 190 | 150.0 | Asbestos Cement | 114.0 | 2.56 | 0.1451 |
| PS-3250 | J-S1530E | J-S1600E | 176 | 200.0 | Asbestos Cement | 114.0 | -1.41 | 0.0450 |
| PS-3260 | J-S1600E | J-S1580E | 161 | 200.0 | Asbestos Cement | 114.0 | -5.13 | 0.1633 |
| PS-3270 | J-S1600E | J-S1390E | 121 | 200.0 | Asbestos Cement | 114.0 | 3.48 | 0.1108 |
| PS-3280 | J-S1440E | J-S1530E | 120 | 200.0 | Asbestos Cement | 114.0 | -3.61 | 0.1149 |
| PS-3290 | J-S1440E | J-S1390E | 175 | 150.0 | Asbestos Cement | 114.0 | -0.75 | 0.0424 |
| PS-3300 | J-S1390E | J-S1380E | 162 | 150.0 | Asbestos Cement | 114.0 | -2.59 | 0.1465 |
| PS-3310 | J-S1580E | J-S1380E | 122 | 200.0 | Asbestos Cement | 114.0 | 2.59 | 0.0824 |
| PS-3320 | J-S1390E | J-S1420E | 43 | 200.0 | Asbestos Cement | 114.0 | 5.16 | 0.1642 |
| PS-3330 | J-S1420E | J-S1430E | 50 | 200.0 | Asbestos Cement | 114.0 | 4.82 | 0.1533 |
| PS-3340 | J-S1425E | J-S1420E | 112 | 200.0 | Asbestos Cement | 114.0 | -0.01 | 0.0003 |
| PS-3350 | J-S2180E | J-S2200E | 111 | 150.0 | PVC | 130.0 | -2.91 | 0.1647 |
| PS-3360 | J-S1430E | J-S1435E | 174 | 150.0 | Asbestos Cement | 114.0 | -0.56 | 0.0318 |
| PS-3370 | J-S1435E | J-S1440E | 93 | 200.0 | Asbestos Cement | 114.0 | -3.90 | 0.1242 |
| PS-3380 | J-S1435E | J-S2205E | 49 | 200.0 | PVC | 130.0 | 3.08 | 0.0981 |
| PS-3390 | J-S2205E | J-S2200E | 175 | 200.0 | PVC | 130.0 | 2.61 | 0.0831 |
| PS-3400 | J-S2200E | J-S1430E | 50 | 200.0 | PVC | 130.0 | -5.38 | 0.1712 |
| PS-3410 | J-S2200E | J-S2190E | 43 | 200.0 | PVC | 130.0 | 4.66 | 0.1483 |
| PS-3430 | J-S1825E | J-S1810E | 21 | 400.0 | PVC | 130.0 | -54.78 | 0.4359 |
| PS-3440 | J-S1810E | J-S1800E | 108 | 400.0 | PVC | 130.0 | -54.82 | 0.4363 |
| PS-3450 | J-S1800E | J-S1780E | 125 | 400.0 | PVC | 130.0 | -55.62 | 0.4426 |
| PS-3460 | J-S1780E | J-S1240E | 124 | 400.0 | PVC | 130.0 | -57.33 | 0.4562 |
| PS-3470 | J-S1240E | J-S1230E | 133 | 400.0 | PVC | 130.0 | -64.24 | 0.5112 |
| PS-3480 | J-S1230E | J-S1190E | 99 | 400.0 | PVC | 130.0 | -66.86 | 0.5320 |
| PS-3500 | J-S485E | J-S480E | 54 | 400.0 | PVC | 130.0 | -72.72 | 0.5787 |
| PS-3510 | J-S480E | J-S510E | 112 | 400.0 | PVC | 130.0 | -76.81 | 0.6112 |
| PS-3520 | J-S510E | J-S440E | 112 | 400.0 | PVC | 130.0 | -82.40 | 0.6557 |
| PS-3530 | J-S440E | J-S400E | 105 | 400.0 | PVC | 130.0 | -85.52 | 0.6806 |
| PS-3550 | J-S330E | J-S311E | 12 | 400.0 | Asbestos Cement | 114.0 | -206.09 | 1.6400 |
| PS-3590 | J-S1615E | J-S644E | 232 | 400.0 | Asbestos Cement | 114.0 | -14.51 | 0.1155 |
| PS-3630 | J-S625E | J-S1330E | 58 | 400.0 | Asbestos Cement | 114.0 | 14.17 | 0.1128 |
| PS-3640 | J-S1330E | J-S1302E | 47 | 400.0 | Asbestos Cement | 114.0 | 14.17 | 0.1128 |
| PS-3650 | J-S2130E | J-S2090E | 135 | 400.0 | PVC | 130.0 | -47.40 | 0.3772 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-3660 | J-S2090E | J-S2100E | 60 | 400.0 | PVC | 130.0 | -47.45 | 0.3776 |
| PS-3690 | J-S1300E | J-S1321E | 167 | 300.0 | Asbestos Cement | 114.0 | 13.51 | 0.1911 |
| PS-3700 | J-S1321E | J-S1320E | 150 | 300.0 | Asbestos Cement | 114.0 | 13.45 | 0.1903 |
| PS-3710 | J-S1320E | J-S1319E | 148 | 300.0 | Asbestos Cement | 114.0 | 13.39 | 0.1895 |
| PS-3720 | J-S1319E | J-S1290E | 115 | 300.0 | Asbestos Cement | 114.0 | 13.34 | 0.1888 |
| PS-3730 | J-S1290E | J-S1295E | 80 | 300.0 | PVC | 130.0 | 25.12 | 0.3554 |
| PS-3740 | J-S1295E | J-S2110E | 56 | 300.0 | PVC | 130.0 | 25.08 | 0.3549 |
| PS-3750 | J-S2110E | J-S2111E | 68 | 300.0 | PVC | 130.0 | 24.98 | 0.3535 |
| PS-3760 | J-S2111E | J-S2112E | 61 | 300.0 | PVC | 130.0 | 15.99 | 0.2262 |
| PS-3770 | J-S2112E | J-S2130E | 84 | 300.0 | PVC | 130.0 | 15.94 | 0.2255 |
| PS-3780 | J-S2130E | J-S2113E | 112 | 300.0 | PVC | 130.0 | 29.55 | 0.4181 |
| PS-3790 | J-S2113E | J-S2114E | 138 | 300.0 | PVC | 130.0 | 29.43 | 0.4164 |
| PS-3800 | J-S2114E | J-S2150E | 88 | 300.0 | PVC | 130.0 | 29.14 | 0.4122 |
| PS-3810 | J-S2150E | J-S2115E | 130 | 300.0 | PVC | 130.0 | -10.68 | 0.1510 |
| PS-3820 | J-S2115E | J-S2140E | 98 | 300.0 | PVC | 130.0 | -11.02 | 0.1558 |
| PS-3830 | J-S2140E | J-S2116E | 243 | 300.0 | PVC | 130.0 | 21.19 | 0.2998 |
| PS-3840 | J-S2116E | J-S2118E | 165 | 300.0 | PVC | 130.0 | 20.94 | 0.2963 |
| PS-3850 | J-S2116E | J-S2117E | 71 | 300.0 | PVC | 130.0 | 0.01 | 0.0001 |
| PS-3860 | J-S2150E | J-S2155E | 111 | 300.0 | PVC | 130.0 | 21.93 | 0.3103 |
| PS-3870 | J-S2155E | J-S2160E | 121 | 300.0 | PVC | 130.0 | 21.57 | 0.3052 |
| PS-3880 | J-S2160E | J-S2165E | 135 | 300.0 | PVC | 130.0 | 21.57 | 0.3052 |
| PS-3890 | J-S2165E | J-S2170E | 41 | 300.0 | PVC | 130.0 | 21.31 | 0.3014 |
| PS-3900 | J-S2170E | J-S2171E | 89 | 300.0 | PVC | 130.0 | 32.84 | 0.4646 |
| PS-3910 | J-S2171E | J-S2172E | 111 | 300.0 | PVC | 130.0 | 15.47 | 0.2188 |
| PS-3920 | J-S2172E | J-S2173E | 422 | 250.0 | PVC | 130.0 | 15.47 | 0.3151 |
| PN-1890 | J-S2173E | J-S2178E | 148 | 200.0 | PVC | 130.0 | 3.39 | 0.1077 |
| PN-1900 | J-S2178E | J-S2177E | 230 | 200.0 | PVC | 130.0 | 3.30 | 0.1050 |
| PS-3930 | J-S2173E | J-S2174E | 213 | 250.0 | PVC | 130.0 | 11.88 | 0.2421 |
| PS-3940 | J-S2174E | J-S2175E | 33 | 250.0 | PVC | 130.0 | 14.59 | 0.2972 |
| PN-1920 | J-S2176E | J-S2174E | 193 | 200.0 | PVC | 130.0 | 2.85 | 0.0909 |
| PS-3950 | J-S2105E | J-S2100E | 115 | 300.0 | PVC | 130.0 | -0.17 | 0.0024 |
| PS-3960 | J-S2100E | J-S2106E | 133 | 300.0 | PVC | 130.0 | 23.59 | 0.3337 |
| PS-3970 | J-S410E | J-S2050E | 66 | 400.0 | Asbestos Cement | 114.0 | 89.37 | 0.7112 |
| PS-4000 | J-S2080E | J-S2085E | 208 | 250.0 | PVC | 130.0 | 15.12 | 0.3081 |
| 78 | J-S60E | J-S41E | 88 | 300.0 | PVC | 130.0 | 78.64 | 1.1125 |
| PS-1050 | J-S41E | J-S40E | 107 | 400.0 | Asbestos Cement | 114.0 | 78.46 | 0.6243 |
| PS-1160 | J-S60E | J-S70E | 95 | 200.0 | Asbestos Cement | 114.0 | 32.66 | 1.0396 |
| PS-1170 | J-S70E | J-S260E | 139 | 200.0 | Asbestos Cement | 114.0 | 32.48 | 1.0337 |
| PS-1130 | J-S110E | J-S81E | 67 | 150.0 | Asbestos Cement | 114.0 | -4.11 | 0.2328 |
| PS-1140 | J-S81E | J-S80E | 58 | 150.0 | Asbestos Cement | 114.0 | -4.26 | 0.2412 |
| PS-1110 | J-S100E | J-S90E | 116 | 150.0 | Asbestos Cement | 114.0 | -3.82 | 0.2161 |
| PS-1120 | J-S90E | J-S110E | 79 | 150.0 | Asbestos Cement | 114.0 | -3.93 | 0.2223 |
| PS-1330 | J-S140E | J-S145E | 107 | 150.0 | Asbestos Cement | 114.0 | 1.05 | 0.0596 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PS-1590 | J-S220E | J-S200E | 140 | 150.0 | Asbestos Cement | 114.0 | 5.29 | 0.2992 |
| PS-1580 | J-S200E | J-S190E | 89 | 150.0 | Asbestos Cement | 114.0 | 5.12 | 0.2900 |
| PS-1190 | J-S250E | J-S240E | 64 | 250.0 | Asbestos Cement | 114.0 | 27.70 | 0.5644 |
| 72 | J-S240E | J-S230E | 151 | 200.0 | PVC | 130.0 | 27.50 | 0.8754 |
| PS-1610 | J-S230E | J-S308E | 148 | 150.0 | Asbestos Cement | 114.0 | 10.20 | 0.5770 |
| PS-1620 | J-S308E | J-S309E | 85 | 150.0 | Asbestos Cement | 114.0 | 10.05 | 0.5686 |
| PS-1630 | J-S309E | J-S310E | 52 | 150.0 | Asbestos Cement | 114.0 | 9.83 | 0.5560 |
| PS-1640 | J-S310E | J-S312E | 30 | 150.0 | Asbestos Cement | 114.0 | 11.31 | 0.6400 |
| PS-1650 | J-S312E | J-S311E | 96 | 150.0 | Asbestos Cement | 114.0 | 11.09 | 0.6275 |
| PS-1310 | J-S280E | J-S365E | 102 | 150.0 | Asbestos Cement | 114.0 | 2.54 | 0.1435 |
| PS-1320 | J-S365E | J-S360E | 122 | 150.0 | PVC | 130.0 | 2.31 | 0.1309 |
| PS-2670 | J-S620E | J-S640E | 146 | 150.0 | Asbestos Cement | 114.0 | 1.44 | 0.0817 |
| PS-2660 | J-S640E | J-S630E | 52 | 150.0 | Asbestos Cement | 114.0 | 2.47 | 0.1395 |
