

Strandherd Limited Partnership

# FUNCTIONAL SERVICING & STORMWATER MANAGEMENT REPORT

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IN SUPPORT OF THE SITE PLAN APPLICATION

4175 Strandherd Drive, City of Ottawa

Our File: 263560

|     |                               |                 |
|-----|-------------------------------|-----------------|
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|     |                               |                 |
| 1   | Issued for Site Plan Approval | August 17, 2026 |
| No. | Revision                      | Date            |

August 2026

Submitted by  
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# 1.0 Executive Summary

Dillon Consulting Ltd. ("Dillon") has been retained by Strandherd Limited Partnership, CHP Management LP ("Client") to prepare this Functional Servicing and Stormwater Management Report in support of the Site Plan Approval Submission of the proposed greenfield development of the lands at 4175 Strandherd Drive in the City of Ottawa.

The subject site consists of Block 3 of the Citi Gate 416 Corporate Campus Development and has an area of **5.27 ha**. The site has been used for agricultural purposes, and it is currently a greenfield with no evidence of previous development.

The site is bound by Systemhouse Street to the north, Strandherd Drive to the east, a commercial development to the south (car dealership), and the O'Keefe Drain corridor to the west. The purpose of the development is the construction of ten commercial retail buildings, all single-storey and without basements. The commercial buildings will have a total floor area of approximately **1.15 ha**, which will include retail and restaurant uses. The development will include drive aisles, entrances and parking areas. The development includes three proposed entrances, two from Strandherd Drive, one of which will be fully signalized, and one entrance from Systemhouse Street.

This report demonstrates that the proposed development can be serviced through the utilization of both existing and new infrastructure without any adverse impact on the municipal services of the surrounding areas. The storm sewer and stormwater management design, the sanitary sewer servicing and the water servicing proposed for the site conform with the design requirements of the approved Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1) prepared by Novatech, dated January 2015, and is in general conformance with City of Ottawa design criteria. The servicing strategy is summarized as follows:

## **Water Servicing:**

There are existing municipal watermains available in the adjacent streets to the sites area. There is an existing 400 mmø watermain on Strandherd Drive and an existing 250 mmø watermain on Systemhouse Street. It is proposed, as per the Citi Gate 416 Corporate Campus Detailed Servicing and Storm management Report (Phase 1), that the subject site will be serviced by connecting a proposed 200 mmø watermain internal to the site to the existing 250 mmø watermain on Systemhouse Street to the north, and to an existing 200 mmø stub which has been provided near the east property line of the site along the Strandherd Drive, which connects to the existing 400 mmø watermain on that street.



The proposed 200 mmø on site watermain will form a loop to which all proposed buildings and the six proposed hydrants within the site will connect. The six proposed hydrants will provide coverage for the site. There are also two existing hydrants on the south boulevard of Systemhouse Street, and there are four existing hydrants on the boulevard on the east side of Strandherd Drive.

The domestic water demands were calculated following MECP Design Guidelines for Drinking-Water Systems average values for commercial use. Peaking factors for domestic commercial water flows follow City of Ottawa's Sewer Design Guideline value of 1.5 times the average flows. Fire flows were calculated using the FUS 2020 calculations.

Watermain modelling was completed with EPANET. The modelling confirmed the proposed watermain system will have adequate flow and pressure to service the proposed development under all applicable conditions including max day, peak hour, and max day + fire flow. No external upgrades or retrofits are required on the existing surrounding watermain network to service the proposed development.

### **Sanitary Servicing:**

The proposed sanitary serving of the site is designed to conform to the requirements of the Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1) in terms of location of site service connection and allowable discharge rate to the municipal sanitary sewers.

The proposed sanitary service connection from the site will connect to the existing 375 mmø municipal sanitary sewer in Systemhouse Street.

The allowable design sanitary flows from the site are 4.58 L/s (not including infiltration) and **6.06 L/s**, including infiltration flows, as per in Appendix B – Sanitary Sewer Design Sheets of the Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1). The total site flows calculated using flow rates for retail and restaurant uses as per Appendix 4-A of the Sewer Design Guideline, City of Ottawa, Infrastructure Services Department, are a total of **3.87 L/s**, including infiltration flows, which is less than the allowable flows and thus meeting the requirements.

### **Stormwater Servicing:**

Post-development stormwater flows are to be controlled to allowable release rates which has been established in the Citi Gate 416 Corporate Campus Detailed Servicing and Stormwater Management Report (Novatech, 2014).

The on-site water quantity requirements will be achieved by rooftop storage, in-sewer underground storage, and parking lot surface storage in combination with a 170mm orifice plate control, at the downstream side of MH1, in order to attenuate storm run-off to the required level.

A Stormceptor STC 9000 Oil Grit Separator (OGS) quality control unit will be provided downstream of MH9, in order to achieve the minimum 80% TSS removal quality control criteria.

## 2.0 Introduction

### 2.1 Purpose

This Functional Servicing and Stormwater Management Report has been prepared in support of Site Plan Approval application being submitted for the subject lands at 4175 Strandherd Drive, which consist of Block 3 of the approved Citi Gate 416 Corporate Campus Development in the City of Ottawa.

The purpose of this Report is to demonstrate that the sites storm, sanitary, water and stormwater management servicing design are in conformance with the requirements of the approved Citi Gate 416 Corporate Campus Development, and City of Ottawa design guidelines.

This Report is also intended to meet the requirements of development approval under the Planning Act, which in turn satisfies the conditions for the Municipal Class Environment Assessment process for the storm and sanitary sewers, stormwater management, water distribution and road servicing for the subject lands.

### 2.2 Background

Dillon Consulting Ltd. ("Dillon") has been retained by Strandherd Limited Partnership, CHP Management LP ("Client") to prepare this Functional Servicing and Stormwater Management Report in support of the Site Plan Approval Submission of the proposed greenfield development of the lands at 4175 Strandherd Drive in the City of Ottawa.

The subject site consists of Block 3 of the Citi Gate 416 Corporate Campus Development and has an area of **5.27 ha** (including the road widening). The site has been used for agricultural purposes, and it is currently a greenfield with no evidence of previous development.

The site is bound by Systemhouse Street to the north, Strandherd Drive to the east, a commercial development to the south (car dealership), and the O'Keefe Drain corridor to the west. The proposed development includes the construction of ten commercial retail buildings, all single-storey without basements. The commercial buildings will have a total floor area of approximately **1.15 ha** which will include retail and restaurant uses. The development will include drive aisles, entrances and parking areas. The development includes three proposed entrances, two from Strandherd Drive, one of which will be fully signalized, and one entrance from Systemhouse Street.

**Table 1** below lists the total floor areas per proposed building and the approximate floor area of each building per type of proposed use, that is retail/commercial or restaurant use.

**Table 1: Proposed Building Floor Areas and Uses**

| Building     | Total Floor Area (Ha) | Retail /Commercial Floor Area (Ha) | Restaurant Floor Area (Ha) |
|--------------|-----------------------|------------------------------------|----------------------------|
| CRU1         | 0.2776                | 0.2637                             | 0.0139                     |
| CRU2         | 0.1592                | 0.1592                             | 0.0000                     |
| CRU3         | 0.1915                | 0.1915                             | 0.0000                     |
| CRU4         | 0.1230                | 0.1230                             | 0.0000                     |
| CRU5         | 0.0196                | 0.0000                             | 0.0196                     |
| CRU6         | 0.1258                | 0.0564                             | 0.0694                     |
| CRU7         | 0.0961                | 0.0333                             | 0.0628                     |
| CRU8         | 0.0409                | 0.0000                             | 0.0409                     |
| CRU9         | 0.0751                | 0.0000                             | 0.0751                     |
| CRU10        | 0.0464                | 0.0000                             | 0.0464                     |
|              |                       |                                    |                            |
| <b>TOTAL</b> | <b>1.1552</b>         | <b>0.8271</b>                      | <b>0.3281</b>              |

## 2.3 Study Parameters

The background documents listed below have been considered in the grading and servicing design for the proposed site and preparation of this Functional Servicing Report:

- Sewer Design Guideline, City of Ottawa, Infrastructure Services Department, December 2025;
- Water Distribution Design Guideline, City of Ottawa, Infrastructure and Water Services Department, December 8, 2025;
- City of Ottawa Plan and Profiles;
- Fire Underwriters Survey, 2020;
- Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1), by Novatech, October 1, 2014;
- Site Plan, Prepared by Hobin Architecture, August 2026.
- Topographic Survey, Block 3, Registered Plan 4M-1538, City of Ottawa, by Annis, O'Sullivan, Vollebakk LTD, July 3, 2026;
- Geotechnical Investigation, Proposed Commercial development, 4175 Strandherd Drive, Ottawa, Ontario, by Paterson Group, dated November 24, 2025.



## KEY PLAN

LOCATION

4175 STRANDHERD RETAIL - CHOICE REIT

DESIGNED BY: G.R

CHECKED BY: G.M

DRAWING BY: J.Y.S

CHECKED BY: R.H

SCALE: N.TS

DATE: AUG. 2026

PROJECT No.

FIGURE No.

FIG: 1

263560

**DILLON**

**COUNTERPOINT  
LAND DEVELOPMENT**

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## 3.0 WATERMAIN SERVICING

### 3.1 Existing Water Servicing

The site is currently a greenfield and therefore does not have existing water use. There are existing municipal watermain available in the municipal streets adjacent to the site. There is an existing 400 mmø watermain on Strandherd Drive, and an existing 250 mmø watermain on Systemhouse Street. An existing 200 mmø water service stub is currently installed to the property line of the site along Strandherd Drive. This existing water service stub will be used as one of the proposed water service connections to the site. There are existing hydrants within the municipal right-of-way ("ROW") adjacent to the site which may be used for firefighting. Four hydrants are available on Strandherd Drive east boulevard, opposite to the site, and two on Systemhouse Street south boulevard, next to the site.

### 3.2 Proposed Water Servicing

It is proposed, as per the Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1), that the subject site will be service by connecting the proposed 200 mmø watermain internal to the site to the existing 250 mmø watermain on Systemhouse Street to the north, and to the existing 200 mmø water service stub from Strandherd Drive, which connects to the existing 400 mmø watermain.

The proposed 200 mmø on site watermain will form a loop to which all proposed buildings and the six proposed hydrants will connect. The six proposed hydrants will provide coverage for the site.

### 3.3 Water Demand

The domestic water demands were calculated following Table 3-2: *Typical Water demands for selected Commercial and Institutional Users* of the MECP Design Guidelines for Drinking-Water Systems. The average values for commercial use (Shopping Centres) of 5 liters/m<sup>2</sup>/day was used to calculate water demand instead of the 2.5 liters/m<sup>2</sup>/day in the City of Ottawa Water Distribution Design Guidelines because it provides for a more conservative result. Fire flow demands were estimated using the Fire Underwriters Survey. Maximum Day + Fire Flow governs the water demand for the proposed development. Refer to **Appendix B** for detailed water service calculations.

2 below shows the result of the calculations of commercial domestic average, maximum day and maximum hour demands, the required Fire Flow, and Max Day + Fire Flow per building (CRU's 1 to 10), and total site demands.

**Table 2: Water Demands**

| Building          | Building Area* (m <sup>2</sup> ) | Average Daily Demand (L/s) | Maximum Day Demand (L/s) | Maximum Hour Demand (L/s) | Fire Flow (L/s) | Max Day Flow + Fire Flow (L/s) | Max Day Flow + Fire Flow (L/min) | Max Day Flow + Fire Flow (GPM) |
|-------------------|----------------------------------|----------------------------|--------------------------|---------------------------|-----------------|--------------------------------|----------------------------------|--------------------------------|
| CRU 1             | 2,647                            | 0.15                       | 0.23                     | 0.41                      | 75.70           | 75.93                          | 4,555.8                          | 1,203.6                        |
| CRU 2             | 1,592                            | 0.09                       | 0.14                     | 0.25                      | 66.67           | 66.80                          | 4,008.3                          | 1,059.0                        |
| CRU 3             | 1,915                            | 0.11                       | 0.17                     | 0.30                      | 66.67           | 66.83                          | 4,010.0                          | 1,059.4                        |
| CRU 4             | 1,230                            | 0.07                       | 0.11                     | 0.19                      | 50.00           | 50.11                          | 3,006.4                          | 794.3                          |
| CRU 5             | 196                              | 0.01                       | 0.02                     | 0.03                      | 33.33           | 33.35                          | 2,001.0                          | 528.7                          |
| CRU 6             | 1,258                            | 0.07                       | 0.11                     | 0.20                      | 50.00           | 50.11                          | 3,006.6                          | 794.3                          |
| CRU 7             | 961                              | 0.06                       | 0.08                     | 0.15                      | 50.00           | 50.08                          | 3,005.0                          | 793.9                          |
| CRU 8             | 409                              | 0.02                       | 0.04                     | 0.06                      | 33.33           | 33.37                          | 2,002.1                          | 529.0                          |
| CRU 9             | 751                              | 0.04                       | 0.07                     | 0.12                      | 50.00           | 50.07                          | 3,003.9                          | 793.6                          |
| CRU 10            | 464                              | 0.03                       | 0.04                     | 0.07                      | 33.33           | 33.37                          | 2,002.4                          | 529.0                          |
| <b>TOTAL SITE</b> | <b>11,423</b>                    | <b>0.66</b>                | <b>0.99</b>              | <b>1.78</b>               | <b>75.70</b>    | <b>76.69</b>                   | <b>4,601.5</b>                   | <b>1,215.7</b>                 |

The total demand is the greater of Maximum Day + Fire Flow or the Peak Hour Demand. Based on Fire Flow requirements, Maximum Day + Fire Flow governs the water demand for the proposed development. The maximum day + fire flow **is 4,601.5 L/min.**

As per City of Ottawa Water Distribution Design Guidelines the design objectives, the water pressure and demand objectives, will be the following:

In general conformity with the MOE Guideline, all new development additions to the public water distribution system shall be designed so that, on a continuous basis, the minimum and maximum water pressures as well as flow rates conform to the following objectives:

- The desired range of system pressures should be approximately 350 to 480 kPa (50 to 70 psi) and not less than 275 kPa (40 psi) during normal operating conditions.
- Where fire flow has been provided; during periods of maximum day and fire flow demand the residual pressure at any point of the distribution system shall not be less than 140 kPa (20 psi).

- In accordance with the Ontario Code and Guide of Plumbing the maximum pressure at any point in the distribution system in occupied areas outside of the public right-of-way shall not exceed 552 kPa (80 psi).
- The maximum pressure at any point in the distribution system in unoccupied areas shall not exceed 552 kPa (80 psi).
- Feeder mains, which have been provided primarily for the purpose of redundancy, shall meet, at a minimum, the basic day plus fire flow demand.

Two water meters in chamber have been included in the design of the water servicing of the site, one per each of the water connections to the municipal distribution system as per City of Ottawa's standard drawing W32.1. Each water meter will include a check valve to isolate the water within the site. The chambers will be type R-3 with 3.00 m X 2.40 m internal dimensions. Meter sizing and installation are to be provided by the City.

### 3.4 Watermain Modelling

Watermain modeling has been performed as requested by the City to evaluate the available pressures in the watermain system. The watermain analysis utilized EPANET to evaluate the capacity of the surrounding water infrastructure and available pressures. The model was run based on the average day, peak hour and maximum day + fire flow demands for the proposed development. The model analyzed max day + fire flow demand scenarios during fire flow conditions at proposed Building CRU1 to CRU10.

The model was set up with boundary conditions locations (i.e., pumps) as follows:

1. One connection at the existing 400 mm ø watermain along Strandherd Drive
2. One connection at the existing 250 mm ø watermain along Systemhouse Street

The characteristics of the supply/connection points were established based on the boundary conditions received from the City staff on July 23, 2026. These boundary conditions have been included in **Appendix B**. The results of the water distribution modeling are summarized in **Tables 3 to 4** below:



**Table 3: Proposed Conditions Residual Pressures During Non-Fire Flow Scenarios**

| Scenario  | Highest Pressure              |                |                | Satisfies Pressure Requirements? |
|-----------|-------------------------------|----------------|----------------|----------------------------------|
|           | Pressure (m H <sub>2</sub> O) | Pressure (psi) | Pressure (kPa) |                                  |
| Max. Day  | 53.68                         | 76.33          | 526.29         | Yes                              |
| Peak Hour | 53.49                         | 76.00          | 524.42         | Yes                              |
| Scenario  | Lowest Pressure               |                |                | Satisfies Pressure Requirements? |
|           | Pressure (m H <sub>2</sub> O) | Pressure (psi) | Pressure (kPa) |                                  |
| Max. Day  | 52.23                         | 74.27          | 512.07         | Yes                              |
| Peak Hour | 52.04                         | 74.00          | 510.21         | Yes                              |

**Table 4: Proposed Conditions Residual Pressures During Fire Flow Scenarios**

| Fire Flow Location | Max. Day + Fire Flow (L/s) | Max. Velocity (m/s) | Lowest Pressure               |                |                | Satisfies Fire Flow Requirements? |
|--------------------|----------------------------|---------------------|-------------------------------|----------------|----------------|-----------------------------------|
|                    |                            |                     | Pressure (m H <sub>2</sub> O) | Pressure (psi) | Pressure (kPa) |                                   |
| CRU1               | 75.93                      | 2.42                | 46.51                         | 66.14          | 455.99         | Yes                               |
| CRU2               | 66.80                      | 2.13                | 48.08                         | 68.37          | 471.38         | Yes                               |
| CRU3               | 66.83                      | 2.13                | 47.12                         | 67.00          | 461.97         | Yes                               |
| CRU4               | 50.11                      | 2.84                | 48.78                         | 69.36          | 478.25         | Yes                               |
| CRU5               | 33.35                      | 1.89                | 49.35                         | 70.17          | 483.83         | Yes                               |
| CRU6               | 50.11                      | 1.60                | 49.89                         | 70.94          | 489.13         | Yes                               |
| CRU7               | 50.08                      | 2.84                | 43.07                         | 61.24          | 422.26         | Yes                               |
| CRU8               | 33.37                      | 1.90                | 47.31                         | 67.27          | 463.83         | Yes                               |
| CRU9               | 50.07                      | 2.84                | 39.10                         | 55.60          | 383.34         | Yes                               |
| CRU10              | 33.37                      | 1.89                | 49.59                         | 70.52          | 486.19         | Yes                               |

Refer to **Appendix B** for the details and full model outputs. As per the City of Ottawa standards, required pressure ranges are outlined as follows:

- Preferred design pressure during normal operating conditions is within 345 kPa to 552 kPa
- Minimum pressure under non-fire conditions shall not be below 275 kPa
- Minimum pressure under max day + fire flow conditions is 140 kPa

As seen from **Table 3** and **Table 4** above, adequate pressure is available in the existing system to service the proposed development and maintain pressures within the required range.

The proposed watermain system will therefore have adequate flow and pressure to service the proposed development under fire flow conditions. The proposed water distribution system for the development shall adequately provide max day + fire flow demand, while maintaining a residual pressure of over 140 kPa, as per the City of Ottawa criteria. Therefore, no external upgrades or retrofits are required on the existing surrounding watermain network to service the proposed development.

## 4.0 SANITARY SERVICING

### 4.1 Existing Sanitary Servicing

The site is currently a greenfield and therefore it generates no existing sanitary sewer demand. There are existing municipal sanitary sewers available in the municipal ROWs adjacent to the site. There is an existing 375 mmØ sanitary sewer on Systemhouse Street and a 525 mmØ sanitary sewer on Strandherd Drive.

### 4.2 Proposed Sanitary Servicing

The proposed sanitary serving of the site is designed to conform to the requirements of the Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1). The proposed sanitary service connection from the site will be to the north of the site where the proposed 250 mmØ sanitary sewer pipe from the site will connect to the existing 375 mmØ in Systemhouse Street.

All buildings on the site will connect to proposed 250 mmØ sanitary sewers which will convey the flows to the outlet connection from the site.

The allowable design sanitary flows from the site are 4.58 L/s (not including infiltration) and **6.06 L/s**, including infiltration flows, as per the sanitary design sheet in Appendix B – Sanitary Sewer Design Sheets of the Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1).

The average sanitary flow rates from the proposed buildings were calculated based on the daily sewage flow rates for different types of building uses listed in Appendix 4-A of the Sewer Design Guideline, City of Ottawa, Infrastructure Services Department. A retail/commercial daily volume of 5 L/day per square meter of floor area was used for retail stores, and 125 L/seat/day was used for restaurant floor areas, with an estimated assignment of one restaurant seat every 5 square meters of restaurant area. The peaking factor used is 1.50 for commercial contribution as per Figure 4.3 of the City of Ottawa's Sewer Design Guideline. The infiltration allowance used in the flow calculations is 0.33 L/s/ha of effective gross area, also as per Figure 4.3 of the Sewer design Guideline. The total flows generated from the site based on actual proposed building areas and on estimated proposed retail and restaurant uses is a total of **3.87 L/s**, including infiltration flows, which is less than the allowable flows **6.06 L/s**, and thus meeting the requirements.

**Table 5** below presents the proposed design flows calculated for each building and the site totals.

**Table 5: Proposed Building/Site Sanitary Flows**

| Building     | Gross Area for Infiltration(Ha) | Retail /Commercial Floor Area (Ha) | Restaurant Floor Area (Ha) | Average Building Flows (litres/s) | Peak Building Flows (litres/s) | Infiltration (litres/s) | Total Flows (litres/s) |
|--------------|---------------------------------|------------------------------------|----------------------------|-----------------------------------|--------------------------------|-------------------------|------------------------|
| CRU1         | 1.015                           | 0.2515                             | 0.0132                     | 0.184                             | 0.276                          | 0.335                   | 0.611                  |
| CRU2         | 0.523                           | 0.1592                             | 0.0000                     | 0.092                             | 0.138                          | 0.173                   | 0.311                  |
| CRU3         | 0.488                           | 0.1915                             | 0.0000                     | 0.111                             | 0.166                          | 0.161                   | 0.327                  |
| CRU4         | 0.513                           | 0.1230                             | 0.0000                     | 0.071                             | 0.107                          | 0.169                   | 0.276                  |
| CRU5         | 0.238                           | 0.0000                             | 0.0196                     | 0.057                             | 0.085                          | 0.079                   | 0.164                  |
| CRU6         | 0.508                           | 0.0564                             | 0.0694                     | 0.233                             | 0.350                          | 0.168                   | 0.518                  |
| CRU7         | 0.489                           | 0.0333                             | 0.0628                     | 0.201                             | 0.301                          | 0.161                   | 0.463                  |
| CRU8         | 0.580                           | 0.0000                             | 0.0409                     | 0.118                             | 0.178                          | 0.191                   | 0.369                  |
| CRU9         | 0.377                           | 0.0000                             | 0.0751                     | 0.217                             | 0.326                          | 0.124                   | 0.450                  |
| CRU10        | 0.542                           | 0.0000                             | 0.0464                     | 0.134                             | 0.201                          | 0.179                   | 0.380                  |
|              |                                 |                                    |                            |                                   |                                |                         |                        |
| <b>TOTAL</b> | <b>5.273</b>                    | <b>0.8149</b>                      | <b>0.3274</b>              | <b>1.42</b>                       | <b>2.13</b>                    | <b>1.74</b>             | <b>3.87</b>            |

Please refer to **Appendix C** for the Sewer Design Sheet and to drawing **SW-SAN** for the sanitary drainage plan.

## 5.0 STORMWATER MANAGEMENT

### 5.1 Existing Conditions

The site is currently a greenfield with no stormwater service connections to municipal sewers and draining to the O'Keefe municipal drain on the west side of the property overland and through existing swales. A storm outlet has been designed and constructed as part of the Citi Gate 416 Corporate Campus development works. The existing structures which have been built include an outlet headwall in the O'Keefe Drain land, an OGS unit withing the site upstream of the headwall, and a 864 mm x 1346 mm elliptical storm pipe to serve as the point of discharge of the proposed stormwater services of the site.

### 5.2 Proposed Storm Servicing

The design of the stormwater servicing and stormwater management follows City of Ottawa design Guideline as well as specific requirements of individual tenant's lease agreements.

The site will be serviced by storm sewers network designed to convey the 2-year storm event calculated as per the City of Ottawa IDF curves. Different pipe sizes ranging from PVC 250 mmØ pipe for catch basin leads to 864mm x 1346 mm elliptical reinforced concrete pipes are proposed. Stormwater will be captured by catch basins and roof drains and transported to the existing outlet pipes at the southwest corner of the site. Full 100-year storm capture by the proposed catch basins is provided. The provision of sufficient stormwater storage volume is proposed to eliminate major storm overland flows.

The roof drainage from five buildings (CRU2, CRU3, CRU4, CRU6 and CRU7) will be fully controlled to attenuate flows up to the 100-year storm, while the roof drainage from the CRU1 will be partially controlled due to some proposed sloped roofs. The stormwater quantity control will be achieved by the installation of underground Greenstorm modular unit tanks for stormwater quantity storage, which will be complemented with pipe and structure storage (manholes and catch basins), and the use of surface storage, for quantity control. One orifice plate at the inlet of proposed manhole MH1 will provide flow restriction to achieve the required stormwater release rates in conformance to the maximum release rate requirements provide in the Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1).

As per the tenant's lease agreement provisions for CRU 1, recessed loading dock areas will not be allowed to pond during any storm event up to the 100-year storm. To achieve this objective and due to grading constraints, the CRU1 and CRU 2 recessed loading dock areas will have the storm flows pumped into the

storm sewer system of the site, specifically into manhole MH 20. Further details of the pump design will be provided by the mechanical engineer at the building permit stage.

Please refer to the **Site Servicing Plan SW-S** for the storm servicing network layout and to **Appendix D** for the Storm Sewer Design Sheet.

### 5.2.1 Allowable Release Rates

Target allowable release rates and required unit storage volumes for Block 3 were established in the Citi Gate 416 Corporate Campus Detailed Servicing and Stormwater Management Report (Novatech, 2014) and are presented in **Table 6** for the subject development. The total allowable release rate will be allocated between the uncontrolled and controlled drainage areas within the proposed stormwater management plan.

**Table 6: Allowable Release Rates for O'Keefe Drain**

| Design Storm Event | Release Rate (L/s/ha) | Allowable Release Rate (L/s) | On-Site Storage Target (m <sup>3</sup> /ha) |
|--------------------|-----------------------|------------------------------|---------------------------------------------|
| 2-Year             | 20                    | 106                          | 179                                         |
| 5-Year             | 35                    | 186                          | 232                                         |
| 10-Year            | 45                    | 239                          | 267                                         |
| 25-Year            | 64                    | 339                          | 310                                         |
| 50-Year            | 75                    | 398                          | 333                                         |
| 100-Year           | 126                   | 668                          | 351                                         |

### 5.2.2 Minor System (Storm Sewers)

Storm servicing for the site is provided via a dual-drainage design, combining minor and major drainage infrastructure to manage stormwater runoff effectively. The minor system conveys runoff from frequent, low-intensity storm events through a network of catch basins and underground storm sewers. For high-intensity storm events that exceed the capacity of the minor system, the major system safely stores and conveys overland runoff through defined surface and underground drainage systems, supplemented by dedicated parking lot storage sags. To analyze the interaction between surface storage and pipe hydraulics during these extreme events, the site's dual-drainage performance was evaluated using a hydrodynamic model.

### Minor System Design Criteria

Peak minor system design flows were calculated using the Rational Method in accordance with the City of Ottawa's Sewer Design Guidelines:

$$Q = 2.78 C I A$$

Where:

- **Q** = Peak runoff rate (L/s)
- **C** = Runoff coefficient, defined by  $C = 0.70 (\%Imp.) + 0.20$
- **I** = Rainfall intensity (mm/hr), derived from City of Ottawa 2-year IDF parameters:
  - $I_{2yr} = 732.951 / (T_c(\text{min}) + 6.199)^{0.8140}$
- **A** = Tributary catchment area (ha)

The storm sewer design adheres to specific pipe and flow constraints to ensure proper hydraulic performance across the site. A minimum sewer pipe diameter of 250-mm is maintained, with full-flow velocities designed within the required range of 0.8 m/s to 3.0 m/s. The internal storm sewer network is sized to convey the 2-year storm event under free-flow conditions. A runoff coefficient of 0.9 has been applied to the majority of the site for storm sewer pipe sizing. For HGL modeling, a runoff coefficient of 1.0 has been applied across the entire site for all design storm events from the 2-year to the 100-year storm, representing a conservative approach.

### 5.2.3 Major System (Overland Flow)

Runoff from storm events exceeding the 2-year design event is captured and stored within the minor system, utilizing the integrated underground storage network and, to a lesser extent, surface ponding areas to attenuate peak discharges. Hydraulic modeling confirms that the major system effectively controls overland runoff under extreme conditions, with the maximum surface ponding depth remaining under 0.30 m across the site during the critical 100-year plus 20% stress test scenario. Furthermore, the stormwater management design fully satisfies the building lease criteria, achieving a drawdown time of less than 30 minutes during the 25-year storm event to ensure rapid surface clearance across all active parking and driving areas.

### Major System (Overland Flow) Criteria

In accordance with the City of Ottawa Sewer Design Guidelines, the major drainage system is designed to provide on-site storage for post-development runoff exceeding allowable target release rates for all

storms up to and including the 100-year event, with zero surface ponding permitted during 2-year storm events. Under 100-year flow conditions, maximum dynamic depths (static ponding plus dynamic flow) are limited to 0.35 m in roadways and parking areas, while ensuring the product of velocity and depth ( $V \times d$ ) does not exceed  $0.60 \text{ m}^2/\text{s}$ . Rooftop storage areas are strictly limited to a maximum ponding depth of 0.15 m.

In addition to municipal guidelines, the design incorporates supplementary performance criteria outlined in the building lease agreements. These site-specific targets for areas adjacent to CRU1 include maintaining no surface ponding up to the 5-year storm event in applicable areas, restricting 25-year event drawdown times to a maximum of 30 minutes, capping 100-year ponding depths at 0.30 m where possible, and prohibiting above-ground storage within recessed loading dock ramps.

The overall performance of the major system was evaluated using a hydraulic model. The analysis confirmed that maximum flow depths remain below 0.30 m across the site, 25-year drawdown times meet the required 30-minute threshold, and floodwaters will not touch building envelopes or lowest openings during the critical stress test scenario (100-year storm event plus 20% rainfall intensity).

### 5.2.4 Stormwater Modelling

The hydrologic and hydraulic evaluation of the post-development minor and major stormwater networks was performed using InfoWorks ICM Ultimate utilizing dynamic wave routing.

#### Software Rationale

InfoWorks ICM Ultimate was selected over PCSWMM to leverage its advanced 1D hydraulic engine, superior numerical stability, and enhanced capabilities in simulating complex subsurface networks. Given the site's storage strategy, InfoWorks ICM Ultimate provides greater precision in modeling dynamic pipe surcharging, head-dependent orifice flows, backwater effects, and exact underground chamber storage utilization without numerical instability or artificial volume loss. In particular, overland flow capture rates at catch basins are more accurately represented using InfoWorks' advanced inlet nodes and custom head-discharge curves.

#### Quantity Control and Storage Optimization

Rather than utilizing individual Inlet Control Devices (ICDs) at each catch basin, the stormwater management strategy relies on a centralized control structure. Post-development outflows are restricted to the target allowable release rates using a single 170-mm diameter orifice located upstream of the outlet Manhole 1. Excess minor system runoff is attenuated upstream within the underground pipe network and an underground Greenstorm storage chamber array.



By utilizing the hydrodynamic capabilities of InfoWorks ICM, the design team was able to refine the required storage volume and substantiate the use of three (3) underground storage chambers. The model confirmed that the 170-mm orifice and optimized three chamber storage array provides sufficient attenuation to maintain peak site discharges below allowable target rates while preventing adverse surface surcharging during design events.

#### Alignment with City of Ottawa Criteria

In accordance with the City of Ottawa Sewer Design Guidelines, the use of advanced hydrodynamic modeling software is permitted for evaluating dual-drainage performance, provided all input parameters adhere to municipal standards. The InfoWorks ICM model was configured using City-approved rainfall distributions (3-hour Chicago Storm Distribution), standard Horton infiltration parameters, and standard depression storage allowances, ensuring full compliance with City criteria and HGL clearance requirements.

### 5.2.5 InfoWorks ICM Model Parameters

#### Design Storms

The model utilizes the following design storms based on the City of Ottawa's IDF data presented in the City of Ottawa Sewer Design Guidelines (2025).

- 2-year, 3-hour, Chicago Storm Distribution
- 5-year, 3-hour, Chicago Storm Distribution
- 25-year, 3-hour, Chicago Storm Distribution
- 100-year, 3-hour, Chicago Storm Distribution

#### Subcatchment Areas / Runoff Coefficients

Post-development subcatchments were delineated based on proposed site grading, surface high and low points, and catchment boundaries tributary to each individual inlet structure and storage node across the site. Runoff coefficients applied in the hydrologic modeling conform strictly to the standard values specified in the City of Ottawa Sewer Design Guidelines.

Under post-development conditions, the site is predominantly impervious, consisting primarily of commercial building roofs, asphalt parking lots, drive aisles, and concrete walkways. Pervious surfaces are limited to select landscaped areas, which are largely situated along the site perimeter within uncontrolled drainage zones discharging overland toward adjacent right-of-ways or the receiving watercourse. Refer to **Appendix D** for detail. Refer to the **Post-Development SWM Drainage Plan SW-SWM**

#### Depression Storage

Standard default values from the City of Ottawa Sewer Design Guidelines were applied to define depression storage across the site:

- Impervious Area Depression Storage: 1.57 mm
- Pervious Area Depression Storage: 4.67 mm

#### Inlet Capture and Quantity Control Structure

Rather than utilizing individual Inlet Control Devices (ICDs) at each catch basin, surface flow capture into the pipe network was modeled using InfoWorks' advanced inlet nodes and head-discharge curves. Primary quantity control for the site is provided by a single 170-mm diameter orifice plate located upstream of the outlet manhole, restricting total site discharge to the previously defined allowable release rates in **Table 7** or less.

#### Surface Storage Curves and Overland Flow Routing

Surface ponding volumes at parking lot sags were calculated directly from the proposed Grading Plans and represented in the model using depth-area storage curves.

#### Downstream Boundary Condition (Minor System)

The designated minor system outlet for the Subject Site is the O'Keefe Municipal Drain, located at the southwest corner of the property. To evaluate system performance, the InfoWorks ICM model was run assuming free-flowing outlet conditions at the outlet.

### 5.2.6 Minor System

Runoff across the site is captured by proposed catch basins and conveyed through the on-site storm sewer network. Rather than utilizing individual Inlet Control Devices (ICDs) at each catch basin, surface inflows to the storm sewer were modeled using InfoWorks ICM's advanced inlet nodes and head-discharge curves based on the physical characteristics and ponding depths at each catch basin low point.

Primary flow control is provided downstream by a single 170-mm diameter orifice located upstream of the outlet Manhole 1, which restricts total minor system outflows to allowable target release rates. Excess runoff is attenuated upstream through a combination of underground pipe storage, three Greenstorm storage chamber array, and managed surface ponding within parking lot sags.

### 5.2.7 Major System

The major system was evaluated using InfoWorks ICM Ultimate to ensure that overland flow depths and velocities comply with City of Ottawa standards and site-specific lease criteria. A complete summary of modeled ponding depths at each inlet node for the 2-year, 5-year, 100-year, and stress test events is provided in **Appendix D**.

Through the hydraulic performance of the downstream 170-mm control orifice, underground pipe storage, and the optimized three Greenstorm storage chamber array, minor system runoff is attenuated effectively. As a result, maximum static and dynamic surface ponding depths across the site remain under 0.30 m for all design events, including the critical 100-year storm and the 100-year plus 20% stress test scenario. Furthermore, all storm events up to and including the 25-year event will be fully contained within the underground stormwater management system, with no surface ponding occurring across the site.

Underground storage within the minor pipe network and Greenstorm storage tanks, along with surface storage at catch basin low points, are represented in the InfoWorks ICM model using storage nodes and custom depth-area relationships. These storage curves define the depth-volume characteristics across the site to calculate precise stage-storage relationships during dynamic rainfall simulations.

The modeling results demonstrate that the proposed underground storage infrastructure provides sufficient capacity to ensure zero surface ponding across the site during frequent events (up to the 2-year storm, and 5-year where applicable per lease criteria). An expanded summary table detailing peak ponding depths at each low point across all design events (including the 100-year plus 20% stress test scenario) is provided in **Appendix D**. Based on these results, the proposed stormwater management system successfully attenuates peak flows for the 2 to 100-year storm events through the 170-mm orifice and GreenStorm chamber array, ensuring that post-development flows are maintained at or below the allowable release rates. Furthermore, the development is not anticipated to experience adverse flooding under the severe 100-year + 20% stress-test event. **Table 8** summarizes the peak flows from the development.

**Table 7: Peak Flow Summary (L/s)**

| Description                        | 2-Year     | 5-Year       | 25-Year    | 100-year     |
|------------------------------------|------------|--------------|------------|--------------|
| Outlet flow to Minor System        | 43         | 48.3         | 66.3       | 70.8         |
| Uncontrolled Areas flow (Rational) | 63         | 85.4         | 118.7      | 146.4        |
| <b>Total Flow from the Site</b>    | <b>106</b> | <b>133.7</b> | <b>185</b> | <b>217.2</b> |
| <b>Allowable</b>                   | <b>106</b> | <b>186</b>   | <b>339</b> | <b>668</b>   |

### 5.2.8 Stormwater Temperature Mitigation

The *CitiGate 416 Corporate Campus Detailed Servicing and Stormwater Management Report* (Novatech, 2015) states that "the O'Keefe Drain has been designated as 'cool-water fish habitat' ... To ensure that the O'Keefe Drain remains a hospitable fish environment, any increase in the water temperature in the drain should be kept to a minimum". As the stormwater outlet for the Subject Site discharges to the O'Keefe Drain, temperature mitigation practices have been incorporated into the site design.

Surface ponding on asphalt parking lots is susceptible to solar radiation and temperature increases. The proposed stormwater management strategy minimizes thermal gains by utilizing sub-surface attenuation within the Greenstorm underground storage tanks and pipe network prior to discharging through the 170-mm control orifice.

Thermal impacts to the receiving watercourse will be mitigated through the following design measures:

- **Underground Capture:** Runoff from frequent and small storm events (up to 25-year event where applicable) is captured and attenuated underground within the storm sewer network and Greenstorm storage tanks, eliminating surface ponding during small and high frequent events.
- **No Open Water Facilities:** No surface wet ponds, retention basins, or open water features are proposed for the development.
- **Rapid Surface Drawdown:** During larger storm events, surface ponding within parking lot sags is rapidly evacuated, maintaining no ponding during 25-year storm events.
- **Light/White Roofs:** CRU buildings proposed for rooftop detention storage will utilize light coloured or white roof technologies to minimize the effects of thermal absorption while the roof storage volume draws down.

## 5.3 Water Quality

The water quality treatment for the site is addressed by an existing OGS unit Stormceptor 9000 that has been provided just upstream of the site's storm outlet to the O'Keefe Drain on the southwest of the site. The OGS unit has been selected to provide 80% TSS removal for the contributing area of the site (Block 3) in Section 8.5.1 of the Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1). Please refer to the **Site Servicing Plan SW-S** and to **Appendix D** for an excerpt of the supplier model selection calculation.

## 6.0 Erosion and Sediment Control

During construction, erosion and sediment control will be implemented on site. This will be achieved through methods such as installation of a silt fence around the perimeter of the site, placement of mud mats at site access points to municipal roadways and the use of sediment control barriers at catch basins located in proximity to the site. All controls must be inspected regularly as per pre-determined schedule and any damage detected must be repaired promptly.

The erosion and sediment control measures proposed during construction will be designed, constructed, and maintained on-site in accordance with the City of Ottawa requirements including the Site Alteration By-Law and applicable guidelines. Further site-specific erosion and sediment control measures may be considered and adapted during construction.

## 7.0 Conclusions

This Report demonstrates that the proposed development can be serviced through the utilization of both existing and new infrastructure meeting without any adverse impact to the municipal services of the surrounding areas and meeting all the requirements stated in the approved Citi Gate 416 Corporate Campus Detailed Servicing and Storm Management Report (Phase 1), prepared by Novatech, for the design of the Citi Gate 416 Corporate Campus subdivision.

We trust this report sufficiently addresses the site servicing requirements and allows for the approval of the proposed re-zoning and draft plan of subdivision application for the subject site. Should there be any questions or comments, please feel free to contact the undersigned.

Sincerely,

**Dillon Consulting Inc.**



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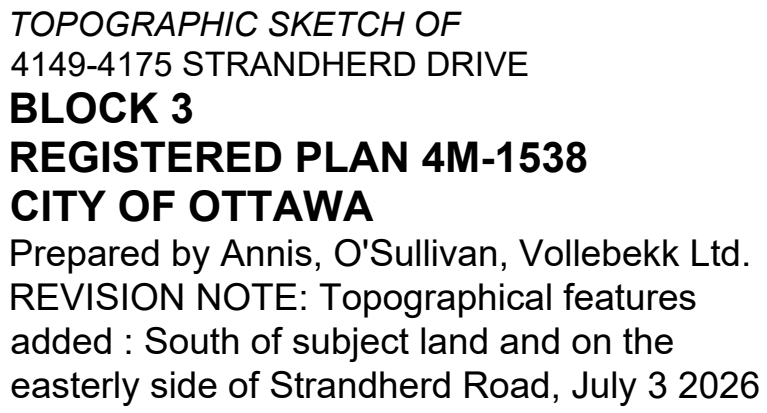
# Appendix A

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## Background

- Site Plan, Prepared by Hobin Architecture
- Topographic Survey, Block 3, registered Plan 4M-1538, City of Ottawa, by Annis, O'Sullivan, Vollebakk LTD, July 3, 2026.
- General Services Plans, Citi Gate 416 Corporate Campus, Novatech.





Scale 1 : 500



**Metric**

|                                                                                               |
|-----------------------------------------------------------------------------------------------|
| DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048 |
|-----------------------------------------------------------------------------------------------|

## Notes & Legend

| Symbol                                                                                | Denotes | Feature                                          |
|---------------------------------------------------------------------------------------|---------|--------------------------------------------------|
|    |         | Fire Hydrant                                     |
|    |         | Water Valve                                      |
|    |         | Maintenance Hole (Storm Sewer)                   |
|    |         | Maintenance Hole (Sanitary)                      |
|    |         | Maintenance Hole (Traffic)                       |
|    |         | Maintenance Hole (Watermain)                     |
|    |         | Valve Chamber (Watermain)                        |
|    |         | Catch Basin Inlet                                |
|    |         | Catch Basin                                      |
|    |         | Borehole                                         |
|    |         | Handhole                                         |
|    |         | Traffic Signal Post                              |
|    |         | Sign                                             |
|    |         | Utility Pole                                     |
|    |         | Anchor                                           |
|    |         | Metal Pole                                       |
|    |         | Light Standard                                   |
|    |         | Location of Elevations                           |
|    |         | Top of Concrete Curb / Wall Elevation            |
|    |         | Wooden Stake Set for Proposed Borehole Locations |
|    |         | Existing Ground elevation Noted                  |
|    |         | Stone Retaining Wall                             |
|    |         | Deciduous Tree                                   |
|    |         | Coniferous Tree                                  |
|    |         | Diameter                                         |
|    |         | Traffic Signal Light                             |
|    |         | Top of Slope                                     |
|   |         | Bottom of Slope                                  |
|  |         | Water Valve                                      |
|  |         | Bollard                                          |

All Trees Are Less Than 0.1 Ø Unless Otherwise Noted  
 SITE AREA = 5.2733 Ha.

### Caution

This is NOT a Plan of Survey and shall not be used except for the purpose indicated in the title block.

Boundary information compiled from plan of survey by (AOV) dated June 22, 2023.

Plan revised June 28, 2023 to show wooden stakes set for 8 additional proposed borehole locations (BH-31 to BH-38).

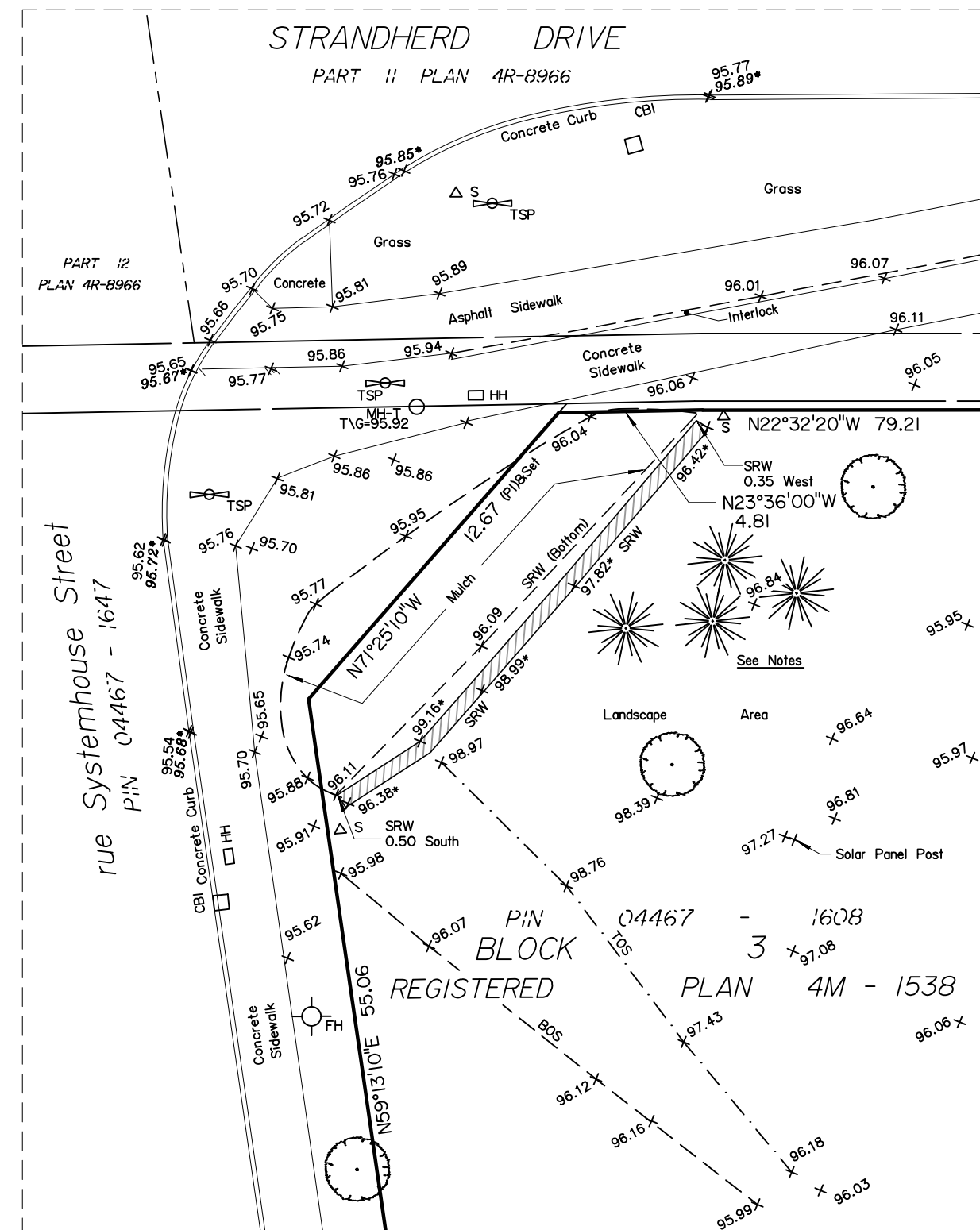
Plan Amended on October 9, 2025 to Add Trees and Topographical Features at Northeast Corner.

## ELEVATION NOTES

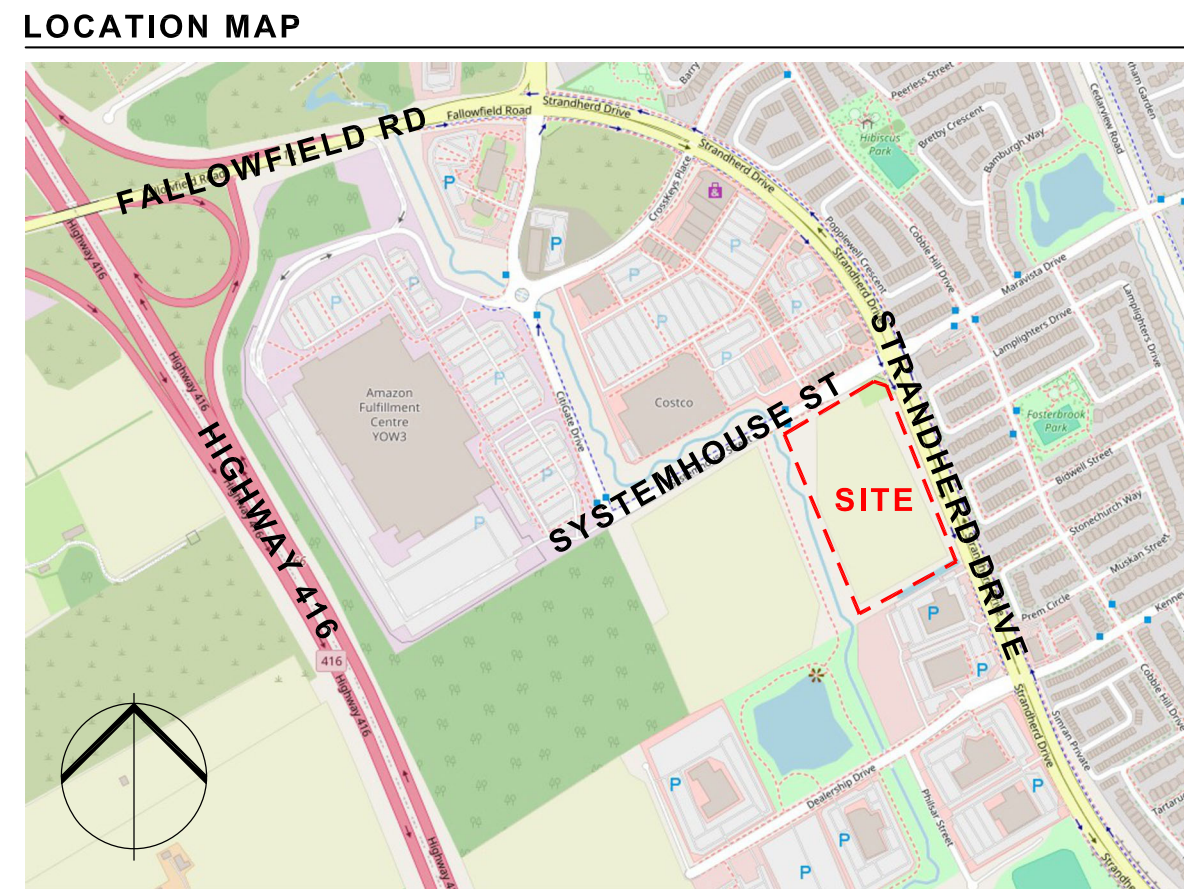
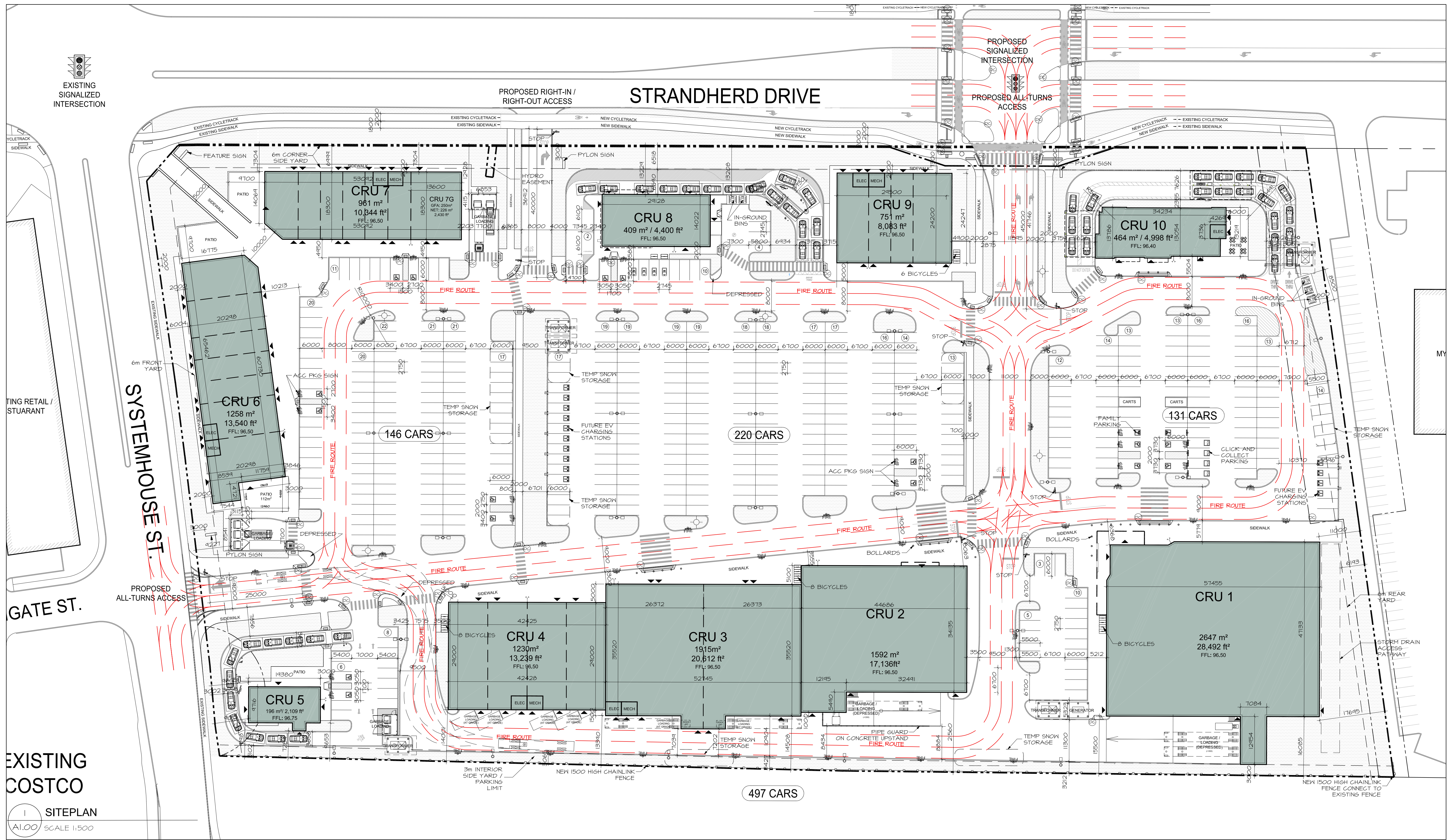
1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum and are related to Ministry of Transportation Ontario Monument number 00820118015 having an elevation of 110.418.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

### UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.







| SURVEY INFORMATION                                                                                                                                   |                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| LEGAL DESCRIPTION:<br>Blocks 3 and Part of Block 27<br>registered Plan 4M-1538<br>City of Ottawa                                                     |                                                  |
| PREPARED BY Annis, O'Sullivan, Vollebek Ltd<br>FIELD WORK COMPLETED ON February 5, 2015                                                              |                                                  |
| NOTE:<br>NOTE: REFER TO LANDSCAPE PLAN FOR EXTERIOR FINISHES, PLANTING & SITE FURNITURE. REFER TO SITE SERVICING AND GRADING PLAN FOR RELEVANT INFO. |                                                  |
| PROJECT INFORMATION                                                                                                                                  |                                                  |
| CITY OF OTTAWA                                                                                                                                       |                                                  |
| OFFICIAL PLAN:                                                                                                                                       | SUBURBAN TRANSECT, MIXED INDUSTRIAL, ARTERIAL RD |
| ZONING:                                                                                                                                              | IP(3033) H(18) INDUSTRIAL PARK                   |
| ADDRESS:                                                                                                                                             | 4175 STRANDHERD DRIVE, OTTAWA                    |
| SITE AREA:                                                                                                                                           | 52,733 M <sup>2</sup>                            |

| ZONING INFORMATION                |                                                 |                                                |
|-----------------------------------|-------------------------------------------------|------------------------------------------------|
| ZONING                            | REQUIRED                                        | PROVIDED                                       |
| PERMITTED USES:                   | Retail,<br>Retail Food Store<br>Restaurant, Etc | Retail<br>Retail Food Store<br>Restaurant, Etc |
| MINIMUM LOT WIDTH                 | No Minimum                                      | 00.0m                                          |
| MINIMUM LOT AREA                  | 750m <sup>2</sup>                               | 52,733 m <sup>2</sup>                          |
| MIN FRONT YARD (SYSTEM HOUSE)     | 6.0m                                            | 6.0m                                           |
| MIN CORNER SIDE YARD (STRANDHERD) | 6.0m                                            | 7.0m                                           |
| MIN INTERIOR SIDE YARD (WEST)     | 3.0m                                            | 3.0m                                           |
| MIN REAR YARD (SOUTH)             | 6.0m                                            | 11.0m                                          |
| LOT COVERAGE                      | 55% (max)                                       | 22%                                            |
| FLOOR SPACE INDEX (FSI)           | FSI 2 (max)                                     | FSI 0.22                                       |
| MAXIMUM HEIGHT                    | 18.0m                                           | 9.6m                                           |
| PARKING REQUIRED:                 | 3.6 / 100m2<br>410                              | 497                                            |
| BICYCLE PARKING:                  | 1/500m2<br>23 SPACES                            | 30 SPACES                                      |

| BUILDING AREA: | USE                        | GFA                     |
|----------------|----------------------------|-------------------------|
| CRU 1          | GROCERY                    | 2647.0 m <sup>2</sup>   |
| CRU 2          | DRUGSTORE                  | 1592.0 m <sup>2</sup>   |
| CRU 3          | RETAIL / ATHLETIC FACILITY | 1915.0 m <sup>2</sup>   |
| CRU 4          | RETAIL                     | 1230.0 m <sup>2</sup>   |
| CRU 5          | DRIVE-THROUGH              | 196.0 m <sup>2</sup>    |
| CRU 6          | RETAIL / RESTAURANT        | 1258.0 m <sup>2</sup>   |
| CRU 7          | RETAIL / RESTAURANT        | 961.0 m <sup>2</sup>    |
| CRU 8          | DRIVE-THROUGH              | 409.0 m <sup>2</sup>    |
| CRU 9          | RETAIL / RESTAURANT        | 751.0 m <sup>2</sup>    |
| CRU 10         | DRIVE-THROUGH              | 464.0 m <sup>2</sup>    |
| PROJECT TOTAL: |                            | 11,423.0 m <sup>2</sup> |

| DRAWING LEGEND |                               |
|----------------|-------------------------------|
|                | PROPERTY LINE                 |
|                | ACCESSIBLE PARKING            |
|                | EV CHARGING                   |
|                | FAMILY PARKING                |
|                | DEPRESSED CURB                |
|                | ENTRANCE                      |
|                | FIRE HYDRANT                  |
|                | UTILITY POLE                  |
|                | EXISTING SIGN                 |
|                | LIGHT STANDARD                |
|                | WATER VALVE                   |
|                | MAN HOLE                      |
|                | CATCH BASIN/CATCH BASIN INLET |
|                | CHAIN LINK FENCE WITH GATE    |
|                | SIAMESE CONNECTION            |
|                | PHASING LINE                  |
|                | FIRE ROUTE SIGN               |
|                | BARRIER FREE PARKING SIGN     |
|                | BICYCLE PARKING               |

SCALE BAR - 1 : 500

11 0 20 40 60 80 100 120 140 160 180 200 220

m 0 10 20 30 40 50 60 70

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July 29, 2026 - Siteplan Coord

|     |               |                                 |
|-----|---------------|---------------------------------|
| 8   | FEB 06, 2026  | REVISED CRU 4, 5, 8, 9          |
| 7   | FEB 02, 2026  | ISSUED FOR SITEPLAN APPLICATION |
| 6   | DEC 19, 2025  | ISSUED FOR COORDINATION         |
| 5   | DEC 15, 2025  | ISSUED FOR CLIENT REVIEW        |
| 4   | DEC 2, 2025   | ISSUED FOR CLIENT REVIEW        |
| 3   | NOV 26, 2025  | ISSUED FOR CLIENT REVIEW        |
| 2   | NOV 13, 2025  | ISSUED FOR CLIENT REVIEW        |
| 1   | SEPT 26, 2025 | ISSUED FOR COORDINATION         |
| no. | date          | revision                        |

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

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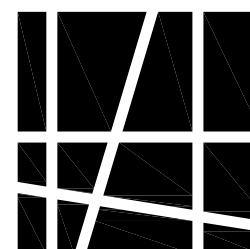
STAMP

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Canada K1S 3K7

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HOBIN  
ARCHITECTURE

PROJECT/LOCATION:  
CHOICE REIT  
4175 STRANDHERD RETAIL  
4175 STRANDHERD DRIVE, OTTAWA

DRAWING TITLE:

SITE PLAN

DRAWN BY: DATE: SCALE: 1:500

OV SEPT 2025

PROJECT: 2511

DRAWING NO.:

A1.00

REVISION NO.:



- LEGEND:**
- PROPOSED BARRIER CURB
  - PROPOSED MULTI-USE ASPHALT PATHWAY
  - PROPOSED CONCRETE SIDEWALK
  - PHASE LINE
  - PROPOSED WATERMAIN AND DIAMETER
  - PROPOSED VALVE & VALVE BOX LOCATION
  - HYD
  - PROPOSED HYDRANT & LEAD
  - PROPOSED TOP OF FLANGE
  - PROPOSED BEND AND THRUSTBLOCK
  - PROPOSED WATERMAIN CROSS
  - PROPOSED WATERMAIN TEE
  - PROPOSED SANITARY MH & SEWER WITH DIRECTION OF FLOW
  - PROPOSED STORM MH & SEWER WITH DIRECTION OF FLOW
  - PROPOSED CATCH BASIN LEAD
  - PROPOSED CURB INLET CATCH BASIN
  - PROPOSED CONCRETE BOX CULVERT
  - PROPOSED CONCRETE BOX MH
  - PROPOSED SANITARY/STORMWATERMAIN CAP
  - PROPOSED VORTECHNICS MH
  - PROPOSED CONCRETE HEADWALL
  - PROPOSED DITCH INLET CATCH BASIN
  - PROPOSED STREETLIGHT
  - TP-P100
  - TP-P1
  - BH-J1
  - TP-J1
  - 138.28
  - BR-96.30
  - I-BR-95.02
  - I-BRBLD-98.28

REFER TO DRAWING 109203-CG-NB FOR NOTES AND TABLES



NOTE:  
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.



|    |                                                |            |     |
|----|------------------------------------------------|------------|-----|
| 8. | RE-ISSUED FOR CONSTRUCTION                     | SEPT 26/14 | MER |
| 7. | ISSUED FOR CONSTRUCTION                        | SEPT 03/14 | MER |
| 6. | ISSUED FOR SWM APPROVAL                        | AUG 10/14  | MER |
| 5. | ISSUED FOR MOE PIPE APPROVALS                  | JUL 23/14  | MER |
| 4. | RE - ISSUED FOR TENDER                         | JUL 18/14  | MER |
| 3. | ISSUED FOR TENDER - PHASE 1                    | JUN 27/14  | MER |
| 2. | REV. PER CITY COMMENTS / ISS. FOR MOE APPROVAL | JUN 27/14  | MER |
| 1. | ISSUED FOR CITY REVIEW                         | MAR 31/14  | MER |
| No | REVISION                                       | DATE       | BY  |

SCALE

1:1000

1:1000

0 10 20 30 40

DESIGN

CH

CHECKED

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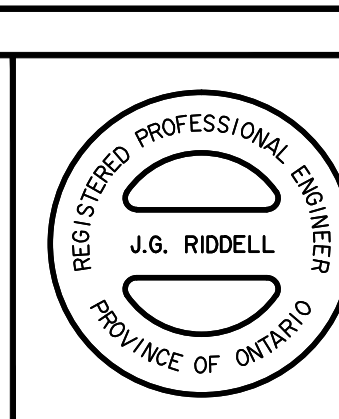
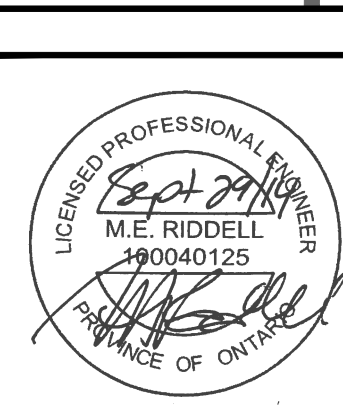
CH/BET

CHECKED

MER

APPROVED

JGR



LOCATION  
CITY OF OTTAWA  
CITI GATE 416 CORPORATE CAMPUS

DRAWING NAME

GENERAL PLAN OF SERVICES

|             |               |
|-------------|---------------|
| PROJECT No. | 109203-00     |
| REV         | REV # 7       |
| DRAWING No. | 109203-CG-GP1 |





NOTE:  
THE POSITION OF ALL POLE LINES, CONDUITS,  
WATERMAINS, SEWERS AND OTHER  
UNDERGROUND AND OVERGROUND UTILITIES AND  
STRUCTURES IS NOT NECESSARILY SHOWN ON  
THE CONTRACT DRAWINGS, AND WHERE SHOWN,  
THE ACCURACY OF THE POSITION OF SUCH  
UTILITIES AND STRUCTURES IS NOT GUARANTEED.  
BEFORE STARTING WORK, DETERMINE THE EXACT  
LOCATION OF ALL SUCH UTILITIES AND  
STRUCTURES AND ASSUME ALL LIABILITY FOR  
DAMAGE TO THEM.

|     |                                                |            |     |
|-----|------------------------------------------------|------------|-----|
| 8.  | RE-ISSUED FOR CONSTRUCTION                     | SEPT 26/14 | MER |
| 7.  | ISSUED FOR CONSTRUCTION                        | SEPT 03/14 | MER |
| 6.  | ISSUED FOR SWM APPROVAL                        | AUG 10/14  | MER |
| 5.  | ISSUED FOR MOE PIPE APPROVALS                  | JUL 23/14  | MER |
| 4.  | RE - ISSUED FOR TENDER                         | JUL 18/14  | MER |
| 3.  | ISSUED FOR TENDER - PHASE 1                    | JUN 27/14  | MER |
| 2.  | REV. PER CITY COMMENTS / ISS. FOR MOE APPROVAL | JUN 27/14  | MER |
| 1.  | ISSUED FOR CITY REVIEW                         | MAR 31/14  | MER |
| No. | REVISION                                       | DATE       | BY  |

|               |  |
|---------------|--|
| SCALE         |  |
| 1:1000        |  |
| 0 10 20 30 40 |  |

|          |        |
|----------|--------|
| DESIGN   | CH     |
| CHECKED  | MER    |
| DRAWN    | CH/BET |
| CHECKED  | MER    |
| APPROVED | JGR    |

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Website www.novatech-eng.com

LOCATION  
CITY OF OTTAWA  
CITI GATE 416 CORPORATE CAMPUS

DRAWING NAME  
GENERAL PLAN OF SERVICES

PROJECT No.  
109203-00

REV  
REV # 8

DRAWING No.  
109203-CG-GP2



# Appendix B

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## Water Servicing

- Domestic Water Demand
- Fire Demand – Fire Underwriters Survey
- EPANET Model Schematic and Results

## Water Demand Summary Sheet

**Project:** 4175 Stranherd Drive  
**Project No:** 263560  
**Location:** Ottawa

### Water Demmand

| Building          | Building Area*<br>(m <sup>2</sup> ) | Average Daily<br>Demand (L/s) | Maximum Day<br>Demand<br>(L/s) | Maximum<br>Hour Demand<br>(L/s) | Fire Flow<br>(L/s) | Max Day Flow<br>+ Fire Flow<br>(L/s) | Max Day Flow<br>+ Fire Flow<br>(L/min) | Max Day Flow<br>+ Fire Flow<br>(GPM) |
|-------------------|-------------------------------------|-------------------------------|--------------------------------|---------------------------------|--------------------|--------------------------------------|----------------------------------------|--------------------------------------|
| CRU 1             | 2,647                               | 0.15                          | 0.23                           | 0.41                            | 75.70              | 75.93                                | 4,555.8                                | 1,203.6                              |
| CRU 2             | 1,592                               | 0.09                          | 0.14                           | 0.25                            | 66.67              | 66.80                                | 4,008.3                                | 1,059.0                              |
| CRU 3             | 1,915                               | 0.11                          | 0.17                           | 0.30                            | 66.67              | 66.83                                | 4,010.0                                | 1,059.4                              |
| CRU 4             | 1,230                               | 0.07                          | 0.11                           | 0.19                            | 50.00              | 50.11                                | 3,006.4                                | 794.3                                |
| CRU 5             | 196                                 | 0.01                          | 0.02                           | 0.03                            | 33.33              | 33.35                                | 2,001.0                                | 528.7                                |
| CRU 6             | 1,258                               | 0.07                          | 0.11                           | 0.20                            | 50.00              | 50.11                                | 3,006.6                                | 794.3                                |
| CRU 7             | 961                                 | 0.06                          | 0.08                           | 0.15                            | 50.00              | 50.08                                | 3,005.0                                | 793.9                                |
| CRU 8             | 409                                 | 0.02                          | 0.04                           | 0.06                            | 33.33              | 33.37                                | 2,002.1                                | 529.0                                |
| CRU 9             | 751                                 | 0.04                          | 0.07                           | 0.12                            | 50.00              | 50.07                                | 3,003.9                                | 793.6                                |
| CRU 10            | 464                                 | 0.03                          | 0.04                           | 0.07                            | 33.33              | 33.37                                | 2,002.4                                | 529.0                                |
| <b>TOTAL SITE</b> | <b>11,423</b>                       | <b>0.66</b>                   | <b>0.99</b>                    | <b>1.78</b>                     | <b>75.70</b>       | <b>76.69</b>                         | <b>4,601.5</b>                         | <b>1,215.7</b>                       |

\*Statistics provided by Architect

\*\*Site fire flows corresponds to Building with highest fire flow demand. Site domestic flows are the sum of the domestic demands of all buildings.

## Water Demand Calculations

## CRU 1

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

## City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 4,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

|                                               |                        |           |                   |
|-----------------------------------------------|------------------------|-----------|-------------------|
| Residential Population                        | 0 Ppl                  |           |                   |
| <b>Domestic Demand:</b>                       | 0 L / day              |           |                   |
| , or                                          | <b>0 L/min</b>         |           | <b>0.0 L/s</b>    |
| Maximum Day Water Demand - Domestic:          | 0 L / day              |           |                   |
| <b>Total Max Day Demand:</b>                  | 0 L / day              |           |                   |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>    |
| Maximum Hour Water Demand - Domestic:         | 0 L / day              |           |                   |
| <b>Total Maximum Hour Water Demand:</b>       | 0 L / day              |           |                   |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>    |
| Retail Area                                   | 2,647.0 m <sup>2</sup> |           |                   |
| <b>Commercial &amp; Institutional Demand:</b> |                        |           |                   |
| Average Daily Demand                          | 13,235 L / day         | or        | 9.2 L/min         |
| <b>Max Day Demand (1.5 x Avg Day Demand)</b>  | <b>19,853 L / day</b>  | <b>or</b> | <b>13.8 L/min</b> |
| Max Hour Demand (1.8 x Max Day Demand)        | 35,735 L / day         | or        | 24.8 L/min        |
| <b>Maximum Day + Fire Flow:</b>               | <b>4,542.0 L / min</b> |           | <b>75.7 L/s</b>   |
|                                               | or                     |           |                   |
|                                               | <b>1,200 USGPM</b>     |           |                   |



**Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 1**

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: August 11, 2026

**A) Determine the Construction Coefficient (C). Refer to pages 20, 21.**

Construction Type, see pages 20 and 21 for definitions: **Type II Noncombustible Construction**  
Construction Coefficient (C): **0.8**

**B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.**

Based on the Construction Type and associated Construction Coefficient:

Are any vertical openings unprotected? **Yes**  
Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.  
Total Effective Floor Area (A): **2,647 m<sup>2</sup>**

**C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.**  $RFF = 220C\sqrt{A}$  **9,000 L/min**

**D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.**

Contents, see Page 24 for definitions and Pages 25-26 for examples: **Limited Combustible**  
Adjustment Factor: **-15%**  
Adjusted Required Fire Flow: **7,650 L/min**

**E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.**

*Automatic Sprinkler System Design*  
Installed and Designed to NFPA 13 Standard? **Yes** [30% Reduction]  
Water Supply standard for both system and fire department hose lines? **Yes** [10% Reduction]  
Fully supervised system? **Yes** [10% Reduction]  
Does the sprinkler system have complete building coverage? **Yes**

Reduction for Automatic Sprinkler Protection: **50%**  
**3,825 L/min**

**F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.**

| Building Face                 | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Bldg Type | Reduction Notes  |   | Charge    |
|-------------------------------|--------------------------|-------------------------------|----------------|-----------|------------------|---|-----------|
| North                         | Greater than 30m         |                               | 0-20           | Type V    | None applicable. | = | 0%        |
| East                          | Greater than 30m         |                               | 0-20           | Type V    | None applicable. | = | 0%        |
| South                         | Greater than 30m         |                               | 0-20           | Type V    | None applicable. | = | 0%        |
| West                          | Greater than 30m         |                               | 0-20           | Type V    | None applicable. | = | 0%        |
| <b>Total Exposure Charge:</b> |                          |                               |                |           |                  |   | <b>0%</b> |

Increase for Exposure Adjustment Charge: **0 L/min**

**G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.**

F = **4,000 L/min**  
F = **1,057 GPM**  
F = **66.7 L/s**  
Client Requirement (Govern)  
F = **4,542 L/min**  
F = **1,200 GPM**  
F = **75.7 L/s**

The larger of FUS calculations or client requirements governs.



## Water Demand Calculations

## CRU 2

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

### City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

#### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

#### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

#### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 4,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

Residential Population 0 Ppl  
**Domestic Demand:** 0 L / day  
 , or 0 L/min 0.0 L/s

Maximum Day Water Demand - Domestic: 0 L / day  
**Total Max Day Demand:** 0 L / day  
 , or 0 L / min 0.0 L/s

Maximum Hour Water Demand - Domestic: 0 L / day  
**Total Maximum Hour Water Demand:** 0 L / day  
 , or 0 L / min 0.0 L/s

Retail Area 1,592.0 m<sup>2</sup> - See Sanitary Flow Calculations  
**Commercial & Institutional Demand:**  
 Average Daily Demand 7,960 L / day or 5.5 L/min  
**Max Day Demand (1.5 x Avg Day Demand)** 11,940 L / day or 8.3 L/min  
 Max Hour Demand (1.8 x Max Day Demand) 21,492 L / day or 14.9 L/min

**Maximum Day + Fire Flow:** 4,008.3 L / min 66.8 L/s

or  
 1,059 USGPM

Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 2

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: August 11, 2026

A) Determine the Construction Coefficient (C). Refer to pages 20, 21.

Construction Type, see pages 20 and 21 for definitions: Type II Noncombustible Construction  
Construction Coefficient (C): 0.8

B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.

Based on the Construction Type and associated Construction Coefficient:  
Are any vertical openings unprotected? Yes  
Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.  
Total Effective Floor Area (A): 1,592 m<sup>2</sup>

C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.  $RFF = 220C\sqrt{A}$  7,000 L/min

D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.

Contents, see Page 24 for definitions and Pages 25-26 for examples: Combustible  
Adjustment Factor: 0%  
Adjusted Required Fire Flow: 7,000 L/min

E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.

*Automatic Sprinkler System Design*  
Installed and Designed to NFPA 13 Standard? Yes [30% Reduction]  
Water Supply standard for both system and fire department hose lines? Yes [10% Reduction]  
Fully supervised system? Yes [10% Reduction]  
Does the sprinkler system have complete building coverage? Yes

Reduction for Automatic Sprinkler Protection: 50%  
3,500 L/min

F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.

| Building Face          | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Bldg Type     | Reduction Notes                       |   | Charge |
|------------------------|--------------------------|-------------------------------|----------------|---------------|---------------------------------------|---|--------|
| North                  | 0-3m                     | 73                            | 61-80          | Type I-II (2) | Site bldg. and exposed bldg. fully pr | = | 0%     |
| East                   | Greater than 30m         |                               | 0-20           | Type I-II (2) | None applicable.                      | = | 0%     |
| South                  | Greater than 30m         |                               | 0-20           | Type I-II (2) | None applicable.                      | = | 0%     |
| West                   | Greater than 30m         |                               | 0-20           | Type I-II (2) | None applicable.                      | = | 0%     |
| Total Exposure Charge: |                          |                               |                |               |                                       |   | 0%     |

Increase for Exposure Adjustment Charge: 0 L/min

G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.