| PS-3600 | J-S644E | J-S640E | 61 | 400.0 | Asbestos Cement | 114.0 | -27.97 | 0.2226 |
| PS-3610 | J-S640E | J-S1855E | 61 | 400.0 | PVC | 130.0 | -28.99 | 0.2307 |
| PS-2780 | J-S720E | J-S725E | 111 | 200.0 | PVC | 130.0 | 0.08 | 0.0026 |
| PS-2330 | J-S1010E | J-S970E | 95 | 300.0 | Asbestos Cement | 114.0 | 1.32 | 0.0187 |
| PS-2340 | J-S970E | J-S990E | 130 | 200.0 | Asbestos Cement | 114.0 | 0.88 | 0.0279 |
| PS-3680 | J-S1302E | J-S1301E | 171 | 400.0 | Asbestos Cement | 114.0 | 14.06 | 0.1119 |
| PS-3670 | J-S1301E | J-S1300E | 140 | 400.0 | Asbestos Cement | 114.0 | 13.97 | 0.1111 |
| PS-3210 | J-S1556E | J-S1555E | 165 | 150.0 | Asbestos Cement | 114.0 | 0.01 | 0.0008 |
| PS-3200 | J-S1555E | J-S1540E | 165 | 150.0 | Asbestos Cement | 114.0 | -0.26 | 0.0146 |
| PS-3030 | J-S1720E | J-S1705E | 177 | 150.0 | Asbestos Cement | 114.0 | 0.36 | 0.0206 |
| PS-3040 | J-S1705E | J-S1710E | 161 | 150.0 | Asbestos Cement | 114.0 | 0.13 | 0.0073 |
| PS-3980 | J-S2050E | J-S2060E | 67 | 400.0 | PVC | 130.0 | 84.48 | 0.6723 |
| PS-3990 | J-S2060E | J-S2080E | 203 | 400.0 | PVC | 130.0 | 92.32 | 0.7347 |
| PN-275 | J-N50E | J-N45E | 91 | 150.0 | Asbestos Cement | 114.0 | -4.25 | 0.2402 |
| PN-280 | J-N45E | J-N40E | 86 | 150.0 | Asbestos Cement | 114.0 | -4.25 | 0.2402 |
| PN-235 | J-N70E | J-N65E | 50 | 150.0 | Asbestos Cement | 114.0 | -2.72 | 0.1537 |
| PN-240 | J-N65E | J-N60E | 60 | 150.0 | Asbestos Cement | 114.0 | -2.72 | 0.1537 |
| PN-405 | J-N120E | J-N125E | 81 | 150.0 | Asbestos Cement | 114.0 | -1.42 | 0.0806 |
| PN-410 | J-N125E | J-N100E | 101 | 150.0 | Asbestos Cement | 114.0 | 1.89 | 0.1070 |
| PN-1655 | J-N180E | J-N185E | 49 | 200.0 | Asbestos Cement | 114.0 | 11.95 | 0.3802 |
| PN-1660 | J-N185E | J-N600E | 142 | 200.0 | Asbestos Cement | 114.0 | 11.95 | 0.3802 |
| PN-1735 | J-N240E | J-N265E | 73 | 200.0 | Asbestos Cement | 114.0 | -8.75 | 0.2786 |
| PN-1740 | J-N265E | J-N260E | 90 | 200.0 | Asbestos Cement | 114.0 | -9.26 | 0.2947 |
| PN-1559 | J-N300E | J-N305E | 79 | 200.0 | PVC | 130.0 | -19.83 | 0.6313 |
| PN-1560 | J-N305E | J-N500E | 79 | 200.0 | PVC | 130.0 | -19.83 | 0.6313 |
| PN-1605 | J-N405E | J-N400E | 47 | 200.0 | Asbestos Cement | 114.0 | -0.30 | 0.0096 |
| PN-1720 | J-N190E | J-N425E | 115 | 200.0 | Asbestos Cement | 114.0 | -0.41 | 0.0129 |
| PN-1725 | J-N425E | J-N420E | 172 | 200.0 | Asbestos Cement | 114.0 | -0.88 | 0.0279 |
| PN-1545 | J-N470E | J-N480E | 39 | 200.0 | Asbestos Cement | 114.0 | 0.82 | 0.0260 |
| PN-1550 | J-N480E | J-N460E | 74 | 200.0 | Asbestos Cement | 114.0 | 0.26 | 0.0081 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-1535 | J-N300E | J-N490E | 83 | 200.0 | Asbestos Cement | 114.0 | 1.34 | 0.0427 |
| PN-1540 | J-N490E | J-N470E | 41 | 200.0 | Asbestos Cement | 114.0 | 0.82 | 0.0260 |
| PN-1565 | J-N500E | J-N525E | 130 | 200.0 | PVC | 130.0 | -20.28 | 0.6455 |
| PN-1570 | J-N525E | J-N520E | 129 | 200.0 | PVC | 130.0 | -20.28 | 0.6455 |
| PN-1580 | J-N520E | J-N530E | 57 | 200.0 | Asbestos Cement | 114.0 | -5.82 | 0.1854 |
| PN-1855 | J-N560E | J-N563E | 48 | 150.0 | Asbestos Cement | 114.0 | 4.26 | 0.2411 |
| PN-1860 | J-N563E | J-N561E | 66 | 150.0 | Asbestos Cement | 114.0 | 3.98 | 0.2253 |
| PN-1360 | J-N1825E | J-N575E | 150 | 300.0 | PVC | 120.0 | 55.46 | 0.7845 |
| PN-1365 | J-N575E | J-N570E | 72 | 300.0 | PVC | 120.0 | 55.15 | 0.7803 |
| PN-80 | J-N870E | J-N636E | 151 | 200.0 | AC | 114.0 | 3.49 | 0.1110 |
| PN-75 | J-N636E | J-N635E | 128 | 200.0 | AC | 114.0 | 3.10 | 0.0986 |
| PN-119 | J-N630E | J-N631E | 77 | 150.0 | Asbestos Cement | 114.0 | 1.89 | 0.1070 |
| PN-120 | J-N631E | J-N640E | 99 | 150.0 | Asbestos Cement | 114.0 | 1.56 | 0.0880 |
| PN-145 | J-N670E | J-N671E | 99 | 150.0 | Asbestos Cement | 114.0 | 2.99 | 0.1691 |
| PN-150 | J-N671E | J-N680E | 59 | 150.0 | Asbestos Cement | 114.0 | 2.60 | 0.1470 |
| PN-165 | J-N710E | J-N720E | 125 | 150.0 | Asbestos Cement | 114.0 | -3.30 | 0.1870 |
| PN-170 | J-N720E | J-N730E | 90 | 150.0 | Asbestos Cement | 114.0 | -3.66 | 0.2072 |
| PN-200 | J-N730E | J-N840E | 42 | 150.0 | AC | 114.0 | -4.32 | 0.2444 |
| PN-295 | J-N760E | J-N750E | 102 | 200.0 | PVC | 120.0 | -7.09 | 0.2258 |
| PN-300 | J-N750E | J-N740E | 86 | 200.0 | PVC | 120.0 | -7.14 | 0.2271 |
| PN-970 | J-N970E | J-N790E | 147 | 150.0 | Asbestos Cement | 114.0 | 2.65 | 0.1499 |
| PN-965 | J-N790E | J-N800E | 102 | 150.0 | Asbestos Cement | 114.0 | 2.37 | 0.1341 |
| PN-880 | J-N850E | J-N851E | 57 | 200.0 | PVC | 120.0 | -4.80 | 0.1527 |
| PN-1170 | J-N1360E | J-N1020E | 196 | 150.0 | Asbestos Cement | 114.0 | -1.51 | 0.0856 |
| PN-1175 | J-N1020E | J-N1010E | 74 | 150.0 | Asbestos Cement | 114.0 | -1.93 | 0.1090 |
| PN-625 | J-N1080E | J-N1085E | 167 | 150.0 | Asbestos Cement | 114.0 | -4.71 | 0.2663 |
| PN-1940 | J-N1091E | J-N1090E | 69 | 150.0 | Asbestos Cement | 120.0 | 1.43 | 0.0811 |
| PN-1930 | J-N1120E | J-N1092E | 36 | 150.0 | Asbestos Cement | 114.0 | 1.96 | 0.1109 |
| PN-1950 | J-N1092E | J-N1091E | 111 | 150.0 | Asbestos Cement | 114.0 | 1.55 | 0.0875 |
| PN-835 | J-N1190E | J-N1165E | 82 | 150.0 | Asbestos Cement | 114.0 | 2.66 | 0.1504 |
| PN-840 | J-N1165E | J-N1160E | 100 | 150.0 | Asbestos Cement | 114.0 | 2.32 | 0.1314 |
| PN-660 | J-N1270E | J-N1275E | 120 | 150.0 | Asbestos Cement | 114.0 | 7.12 | 0.4028 |
| PN-655 | J-N1275E | J-N1590E | 167 | 150.0 | Asbestos Cement | 114.0 | 7.12 | 0.4028 |
| PN-810 | J-N1280E | J-N1285E | 48 | 200.0 | PVC | 130.0 | -29.09 | 0.9260 |
| PN-779 | J-N1290E | J-N1279E | 94 | 200.0 | PVC | 130.0 | -17.77 | 0.5656 |
| PN-800 | J-N1279E | J-N1280E | 79 | 200.0 | PVC | 130.0 | -17.77 | 0.5656 |
| PN-1060 | J-N1010E | J-N1310E | 90 | 200.0 | Asbestos Cement | 114.0 | -38.40 | 1.2224 |
| PN-1065 | J-N1310E | J-N1300E | 91 | 200.0 | Asbestos Cement | 114.0 | -38.40 | 1.2224 |
| PN-510 | J-N990E | J-N1380E | 194 | 200.0 | Asbestos Cement | 114.0 | -7.95 | 0.2530 |
| PN-515 | J-N1380E | J-N1390E | 92 | 200.0 | Asbestos Cement | 114.0 | -8.36 | 0.2662 |
| PN-1080 | J-N1450E | J-N1451E | 98 | 150.0 | Asbestos Cement | 114.0 | 16.56 | 0.9373 |
| PN-570 | J-N1490E | J-N1525E | 139 | 200.0 | Asbestos Cement | 114.0 | 18.34 | 0.5838 |
| PN-565 | J-N1525E | J-N1520E | 55 | 200.0 | Asbestos Cement | 114.0 | -26.81 | 0.8535 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-585 | J-N1520E | J-N1526E | 99 | 200.0 | Asbestos Cement | 114.0 | -27.16 | 0.8646 |
| PN-590 | J-N1526E | J-N1540E | 102 | 200.0 | Asbestos Cement | 114.0 | -27.50 | 0.8755 |
| PN-555 | J-N1555E | J-N1550E | 45 | 200.0 | Asbestos Cement | 114.0 | -18.29 | 0.5821 |
| PN-721 | J-N1640E | J-N1645E | 46 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| PN-725 | J-N1640E | J-N1651E | 76 | 200.0 | PVC | 130.0 | -6.98 | 0.2221 |
| PN-730 | J-N1651E | J-N1650E | 38 | 200.0 | PVC | 130.0 | -6.98 | 0.2221 |
| PN-1445 | J-N1710E | J-N1705E | 164 | 250.0 | PVC | 130.0 | 14.85 | 0.3024 |
| PN-1450 | J-N1705E | J-N1700E | 156 | 250.0 | PVC | 130.0 | 14.18 | 0.2888 |
| PN-1461 | J-N1690E | J-N1691E | 177 | 250.0 | PVC | 130.0 | 16.47 | 0.3354 |
| PN-1462 | J-N1691E | J-N1692E | 152 | 250.0 | PVC | 130.0 | 16.16 | 0.3293 |
| PN-1470 | J-N1692E | J-N1760E | 79 | 250.0 | PVC | 130.0 | 16.16 | 0.3293 |
| PN-1481 | J-N1770E | J-N1771E | 145 | 250.0 | PVC | 130.0 | 15.86 | 0.3232 |
| PN-1482 | J-N1771E | J-N1772E | 115 | 250.0 | PVC | 130.0 | 15.58 | 0.3175 |
| PN-1483 | J-N1772E | J-N1773E | 122 | 250.0 | PVC | 130.0 | 15.58 | 0.3175 |
| PN-1490 | J-N1773E | J-N1780E | 95 | 250.0 | PVC | 130.0 | 15.34 | 0.3124 |