F = 4,000 L/min  
F = 1,057 GPM  
F = 66.7 L/s

## Water Demand Calculations

CRU 3

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

## City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 4,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

Residential Population 0 Ppl  
**Domestic Demand:** 0 L / day  
 , or 0 L/min 0.0 L/s

Maximum Day Water Demand - Domestic: 0 L / day  
**Total Max Day Demand:** 0 L / day  
 , or 0 L / min 0.0 L/s

Maximum Hour Water Demand - Domestic: 0 L / day  
**Total Maximum Hour Water Demand:** 0 L / day  
 , or 0 L / min 0.0 L/s

Retail Area 1,915.0 m<sup>2</sup> - See Sanitary Flow Calculations  
**Commercial & Institutional Demand:**  
 Average Daily Demand 9,575 L / day or 6.6 L/min  
**Max Day Demand (1.5 x Avg Day Demand)** 14,363 L / day or 10.0 L/min  
 Max Hour Demand (1.8 x Max Day Demand) 25,853 L / day or 18.0 L/min

**Maximum Day + Fire Flow:** 4,010.0 L / min 66.8 L/s

or  
 1,059 USGPM



# Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 3

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: August 11, 2026

## A) Determine the Construction Coefficient (C). Refer to pages 20, 21.

Construction Type, see pages 20 and 21 for definitions: **Type II Noncombustible Construction**  
Construction Coefficient (C): **0.8**

## B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.

Based on the Construction Type and associated Construction Coefficient:  
Are any vertical openings unprotected? **Yes**  
**Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.**  
Total Effective Floor Area (A): **1,915 m<sup>2</sup>**

## C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM. $RFF = 220C\sqrt{A}$ **8,000 L/min**

## D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.

Contents, see Page 24 for definitions and Pages 25-26 for examples: **Combustible**  
Adjustment Factor: **0%**  
Adjusted Required Fire Flow: **8,000 L/min**

## E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.

**Automatic Sprinkler System Design**  
Installed and Designed to NFPA 13 Standard? **Yes** [30% Reduction]  
Water Supply standard for both system and fire department hose lines? **Yes** [10% Reduction]  
Fully supervised system? **Yes** [10% Reduction]  
Does the sprinkler system have complete building coverage? **Yes**  
Reduction for Automatic Sprinkler Protection: **50%**  
**4,000 L/min**

## F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.

| Building Face                 | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Bldg Type     | Reduction Notes                       |   | Charge    |
|-------------------------------|--------------------------|-------------------------------|----------------|---------------|---------------------------------------|---|-----------|
| North                         | 0-3m                     | 73                            | 61-80          | Type I-II (2) | Site bldg. and exposed bldg. fully pr | = | 0%        |
| East                          | Greater than 30m         |                               | 0-20           | Type I-II (2) | None applicable.                      | = | 0%        |
| South                         | 0-3m                     | 58                            | 41-60          | Type I-II (2) | Site bldg. and exposed bldg. fully pr | = | 0%        |
| West                          | Greater than 30m         |                               | 0-20           | Type I-II (2) | None applicable.                      | = | 0%        |
| <b>Total Exposure Charge:</b> |                          |                               |                |               |                                       |   | <b>0%</b> |

Increase for Exposure Adjustment Charge: **0 L/min**

## G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.

F = **4,000 L/min**  
F = **1,057 GPM**  
F = **66.7 L/s**



## Water Demand Calculations

CRU 4

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

## City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 3,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

|                                               |                        |           |                                  |
|-----------------------------------------------|------------------------|-----------|----------------------------------|
| Residential Population                        | 0 Ppl                  |           |                                  |
| <b>Domestic Demand:</b>                       | 0 L / day              |           |                                  |
| , or                                          | <b>0 L/min</b>         |           | <b>0.0 L/s</b>                   |
| Maximum Day Water Demand - Domestic:          | 0 L / day              |           |                                  |
| <b>Total Max Day Demand:</b>                  | 0 L / day              |           |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>                   |
| Maximum Hour Water Demand - Domestic:         | 0 L / day              |           |                                  |
| <b>Total Maximum Hour Water Demand:</b>       | 0 L / day              |           |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>                   |
| Retail Area                                   | 1,230.0 m <sup>2</sup> |           | - See Sanitary Flow Calculations |
| <b>Commercial &amp; Institutional Demand:</b> |                        |           |                                  |
| Average Daily Demand                          | 6,150 L / day          | or        | 4.3 L/min                        |
| <b>Max Day Demand (1.5 x Avg Day Demand)</b>  | <b>9,225 L / day</b>   | <b>or</b> | <b>6.4 L/min</b>                 |
| Max Hour Demand (1.8 x Max Day Demand)        | 16,605 L / day         | or        | 11.5 L/min                       |
| <b>Maximum Day + Fire Flow:</b>               | <b>3,006.4 L / min</b> |           | <b>50.1 L/s</b>                  |
|                                               | or                     |           |                                  |
|                                               | <b>794 USGPM</b>       |           |                                  |



**Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 4**

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: August 11, 2026

**A) Determine the Construction Coefficient (C). Refer to pages 20, 21.**

Construction Type, see pages 20 and 21 for definitions: **Type II Noncombustible Construction**  
Construction Coefficient (C): **0.8**

**B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.**

Based on the Construction Type and associated Construction Coefficient:

Are any vertical openings unprotected? **Yes**  
*Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.*  
Total Effective Floor Area (A): **1,230 m<sup>2</sup>**

**C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.**  $RFF = 220C\sqrt{A}$  **6,000 L/min**

**D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.**

Contents, see Page 24 for definitions and Pages 25-26 for examples: **Combustible**  
Adjustment Factor: **0%**

Adjusted Required Fire Flow: **6,000 L/min**

**E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.**

*Automatic Sprinkler System Design*  
Installed and Designed to NFPA 13 Standard? **Yes** [30% Reduction]  
Water Supply standard for both system and fire department hose lines? **Yes** [10% Reduction]  
Fully supervised system? **Yes** [10% Reduction]

Does the sprinkler system have complete building coverage? **Yes**

Reduction for Automatic Sprinkler Protection: **50%**  
**3,000 L/min**

**F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.**

| Building Face                 | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Bldg Type     | Reduction Notes                       |   | Charge    |
|-------------------------------|--------------------------|-------------------------------|----------------|---------------|---------------------------------------|---|-----------|
| North                         | Greater than 30m         |                               | 0-20           | Type I-II (2) | None applicable.                      | = | 0%        |
| East                          | Greater than 30m         |                               | 0-20           | Type I-II (2) | None applicable.                      | = | 0%        |
| South                         | 0-3m                     | 58                            | 41-60          | Type I-II (2) | Site bldg. and exposed bldg. fully pr | = | 0%        |
| West                          | Greater than 30m         |                               | 0-20           | Type I-II (2) | None applicable.                      | = | 0%        |
| <b>Total Exposure Charge:</b> |                          |                               |                |               |                                       |   | <b>0%</b> |

Increase for Exposure Adjustment Charge: **0 L/min**

**G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.**

F = **3,000 L/min**  
F = **793 GPM**  
F = **50.0 L/s**

## Water Demand Calculations

CRU 5

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

### City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

#### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

#### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

#### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 2,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

|                                               |                        |           |                                  |
|-----------------------------------------------|------------------------|-----------|----------------------------------|
| Residential Population                        | 0 Ppl                  |           |                                  |
| <b>Domestic Demand:</b>                       | 0 L / day              |           |                                  |
| , or                                          | <b>0 L/min</b>         |           | <b>0.0 L/s</b>                   |
| Maximum Day Water Demand - Domestic:          | 0 L / day              |           |                                  |
| <b>Total Max Day Demand:</b>                  | 0 L / day              |           |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>                   |
| Maximum Hour Water Demand - Domestic:         | 0 L / day              |           |                                  |
| <b>Total Maximum Hour Water Demand:</b>       | 0 L / day              |           |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>                   |
| Retail Area                                   | 196.0 m <sup>2</sup>   |           | - See Sanitary Flow Calculations |
| <b>Commercial &amp; Institutional Demand:</b> |                        |           |                                  |
| Average Daily Demand                          | 980 L / day            | or        | 0.7 L/min                        |
| <b>Max Day Demand (1.5 x Avg Day Demand)</b>  | <b>1,470 L / day</b>   | <b>or</b> | <b>1.0 L/min</b>                 |
| Max Hour Demand (1.8 x Max Day Demand)        | 2,646 L / day          | or        | 1.8 L/min                        |
| <b>Maximum Day + Fire Flow:</b>               | <b>2,001.0 L / min</b> |           | <b>33.4 L/s</b>                  |
|                                               | or                     |           |                                  |
|                                               | <b>529 USGPM</b>       |           |                                  |



**Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 5**

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: Aug-26

**A) Determine the Construction Coefficient (C). Refer to pages 20, 21.**

Construction Type, see pages 20 and 21 for definitions: **Type III Ordinary Construction**  
Construction Coefficient (C): **1.0**

**B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.**

Based on the Construction Type and associated Construction Coefficient:

Take 100% of all floor areas.

Total Effective Floor Area (A): **196** m<sup>2</sup>

**C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.**

$$RFF = 220C\sqrt{A}$$

**3,000** L/min

**D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.**

Contents, see Page 24 for definitions and Pages 25-26 for examples: **Combustible**  
Adjustment Factor: **0%**

Adjusted Required Fire Flow: **3,000** L/min

**E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.**

Automatic Sprinkler System Design  
Installed and Designed to NFPA 13 Standard? **Yes** [30% Reduction]  
Water Supply standard for both system and fire department hose lines? **Yes** [10% Reduction]  
Fully supervised system? **Yes** [10% Reduction]

Does the sprinkler system have complete building coverage?

**Yes**

Reduction for Automatic Sprinkler Protection: **50%**  
**1,500** L/min

**F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.**

| Building Face                 | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Bldg Type       | Reduction Notes  |   | Charge    |
|-------------------------------|--------------------------|-------------------------------|----------------|-----------------|------------------|---|-----------|
| North                         | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| East                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| South                         | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| West                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| <b>Total Exposure Charge:</b> |                          |                               |                |                 |                  |   | <b>0%</b> |

Increase for Exposure Adjustment Charge: **0** L/min

**G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.**

F = **2,000** L/min  
F = **528** GPM  
F = **33.3** L/s



## Water Demand Calculations

CRU 6

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

### City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

#### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

#### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

#### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 3,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

|                                         |                  |  |                |
|-----------------------------------------|------------------|--|----------------|
| Residential Population                  | 0 Ppl            |  |                |
| <b>Domestic Demand:</b>                 | 0 L / day        |  |                |
| , or                                    | <b>0 L/min</b>   |  | <b>0.0 L/s</b> |
| Maximum Day Water Demand - Domestic:    | 0 L / day        |  |                |
| <b>Total Max Day Demand:</b>            | 0 L / day        |  |                |
| , or                                    | <b>0 L / min</b> |  | <b>0.0 L/s</b> |
| Maximum Hour Water Demand - Domestic:   | 0 L / day        |  |                |
| <b>Total Maximum Hour Water Demand:</b> | 0 L / day        |  |                |
| , or                                    | <b>0 L / min</b> |  | <b>0.0 L/s</b> |

|                                               |                        |           |                                  |
|-----------------------------------------------|------------------------|-----------|----------------------------------|
| Retail Area                                   | 1,258.0 m <sup>2</sup> |           | - See Sanitary Flow Calculations |
| <b>Commercial &amp; Institutional Demand:</b> |                        |           |                                  |
| Average Daily Demand                          | 6,290 L / day          | or        | 4.4 L/min                        |
| <b>Max Day Demand (1.5 x Avg Day Demand)</b>  | <b>9,435 L / day</b>   | <b>or</b> | <b>6.6 L/min</b>                 |
| Max Hour Demand (1.8 x Max Day Demand)        | 16,983 L / day         | or        | 11.8 L/min                       |

**Maximum Day + Fire Flow: 3,006.6 L / min 50.1 L/s**

or  
**794 USGPM**



**Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 6**

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: August 11, 2026

**A) Determine the Construction Coefficient (C). Refer to pages 20, 21.**

Construction Type, see pages 20 and 21 for definitions: **Type II Noncombustible Construction**  
Construction Coefficient (C): **0.8**

**B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.**

Based on the Construction Type and associated Construction Coefficient:

Are any vertical openings unprotected? **Yes**  
*Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.*  
Total Effective Floor Area (A): **1,258 m<sup>2</sup>**

**C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.**  $RFF = 220C\sqrt{A}$  **6,000 L/min**

**D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.**

Contents, see Page 24 for definitions and Pages 25-26 for examples: **Combustible**  
Adjustment Factor: **0%**

Adjusted Required Fire Flow: **6,000 L/min**

**E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.**

*Automatic Sprinkler System Design*  
Installed and Designed to NFPA 13 Standard? **Yes** [30% Reduction]  
Water Supply standard for both system and fire department hose lines? **Yes** [10% Reduction]  
Fully supervised system? **Yes** [10% Reduction]

Does the sprinkler system have complete building coverage? **Yes**

Reduction for Automatic Sprinkler Protection: **50%**  
**3,000 L/min**

**F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.**

| Building Face                 | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Slide Type      | Reduction Notes  |   | Charge    |
|-------------------------------|--------------------------|-------------------------------|----------------|-----------------|------------------|---|-----------|
| North                         | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| East                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| South                         | 10.1-20m                 | 84                            | 81-100         | Type III-IV (3) | None applicable. | = | 4%        |
| West                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| <b>Total Exposure Charge:</b> |                          |                               |                |                 |                  |   | <b>4%</b> |

Increase for Exposure Adjustment Charge: **240 L/min**

**G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.**

F = **3,000 L/min**  
F = **793 GPM**  
F = **50.0 L/s**

## Water Demand Calculations

CRU 7

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

### City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

#### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

#### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

#### Fire Demand

|                    |       |         |                         |
|--------------------|-------|---------|-------------------------|
| Fire Flow          | 3,000 | L / min | - See FUS calculations. |
| Fire Flow Duration | 2     | hours   |                         |

|                                               |                        |           |                                  |
|-----------------------------------------------|------------------------|-----------|----------------------------------|
| Residential Population                        | 0 Ppl                  |           |                                  |
| <b>Domestic Demand:</b>                       | 0 L / day              |           |                                  |
| , or                                          | 0 L/min                |           | 0.0 L/s                          |
| Maximum Day Water Demand - Domestic:          | 0 L / day              |           |                                  |
| <b>Total Max Day Demand:</b>                  | 0 L / day              |           |                                  |
| , or                                          | 0 L / min              |           | 0.0 L/s                          |
| Maximum Hour Water Demand - Domestic:         | 0 L / day              |           |                                  |
| <b>Total Maximum Hour Water Demand:</b>       | 0 L / day              |           |                                  |
| , or                                          | 0 L / min              |           | 0.0 L/s                          |
| Retail Area                                   | 961.0 m <sup>2</sup>   |           | - See Sanitary Flow Calculations |
| <b>Commercial &amp; Institutional Demand:</b> |                        |           |                                  |
| Average Daily Demand                          | 4,805 L / day          | or        | 3.3 L/min                        |
| <b>Max Day Demand (1.5 x Avg Day Demand)</b>  | <b>7,208 L / day</b>   | <b>or</b> | <b>5.0 L/min</b>                 |
| Max Hour Demand (1.8 x Max Day Demand)        | 12,974 L / day         | or        | 9.0 L/min                        |
| <b>Maximum Day + Fire Flow:</b>               | <b>3,005.0 L / min</b> |           | <b>50.1 L/s</b>                  |
|                                               | or                     |           |                                  |
|                                               | <b>794 USGPM</b>       |           |                                  |



**Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 7**

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: August 11, 2026

**A) Determine the Construction Coefficient (C). Refer to pages 20, 21.**

Construction Type, see pages 20 and 21 for definitions: **Type II Noncombustible Construction**  
Construction Coefficient (C): **0.8**

**B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.**

Based on the Construction Type and associated Construction Coefficient:

Are any vertical openings unprotected? **Yes**  
*Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.*  
Total Effective Floor Area (A): **961 m<sup>2</sup>**

**C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.**

$$RFF = 220C\sqrt{A}$$

**5,000 L/min**

**D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.**

Contents, see Page 24 for definitions and Pages 25-26 for examples: **Combustible**  
Adjustment Factor: **0%**

Adjusted Required Fire Flow: **5,000 L/min**

**E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.**

*Automatic Sprinkler System Design*  
Installed and Designed to NFPA 13 Standard? **Yes** [30% Reduction]  
Water Supply standard for both system and fire department hose lines? **Yes** [10% Reduction]  
Fully supervised system? **Yes** [10% Reduction]

Does the sprinkler system have complete building coverage? **Yes**

Reduction for Automatic Sprinkler Protection: **50%**  
**2,500 L/min**

**F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.**

| Building Face                 | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Slide Type      | Reduction Notes  |   | Charge    |
|-------------------------------|--------------------------|-------------------------------|----------------|-----------------|------------------|---|-----------|
| North                         | 10.1-20m                 | 102                           | Over 100       | Type III-IV (3) | None applicable. | = | 5%        |
| East                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| South                         | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| West                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| <b>Total Exposure Charge:</b> |                          |                               |                |                 |                  |   | <b>5%</b> |

Increase for Exposure Adjustment Charge: **250 L/min**

**G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.**

F = **3,000 L/min**  
F = **793 GPM**  
F = **50.0 L/s**



## Water Demand Calculations

CRU 8

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

### City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

#### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

#### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

#### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 2,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

|                                               |                        |           |                                  |
|-----------------------------------------------|------------------------|-----------|----------------------------------|
| Residential Population                        | 0 Ppl                  |           |                                  |
| <b>Domestic Demand:</b>                       | 0 L / day              |           |                                  |
| , or                                          | <b>0 L/min</b>         |           | <b>0.0 L/s</b>                   |
| Maximum Day Water Demand - Domestic:          | 0 L / day              |           |                                  |
| <b>Total Max Day Demand:</b>                  | 0 L / day              |           |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>                   |
| Maximum Hour Water Demand - Domestic:         | 0 L / day              |           |                                  |
| <b>Total Maximum Hour Water Demand:</b>       | 0 L / day              |           |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>                   |
| Retail Area                                   | 409.0 m <sup>2</sup>   |           | - See Sanitary Flow Calculations |
| <b>Commercial &amp; Institutional Demand:</b> |                        |           |                                  |
| Average Daily Demand                          | 2,045 L / day          | or        | 1.4 L/min                        |
| <b>Max Day Demand (1.5 x Avg Day Demand)</b>  | <b>3,068 L / day</b>   | <b>or</b> | <b>2.1 L/min</b>                 |
| Max Hour Demand (1.8 x Max Day Demand)        | 5,522 L / day          | or        | 3.8 L/min                        |
| <b>Maximum Day + Fire Flow:</b>               | <b>2,002.1 L / min</b> |           | <b>33.4 L/s</b>                  |
|                                               | or                     |           |                                  |
|                                               | <b>529 USGPM</b>       |           |                                  |



**Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 8**

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: July 6, 2026

**A) Determine the Construction Coefficient (C). Refer to pages 20, 21.**

Construction Type, see pages 20 and 21 for definitions: **Type II Noncombustible Construction**  
Construction Coefficient (C): **0.8**

**B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.**

Based on the Construction Type and associated Construction Coefficient:

Are any vertical openings unprotected? **Yes**  
*Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.*  
Total Effective Floor Area (A): **409 m<sup>2</sup>**

**C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.**

$$RFF = 220C\sqrt{A}$$

**4,000 L/min**

**D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.**

Contents, see Page 24 for definitions and Pages 25-26 for examples: **Combustible**  
Adjustment Factor: **0%**

Adjusted Required Fire Flow: **4,000 L/min**

**E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.**

*Automatic Sprinkler System Design*  
Installed and Designed to NFPA 13 Standard? **Yes** [30% Reduction]  
Water Supply standard for both system and fire department hose lines? **Yes** [10% Reduction]  
Fully supervised system? **Yes** [10% Reduction]

Does the sprinkler system have complete building coverage? **Yes**

Reduction for Automatic Sprinkler Protection: **50%**  
**2,000 L/min**

**F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.**

| Building Face                 | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Slide Type      | Reduction Notes  |   | Charge    |
|-------------------------------|--------------------------|-------------------------------|----------------|-----------------|------------------|---|-----------|
| North                         | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| East                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| South                         | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| West                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| <b>Total Exposure Charge:</b> |                          |                               |                |                 |                  |   | <b>0%</b> |

Increase for Exposure Adjustment Charge: **0 L/min**

**G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.**

F = **2,000 L/min**  
F = **528 GPM**  
F = **33.3 L/s**

## Water Demand Calculations

CRU 9

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

### City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

#### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

#### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

#### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 3,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

|                                               |                        |           |                                  |
|-----------------------------------------------|------------------------|-----------|----------------------------------|
| Residential Population                        | 0 Ppl                  |           |                                  |
| <b>Domestic Demand:</b>                       | 0 L / day              |           |                                  |
| , or                                          | <b>0 L/min</b>         |           | <b>0.0 L/s</b>                   |
| Maximum Day Water Demand - Domestic:          | 0 L / day              |           |                                  |
| <b>Total Max Day Demand:</b>                  | 0 L / day              |           |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>                   |
| Maximum Hour Water Demand - Domestic:         | 0 L / day              |           |                                  |
| <b>Total Maximum Hour Water Demand:</b>       | 0 L / day              |           |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>                   |
| Retail Area                                   | 751.0 m <sup>2</sup>   |           | - See Sanitary Flow Calculations |
| <b>Commercial &amp; Institutional Demand:</b> |                        |           |                                  |
| Average Daily Demand                          | 3,755 L / day          | or        | 2.6 L/min                        |
| <b>Max Day Demand (1.5 x Avg Day Demand)</b>  | <b>5,633 L / day</b>   | <b>or</b> | <b>3.9 L/min</b>                 |
| Max Hour Demand (1.8 x Max Day Demand)        | 10,139 L / day         | or        | 7.0 L/min                        |
| <b>Maximum Day + Fire Flow:</b>               | <b>3,003.9 L / min</b> |           | <b>50.1 L/s</b>                  |
|                                               | or                     |           |                                  |
|                                               | <b>794 USGPM</b>       |           |                                  |

Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 9

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: July 6, 2026

A) Determine the Construction Coefficient (C). Refer to pages 20, 21.

Construction Type, see pages 20 and 21 for definitions: Type II Noncombustible Construction  
Construction Coefficient (C): 0.8

B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.

Based on the Construction Type and associated Construction Coefficient:

Are any vertical openings unprotected? Yes  
Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.  
Total Effective Floor Area (A): 751 m<sup>2</sup>

C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.

$$RFF = 220C\sqrt{A}$$

5,000 L/min

D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.

Contents, see Page 24 for definitions and Pages 25-26 for examples: Combustible  
Adjustment Factor: 0%

Adjusted Required Fire Flow: 5,000 L/min

E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.

Automatic Sprinkler System Design  
Installed and Designed to NFPA 13 Standard? Yes [30% Reduction]  
Water Supply standard for both system and fire department hose lines? Yes [10% Reduction]  
Fully supervised system? Yes [10% Reduction]

Does the sprinkler system have complete building coverage? Yes

Reduction for Automatic Sprinkler Protection: 50%  
2,500 L/min

F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.

| Building Face          | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Slide Type      | Reduction Notes  |   | Charge |
|------------------------|--------------------------|-------------------------------|----------------|-----------------|------------------|---|--------|
| North                  | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%     |
| East                   | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%     |
| South                  | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%     |
| West                   | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%     |
| Total Exposure Charge: |                          |                               |                |                 |                  |   | 0%     |

Increase for Exposure Adjustment Charge: 0 L/min

G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.

F = 3,000 L/min  
F = 793 GPM  
F = 50.0 L/s

## Water Demand Calculations

CRU 10

Project Name: 4175 Stranherd Drive  
 Project Number: 263560  
 Location: Ottawa  
 Date: Aug-26

### City of Ottawa Watermain Design Guidelines

Water Demand = Maximum Day Flow + Fire Flow or Peak Hour Flow

#### Domestic Demand

|                                        |      |               |
|----------------------------------------|------|---------------|
| Residential Flow (Avg Day Demand)      | 280  | L /capita/day |
| Max Day Demand (2.5 x Avg Day Demand)  | 700  | L /capita/day |
| Max Hour Demand (2.2 x Max Day Demand) | 1540 | L /capita/day |

*\*Peaking factors as per Table 3-3 of the MOE Design Guidelines for Drinking Water Systems  
 (used for opulations 500ppl or less in City of Ottawa)*

#### Commercial & Institutional Demand

|                                        |        |                            |
|----------------------------------------|--------|----------------------------|
| Retail/Shopping Centres                | 5,000  | L /1000m <sup>2</sup> /day |
| Max Day Demand (1.5 x Avg Day Demand)  | 7,500  | L /1000m <sup>2</sup> /day |
| Max Hour Demand (1.8 x Max Day Demand) | 13,500 | L /1000m <sup>2</sup> /day |

#### Fire Demand

|                    |       |         |
|--------------------|-------|---------|
| Fire Flow          | 2,000 | L / min |
| Fire Flow Duration | 2     | hours   |

- See FUS calculations.

|                                               |                        |           |                  |                                  |
|-----------------------------------------------|------------------------|-----------|------------------|----------------------------------|
| Residential Population                        | 0 Ppl                  |           |                  |                                  |
| <b>Domestic Demand:</b>                       | 0 L / day              |           |                  |                                  |
| , or                                          | <b>0 L/min</b>         |           | <b>0.0 L/s</b>   |                                  |
| Maximum Day Water Demand - Domestic:          | 0 L / day              |           |                  |                                  |
| <b>Total Max Day Demand:</b>                  | 0 L / day              |           |                  |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>   |                                  |
| Maximum Hour Water Demand - Domestic:         | 0 L / day              |           |                  |                                  |
| <b>Total Maximum Hour Water Demand:</b>       | 0 L / day              |           |                  |                                  |
| , or                                          | <b>0 L / min</b>       |           | <b>0.0 L/s</b>   |                                  |
| Retail Area                                   | 464.0 m <sup>2</sup>   |           |                  | - See Sanitary Flow Calculations |
| <b>Commercial &amp; Institutional Demand:</b> |                        |           |                  |                                  |
| Average Daily Demand                          | 2,320 L / day          | or        | 1.6 L/min        | 25.5 GPM                         |
| <b>Max Day Demand (1.5 x Avg Day Demand)</b>  | <b>3,480 L / day</b>   | <b>or</b> | <b>2.4 L/min</b> | <b>38.3 GPM</b>                  |
| Max Hour Demand (1.8 x Max Day Demand)        | 6,264 L / day          | or        | 4.4 L/min        | 69.0 GPM                         |
| <b>Maximum Day + Fire Flow:</b>               | <b>2,002.4 L / min</b> |           | <b>33.4 L/s</b>  |                                  |
|                                               | or                     |           |                  |                                  |
|                                               | <b>529 USGPM</b>       |           |                  |                                  |





**Fire Underwriter Survey (2020) Fire Flow Calculation for CRU 10**

Reference: <https://fireunderwriters.ca/assets/img/Water%20Supply%20for%20Public%20Fire%20Protection%20in%20Canada%202020.pdf>

Project: 4175 Stranherd Drive  
Building: 263560  
Project No: Ottawa  
Location: July 6, 2026

**A) Determine the Construction Coefficient (C). Refer to pages 20, 21.**

Construction Type, see pages 20 and 21 for definitions: **Type II Noncombustible Construction**  
Construction Coefficient (C): **0.8**

**B) Determine the Total Effective Floor Area (A). Refer to pages 22, 23.**

Based on the Construction Type and associated Construction Coefficient:

Are any vertical openings unprotected? **Yes**  
*Take two largest adjoining floor areas plus 50% of the sum of all floor areas immediately above them up to a maximum of eight.*  
Total Effective Floor Area (A): **464 m<sup>2</sup>**

**C) Calculate the Required Fire Flow (RFF), rounded to nearest 1,000 LPM.**

$$RFF = 220C\sqrt{A}$$

**4,000 L/min**

**D) Determine the decrease or increase for the Occupancy Contents Adjustment Factor. Apply to value obtained in C. Refer to pages 24 to 26.**

Contents, see Page 24 for definitions and Pages 25-26 for examples: **Combustible**  
Adjustment Factor: **0%**

Adjusted Required Fire Flow: **4,000 L/min**

**E) Determine decrease for having Automatic Sprinkler Protection, if warranted. Refer to pages 27 to 29.**

*Automatic Sprinkler System Design*  
Installed and Designed to NFPA 13 Standard? **Yes** [30% Reduction]  
Water Supply standard for both system and fire department hose lines? **Yes** [10% Reduction]  
Fully supervised system? **Yes** [10% Reduction]

Does the sprinkler system have complete building coverage? **Yes**

Reduction for Automatic Sprinkler Protection: **50%**  
**2,000 L/min**

**F) Determine the total Exposure Adjustment Charge for exposures. Refer to pages 30 to 32.**

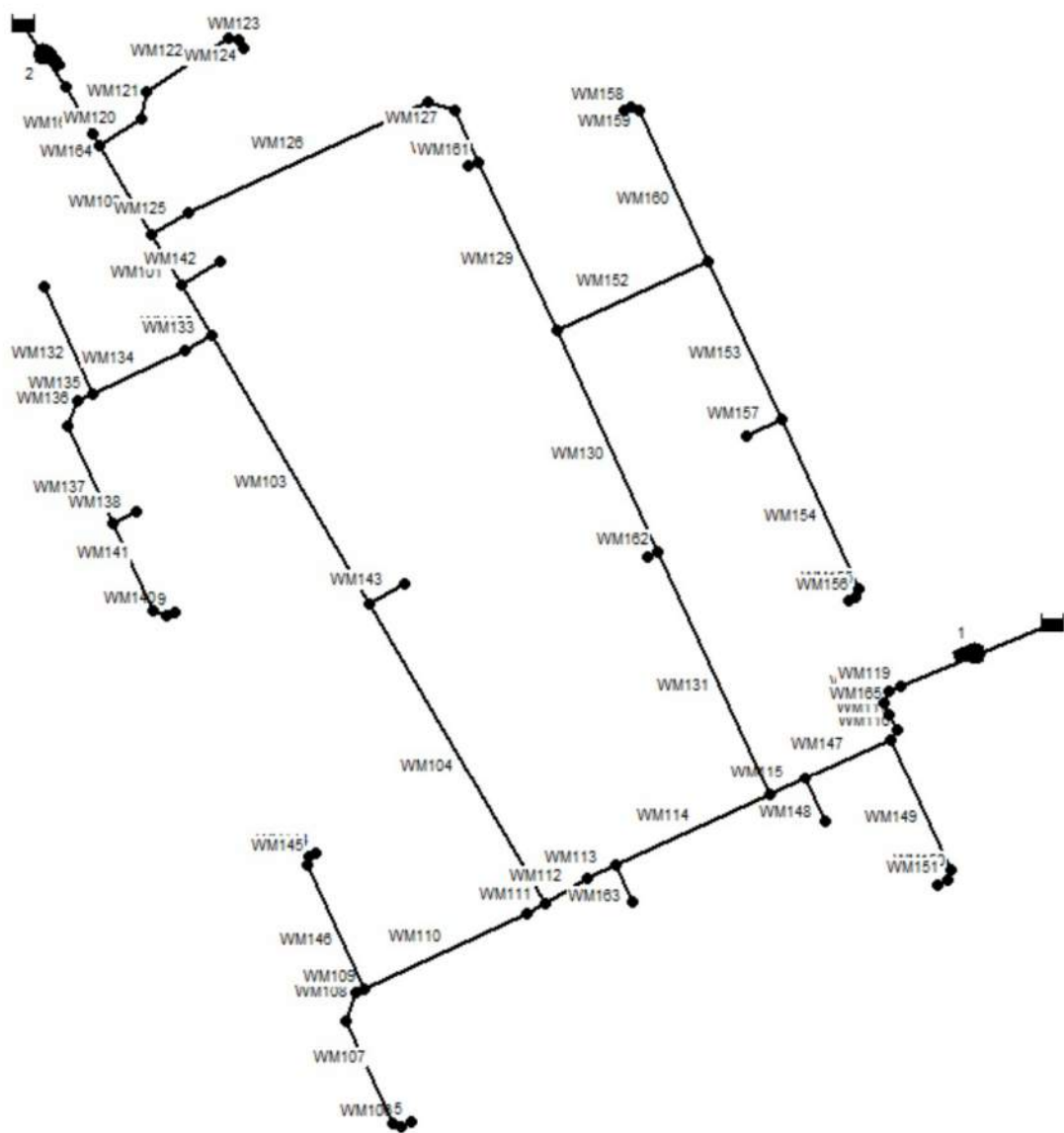
| Building Face                 | Distance to Exposure (m) | Length-Height Factor (L.H.F.) | L.H.F. Bracket | Slide Type      | Reduction Notes  |   | Charge    |
|-------------------------------|--------------------------|-------------------------------|----------------|-----------------|------------------|---|-----------|
| North                         | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| East                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| South                         | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| West                          | Greater than 30m         |                               | 0-20           | Type III-IV (3) | None applicable. | = | 0%        |
| <b>Total Exposure Charge:</b> |                          |                               |                |                 |                  |   | <b>0%</b> |

Increase for Exposure Adjustment Charge: **0 L/min**

**G) Final Calculation of Required Fire Flow. Subtract the value obtained in E from the answer obtained in D, then add the value obtained in F.**

F = **2,000 L/min**  
F = **528 GPM**  
F = **33.3 L/s**

# EPANET Model Schematic



## Proposed Model Results Summary Tables

### Residual Pressure in expanded system during Proposed Non-fire Scenarios

| Scenario  | Lowest Pressure |          |          |
|-----------|-----------------|----------|----------|
|           | Pressure        | Pressure | Pressure |
|           | (m H2O)         | (psi)    | (kPa)    |
| Max Day   | 52.23           | 74.27    | 512.07   |
| Peak Hour | 52.04           | 74.00    | 510.21   |

| Scenario  | Highest Pressure |          |          |
|-----------|------------------|----------|----------|
|           | Pressure         | Pressure | Pressure |
|           | (m H2O)          | (psi)    | (kPa)    |
| Max Day   | 53.68            | 76.33    | 526.29   |
| Peak Hour | 53.49            | 76.06    | 524.42   |

### Residual Pressure Per Building in expanded system during Proposed Non-fire Scenarios

| Building Name/<br>Node Name | Highest Pressure |           |
|-----------------------------|------------------|-----------|
|                             | Maximum Day      | Peak Hour |
|                             | (kPa)            | (kPa)     |
| CR1                         | 520.80           | 518.93    |
| CR2                         | 526.29           | 524.42    |
| CR3                         | 515.21           | 513.34    |
| CR4                         | 515.21           | 513.34    |
| CR5                         | 512.85           | 510.99    |
| CR6                         | 515.31           | 513.44    |
| CR7                         | 515.21           | 513.34    |
| CR8                         | 516.68           | 514.82    |
| CR9                         | 515.21           | 513.34    |
| CR10                        | 516.68           | 514.82    |

#### Notes:

1. Preferred design pressure during normal operating conditions is approximately 345 kPa to 552 kPa
2. The maximum static pressure shall not exceed 552 kPa
3. The minimum pressure under any non-fire demand scenario should not be less than 276 kPa
4. In cases where all services are protected by an individual pressure reducing device, the maximum pressure in the watermain system will not exceed 689 kilopascals.