| PN-1441 | J-N1717E | J-N1710E | 58 | 250.0 | PVC | 130.0 | 14.91 | 0.3037 |
| PN-1599 | J-N435E | J-N437E | 78 | 200.0 | PVC | 130.0 | 10.48 | 0.3337 |
| PN-1598 | J-N437E | J-N436E | 492 | 200.0 | PVC | 130.0 | 10.20 | 0.3246 |
| PS-4230 | PRV-8 | J-S45E | 21 | 600.0 | Asbestos Cement | 114.0 | 407.11 | 1.4399 |
| PS-4240 | J-S902E | J-S910E | 333 | 300.0 | PVC | 130.0 | 12.76 | 0.1805 |
| PS-4260 | J-S1770E | J-S1775E | 144 | 200.0 | Asbestos Cement | 114.0 | -0.19 | 0.0060 |
| PS-4270 | J-S1775E | J-S1300E | 138 | 200.0 | Asbestos Cement | 114.0 | -0.38 | 0.0121 |
| PN-2040 | J-N540E | J-N541E | 121 | 200.0 | PVC | 130.0 | 10.46 | 0.3329 |
| PN-2070 | J-N1305E | J-N1306E | 93 | 200.0 | PVC | 130.0 | -67.18 | 2.1385 |
| PN-2080 | J-N1306E | J-N1307E | 206 | 200.0 | PVC | 130.0 | -19.00 | 0.6049 |
| PN-2090 | J-N400E | J-N401E | 51 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| PN-2100 | J-N433E | J-N438E | 174 | 150.0 | PVC | 130.0 | -1.40 | 0.0793 |
| PS-4300 | J-Ardmore_FortK | J-S2175E | 460 | 250.0 | PVC | 130.0 | -14.59 | 0.2972 |
| PS-4290 | J-S720E | J-S780E | 128 | 350.0 | Asbestos Cement | 114.0 | -17.15 | 0.1783 |
| PN-2130 | J-N1060E | J-CLIR149A | 233 | 200.0 | PVC | 130.0 | 0.44 | 0.0139 |
| PS-4310 | J-S610E | J-S625E | 236 | 150.0 | PVC | 130.0 | -1.44 | 0.0816 |
| PS-4320 | J-S220E | J-S210E | 81 | 150.0 | PVC | 130.0 | -13.70 | 0.7752 |
| PS-4340 | J-S740E | J-S905E | 245 | 150.0 | Asbestos Cement | 114.0 | -0.54 | 0.0305 |
| PS-4350 | J-S1290E | J-S1280E | 24 | 150.0 | PVC | 130.0 | -11.82 | 0.6691 |
| PS-4360 | J-S2100E | J-S2230E | 220 | 400.0 | PVC | 130.0 | -71.38 | 0.5680 |
| PS-4370 | J-S2111E | J-S2210E | 57 | 200.0 | PVC | 130.0 | 8.86 | 0.2821 |
| PS-4380 | J-S2135E | J-S2220E | 103 | 400.0 | PVC | 130.0 | -36.71 | 0.2921 |
| PS-4390 | J-S2220E | J-S2130E | 33 | 400.0 | PVC | 130.0 | -33.79 | 0.2689 |
| PS-4400 | J-S2210E | J-S2220E | 129 | 200.0 | PVC | 130.0 | 2.92 | 0.0929 |
| PS-4410 | J-S2210E | J-S2240E | 102 | 150.0 | PVC | 130.0 | 5.95 | 0.3364 |
| PS-4420 | J-S1820E | J-S1825E | 8 | 400.0 | PVC | 130.0 | -52.40 | 0.4170 |
| PN-2160 | J-N670E | J-N700E | 107 | 150.0 | Asbestos Cement | 114.0 | -1.74 | 0.0982 |
| PN-2210 | J-N1160E | J-N1140E | 96 | 150.0 | Asbestos Cement | 114.0 | Closed | 0.0000 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-2220 | J-N1060E | J-N1056E | 213 | 150.0 | PVC | 130.0 | 7.03 | 0.3978 |
| PN-2230 | J-N1056E | J-N1240E | 211 | 150.0 | PVC | 130.0 | 8.37 | 0.4739 |
| PN-2240 | J-N1755E | J-N1757E | 103 | 150.0 | PVC | 130.0 | 5.01 | 0.2834 |
| PN-2250 | J-N1757E | J-N1711E | 97 | 150.0 | PVC | 130.0 | 6.99 | 0.3953 |
| PN-2260 | J-N1755E | J-N1880E | 161 | 250.0 | PVC | 130.0 | 16.03 | 0.3267 |
| PN-2280 | J-N430E | J-N1890E | 30 | 150.0 | PVC | 130.0 | -1.86 | 0.1055 |
| PN-2290 | J-N1890E | J-N433E | 94 | 150.0 | PVC | 130.0 | -0.21 | 0.0117 |
| PN-2300 | J-N1890E | J-N1900E | 132 | 200.0 | PVC | 130.0 | -1.66 | 0.0528 |
| PN-2310 | J-N1900E | J-N438E | 100 | 200.0 | PVC | 130.0 | -3.48 | 0.1107 |
| PS-20010 | J-S1151E | J-S1780E | 124 | 200.0 | PVC | 120.0 | -4.26 | 0.1355 |
| PS-2195 | J-S1890E | J-S1153E | 86 | 150.0 | Asbestos Cement | 114.0 | -3.74 | 0.2115 |
| PS-2190 | J-S1153E | J-S1152E | 38 | 150.0 | Asbestos Cement | 114.0 | -3.01 | 0.1704 |
| PS-20030 | J-S1800E | J-S1153E | 123 | 250.0 | PVC | 120.0 | 0.73 | 0.0148 |
| PS-2735 | J-S790E | J-S820E | 58 | 200.0 | PVC | 130.0 | -3.43 | 0.1092 |
| PS-2710 | J-S660E | J-S661E | 53 | 150.0 | Asbestos Cement | 114.0 | -3.32 | 0.1876 |
| PS-20230 | J-S780E | J-S870E | 63 | 300.0 | PVC | 130.0 | -10.81 | 0.1529 |
| PS-20460 | J-S2080E | J-S2230E | 479 | 400.0 | PVC | 120.0 | 71.38 | 0.5680 |
| PS-20470 | J-S2106E | J-S2140E | 235 | 300.0 | PVC | 120.0 | 32.56 | 0.4607 |
| PS-20480 | J-S2170E | J-S2118E | 228 | 300.0 | PVC | 120.0 | -11.54 | 0.1632 |
| PS-20490 | J-S1370E | J-S2105E | 150 | 250.0 | PVC | 130.0 | 0.00 | 0.0000 |
| PS-20500 | J-S1340E | J-S1245E | 136 | 250.0 | PVC | 120.0 | -2.66 | 0.0542 |
| PS-20530 | J-S2045E | J-S2080E | 242 | 250.0 | PVC | 120.0 | -5.29 | 0.1077 |
| PS-20540 | J-S1245E | J-S1351E | 188 | 250.0 | PVC | 130.0 | -0.41 | 0.0083 |
| PS-1711 | J-S1351E | J-S1350E | 80 | 150.0 | Asbestos Cement | 114.0 | -5.02 | 0.2839 |
| PS-20580 | J-S2135E | J-S2240E | 133 | 250.0 | PVC | 120.0 | 14.67 | 0.2989 |
| PS-4330 | J-S1141E | J-S1140E | 63 | 150.0 | Asbestos Cement | 114.0 | -9.01 | 0.5100 |
| PS-4335 | J-S1095E | J-S1141E | 69 | 150.0 | Asbestos Cement | 114.0 | -0.97 | 0.0548 |
| PS-1910 | J-S1855E | J-S1920E | 66 | 150.0 | Asbestos Cement | 114.0 | -1.77 | 0.1001 |
| PS-2875 | J-S700E | J-S701E | 72 | 150.0 | Asbestos Cement | 114.0 | 0.26 | 0.0149 |
| PS-2871 | J-S680E | J-S702E | 51 | 150.0 | Asbestos Cement | 114.0 | -0.26 | 0.0149 |
| PS-20740 | J-S1525E | J-S610E | 92 | 150.0 | PVC | 120.0 | -0.91 | 0.0513 |
| PN-210 | J-N846E | J-N850E | 25 | 200.0 | PVC | 120.0 | -9.40 | 0.2993 |
| PN-211 | J-N840E | J-N846E | 42 | 200.0 | PVC | 120.0 | -9.40 | 0.2993 |
| PN-886 | J-N852E | J-N851E | 55 | 200.0 | PVC | 120.0 | 4.96 | 0.1580 |
| PN-115 | J-N160E | J-N161E | 115 | 150.0 | Asbestos Cement | 114.0 | 2.27 | 0.1286 |
| PN-45 | J-N141E | J-N680E | 95 | 400.0 | Asbestos Cement | 114.0 | -58.04 | 0.4619 |
| PN-20950 | J-N141E | J-N160E | 99 | 200.0 | PVC | 120.0 | -1.57 | 0.0500 |
| PN-20970 | J-N161E | J-N20E | 119 | 200.0 | PVC | 120.0 | -1.57 | 0.0499 |
| PN-21030 | J-N770E | J-N760E | 125 | 200.0 | PVC | 120.0 | -2.42 | 0.0771 |
| PN-884 | J-N891E | J-N852E | 94 | 200.0 | PVC | 120.0 | 4.96 | 0.1580 |
| 6 | J-N632E | J-N635E | 50 | 400.0 | PVC | 120.0 | 76.76 | 0.6109 |
| PN-41 | J-N632E | J-N634E | 36 | 400.0 | Asbestos Cement | 114.0 | -76.76 | 0.6109 |
| PN-1285 | J-N1454E | J-N1450E | 92 | 300.0 | Asbestos Cement | 114.0 | 78.77 | 1.1143 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| PN-1736 | J-N420E | J-N421E | 119 | 200.0 | Asbestos Cement | 114.0 | -8.08 | 0.2571 |
| PS-21900 | J-S10610U | J-S10620U | 378 | 250.0 | PVC | 120.0 | -13.43 | 0.2737 |
| PS-21910 | J-S10620U | J-S2135E | 214 | 250.0 | PVC | 120.0 | -17.73 | 0.3613 |
| PS-21920 | J-S1300E | J-S10630U | 198 | 250.0 | PVC | 120.0 | 16.15 | 0.3291 |
| PS-21940 | J-S10630U | J-S10640U | 238 | 250.0 | PVC | 120.0 | -12.02 | 0.2449 |
| PS-21950 | J-S10640U | J-S2240E | 212 | 250.0 | PVC | 120.0 | -16.32 | 0.3325 |
| PS-21960 | J-S10610U | J-S10650U | 347 | 250.0 | PVC | 120.0 | 16.85 | 0.3433 |
| PS-21970 | J-S10650U | J-S10670U | 435 | 250.0 | PVC | 120.0 | 12.55 | 0.2557 |
| PS-21980 | J-S10660U | J-S10670U | 266 | 250.0 | PVC | 120.0 | -18.38 | 0.3744 |
| PS-21990 | J-S10670U | J-S10680U | 589 | 300.0 | PVC | 120.0 | -22.05 | 0.3119 |
| PS-22000 | J-S10680U | J-S10690U | 259 | 250.0 | PVC | 120.0 | -9.28 | 0.1890 |
| PS-22010 | J-S10690U | J-S10700U | 234 | 250.0 | PVC | 120.0 | -13.58 | 0.2766 |
| PS-22020 | J-S10700U | J-S2135E | 338 | 250.0 | PVC | 120.0 | 0.00 | 0.0000 |
| PS-22030 | J-S10700U | J-S2150E | 138 | 250.0 | PVC | 120.0 | -17.88 | 0.3642 |
| PS-22050 | J-S10680U | J-S2171E | 139 | 300.0 | PVC | 120.0 | -17.07 | 0.2415 |
| PS-22070 | J-S2118E | J-S10710U | 181 | 300.0 | PVC | 130.0 | 9.03 | 0.1278 |
| PS-22080 | J-S10710U | J-S10720U | 437 | 300.0 | PVC | 120.0 | 2.77 | 0.0392 |
| PN-1401 | J-N1740E | J-N1741E | 298 | 400.0 | Asbestos Cement | 114.0 | -54.41 | 0.4330 |
| P-19 | J-9 | PRV-8 | 16 | 600.0 | AC | 114.0 | 407.11 | 1.4399 |
| P-1191 | J-N1750E | J-1091 | 17 | 350.0 | PVC | 130.0 | 14.08 | 0.1463 |