### Residual Pressure in expanded system based on Maximum Day Demand + Fire Flow

| Fire Flow at<br>Location/ Node | Max. Velocity<br>(m/s) | Lowest Pressure |          |          | Satisfies Pressure<br>Requirements? |
|--------------------------------|------------------------|-----------------|----------|----------|-------------------------------------|
|                                |                        | Pressure        | Pressure | Pressure |                                     |
|                                |                        | (m H2O)         | (psi)    | (kPa)    |                                     |
| CR1                            | 2.42                   | 46.51           | 66.14    | 455.99   | Yes                                 |
| CR2                            | 2.13                   | 48.08           | 68.37    | 471.38   | Yes                                 |
| CR3                            | 2.13                   | 47.12           | 67.00    | 461.97   | Yes                                 |
| CR4                            | 2.84                   | 48.78           | 69.36    | 478.25   | Yes                                 |
| CR5                            | 1.89                   | 49.35           | 70.17    | 483.83   | Yes                                 |
| CR6                            | 1.60                   | 49.89           | 70.94    | 489.13   | Yes                                 |
| CR7                            | 2.84                   | 43.07           | 61.24    | 422.26   | Yes                                 |
| CR8                            | 1.90                   | 47.31           | 67.27    | 463.83   | Yes                                 |
| CR9                            | 2.84                   | 39.10           | 55.60    | 383.34   | Yes                                 |
| CR10                           | 1.89                   | 49.59           | 70.52    | 486.19   | Yes                                 |

#### Notes:

1. Fire flow requirements satisfied if lowest pressure in system > 140 kPa (20 psi)
2. Fire flow requirements satisfied if maximum velocity is <= 3.0 m/s

**Proposed Conditions Nodal Elevations**

| <b>Nodal Elevations</b> |                      |
|-------------------------|----------------------|
| <b>Node ID</b>          | <b>Elevation (m)</b> |
| Junc CRU-2              | 95.367               |
| Junc TEE-BEND24         | 95.367               |
| Junc TEE-BEND23         | 95.442               |
| Junc TEE-BEND43         | 95.468               |
| Junc TEE-BEND44         | 95.544               |
| Junc CHAMBER2           | 95.565               |
| Junc TEE-BEND18         | 95.682               |
| Junc TEE-BEND46         | 95.801               |
| Junc TEE-BEND53         | 95.87                |
| Junc TEE-BEND47         | 95.871               |
| Junc TEE-BEND22         | 95.875               |
| Junc CRU-1              | 95.925               |
| Junc TEE-BEND52         | 95.945               |
| Junc HYD3               | 95.969               |
| Junc TEE-BEND45         | 95.979               |
| Junc TEE-BEND16         | 96                   |
| Junc HYD2               | 96.011               |
| Junc HYD7               | 96.029               |
| Junc TEE-BEND51         | 96.033               |
| Junc TEE-BEND34         | 96.063               |
| Junc TEE-BEND36         | 96.065               |
| Junc TEE-BEND55         | 96.068               |
| Junc TEE-BEND35         | 96.072               |
| Junc HYD1               | 96.075               |
| Junc HYD6               | 96.093               |
| Junc TEE-BEND37         | 96.11                |
| Junc TEE-BEND50         | 96.115               |
| Junc TEE-BEND33         | 96.119               |
| Junc TEE-BEND17         | 96.157               |
| Junc TEE-BEND21         | 96.157               |
| Junc TEE-BEND49         | 96.16                |
| Junc TEE-BEND48         | 96.168               |
| Junc TEE-BEND12         | 96.187               |
| Junc TEE-BEND40         | 96.191               |
| Junc TEE-BEND20         | 96.197               |
| Junc TEE-BEND38         | 96.203               |
| Junc TEE-BEND57         | 96.203               |
| Junc TEE-BEND56         | 96.207               |
| Junc TEE-BEND58         | 96.231               |
| Junc TEE-BEND32         | 96.238               |
| Junc TEE-BEND31         | 96.264               |

## Proposed Conditions Nodal Elevations

| Nodal Elevations |               |
|------------------|---------------|
| Node ID          | Elevation (m) |
| Junc TEE-BEND30  | 96.277        |
| Junc HYD5        | 96.301        |
| Junc CRU-8       | 96.344        |
| Junc TEE-BEND28  | 96.351        |
| Junc CRU-10      | 96.352        |
| Junc TEE-BEND39  | 96.369        |
| Junc TEE-BEND26  | 96.374        |
| Junc TEE-BEND15  | 96.384        |
| Junc TEE-BEND29  | 96.406        |
| Junc TEE-BEND13  | 96.407        |
| Junc TEE-BEND59  | 96.412        |
| Junc TEE-BEND27  | 96.437        |
| Junc TEE-BEND41  | 96.452        |
| Junc TEE-BEND42  | 96.454        |
| Junc CRU-6       | 96.486        |
| Junc CRU-9       | 96.495        |
| Junc CRU-7       | 96.495        |
| Junc CRU-4       | 96.496        |
| Junc CRU-3       | 96.497        |
| Junc TEE-BEND6   | 96.65         |
| Junc CRU-5       | 96.736        |
| Junc TEE-BEND4   | 96.746        |
| Junc TEE-BEND3   | 96.75         |
| Junc TEE-BEND2   | 96.773        |
| Junc TEE-BEND1   | 96.799        |
| Junc CHAMBER1    | 96.816        |



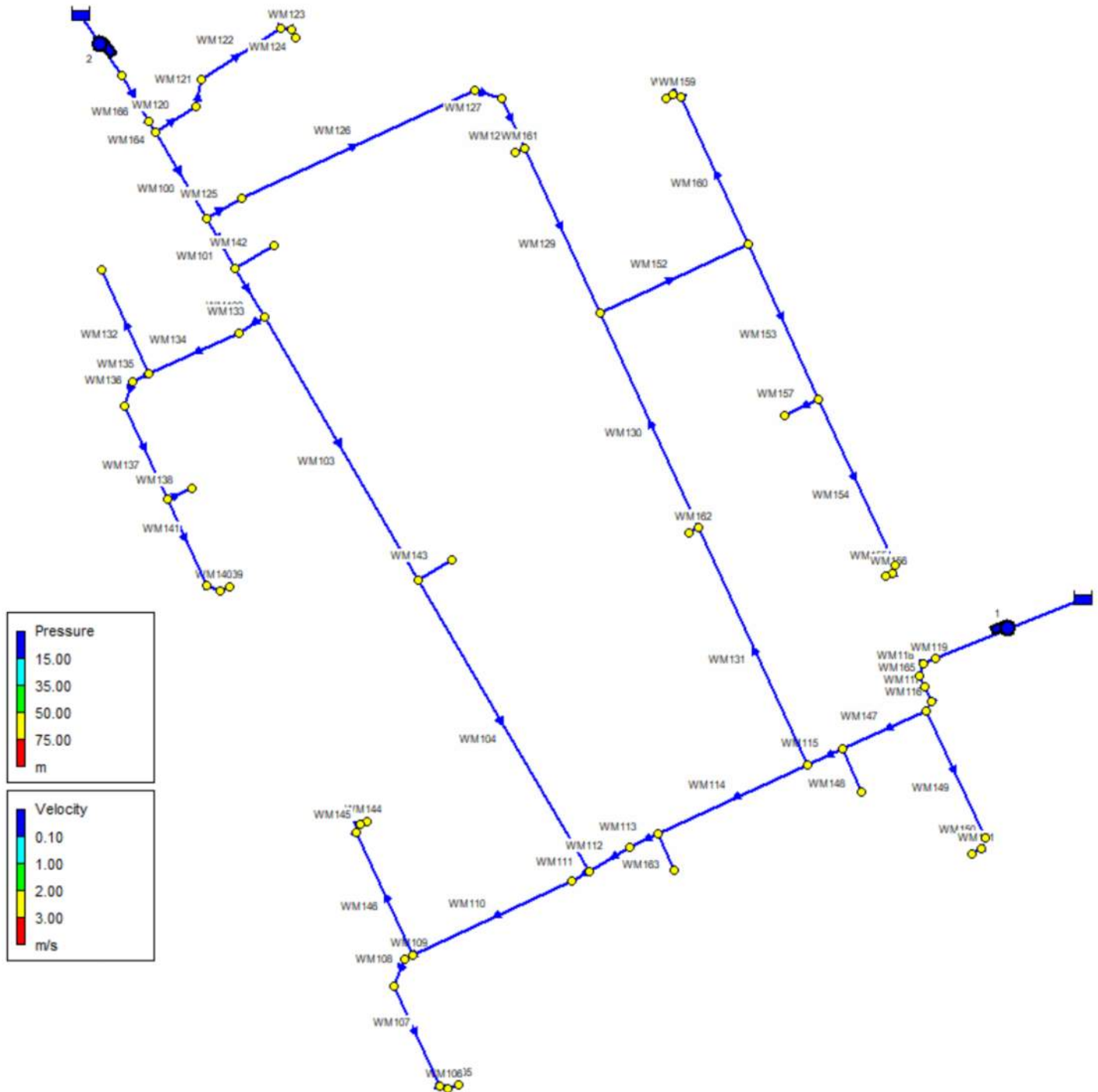
**Proposed Conditions Pipe Properties**

| Pipe Properties |            |               |                     |
|-----------------|------------|---------------|---------------------|
| Pipe ID         | Length (m) | Diameter (mm) | Roughness (C Value) |
| Pipe WM166      | 13.008     | 200           | 110                 |
| Pipe WM100      | 24.428     | 200           | 110                 |
| Pipe WM101      | 14.105     | 200           | 110                 |
| Pipe WM102      | 14.07      | 200           | 110                 |
| Pipe WM103      | 74.594     | 200           | 110                 |
| Pipe WM104      | 83.148     | 200           | 110                 |
| Pipe WM105      | 2.742      | 200           | 110                 |
| Pipe WM106      | 2.121      | 200           | 110                 |
| Pipe WM107      | 27.06      | 200           | 110                 |
| Pipe WM108      | 7.071      | 200           | 110                 |
| Pipe WM109      | 2.273      | 200           | 110                 |
| Pipe WM110      | 43.09      | 200           | 110                 |
| Pipe WM111      | 5.039      | 200           | 110                 |
| Pipe WM112      | 11.407     | 200           | 110                 |
| Pipe WM113      | 7.671      | 200           | 110                 |
| Pipe WM114      | 40.486     | 200           | 110                 |
| Pipe WM115      | 9.344      | 200           | 110                 |
| Pipe WM116      | 2.594      | 200           | 110                 |
| Pipe WM117      | 4.079      | 200           | 110                 |
| Pipe WM118      | 3.05       | 200           | 110                 |
| Pipe WM119      | 3.256      | 200           | 110                 |
| Pipe WM120      | 11.711     | 200           | 110                 |
| Pipe WM121      | 6.787      | 200           | 110                 |
| Pipe WM122      | 23.393     | 200           | 110                 |
| Pipe WM123      | 2.505      | 200           | 110                 |
| Pipe WM124      | 2.125      | 200           | 110                 |
| Pipe WM125      | 10.059     | 200           | 110                 |
| Pipe WM126      | 63.282     | 200           | 110                 |
| Pipe WM127      | 6.851      | 200           | 110                 |
| Pipe WM128      | 13.346     | 200           | 110                 |
| Pipe WM129      | 44.459     | 200           | 110                 |
| Pipe WM130      | 58.093     | 200           | 110                 |
| Pipe WM131      | 64.037     | 200           | 110                 |
| Pipe WM132      | 28.008     | 150           | 100                 |
| Pipe WM133      | 7.36       | 200           | 110                 |
| Pipe WM134      | 24.33      | 200           | 110                 |
| Pipe WM135      | 4.156      | 200           | 110                 |
| Pipe WM136      | 6.364      | 200           | 110                 |
| Pipe WM137      | 25.455     | 200           | 110                 |
| Pipe WM138      | 6.415      | 150           | 100                 |
| Pipe WM139      | 2.385      | 200           | 110                 |

## Proposed Conditions Pipe Properties

| Pipe Properties |            |               |                     |
|-----------------|------------|---------------|---------------------|
| Pipe ID         | Length (m) | Diameter (mm) | Roughness (C Value) |
| Pipe WM140      | 3.536      | 200           | 110                 |
| Pipe WM141      | 23.086     | 200           | 110                 |
| Pipe WM142      | 10.887     | 150           | 100                 |
| Pipe WM143      | 9.503      | 150           | 100                 |
| Pipe WM144      | 1.762      | 200           | 100                 |
| Pipe WM145      | 2.121      | 200           | 100                 |
| Pipe WM146      | 32.909     | 200           | 100                 |
| Pipe WM147      | 22.758     | 200           | 110                 |
| Pipe WM148      | 11.496     | 150           | 100                 |
| Pipe WM149      | 34.44      | 150           | 100                 |
| Pipe WM150      | 2.828      | 150           | 100                 |
| Pipe WM151      | 2.565      | 150           | 100                 |
| Pipe WM152      | 40.078     | 150           | 100                 |
| Pipe WM153      | 41.623     | 150           | 100                 |
| Pipe WM154      | 44.771     | 150           | 100                 |
| Pipe WM155      | 2.121      | 150           | 100                 |
| Pipe WM156      | 1.839      | 150           | 100                 |
| Pipe WM157      | 9.273      | 150           | 100                 |
| Pipe WM158      | 1.895      | 150           | 100                 |
| Pipe WM159      | 2.082      | 150           | 100                 |
| Pipe WM160      | 39.698     | 150           | 100                 |
| Pipe WM161      | 2.581      | 150           | 100                 |
| Pipe WM162      | 2.581      | 150           | 100                 |
| Pipe WM163      | 9.67       | 150           | 100                 |
| Pipe WM164      | 3.351      | 200           | 110                 |
| Pipe WM165      | 2.85       | 200           | 110                 |

## EPANET Model Schematic Maximum Daily Demand



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day Demand+pumos.net

Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |

|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 0.73    | 0.73    | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 1.24    | 1.24    | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |





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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 149.05 | 53.68      | 0.00    |
| TEE-BEND24 | 0.00       | 149.05 | 53.68      | 0.00    |
| TEE-BEND23 | 0.00       | 149.05 | 53.61      | 0.00    |
| TEE-BEND43 | 0.00       | 149.05 | 53.58      | 0.00    |
| TEE-BEND44 | 0.00       | 149.05 | 53.50      | 0.00    |
| CHAMBER2   | 0.00       | 149.05 | 53.48      | 0.00    |
| TEE-BEND18 | 0.00       | 149.05 | 53.37      | 0.00    |
| TEE-BEND46 | 0.00       | 149.05 | 53.25      | 0.00    |
| TEE-BEND53 | 0.00       | 149.05 | 53.18      | 0.00    |
| TEE-BEND47 | 0.00       | 149.05 | 53.18      | 0.00    |
| TEE-BEND22 | 0.00       | 149.05 | 53.17      | 0.00    |
| CRU-1      | 0.23       | 149.05 | 53.12      | 0.00    |
| TEE-BEND52 | 0.00       | 149.05 | 53.10      | 0.00    |
| HYD3       | 0.00       | 149.05 | 53.08      | 0.00    |
| TEE-BEND45 | 0.00       | 149.05 | 53.07      | 0.00    |
| TEE-BEND16 | 0.00       | 149.05 | 53.05      | 0.00    |
| HYD2       | 0.00       | 149.05 | 53.04      | 0.00    |
| HYD7       | 0.00       | 149.05 | 53.02      | 0.00    |
| TEE-BEND51 | 0.00       | 149.05 | 53.02      | 0.00    |
| TEE-BEND34 | 0.00       | 149.05 | 52.99      | 0.00    |
| TEE-BEND36 | 0.00       | 149.05 | 52.98      | 0.00    |
| TEE-BEND55 | 0.00       | 149.05 | 52.98      | 0.00    |
| TEE-BEND35 | 0.00       | 149.05 | 52.98      | 0.00    |
| HYD1       | 0.00       | 149.05 | 52.97      | 0.00    |
| HYD6       | 0.00       | 149.05 | 52.96      | 0.00    |
| TEE-BEND37 | 0.00       | 149.05 | 52.94      | 0.00    |
| TEE-BEND50 | 0.00       | 149.05 | 52.93      | 0.00    |
| TEE-BEND33 | 0.00       | 149.05 | 52.93      | 0.00    |
| TEE-BEND17 | 0.00       | 149.05 | 52.89      | 0.00    |
| TEE-BEND21 | 0.00       | 149.05 | 52.89      | 0.00    |
| TEE-BEND49 | 0.00       | 149.05 | 52.89      | 0.00    |
| TEE-BEND48 | 0.00       | 149.05 | 52.88      | 0.00    |
| TEE-BEND12 | 0.00       | 149.05 | 52.86      | 0.00    |
| TEE-BEND40 | 0.00       | 149.05 | 52.86      | 0.00    |
| TEE-BEND20 | 0.00       | 149.05 | 52.85      | 0.00    |
| TEE-BEND38 | 0.00       | 149.05 | 52.85      | 0.00    |
| TEE-BEND57 | 0.00       | 149.05 | 52.85      | 0.00    |
| TEE-BEND56 | 0.00       | 149.05 | 52.84      | 0.00    |
| TEE-BEND58 | 0.00       | 149.05 | 52.82      | 0.00    |
| TEE-BEND32 | 0.00       | 149.05 | 52.81      | 0.00    |
| TEE-BEND31 | 0.00       | 149.05 | 52.78      | 0.00    |
| TEE-BEND30 | 0.00       | 149.05 | 52.77      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 149.05 | 52.70 | 0.00 |
| CRU-8      | 0.04 | 149.05 | 52.70 | 0.00 |
| TEE-BEND28 | 0.00 | 149.05 | 52.70 | 0.00 |
| CRU-10     | 0.04 | 149.05 | 52.70 | 0.00 |
| TEE-BEND39 | 0.00 | 149.05 | 52.68 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 149.05 | 52.67      | 0.00           |
| TEE-BEND15 | 0.00       | 149.05 | 52.66      | 0.00           |
| TEE-BEND29 | 0.00       | 149.05 | 52.64      | 0.00           |
| TEE-BEND13 | 0.00       | 149.05 | 52.64      | 0.00           |
| TEE-BEND59 | 0.00       | 149.05 | 52.64      | 0.00           |
| TEE-BEND27 | 0.00       | 149.05 | 52.61      | 0.00           |
| TEE-BEND41 | 0.00       | 149.05 | 52.60      | 0.00           |
| TEE-BEND42 | 0.00       | 149.05 | 52.59      | 0.00           |
| CRU-6      | 0.11       | 149.05 | 52.56      | 0.00           |
| CRU-9      | 0.07       | 149.05 | 52.55      | 0.00           |
| CRU-7      | 0.08       | 149.05 | 52.55      | 0.00           |
| CRU-4      | 0.11       | 149.05 | 52.55      | 0.00           |
| CRU-3      | 0.17       | 149.05 | 52.55      | 0.00           |
| TEE-BEND6  | 0.00       | 149.05 | 52.40      | 0.00           |
| CRU-5      | 0.02       | 149.05 | 52.31      | 0.00           |
| TEE-BEND4  | 0.00       | 149.05 | 52.30      | 0.00           |
| TEE-BEND3  | 0.00       | 149.05 | 52.30      | 0.00           |
| TEE-BEND2  | 0.00       | 149.05 | 52.28      | 0.00           |
| TEE-BEND1  | 0.00       | 149.05 | 52.25      | 0.00           |
| CHAMBER1   | 0.00       | 149.05 | 52.23      | 0.00           |
| R1         | -0.38      | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -0.63      | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 0.63     | 0.02         | 0.01          | Open   |
| WM100   | 0.52     | 0.02         | 0.00          | Open   |
| WM101   | 0.40     | 0.01         | 0.00          | Open   |
| WM102   | 0.40     | 0.01         | 0.00          | Open   |
| WM103   | 0.10     | 0.00         | 0.00          | Open   |
| WM104   | 0.10     | 0.00         | 0.00          | Open   |
| WM105   | -0.23    | 0.01         | 0.00          | Open   |
| WM106   | -0.23    | 0.01         | 0.00          | Open   |
| WM107   | -0.23    | 0.01         | 0.00          | Open   |
| WM108   | -0.23    | 0.01         | 0.00          | Open   |
| WM109   | -0.23    | 0.01         | 0.00          | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM110 | -0.37 | 0.01 | 0.00 | Open |
| WM111 | -0.37 | 0.01 | 0.00 | Open |
| WM112 | -0.27 | 0.01 | 0.00 | Open |
| WM113 | -0.27 | 0.01 | 0.00 | Open |
| WM114 | -0.27 | 0.01 | 0.00 | Open |
| WM115 | -0.34 | 0.01 | 0.00 | Open |
| WM116 | -0.38 | 0.01 | 0.00 | Open |
| WM117 | -0.38 | 0.01 | 0.00 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -0.38    | 0.01         | 0.00               | Open   |
| WM119   | -0.38    | 0.01         | 0.00               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 0.12     | 0.00         | 0.00               | Open   |
| WM126   | 0.12     | 0.00         | 0.00               | Open   |
| WM127   | 0.12     | 0.00         | 0.00               | Open   |
| WM128   | 0.12     | 0.00         | 0.00               | Open   |
| WM129   | 0.12     | 0.00         | 0.00               | Open   |
| WM130   | -0.07    | 0.00         | 0.00               | Open   |
| WM131   | -0.07    | 0.00         | 0.00               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -0.34    | 0.01         | 0.00               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 0.19     | 0.01         | 0.00               | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM154 | 0.07  | 0.00 | 0.00 | Open |
| WM155 | 0.07  | 0.00 | 0.00 | Open |
| WM156 | 0.07  | 0.00 | 0.00 | Open |
| WM157 | 0.04  | 0.00 | 0.00 | Open |
| WM158 | -0.08 | 0.00 | 0.00 | Open |
| WM159 | -0.08 | 0.00 | 0.00 | Open |
| WM160 | -0.08 | 0.00 | 0.00 | Open |
| WM161 | 0.00  | 0.00 | 0.00 | Open |
| WM162 | 0.00  | 0.00 | 0.00 | Open |
| WM163 | 0.00  | 0.00 | 0.00 | Open |
| WM164 | 0.63  | 0.02 | 0.01 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -0.38    | 0.01         | 0.00               | Open      |
| 1       | 0.38     | 0.00         | -149.05            | Open Pump |
| 2       | 0.63     | 0.00         | -149.05            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 149.05 | 53.68      | 0.00    |
| TEE-BEND24 | 0.00       | 149.05 | 53.68      | 0.00    |
| TEE-BEND23 | 0.00       | 149.05 | 53.61      | 0.00    |
| TEE-BEND43 | 0.00       | 149.05 | 53.58      | 0.00    |
| TEE-BEND44 | 0.00       | 149.05 | 53.50      | 0.00    |
| CHAMBER2   | 0.00       | 149.05 | 53.48      | 0.00    |
| TEE-BEND18 | 0.00       | 149.05 | 53.37      | 0.00    |
| TEE-BEND46 | 0.00       | 149.05 | 53.25      | 0.00    |
| TEE-BEND53 | 0.00       | 149.05 | 53.18      | 0.00    |
| TEE-BEND47 | 0.00       | 149.05 | 53.18      | 0.00    |
| TEE-BEND22 | 0.00       | 149.05 | 53.17      | 0.00    |
| CRU-1      | 0.23       | 149.05 | 53.12      | 0.00    |
| TEE-BEND52 | 0.00       | 149.05 | 53.10      | 0.00    |
| HYD3       | 0.00       | 149.05 | 53.08      | 0.00    |
| TEE-BEND45 | 0.00       | 149.05 | 53.07      | 0.00    |
| TEE-BEND16 | 0.00       | 149.05 | 53.05      | 0.00    |
| HYD2       | 0.00       | 149.05 | 53.04      | 0.00    |
| HYD7       | 0.00       | 149.05 | 53.02      | 0.00    |
| TEE-BEND51 | 0.00       | 149.05 | 53.02      | 0.00    |
| TEE-BEND34 | 0.00       | 149.05 | 52.99      | 0.00    |
| TEE-BEND36 | 0.00       | 149.05 | 52.98      | 0.00    |
| TEE-BEND55 | 0.00       | 149.05 | 52.98      | 0.00    |
| TEE-BEND35 | 0.00       | 149.05 | 52.98      | 0.00    |
| HYD1       | 0.00       | 149.05 | 52.97      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 149.05 | 52.94 | 0.00 |
| TEE-BEND37 | 0.00 | 149.05 | 52.94 | 0.00 |
| TEE-BEND50 | 0.00 | 149.05 | 52.93 | 0.00 |
| TEE-BEND33 | 0.00 | 149.05 | 52.93 | 0.00 |
| TEE-BEND17 | 0.00 | 149.05 | 52.89 | 0.00 |
| TEE-BEND21 | 0.00 | 149.05 | 52.89 | 0.00 |
| TEE-BEND49 | 0.00 | 149.05 | 52.89 | 0.00 |
| TEE-BEND48 | 0.00 | 149.05 | 52.88 | 0.00 |
| TEE-BEND12 | 0.00 | 149.05 | 52.86 | 0.00 |
| TEE-BEND40 | 0.00 | 149.05 | 52.86 | 0.00 |
| TEE-BEND20 | 0.00 | 149.05 | 52.85 | 0.00 |
| TEE-BEND38 | 0.00 | 149.05 | 52.85 | 0.00 |
| TEE-BEND57 | 0.00 | 149.05 | 52.85 | 0.00 |
| TEE-BEND56 | 0.00 | 149.05 | 52.84 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 149.05 | 52.82      | 0.00           |
| TEE-BEND32 | 0.00       | 149.05 | 52.81      | 0.00           |
| TEE-BEND31 | 0.00       | 149.05 | 52.78      | 0.00           |
| TEE-BEND30 | 0.00       | 149.05 | 52.77      | 0.00           |
| HYD5       | 0.00       | 149.05 | 52.75      | 0.00           |
| CRU-8      | 0.04       | 149.05 | 52.70      | 0.00           |
| TEE-BEND28 | 0.00       | 149.05 | 52.70      | 0.00           |
| CRU-10     | 0.04       | 149.05 | 52.70      | 0.00           |
| TEE-BEND39 | 0.00       | 149.05 | 52.68      | 0.00           |
| TEE-BEND26 | 0.00       | 149.05 | 52.67      | 0.00           |
| TEE-BEND15 | 0.00       | 149.05 | 52.66      | 0.00           |
| TEE-BEND29 | 0.00       | 149.05 | 52.64      | 0.00           |
| TEE-BEND13 | 0.00       | 149.05 | 52.64      | 0.00           |
| TEE-BEND59 | 0.00       | 149.05 | 52.64      | 0.00           |
| TEE-BEND27 | 0.00       | 149.05 | 52.61      | 0.00           |
| TEE-BEND41 | 0.00       | 149.05 | 52.60      | 0.00           |
| TEE-BEND42 | 0.00       | 149.05 | 52.59      | 0.00           |
| CRU-6      | 0.11       | 149.05 | 52.56      | 0.00           |
| CRU-9      | 0.07       | 149.05 | 52.55      | 0.00           |
| CRU-7      | 0.08       | 149.05 | 52.55      | 0.00           |
| CRU-4      | 0.11       | 149.05 | 52.55      | 0.00           |
| CRU-3      | 0.17       | 149.05 | 52.55      | 0.00           |
| TEE-BEND6  | 0.00       | 149.05 | 52.40      | 0.00           |
| CRU-5      | 0.02       | 149.05 | 52.31      | 0.00           |
| TEE-BEND4  | 0.00       | 149.05 | 52.30      | 0.00           |
| TEE-BEND3  | 0.00       | 149.05 | 52.30      | 0.00           |
| TEE-BEND2  | 0.00       | 149.05 | 52.28      | 0.00           |
| TEE-BEND1  | 0.00       | 149.05 | 52.25      | 0.00           |
| CHAMBER1   | 0.00       | 149.05 | 52.23      | 0.00           |
| R1         | -0.38      | 0.00   | 0.00       | 0.00 Reservoir |



R2 -0.63 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 0.63     | 0.02         | 0.01               | Open   |
| WM100   | 0.52     | 0.02         | 0.00               | Open   |
| WM101   | 0.40     | 0.01         | 0.00               | Open   |
| WM102   | 0.40     | 0.01         | 0.00               | Open   |
| WM103   | 0.10     | 0.00         | 0.00               | Open   |
| WM104   | 0.10     | 0.00         | 0.00               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -0.27    | 0.01         | 0.00               | Open   |
| WM113   | -0.27    | 0.01         | 0.00               | Open   |
| WM114   | -0.27    | 0.01         | 0.00               | Open   |
| WM115   | -0.34    | 0.01         | 0.00               | Open   |
| WM116   | -0.38    | 0.01         | 0.00               | Open   |
| WM117   | -0.38    | 0.01         | 0.00               | Open   |
| WM118   | -0.38    | 0.01         | 0.00               | Open   |
| WM119   | -0.38    | 0.01         | 0.00               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 0.12     | 0.00         | 0.00               | Open   |
| WM126   | 0.12     | 0.00         | 0.00               | Open   |
| WM127   | 0.12     | 0.00         | 0.00               | Open   |
| WM128   | 0.12     | 0.00         | 0.00               | Open   |
| WM129   | 0.12     | 0.00         | 0.00               | Open   |
| WM130   | -0.07    | 0.00         | 0.00               | Open   |
| WM131   | -0.07    | 0.00         | 0.00               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM136 | 0.28  | 0.01 | 0.00 | Open |
| WM137 | 0.28  | 0.01 | 0.00 | Open |
| WM138 | 0.11  | 0.01 | 0.00 | Open |
| WM139 | -0.17 | 0.01 | 0.00 | Open |
| WM140 | -0.17 | 0.01 | 0.00 | Open |
| WM141 | -0.17 | 0.01 | 0.00 | Open |
| WM142 | 0.00  | 0.00 | 0.00 | Open |
| WM143 | 0.00  | 0.00 | 0.00 | Open |
| WM144 | -0.14 | 0.00 | 0.00 | Open |
| WM145 | -0.14 | 0.00 | 0.00 | Open |
| WM146 | -0.14 | 0.00 | 0.00 | Open |
| WM147 | -0.34 | 0.01 | 0.00 | Open |
| WM148 | 0.00  | 0.00 | 0.00 | Open |
| WM149 | 0.04  | 0.00 | 0.00 | Open |
| WM150 | 0.04  | 0.00 | 0.00 | Open |
| WM151 | 0.04  | 0.00 | 0.00 | Open |
| WM152 | 0.19  | 0.01 | 0.00 | Open |
| WM153 | 0.11  | 0.01 | 0.00 | Open |
| WM154 | 0.07  | 0.00 | 0.00 | Open |
| WM155 | 0.07  | 0.00 | 0.00 | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 0.63     | 0.02         | 0.01               | Open      |
| WM165   | -0.38    | 0.01         | 0.00               | Open      |
| 1       | 0.38     | 0.00         | -149.05            | Open Pump |
| 2       | 0.63     | 0.00         | -149.05            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 149.05 | 53.68      | 0.00    |
| TEE-BEND24 | 0.00       | 149.05 | 53.68      | 0.00    |
| TEE-BEND23 | 0.00       | 149.05 | 53.61      | 0.00    |
| TEE-BEND43 | 0.00       | 149.05 | 53.58      | 0.00    |
| TEE-BEND44 | 0.00       | 149.05 | 53.50      | 0.00    |
| CHAMBER2   | 0.00       | 149.05 | 53.48      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 149.05 | 53.18 | 0.00 |
| TEE-BEND46 | 0.00 | 149.05 | 53.25 | 0.00 |
| TEE-BEND53 | 0.00 | 149.05 | 53.18 | 0.00 |
| TEE-BEND47 | 0.00 | 149.05 | 53.18 | 0.00 |
| TEE-BEND22 | 0.00 | 149.05 | 53.17 | 0.00 |
| CRU-1      | 0.23 | 149.05 | 53.12 | 0.00 |
| TEE-BEND52 | 0.00 | 149.05 | 53.10 | 0.00 |
| HYD3       | 0.00 | 149.05 | 53.08 | 0.00 |
| TEE-BEND45 | 0.00 | 149.05 | 53.07 | 0.00 |
| TEE-BEND16 | 0.00 | 149.05 | 53.05 | 0.00 |
| HYD2       | 0.00 | 149.05 | 53.04 | 0.00 |
| HYD7       | 0.00 | 149.05 | 53.02 | 0.00 |
| TEE-BEND51 | 0.00 | 149.05 | 53.02 | 0.00 |
| TEE-BEND34 | 0.00 | 149.05 | 52.99 | 0.00 |
| TEE-BEND36 | 0.00 | 149.05 | 52.98 | 0.00 |
| TEE-BEND55 | 0.00 | 149.05 | 52.98 | 0.00 |
| TEE-BEND35 | 0.00 | 149.05 | 52.98 | 0.00 |
| HYD1       | 0.00 | 149.05 | 52.97 | 0.00 |
| HYD6       | 0.00 | 149.05 | 52.96 | 0.00 |
| TEE-BEND37 | 0.00 | 149.05 | 52.94 | 0.00 |
| TEE-BEND50 | 0.00 | 149.05 | 52.93 | 0.00 |
| TEE-BEND33 | 0.00 | 149.05 | 52.93 | 0.00 |
| TEE-BEND17 | 0.00 | 149.05 | 52.89 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 149.05 | 52.89      | 0.00    |
| TEE-BEND49 | 0.00       | 149.05 | 52.89      | 0.00    |
| TEE-BEND48 | 0.00       | 149.05 | 52.88      | 0.00    |
| TEE-BEND12 | 0.00       | 149.05 | 52.86      | 0.00    |
| TEE-BEND40 | 0.00       | 149.05 | 52.86      | 0.00    |
| TEE-BEND20 | 0.00       | 149.05 | 52.85      | 0.00    |
| TEE-BEND38 | 0.00       | 149.05 | 52.85      | 0.00    |
| TEE-BEND57 | 0.00       | 149.05 | 52.85      | 0.00    |
| TEE-BEND56 | 0.00       | 149.05 | 52.84      | 0.00    |
| TEE-BEND58 | 0.00       | 149.05 | 52.82      | 0.00    |
| TEE-BEND32 | 0.00       | 149.05 | 52.81      | 0.00    |
| TEE-BEND31 | 0.00       | 149.05 | 52.78      | 0.00    |
| TEE-BEND30 | 0.00       | 149.05 | 52.77      | 0.00    |
| HYD5       | 0.00       | 149.05 | 52.75      | 0.00    |
| CRU-8      | 0.04       | 149.05 | 52.70      | 0.00    |
| TEE-BEND28 | 0.00       | 149.05 | 52.70      | 0.00    |
| CRU-10     | 0.04       | 149.05 | 52.70      | 0.00    |
| TEE-BEND39 | 0.00       | 149.05 | 52.68      | 0.00    |
| TEE-BEND26 | 0.00       | 149.05 | 52.67      | 0.00    |
| TEE-BEND15 | 0.00       | 149.05 | 52.66      | 0.00    |
| TEE-BEND29 | 0.00       | 149.05 | 52.64      | 0.00    |

|            |       |        |       |                |
|------------|-------|--------|-------|----------------|
| TEE-BEND13 | 0.00  | 149.05 | 52.64 | 0.00           |
| TEE-BEND59 | 0.00  | 149.05 | 52.64 | 0.00           |
| TEE-BEND27 | 0.00  | 149.05 | 52.61 | 0.00           |
| TEE-BEND41 | 0.00  | 149.05 | 52.60 | 0.00           |
| TEE-BEND42 | 0.00  | 149.05 | 52.59 | 0.00           |
| CRU-6      | 0.11  | 149.05 | 52.56 | 0.00           |
| CRU-9      | 0.07  | 149.05 | 52.55 | 0.00           |
| CRU-7      | 0.08  | 149.05 | 52.55 | 0.00           |
| CRU-4      | 0.11  | 149.05 | 52.55 | 0.00           |
| CRU-3      | 0.17  | 149.05 | 52.55 | 0.00           |
| TEE-BEND6  | 0.00  | 149.05 | 52.40 | 0.00           |
| CRU-5      | 0.02  | 149.05 | 52.31 | 0.00           |
| TEE-BEND4  | 0.00  | 149.05 | 52.30 | 0.00           |
| TEE-BEND3  | 0.00  | 149.05 | 52.30 | 0.00           |
| TEE-BEND2  | 0.00  | 149.05 | 52.28 | 0.00           |
| TEE-BEND1  | 0.00  | 149.05 | 52.25 | 0.00           |
| CHAMBER1   | 0.00  | 149.05 | 52.23 | 0.00           |
| R1         | -0.38 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -0.63 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 0.63     | 0.02         | 0.01               | Open   |
| WM100   | 0.52     | 0.02         | 0.00               | Open   |
| WM101   | 0.40     | 0.01         | 0.00               | Open   |
| WM102   | 0.40     | 0.01         | 0.00               | Open   |
| WM103   | 0.10     | 0.00         | 0.00               | Open   |
| WM104   | 0.10     | 0.00         | 0.00               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -0.27    | 0.01         | 0.00               | Open   |
| WM113   | -0.27    | 0.01         | 0.00               | Open   |
| WM114   | -0.27    | 0.01         | 0.00               | Open   |
| WM115   | -0.34    | 0.01         | 0.00               | Open   |
| WM116   | -0.38    | 0.01         | 0.00               | Open   |
| WM117   | -0.38    | 0.01         | 0.00               | Open   |
| WM118   | -0.38    | 0.01         | 0.00               | Open   |
| WM119   | -0.38    | 0.01         | 0.00               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM123 | 0.11  | 0.00 | 0.00 | Open |
| WM124 | 0.11  | 0.00 | 0.00 | Open |
| WM125 | 0.12  | 0.00 | 0.00 | Open |
| WM126 | 0.12  | 0.00 | 0.00 | Open |
| WM127 | 0.12  | 0.00 | 0.00 | Open |
| WM128 | 0.12  | 0.00 | 0.00 | Open |
| WM129 | 0.12  | 0.00 | 0.00 | Open |
| WM130 | -0.07 | 0.00 | 0.00 | Open |
| WM131 | -0.07 | 0.00 | 0.00 | Open |
| WM132 | -0.02 | 0.00 | 0.00 | Open |
| WM133 | 0.30  | 0.01 | 0.00 | Open |
| WM134 | 0.30  | 0.01 | 0.00 | Open |
| WM135 | 0.28  | 0.01 | 0.00 | Open |
| WM136 | 0.28  | 0.01 | 0.00 | Open |
| WM137 | 0.28  | 0.01 | 0.00 | Open |
| WM138 | 0.11  | 0.01 | 0.00 | Open |
| WM139 | -0.17 | 0.01 | 0.00 | Open |
| WM140 | -0.17 | 0.01 | 0.00 | Open |
| WM141 | -0.17 | 0.01 | 0.00 | Open |
| WM142 | 0.00  | 0.00 | 0.00 | Open |
| WM143 | 0.00  | 0.00 | 0.00 | Open |
| WM144 | -0.14 | 0.00 | 0.00 | Open |
| WM145 | -0.14 | 0.00 | 0.00 | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -0.34    | 0.01         | 0.00               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 0.19     | 0.01         | 0.00               | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 0.63     | 0.02         | 0.01               | Open      |
| WM165   | -0.38    | 0.01         | 0.00               | Open      |
| 1       | 0.38     | 0.00         | -149.05            | Open Pump |

2

0.63

0.00

-149



DILLON

Open Pump

COUNTERPOINT  
LAND DEVELOPMENT

Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 149.05 | 53.68      | 0.00    |
| TEE-BEND24 | 0.00       | 149.05 | 53.68      | 0.00    |
| TEE-BEND23 | 0.00       | 149.05 | 53.61      | 0.00    |
| TEE-BEND43 | 0.00       | 149.05 | 53.58      | 0.00    |
| TEE-BEND44 | 0.00       | 149.05 | 53.50      | 0.00    |
| CHAMBER2   | 0.00       | 149.05 | 53.48      | 0.00    |
| TEE-BEND18 | 0.00       | 149.05 | 53.37      | 0.00    |
| TEE-BEND46 | 0.00       | 149.05 | 53.25      | 0.00    |
| TEE-BEND53 | 0.00       | 149.05 | 53.18      | 0.00    |
| TEE-BEND47 | 0.00       | 149.05 | 53.18      | 0.00    |
| TEE-BEND22 | 0.00       | 149.05 | 53.17      | 0.00    |
| CRU-1      | 0.23       | 149.05 | 53.12      | 0.00    |
| TEE-BEND52 | 0.00       | 149.05 | 53.10      | 0.00    |
| HYD3       | 0.00       | 149.05 | 53.08      | 0.00    |
| TEE-BEND45 | 0.00       | 149.05 | 53.07      | 0.00    |
| TEE-BEND16 | 0.00       | 149.05 | 53.05      | 0.00    |
| HYD2       | 0.00       | 149.05 | 53.04      | 0.00    |
| HYD7       | 0.00       | 149.05 | 53.02      | 0.00    |
| TEE-BEND51 | 0.00       | 149.05 | 53.02      | 0.00    |



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Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 149.05 | 52.99      | 0.00    |
| TEE-BEND36 | 0.00       | 149.05 | 52.98      | 0.00    |
| TEE-BEND55 | 0.00       | 149.05 | 52.98      | 0.00    |
| TEE-BEND35 | 0.00       | 149.05 | 52.98      | 0.00    |
| HYD1       | 0.00       | 149.05 | 52.97      | 0.00    |
| HYD6       | 0.00       | 149.05 | 52.96      | 0.00    |
| TEE-BEND37 | 0.00       | 149.05 | 52.94      | 0.00    |
| TEE-BEND50 | 0.00       | 149.05 | 52.93      | 0.00    |
| TEE-BEND33 | 0.00       | 149.05 | 52.93      | 0.00    |
| TEE-BEND17 | 0.00       | 149.05 | 52.89      | 0.00    |
| TEE-BEND21 | 0.00       | 149.05 | 52.89      | 0.00    |
| TEE-BEND49 | 0.00       | 149.05 | 52.89      | 0.00    |
| TEE-BEND48 | 0.00       | 149.05 | 52.88      | 0.00    |
| TEE-BEND12 | 0.00       | 149.05 | 52.86      | 0.00    |
| TEE-BEND40 | 0.00       | 149.05 | 52.86      | 0.00    |
| TEE-BEND20 | 0.00       | 149.05 | 52.85      | 0.00    |
| TEE-BEND38 | 0.00       | 149.05 | 52.85      | 0.00    |
| TEE-BEND57 | 0.00       | 149.05 | 52.85      | 0.00    |



|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND56 | 0.00 | 149.05 | 52.82 | 0.00 |
| TEE-BEND58 | 0.00 | 149.05 | 52.82 | 0.00 |
| TEE-BEND32 | 0.00 | 149.05 | 52.81 | 0.00 |
| TEE-BEND31 | 0.00 | 149.05 | 52.78 | 0.00 |
| TEE-BEND30 | 0.00 | 149.05 | 52.77 | 0.00 |
| HYD5       | 0.00 | 149.05 | 52.75 | 0.00 |
| CRU-8      | 0.04 | 149.05 | 52.70 | 0.00 |
| TEE-BEND28 | 0.00 | 149.05 | 52.70 | 0.00 |
| CRU-10     | 0.04 | 149.05 | 52.70 | 0.00 |
| TEE-BEND39 | 0.00 | 149.05 | 52.68 | 0.00 |
| TEE-BEND26 | 0.00 | 149.05 | 52.67 | 0.00 |
| TEE-BEND15 | 0.00 | 149.05 | 52.66 | 0.00 |
| TEE-BEND29 | 0.00 | 149.05 | 52.64 | 0.00 |
| TEE-BEND13 | 0.00 | 149.05 | 52.64 | 0.00 |
| TEE-BEND59 | 0.00 | 149.05 | 52.64 | 0.00 |
| TEE-BEND27 | 0.00 | 149.05 | 52.61 | 0.00 |
| TEE-BEND41 | 0.00 | 149.05 | 52.60 | 0.00 |
| TEE-BEND42 | 0.00 | 149.05 | 52.59 | 0.00 |
| CRU-6      | 0.11 | 149.05 | 52.56 | 0.00 |
| CRU-9      | 0.07 | 149.05 | 52.55 | 0.00 |
| CRU-7      | 0.08 | 149.05 | 52.55 | 0.00 |
| CRU-4      | 0.11 | 149.05 | 52.55 | 0.00 |
| CRU-3      | 0.17 | 149.05 | 52.55 | 0.00 |
| TEE-BEND6  | 0.00 | 149.05 | 52.40 | 0.00 |
| CRU-5      | 0.02 | 149.05 | 52.31 | 0.00 |
| TEE-BEND4  | 0.00 | 149.05 | 52.30 | 0.00 |
| TEE-BEND3  | 0.00 | 149.05 | 52.30 | 0.00 |
| TEE-BEND2  | 0.00 | 149.05 | 52.28 | 0.00 |
| TEE-BEND1  | 0.00 | 149.05 | 52.25 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 149.05 | 52.23      | 0.00           |
| R1       | -0.38      | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -0.63      | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 0.63     | 0.02         | 0.01          | Open   |
| WM100   | 0.52     | 0.02         | 0.00          | Open   |
| WM101   | 0.40     | 0.01         | 0.00          | Open   |
| WM102   | 0.40     | 0.01         | 0.00          | Open   |
| WM103   | 0.10     | 0.00         | 0.00          | Open   |
| WM104   | 0.10     | 0.00         | 0.00          | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM105 | -0.23 | 0.01 | 0.00 | Open |
| WM106 | -0.23 | 0.01 | 0.00 | Open |
| WM107 | -0.23 | 0.01 | 0.00 | Open |
| WM108 | -0.23 | 0.01 | 0.00 | Open |
| WM109 | -0.23 | 0.01 | 0.00 | Open |
| WM110 | -0.37 | 0.01 | 0.00 | Open |
| WM111 | -0.37 | 0.01 | 0.00 | Open |
| WM112 | -0.27 | 0.01 | 0.00 | Open |
| WM113 | -0.27 | 0.01 | 0.00 | Open |
| WM114 | -0.27 | 0.01 | 0.00 | Open |
| WM115 | -0.34 | 0.01 | 0.00 | Open |
| WM116 | -0.38 | 0.01 | 0.00 | Open |
| WM117 | -0.38 | 0.01 | 0.00 | Open |
| WM118 | -0.38 | 0.01 | 0.00 | Open |
| WM119 | -0.38 | 0.01 | 0.00 | Open |
| WM120 | 0.11  | 0.00 | 0.00 | Open |
| WM121 | 0.11  | 0.00 | 0.00 | Open |
| WM122 | 0.11  | 0.00 | 0.00 | Open |
| WM123 | 0.11  | 0.00 | 0.00 | Open |
| WM124 | 0.11  | 0.00 | 0.00 | Open |
| WM125 | 0.12  | 0.00 | 0.00 | Open |
| WM126 | 0.12  | 0.00 | 0.00 | Open |
| WM127 | 0.12  | 0.00 | 0.00 | Open |
| WM128 | 0.12  | 0.00 | 0.00 | Open |
| WM129 | 0.12  | 0.00 | 0.00 | Open |
| WM130 | -0.07 | 0.00 | 0.00 | Open |
| WM131 | -0.07 | 0.00 | 0.00 | Open |
| WM132 | -0.02 | 0.00 | 0.00 | Open |
| WM133 | 0.30  | 0.01 | 0.00 | Open |
| WM134 | 0.30  | 0.01 | 0.00 | Open |
| WM135 | 0.28  | 0.01 | 0.00 | Open |
| WM136 | 0.28  | 0.01 | 0.00 | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -0.34    | 0.01         | 0.00               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |       |      |         |           |
|-------|-------|------|---------|-----------|
| WM149 | 0.04  | 0.00 | 0.00    | Open      |
| WM150 | 0.04  | 0.00 | 0.00    | Open      |
| WM151 | 0.04  | 0.00 | 0.00    | Open      |
| WM152 | 0.19  | 0.01 | 0.00    | Open      |
| WM153 | 0.11  | 0.01 | 0.00    | Open      |
| WM154 | 0.07  | 0.00 | 0.00    | Open      |
| WM155 | 0.07  | 0.00 | 0.00    | Open      |
| WM156 | 0.07  | 0.00 | 0.00    | Open      |
| WM157 | 0.04  | 0.00 | 0.00    | Open      |
| WM158 | -0.08 | 0.00 | 0.00    | Open      |
| WM159 | -0.08 | 0.00 | 0.00    | Open      |
| WM160 | -0.08 | 0.00 | 0.00    | Open      |
| WM161 | 0.00  | 0.00 | 0.00    | Open      |
| WM162 | 0.00  | 0.00 | 0.00    | Open      |
| WM163 | 0.00  | 0.00 | 0.00    | Open      |
| WM164 | 0.63  | 0.02 | 0.01    | Open      |
| WM165 | -0.38 | 0.01 | 0.00    | Open      |
| 1     | 0.38  | 0.00 | -149.05 | Open Pump |
| 2     | 0.63  | 0.00 | -149.05 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 149.05 | 53.68      | 0.00    |
| TEE-BEND24 | 0.00       | 149.05 | 53.68      | 0.00    |
| TEE-BEND23 | 0.00       | 149.05 | 53.61      | 0.00    |
| TEE-BEND43 | 0.00       | 149.05 | 53.58      | 0.00    |
| TEE-BEND44 | 0.00       | 149.05 | 53.50      | 0.00    |
| CHAMBER2   | 0.00       | 149.05 | 53.48      | 0.00    |
| TEE-BEND18 | 0.00       | 149.05 | 53.37      | 0.00    |
| TEE-BEND46 | 0.00       | 149.05 | 53.25      | 0.00    |
| TEE-BEND53 | 0.00       | 149.05 | 53.18      | 0.00    |
| TEE-BEND47 | 0.00       | 149.05 | 53.18      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 149.05 | 53.17      | 0.00    |
| CRU-1      | 0.23       | 149.05 | 53.12      | 0.00    |
| TEE-BEND52 | 0.00       | 149.05 | 53.10      | 0.00    |
| HYD3       | 0.00       | 149.05 | 53.08      | 0.00    |
| TEE-BEND45 | 0.00       | 149.05 | 53.07      | 0.00    |
| TEE-BEND16 | 0.00       | 149.05 | 53.05      | 0.00    |
| HYD2       | 0.00       | 149.05 | 53.04      | 0.00    |
| HYD7       | 0.00       | 149.05 | 53.02      | 0.00    |
| TEE-BEND51 | 0.00       | 149.05 | 53.02      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND34 | 0.00 | 149.05 | 52.98 | 0.00 |
| TEE-BEND36 | 0.00 | 149.05 | 52.98 | 0.00 |
| TEE-BEND55 | 0.00 | 149.05 | 52.98 | 0.00 |
| TEE-BEND35 | 0.00 | 149.05 | 52.98 | 0.00 |
| HYD1       | 0.00 | 149.05 | 52.97 | 0.00 |
| HYD6       | 0.00 | 149.05 | 52.96 | 0.00 |
| TEE-BEND37 | 0.00 | 149.05 | 52.94 | 0.00 |
| TEE-BEND50 | 0.00 | 149.05 | 52.93 | 0.00 |
| TEE-BEND33 | 0.00 | 149.05 | 52.93 | 0.00 |
| TEE-BEND17 | 0.00 | 149.05 | 52.89 | 0.00 |
| TEE-BEND21 | 0.00 | 149.05 | 52.89 | 0.00 |
| TEE-BEND49 | 0.00 | 149.05 | 52.89 | 0.00 |
| TEE-BEND48 | 0.00 | 149.05 | 52.88 | 0.00 |
| TEE-BEND12 | 0.00 | 149.05 | 52.86 | 0.00 |
| TEE-BEND40 | 0.00 | 149.05 | 52.86 | 0.00 |
| TEE-BEND20 | 0.00 | 149.05 | 52.85 | 0.00 |
| TEE-BEND38 | 0.00 | 149.05 | 52.85 | 0.00 |
| TEE-BEND57 | 0.00 | 149.05 | 52.85 | 0.00 |
| TEE-BEND56 | 0.00 | 149.05 | 52.84 | 0.00 |
| TEE-BEND58 | 0.00 | 149.05 | 52.82 | 0.00 |
| TEE-BEND32 | 0.00 | 149.05 | 52.81 | 0.00 |
| TEE-BEND31 | 0.00 | 149.05 | 52.78 | 0.00 |
| TEE-BEND30 | 0.00 | 149.05 | 52.77 | 0.00 |
| HYD5       | 0.00 | 149.05 | 52.75 | 0.00 |
| CRU-8      | 0.04 | 149.05 | 52.70 | 0.00 |
| TEE-BEND28 | 0.00 | 149.05 | 52.70 | 0.00 |
| CRU-10     | 0.04 | 149.05 | 52.70 | 0.00 |
| TEE-BEND39 | 0.00 | 149.05 | 52.68 | 0.00 |
| TEE-BEND26 | 0.00 | 149.05 | 52.67 | 0.00 |
| TEE-BEND15 | 0.00 | 149.05 | 52.66 | 0.00 |
| TEE-BEND29 | 0.00 | 149.05 | 52.64 | 0.00 |
| TEE-BEND13 | 0.00 | 149.05 | 52.64 | 0.00 |
| TEE-BEND59 | 0.00 | 149.05 | 52.64 | 0.00 |
| TEE-BEND27 | 0.00 | 149.05 | 52.61 | 0.00 |
| TEE-BEND41 | 0.00 | 149.05 | 52.60 | 0.00 |
| TEE-BEND42 | 0.00 | 149.05 | 52.59 | 0.00 |
| CRU-6      | 0.11 | 149.05 | 52.56 | 0.00 |
| CRU-9      | 0.07 | 149.05 | 52.55 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 149.05 | 52.55      | 0.00    |
| CRU-4     | 0.11       | 149.05 | 52.55      | 0.00    |
| CRU-3     | 0.17       | 149.05 | 52.55      | 0.00    |
| TEE-BEND6 | 0.00       | 149.05 | 52.40      | 0.00    |
| CRU-5     | 0.02       | 149.05 | 52.31      | 0.00    |
| TEE-BEND4 | 0.00       | 149.05 | 52.30      | 0.00    |

|           |       |        |       |                |
|-----------|-------|--------|-------|----------------|
| TEE-BEND3 | 0.00  | 149.05 | 52.28 | 0.00           |
| TEE-BEND2 | 0.00  | 149.05 | 52.28 | 0.00           |
| TEE-BEND1 | 0.00  | 149.05 | 52.25 | 0.00           |
| CHAMBER1  | 0.00  | 149.05 | 52.23 | 0.00           |
| R1        | -0.38 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -0.63 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 0.63     | 0.02         | 0.01               | Open   |
| WM100   | 0.52     | 0.02         | 0.00               | Open   |
| WM101   | 0.40     | 0.01         | 0.00               | Open   |
| WM102   | 0.40     | 0.01         | 0.00               | Open   |
| WM103   | 0.10     | 0.00         | 0.00               | Open   |
| WM104   | 0.10     | 0.00         | 0.00               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -0.27    | 0.01         | 0.00               | Open   |
| WM113   | -0.27    | 0.01         | 0.00               | Open   |
| WM114   | -0.27    | 0.01         | 0.00               | Open   |
| WM115   | -0.34    | 0.01         | 0.00               | Open   |
| WM116   | -0.38    | 0.01         | 0.00               | Open   |
| WM117   | -0.38    | 0.01         | 0.00               | Open   |
| WM118   | -0.38    | 0.01         | 0.00               | Open   |
| WM119   | -0.38    | 0.01         | 0.00               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 0.12     | 0.00         | 0.00               | Open   |
| WM126   | 0.12     | 0.00         | 0.00               | Open   |
| WM127   | 0.12     | 0.00         | 0.00               | Open   |



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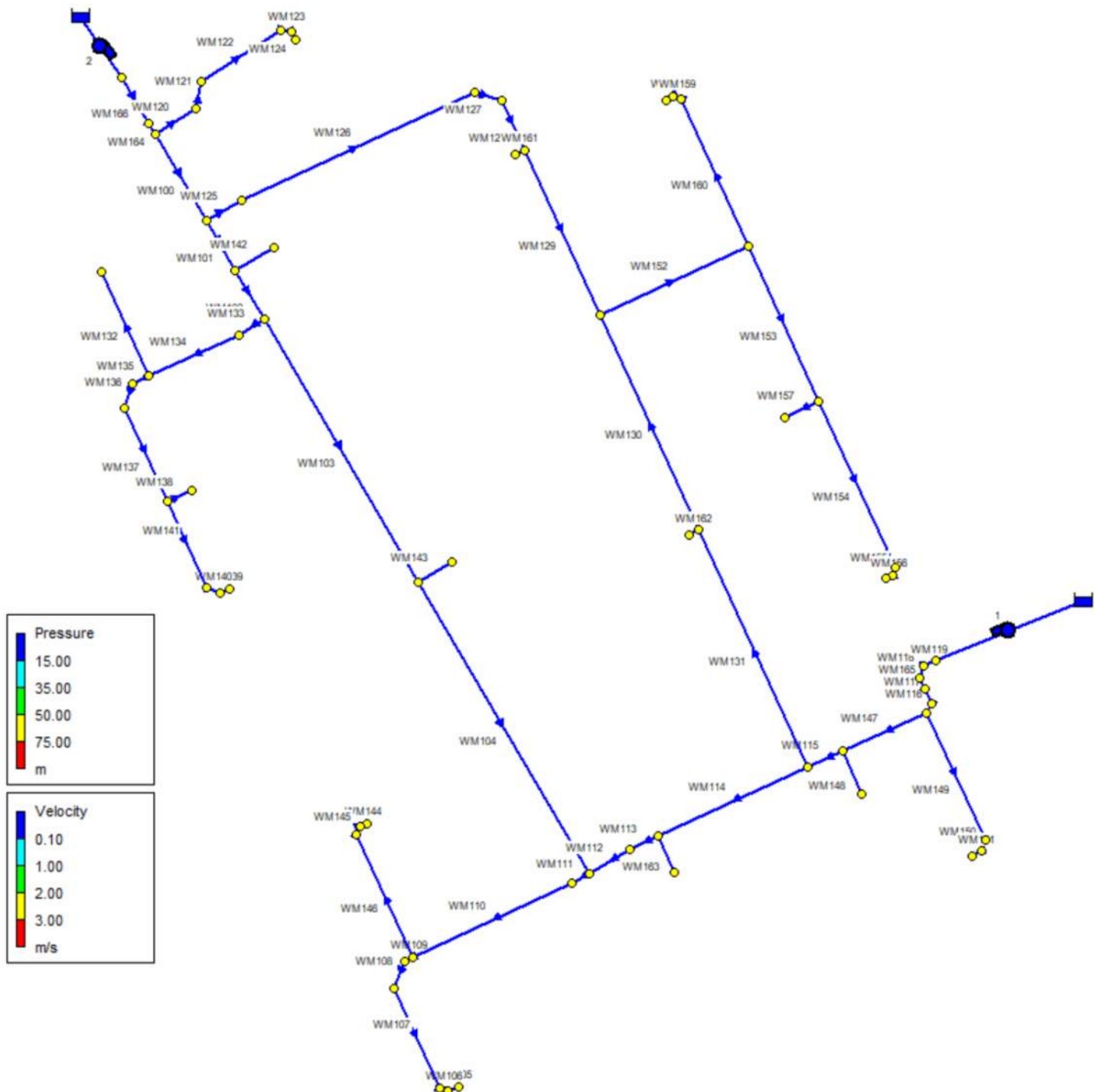
Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | 0.12     | 0.00         | 0.00               | Open   |
| WM129   | 0.12     | 0.00         | 0.00               | Open   |
| WM130   | -0.07    | 0.00         | 0.00               | Open   |

|       |       |      |         |           |
|-------|-------|------|---------|-----------|
| WM131 | -0.07 | 0.00 | 0.00    | Open      |
| WM132 | -0.02 | 0.00 | 0.00    | Open      |
| WM133 | 0.30  | 0.01 | 0.00    | Open      |
| WM134 | 0.30  | 0.01 | 0.00    | Open      |
| WM135 | 0.28  | 0.01 | 0.00    | Open      |
| WM136 | 0.28  | 0.01 | 0.00    | Open      |
| WM137 | 0.28  | 0.01 | 0.00    | Open      |
| WM138 | 0.11  | 0.01 | 0.00    | Open      |
| WM139 | -0.17 | 0.01 | 0.00    | Open      |
| WM140 | -0.17 | 0.01 | 0.00    | Open      |
| WM141 | -0.17 | 0.01 | 0.00    | Open      |
| WM142 | 0.00  | 0.00 | 0.00    | Open      |
| WM143 | 0.00  | 0.00 | 0.00    | Open      |
| WM144 | -0.14 | 0.00 | 0.01    | Open      |
| WM145 | -0.14 | 0.00 | 0.00    | Open      |
| WM146 | -0.14 | 0.00 | 0.00    | Open      |
| WM147 | -0.34 | 0.01 | 0.00    | Open      |
| WM148 | 0.00  | 0.00 | 0.00    | Open      |
| WM149 | 0.04  | 0.00 | 0.00    | Open      |
| WM150 | 0.04  | 0.00 | 0.00    | Open      |
| WM151 | 0.04  | 0.00 | 0.00    | Open      |
| WM152 | 0.19  | 0.01 | 0.00    | Open      |
| WM153 | 0.11  | 0.01 | 0.00    | Open      |
| WM154 | 0.07  | 0.00 | 0.00    | Open      |
| WM155 | 0.07  | 0.00 | 0.00    | Open      |
| WM156 | 0.07  | 0.00 | 0.01    | Open      |
| WM157 | 0.04  | 0.00 | 0.00    | Open      |
| WM158 | -0.08 | 0.00 | 0.00    | Open      |
| WM159 | -0.08 | 0.00 | 0.00    | Open      |
| WM160 | -0.08 | 0.00 | 0.00    | Open      |
| WM161 | 0.00  | 0.00 | 0.00    | Open      |
| WM162 | 0.00  | 0.00 | 0.00    | Open      |
| WM163 | 0.00  | 0.00 | 0.00    | Open      |
| WM164 | 0.63  | 0.02 | 0.01    | Open      |
| WM165 | -0.38 | 0.01 | 0.00    | Open      |
| 1     | 0.38  | 0.00 | -149.05 | Open Pump |
| 2     | 0.63  | 0.00 | -149.05 | Open Pump |