| P-1192a | J-1091 | J-11 | 44 | 300.0 | PVC | 130.0 | 14.08 | 0.1992 |
| P-1192 | J-11 | J-1097 | 34 | 300.0 | PVC | 130.0 | 13.81 | 0.1954 |
| P-1246a | J-1097 | J-13 | 107 | 200.0 | PVC | 130.0 | 0.58 | 0.0186 |
| P-1246 | J-13 | J-14 | 38 | 200.0 | PVC | 130.0 | 0.29 | 0.0093 |
| P-1248 | J-1097 | J-1098 | 95 | 200.0 | PVC | 130.0 | -6.04 | 0.1923 |
| P-1245 | J-1097 | J-1099 | 49 | 300.0 | PVC | 130.0 | 19.00 | 0.2688 |
| P-27 | J-N1750E | J-1079 | 136 | 350.0 | PVC | 130.0 | 19.26 | 0.2002 |
| P-28 | J-1079 | J-N1755E | 99 | 350.0 | PVC | 130.0 | 23.77 | 0.2471 |
| P-27 | J-1081 | J-1080 | 6 | 200.0 | PVC | 130.0 | 4.88 | 0.1553 |
| P-891 | J-1080 | J-1079 | 109 | 200.0 | PVC | 130.0 | 4.68 | 0.1491 |
| P-890 | J-1081 | J-1083 | 81 | 200.0 | PVC | 130.0 | -4.88 | 0.1553 |
| P-35 | J-1090 | J-N1750E | 136 | 350.0 | PVC | 130.0 | 33.61 | 0.3493 |
| P-1194 | J-1083 | J-1083 | 17 | 200.0 | PVC | 130.0 | -4.88 | 0.1553 |
| P-1194a | J-1083 | J-1085 | 43 | 200.0 | PVC | 130.0 | -5.27 | 0.1677 |
| P-1198 | J-1085 | J-1086 | 16 | 200.0 | PVC | 130.0 | -5.27 | 0.1677 |
| P-1189 | J-1086 | J-1087 | 58 | 200.0 | PVC | 130.0 | -5.46 | 0.1739 |
| P-1189a | J-1087 | J-1088 | 45 | 200.0 | PVC | 130.0 | -5.66 | 0.1801 |
| P-1089b | J-1088 | J-1090 | 16 | 200.0 | PVC | 130.0 | -5.66 | 0.1801 |
| P-1195 | J-1083 | J-1084 | 51 | 150.0 | PVC | 130.0 | 0.19 | 0.0110 |
| P-46 | J-N1720E | J-912 | 96 | 350.0 | PVC | 130.0 | 42.07 | 0.4373 |
| P-47 | J-912 | J-1090 | 94 | 350.0 | PVC | 130.0 | 42.06 | 0.4372 |
| P-1188 | J-912 | J-911 | 64 | 200.0 | PVC | 130.0 | 0.01 | 0.0003 |
| P-955 | J-N1730E | J-1100 | 80 | 300.0 | PVC | 130.0 | -23.43 | 0.3315 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-898 | J-1100 | J-1101 | 135 | 300.0 | PVC | 130.0 | -24.21 | 0.3425 |
| P-1315 | J-N543E | J-1106 | 55 | 300.0 | PVC | 130.0 | 14.34 | 0.2028 |
| P-53 | J-1106 | J-1107 | 92 | 200.0 | PVC | 130.0 | 3.03 | 0.0966 |
| P-1301 | J-1107 | J-1108 | 41 | 200.0 | PVC | 130.0 | 0.22 | 0.0070 |
| P-1298 | J-1107 | J-1109 | 92 | 200.0 | PVC | 130.0 | 2.60 | 0.0826 |
| P-1296 | J-1109 | J-1110 | 88 | 200.0 | PVC | 130.0 | 2.38 | 0.0757 |
| P-1317 | J-1106 | J-38 | 87 | 300.0 | PVC | 130.0 | 10.14 | 0.1434 |
| P-1320 | J-1103 | J-1101 | 79 | 300.0 | PVC | 130.0 | 15.22 | 0.2154 |
| P-1318 | J-38 | J-1104 | 114 | 300.0 | PVC | 130.0 | 13.06 | 0.1848 |
| P-1319 | J-1104 | J-1103 | 15 | 300.0 | PVC | 130.0 | 15.22 | 0.2154 |
| P-1308 | J-38 | J-1138 | 85 | 200.0 | PVC | 130.0 | -3.07 | 0.0978 |
| P-63 | J-N541E | J-1132 | 47 | 200.0 | PVC | 130.0 | 10.17 | 0.3236 |
| P-64 | J-1132 | J-N542E | 86 | 200.0 | PVC | 130.0 | 8.70 | 0.2768 |
| P-274 | J-1132 | J-1133 | 95 | 150.0 | PVC | 130.0 | 1.17 | 0.0661 |
| P-274 a | J-1133 | J-1136 | 49 | 150.0 | PVC | 130.0 | 0.44 | 0.0249 |
| P-274b | J-1136 | J-1135 | 51 | 150.0 | PVC | 130.0 | 0.15 | 0.0084 |
| P-274c | J-1135 | J-1134 | 48 | 150.0 | PVC | 130.0 | -0.14 | 0.0082 |
| P-274d | J-1134 | J-1133 | 50 | 150.0 | PVC | 130.0 | -0.44 | 0.0247 |
| P-70 | J-N891E | J-841 | 76 | 200.0 | Asbestos Cement | 114.0 | -4.96 | 0.1580 |
| P-71 | J-841 | J-N890E | 54 | 200.0 | Asbestos Cement | 114.0 | -4.99 | 0.1589 |
| P-1020 | J-841 | J-77 | 39 | 150.0 | PVC | 130.0 | 0.03 | 0.0017 |
| P-1013 | J-77 | J-110 | 62 | 150.0 | PVC | 130.0 | 0.00 | 0.0001 |
| P-1008 | J-110 | J-794 | 56 | 150.0 | PVC | 130.0 | -0.03 | 0.0015 |
| P-75 | J-N633E | J-796 | 62 | 400.0 | Asbestos Cement | 114.0 | 76.96 | 0.6124 |
| P-1004 | J-794 | J-796 | 29 | 150.0 | PVC | 120.0 | -0.20 | 0.0111 |
| P-1021 | J-794 | J-123 | 27 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-1011 | J-110 | J-146 | 27 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-1016 | J-77 | J-133 | 23 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-550 | J-N1306E | J-816 | 56 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-346 | J-N1305E | J-870 | 54 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-347 | J-N1305E | J-854 | 62 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-46 | J-N1306E | J-1120 | 97 | 200.0 | PVC | 130.0 | -48.75 | 1.5518 |
| P-627 | J-1120 | J-1118 | 63 | 200.0 | PVC | 130.0 | -49.21 | 1.5664 |
| P-944a | J-1116 | J-1114 | 47 | 150.0 | PVC | 130.0 | 19.46 | 1.1013 |
| P-944 | J-1114 | J-N1307E | 97 | 200.0 | PVC | 130.0 | 19.46 | 0.6195 |
| P-948 | J-N1307E | J-1140 | 65 | 200.0 | PVC | 130.0 | 0.01 | 0.0003 |
| P-91 | J-N1680E | J-1119 | 69 | 400.0 | Asbestos Cement | 114.0 | 419.87 | 3.3412 |
| P-92 | J-1119 | J-N1455E | 173 | 400.0 | Asbestos Cement | 114.0 | 350.29 | 2.7875 |
| P-1250 | J-1118 | J-1119 | 105 | 200.0 | PVC | 130.0 | -69.58 | 2.2149 |
| P-626 | J-1120 | J-1121 | 61 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-943 | J-1118 | J-H1133 | 66 | 150.0 | PVC | 130.0 | 19.92 | 1.1273 |
| P-943a | J-H1133 | J-1116 | 28 | 150.0 | PVC | 130.0 | 19.92 | 1.1273 |
| P-946 | J-1116 | J-1117 | 55 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-98 | J-N1451E | J-1130 | 63 | 150.0 | Asbestos Cement | 114.0 | 16.28 | 0.9215 |
| P-99 | J-1130 | J-N1480E | 53 | 150.0 | Asbestos Cement | 114.0 | 37.32 | 2.1119 |
| P-1234 | J-1130 | J-70 | 139 | 200.0 | PVC | 130.0 | -21.04 | 0.6696 |
| P-1238 | J-1131 | J-70 | 83 | 200.0 | PVC | 130.0 | -28.49 | 0.9068 |
| P-1257 | J-N1535E | J-171A | 103 | 200.0 | PVC | 130.0 | -28.24 | 0.8990 |
| P-1256 | J-171A | J-1131 | 44 | 200.0 | PVC | 130.0 | -28.24 | 0.8990 |
| P-1235 | J-70 | J-1129 | 42 | 200.0 | PVC | 130.0 | -14.24 | 0.4532 |
| P-106 | J-N1454E | J-1122 | 70 | 300.0 | Asbestos Cement | 114.0 | -78.77 | 1.1143 |
| P-107 | J-1122 | J-N1455E | 230 | 300.0 | Asbestos Cement | 114.0 | -129.17 | 1.8273 |
| P-1221 | J-1124 | J-1226 | 26 | 200.0 | PVC | 130.0 | 36.16 | 1.1511 |
| P-1239 | J-1226 | J-70 | 89 | 200.0 | PVC | 130.0 | 35.77 | 1.1387 |
| P-1220 | J-1122 | J-1123 | 27 | 200.0 | PVC | 130.0 | 50.40 | 1.6043 |
| P-1227 | J-1123 | J-1124 | 54 | 200.0 | PVC | 130.0 | 50.40 | 1.6043 |
| P-1222 | J-1124 | J-1225 | 35 | 200.0 | PVC | 130.0 | 14.24 | 0.4532 |
| P-1229 | J-1226 | J-1127 | 81 | 200.0 | PVC | 130.0 | 0.39 | 0.0124 |
| P-751 | J-S877E | J-1163 | 92 | 200.0 | PVC | 130.0 | 1.74 | 0.0554 |
| P-833 | J-1163 | J-1154 | 120 | 200.0 | PVC | 130.0 | 1.23 | 0.0392 |
| P-117 | J-S879E | J-1154 | 46 | 300.0 | PVC | 130.0 | 9.57 | 0.1354 |
| P-873 | J-1161 | J-1162 | 51 | 150.0 | PVC | 130.0 | 0.17 | 0.0096 |
| P-542 | J-S901E | J-1142 | 128 | 200.0 | PVC | 130.0 | 3.46 | 0.1100 |
| P-124 | J-87 | J-88 | 19 | 200.0 | PVC | 130.0 | 0.69 | 0.0219 |
| P-870 | J-1160 | J-94 | 85 | 200.0 | PVC | 130.0 | 1.58 | 0.0503 |
| P-888 | J-94 | J-95 | 69 | 300.0 | PVC | 130.0 | 9.25 | 0.1308 |
| P-879 | J-1142 | J-1143 | 18 | 200.0 | PVC | 130.0 | 3.31 | 0.1054 |
| P-1254 | J-1143 | J-1144 | 73 | 200.0 | PVC | 130.0 | 3.16 | 0.1007 |
| P-1253 | J-1144 | J-1145 | 86 | 200.0 | PVC | 130.0 | 3.02 | 0.0961 |
| P-1252 | J-1145 | J-1146 | 35 | 150.0 | PVC | 130.0 | 0.24 | 0.0138 |
| P-1255 | J-1145 | J-1147 | 56 | 200.0 | PVC | 130.0 | 2.53 | 0.0806 |
| P-1289 | J-1147 | J-1149 | 36 | 200.0 | PVC | 130.0 | 2.53 | 0.0806 |
| P-1271 | J-1149 | J-1150 | 48 | 200.0 | PVC | 130.0 | 2.34 | 0.0744 |
| P-1269 | J-1150 | J-1166 | 71 | 200.0 | PVC | 130.0 | 0.27 | 0.0085 |
| P-1276 | J-1150 | J-87 | 95 | 200.0 | PVC | 130.0 | 1.87 | 0.0597 |
| P-1278 | J-87 | J-1152 | 81 | 200.0 | PVC | 130.0 | 1.19 | 0.0378 |
| P-1280 | J-1152 | J-105 | 122 | 200.0 | PVC | 130.0 | 0.94 | 0.0300 |
| P-861 | J-1154 | J-1155 | 47 | 300.0 | PVC | 130.0 | 10.80 | 0.1528 |