## EPANET Model Schematic Maximum Peak Demand



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                *
*****
```

Input File: 263560\_Proposed Conditions - Peak Hour Demand+pumps.net

# Link - Node Table:

| Link<br>ID | Start<br>Node | End<br>Node | Length<br>m | Diameter<br>mm |
|------------|---------------|-------------|-------------|----------------|
| WM166      | TEE-BEND3     | CHAMBER1    | 13.008      | 200            |
| WM100      | TEE-BEND2     | TEE-BEND59  | 24.428      | 200            |
| WM101      | TEE-BEND59    | TEE-BEND58  | 14.105      | 200            |
| WM102      | TEE-BEND58    | TEE-BEND57  | 14.07       | 200            |
| WM103      | TEE-BEND57    | TEE-BEND56  | 74.594      | 200            |
| WM104      | TEE-BEND56    | TEE-BEND55  | 83.148      | 200            |
| WM105      | CRU-1         | TEE-BEND53  | 2.742       | 200            |
| WM106      | TEE-BEND53    | TEE-BEND52  | 2.121       | 200            |
| WM107      | TEE-BEND52    | TEE-BEND51  | 27.06       | 200            |
| WM108      | TEE-BEND51    | TEE-BEND50  | 7.071       | 200            |
| WM109      | TEE-BEND50    | TEE-BEND49  | 2.273       | 200            |
| WM110      | TEE-BEND49    | TEE-BEND48  | 43.09       | 200            |
| WM111      | TEE-BEND48    | TEE-BEND55  | 5.039       | 200            |
| WM112      | TEE-BEND55    | TEE-BEND47  | 11.407      | 200            |
| WM113      | TEE-BEND47    | TEE-BEND46  | 7.671       | 200            |
| WM114      | TEE-BEND46    | TEE-BEND45  | 40.486      | 200            |
| WM115      | TEE-BEND45    | TEE-BEND22  | 9.344       | 200            |
| WM116      | TEE-BEND44    | TEE-BEND43  | 2.594       | 200            |
| WM117      | TEE-BEND43    | CHAMBER2    | 4.079       | 200            |
| WM118      | TEE-BEND42    | TEE-BEND41  | 3.05        | 200            |
| WM119      | TEE-BEND41    | TEE-BEND40  | 3.256       | 200            |
| WM120      | TEE-BEND2     | TEE-BEND6   | 11.711      | 200            |
| WM121      | TEE-BEND6     | TEE-BEND1   | 6.787       | 200            |
| WM122      | TEE-BEND1     | TEE-BEND4   | 23.393      | 200            |
| WM123      | TEE-BEND4     | TEE-BEND39  | 2.505       | 200            |
| WM124      | TEE-BEND39    | CRU-6       | 2.125       | 200            |
| WM125      | TEE-BEND59    | TEE-BEND38  | 10.059      | 200            |
| WM126      | TEE-BEND38    | TEE-BEND37  | 63.282      | 200            |
| WM127      | TEE-BEND37    | TEE-BEND36  | 6.851       | 200            |
| WM128      | TEE-BEND36    | TEE-BEND35  | 13.346      | 200            |
| WM129      | TEE-BEND35    | TEE-BEND34  | 44.459      | 200            |
| WM130      | TEE-BEND34    | TEE-BEND33  | 58.093      | 200            |
| WM131      | TEE-BEND33    | TEE-BEND45  | 64.037      | 200            |
| WM132      | CRU-5         | TEE-BEND32  | 28.008      | 150            |
| WM133      | TEE-BEND57    | TEE-BEND31  | 7.36        | 200            |

|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 1.28    | 1.28    | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 2.18    | 2.18    | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.25       | 148.86 | 53.49      | 0.00    |
| TEE-BEND24 | 0.00       | 148.86 | 53.49      | 0.00    |
| TEE-BEND23 | 0.00       | 148.86 | 53.42      | 0.00    |
| TEE-BEND43 | 0.00       | 148.86 | 53.39      | 0.00    |
| TEE-BEND44 | 0.00       | 148.86 | 53.31      | 0.00    |
| CHAMBER2   | 0.00       | 148.86 | 53.29      | 0.00    |
| TEE-BEND18 | 0.00       | 148.86 | 53.18      | 0.00    |
| TEE-BEND46 | 0.00       | 148.86 | 53.06      | 0.00    |
| TEE-BEND53 | 0.00       | 148.86 | 52.99      | 0.00    |
| TEE-BEND47 | 0.00       | 148.86 | 52.99      | 0.00    |
| TEE-BEND22 | 0.00       | 148.86 | 52.98      | 0.00    |
| CRU-1      | 0.41       | 148.86 | 52.93      | 0.00    |
| TEE-BEND52 | 0.00       | 148.86 | 52.91      | 0.00    |
| HYD3       | 0.00       | 148.86 | 52.89      | 0.00    |
| TEE-BEND45 | 0.00       | 148.86 | 52.88      | 0.00    |
| TEE-BEND16 | 0.00       | 148.86 | 52.86      | 0.00    |
| HYD2       | 0.00       | 148.86 | 52.85      | 0.00    |
| HYD7       | 0.00       | 148.86 | 52.83      | 0.00    |
| TEE-BEND51 | 0.00       | 148.86 | 52.82      | 0.00    |
| TEE-BEND34 | 0.00       | 148.86 | 52.80      | 0.00    |
| TEE-BEND36 | 0.00       | 148.86 | 52.79      | 0.00    |
| TEE-BEND55 | 0.00       | 148.86 | 52.79      | 0.00    |
| TEE-BEND35 | 0.00       | 148.86 | 52.79      | 0.00    |
| HYD1       | 0.00       | 148.86 | 52.78      | 0.00    |
| HYD6       | 0.00       | 148.86 | 52.77      | 0.00    |
| TEE-BEND37 | 0.00       | 148.86 | 52.75      | 0.00    |
| TEE-BEND50 | 0.00       | 148.86 | 52.74      | 0.00    |
| TEE-BEND33 | 0.00       | 148.86 | 52.74      | 0.00    |
| TEE-BEND17 | 0.00       | 148.86 | 52.70      | 0.00    |
| TEE-BEND21 | 0.00       | 148.86 | 52.70      | 0.00    |
| TEE-BEND49 | 0.00       | 148.86 | 52.70      | 0.00    |
| TEE-BEND48 | 0.00       | 148.86 | 52.69      | 0.00    |
| TEE-BEND12 | 0.00       | 148.86 | 52.67      | 0.00    |
| TEE-BEND40 | 0.00       | 148.86 | 52.67      | 0.00    |
| TEE-BEND20 | 0.00       | 148.86 | 52.66      | 0.00    |
| TEE-BEND38 | 0.00       | 148.86 | 52.66      | 0.00    |
| TEE-BEND57 | 0.00       | 148.86 | 52.66      | 0.00    |
| TEE-BEND56 | 0.00       | 148.86 | 52.65      | 0.00    |
| TEE-BEND58 | 0.00       | 148.86 | 52.63      | 0.00    |
| TEE-BEND32 | 0.00       | 148.86 | 52.62      | 0.00    |
| TEE-BEND31 | 0.00       | 148.86 | 52.59      | 0.00    |
| TEE-BEND30 | 0.00       | 148.86 | 52.58      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 148.86 | 52.51 | 0.00 |
| CRU-8      | 0.06 | 148.86 | 52.51 | 0.00 |
| TEE-BEND28 | 0.00 | 148.86 | 52.51 | 0.00 |
| CRU-10     | 0.07 | 148.86 | 52.51 | 0.00 |
| TEE-BEND39 | 0.00 | 148.86 | 52.49 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 148.86 | 52.48      | 0.00           |
| TEE-BEND15 | 0.00       | 148.86 | 52.47      | 0.00           |
| TEE-BEND29 | 0.00       | 148.86 | 52.45      | 0.00           |
| TEE-BEND13 | 0.00       | 148.86 | 52.45      | 0.00           |
| TEE-BEND59 | 0.00       | 148.86 | 52.45      | 0.00           |
| TEE-BEND27 | 0.00       | 148.86 | 52.42      | 0.00           |
| TEE-BEND41 | 0.00       | 148.86 | 52.41      | 0.00           |
| TEE-BEND42 | 0.00       | 148.86 | 52.40      | 0.00           |
| CRU-6      | 0.20       | 148.86 | 52.37      | 0.00           |
| CRU-9      | 0.12       | 148.86 | 52.36      | 0.00           |
| CRU-7      | 0.15       | 148.86 | 52.36      | 0.00           |
| CRU-4      | 0.19       | 148.86 | 52.36      | 0.00           |
| CRU-3      | 0.30       | 148.86 | 52.36      | 0.00           |
| TEE-BEND6  | 0.00       | 148.86 | 52.21      | 0.00           |
| CRU-5      | 0.03       | 148.86 | 52.12      | 0.00           |
| TEE-BEND4  | 0.00       | 148.86 | 52.11      | 0.00           |
| TEE-BEND3  | 0.00       | 148.86 | 52.11      | 0.00           |
| TEE-BEND2  | 0.00       | 148.86 | 52.09      | 0.00           |
| TEE-BEND1  | 0.00       | 148.86 | 52.06      | 0.00           |
| CHAMBER1   | 0.00       | 148.86 | 52.04      | 0.00           |
| R1         | -0.66      | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -1.12      | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 1.12     | 0.04         | 0.02          | Open   |
| WM100   | 0.92     | 0.03         | 0.01          | Open   |
| WM101   | 0.70     | 0.02         | 0.01          | Open   |
| WM102   | 0.70     | 0.02         | 0.01          | Open   |
| WM103   | 0.18     | 0.01         | 0.00          | Open   |
| WM104   | 0.18     | 0.01         | 0.00          | Open   |
| WM105   | -0.41    | 0.01         | 0.00          | Open   |
| WM106   | -0.41    | 0.01         | 0.00          | Open   |
| WM107   | -0.41    | 0.01         | 0.00          | Open   |
| WM108   | -0.41    | 0.01         | 0.00          | Open   |
| WM109   | -0.41    | 0.01         | 0.00          | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM110 | -0.66 | 0.02 | 0.00 | Open |
| WM111 | -0.66 | 0.02 | 0.01 | Open |
| WM112 | -0.48 | 0.02 | 0.00 | Open |
| WM113 | -0.48 | 0.02 | 0.00 | Open |
| WM114 | -0.48 | 0.02 | 0.00 | Open |
| WM115 | -0.59 | 0.02 | 0.00 | Open |
| WM116 | -0.66 | 0.02 | 0.01 | Open |
| WM117 | -0.66 | 0.02 | 0.00 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -0.66    | 0.02         | 0.01               | Open   |
| WM119   | -0.66    | 0.02         | 0.01               | Open   |
| WM120   | 0.20     | 0.01         | 0.00               | Open   |
| WM121   | 0.20     | 0.01         | 0.00               | Open   |
| WM122   | 0.20     | 0.01         | 0.00               | Open   |
| WM123   | 0.20     | 0.01         | 0.00               | Open   |
| WM124   | 0.20     | 0.01         | 0.00               | Open   |
| WM125   | 0.22     | 0.01         | 0.00               | Open   |
| WM126   | 0.22     | 0.01         | 0.00               | Open   |
| WM127   | 0.22     | 0.01         | 0.00               | Open   |
| WM128   | 0.22     | 0.01         | 0.00               | Open   |
| WM129   | 0.22     | 0.01         | 0.00               | Open   |
| WM130   | -0.11    | 0.00         | 0.00               | Open   |
| WM131   | -0.11    | 0.00         | 0.00               | Open   |
| WM132   | -0.03    | 0.00         | 0.00               | Open   |
| WM133   | 0.52     | 0.02         | 0.00               | Open   |
| WM134   | 0.52     | 0.02         | 0.00               | Open   |
| WM135   | 0.49     | 0.02         | 0.00               | Open   |
| WM136   | 0.49     | 0.02         | 0.00               | Open   |
| WM137   | 0.49     | 0.02         | 0.00               | Open   |
| WM138   | 0.19     | 0.01         | 0.00               | Open   |
| WM139   | -0.30    | 0.01         | 0.00               | Open   |
| WM140   | -0.30    | 0.01         | 0.00               | Open   |
| WM141   | -0.30    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.25    | 0.01         | 0.00               | Open   |
| WM145   | -0.25    | 0.01         | 0.00               | Open   |
| WM146   | -0.25    | 0.01         | 0.00               | Open   |
| WM147   | -0.59    | 0.02         | 0.00               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.07     | 0.00         | 0.00               | Open   |
| WM150   | 0.07     | 0.00         | 0.00               | Open   |
| WM151   | 0.07     | 0.00         | 0.00               | Open   |
| WM152   | 0.33     | 0.02         | 0.01               | Open   |
| WM153   | 0.18     | 0.01         | 0.00               | Open   |



|       |       |      |      |      |
|-------|-------|------|------|------|
| WM154 | 0.12  | 0.01 | 0.00 | Open |
| WM155 | 0.12  | 0.01 | 0.00 | Open |
| WM156 | 0.12  | 0.01 | 0.00 | Open |
| WM157 | 0.06  | 0.00 | 0.00 | Open |
| WM158 | -0.15 | 0.01 | 0.00 | Open |
| WM159 | -0.15 | 0.01 | 0.00 | Open |
| WM160 | -0.15 | 0.01 | 0.00 | Open |
| WM161 | 0.00  | 0.00 | 0.00 | Open |
| WM162 | 0.00  | 0.00 | 0.00 | Open |
| WM163 | 0.00  | 0.00 | 0.00 | Open |
| WM164 | 1.12  | 0.04 | 0.02 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -0.66    | 0.02         | 0.01               | Open      |
| 1       | 0.66     | 0.00         | -148.86            | Open Pump |
| 2       | 1.12     | 0.00         | -148.86            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.25       | 148.86 | 53.49      | 0.00    |
| TEE-BEND24 | 0.00       | 148.86 | 53.49      | 0.00    |
| TEE-BEND23 | 0.00       | 148.86 | 53.42      | 0.00    |
| TEE-BEND43 | 0.00       | 148.86 | 53.39      | 0.00    |
| TEE-BEND44 | 0.00       | 148.86 | 53.31      | 0.00    |
| CHAMBER2   | 0.00       | 148.86 | 53.29      | 0.00    |
| TEE-BEND18 | 0.00       | 148.86 | 53.18      | 0.00    |
| TEE-BEND46 | 0.00       | 148.86 | 53.06      | 0.00    |
| TEE-BEND53 | 0.00       | 148.86 | 52.99      | 0.00    |
| TEE-BEND47 | 0.00       | 148.86 | 52.99      | 0.00    |
| TEE-BEND22 | 0.00       | 148.86 | 52.98      | 0.00    |
| CRU-1      | 0.41       | 148.86 | 52.93      | 0.00    |
| TEE-BEND52 | 0.00       | 148.86 | 52.91      | 0.00    |
| HYD3       | 0.00       | 148.86 | 52.89      | 0.00    |
| TEE-BEND45 | 0.00       | 148.86 | 52.88      | 0.00    |
| TEE-BEND16 | 0.00       | 148.86 | 52.86      | 0.00    |
| HYD2       | 0.00       | 148.86 | 52.85      | 0.00    |
| HYD7       | 0.00       | 148.86 | 52.83      | 0.00    |
| TEE-BEND51 | 0.00       | 148.86 | 52.82      | 0.00    |
| TEE-BEND34 | 0.00       | 148.86 | 52.80      | 0.00    |
| TEE-BEND36 | 0.00       | 148.86 | 52.79      | 0.00    |
| TEE-BEND55 | 0.00       | 148.86 | 52.79      | 0.00    |
| TEE-BEND35 | 0.00       | 148.86 | 52.79      | 0.00    |
| HYD1       | 0.00       | 148.86 | 52.78      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 148.86 | 52.75 | 0.00 |
| TEE-BEND37 | 0.00 | 148.86 | 52.75 | 0.00 |
| TEE-BEND50 | 0.00 | 148.86 | 52.74 | 0.00 |
| TEE-BEND33 | 0.00 | 148.86 | 52.74 | 0.00 |
| TEE-BEND17 | 0.00 | 148.86 | 52.70 | 0.00 |
| TEE-BEND21 | 0.00 | 148.86 | 52.70 | 0.00 |
| TEE-BEND49 | 0.00 | 148.86 | 52.70 | 0.00 |
| TEE-BEND48 | 0.00 | 148.86 | 52.69 | 0.00 |
| TEE-BEND12 | 0.00 | 148.86 | 52.67 | 0.00 |
| TEE-BEND40 | 0.00 | 148.86 | 52.67 | 0.00 |
| TEE-BEND20 | 0.00 | 148.86 | 52.66 | 0.00 |
| TEE-BEND38 | 0.00 | 148.86 | 52.66 | 0.00 |
| TEE-BEND57 | 0.00 | 148.86 | 52.66 | 0.00 |
| TEE-BEND56 | 0.00 | 148.86 | 52.65 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 148.86 | 52.63      | 0.00           |
| TEE-BEND32 | 0.00       | 148.86 | 52.62      | 0.00           |
| TEE-BEND31 | 0.00       | 148.86 | 52.59      | 0.00           |
| TEE-BEND30 | 0.00       | 148.86 | 52.58      | 0.00           |
| HYD5       | 0.00       | 148.86 | 52.56      | 0.00           |
| CRU-8      | 0.06       | 148.86 | 52.51      | 0.00           |
| TEE-BEND28 | 0.00       | 148.86 | 52.51      | 0.00           |
| CRU-10     | 0.07       | 148.86 | 52.51      | 0.00           |
| TEE-BEND39 | 0.00       | 148.86 | 52.49      | 0.00           |
| TEE-BEND26 | 0.00       | 148.86 | 52.48      | 0.00           |
| TEE-BEND15 | 0.00       | 148.86 | 52.47      | 0.00           |
| TEE-BEND29 | 0.00       | 148.86 | 52.45      | 0.00           |
| TEE-BEND13 | 0.00       | 148.86 | 52.45      | 0.00           |
| TEE-BEND59 | 0.00       | 148.86 | 52.45      | 0.00           |
| TEE-BEND27 | 0.00       | 148.86 | 52.42      | 0.00           |
| TEE-BEND41 | 0.00       | 148.86 | 52.41      | 0.00           |
| TEE-BEND42 | 0.00       | 148.86 | 52.40      | 0.00           |
| CRU-6      | 0.20       | 148.86 | 52.37      | 0.00           |
| CRU-9      | 0.12       | 148.86 | 52.36      | 0.00           |
| CRU-7      | 0.15       | 148.86 | 52.36      | 0.00           |
| CRU-4      | 0.19       | 148.86 | 52.36      | 0.00           |
| CRU-3      | 0.30       | 148.86 | 52.36      | 0.00           |
| TEE-BEND6  | 0.00       | 148.86 | 52.21      | 0.00           |
| CRU-5      | 0.03       | 148.86 | 52.12      | 0.00           |
| TEE-BEND4  | 0.00       | 148.86 | 52.11      | 0.00           |
| TEE-BEND3  | 0.00       | 148.86 | 52.11      | 0.00           |
| TEE-BEND2  | 0.00       | 148.86 | 52.09      | 0.00           |
| TEE-BEND1  | 0.00       | 148.86 | 52.06      | 0.00           |
| CHAMBER1   | 0.00       | 148.86 | 52.04      | 0.00           |
| R1         | -0.66      | 0.00   | 0.00       | 0.00 Reservoir |

R2 -1.12 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 1.12     | 0.04         | 0.02               | Open   |
| WM100   | 0.92     | 0.03         | 0.01               | Open   |
| WM101   | 0.70     | 0.02         | 0.01               | Open   |
| WM102   | 0.70     | 0.02         | 0.01               | Open   |
| WM103   | 0.18     | 0.01         | 0.00               | Open   |
| WM104   | 0.18     | 0.01         | 0.00               | Open   |
| WM105   | -0.41    | 0.01         | 0.00               | Open   |
| WM106   | -0.41    | 0.01         | 0.00               | Open   |
| WM107   | -0.41    | 0.01         | 0.00               | Open   |
| WM108   | -0.41    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.41    | 0.01         | 0.00               | Open   |
| WM110   | -0.66    | 0.02         | 0.01               | Open   |
| WM111   | -0.66    | 0.02         | 0.01               | Open   |
| WM112   | -0.48    | 0.02         | 0.00               | Open   |
| WM113   | -0.48    | 0.02         | 0.00               | Open   |
| WM114   | -0.48    | 0.02         | 0.00               | Open   |
| WM115   | -0.59    | 0.02         | 0.00               | Open   |
| WM116   | -0.66    | 0.02         | 0.00               | Open   |
| WM117   | -0.66    | 0.02         | 0.01               | Open   |
| WM118   | -0.66    | 0.02         | 0.01               | Open   |
| WM119   | -0.66    | 0.02         | 0.01               | Open   |
| WM120   | 0.20     | 0.01         | 0.00               | Open   |
| WM121   | 0.20     | 0.01         | 0.00               | Open   |
| WM122   | 0.20     | 0.01         | 0.00               | Open   |
| WM123   | 0.20     | 0.01         | 0.00               | Open   |
| WM124   | 0.20     | 0.01         | 0.00               | Open   |
| WM125   | 0.22     | 0.01         | 0.00               | Open   |
| WM126   | 0.22     | 0.01         | 0.00               | Open   |
| WM127   | 0.22     | 0.01         | 0.00               | Open   |
| WM128   | 0.22     | 0.01         | 0.00               | Open   |
| WM129   | 0.22     | 0.01         | 0.00               | Open   |
| WM130   | -0.11    | 0.00         | 0.00               | Open   |
| WM131   | -0.11    | 0.00         | 0.00               | Open   |
| WM132   | -0.03    | 0.00         | 0.00               | Open   |
| WM133   | 0.52     | 0.02         | 0.00               | Open   |
| WM134   | 0.52     | 0.02         | 0.00               | Open   |
| WM135   | 0.49     | 0.02         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM136 | 0.49  | 0.02 | 0.00 | Open |
| WM137 | 0.49  | 0.02 | 0.00 | Open |
| WM138 | 0.19  | 0.01 | 0.00 | Open |
| WM139 | -0.30 | 0.01 | 0.00 | Open |
| WM140 | -0.30 | 0.01 | 0.00 | Open |
| WM141 | -0.30 | 0.01 | 0.00 | Open |
| WM142 | 0.00  | 0.00 | 0.00 | Open |
| WM143 | 0.00  | 0.00 | 0.00 | Open |
| WM144 | -0.25 | 0.01 | 0.00 | Open |
| WM145 | -0.25 | 0.01 | 0.00 | Open |
| WM146 | -0.25 | 0.01 | 0.00 | Open |
| WM147 | -0.59 | 0.02 | 0.00 | Open |
| WM148 | 0.00  | 0.00 | 0.00 | Open |
| WM149 | 0.07  | 0.00 | 0.00 | Open |
| WM150 | 0.07  | 0.00 | 0.00 | Open |
| WM151 | 0.07  | 0.00 | 0.00 | Open |
| WM152 | 0.33  | 0.02 | 0.01 | Open |
| WM153 | 0.18  | 0.01 | 0.00 | Open |
| WM154 | 0.12  | 0.01 | 0.00 | Open |
| WM155 | 0.12  | 0.01 | 0.00 | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.12     | 0.01         | 0.00               | Open      |
| WM157   | 0.06     | 0.00         | 0.00               | Open      |
| WM158   | -0.15    | 0.01         | 0.00               | Open      |
| WM159   | -0.15    | 0.01         | 0.00               | Open      |
| WM160   | -0.15    | 0.01         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 1.12     | 0.04         | 0.01               | Open      |
| WM165   | -0.66    | 0.02         | 0.01               | Open      |
| 1       | 0.66     | 0.00         | -148.86            | Open Pump |
| 2       | 1.12     | 0.00         | -148.86            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.25       | 148.86 | 53.49      | 0.00    |
| TEE-BEND24 | 0.00       | 148.86 | 53.49      | 0.00    |
| TEE-BEND23 | 0.00       | 148.86 | 53.42      | 0.00    |
| TEE-BEND43 | 0.00       | 148.86 | 53.39      | 0.00    |
| TEE-BEND44 | 0.00       | 148.86 | 53.31      | 0.00    |
| CHAMBER2   | 0.00       | 148.86 | 53.29      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 148.86 | 53.06 | 0.00 |
| TEE-BEND46 | 0.00 | 148.86 | 53.06 | 0.00 |
| TEE-BEND53 | 0.00 | 148.86 | 52.99 | 0.00 |
| TEE-BEND47 | 0.00 | 148.86 | 52.99 | 0.00 |
| TEE-BEND22 | 0.00 | 148.86 | 52.98 | 0.00 |
| CRU-1      | 0.41 | 148.86 | 52.93 | 0.00 |
| TEE-BEND52 | 0.00 | 148.86 | 52.91 | 0.00 |
| HYD3       | 0.00 | 148.86 | 52.89 | 0.00 |
| TEE-BEND45 | 0.00 | 148.86 | 52.88 | 0.00 |
| TEE-BEND16 | 0.00 | 148.86 | 52.86 | 0.00 |
| HYD2       | 0.00 | 148.86 | 52.85 | 0.00 |
| HYD7       | 0.00 | 148.86 | 52.83 | 0.00 |
| TEE-BEND51 | 0.00 | 148.86 | 52.82 | 0.00 |
| TEE-BEND34 | 0.00 | 148.86 | 52.80 | 0.00 |
| TEE-BEND36 | 0.00 | 148.86 | 52.79 | 0.00 |
| TEE-BEND55 | 0.00 | 148.86 | 52.79 | 0.00 |
| TEE-BEND35 | 0.00 | 148.86 | 52.79 | 0.00 |
| HYD1       | 0.00 | 148.86 | 52.78 | 0.00 |
| HYD6       | 0.00 | 148.86 | 52.77 | 0.00 |
| TEE-BEND37 | 0.00 | 148.86 | 52.75 | 0.00 |
| TEE-BEND50 | 0.00 | 148.86 | 52.74 | 0.00 |
| TEE-BEND33 | 0.00 | 148.86 | 52.74 | 0.00 |
| TEE-BEND17 | 0.00 | 148.86 | 52.70 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 148.86 | 52.70      | 0.00    |
| TEE-BEND49 | 0.00       | 148.86 | 52.70      | 0.00    |
| TEE-BEND48 | 0.00       | 148.86 | 52.69      | 0.00    |
| TEE-BEND12 | 0.00       | 148.86 | 52.67      | 0.00    |
| TEE-BEND40 | 0.00       | 148.86 | 52.67      | 0.00    |
| TEE-BEND20 | 0.00       | 148.86 | 52.66      | 0.00    |
| TEE-BEND38 | 0.00       | 148.86 | 52.66      | 0.00    |
| TEE-BEND57 | 0.00       | 148.86 | 52.66      | 0.00    |
| TEE-BEND56 | 0.00       | 148.86 | 52.65      | 0.00    |
| TEE-BEND58 | 0.00       | 148.86 | 52.63      | 0.00    |
| TEE-BEND32 | 0.00       | 148.86 | 52.62      | 0.00    |
| TEE-BEND31 | 0.00       | 148.86 | 52.59      | 0.00    |
| TEE-BEND30 | 0.00       | 148.86 | 52.58      | 0.00    |
| HYD5       | 0.00       | 148.86 | 52.56      | 0.00    |
| CRU-8      | 0.06       | 148.86 | 52.51      | 0.00    |
| TEE-BEND28 | 0.00       | 148.86 | 52.51      | 0.00    |
| CRU-10     | 0.07       | 148.86 | 52.51      | 0.00    |
| TEE-BEND39 | 0.00       | 148.86 | 52.49      | 0.00    |
| TEE-BEND26 | 0.00       | 148.86 | 52.48      | 0.00    |
| TEE-BEND15 | 0.00       | 148.86 | 52.47      | 0.00    |
| TEE-BEND29 | 0.00       | 148.86 | 52.45      | 0.00    |

|            |       |        |       |                |
|------------|-------|--------|-------|----------------|
| TEE-BEND13 | 0.00  | 148.86 | 52.45 | 0.00           |
| TEE-BEND59 | 0.00  | 148.86 | 52.45 | 0.00           |
| TEE-BEND27 | 0.00  | 148.86 | 52.42 | 0.00           |
| TEE-BEND41 | 0.00  | 148.86 | 52.41 | 0.00           |
| TEE-BEND42 | 0.00  | 148.86 | 52.40 | 0.00           |
| CRU-6      | 0.20  | 148.86 | 52.37 | 0.00           |
| CRU-9      | 0.12  | 148.86 | 52.36 | 0.00           |
| CRU-7      | 0.15  | 148.86 | 52.36 | 0.00           |
| CRU-4      | 0.19  | 148.86 | 52.36 | 0.00           |
| CRU-3      | 0.30  | 148.86 | 52.36 | 0.00           |
| TEE-BEND6  | 0.00  | 148.86 | 52.21 | 0.00           |
| CRU-5      | 0.03  | 148.86 | 52.12 | 0.00           |
| TEE-BEND4  | 0.00  | 148.86 | 52.11 | 0.00           |
| TEE-BEND3  | 0.00  | 148.86 | 52.11 | 0.00           |
| TEE-BEND2  | 0.00  | 148.86 | 52.09 | 0.00           |
| TEE-BEND1  | 0.00  | 148.86 | 52.06 | 0.00           |
| CHAMBER1   | 0.00  | 148.86 | 52.04 | 0.00           |
| R1         | -0.66 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -1.12 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 1.12     | 0.04         | 0.02               | Open   |
| WM100   | 0.92     | 0.03         | 0.01               | Open   |
| WM101   | 0.70     | 0.02         | 0.01               | Open   |
| WM102   | 0.70     | 0.02         | 0.01               | Open   |
| WM103   | 0.18     | 0.01         | 0.00               | Open   |
| WM104   | 0.18     | 0.01         | 0.00               | Open   |
| WM105   | -0.41    | 0.01         | 0.00               | Open   |
| WM106   | -0.41    | 0.01         | 0.00               | Open   |
| WM107   | -0.41    | 0.01         | 0.00               | Open   |
| WM108   | -0.41    | 0.01         | 0.00               | Open   |
| WM109   | -0.41    | 0.01         | 0.00               | Open   |
| WM110   | -0.66    | 0.02         | 0.01               | Open   |
| WM111   | -0.66    | 0.02         | 0.01               | Open   |
| WM112   | -0.48    | 0.02         | 0.00               | Open   |
| WM113   | -0.48    | 0.02         | 0.00               | Open   |
| WM114   | -0.48    | 0.02         | 0.00               | Open   |
| WM115   | -0.59    | 0.02         | 0.00               | Open   |
| WM116   | -0.66    | 0.02         | 0.01               | Open   |
| WM117   | -0.66    | 0.02         | 0.00               | Open   |
| WM118   | -0.66    | 0.02         | 0.01               | Open   |
| WM119   | -0.66    | 0.02         | 0.01               | Open   |
| WM120   | 0.20     | 0.01         | 0.00               | Open   |
| WM121   | 0.20     | 0.01         | 0.00               | Open   |
| WM122   | 0.20     | 0.01         | 0.00               | Open   |



|       |       |      |      |      |
|-------|-------|------|------|------|
| WM123 | 0.20  | 0.01 | 0.00 | Open |
| WM124 | 0.20  | 0.01 | 0.00 | Open |
| WM125 | 0.22  | 0.01 | 0.00 | Open |
| WM126 | 0.22  | 0.01 | 0.00 | Open |
| WM127 | 0.22  | 0.01 | 0.00 | Open |
| WM128 | 0.22  | 0.01 | 0.00 | Open |
| WM129 | 0.22  | 0.01 | 0.00 | Open |
| WM130 | -0.11 | 0.00 | 0.00 | Open |
| WM131 | -0.11 | 0.00 | 0.00 | Open |
| WM132 | -0.03 | 0.00 | 0.00 | Open |
| WM133 | 0.52  | 0.02 | 0.00 | Open |
| WM134 | 0.52  | 0.02 | 0.00 | Open |
| WM135 | 0.49  | 0.02 | 0.00 | Open |
| WM136 | 0.49  | 0.02 | 0.00 | Open |
| WM137 | 0.49  | 0.02 | 0.00 | Open |
| WM138 | 0.19  | 0.01 | 0.00 | Open |
| WM139 | -0.30 | 0.01 | 0.00 | Open |
| WM140 | -0.30 | 0.01 | 0.00 | Open |
| WM141 | -0.30 | 0.01 | 0.00 | Open |
| WM142 | 0.00  | 0.00 | 0.00 | Open |
| WM143 | 0.00  | 0.00 | 0.00 | Open |
| WM144 | -0.25 | 0.01 | 0.00 | Open |
| WM145 | -0.25 | 0.01 | 0.00 | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.25    | 0.01         | 0.00               | Open      |
| WM147   | -0.59    | 0.02         | 0.00               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.07     | 0.00         | 0.00               | Open      |
| WM150   | 0.07     | 0.00         | 0.00               | Open      |
| WM151   | 0.07     | 0.00         | 0.00               | Open      |
| WM152   | 0.33     | 0.02         | 0.01               | Open      |
| WM153   | 0.18     | 0.01         | 0.00               | Open      |
| WM154   | 0.12     | 0.01         | 0.00               | Open      |
| WM155   | 0.12     | 0.01         | 0.00               | Open      |
| WM156   | 0.12     | 0.01         | 0.00               | Open      |
| WM157   | 0.06     | 0.00         | 0.00               | Open      |
| WM158   | -0.15    | 0.01         | 0.00               | Open      |
| WM159   | -0.15    | 0.01         | 0.00               | Open      |
| WM160   | -0.15    | 0.01         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 1.12     | 0.04         | 0.02               | Open      |
| WM165   | -0.66    | 0.02         | 0.01               | Open      |
| 1       | 0.66     | 0.00         | -148.86            | Open Pump |

2

1.12

0.00

-148


**DILLON**  
 Open Pump

 COUNTERPOINT  
 LAND DEVELOPMENT

Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.25       | 148.86 | 53.49      | 0.00    |
| TEE-BEND24 | 0.00       | 148.86 | 53.49      | 0.00    |
| TEE-BEND23 | 0.00       | 148.86 | 53.42      | 0.00    |
| TEE-BEND43 | 0.00       | 148.86 | 53.39      | 0.00    |
| TEE-BEND44 | 0.00       | 148.86 | 53.31      | 0.00    |
| CHAMBER2   | 0.00       | 148.86 | 53.29      | 0.00    |
| TEE-BEND18 | 0.00       | 148.86 | 53.18      | 0.00    |
| TEE-BEND46 | 0.00       | 148.86 | 53.06      | 0.00    |
| TEE-BEND53 | 0.00       | 148.86 | 52.99      | 0.00    |
| TEE-BEND47 | 0.00       | 148.86 | 52.99      | 0.00    |
| TEE-BEND22 | 0.00       | 148.86 | 52.98      | 0.00    |
| CRU-1      | 0.41       | 148.86 | 52.93      | 0.00    |
| TEE-BEND52 | 0.00       | 148.86 | 52.91      | 0.00    |
| HYD3       | 0.00       | 148.86 | 52.89      | 0.00    |
| TEE-BEND45 | 0.00       | 148.86 | 52.88      | 0.00    |
| TEE-BEND16 | 0.00       | 148.86 | 52.86      | 0.00    |
| HYD2       | 0.00       | 148.86 | 52.85      | 0.00    |
| HYD7       | 0.00       | 148.86 | 52.83      | 0.00    |
| TEE-BEND51 | 0.00       | 148.86 | 52.82      | 0.00    |



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Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 148.86 | 52.80      | 0.00    |
| TEE-BEND36 | 0.00       | 148.86 | 52.79      | 0.00    |
| TEE-BEND55 | 0.00       | 148.86 | 52.79      | 0.00    |
| TEE-BEND35 | 0.00       | 148.86 | 52.79      | 0.00    |
| HYD1       | 0.00       | 148.86 | 52.78      | 0.00    |
| HYD6       | 0.00       | 148.86 | 52.77      | 0.00    |
| TEE-BEND37 | 0.00       | 148.86 | 52.75      | 0.00    |
| TEE-BEND50 | 0.00       | 148.86 | 52.74      | 0.00    |
| TEE-BEND33 | 0.00       | 148.86 | 52.74      | 0.00    |
| TEE-BEND17 | 0.00       | 148.86 | 52.70      | 0.00    |
| TEE-BEND21 | 0.00       | 148.86 | 52.70      | 0.00    |
| TEE-BEND49 | 0.00       | 148.86 | 52.70      | 0.00    |
| TEE-BEND48 | 0.00       | 148.86 | 52.69      | 0.00    |
| TEE-BEND12 | 0.00       | 148.86 | 52.67      | 0.00    |
| TEE-BEND40 | 0.00       | 148.86 | 52.67      | 0.00    |
| TEE-BEND20 | 0.00       | 148.86 | 52.66      | 0.00    |
| TEE-BEND38 | 0.00       | 148.86 | 52.66      | 0.00    |
| TEE-BEND57 | 0.00       | 148.86 | 52.66      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND56 | 0.00 | 148.86 | 52.00 | 0.00 |
| TEE-BEND58 | 0.00 | 148.86 | 52.63 | 0.00 |
| TEE-BEND32 | 0.00 | 148.86 | 52.62 | 0.00 |
| TEE-BEND31 | 0.00 | 148.86 | 52.59 | 0.00 |
| TEE-BEND30 | 0.00 | 148.86 | 52.58 | 0.00 |
| HYD5       | 0.00 | 148.86 | 52.56 | 0.00 |
| CRU-8      | 0.06 | 148.86 | 52.51 | 0.00 |
| TEE-BEND28 | 0.00 | 148.86 | 52.51 | 0.00 |
| CRU-10     | 0.07 | 148.86 | 52.51 | 0.00 |
| TEE-BEND39 | 0.00 | 148.86 | 52.49 | 0.00 |
| TEE-BEND26 | 0.00 | 148.86 | 52.48 | 0.00 |
| TEE-BEND15 | 0.00 | 148.86 | 52.47 | 0.00 |
| TEE-BEND29 | 0.00 | 148.86 | 52.45 | 0.00 |
| TEE-BEND13 | 0.00 | 148.86 | 52.45 | 0.00 |
| TEE-BEND59 | 0.00 | 148.86 | 52.45 | 0.00 |
| TEE-BEND27 | 0.00 | 148.86 | 52.42 | 0.00 |
| TEE-BEND41 | 0.00 | 148.86 | 52.41 | 0.00 |
| TEE-BEND42 | 0.00 | 148.86 | 52.40 | 0.00 |
| CRU-6      | 0.20 | 148.86 | 52.37 | 0.00 |
| CRU-9      | 0.12 | 148.86 | 52.36 | 0.00 |
| CRU-7      | 0.15 | 148.86 | 52.36 | 0.00 |
| CRU-4      | 0.19 | 148.86 | 52.36 | 0.00 |
| CRU-3      | 0.30 | 148.86 | 52.36 | 0.00 |
| TEE-BEND6  | 0.00 | 148.86 | 52.21 | 0.00 |
| CRU-5      | 0.03 | 148.86 | 52.12 | 0.00 |
| TEE-BEND4  | 0.00 | 148.86 | 52.11 | 0.00 |
| TEE-BEND3  | 0.00 | 148.86 | 52.11 | 0.00 |
| TEE-BEND2  | 0.00 | 148.86 | 52.09 | 0.00 |
| TEE-BEND1  | 0.00 | 148.86 | 52.06 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 148.86 | 52.04      | 0.00           |
| R1       | -0.66      | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -1.12      | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 1.12     | 0.04         | 0.02               | Open   |
| WM100   | 0.92     | 0.03         | 0.01               | Open   |
| WM101   | 0.70     | 0.02         | 0.01               | Open   |
| WM102   | 0.70     | 0.02         | 0.01               | Open   |
| WM103   | 0.18     | 0.01         | 0.00               | Open   |
| WM104   | 0.18     | 0.01         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM105 | -0.41 | 0.01 | 0.00 | Open |
| WM106 | -0.41 | 0.01 | 0.00 | Open |
| WM107 | -0.41 | 0.01 | 0.00 | Open |
| WM108 | -0.41 | 0.01 | 0.00 | Open |
| WM109 | -0.41 | 0.01 | 0.00 | Open |
| WM110 | -0.66 | 0.02 | 0.01 | Open |
| WM111 | -0.66 | 0.02 | 0.01 | Open |
| WM112 | -0.48 | 0.02 | 0.00 | Open |
| WM113 | -0.48 | 0.02 | 0.00 | Open |
| WM114 | -0.48 | 0.02 | 0.00 | Open |
| WM115 | -0.59 | 0.02 | 0.00 | Open |
| WM116 | -0.66 | 0.02 | 0.01 | Open |
| WM117 | -0.66 | 0.02 | 0.00 | Open |
| WM118 | -0.66 | 0.02 | 0.01 | Open |
| WM119 | -0.66 | 0.02 | 0.01 | Open |
| WM120 | 0.20  | 0.01 | 0.00 | Open |
| WM121 | 0.20  | 0.01 | 0.00 | Open |
| WM122 | 0.20  | 0.01 | 0.00 | Open |
| WM123 | 0.20  | 0.01 | 0.00 | Open |
| WM124 | 0.20  | 0.01 | 0.00 | Open |
| WM125 | 0.22  | 0.01 | 0.00 | Open |
| WM126 | 0.22  | 0.01 | 0.00 | Open |
| WM127 | 0.22  | 0.01 | 0.00 | Open |
| WM128 | 0.22  | 0.01 | 0.00 | Open |
| WM129 | 0.22  | 0.01 | 0.00 | Open |
| WM130 | -0.11 | 0.00 | 0.00 | Open |
| WM131 | -0.11 | 0.00 | 0.00 | Open |
| WM132 | -0.03 | 0.00 | 0.00 | Open |
| WM133 | 0.52  | 0.02 | 0.00 | Open |
| WM134 | 0.52  | 0.02 | 0.00 | Open |
| WM135 | 0.49  | 0.02 | 0.00 | Open |
| WM136 | 0.49  | 0.02 | 0.00 | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.49     | 0.02         | 0.00               | Open   |
| WM138   | 0.19     | 0.01         | 0.00               | Open   |
| WM139   | -0.30    | 0.01         | 0.00               | Open   |
| WM140   | -0.30    | 0.01         | 0.00               | Open   |
| WM141   | -0.30    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.25    | 0.01         | 0.00               | Open   |
| WM145   | -0.25    | 0.01         | 0.00               | Open   |
| WM146   | -0.25    | 0.01         | 0.00               | Open   |
| WM147   | -0.59    | 0.02         | 0.00               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |       |      |         |           |
|-------|-------|------|---------|-----------|
| WM149 | 0.07  | 0.00 | 0.00    | Open      |
| WM150 | 0.07  | 0.00 | 0.00    | Open      |
| WM151 | 0.07  | 0.00 | 0.00    | Open      |
| WM152 | 0.33  | 0.02 | 0.01    | Open      |
| WM153 | 0.18  | 0.01 | 0.00    | Open      |
| WM154 | 0.12  | 0.01 | 0.00    | Open      |
| WM155 | 0.12  | 0.01 | 0.00    | Open      |
| WM156 | 0.12  | 0.01 | 0.00    | Open      |