| P-862 | J-1155 | J-1156 | 50 | 300.0 | PVC | 130.0 | 10.61 | 0.1501 |
| P-149 | J-1156 | J-825 | 133 | 200.0 | PVC | 130.0 | 2.31 | 0.0735 |
| P-865 | J-825 | J-1161 | 42 | 200.0 | PVC | 130.0 | 2.14 | 0.0681 |
| P-868 | J-1161 | J-1222 | 73 | 200.0 | PVC | 130.0 | 1.80 | 0.0573 |
| P-868 | J-1222 | J-1160 | 79 | 200.0 | PVC | 130.0 | 1.80 | 0.0573 |
| P-883 | J-1157 | J-1156 | 77 | 300.0 | PVC | 130.0 | -8.10 | 0.1147 |
| P-886 | J-94 | J-878 | 58 | 300.0 | PVC | 130.0 | -7.67 | 0.1085 |
| P-885 | J-878 | J-1157 | 92 | 300.0 | PVC | 130.0 | -7.89 | 0.1116 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-1052 | J-S878E | J-1167 | 76 | 300.0 | PVC | 130.0 | -14.62 | 0.2068 |
| P-1053 | J-1167 | J-1168 | 51 | 300.0 | PVC | 130.0 | -14.62 | 0.2068 |
| P-1037a | J-1168 | J-1180 | 64 | 150.0 | PVC | 130.0 | -1.69 | 0.0956 |
| P-1037b | J-1180 | J-1181 | 69 | 150.0 | PVC | 130.0 | -1.93 | 0.1093 |
| P-1037c | J-1181 | J-1182 | 92 | 150.0 | PVC | 130.0 | -2.18 | 0.1231 |
| P-1023 | J-1168 | J-1169 | 113 | 150.0 | PVC | 130.0 | -0.81 | 0.0456 |
| P-1023a | J-1169 | J-1170 | 85 | 150.0 | PVC | 130.0 | -1.29 | 0.0731 |
| P-1147 | J-1170 | J-1171 | 59 | 150.0 | PVC | 130.0 | -1.54 | 0.0869 |
| P-1024 | J-1171 | J-1172 | 94 | 150.0 | PVC | 130.0 | -1.78 | 0.1007 |
| P-1030 | J-1172 | J-1178 | 110 | 150.0 | PVC | 130.0 | 0.29 | 0.0167 |
| P-1031 | J-1178 | J-1177 | 125 | 150.0 | PVC | 130.0 | 0.29 | 0.0167 |
| P-1054 | J-1177 | J-1179 | 111 | 300.0 | PVC | 130.0 | 12.61 | 0.1784 |
| P-1054a | J-1179 | J-1168 | 49 | 300.0 | PVC | 130.0 | 12.37 | 0.1750 |
| P-1038 | J-1177 | J-1182 | 81 | 300.0 | PVC | 130.0 | -10.02 | 0.1418 |
| P-1029 | J-1177 | J-123 | 82 | 150.0 | PVC | 130.0 | -2.54 | 0.1435 |
| P-1028 | J-123 | J-1175 | 129 | 150.0 | PVC | 130.0 | 0.14 | 0.0079 |
| P-1070 | J-1175 | J-1174 | 109 | 150.0 | PVC | 130.0 | -0.10 | 0.0058 |
| P-1026 | J-1174 | J-1173 | 40 | 150.0 | PVC | 130.0 | 2.56 | 0.1449 |
| P-1025 | J-1173 | J-1172 | 43 | 150.0 | PVC | 130.0 | 2.32 | 0.1311 |
| P-1032 | J-1169 | J-898 | 71 | 150.0 | PVC | 130.0 | 0.24 | 0.0138 |
| P-179 | J-S872E | J-1216 | 119 | 300.0 | PVC | 130.0 | 8.86 | 0.1253 |
| P-180 | J-1216 | J-S874E | 195 | 300.0 | PVC | 130.0 | 15.17 | 0.2146 |
| P-919 | J-1216 | J-1190 | 57 | 200.0 | PVC | 130.0 | -6.32 | 0.2010 |
| P-912 | J-1190 | J-1191 | 95 | 200.0 | PVC | 130.0 | -1.01 | 0.0321 |
| P-911 | J-1191 | J-1192 | 40 | 200.0 | PVC | 130.0 | -1.01 | 0.0321 |
| P-910 | J-1192 | J-1193 | 74 | 200.0 | PVC | 130.0 | -1.40 | 0.0445 |
| P-909 | J-1193 | J-1194 | 34 | 200.0 | PVC | 130.0 | -1.40 | 0.0445 |
| P-908 | J-1194 | J-134 | 42 | 200.0 | PVC | 130.0 | -1.81 | 0.0576 |
| P-608 | J-134 | J-1196 | 72 | 200.0 | PVC | 130.0 | 0.19 | 0.0062 |
| P-916 | J-1188 | J-1187 | 129 | 200.0 | PVC | 130.0 | -1.52 | 0.0482 |
| P-1112 | J-1187 | J-1186 | 105 | 200.0 | PVC | 130.0 | -1.91 | 0.0606 |
| P-920 | J-1197 | J-134 | 45 | 200.0 | PVC | 130.0 | 2.18 | 0.0693 |
| P-1200b | J-1185 | J-1200 | 73 | 200.0 | PVC | 130.0 | 1.42 | 0.0451 |
| P-198 | J-144 | J-1185 | 98 | 300.0 | PVC | 130.0 | 18.11 | 0.2562 |
| P-915 | J-1190 | J-1189 | 9 | 200.0 | PVC | 130.0 | -5.70 | 0.1813 |
| P-914 | J-1189 | J-1188 | 26 | 200.0 | PVC | 130.0 | -1.52 | 0.0482 |
| P-1113 | J-1186 | J-1198 | 37 | 200.0 | PVC | 130.0 | 2.18 | 0.0693 |
| P-1114 | J-1198 | J-1197 | 26 | 200.0 | PVC | 130.0 | 2.18 | 0.0693 |
| P-1135 | J-1186 | J-147 | 48 | 200.0 | PVC | 130.0 | -4.25 | 0.1353 |
| P-1200 | J-147 | J-148 | 33 | 200.0 | PVC | 130.0 | -4.25 | 0.1353 |
| P-1200a | J-148 | J-1185 | 23 | 200.0 | PVC | 130.0 | -4.25 | 0.1353 |
| P-1199 | J-1200 | J-1201 | 96 | 200.0 | PVC | 130.0 | 1.42 | 0.0451 |
| P-1199a | J-1201 | J-1202 | 93 | 200.0 | PVC | 130.0 | 1.42 | 0.0451 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-1206a | J-1202 | J-1203 | 53 | 200.0 | PVC | 130.0 | -3.06 | 0.0973 |
| P-1206b | J-1203 | J-143 | 45 | 200.0 | PVC | 130.0 | -3.06 | 0.0973 |
| P-1261 | J-143 | J-1205 | 111 | 200.0 | PVC | 130.0 | -3.40 | 0.1081 |
| P-1259 | J-1205 | J-1206 | 118 | 200.0 | PVC | 130.0 | -3.76 | 0.1198 |
| P-1259a | J-1206 | J-144 | 17 | 200.0 | PVC | 130.0 | -3.76 | 0.1198 |
| P-1206 | J-1202 | J-1202 | 72 | 200.0 | PVC | 130.0 | 4.45 | 0.1416 |
| P-1045 | J-144 | J-1208 | 142 | 300.0 | PVC | 130.0 | -22.21 | 0.3142 |
| P-1046 | J-1208 | J-1209 | 196 | 300.0 | PVC | 130.0 | -28.76 | 0.4069 |
| P-1075 | J-1185 | J-1184 | 63 | 300.0 | PVC | 130.0 | 12.44 | 0.1760 |
| P-1040 | J-1184 | J-159 | 78 | 300.0 | PVC | 130.0 | 12.44 | 0.1760 |
| P-1039 | J-159 | J-1182 | 42 | 300.0 | PVC | 130.0 | 12.44 | 0.1760 |
| P-225 | J-160 | J-S1036E | 182 | 400.0 | PVC | 130.0 | 18.94 | 0.1507 |
| P-430a | J-S1141E | J-1212 | 128 | 300.0 | PVC | 130.0 | 8.04 | 0.1138 |
| P-430 | J-1212 | J-160 | 102 | 300.0 | PVC | 130.0 | 8.44 | 0.1194 |
| P-929 | J-S1085E | J-1212 | 68 | 150.0 | PVC | 130.0 | 0.40 | 0.0226 |
| P-987 | J-164 | J-165 | 59 | 300.0 | PVC | 130.0 | 45.92 | 0.6496 |
| P-985 | J-165 | J-166 | 100 | 200.0 | PVC | 130.0 | 8.31 | 0.2644 |
| P-977 | J-166 | J-167 | 148 | 200.0 | PVC | 130.0 | 7.63 | 0.2430 |
| P-975 | J-167 | J-168 | 93 | 200.0 | PVC | 130.0 | 7.18 | 0.2286 |
| P-960 | J-165 | J-169 | 39 | 200.0 | PVC | 130.0 | 6.82 | 0.2171 |
| P-988 | J-168 | J-170 | 67 | 200.0 | PVC | 130.0 | -5.92 | 0.1884 |
| P-969 | J-168 | J-171 | 57 | 300.0 | PVC | 130.0 | 42.54 | 0.6019 |
| P-981 | J-166 | J-172 | 55 | 200.0 | PVC | 130.0 | 0.22 | 0.0072 |
| P-963 | J-173 | J-165 | 29 | 300.0 | PVC | 130.0 | -30.34 | 0.4292 |
| P-966 | J-168 | J-174 | 73 | 300.0 | PVC | 130.0 | -29.89 | 0.4229 |
| P-965 | J-174 | J-173 | 95 | 300.0 | PVC | 130.0 | -30.34 | 0.4292 |
| P-249 | J-S910E | J-S9005E | 214 | 300.0 | PVC | 130.0 | 12.25 | 0.1733 |
| P-251 | J-S2177E | J-S2279E | 74 | 200.0 | PVC | 130.0 | 3.08 | 0.0979 |
| P-252 | J-S2279E | J-S2176E | 199 | 200.0 | PVC | 130.0 | 3.08 | 0.0979 |
| P-253 | J-S145E | J-S177E | 129 | 150.0 | Asbestos Cement | 114.0 | 0.85 | 0.0483 |
| P-254 | J-S177E | J-S160E | 39 | 150.0 | Asbestos Cement | 114.0 | 0.85 | 0.0483 |
| P-255 | J-N1711E | J-N178E | 132 | 200.0 | PVC | 130.0 | 2.59 | 0.0824 |
| P-256 | J-N178E | J-N1712E | 86 | 200.0 | PVC | 130.0 | 2.59 | 0.0824 |
| P-257 | J-S9005E | J-179 | 105 | 300.0 | PVC | 130.0 | 12.25 | 0.1733 |
| P-258 | J-179 | J-S903E | 52 | 300.0 | PVC | 130.0 | 12.24 | 0.1732 |
| P-936 | J-179 | J-S182E | 93 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-260 | J-S160E | J-S181E | 67 | 150.0 | Asbestos Cement | 114.0 | 0.56 | 0.0316 |
| P-261 | J-S181E | J-S170E | 37 | 150.0 | Asbestos Cement | 114.0 | 0.56 | 0.0316 |
| P-263 | J-NS182 | J-NS183 | 442 | 400.0 | PVC | 120.0 | -60.36 | 0.4803 |
| P-264 | J-NS183 | J-NS184 | 264 | 300.0 | PVC | 120.0 | 25.83 | 0.3654 |
| P-266 | J-NS183 | J-NS185 | 511 | 400.0 | PVC | 120.0 | -105.43 | 0.8390 |
| P-269 | J-NS87 | J-171 | 272 | 300.0 | PVC | 120.0 | -42.09 | 0.5955 |
| P-271 | J-188 | J-NS183 | 336 | 300.0 | PVC | 120.0 | -11.53 | 0.1631 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-274 | J-NS87 | J-188 | 169 | 300.0 | PVC | 120.0 | -3.82 | 0.0541 |
| P-276 | J-NS182 | J-NS191 | 274 | 400.0 | PVC | 120.0 | 52.65 | 0.4189 |
| P-277 | J-NS191 | J-NS190 | 215 | 400.0 | PVC | 120.0 | 17.33 | 0.1379 |
| P-278 | J-NS191 | J-NS192 | 206 | 300.0 | PVC | 120.0 | 27.60 | 0.3905 |
| P-279 | J-NS192 | J-NS193 | 179 | 300.0 | PVC | 120.0 | 19.89 | 0.2814 |
| P-280 | J-NS193 | J-NS194 | 259 | 300.0 | PVC | 120.0 | -15.07 | 0.2132 |