| WM157 | 0.06  | 0.00 | 0.00    | Open      |
| WM158 | -0.15 | 0.01 | 0.00    | Open      |
| WM159 | -0.15 | 0.01 | 0.00    | Open      |
| WM160 | -0.15 | 0.01 | 0.00    | Open      |
| WM161 | 0.00  | 0.00 | 0.00    | Open      |
| WM162 | 0.00  | 0.00 | 0.00    | Open      |
| WM163 | 0.00  | 0.00 | 0.00    | Open      |
| WM164 | 1.12  | 0.04 | 0.01    | Open      |
| WM165 | -0.66 | 0.02 | 0.01    | Open      |
| 1     | 0.66  | 0.00 | -148.86 | Open Pump |
| 2     | 1.12  | 0.00 | -148.86 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.25       | 148.86 | 53.49      | 0.00    |
| TEE-BEND24 | 0.00       | 148.86 | 53.49      | 0.00    |
| TEE-BEND23 | 0.00       | 148.86 | 53.42      | 0.00    |
| TEE-BEND43 | 0.00       | 148.86 | 53.39      | 0.00    |
| TEE-BEND44 | 0.00       | 148.86 | 53.31      | 0.00    |
| CHAMBER2   | 0.00       | 148.86 | 53.29      | 0.00    |
| TEE-BEND18 | 0.00       | 148.86 | 53.18      | 0.00    |
| TEE-BEND46 | 0.00       | 148.86 | 53.06      | 0.00    |
| TEE-BEND53 | 0.00       | 148.86 | 52.99      | 0.00    |
| TEE-BEND47 | 0.00       | 148.86 | 52.99      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 148.86 | 52.98      | 0.00    |
| CRU-1      | 0.41       | 148.86 | 52.93      | 0.00    |
| TEE-BEND52 | 0.00       | 148.86 | 52.91      | 0.00    |
| HYD3       | 0.00       | 148.86 | 52.89      | 0.00    |
| TEE-BEND45 | 0.00       | 148.86 | 52.88      | 0.00    |
| TEE-BEND16 | 0.00       | 148.86 | 52.86      | 0.00    |
| HYD2       | 0.00       | 148.86 | 52.85      | 0.00    |
| HYD7       | 0.00       | 148.86 | 52.83      | 0.00    |
| TEE-BEND51 | 0.00       | 148.86 | 52.82      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND34 | 0.00 | 148.86 | 52.79 | 0.00 |
| TEE-BEND36 | 0.00 | 148.86 | 52.79 | 0.00 |
| TEE-BEND55 | 0.00 | 148.86 | 52.79 | 0.00 |
| TEE-BEND35 | 0.00 | 148.86 | 52.79 | 0.00 |
| HYD1       | 0.00 | 148.86 | 52.78 | 0.00 |
| HYD6       | 0.00 | 148.86 | 52.77 | 0.00 |
| TEE-BEND37 | 0.00 | 148.86 | 52.75 | 0.00 |
| TEE-BEND50 | 0.00 | 148.86 | 52.74 | 0.00 |
| TEE-BEND33 | 0.00 | 148.86 | 52.74 | 0.00 |
| TEE-BEND17 | 0.00 | 148.86 | 52.70 | 0.00 |
| TEE-BEND21 | 0.00 | 148.86 | 52.70 | 0.00 |
| TEE-BEND49 | 0.00 | 148.86 | 52.70 | 0.00 |
| TEE-BEND48 | 0.00 | 148.86 | 52.69 | 0.00 |
| TEE-BEND12 | 0.00 | 148.86 | 52.67 | 0.00 |
| TEE-BEND40 | 0.00 | 148.86 | 52.67 | 0.00 |
| TEE-BEND20 | 0.00 | 148.86 | 52.66 | 0.00 |
| TEE-BEND38 | 0.00 | 148.86 | 52.66 | 0.00 |
| TEE-BEND57 | 0.00 | 148.86 | 52.66 | 0.00 |
| TEE-BEND56 | 0.00 | 148.86 | 52.65 | 0.00 |
| TEE-BEND58 | 0.00 | 148.86 | 52.63 | 0.00 |
| TEE-BEND32 | 0.00 | 148.86 | 52.62 | 0.00 |
| TEE-BEND31 | 0.00 | 148.86 | 52.59 | 0.00 |
| TEE-BEND30 | 0.00 | 148.86 | 52.58 | 0.00 |
| HYD5       | 0.00 | 148.86 | 52.56 | 0.00 |
| CRU-8      | 0.06 | 148.86 | 52.51 | 0.00 |
| TEE-BEND28 | 0.00 | 148.86 | 52.51 | 0.00 |
| CRU-10     | 0.07 | 148.86 | 52.51 | 0.00 |
| TEE-BEND39 | 0.00 | 148.86 | 52.49 | 0.00 |
| TEE-BEND26 | 0.00 | 148.86 | 52.48 | 0.00 |
| TEE-BEND15 | 0.00 | 148.86 | 52.47 | 0.00 |
| TEE-BEND29 | 0.00 | 148.86 | 52.45 | 0.00 |
| TEE-BEND13 | 0.00 | 148.86 | 52.45 | 0.00 |
| TEE-BEND59 | 0.00 | 148.86 | 52.45 | 0.00 |
| TEE-BEND27 | 0.00 | 148.86 | 52.42 | 0.00 |
| TEE-BEND41 | 0.00 | 148.86 | 52.41 | 0.00 |
| TEE-BEND42 | 0.00 | 148.86 | 52.40 | 0.00 |
| CRU-6      | 0.20 | 148.86 | 52.37 | 0.00 |
| CRU-9      | 0.12 | 148.86 | 52.36 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.15       | 148.86 | 52.36      | 0.00    |
| CRU-4     | 0.19       | 148.86 | 52.36      | 0.00    |
| CRU-3     | 0.30       | 148.86 | 52.36      | 0.00    |
| TEE-BEND6 | 0.00       | 148.86 | 52.21      | 0.00    |
| CRU-5     | 0.03       | 148.86 | 52.12      | 0.00    |
| TEE-BEND4 | 0.00       | 148.86 | 52.11      | 0.00    |



|           |       |        |       |                |
|-----------|-------|--------|-------|----------------|
| TEE-BEND3 | 0.00  | 148.86 | 52.00 | 0.00           |
| TEE-BEND2 | 0.00  | 148.86 | 52.09 | 0.00           |
| TEE-BEND1 | 0.00  | 148.86 | 52.06 | 0.00           |
| CHAMBER1  | 0.00  | 148.86 | 52.04 | 0.00           |
| R1        | -0.66 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -1.12 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 1.12     | 0.04         | 0.02               | Open   |
| WM100   | 0.92     | 0.03         | 0.01               | Open   |
| WM101   | 0.70     | 0.02         | 0.01               | Open   |
| WM102   | 0.70     | 0.02         | 0.01               | Open   |
| WM103   | 0.18     | 0.01         | 0.00               | Open   |
| WM104   | 0.18     | 0.01         | 0.00               | Open   |
| WM105   | -0.41    | 0.01         | 0.00               | Open   |
| WM106   | -0.41    | 0.01         | 0.00               | Open   |
| WM107   | -0.41    | 0.01         | 0.00               | Open   |
| WM108   | -0.41    | 0.01         | 0.00               | Open   |
| WM109   | -0.41    | 0.01         | 0.00               | Open   |
| WM110   | -0.66    | 0.02         | 0.01               | Open   |
| WM111   | -0.66    | 0.02         | 0.01               | Open   |
| WM112   | -0.48    | 0.02         | 0.00               | Open   |
| WM113   | -0.48    | 0.02         | 0.00               | Open   |
| WM114   | -0.48    | 0.02         | 0.00               | Open   |
| WM115   | -0.59    | 0.02         | 0.00               | Open   |
| WM116   | -0.66    | 0.02         | 0.00               | Open   |
| WM117   | -0.66    | 0.02         | 0.01               | Open   |
| WM118   | -0.66    | 0.02         | 0.01               | Open   |
| WM119   | -0.66    | 0.02         | 0.01               | Open   |
| WM120   | 0.20     | 0.01         | 0.00               | Open   |
| WM121   | 0.20     | 0.01         | 0.00               | Open   |
| WM122   | 0.20     | 0.01         | 0.00               | Open   |
| WM123   | 0.20     | 0.01         | 0.00               | Open   |
| WM124   | 0.20     | 0.01         | 0.00               | Open   |
| WM125   | 0.22     | 0.01         | 0.00               | Open   |
| WM126   | 0.22     | 0.01         | 0.00               | Open   |
| WM127   | 0.22     | 0.01         | 0.00               | Open   |



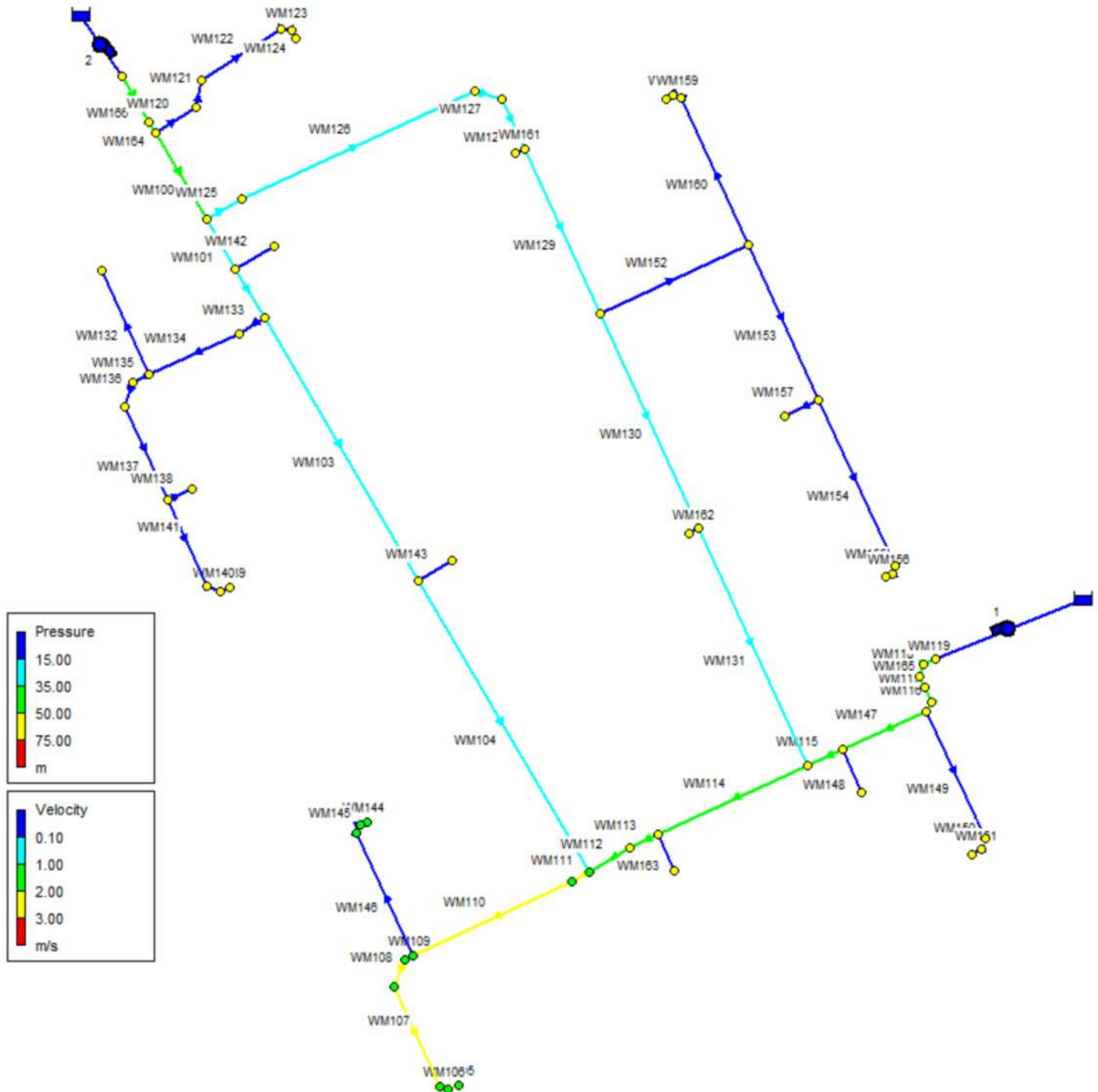
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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | 0.22     | 0.01         | 0.00               | Open   |
| WM129   | 0.22     | 0.01         | 0.00               | Open   |
| WM130   | -0.11    | 0.00         | 0.00               | Open   |

|       |       |      |         |           |
|-------|-------|------|---------|-----------|
| WM131 | -0.11 | 0.00 | 0.00    | Open      |
| WM132 | -0.03 | 0.00 | 0.00    | Open      |
| WM133 | 0.52  | 0.02 | 0.00    | Open      |
| WM134 | 0.52  | 0.02 | 0.00    | Open      |
| WM135 | 0.49  | 0.02 | 0.00    | Open      |
| WM136 | 0.49  | 0.02 | 0.00    | Open      |
| WM137 | 0.49  | 0.02 | 0.00    | Open      |
| WM138 | 0.19  | 0.01 | 0.00    | Open      |
| WM139 | -0.30 | 0.01 | 0.00    | Open      |
| WM140 | -0.30 | 0.01 | 0.00    | Open      |
| WM141 | -0.30 | 0.01 | 0.00    | Open      |
| WM142 | 0.00  | 0.00 | 0.00    | Open      |
| WM143 | 0.00  | 0.00 | 0.00    | Open      |
| WM144 | -0.25 | 0.01 | 0.00    | Open      |
| WM145 | -0.25 | 0.01 | 0.00    | Open      |
| WM146 | -0.25 | 0.01 | 0.00    | Open      |
| WM147 | -0.59 | 0.02 | 0.00    | Open      |
| WM148 | 0.00  | 0.00 | 0.00    | Open      |
| WM149 | 0.07  | 0.00 | 0.00    | Open      |
| WM150 | 0.07  | 0.00 | 0.00    | Open      |
| WM151 | 0.07  | 0.00 | 0.00    | Open      |
| WM152 | 0.33  | 0.02 | 0.01    | Open      |
| WM153 | 0.18  | 0.01 | 0.00    | Open      |
| WM154 | 0.12  | 0.01 | 0.00    | Open      |
| WM155 | 0.12  | 0.01 | 0.00    | Open      |
| WM156 | 0.12  | 0.01 | 0.00    | Open      |
| WM157 | 0.06  | 0.00 | 0.00    | Open      |
| WM158 | -0.15 | 0.01 | 0.00    | Open      |
| WM159 | -0.15 | 0.01 | 0.00    | Open      |
| WM160 | -0.15 | 0.01 | 0.00    | Open      |
| WM161 | 0.00  | 0.00 | 0.00    | Open      |
| WM162 | 0.00  | 0.00 | 0.00    | Open      |
| WM163 | 0.00  | 0.00 | 0.00    | Open      |
| WM164 | 1.12  | 0.04 | 0.02    | Open      |
| WM165 | -0.66 | 0.02 | 0.01    | Open      |
| 1     | 0.66  | 0.00 | -148.86 | Open Pump |
| 2     | 1.12  | 0.00 | -148.86 | Open Pump |

## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR1



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU1)+pumps.net

#### Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |

|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.53      | 70.86   | 70.86   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 76.89   | 76.89   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 144.00 | 48.63      | 0.00    |
| TEE-BEND24 | 0.00       | 144.00 | 48.63      | 0.00    |
| TEE-BEND23 | 0.00       | 144.00 | 48.56      | 0.00    |
| TEE-BEND43 | 0.00       | 147.11 | 51.64      | 0.00    |
| TEE-BEND44 | 0.00       | 147.08 | 51.54      | 0.00    |
| CHAMBER2   | 0.00       | 147.15 | 51.58      | 0.00    |
| TEE-BEND18 | 0.00       | 146.88 | 51.20      | 0.00    |
| TEE-BEND46 | 0.00       | 146.13 | 50.33      | 0.00    |
| TEE-BEND53 | 0.00       | 142.54 | 46.67      | 0.00    |
| TEE-BEND47 | 0.00       | 146.01 | 50.14      | 0.00    |
| TEE-BEND22 | 0.00       | 146.86 | 50.98      | 0.00    |
| CRU-1      | 75.93      | 142.44 | 46.51      | 0.00    |
| TEE-BEND52 | 0.00       | 142.62 | 46.68      | 0.00    |
| HYD3       | 0.00       | 146.13 | 50.16      | 0.00    |
| TEE-BEND45 | 0.00       | 146.76 | 50.78      | 0.00    |
| TEE-BEND16 | 0.00       | 146.88 | 50.88      | 0.00    |
| HYD2       | 0.00       | 146.36 | 50.35      | 0.00    |
| HYD7       | 0.00       | 146.92 | 50.89      | 0.00    |
| TEE-BEND51 | 0.00       | 143.65 | 47.61      | 0.00    |
| TEE-BEND34 | 0.00       | 146.88 | 50.82      | 0.00    |
| TEE-BEND36 | 0.00       | 146.94 | 50.87      | 0.00    |
| TEE-BEND55 | 0.00       | 145.83 | 49.76      | 0.00    |
| TEE-BEND35 | 0.00       | 146.92 | 50.85      | 0.00    |
| HYD1       | 0.00       | 146.92 | 50.85      | 0.00    |
| HYD6       | 0.00       | 146.82 | 50.73      | 0.00    |
| TEE-BEND37 | 0.00       | 146.94 | 50.83      | 0.00    |
| TEE-BEND50 | 0.00       | 143.91 | 47.80      | 0.00    |
| TEE-BEND33 | 0.00       | 146.82 | 50.70      | 0.00    |
| TEE-BEND17 | 0.00       | 146.88 | 50.72      | 0.00    |
| TEE-BEND21 | 0.00       | 147.08 | 50.92      | 0.00    |
| TEE-BEND49 | 0.00       | 144.00 | 47.84      | 0.00    |
| TEE-BEND48 | 0.00       | 145.64 | 49.47      | 0.00    |
| TEE-BEND12 | 0.00       | 146.88 | 50.69      | 0.00    |
| TEE-BEND40 | 0.00       | 147.24 | 51.05      | 0.00    |
| TEE-BEND20 | 0.00       | 147.08 | 50.88      | 0.00    |
| TEE-BEND38 | 0.00       | 147.00 | 50.80      | 0.00    |
| TEE-BEND57 | 0.00       | 146.83 | 50.63      | 0.00    |
| TEE-BEND56 | 0.00       | 146.36 | 50.15      | 0.00    |
| TEE-BEND58 | 0.00       | 146.92 | 50.69      | 0.00    |
| TEE-BEND32 | 0.00       | 146.83 | 50.59      | 0.00    |
| TEE-BEND31 | 0.00       | 146.83 | 50.57      | 0.00    |
| TEE-BEND30 | 0.00       | 146.83 | 50.55      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 146.86 | 50.48 | 0.00 |
| CRU-8      | 0.04 | 146.88 | 50.53 | 0.00 |
| TEE-BEND28 | 0.00 | 146.83 | 50.48 | 0.00 |
| CRU-10     | 0.04 | 147.08 | 50.73 | 0.00 |
| TEE-BEND39 | 0.00 | 147.29 | 50.92 | 0.00 |



Page 4

Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 146.83 | 50.46      | 0.00           |
| TEE-BEND15 | 0.00       | 146.88 | 50.49      | 0.00           |
| TEE-BEND29 | 0.00       | 146.83 | 50.43      | 0.00           |
| TEE-BEND13 | 0.00       | 146.88 | 50.47      | 0.00           |
| TEE-BEND59 | 0.00       | 147.01 | 50.60      | 0.00           |
| TEE-BEND27 | 0.00       | 146.83 | 50.39      | 0.00           |
| TEE-BEND41 | 0.00       | 147.21 | 50.75      | 0.00           |
| TEE-BEND42 | 0.00       | 147.18 | 50.72      | 0.00           |
| CRU-6      | 0.11       | 147.29 | 50.81      | 0.00           |
| CRU-9      | 0.07       | 146.88 | 50.38      | 0.00           |
| CRU-7      | 0.08       | 146.88 | 50.38      | 0.00           |
| CRU-4      | 0.11       | 146.83 | 50.34      | 0.00           |
| CRU-3      | 0.17       | 146.83 | 50.33      | 0.00           |
| TEE-BEND6  | 0.00       | 147.29 | 50.64      | 0.00           |
| CRU-5      | 0.02       | 146.83 | 50.10      | 0.00           |
| TEE-BEND4  | 0.00       | 147.29 | 50.55      | 0.00           |
| TEE-BEND3  | 0.00       | 147.48 | 50.73      | 0.00           |
| TEE-BEND2  | 0.00       | 147.29 | 50.52      | 0.00           |
| TEE-BEND1  | 0.00       | 147.29 | 50.49      | 0.00           |
| CHAMBER1   | 0.00       | 147.33 | 50.52      | 0.00           |
| R1         | -36.82     | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -39.89     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 39.89    | 1.27         | 11.50         | Open   |
| WM100   | 39.78    | 1.27         | 11.44         | Open   |
| WM101   | 29.24    | 0.93         | 6.47          | Open   |
| WM102   | 29.24    | 0.93         | 6.47          | Open   |
| WM103   | 28.94    | 0.92         | 6.35          | Open   |
| WM104   | 28.94    | 0.92         | 6.35          | Open   |
| WM105   | -75.93   | 2.42         | 37.90         | Open   |
| WM106   | -75.93   | 2.42         | 37.90         | Open   |
| WM107   | -75.93   | 2.42         | 37.89         | Open   |
| WM108   | -75.93   | 2.42         | 37.90         | Open   |
| WM109   | -75.93   | 2.42         | 37.89         | Open   |



|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM110 | -76.07 | 2.42 | 38    | Open |
| WM111 | -76.07 | 2.42 | 38.02 | Open |
| WM112 | -47.13 | 1.50 | 15.67 | Open |
| WM113 | -47.13 | 1.50 | 15.67 | Open |
| WM114 | -47.13 | 1.50 | 15.67 | Open |
| WM115 | -36.78 | 1.17 | 9.90  | Open |
| WM116 | -36.82 | 1.17 | 9.92  | Open |
| WM117 | -36.82 | 1.17 | 9.92  | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -36.82   | 1.17         | 9.92               | Open   |
| WM119   | -36.82   | 1.17         | 9.92               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 10.54    | 0.34         | 0.98               | Open   |
| WM126   | 10.54    | 0.34         | 0.98               | Open   |
| WM127   | 10.54    | 0.34         | 0.98               | Open   |
| WM128   | 10.54    | 0.34         | 0.98               | Open   |
| WM129   | 10.54    | 0.34         | 0.98               | Open   |
| WM130   | 10.35    | 0.33         | 0.95               | Open   |
| WM131   | 10.35    | 0.33         | 0.95               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -36.78   | 1.17         | 9.90               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 0.19     | 0.01         | 0.00               | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |

|       |       |      |       |      |
|-------|-------|------|-------|------|
| WM154 | 0.07  | 0.00 | 0.00  | Open |
| WM155 | 0.07  | 0.00 | 0.00  | Open |
| WM156 | 0.07  | 0.00 | 0.01  | Open |
| WM157 | 0.04  | 0.00 | 0.00  | Open |
| WM158 | -0.08 | 0.00 | 0.00  | Open |
| WM159 | -0.08 | 0.00 | 0.00  | Open |
| WM160 | -0.08 | 0.00 | 0.00  | Open |
| WM161 | 0.00  | 0.00 | 0.00  | Open |
| WM162 | 0.00  | 0.00 | 0.00  | Open |
| WM163 | 0.00  | 0.00 | 0.00  | Open |
| WM164 | 39.89 | 1.27 | 11.50 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -36.82   | 1.17         | 9.92               | Open      |
| 1       | 36.82    | 0.00         | -147.24            | Open Pump |
| 2       | 39.89    | 0.00         | -147.48            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 144.00 | 48.63      | 0.00    |
| TEE-BEND24 | 0.00       | 144.00 | 48.63      | 0.00    |
| TEE-BEND23 | 0.00       | 144.00 | 48.56      | 0.00    |
| TEE-BEND43 | 0.00       | 147.11 | 51.64      | 0.00    |
| TEE-BEND44 | 0.00       | 147.08 | 51.54      | 0.00    |
| CHAMBER2   | 0.00       | 147.15 | 51.58      | 0.00    |
| TEE-BEND18 | 0.00       | 146.88 | 51.20      | 0.00    |
| TEE-BEND46 | 0.00       | 146.13 | 50.33      | 0.00    |
| TEE-BEND53 | 0.00       | 142.54 | 46.67      | 0.00    |
| TEE-BEND47 | 0.00       | 146.01 | 50.14      | 0.00    |
| TEE-BEND22 | 0.00       | 146.86 | 50.98      | 0.00    |
| CRU-1      | 75.93      | 142.44 | 46.51      | 0.00    |
| TEE-BEND52 | 0.00       | 142.62 | 46.68      | 0.00    |
| HYD3       | 0.00       | 146.13 | 50.16      | 0.00    |
| TEE-BEND45 | 0.00       | 146.76 | 50.78      | 0.00    |
| TEE-BEND16 | 0.00       | 146.88 | 50.88      | 0.00    |
| HYD2       | 0.00       | 146.36 | 50.35      | 0.00    |
| HYD7       | 0.00       | 146.92 | 50.89      | 0.00    |
| TEE-BEND51 | 0.00       | 143.65 | 47.61      | 0.00    |
| TEE-BEND34 | 0.00       | 146.88 | 50.82      | 0.00    |
| TEE-BEND36 | 0.00       | 146.94 | 50.87      | 0.00    |
| TEE-BEND55 | 0.00       | 145.83 | 49.76      | 0.00    |
| TEE-BEND35 | 0.00       | 146.92 | 50.85      | 0.00    |
| HYD1       | 0.00       | 146.92 | 50.85      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 146.82 | 50.00 | 0.00 |
| TEE-BEND37 | 0.00 | 146.94 | 50.83 | 0.00 |
| TEE-BEND50 | 0.00 | 143.91 | 47.80 | 0.00 |
| TEE-BEND33 | 0.00 | 146.82 | 50.70 | 0.00 |
| TEE-BEND17 | 0.00 | 146.88 | 50.72 | 0.00 |
| TEE-BEND21 | 0.00 | 147.08 | 50.92 | 0.00 |
| TEE-BEND49 | 0.00 | 144.00 | 47.84 | 0.00 |
| TEE-BEND48 | 0.00 | 145.64 | 49.47 | 0.00 |
| TEE-BEND12 | 0.00 | 146.88 | 50.69 | 0.00 |
| TEE-BEND40 | 0.00 | 147.24 | 51.05 | 0.00 |
| TEE-BEND20 | 0.00 | 147.08 | 50.88 | 0.00 |
| TEE-BEND38 | 0.00 | 147.00 | 50.80 | 0.00 |
| TEE-BEND57 | 0.00 | 146.83 | 50.63 | 0.00 |
| TEE-BEND56 | 0.00 | 146.36 | 50.15 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 146.92 | 50.69      | 0.00           |
| TEE-BEND32 | 0.00       | 146.83 | 50.59      | 0.00           |
| TEE-BEND31 | 0.00       | 146.83 | 50.57      | 0.00           |
| TEE-BEND30 | 0.00       | 146.83 | 50.55      | 0.00           |
| HYD5       | 0.00       | 146.86 | 50.55      | 0.00           |
| CRU-8      | 0.04       | 146.88 | 50.53      | 0.00           |
| TEE-BEND28 | 0.00       | 146.83 | 50.48      | 0.00           |
| CRU-10     | 0.04       | 147.08 | 50.73      | 0.00           |
| TEE-BEND39 | 0.00       | 147.29 | 50.92      | 0.00           |
| TEE-BEND26 | 0.00       | 146.83 | 50.46      | 0.00           |
| TEE-BEND15 | 0.00       | 146.88 | 50.49      | 0.00           |
| TEE-BEND29 | 0.00       | 146.83 | 50.43      | 0.00           |
| TEE-BEND13 | 0.00       | 146.88 | 50.47      | 0.00           |
| TEE-BEND59 | 0.00       | 147.01 | 50.60      | 0.00           |
| TEE-BEND27 | 0.00       | 146.83 | 50.39      | 0.00           |
| TEE-BEND41 | 0.00       | 147.21 | 50.75      | 0.00           |
| TEE-BEND42 | 0.00       | 147.18 | 50.72      | 0.00           |
| CRU-6      | 0.11       | 147.29 | 50.81      | 0.00           |
| CRU-9      | 0.07       | 146.88 | 50.38      | 0.00           |
| CRU-7      | 0.08       | 146.88 | 50.38      | 0.00           |
| CRU-4      | 0.11       | 146.83 | 50.34      | 0.00           |
| CRU-3      | 0.17       | 146.83 | 50.33      | 0.00           |
| TEE-BEND6  | 0.00       | 147.29 | 50.64      | 0.00           |
| CRU-5      | 0.02       | 146.83 | 50.10      | 0.00           |
| TEE-BEND4  | 0.00       | 147.29 | 50.55      | 0.00           |
| TEE-BEND3  | 0.00       | 147.48 | 50.73      | 0.00           |
| TEE-BEND2  | 0.00       | 147.29 | 50.52      | 0.00           |
| TEE-BEND1  | 0.00       | 147.29 | 50.49      | 0.00           |
| CHAMBER1   | 0.00       | 147.33 | 50.52      | 0.00           |
| R1         | -36.82     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -39.89 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 39.89    | 1.27         | 11.50              | Open   |
| WM100   | 39.78    | 1.27         | 11.44              | Open   |
| WM101   | 29.24    | 0.93         | 6.47               | Open   |
| WM102   | 29.24    | 0.93         | 6.47               | Open   |
| WM103   | 28.94    | 0.92         | 6.35               | Open   |
| WM104   | 28.94    | 0.92         | 6.35               | Open   |
| WM105   | -75.93   | 2.42         | 37.90              | Open   |
| WM106   | -75.93   | 2.42         | 37.90              | Open   |
| WM107   | -75.93   | 2.42         | 37.89              | Open   |
| WM108   | -75.93   | 2.42         | 37.90              | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -75.93   | 2.42         | 37.89              | Open   |
| WM110   | -76.07   | 2.42         | 38.02              | Open   |
| WM111   | -76.07   | 2.42         | 38.02              | Open   |
| WM112   | -47.13   | 1.50         | 15.67              | Open   |
| WM113   | -47.13   | 1.50         | 15.67              | Open   |
| WM114   | -47.13   | 1.50         | 15.67              | Open   |
| WM115   | -36.78   | 1.17         | 9.90               | Open   |
| WM116   | -36.82   | 1.17         | 9.92               | Open   |
| WM117   | -36.82   | 1.17         | 9.92               | Open   |
| WM118   | -36.82   | 1.17         | 9.92               | Open   |
| WM119   | -36.82   | 1.17         | 9.92               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 10.54    | 0.34         | 0.98               | Open   |
| WM126   | 10.54    | 0.34         | 0.98               | Open   |
| WM127   | 10.54    | 0.34         | 0.98               | Open   |
| WM128   | 10.54    | 0.34         | 0.98               | Open   |
| WM129   | 10.54    | 0.34         | 0.98               | Open   |
| WM130   | 10.35    | 0.33         | 0.95               | Open   |
| WM131   | 10.35    | 0.33         | 0.95               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM136 | 0.28   | 0.01 | 0.00 | Open |
| WM137 | 0.28   | 0.01 | 0.00 | Open |
| WM138 | 0.11   | 0.01 | 0.00 | Open |
| WM139 | -0.17  | 0.01 | 0.00 | Open |
| WM140 | -0.17  | 0.01 | 0.00 | Open |
| WM141 | -0.17  | 0.01 | 0.00 | Open |
| WM142 | 0.00   | 0.00 | 0.00 | Open |
| WM143 | 0.00   | 0.00 | 0.00 | Open |
| WM144 | -0.14  | 0.00 | 0.00 | Open |
| WM145 | -0.14  | 0.00 | 0.00 | Open |
| WM146 | -0.14  | 0.00 | 0.00 | Open |
| WM147 | -36.78 | 1.17 | 9.90 | Open |
| WM148 | 0.00   | 0.00 | 0.00 | Open |
| WM149 | 0.04   | 0.00 | 0.00 | Open |
| WM150 | 0.04   | 0.00 | 0.00 | Open |
| WM151 | 0.04   | 0.00 | 0.00 | Open |
| WM152 | 0.19   | 0.01 | 0.00 | Open |
| WM153 | 0.11   | 0.01 | 0.00 | Open |
| WM154 | 0.07   | 0.00 | 0.00 | Open |
| WM155 | 0.07   | 0.00 | 0.00 | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.01               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 39.89    | 1.27         | 11.50              | Open      |
| WM165   | -36.82   | 1.17         | 9.92               | Open      |
| 1       | 36.82    | 0.00         | -147.24            | Open Pump |
| 2       | 39.89    | 0.00         | -147.48            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 144.00 | 48.63      | 0.00    |
| TEE-BEND24 | 0.00       | 144.00 | 48.63      | 0.00    |
| TEE-BEND23 | 0.00       | 144.00 | 48.56      | 0.00    |
| TEE-BEND43 | 0.00       | 147.11 | 51.64      | 0.00    |
| TEE-BEND44 | 0.00       | 147.08 | 51.54      | 0.00    |
| CHAMBER2   | 0.00       | 147.15 | 51.58      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND18 | 0.00  | 146.88 | 51.00 | 0.00 |
| TEE-BEND46 | 0.00  | 146.13 | 50.33 | 0.00 |
| TEE-BEND53 | 0.00  | 142.54 | 46.67 | 0.00 |
| TEE-BEND47 | 0.00  | 146.01 | 50.14 | 0.00 |
| TEE-BEND22 | 0.00  | 146.86 | 50.98 | 0.00 |
| CRU-1      | 75.93 | 142.44 | 46.51 | 0.00 |
| TEE-BEND52 | 0.00  | 142.62 | 46.68 | 0.00 |
| HYD3       | 0.00  | 146.13 | 50.16 | 0.00 |
| TEE-BEND45 | 0.00  | 146.76 | 50.78 | 0.00 |
| TEE-BEND16 | 0.00  | 146.88 | 50.88 | 0.00 |
| HYD2       | 0.00  | 146.36 | 50.35 | 0.00 |
| HYD7       | 0.00  | 146.92 | 50.89 | 0.00 |
| TEE-BEND51 | 0.00  | 143.65 | 47.61 | 0.00 |
| TEE-BEND34 | 0.00  | 146.88 | 50.82 | 0.00 |
| TEE-BEND36 | 0.00  | 146.94 | 50.87 | 0.00 |
| TEE-BEND55 | 0.00  | 145.83 | 49.76 | 0.00 |
| TEE-BEND35 | 0.00  | 146.92 | 50.85 | 0.00 |
| HYD1       | 0.00  | 146.92 | 50.85 | 0.00 |
| HYD6       | 0.00  | 146.82 | 50.73 | 0.00 |
| TEE-BEND37 | 0.00  | 146.94 | 50.83 | 0.00 |
| TEE-BEND50 | 0.00  | 143.91 | 47.80 | 0.00 |
| TEE-BEND33 | 0.00  | 146.82 | 50.70 | 0.00 |
| TEE-BEND17 | 0.00  | 146.88 | 50.72 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.08 | 50.92      | 0.00    |
| TEE-BEND49 | 0.00       | 144.00 | 47.84      | 0.00    |
| TEE-BEND48 | 0.00       | 145.64 | 49.47      | 0.00    |
| TEE-BEND12 | 0.00       | 146.88 | 50.69      | 0.00    |
| TEE-BEND40 | 0.00       | 147.24 | 51.05      | 0.00    |
| TEE-BEND20 | 0.00       | 147.08 | 50.88      | 0.00    |
| TEE-BEND38 | 0.00       | 147.00 | 50.80      | 0.00    |
| TEE-BEND57 | 0.00       | 146.83 | 50.63      | 0.00    |
| TEE-BEND56 | 0.00       | 146.36 | 50.15      | 0.00    |
| TEE-BEND58 | 0.00       | 146.92 | 50.69      | 0.00    |
| TEE-BEND32 | 0.00       | 146.83 | 50.59      | 0.00    |
| TEE-BEND31 | 0.00       | 146.83 | 50.57      | 0.00    |
| TEE-BEND30 | 0.00       | 146.83 | 50.55      | 0.00    |
| HYD5       | 0.00       | 146.86 | 50.55      | 0.00    |
| CRU-8      | 0.04       | 146.88 | 50.53      | 0.00    |
| TEE-BEND28 | 0.00       | 146.83 | 50.48      | 0.00    |
| CRU-10     | 0.04       | 147.08 | 50.73      | 0.00    |
| TEE-BEND39 | 0.00       | 147.29 | 50.92      | 0.00    |
| TEE-BEND26 | 0.00       | 146.83 | 50.46      | 0.00    |
| TEE-BEND15 | 0.00       | 146.88 | 50.49      | 0.00    |
| TEE-BEND29 | 0.00       | 146.83 | 50.43      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 146.88 | 50.60 | 0.00           |
| TEE-BEND59 | 0.00   | 147.01 | 50.60 | 0.00           |
| TEE-BEND27 | 0.00   | 146.83 | 50.39 | 0.00           |
| TEE-BEND41 | 0.00   | 147.21 | 50.75 | 0.00           |
| TEE-BEND42 | 0.00   | 147.18 | 50.72 | 0.00           |
| CRU-6      | 0.11   | 147.29 | 50.81 | 0.00           |
| CRU-9      | 0.07   | 146.88 | 50.38 | 0.00           |
| CRU-7      | 0.08   | 146.88 | 50.38 | 0.00           |
| CRU-4      | 0.11   | 146.83 | 50.34 | 0.00           |
| CRU-3      | 0.17   | 146.83 | 50.33 | 0.00           |
| TEE-BEND6  | 0.00   | 147.29 | 50.64 | 0.00           |
| CRU-5      | 0.02   | 146.83 | 50.10 | 0.00           |
| TEE-BEND4  | 0.00   | 147.29 | 50.55 | 0.00           |
| TEE-BEND3  | 0.00   | 147.48 | 50.73 | 0.00           |
| TEE-BEND2  | 0.00   | 147.29 | 50.52 | 0.00           |
| TEE-BEND1  | 0.00   | 147.29 | 50.49 | 0.00           |
| CHAMBER1   | 0.00   | 147.33 | 50.52 | 0.00           |
| R1         | -36.82 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -39.89 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 39.89    | 1.27         | 11.50              | Open   |
| WM100   | 39.78    | 1.27         | 11.44              | Open   |
| WM101   | 29.24    | 0.93         | 6.47               | Open   |
| WM102   | 29.24    | 0.93         | 6.47               | Open   |
| WM103   | 28.94    | 0.92         | 6.35               | Open   |
| WM104   | 28.94    | 0.92         | 6.35               | Open   |
| WM105   | -75.93   | 2.42         | 37.90              | Open   |
| WM106   | -75.93   | 2.42         | 37.90              | Open   |
| WM107   | -75.93   | 2.42         | 37.89              | Open   |
| WM108   | -75.93   | 2.42         | 37.90              | Open   |
| WM109   | -75.93   | 2.42         | 37.89              | Open   |
| WM110   | -76.07   | 2.42         | 38.02              | Open   |
| WM111   | -76.07   | 2.42         | 38.02              | Open   |
| WM112   | -47.13   | 1.50         | 15.67              | Open   |
| WM113   | -47.13   | 1.50         | 15.67              | Open   |
| WM114   | -47.13   | 1.50         | 15.67              | Open   |
| WM115   | -36.78   | 1.17         | 9.90               | Open   |
| WM116   | -36.82   | 1.17         | 9.92               | Open   |
| WM117   | -36.82   | 1.17         | 9.92               | Open   |
| WM118   | -36.82   | 1.17         | 9.92               | Open   |
| WM119   | -36.82   | 1.17         | 9.92               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |



|       |       |      |      |      |
|-------|-------|------|------|------|
| WM123 | 0.11  | 0.00 | 0.00 | Open |
| WM124 | 0.11  | 0.00 | 0.00 | Open |
| WM125 | 10.54 | 0.34 | 0.98 | Open |
| WM126 | 10.54 | 0.34 | 0.98 | Open |
| WM127 | 10.54 | 0.34 | 0.98 | Open |
| WM128 | 10.54 | 0.34 | 0.98 | Open |
| WM129 | 10.54 | 0.34 | 0.98 | Open |
| WM130 | 10.35 | 0.33 | 0.95 | Open |
| WM131 | 10.35 | 0.33 | 0.95 | Open |
| WM132 | -0.02 | 0.00 | 0.00 | Open |
| WM133 | 0.30  | 0.01 | 0.00 | Open |
| WM134 | 0.30  | 0.01 | 0.00 | Open |
| WM135 | 0.28  | 0.01 | 0.00 | Open |
| WM136 | 0.28  | 0.01 | 0.00 | Open |
| WM137 | 0.28  | 0.01 | 0.00 | Open |
| WM138 | 0.11  | 0.01 | 0.00 | Open |
| WM139 | -0.17 | 0.01 | 0.00 | Open |
| WM140 | -0.17 | 0.01 | 0.00 | Open |
| WM141 | -0.17 | 0.01 | 0.00 | Open |
| WM142 | 0.00  | 0.00 | 0.00 | Open |
| WM143 | 0.00  | 0.00 | 0.00 | Open |
| WM144 | -0.14 | 0.00 | 0.00 | Open |
| WM145 | -0.14 | 0.00 | 0.00 | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -36.78   | 1.17         | 9.90               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 0.19     | 0.01         | 0.00               | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.01               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 39.89    | 1.27         | 11.50              | Open      |
| WM165   | -36.82   | 1.17         | 9.92               | Open      |
| 1       | 36.82    | 0.00         | -147.24            | Open Pump |



## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 144.00 | 48.63      | 0.00    |
| TEE-BEND24 | 0.00       | 144.00 | 48.63      | 0.00    |
| TEE-BEND23 | 0.00       | 144.00 | 48.56      | 0.00    |
| TEE-BEND43 | 0.00       | 147.11 | 51.64      | 0.00    |
| TEE-BEND44 | 0.00       | 147.08 | 51.54      | 0.00    |
| CHAMBER2   | 0.00       | 147.15 | 51.58      | 0.00    |
| TEE-BEND18 | 0.00       | 146.88 | 51.20      | 0.00    |
| TEE-BEND46 | 0.00       | 146.13 | 50.33      | 0.00    |
| TEE-BEND53 | 0.00       | 142.54 | 46.67      | 0.00    |
| TEE-BEND47 | 0.00       | 146.01 | 50.14      | 0.00    |
| TEE-BEND22 | 0.00       | 146.86 | 50.98      | 0.00    |
| CRU-1      | 75.93      | 142.44 | 46.51      | 0.00    |
| TEE-BEND52 | 0.00       | 142.62 | 46.68      | 0.00    |
| HYD3       | 0.00       | 146.13 | 50.16      | 0.00    |
| TEE-BEND45 | 0.00       | 146.76 | 50.78      | 0.00    |
| TEE-BEND16 | 0.00       | 146.88 | 50.88      | 0.00    |
| HYD2       | 0.00       | 146.36 | 50.35      | 0.00    |
| HYD7       | 0.00       | 146.92 | 50.89      | 0.00    |
| TEE-BEND51 | 0.00       | 143.65 | 47.61      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 146.88 | 50.82      | 0.00    |
| TEE-BEND36 | 0.00       | 146.94 | 50.87      | 0.00    |
| TEE-BEND55 | 0.00       | 145.83 | 49.76      | 0.00    |
| TEE-BEND35 | 0.00       | 146.92 | 50.85      | 0.00    |
| HYD1       | 0.00       | 146.92 | 50.85      | 0.00    |
| HYD6       | 0.00       | 146.82 | 50.73      | 0.00    |
| TEE-BEND37 | 0.00       | 146.94 | 50.83      | 0.00    |
| TEE-BEND50 | 0.00       | 143.91 | 47.80      | 0.00    |
| TEE-BEND33 | 0.00       | 146.82 | 50.70      | 0.00    |
| TEE-BEND17 | 0.00       | 146.88 | 50.72      | 0.00    |
| TEE-BEND21 | 0.00       | 147.08 | 50.92      | 0.00    |
| TEE-BEND49 | 0.00       | 144.00 | 47.84      | 0.00    |
| TEE-BEND48 | 0.00       | 145.64 | 49.47      | 0.00    |
| TEE-BEND12 | 0.00       | 146.88 | 50.69      | 0.00    |
| TEE-BEND40 | 0.00       | 147.24 | 51.05      | 0.00    |
| TEE-BEND20 | 0.00       | 147.08 | 50.88      | 0.00    |
| TEE-BEND38 | 0.00       | 147.00 | 50.80      | 0.00    |
| TEE-BEND57 | 0.00       | 146.83 | 50.63      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND56 | 0.00 | 146.36 | 50.52 | 0.00 |
| TEE-BEND58 | 0.00 | 146.92 | 50.69 | 0.00 |
| TEE-BEND32 | 0.00 | 146.83 | 50.59 | 0.00 |
| TEE-BEND31 | 0.00 | 146.83 | 50.57 | 0.00 |
| TEE-BEND30 | 0.00 | 146.83 | 50.55 | 0.00 |
| HYD5       | 0.00 | 146.86 | 50.55 | 0.00 |
| CRU-8      | 0.04 | 146.88 | 50.53 | 0.00 |
| TEE-BEND28 | 0.00 | 146.83 | 50.48 | 0.00 |
| CRU-10     | 0.04 | 147.08 | 50.73 | 0.00 |
| TEE-BEND39 | 0.00 | 147.29 | 50.92 | 0.00 |
| TEE-BEND26 | 0.00 | 146.83 | 50.46 | 0.00 |
| TEE-BEND15 | 0.00 | 146.88 | 50.49 | 0.00 |
| TEE-BEND29 | 0.00 | 146.83 | 50.43 | 0.00 |
| TEE-BEND13 | 0.00 | 146.88 | 50.47 | 0.00 |
| TEE-BEND59 | 0.00 | 147.01 | 50.60 | 0.00 |
| TEE-BEND27 | 0.00 | 146.83 | 50.39 | 0.00 |
| TEE-BEND41 | 0.00 | 147.21 | 50.75 | 0.00 |
| TEE-BEND42 | 0.00 | 147.18 | 50.72 | 0.00 |
| CRU-6      | 0.11 | 147.29 | 50.81 | 0.00 |
| CRU-9      | 0.07 | 146.88 | 50.38 | 0.00 |
| CRU-7      | 0.08 | 146.88 | 50.38 | 0.00 |
| CRU-4      | 0.11 | 146.83 | 50.34 | 0.00 |
| CRU-3      | 0.17 | 146.83 | 50.33 | 0.00 |
| TEE-BEND6  | 0.00 | 147.29 | 50.64 | 0.00 |
| CRU-5      | 0.02 | 146.83 | 50.10 | 0.00 |
| TEE-BEND4  | 0.00 | 147.29 | 50.55 | 0.00 |
| TEE-BEND3  | 0.00 | 147.48 | 50.73 | 0.00 |
| TEE-BEND2  | 0.00 | 147.29 | 50.52 | 0.00 |
| TEE-BEND1  | 0.00 | 147.29 | 50.49 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.33 | 50.52      | 0.00           |
| R1       | -36.82     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -39.89     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 39.89    | 1.27         | 11.50         | Open   |
| WM100   | 39.78    | 1.27         | 11.44         | Open   |
| WM101   | 29.24    | 0.93         | 6.47          | Open   |
| WM102   | 29.24    | 0.93         | 6.47          | Open   |
| WM103   | 28.94    | 0.92         | 6.35          | Open   |
| WM104   | 28.94    | 0.92         | 6.35          | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM105 | -75.93 | 2.42 | 37.90 | Open |