| P-281 | J-NS194 | J-NS195 | 242 | 300.0 | PVC | 120.0 | -22.78 | 0.3223 |
| P-282 | J-NS195 | J-NS196 | 309 | 300.0 | PVC | 120.0 | -30.49 | 0.4314 |
| P-283 | J-NS196 | J-NS87 | 161 | 300.0 | PVC | 120.0 | -38.20 | 0.5405 |
| P-284 | J-NS190 | J-1099 | 448 | 400.0 | PVC | 120.0 | 33.92 | 0.2699 |
| P-285 | J-1098 | J-LW197 | 116 | 200.0 | PVC | 120.0 | -6.31 | 0.2008 |
| P-286 | J-LW197 | J-LW198 | 130 | 200.0 | PVC | 120.0 | -6.03 | 0.1918 |
| P-287 | J-LW198 | J-LW199 | 105 | 200.0 | PVC | 120.0 | -8.36 | 0.2660 |
| P-288 | J-LW199 | J-N1740E | 95 | 200.0 | PVC | 120.0 | -10.68 | 0.3400 |
| P-290 | J-N1630E | J-UL201 | 302 | 200.0 | PVC | 120.0 | 15.25 | 0.4856 |
| P-291 | J-UL201 | J-202 | 265 | 300.0 | PVC | 120.0 | -4.25 | 0.0601 |
| P-292 | J-202 | J-UL203 | 201 | 300.0 | PVC | 120.0 | -10.70 | 0.1514 |
| P-293 | J-N1250E | J-UL204 | 244 | 300.0 | PVC | 120.0 | 17.15 | 0.2426 |
| P-295 | J-UL203 | J-UL204 | 169 | 300.0 | PVC | 120.0 | -10.70 | 0.1514 |
| P-297 | J-N1657E | J-206 | 261 | 300.0 | PVC | 130.0 | 39.90 | 0.5644 |
| P-298 | J-206 | J-UL207 | 447 | 300.0 | PVC | 120.0 | 34.42 | 0.4869 |
| P-299 | J-UL207 | J-UL208 | 568 | 300.0 | PVC | 120.0 | -6.60 | 0.0934 |
| P-300 | J-UL208 | J-UL201 | 568 | 300.0 | PVC | 120.0 | -13.05 | 0.1847 |
| P-302 | J-N1657E | J-FH210 | 178 | 300.0 | PVC | 120.0 | -34.67 | 0.4905 |
| P-303 | J-FH210 | J-FH211 | 118 | 300.0 | PVC | 130.0 | -36.68 | 0.5189 |
| P-304 | J-FH211 | J-FH212 | 166 | 200.0 | PVC | 120.0 | -42.81 | 1.3626 |
| P-305 | J-FH212 | J-N1525E | 114 | 200.0 | PVC | 120.0 | -44.81 | 1.4264 |
| P-307 | J-338 | J-FH214 | 148 | 300.0 | PVC | 120.0 | 65.58 | 0.9278 |
| P-308 | J-FH214 | J-FH211 | 162 | 300.0 | PVC | 120.0 | 63.58 | 0.8994 |
| P-310 | J-FH215 | J-206 | 339 | 300.0 | PVC | 120.0 | -5.48 | 0.0775 |
| P-312 | J-FH215 | J-FH217 | 191 | 300.0 | PVC | 120.0 | 34.83 | 0.4927 |
| P-313 | J-FH217 | J-FH216 | 296 | 300.0 | PVC | 120.0 | 65.15 | 0.9217 |
| P-314 | J-FH217 | J-FH218 | 126 | 300.0 | PVC | 120.0 | -32.33 | 0.4574 |
| P-315 | J-FH211 | J-FH219 | 141 | 300.0 | PVC | 120.0 | 67.70 | 0.9578 |
| P-316 | J-FH219 | J-FH215 | 129 | 300.0 | PVC | 120.0 | 31.36 | 0.4436 |
| P-317 | J-FH218 | J-FH219 | 192 | 300.0 | PVC | 120.0 | -34.34 | 0.4858 |
| P-318 | J-N1810E | J-HSB220 | 417 | 250.0 | PVC | 120.0 | 15.53 | 0.3164 |
| P-319 | J-HSB220 | J-HSB221 | 403 | 250.0 | PVC | 120.0 | 12.66 | 0.2580 |
| P-320 | J-1099 | J-222 | 209 | 400.0 | PVC | 120.0 | 52.65 | 0.4190 |
| P-321 | J-222 | J-N1712E | 202 | 400.0 | PVC | 120.0 | 52.65 | 0.4190 |
| P-324 | J-297 | J-AN224 | 519 | 400.0 | PVC | 120.0 | 54.34 | 0.4324 |
| P-325 | J-AN224 | J-AN225 | 603 | 400.0 | PVC | 120.0 | 44.31 | 0.3526 |
| P-326 | J-AN225 | J-AN226 | 410 | 300.0 | PVC | 120.0 | 29.77 | 0.4211 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-327 | J-AN226 | J-AN227 | 408 | 300.0 | PVC | 120.0 | 16.29 | 0.2305 |
| P-328 | J-AN227 | J-HSB221 | 296 | 300.0 | PVC | 120.0 | -9.80 | 0.1386 |
| P-329 | J-N1810E | J-AN225 | 305 | 300.0 | PVC | 120.0 | -1.36 | 0.0192 |
| P-333 | J-S130E | J-C231 | 187 | 300.0 | PVC | 120.0 | 72.40 | 1.0242 |
| P-334 | J-C231 | J-C232 | 277 | 300.0 | PVC | 120.0 | 56.00 | 0.7922 |
| P-335 | J-C232 | J-C233 | 253 | 300.0 | PVC | 120.0 | 1.35 | 0.0191 |
| P-336 | J-C233 | J-C228 | 226 | 300.0 | PVC | 120.0 | -3.55 | 0.0503 |
| P-337 | J-S340E | J-C228 | 49 | 300.0 | PVC | 120.0 | 44.32 | 0.6270 |
| P-338 | J-C231 | J-C234 | 173 | 300.0 | PVC | 120.0 | 11.50 | 0.1627 |
| P-339 | J-95 | J-C235 | 315 | 300.0 | PVC | 120.0 | 8.93 | 0.1263 |
| P-340 | J-C235 | J-C236 | 393 | 400.0 | PVC | 120.0 | -13.09 | 0.1041 |
| P-341 | J-C236 | J-105 | 266 | 200.0 | PVC | 120.0 | -1.19 | 0.0380 |
| P-342 | J-S10630U | J-S10610U | 229 | 250.0 | PVC | 120.0 | 7.72 | 0.1573 |
| P-343 | J-Ardmore_FortK | J-S10670U | 586 | 250.0 | PVC | 120.0 | -11.92 | 0.2429 |
| P-345 | J-S311E | J-238 | 370 | 400.0 | Asbestos Cement | 114.0 | -195.00 | 1.5518 |
| P-346 | J-238 | J-S45E | 284 | 400.0 | Asbestos Cement | 114.0 | -195.00 | 1.5518 |
| P-350 | J-240 | J-241 | 313 | 250.0 | PVC | 120.0 | -14.21 | 0.2894 |
| P-352 | J-S2060E | J-242 | 179 | 250.0 | PVC | 120.0 | -8.31 | 0.1693 |
| P-353 | J-242 | J-237 | 349 | 250.0 | PVC | 120.0 | -15.39 | 0.3136 |
| P-354 | J-237 | J-243 | 298 | 250.0 | PVC | 120.0 | -50.99 | 1.0387 |
| P-356 | J-S50E | J-243 | 182 | 250.0 | PVC | 120.0 | 100.44 | 2.0461 |
| P-357 | J-243 | J-244 | 328 | 250.0 | PVC | 120.0 | 42.37 | 0.8631 |
| P-358 | J-244 | J-245 | 452 | 250.0 | PVC | 120.0 | 26.97 | 0.5494 |
| P-359 | J-245 | J-240 | 350 | 250.0 | PVC | 120.0 | 19.89 | 0.4052 |
| P-360 | J-241 | J-237 | 312 | 250.0 | PVC | 120.0 | -28.52 | 0.5809 |
| P-362 | J-C235 | J-S904E | 100 | 300.0 | PVC | 120.0 | 17.11 | 0.2421 |
| P-364 | J-S1855E | J-247 | 310 | 400.0 | PVC | 120.0 | 21.34 | 0.1698 |
| P-365 | J-247 | J-S945E | 170 | 400.0 | PVC | 120.0 | 21.85 | 0.1739 |
| P-366 | J-S661E | J-247 | 57 | 200.0 | PVC | 120.0 | -5.89 | 0.1875 |
| P-367 | J-247 | J-S1925E | 57 | 200.0 | PVC | 120.0 | -6.41 | 0.2039 |
| P-368 | J-S1925E | J-S1885E | 59 | 200.0 | PVC | 120.0 | -4.99 | 0.1588 |
| P-369 | J-N542E | J-N543E | 169 | 200.0 | PVC | 130.0 | 8.40 | 0.2675 |
| P-373 | J-248 | J-394 | 356 | 300.0 | PVC | 120.0 | 52.61 | 0.7443 |
| P-379 | J-AN253 | J-AN254 | 377 | 300.0 | PVC | 120.0 | -7.33 | 0.1036 |
| P-380 | J-AN254 | J-AN255 | 598 | 300.0 | PVC | 120.0 | -13.83 | 0.1957 |
| P-386 | J-AN260 | J-AN261 | 356 | 300.0 | PVC | 120.0 | 12.00 | 0.1698 |
| P-387 | J-AN261 | J-AN262 | 316 | 300.0 | PVC | 120.0 | 22.51 | 0.3184 |
| P-388 | J-AN262 | J-263 | 322 | 300.0 | PVC | 120.0 | 22.51 | 0.3184 |
| P-411 | J-NS193 | J-AN271 | 215 | 300.0 | PVC | 120.0 | 27.25 | 0.3855 |
| P-424 | J-FH216 | J-AN276 | 520 | 300.0 | PVC | 120.0 | 52.86 | 0.7478 |
| P-427 | J-AN278 | J-AN288 | 408 | 300.0 | PVC | 120.0 | 9.44 | 0.1336 |
| P-435 | J-263 | J-283 | 361 | 300.0 | PVC | 120.0 | 8.74 | 0.1236 |
| P-438 | J-283 | J-AN284 | 405 | 300.0 | PVC | 120.0 | 29.27 | 0.4140 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-440 | J-285 | J-AN256 | 379 | 300.0 | PVC | 120.0 | -13.27 | 0.1877 |
| P-441 | J-AN284 | J-285 | 555 | 300.0 | PVC | 120.0 | 7.58 | 0.1072 |
| P-443 | J-AN277 | J-AN286 | 505 | 300.0 | PVC | 120.0 | 70.47 | 0.9969 |
| P-444 | J-AN286 | J-AN278 | 400 | 300.0 | PVC | 120.0 | 29.15 | 0.4125 |
| P-447 | J-AN286 | J-AN287 | 544 | 300.0 | PVC | 120.0 | 16.04 | 0.2269 |
| P-451 | J-AN289 | J-AN287 | 797 | 300.0 | PVC | 120.0 | -16.04 | 0.2269 |
| P-452 | J-AN288 | J-AN289 | 552 | 300.0 | PVC | 120.0 | -2.75 | 0.0389 |
| P-453 | J-AN288 | J-AN290 | 555 | 300.0 | PVC | 120.0 | -4.60 | 0.0651 |
| P-454 | J-AN290 | J-AN280 | 693 | 300.0 | PVC | 120.0 | -20.44 | 0.2892 |
| P-458 | J-C234 | J-292 | 338 | 300.0 | PVC | 120.0 | 6.60 | 0.0933 |
| P-463 | J-AN295 | J-AN296 | 378 | 300.0 | PVC | 120.0 | 0.26 | 0.0036 |
| P-464 | J-AN296 | J-AN271 | 478 | 300.0 | PVC | 120.0 | -20.74 | 0.2934 |
| P-469 | J-AN295 | J-297 | 367 | 400.0 | PVC | 120.0 | 54.34 | 0.4324 |
| P-471 | J-AN253 | J-298 | 575 | 300.0 | PVC | 120.0 | -4.76 | 0.0674 |
| P-474 | J-C236 | J-AN288 | 358 | 300.0 | PVC | 120.0 | -16.80 | 0.2376 |
| P-475 | J-S909E | J-AN286 | 826 | 300.0 | PVC | 120.0 | -25.28 | 0.3576 |
| P-476 | J-390 | J-AN276 | 665 | 300.0 | PVC | 120.0 | -11.43 | 0.1617 |
| P-477 | J-C232 | J-AN280 | 403 | 300.0 | PVC | 120.0 | 49.75 | 0.7038 |
| P-480 | J-S872E | J-AN260 | 176 | 300.0 | PVC | 120.0 | 12.00 | 0.1698 |
| P-483 | J-S903E | J-299 | 266 | 300.0 | PVC | 120.0 | 20.53 | 0.2904 |
| P-484 | J-AN256 | J-300 | 164 | 300.0 | PVC | 120.0 | -33.61 | 0.4755 |
| P-486 | J-S908E | J-300 | 348 | 300.0 | PVC | 120.0 | 33.61 | 0.4755 |
| P-489 | J-N1740E | J-N1720E | 89 | 350.0 | PVC | 130.0 | 42.08 | 0.4374 |
| P-491 | J-N82E | J-N510E | 143 | 200.0 | PVC | 130.0 | 0.34 | 0.0107 |
| P-493 | J-N630E | J-N434E | 127 | 200.0 | PVC | 130.0 | 22.37 | 0.7120 |
| P-495 | J-796 | J-N634E | 69 | 400.0 | Asbestos Cement | 114.0 | 76.76 | 0.6109 |
| P-497 | J-N810E | J-N800E | 61 | 200.0 | Asbestos Cement | 114.0 | -10.72 | 0.3413 |
| P-501 | J-N940E | PRV-25 | 55 | 200.0 | Asbestos Cement | 114.0 | -23.07 | 0.7345 |
| P-502 | PRV-25 | J-N990E | 41 | 200.0 | Asbestos Cement | 114.0 | -23.09 | 0.7349 |
| P-503 | J-N1085E | PRV-26 | 146 | 150.0 | Asbestos Cement | 114.0 | -4.95 | 0.2802 |
| P-504 | PRV-26 | J-N1050E | 34 | 150.0 | Asbestos Cement | 114.0 | -4.95 | 0.2804 |
| P-505 | J-N30E | J-N40E | 120 | 200.0 | PVC | 120.0 | -0.10 | 0.0033 |
| P-508 | J-S1004E | J-S1006E | 319 | 300.0 | PVC | 130.0 | 0.01 | 0.0001 |
| P-511 | J-163 | J-164 | 187 | 300.0 | PVC | 130.0 | 45.92 | 0.6496 |
| P-512 | J-S150E | J-S140E | 142 | 150.0 | PVC | 130.0 | -10.13 | 0.5731 |
| P-514 | J-S180E | J-S270E | 126 | 150.0 | Asbestos Cement | 114.0 | 11.86 | 0.6713 |
| P-516 | J-S400E | J-S330E | 59 | 400.0 | PVC | 130.0 | -204.81 | 1.6298 |
| P-523 | J-S410E | J-S400E | 45 | 400.0 | Asbestos Cement | 114.0 | -89.59 | 0.7130 |
| P-524 | R-9 | J-9 | 38 | 500.0 | PVC | 120.0 | 407.11 | 2.0734 |
| P-525 | R-10 | J-N1680E | 49 | 500.0 | PVC | 120.0 | 507.68 | 2.5856 |
| P-528 | J-N1730E | J-NS190 | 261 | 300.0 | PVC | 120.0 | 24.30 | 0.3438 |
| P-529 | R-13 | J-AN275 | 212 | 500.0 | PVC | 120.0 | (N/A) | (N/A) |
| P-533 | J-302 | J-S720E | 265 | 300.0 | PVC | 120.0 | -20.07 | 0.2840 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-534 | J-N1455E | J-303 | 543 | 300.0 | PVC | 130.0 | 220.15 | 3.1145 |
| P-535 | J-303 | J-162 | 614 | 300.0 | PVC | 130.0 | 85.22 | 1.2056 |
| P-541 | J-S1580E | J-S1560E | 66 | 150.0 | Asbestos Cement | 114.0 | -7.72 | 0.4368 |
| P-542 | J-S1560E | J-S1540E | 67 | 150.0 | Asbestos Cement | 114.0 | 0.57 | 0.0321 |
| P-544 | J-S595E | J-S1615E | 64 | 150.0 | Asbestos Cement | 114.0 | -4.55 | 0.2575 |
| P-546 | J-S1615E | J-S600E | 67 | 150.0 | Asbestos Cement | 114.0 | 1.68 | 0.0948 |
| P-548 | J-S635E | J-S560E | 125 | 150.0 | Asbestos Cement | 114.0 | 2.44 | 0.1383 |
| P-551 | J-S644E | J-S625E | 125 | 400.0 | Asbestos Cement | 114.0 | 13.27 | 0.1056 |
| P-552 | J-941 | J-1210 | 289 | 300.0 | PVC | 130.0 | -36.64 | 0.5183 |
| P-554 | J-S870E | J-S871E | 287 | 300.0 | PVC | 130.0 | 20.86 | 0.2951 |
| P-557 | J-AN261 | J-302 | 668 | 300.0 | PVC | 120.0 | -20.07 | 0.2840 |
| P-560 | J-S871E | J-S872E | 570 | 300.0 | PVC | 130.0 | 20.86 | 0.2951 |
| P-561 | J-1209 | J-941 | 168 | 300.0 | PVC | 130.0 | -36.64 | 0.5183 |
| P-571 | J-1174 | J-304 | 87 | 150.0 | PVC | 120.0 | -2.91 | 0.1645 |
| P-572 | J-304 | J-305 | 241 | 150.0 | PVC | 120.0 | -0.17 | 0.0095 |
| P-573 | J-305 | J-123 | 88 | 150.0 | PVC | 120.0 | 2.92 | 0.1652 |
| P-575 | J-1209 | J-306 | 170 | 200.0 | PVC | 120.0 | 7.88 | 0.2507 |
| P-576 | J-1208 | J-307 | 84 | 200.0 | PVC | 120.0 | 0.72 | 0.0230 |
| P-577 | J-307 | J-308 | 255 | 200.0 | PVC | 120.0 | 0.72 | 0.0230 |
| P-578 | J-308 | J-309 | 155 | 200.0 | PVC | 120.0 | -3.58 | 0.1139 |
| P-579 | J-309 | J-306 | 245 | 200.0 | PVC | 120.0 | -3.58 | 0.1139 |
| P-581 | J-310 | J-311 | 302 | 150.0 | PVC | 120.0 | -1.10 | 0.0624 |
| P-582 | J-305 | J-312 | 86 | 150.0 | PVC | 120.0 | -3.09 | 0.1747 |
| P-584 | J-311 | J-314 | 83 | 150.0 | PVC | 120.0 | -1.10 | 0.0624 |
| P-585 | J-304 | J-313 | 85 | 150.0 | PVC | 120.0 | -2.74 | 0.1551 |
| P-586 | J-313 | J-310 | 89 | 150.0 | PVC | 120.0 | -1.10 | 0.0624 |
| P-587 | J-312 | J-313 | 240 | 200.0 | PVC | 120.0 | 1.64 | 0.0521 |
| P-588 | J-312 | J-314 | 96 | 200.0 | PVC | 120.0 | -4.72 | 0.1504 |
| P-589 | J-314 | J-1208 | 81 | 200.0 | PVC | 120.0 | -5.83 | 0.1855 |
| P-590 | J-N140E | J-N520E | 147 | 200.0 | PVC | 120.0 | 14.68 | 0.4672 |
| P-592 | J-LW197 | J-1090 | 101 | 200.0 | PVC | 120.0 | -2.60 | 0.0829 |
| P-593 | J-170 | J-316 | 191 | 200.0 | PVC | 120.0 | -6.37 | 0.2027 |
| P-594 | J-316 | J-169 | 142 | 200.0 | PVC | 120.0 | -6.37 | 0.2027 |
| P-595 | J-1210 | J-317 | 108 | 300.0 | PVC | 120.0 | -47.38 | 0.6702 |
| P-596 | J-317 | J-C228 | 199 | 300.0 | PVC | 120.0 | -35.86 | 0.5074 |
| P-597 | J-N120E | PRV-Existing | 43 | 400.0 | PVC | 120.0 | -44.37 | 0.3531 |
| P-598 | PRV-Existing | J-N140E | 98 | 400.0 | PVC | 120.0 | -44.37 | 0.3531 |
| P-601 | J-N436E | J-319 | 127 | 300.0 | PVC | 130.0 | 9.82 | 0.1389 |
| P-602 | J-319 | J-320 | 55 | 300.0 | PVC | 130.0 | 0.01 | 0.0001 |
| P-603 | J-320 | J-321 | 71 | 300.0 | PVC | 120.0 | 0.01 | 0.0001 |
| P-605 | J-1106 | J-322 | 88 | 200.0 | PVC | 130.0 | 0.95 | 0.0301 |
| P-606 | J-322 | J-323 | 40 | 200.0 | PVC | 130.0 | 0.95 | 0.0301 |
| P-607 | J-317 | J-324 | 74 | 300.0 | PVC | 130.0 | -11.51 | 0.1629 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-608 | J-324 | J-325 | 119 | 200.0 | PVC | 130.0 | -11.52 | 0.3668 |
| P-609 | J-325 | J-326 | 60 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-610 | J-325 | J-327 | 61 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-611 | J-325 | J-S450E | 98 | 200.0 | PVC | 130.0 | -11.54 | 0.3674 |
| P-612 | J-324 | J-328 | 72 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-613 | J-S903E | J-329 | 55 | 300.0 | PVC | 130.0 | 1.31 | 0.0185 |
| P-614 | J-329 | J-318 | 190 | 300.0 | PVC | 130.0 | 1.30 | 0.0183 |
| P-615 | J-329 | J-330 | 71 | 200.0 | PVC | 130.0 | 0.01 | 0.0003 |
| P-616 | J-330 | J-331 | 66 | 150.0 | PVC | 130.0 | 0.01 | 0.0006 |
| P-617 | J-1225 | J-332 | 51 | 200.0 | PVC | 130.0 | 14.24 | 0.4532 |
| P-618 | J-332 | J-333 | 146 | 200.0 | PVC | 130.0 | 14.24 | 0.4532 |
| P-619 | J-333 | J-334 | 149 | 200.0 | PVC | 130.0 | 14.24 | 0.4532 |
| P-620 | J-334 | J-335 | 126 | 200.0 | PVC | 130.0 | 14.24 | 0.4532 |
| P-621 | J-335 | J-1129 | 91 | 200.0 | PVC | 130.0 | 14.24 | 0.4532 |
| P-622 | J-LW198 | J-336 | 83 | 200.0 | PVC | 120.0 | 0.01 | 0.0003 |
| P-623 | J-N1720E | J-337 | 61 | 200.0 | PVC | 120.0 | 0.01 | 0.0003 |
| P-626 | J-N1570E | J-340 | 93 | 200.0 | Asbestos Cement | 114.0 | 32.62 | 1.0384 |
| P-627 | J-340 | J-N1555E | 39 | 200.0 | Asbestos Cement | 114.0 | -17.87 | 0.5689 |
| P-628 | J-340 | J-341 | 75 | 200.0 | PVC | 130.0 | 50.50 | 1.6074 |
| P-629 | J-341 | J-342 | 71 | 200.0 | PVC | 130.0 | 50.50 | 1.6074 |
| P-630 | J-338 | J-342 | 95 | 300.0 | PVC | 130.0 | -50.50 | 0.7144 |
| P-631 | J-S908E | J-343 | 46 | 300.0 | PVC | 130.0 | -26.47 | 0.3745 |
| P-632 | J-343 | J-S909E | 31 | 300.0 | PVC | 120.0 | -25.23 | 0.3569 |
| P-634 | J-318 | J-344 | 330 | 300.0 | PVC | 120.0 | 1.30 | 0.0183 |
| P-635 | J-344 | J-343 | 321 | 300.0 | PVC | 120.0 | 1.25 | 0.0176 |
| P-636 | J-344 | J-345 | 410 | 300.0 | PVC | 120.0 | 0.05 | 0.0007 |
| P-637 | J-N530E | J-346 | 105 | 200.0 | PVC | 130.0 | -5.04 | 0.1603 |
| P-638 | J-N438E | J-347 | 89 | 200.0 | PVC | 130.0 | -6.00 | 0.1910 |
| P-639 | J-347 | J-N434E | 21 | 200.0 | PVC | 130.0 | -11.04 | 0.3513 |
| P-640 | J-346 | J-347 | 131 | 200.0 | PVC | 130.0 | -5.04 | 0.1603 |
| P-641 | J-1110 | J-348 | 61 | 200.0 | PVC | 130.0 | 2.16 | 0.0687 |
| P-642 | J-348 | J-1104 | 155 | 200.0 | PVC | 130.0 | 2.16 | 0.0687 |
| P-643 | J-1101 | J-349 | 202 | 300.0 | PVC | 130.0 | -9.76 | 0.1381 |
| P-645 | J-N543E | J-350 | 176 | 300.0 | PVC | 130.0 | -5.93 | 0.0839 |
| P-646 | J-350 | J-1112 | 102 | 300.0 | PVC | 130.0 | -5.93 | 0.0839 |
| P-648 | J-NS184 | J-351 | 60 | 300.0 | PVC | 120.0 | 18.12 | 0.2563 |
| P-650 | J-351 | J-352 | 82 | 300.0 | PVC | 130.0 | 12.04 | 0.1703 |
| P-651 | J-352 | J-353 | 60 | 300.0 | PVC | 130.0 | 12.04 | 0.1703 |
| P-652 | J-353 | J-1138 | 205 | 200.0 | PVC | 120.0 | 2.27 | 0.0724 |
| P-653 | J-353 | J-354 | 94 | 300.0 | PVC | 130.0 | 9.76 | 0.1381 |
| P-654 | J-354 | J-355 | 153 | 300.0 | PVC | 130.0 | 9.76 | 0.1381 |
| P-655 | J-355 | J-349 | 134 | 300.0 | PVC | 130.0 | 9.76 | 0.1381 |
| P-664 | J-105 | J-364 | 97 | 200.0 | PVC | 130.0 | -0.33 | 0.0104 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-665 | J-105 | J-365 | 100 | 200.0 | PVC | 130.0 | -0.36 | 0.0115 |
| P-666 | J-364 | J-366 | 155 | 200.0 | PVC | 130.0 | -0.33 | 0.0104 |
| P-667 | J-365 | J-366 | 109 | 200.0 | PVC | 130.0 | -0.36 | 0.0115 |
| P-668 | J-88 | J-367 | 39 | 200.0 | PVC | 120.0 | 0.69 | 0.0219 |
| P-669 | J-367 | J-368 | 204 | 200.0 | PVC | 130.0 | 0.69 | 0.0219 |
| P-670 | J-368 | J-366 | 111 | 200.0 | PVC | 130.0 | 0.69 | 0.0219 |
| P-671 | J-1210 | J-160 | 224 | 400.0 | PVC | 130.0 | 10.49 | 0.0835 |
| P-673 | J-S550E | J-S1140E | 107 | 150.0 | Asbestos Cement | 114.0 | 4.98 | 0.2819 |
| P-676 | J-S1190E | J-S485E | 144 | 400.0 | PVC | 130.0 | -72.59 | 0.5777 |
| P-686 | J-369 | J-163 | 227 | 300.0 | PVC | 130.0 | 45.92 | 0.6496 |
| P-690 | J-371 | J-338 | 95 | 300.0 | PVC | 130.0 | 15.09 | 0.2134 |
| P-691 | J-N1285E | J-372 | 76 | 200.0 | PVC | 130.0 | -29.09 | 0.9260 |
| P-692 | J-372 | J-N1220E | 46 | 300.0 | PVC | 120.0 | -44.18 | 0.6250 |
| P-693 | J-371 | J-372 | 257 | 300.0 | PVC | 120.0 | -15.09 | 0.2134 |
| P-695 | J-373 | J-N405E | 79 | 200.0 | Asbestos Cement | 114.0 | 0.01 | 0.0003 |
| P-696 | J-N165E | J-N125E | 76 | 150.0 | AC | 114.0 | 3.48 | 0.1971 |
| P-697 | J-N82E | J-N1825E | 344 | 300.0 | PVC | 120.0 | 56.58 | 0.8004 |
| P-698 | J-N870E | J-N840E | 117 | 200.0 | PVC | 120.0 | -7.49 | 0.2384 |
| P-699 | J-N510E | J-374 | 131 | 200.0 | PVC | 130.0 | 0.00 | 0.0000 |
| P-701 | J-N1820E | J-N1825E | 57 | 200.0 | AC | 114.0 | -1.12 | 0.0357 |
| P-702 | J-N880E | J-N890E | 69 | 200.0 | PVC | 120.0 | 8.68 | 0.2763 |
| P-703 | J-162 | PRV-62 | 45 | 300.0 | PVC | 130.0 | 96.64 | 1.3672 |
| P-704 | PRV-62 | J-369 | 211 | 300.0 | PVC | 130.0 | 96.64 | 1.3672 |
| P-707 | J-303 | PRV-64 | 53 | 300.0 | PVC | 120.0 | 57.97 | 0.8201 |
| P-708 | PRV-64 | J-248 | 259 | 300.0 | PVC | 120.0 | 57.91 | 0.8193 |
| P-709 | J-369 | J-375 | 125 | 400.0 | PVC | 120.0 | 50.72 | 0.4036 |
| P-710 | J-375 | J-NS185 | 370 | 400.0 | PVC | 120.0 | 50.72 | 0.4036 |
| P-724 | J-Ardmore_FortK | J-381 | 565 | 250.0 | PVC | 120.0 | 11.63 | 0.2370 |
| P-725 | J-381 | J-382 | 587 | 250.0 | PVC | 120.0 | -5.08 | 0.1034 |
| P-726 | J-382 | J-S10660U | 303 | 250.0 | PVC | 120.0 | -14.08 | 0.2868 |
| P-728 | J-383 | J-384 | 407 | 250.0 | PVC | 120.0 | 12.41 | 0.2527 |
| P-729 | J-384 | J-385 | 436 | 250.0 | PVC | 120.0 | 6.00 | 0.1221 |
| P-730 | J-385 | J-386 | 631 | 250.0 | PVC | 120.0 | 1.14 | 0.0231 |
| P-731 | J-386 | J-S10720U | 652 | 250.0 | PVC | 120.0 | 2.09 | 0.0426 |
| P-733 | J-387 | J-388 | 409 | 250.0 | PVC | 120.0 | 12.61 | 0.2569 |
| P-734 | J-388 | J-386 | 438 | 250.0 | PVC | 120.0 | 5.81 | 0.1185 |
| P-735 | J-383 | J-387 | 616 | 250.0 | PVC | 120.0 | -0.38 | 0.0078 |
| P-736 | J-384 | J-388 | 622 | 250.0 | PVC | 120.0 | 1.55 | 0.0316 |
| P-737 | J-S2085E | J-389 | 83 | 250.0 | PVC | 120.0 | -7.23 | 0.1472 |
| P-738 | J-389 | J-241 | 286 | 250.0 | PVC | 120.0 | -7.23 | 0.1472 |
| P-739 | J-162 | J-390 | 702 | 300.0 | PVC | 130.0 | -11.42 | 0.1616 |
| P-742 | J-S1940E | J-S1960E | 111 | 150.0 | PVC | 120.0 | -4.90 | 0.2772 |
| P-743 | J-S1855E | J-391 | 89 | 400.0 | PVC | 130.0 | -48.56 | 0.3864 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-744 | J-391 | J-S1820E | 66 | 400.0 | PVC | 130.0 | -52.40 | 0.4170 |
| P-745 | J-S360E | J-392 | 76 | 150.0 | AC | 114.0 | 0.01 | 0.0006 |
| P-746 | J-N1900E | J-N431E | 221 | 200.0 | PVC | 130.0 | 1.82 | 0.0580 |
| P-747 | J-1138 | J-323 | 95 | 200.0 | PVC | 130.0 | -0.95 | 0.0301 |
| P-748 | J-N438E | J-393 | 68 | 200.0 | PVC | 120.0 | 0.01 | 0.0003 |
| P-749 | J-1202 | J-1189 | 40 | 200.0 | PVC | 130.0 | 4.18 | 0.1331 |
| P-750 | J-319 | J-394 | 179 | 300.0 | PVC | 120.0 | 9.81 | 0.1388 |
| P-752 | J-351 | J-396 | 66 | 300.0 | PVC | 120.0 | 6.08 | 0.0860 |
| P-753 | J-396 | J-1112 | 99 | 300.0 | PVC | 120.0 | 6.08 | 0.0860 |
| P-762 | J-394 | J-NS185 | 286 | 300.0 | PVC | 120.0 | 62.42 | 0.8830 |
| P-763 | J-N1880E | J-402 | 102 | 250.0 | PVC | 130.0 | 15.35 | 0.3128 |
| P-764 | J-402 | J-N1717E | 95 | 250.0 | PVC | 130.0 | 15.35 | 0.3128 |
| P-768 | J-N880E | J-406 | 229 | 200.0 | PVC | 130.0 | -9.51 | 0.3026 |
| P-769 | J-406 | J-N900E | 23 | 200.0 | PVC | 130.0 | 1.30 | 0.0413 |
| P-770 | J-N1680E | PRV-65 | 135 | 400.0 | Asbestos Cement | 114.0 | 87.81 | 0.6988 |
| P-771 | PRV-65 | J-N1681E | 28 | 400.0 | Asbestos Cement | 114.0 | 87.76 | 0.6984 |
| P-772 | J-N1681E | J-407 | 36 | 200.0 | PVC | 120.0 | 10.80 | 0.3439 |
| P-773 | J-407 | J-406 | 197 | 200.0 | PVC | 120.0 | 10.80 | 0.3439 |
| P-777 | J-N860E | J-410 | 44 | 200.0 | PVC | 120.0 | -3.09 | 0.0983 |
| P-779 | J-410 | J-411 | 62 | 200.0 | PVC | 120.0 | -3.09 | 0.0983 |
| P-780 | J-411 | J-N910E | 175 | 200.0 | PVC | 120.0 | -3.09 | 0.0983 |
| P-784 | J-292 | J-244 | 816 | 300.0 | PVC | 120.0 | -8.31 | 0.1176 |
| P-791 | J-299 | J-283 | 378 | 300.0 | PVC | 120.0 | 20.53 | 0.2904 |
| P-802 | J-417 | J-FH216 | 450 | 300.0 | PVC | 120.0 | 5.74 | 0.0812 |
| P-803 | J-298 | J-285 | 676 | 300.0 | PVC | 120.0 | -20.84 | 0.2949 |
| P-804 | J-AN276 | PRV-69 | 89 | 300.0 | PVC | 120.0 | 96.63 | 1.3670 |
| P-805 | PRV-69 | J-AN277 | 226 | 300.0 | PVC | 120.0 | 96.63 | 1.3670 |
| P-806 | J-S800E | J-S661E | 169 | 150.0 | Asbestos Cement | 114.0 | -2.58 | 0.1458 |
| P-810 | J-N583E | J-N562E | 142 | 150.0 | PVC | 120.0 | 2.50 | 0.1413 |
| P-812 | J-417 | J-UL207 | 816 | 300.0 | PVC | 130.0 | -34.57 | 0.4890 |
| P-813 | J-S10710U | J-388 | 665 | 250.0 | PVC | 130.0 | -5.35 | 0.1089 |
| P-814 | J-S2085E | J-419 | 481 | 250.0 | PVC | 120.0 | 21.08 | 0.4295 |
| P-815 | J-419 | J-387 | 384 | 250.0 | PVC | 120.0 | 18.45 | 0.3759 |
| P-816 | J-S2106E | J-419 | 701 | 250.0 | PVC | 130.0 | -9.16 | 0.1866 |
| P-817 | J-240 | J-420 | 202 | 250.0 | PVC | 120.0 | 27.02 | 0.5504 |
| P-818 | J-420 | J-383 | 381 | 250.0 | PVC | 120.0 | 20.49 | 0.4173 |
| P-819 | J-419 | J-420 | 618 | 250.0 | PVC | 130.0 | -6.53 | 0.1330 |
| P-820 | J-AN276 | J-421 | 437 | 300.0 | PVC | 130.0 | -71.23 | 1.0077 |
| P-821 | J-421 | J-303 | 370 | 300.0 | PVC | 130.0 | -71.23 | 1.0077 |
| P-822 | J-AN295 | J-N1712E | 368 | 400.0 | PVC | 130.0 | -54.60 | 0.4345 |
| P-825 | J-AN256 | J-AN255 | 660 | 300.0 | PVC | 130.0 | 20.34 | 0.2878 |
| P-826 | J-N633E | J-N1681E | 253 | 400.0 | Asbestos Cement | 114.0 | -76.96 | 0.6124 |
| P-828 | J-S1004E | J-423 | 87 | 300.0 | PVC | 130.0 | 0.02 | 0.0003 |

| Label | Start Node | Stop Node | Length (Scaled) (m) | Diameter (mm) | Material | Hazen-Williams C | Flow (L/s) | Velocity (m/s) |
|---|---|---|---|---|---|---|---|---|
| P-829 | J-423 | J-S1005E | 118 | 300.0 | PVC | 130.0 | 0.01 | 0.0001 |
| P-830 | J-390 | J-S1006E | 93 | 300.0 | PVC | 130.0 | 0.00 | 0.0000 |

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