| WM106 | -75.93 | 2.42 | 37.90 | Open |
| WM107 | -75.93 | 2.42 | 37.89 | Open |
| WM108 | -75.93 | 2.42 | 37.90 | Open |
| WM109 | -75.93 | 2.42 | 37.89 | Open |
| WM110 | -76.07 | 2.42 | 38.02 | Open |
| WM111 | -76.07 | 2.42 | 38.02 | Open |
| WM112 | -47.13 | 1.50 | 15.67 | Open |
| WM113 | -47.13 | 1.50 | 15.67 | Open |
| WM114 | -47.13 | 1.50 | 15.67 | Open |
| WM115 | -36.78 | 1.17 | 9.90  | Open |
| WM116 | -36.82 | 1.17 | 9.92  | Open |
| WM117 | -36.82 | 1.17 | 9.92  | Open |
| WM118 | -36.82 | 1.17 | 9.92  | Open |
| WM119 | -36.82 | 1.17 | 9.92  | Open |
| WM120 | 0.11   | 0.00 | 0.00  | Open |
| WM121 | 0.11   | 0.00 | 0.00  | Open |
| WM122 | 0.11   | 0.00 | 0.00  | Open |
| WM123 | 0.11   | 0.00 | 0.00  | Open |
| WM124 | 0.11   | 0.00 | 0.00  | Open |
| WM125 | 10.54  | 0.34 | 0.98  | Open |
| WM126 | 10.54  | 0.34 | 0.98  | Open |
| WM127 | 10.54  | 0.34 | 0.98  | Open |
| WM128 | 10.54  | 0.34 | 0.98  | Open |
| WM129 | 10.54  | 0.34 | 0.98  | Open |
| WM130 | 10.35  | 0.33 | 0.95  | Open |
| WM131 | 10.35  | 0.33 | 0.95  | Open |
| WM132 | -0.02  | 0.00 | 0.00  | Open |
| WM133 | 0.30   | 0.01 | 0.00  | Open |
| WM134 | 0.30   | 0.01 | 0.00  | Open |
| WM135 | 0.28   | 0.01 | 0.00  | Open |
| WM136 | 0.28   | 0.01 | 0.00  | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -36.78   | 1.17         | 9.90               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 39.89  | 1.27 | 11.50   | Open      |
| WM165 | -36.82 | 1.17 | 9.92    | Open      |
| 1     | 36.82  | 0.00 | -147.24 | Open Pump |
| 2     | 39.89  | 0.00 | -147.48 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 144.00 | 48.63      | 0.00    |
| TEE-BEND24 | 0.00       | 144.00 | 48.63      | 0.00    |
| TEE-BEND23 | 0.00       | 144.00 | 48.56      | 0.00    |
| TEE-BEND43 | 0.00       | 147.11 | 51.64      | 0.00    |
| TEE-BEND44 | 0.00       | 147.08 | 51.54      | 0.00    |
| CHAMBER2   | 0.00       | 147.15 | 51.58      | 0.00    |
| TEE-BEND18 | 0.00       | 146.88 | 51.20      | 0.00    |
| TEE-BEND46 | 0.00       | 146.13 | 50.33      | 0.00    |
| TEE-BEND53 | 0.00       | 142.54 | 46.67      | 0.00    |
| TEE-BEND47 | 0.00       | 146.01 | 50.14      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 146.86 | 50.98      | 0.00    |
| CRU-1      | 75.93      | 142.44 | 46.51      | 0.00    |
| TEE-BEND52 | 0.00       | 142.62 | 46.68      | 0.00    |
| HYD3       | 0.00       | 146.13 | 50.16      | 0.00    |
| TEE-BEND45 | 0.00       | 146.76 | 50.78      | 0.00    |
| TEE-BEND16 | 0.00       | 146.88 | 50.88      | 0.00    |
| HYD2       | 0.00       | 146.36 | 50.35      | 0.00    |
| HYD7       | 0.00       | 146.92 | 50.89      | 0.00    |
| TEE-BEND51 | 0.00       | 143.65 | 47.61      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND34 | 0.00 | 146.88 | 50.87 | 0.00 |
| TEE-BEND36 | 0.00 | 146.94 | 50.87 | 0.00 |
| TEE-BEND55 | 0.00 | 145.83 | 49.76 | 0.00 |
| TEE-BEND35 | 0.00 | 146.92 | 50.85 | 0.00 |
| HYD1       | 0.00 | 146.92 | 50.85 | 0.00 |
| HYD6       | 0.00 | 146.82 | 50.73 | 0.00 |
| TEE-BEND37 | 0.00 | 146.94 | 50.83 | 0.00 |
| TEE-BEND50 | 0.00 | 143.91 | 47.80 | 0.00 |
| TEE-BEND33 | 0.00 | 146.82 | 50.70 | 0.00 |
| TEE-BEND17 | 0.00 | 146.88 | 50.72 | 0.00 |
| TEE-BEND21 | 0.00 | 147.08 | 50.92 | 0.00 |
| TEE-BEND49 | 0.00 | 144.00 | 47.84 | 0.00 |
| TEE-BEND48 | 0.00 | 145.64 | 49.47 | 0.00 |
| TEE-BEND12 | 0.00 | 146.88 | 50.69 | 0.00 |
| TEE-BEND40 | 0.00 | 147.24 | 51.05 | 0.00 |
| TEE-BEND20 | 0.00 | 147.08 | 50.88 | 0.00 |
| TEE-BEND38 | 0.00 | 147.00 | 50.80 | 0.00 |
| TEE-BEND57 | 0.00 | 146.83 | 50.63 | 0.00 |
| TEE-BEND56 | 0.00 | 146.36 | 50.15 | 0.00 |
| TEE-BEND58 | 0.00 | 146.92 | 50.69 | 0.00 |
| TEE-BEND32 | 0.00 | 146.83 | 50.59 | 0.00 |
| TEE-BEND31 | 0.00 | 146.83 | 50.57 | 0.00 |
| TEE-BEND30 | 0.00 | 146.83 | 50.55 | 0.00 |
| HYD5       | 0.00 | 146.86 | 50.55 | 0.00 |
| CRU-8      | 0.04 | 146.88 | 50.53 | 0.00 |
| TEE-BEND28 | 0.00 | 146.83 | 50.48 | 0.00 |
| CRU-10     | 0.04 | 147.08 | 50.73 | 0.00 |
| TEE-BEND39 | 0.00 | 147.29 | 50.92 | 0.00 |
| TEE-BEND26 | 0.00 | 146.83 | 50.46 | 0.00 |
| TEE-BEND15 | 0.00 | 146.88 | 50.49 | 0.00 |
| TEE-BEND29 | 0.00 | 146.83 | 50.43 | 0.00 |
| TEE-BEND13 | 0.00 | 146.88 | 50.47 | 0.00 |
| TEE-BEND59 | 0.00 | 147.01 | 50.60 | 0.00 |
| TEE-BEND27 | 0.00 | 146.83 | 50.39 | 0.00 |
| TEE-BEND41 | 0.00 | 147.21 | 50.75 | 0.00 |
| TEE-BEND42 | 0.00 | 147.18 | 50.72 | 0.00 |
| CRU-6      | 0.11 | 147.29 | 50.81 | 0.00 |
| CRU-9      | 0.07 | 146.88 | 50.38 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 146.88 | 50.38      | 0.00    |
| CRU-4     | 0.11       | 146.83 | 50.34      | 0.00    |
| CRU-3     | 0.17       | 146.83 | 50.33      | 0.00    |
| TEE-BEND6 | 0.00       | 147.29 | 50.64      | 0.00    |
| CRU-5     | 0.02       | 146.83 | 50.10      | 0.00    |
| TEE-BEND4 | 0.00       | 147.29 | 50.55      | 0.00    |

|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.48 | 50.52 | 0.00           |
| TEE-BEND2 | 0.00   | 147.29 | 50.52 | 0.00           |
| TEE-BEND1 | 0.00   | 147.29 | 50.49 | 0.00           |
| CHAMBER1  | 0.00   | 147.33 | 50.52 | 0.00           |
| R1        | -36.82 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -39.89 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 39.89    | 1.27         | 11.50              | Open   |
| WM100   | 39.78    | 1.27         | 11.44              | Open   |
| WM101   | 29.24    | 0.93         | 6.47               | Open   |
| WM102   | 29.24    | 0.93         | 6.47               | Open   |
| WM103   | 28.94    | 0.92         | 6.35               | Open   |
| WM104   | 28.94    | 0.92         | 6.35               | Open   |
| WM105   | -75.93   | 2.42         | 37.90              | Open   |
| WM106   | -75.93   | 2.42         | 37.90              | Open   |
| WM107   | -75.93   | 2.42         | 37.89              | Open   |
| WM108   | -75.93   | 2.42         | 37.90              | Open   |
| WM109   | -75.93   | 2.42         | 37.89              | Open   |
| WM110   | -76.07   | 2.42         | 38.02              | Open   |
| WM111   | -76.07   | 2.42         | 38.02              | Open   |
| WM112   | -47.13   | 1.50         | 15.67              | Open   |
| WM113   | -47.13   | 1.50         | 15.67              | Open   |
| WM114   | -47.13   | 1.50         | 15.67              | Open   |
| WM115   | -36.78   | 1.17         | 9.90               | Open   |
| WM116   | -36.82   | 1.17         | 9.92               | Open   |
| WM117   | -36.82   | 1.17         | 9.92               | Open   |
| WM118   | -36.82   | 1.17         | 9.92               | Open   |
| WM119   | -36.82   | 1.17         | 9.92               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 10.54    | 0.34         | 0.98               | Open   |
| WM126   | 10.54    | 0.34         | 0.98               | Open   |
| WM127   | 10.54    | 0.34         | 0.98               | Open   |



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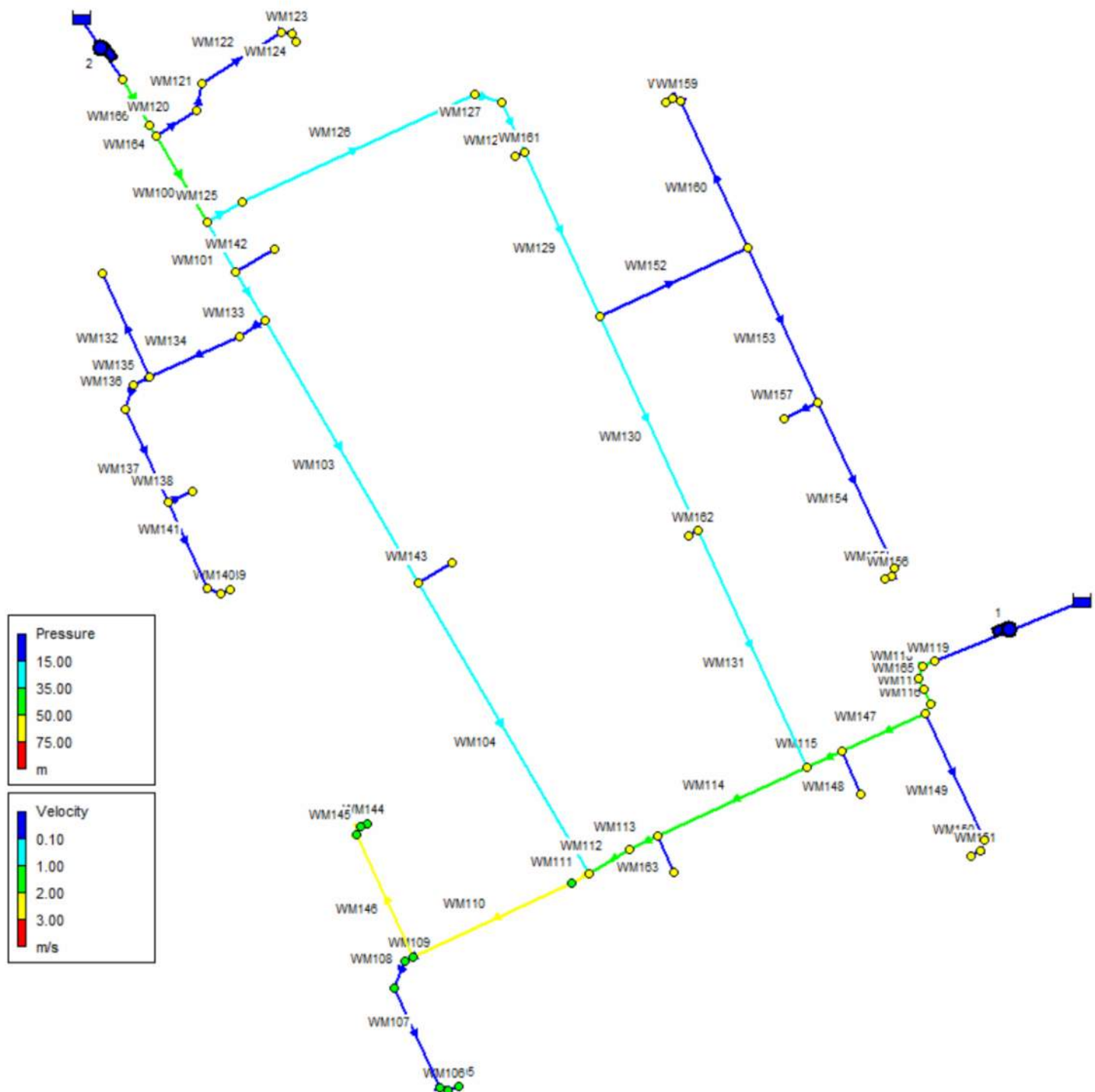
Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | 10.54    | 0.34         | 0.98               | Open   |
| WM129   | 10.54    | 0.34         | 0.98               | Open   |
| WM130   | 10.35    | 0.33         | 0.95               | Open   |



|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | 10.35  | 0.33 | 0.00    | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 0.30   | 0.01 | 0.00    | Open      |
| WM134 | 0.30   | 0.01 | 0.00    | Open      |
| WM135 | 0.28   | 0.01 | 0.00    | Open      |
| WM136 | 0.28   | 0.01 | 0.00    | Open      |
| WM137 | 0.28   | 0.01 | 0.00    | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.00    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | -36.78 | 1.17 | 9.90    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 39.89  | 1.27 | 11.50   | Open      |
| WM165 | -36.82 | 1.17 | 9.92    | Open      |
| 1     | 36.82  | 0.00 | -147.24 | Open Pump |
| 2     | 39.89  | 0.00 | -147.48 | Open Pump |

## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR2



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU2)+pumps.net

Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |

|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |      |
|---------|------------|------------|----------|-------------|------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |      |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |      |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |      |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |      |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |      |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |      |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |      |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |      |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |      |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |      |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |      |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |      |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |      |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |      |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |      |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |      |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |      |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |      |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |      |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |      |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |      |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |      |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |      |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |      |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |      |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |      |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |      |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |      |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |      |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |      |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A        | Pump |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A        | Pump |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.53      | 61.58   | 61.58   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 68.81   | 68.81   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 66.80      | 143.44 | 48.08      | 0.00    |
| TEE-BEND24 | 0.00       | 143.51 | 48.14      | 0.00    |
| TEE-BEND23 | 0.00       | 143.58 | 48.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.20 | 51.73      | 0.00    |
| TEE-BEND44 | 0.00       | 147.18 | 51.64      | 0.00    |
| CHAMBER2   | 0.00       | 147.23 | 51.67      | 0.00    |
| TEE-BEND18 | 0.00       | 147.03 | 51.35      | 0.00    |
| TEE-BEND46 | 0.00       | 146.44 | 50.64      | 0.00    |
| TEE-BEND53 | 0.00       | 144.76 | 48.89      | 0.00    |
| TEE-BEND47 | 0.00       | 146.34 | 50.47      | 0.00    |
| TEE-BEND22 | 0.00       | 147.01 | 51.13      | 0.00    |
| CRU-1      | 0.23       | 144.76 | 48.83      | 0.00    |
| TEE-BEND52 | 0.00       | 144.76 | 48.81      | 0.00    |
| HYD3       | 0.00       | 146.44 | 50.47      | 0.00    |
| TEE-BEND45 | 0.00       | 146.94 | 50.96      | 0.00    |
| TEE-BEND16 | 0.00       | 147.03 | 51.03      | 0.00    |
| HYD2       | 0.00       | 146.63 | 50.61      | 0.00    |
| HYD7       | 0.00       | 147.07 | 51.04      | 0.00    |
| TEE-BEND51 | 0.00       | 144.76 | 48.72      | 0.00    |
| TEE-BEND34 | 0.00       | 147.04 | 50.97      | 0.00    |
| TEE-BEND36 | 0.00       | 147.08 | 51.02      | 0.00    |
| TEE-BEND55 | 0.00       | 146.20 | 50.14      | 0.00    |
| TEE-BEND35 | 0.00       | 147.07 | 51.00      | 0.00    |
| HYD1       | 0.00       | 147.08 | 51.00      | 0.00    |
| HYD6       | 0.00       | 146.99 | 50.90      | 0.00    |
| TEE-BEND37 | 0.00       | 147.09 | 50.98      | 0.00    |
| TEE-BEND50 | 0.00       | 144.76 | 48.64      | 0.00    |
| TEE-BEND33 | 0.00       | 146.99 | 50.87      | 0.00    |
| TEE-BEND17 | 0.00       | 147.03 | 50.88      | 0.00    |
| TEE-BEND21 | 0.00       | 147.18 | 51.03      | 0.00    |
| TEE-BEND49 | 0.00       | 144.76 | 48.60      | 0.00    |
| TEE-BEND48 | 0.00       | 146.05 | 49.88      | 0.00    |
| TEE-BEND12 | 0.00       | 147.03 | 50.85      | 0.00    |
| TEE-BEND40 | 0.00       | 147.30 | 51.11      | 0.00    |
| TEE-BEND20 | 0.00       | 147.18 | 50.99      | 0.00    |
| TEE-BEND38 | 0.00       | 147.14 | 50.94      | 0.00    |
| TEE-BEND57 | 0.00       | 147.00 | 50.80      | 0.00    |
| TEE-BEND56 | 0.00       | 146.63 | 50.42      | 0.00    |
| TEE-BEND58 | 0.00       | 147.08 | 50.85      | 0.00    |
| TEE-BEND32 | 0.00       | 147.00 | 50.77      | 0.00    |
| TEE-BEND31 | 0.00       | 147.00 | 50.74      | 0.00    |
| TEE-BEND30 | 0.00       | 147.00 | 50.73      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 147.01 | 50.69 | 0.00 |
| CRU-8      | 0.04 | 147.03 | 50.69 | 0.00 |
| TEE-BEND28 | 0.00 | 147.00 | 50.65 | 0.00 |
| CRU-10     | 0.04 | 147.18 | 50.83 | 0.00 |
| TEE-BEND39 | 0.00 | 147.38 | 51.01 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 147.00 | 50.63      | 0.00           |
| TEE-BEND15 | 0.00       | 147.03 | 50.65      | 0.00           |
| TEE-BEND29 | 0.00       | 147.00 | 50.60      | 0.00           |
| TEE-BEND13 | 0.00       | 147.03 | 50.63      | 0.00           |
| TEE-BEND59 | 0.00       | 147.15 | 50.74      | 0.00           |
| TEE-BEND27 | 0.00       | 147.00 | 50.57      | 0.00           |
| TEE-BEND41 | 0.00       | 147.28 | 50.83      | 0.00           |
| TEE-BEND42 | 0.00       | 147.25 | 50.80      | 0.00           |
| CRU-6      | 0.11       | 147.38 | 50.89      | 0.00           |
| CRU-9      | 0.07       | 147.03 | 50.54      | 0.00           |
| CRU-7      | 0.08       | 147.03 | 50.54      | 0.00           |
| CRU-4      | 0.11       | 147.00 | 50.51      | 0.00           |
| CRU-3      | 0.17       | 147.00 | 50.51      | 0.00           |
| TEE-BEND6  | 0.00       | 147.38 | 50.73      | 0.00           |
| CRU-5      | 0.02       | 147.00 | 50.27      | 0.00           |
| TEE-BEND4  | 0.00       | 147.38 | 50.63      | 0.00           |
| TEE-BEND3  | 0.00       | 147.53 | 50.78      | 0.00           |
| TEE-BEND2  | 0.00       | 147.38 | 50.60      | 0.00           |
| TEE-BEND1  | 0.00       | 147.38 | 50.58      | 0.00           |
| CHAMBER1   | 0.00       | 147.41 | 50.59      | 0.00           |
| R1         | -31.98     | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -35.69     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 35.69    | 1.14         | 9.36          | Open   |
| WM100   | 35.58    | 1.13         | 9.31          | Open   |
| WM101   | 25.93    | 0.83         | 5.18          | Open   |
| WM102   | 25.93    | 0.83         | 5.18          | Open   |
| WM103   | 25.63    | 0.82         | 5.07          | Open   |
| WM104   | 25.63    | 0.82         | 5.07          | Open   |
| WM105   | -0.23    | 0.01         | 0.00          | Open   |
| WM106   | -0.23    | 0.01         | 0.00          | Open   |
| WM107   | -0.23    | 0.01         | 0.00          | Open   |
| WM108   | -0.23    | 0.01         | 0.00          | Open   |
| WM109   | -0.23    | 0.01         | 0.00          | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM110 | -67.03 | 2.13 | 30    | Open |
| WM111 | -67.03 | 2.13 | 30.08 | Open |
| WM112 | -41.40 | 1.32 | 12.32 | Open |
| WM113 | -41.40 | 1.32 | 12.32 | Open |
| WM114 | -41.40 | 1.32 | 12.32 | Open |
| WM115 | -31.94 | 1.02 | 7.62  | Open |
| WM116 | -31.98 | 1.02 | 7.64  | Open |
| WM117 | -31.98 | 1.02 | 7.64  | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -31.98   | 1.02         | 7.64               | Open   |
| WM119   | -31.98   | 1.02         | 7.64               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 9.64     | 0.31         | 0.83               | Open   |
| WM126   | 9.64     | 0.31         | 0.83               | Open   |
| WM127   | 9.64     | 0.31         | 0.83               | Open   |
| WM128   | 9.64     | 0.31         | 0.83               | Open   |
| WM129   | 9.64     | 0.31         | 0.83               | Open   |
| WM130   | 9.45     | 0.30         | 0.80               | Open   |
| WM131   | 9.45     | 0.30         | 0.80               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -66.80   | 2.13         | 35.67              | Open   |
| WM145   | -66.80   | 2.13         | 35.66              | Open   |
| WM146   | -66.80   | 2.13         | 35.66              | Open   |
| WM147   | -31.94   | 1.02         | 7.62               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 0.19     | 0.01         | 0.00               | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |



|       |       |      |      |      |
|-------|-------|------|------|------|
| WM154 | 0.07  | 0.00 | 0.00 | Open |
| WM155 | 0.07  | 0.00 | 0.00 | Open |
| WM156 | 0.07  | 0.00 | 0.00 | Open |
| WM157 | 0.04  | 0.00 | 0.00 | Open |
| WM158 | -0.08 | 0.00 | 0.00 | Open |
| WM159 | -0.08 | 0.00 | 0.00 | Open |
| WM160 | -0.08 | 0.00 | 0.00 | Open |
| WM161 | 0.00  | 0.00 | 0.00 | Open |
| WM162 | 0.00  | 0.00 | 0.00 | Open |
| WM163 | 0.00  | 0.00 | 0.00 | Open |
| WM164 | 35.69 | 1.14 | 9.36 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -31.98   | 1.02         | 7.64               | Open      |
| 1       | 31.98    | 0.00         | -147.30            | Open Pump |
| 2       | 35.69    | 0.00         | -147.53            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 66.80      | 143.44 | 48.08      | 0.00    |
| TEE-BEND24 | 0.00       | 143.51 | 48.14      | 0.00    |
| TEE-BEND23 | 0.00       | 143.58 | 48.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.20 | 51.73      | 0.00    |
| TEE-BEND44 | 0.00       | 147.18 | 51.64      | 0.00    |
| CHAMBER2   | 0.00       | 147.23 | 51.67      | 0.00    |
| TEE-BEND18 | 0.00       | 147.03 | 51.35      | 0.00    |
| TEE-BEND46 | 0.00       | 146.44 | 50.64      | 0.00    |
| TEE-BEND53 | 0.00       | 144.76 | 48.89      | 0.00    |
| TEE-BEND47 | 0.00       | 146.34 | 50.47      | 0.00    |
| TEE-BEND22 | 0.00       | 147.01 | 51.13      | 0.00    |
| CRU-1      | 0.23       | 144.76 | 48.83      | 0.00    |
| TEE-BEND52 | 0.00       | 144.76 | 48.81      | 0.00    |
| HYD3       | 0.00       | 146.44 | 50.47      | 0.00    |
| TEE-BEND45 | 0.00       | 146.94 | 50.96      | 0.00    |
| TEE-BEND16 | 0.00       | 147.03 | 51.03      | 0.00    |
| HYD2       | 0.00       | 146.63 | 50.61      | 0.00    |
| HYD7       | 0.00       | 147.07 | 51.04      | 0.00    |
| TEE-BEND51 | 0.00       | 144.76 | 48.72      | 0.00    |
| TEE-BEND34 | 0.00       | 147.04 | 50.97      | 0.00    |
| TEE-BEND36 | 0.00       | 147.08 | 51.02      | 0.00    |
| TEE-BEND55 | 0.00       | 146.20 | 50.14      | 0.00    |
| TEE-BEND35 | 0.00       | 147.07 | 51.00      | 0.00    |
| HYD1       | 0.00       | 147.08 | 51.00      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 146.99 | 50.87 | 0.00 |
| TEE-BEND37 | 0.00 | 147.09 | 50.98 | 0.00 |
| TEE-BEND50 | 0.00 | 144.76 | 48.64 | 0.00 |
| TEE-BEND33 | 0.00 | 146.99 | 50.87 | 0.00 |
| TEE-BEND17 | 0.00 | 147.03 | 50.88 | 0.00 |
| TEE-BEND21 | 0.00 | 147.18 | 51.03 | 0.00 |
| TEE-BEND49 | 0.00 | 144.76 | 48.60 | 0.00 |
| TEE-BEND48 | 0.00 | 146.05 | 49.88 | 0.00 |
| TEE-BEND12 | 0.00 | 147.03 | 50.85 | 0.00 |
| TEE-BEND40 | 0.00 | 147.30 | 51.11 | 0.00 |
| TEE-BEND20 | 0.00 | 147.18 | 50.99 | 0.00 |
| TEE-BEND38 | 0.00 | 147.14 | 50.94 | 0.00 |
| TEE-BEND57 | 0.00 | 147.00 | 50.80 | 0.00 |
| TEE-BEND56 | 0.00 | 146.63 | 50.42 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 147.08 | 50.85      | 0.00           |
| TEE-BEND32 | 0.00       | 147.00 | 50.77      | 0.00           |
| TEE-BEND31 | 0.00       | 147.00 | 50.74      | 0.00           |
| TEE-BEND30 | 0.00       | 147.00 | 50.73      | 0.00           |
| HYD5       | 0.00       | 147.01 | 50.71      | 0.00           |
| CRU-8      | 0.04       | 147.03 | 50.69      | 0.00           |
| TEE-BEND28 | 0.00       | 147.00 | 50.65      | 0.00           |
| CRU-10     | 0.04       | 147.18 | 50.83      | 0.00           |
| TEE-BEND39 | 0.00       | 147.38 | 51.01      | 0.00           |
| TEE-BEND26 | 0.00       | 147.00 | 50.63      | 0.00           |
| TEE-BEND15 | 0.00       | 147.03 | 50.65      | 0.00           |
| TEE-BEND29 | 0.00       | 147.00 | 50.60      | 0.00           |
| TEE-BEND13 | 0.00       | 147.03 | 50.63      | 0.00           |
| TEE-BEND59 | 0.00       | 147.15 | 50.74      | 0.00           |
| TEE-BEND27 | 0.00       | 147.00 | 50.57      | 0.00           |
| TEE-BEND41 | 0.00       | 147.28 | 50.83      | 0.00           |
| TEE-BEND42 | 0.00       | 147.25 | 50.80      | 0.00           |
| CRU-6      | 0.11       | 147.38 | 50.89      | 0.00           |
| CRU-9      | 0.07       | 147.03 | 50.54      | 0.00           |
| CRU-7      | 0.08       | 147.03 | 50.54      | 0.00           |
| CRU-4      | 0.11       | 147.00 | 50.51      | 0.00           |
| CRU-3      | 0.17       | 147.00 | 50.51      | 0.00           |
| TEE-BEND6  | 0.00       | 147.38 | 50.73      | 0.00           |
| CRU-5      | 0.02       | 147.00 | 50.27      | 0.00           |
| TEE-BEND4  | 0.00       | 147.38 | 50.63      | 0.00           |
| TEE-BEND3  | 0.00       | 147.53 | 50.78      | 0.00           |
| TEE-BEND2  | 0.00       | 147.38 | 50.60      | 0.00           |
| TEE-BEND1  | 0.00       | 147.38 | 50.58      | 0.00           |
| CHAMBER1   | 0.00       | 147.41 | 50.59      | 0.00           |
| R1         | -31.98     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -35.69 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 35.69    | 1.14         | 9.36               | Open   |
| WM100   | 35.58    | 1.13         | 9.31               | Open   |
| WM101   | 25.93    | 0.83         | 5.18               | Open   |
| WM102   | 25.93    | 0.83         | 5.18               | Open   |
| WM103   | 25.63    | 0.82         | 5.07               | Open   |
| WM104   | 25.63    | 0.82         | 5.07               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -67.03   | 2.13         | 30.08              | Open   |
| WM111   | -67.03   | 2.13         | 30.08              | Open   |
| WM112   | -41.40   | 1.32         | 12.32              | Open   |
| WM113   | -41.40   | 1.32         | 12.32              | Open   |
| WM114   | -41.40   | 1.32         | 12.32              | Open   |
| WM115   | -31.94   | 1.02         | 7.62               | Open   |
| WM116   | -31.98   | 1.02         | 7.64               | Open   |
| WM117   | -31.98   | 1.02         | 7.64               | Open   |
| WM118   | -31.98   | 1.02         | 7.64               | Open   |
| WM119   | -31.98   | 1.02         | 7.64               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 9.64     | 0.31         | 0.83               | Open   |
| WM126   | 9.64     | 0.31         | 0.83               | Open   |
| WM127   | 9.64     | 0.31         | 0.83               | Open   |
| WM128   | 9.64     | 0.31         | 0.83               | Open   |
| WM129   | 9.64     | 0.31         | 0.83               | Open   |
| WM130   | 9.45     | 0.30         | 0.80               | Open   |
| WM131   | 9.45     | 0.30         | 0.80               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM136 | 0.28   | 0.01 | 0.00  | Open |
| WM137 | 0.28   | 0.01 | 0.00  | Open |
| WM138 | 0.11   | 0.01 | 0.00  | Open |
| WM139 | -0.17  | 0.01 | 0.00  | Open |
| WM140 | -0.17  | 0.01 | 0.00  | Open |
| WM141 | -0.17  | 0.01 | 0.00  | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -66.80 | 2.13 | 35.66 | Open |
| WM145 | -66.80 | 2.13 | 35.66 | Open |
| WM146 | -66.80 | 2.13 | 35.66 | Open |
| WM147 | -31.94 | 1.02 | 7.62  | Open |
| WM148 | 0.00   | 0.00 | 0.00  | Open |
| WM149 | 0.04   | 0.00 | 0.00  | Open |
| WM150 | 0.04   | 0.00 | 0.00  | Open |
| WM151 | 0.04   | 0.00 | 0.00  | Open |
| WM152 | 0.19   | 0.01 | 0.00  | Open |
| WM153 | 0.11   | 0.01 | 0.00  | Open |
| WM154 | 0.07   | 0.00 | 0.00  | Open |
| WM155 | 0.07   | 0.00 | 0.00  | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 35.69    | 1.14         | 9.36               | Open      |
| WM165   | -31.98   | 1.02         | 7.64               | Open      |
| 1       | 31.98    | 0.00         | -147.30            | Open Pump |
| 2       | 35.69    | 0.00         | -147.53            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 66.80      | 143.44 | 48.08      | 0.00    |
| TEE-BEND24 | 0.00       | 143.51 | 48.14      | 0.00    |
| TEE-BEND23 | 0.00       | 143.58 | 48.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.20 | 51.73      | 0.00    |
| TEE-BEND44 | 0.00       | 147.18 | 51.64      | 0.00    |
| CHAMBER2   | 0.00       | 147.23 | 51.67      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 147.03 | 51.00 | 0.00 |
| TEE-BEND46 | 0.00 | 146.44 | 50.64 | 0.00 |
| TEE-BEND53 | 0.00 | 144.76 | 48.89 | 0.00 |
| TEE-BEND47 | 0.00 | 146.34 | 50.47 | 0.00 |
| TEE-BEND22 | 0.00 | 147.01 | 51.13 | 0.00 |
| CRU-1      | 0.23 | 144.76 | 48.83 | 0.00 |
| TEE-BEND52 | 0.00 | 144.76 | 48.81 | 0.00 |
| HYD3       | 0.00 | 146.44 | 50.47 | 0.00 |
| TEE-BEND45 | 0.00 | 146.94 | 50.96 | 0.00 |
| TEE-BEND16 | 0.00 | 147.03 | 51.03 | 0.00 |
| HYD2       | 0.00 | 146.63 | 50.61 | 0.00 |
| HYD7       | 0.00 | 147.07 | 51.04 | 0.00 |
| TEE-BEND51 | 0.00 | 144.76 | 48.72 | 0.00 |
| TEE-BEND34 | 0.00 | 147.04 | 50.97 | 0.00 |
| TEE-BEND36 | 0.00 | 147.08 | 51.02 | 0.00 |
| TEE-BEND55 | 0.00 | 146.20 | 50.14 | 0.00 |
| TEE-BEND35 | 0.00 | 147.07 | 51.00 | 0.00 |
| HYD1       | 0.00 | 147.08 | 51.00 | 0.00 |
| HYD6       | 0.00 | 146.99 | 50.90 | 0.00 |
| TEE-BEND37 | 0.00 | 147.09 | 50.98 | 0.00 |
| TEE-BEND50 | 0.00 | 144.76 | 48.64 | 0.00 |
| TEE-BEND33 | 0.00 | 146.99 | 50.87 | 0.00 |
| TEE-BEND17 | 0.00 | 147.03 | 50.88 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.18 | 51.03      | 0.00    |
| TEE-BEND49 | 0.00       | 144.76 | 48.60      | 0.00    |
| TEE-BEND48 | 0.00       | 146.05 | 49.88      | 0.00    |
| TEE-BEND12 | 0.00       | 147.03 | 50.85      | 0.00    |
| TEE-BEND40 | 0.00       | 147.30 | 51.11      | 0.00    |
| TEE-BEND20 | 0.00       | 147.18 | 50.99      | 0.00    |
| TEE-BEND38 | 0.00       | 147.14 | 50.94      | 0.00    |
| TEE-BEND57 | 0.00       | 147.00 | 50.80      | 0.00    |
| TEE-BEND56 | 0.00       | 146.63 | 50.42      | 0.00    |
| TEE-BEND58 | 0.00       | 147.08 | 50.85      | 0.00    |
| TEE-BEND32 | 0.00       | 147.00 | 50.77      | 0.00    |
| TEE-BEND31 | 0.00       | 147.00 | 50.74      | 0.00    |
| TEE-BEND30 | 0.00       | 147.00 | 50.73      | 0.00    |
| HYD5       | 0.00       | 147.01 | 50.71      | 0.00    |
| CRU-8      | 0.04       | 147.03 | 50.69      | 0.00    |
| TEE-BEND28 | 0.00       | 147.00 | 50.65      | 0.00    |
| CRU-10     | 0.04       | 147.18 | 50.83      | 0.00    |
| TEE-BEND39 | 0.00       | 147.38 | 51.01      | 0.00    |
| TEE-BEND26 | 0.00       | 147.00 | 50.63      | 0.00    |
| TEE-BEND15 | 0.00       | 147.03 | 50.65      | 0.00    |
| TEE-BEND29 | 0.00       | 147.00 | 50.60      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 147.03 | 50.74 | 0.00           |
| TEE-BEND59 | 0.00   | 147.15 | 50.74 | 0.00           |
| TEE-BEND27 | 0.00   | 147.00 | 50.57 | 0.00           |
| TEE-BEND41 | 0.00   | 147.28 | 50.83 | 0.00           |
| TEE-BEND42 | 0.00   | 147.25 | 50.80 | 0.00           |
| CRU-6      | 0.11   | 147.38 | 50.89 | 0.00           |
| CRU-9      | 0.07   | 147.03 | 50.54 | 0.00           |
| CRU-7      | 0.08   | 147.03 | 50.54 | 0.00           |
| CRU-4      | 0.11   | 147.00 | 50.51 | 0.00           |
| CRU-3      | 0.17   | 147.00 | 50.51 | 0.00           |
| TEE-BEND6  | 0.00   | 147.38 | 50.73 | 0.00           |
| CRU-5      | 0.02   | 147.00 | 50.27 | 0.00           |
| TEE-BEND4  | 0.00   | 147.38 | 50.63 | 0.00           |
| TEE-BEND3  | 0.00   | 147.53 | 50.78 | 0.00           |
| TEE-BEND2  | 0.00   | 147.38 | 50.60 | 0.00           |
| TEE-BEND1  | 0.00   | 147.38 | 50.58 | 0.00           |
| CHAMBER1   | 0.00   | 147.41 | 50.59 | 0.00           |
| R1         | -31.98 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -35.69 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 35.69    | 1.14         | 9.36               | Open   |
| WM100   | 35.58    | 1.13         | 9.31               | Open   |
| WM101   | 25.93    | 0.83         | 5.18               | Open   |
| WM102   | 25.93    | 0.83         | 5.18               | Open   |
| WM103   | 25.63    | 0.82         | 5.07               | Open   |
| WM104   | 25.63    | 0.82         | 5.07               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -67.03   | 2.13         | 30.08              | Open   |
| WM111   | -67.03   | 2.13         | 30.08              | Open   |
| WM112   | -41.40   | 1.32         | 12.32              | Open   |
| WM113   | -41.40   | 1.32         | 12.32              | Open   |
| WM114   | -41.40   | 1.32         | 12.32              | Open   |
| WM115   | -31.94   | 1.02         | 7.62               | Open   |
| WM116   | -31.98   | 1.02         | 7.64               | Open   |
| WM117   | -31.98   | 1.02         | 7.64               | Open   |
| WM118   | -31.98   | 1.02         | 7.64               | Open   |
| WM119   | -31.98   | 1.02         | 7.64               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM123 | 0.11   | 0.00 | 0.00  | Open |
| WM124 | 0.11   | 0.00 | 0.00  | Open |
| WM125 | 9.64   | 0.31 | 0.83  | Open |
| WM126 | 9.64   | 0.31 | 0.83  | Open |
| WM127 | 9.64   | 0.31 | 0.83  | Open |
| WM128 | 9.64   | 0.31 | 0.83  | Open |
| WM129 | 9.64   | 0.31 | 0.83  | Open |
| WM130 | 9.45   | 0.30 | 0.80  | Open |
| WM131 | 9.45   | 0.30 | 0.80  | Open |
| WM132 | -0.02  | 0.00 | 0.00  | Open |
| WM133 | 0.30   | 0.01 | 0.00  | Open |
| WM134 | 0.30   | 0.01 | 0.00  | Open |
| WM135 | 0.28   | 0.01 | 0.00  | Open |
| WM136 | 0.28   | 0.01 | 0.00  | Open |
| WM137 | 0.28   | 0.01 | 0.00  | Open |
| WM138 | 0.11   | 0.01 | 0.00  | Open |
| WM139 | -0.17  | 0.01 | 0.00  | Open |
| WM140 | -0.17  | 0.01 | 0.00  | Open |
| WM141 | -0.17  | 0.01 | 0.00  | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -66.80 | 2.13 | 35.67 | Open |
| WM145 | -66.80 | 2.13 | 35.66 | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -66.80   | 2.13         | 35.66              | Open      |
| WM147   | -31.94   | 1.02         | 7.62               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 0.19     | 0.01         | 0.00               | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 35.69    | 1.14         | 9.36               | Open      |
| WM165   | -31.98   | 1.02         | 7.64               | Open      |
| 1       | 31.98    | 0.00         | -147.30            | Open Pump |





## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 66.80      | 143.44 | 48.08      | 0.00    |
| TEE-BEND24 | 0.00       | 143.51 | 48.14      | 0.00    |
| TEE-BEND23 | 0.00       | 143.58 | 48.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.20 | 51.73      | 0.00    |
| TEE-BEND44 | 0.00       | 147.18 | 51.64      | 0.00    |
| CHAMBER2   | 0.00       | 147.23 | 51.67      | 0.00    |
| TEE-BEND18 | 0.00       | 147.03 | 51.35      | 0.00    |
| TEE-BEND46 | 0.00       | 146.44 | 50.64      | 0.00    |
| TEE-BEND53 | 0.00       | 144.76 | 48.89      | 0.00    |
| TEE-BEND47 | 0.00       | 146.34 | 50.47      | 0.00    |
| TEE-BEND22 | 0.00       | 147.01 | 51.13      | 0.00    |
| CRU-1      | 0.23       | 144.76 | 48.83      | 0.00    |
| TEE-BEND52 | 0.00       | 144.76 | 48.81      | 0.00    |
| HYD3       | 0.00       | 146.44 | 50.47      | 0.00    |
| TEE-BEND45 | 0.00       | 146.94 | 50.96      | 0.00    |
| TEE-BEND16 | 0.00       | 147.03 | 51.03      | 0.00    |
| HYD2       | 0.00       | 146.63 | 50.61      | 0.00    |
| HYD7       | 0.00       | 147.07 | 51.04      | 0.00    |
| TEE-BEND51 | 0.00       | 144.76 | 48.72      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 147.04 | 50.97      | 0.00    |
| TEE-BEND36 | 0.00       | 147.08 | 51.02      | 0.00    |
| TEE-BEND55 | 0.00       | 146.20 | 50.14      | 0.00    |
| TEE-BEND35 | 0.00       | 147.07 | 51.00      | 0.00    |
| HYD1       | 0.00       | 147.08 | 51.00      | 0.00    |
| HYD6       | 0.00       | 146.99 | 50.90      | 0.00    |
| TEE-BEND37 | 0.00       | 147.09 | 50.98      | 0.00    |
| TEE-BEND50 | 0.00       | 144.76 | 48.64      | 0.00    |
| TEE-BEND33 | 0.00       | 146.99 | 50.87      | 0.00    |
| TEE-BEND17 | 0.00       | 147.03 | 50.88      | 0.00    |
| TEE-BEND21 | 0.00       | 147.18 | 51.03      | 0.00    |
| TEE-BEND49 | 0.00       | 144.76 | 48.60      | 0.00    |
| TEE-BEND48 | 0.00       | 146.05 | 49.88      | 0.00    |
| TEE-BEND12 | 0.00       | 147.03 | 50.85      | 0.00    |
| TEE-BEND40 | 0.00       | 147.30 | 51.11      | 0.00    |
| TEE-BEND20 | 0.00       | 147.18 | 50.99      | 0.00    |
| TEE-BEND38 | 0.00       | 147.14 | 50.94      | 0.00    |
| TEE-BEND57 | 0.00       | 147.00 | 50.80      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND56 | 0.00 | 146.63 | 50.85 | 0.00 |
| TEE-BEND58 | 0.00 | 147.08 | 50.85 | 0.00 |
| TEE-BEND32 | 0.00 | 147.00 | 50.77 | 0.00 |
| TEE-BEND31 | 0.00 | 147.00 | 50.74 | 0.00 |
| TEE-BEND30 | 0.00 | 147.00 | 50.73 | 0.00 |
| HYD5       | 0.00 | 147.01 | 50.71 | 0.00 |
| CRU-8      | 0.04 | 147.03 | 50.69 | 0.00 |
| TEE-BEND28 | 0.00 | 147.00 | 50.65 | 0.00 |
| CRU-10     | 0.04 | 147.18 | 50.83 | 0.00 |
| TEE-BEND39 | 0.00 | 147.38 | 51.01 | 0.00 |
| TEE-BEND26 | 0.00 | 147.00 | 50.63 | 0.00 |
| TEE-BEND15 | 0.00 | 147.03 | 50.65 | 0.00 |
| TEE-BEND29 | 0.00 | 147.00 | 50.60 | 0.00 |
| TEE-BEND13 | 0.00 | 147.03 | 50.63 | 0.00 |
| TEE-BEND59 | 0.00 | 147.15 | 50.74 | 0.00 |
| TEE-BEND27 | 0.00 | 147.00 | 50.57 | 0.00 |
| TEE-BEND41 | 0.00 | 147.28 | 50.83 | 0.00 |
| TEE-BEND42 | 0.00 | 147.25 | 50.80 | 0.00 |
| CRU-6      | 0.11 | 147.38 | 50.89 | 0.00 |
| CRU-9      | 0.07 | 147.03 | 50.54 | 0.00 |
| CRU-7      | 0.08 | 147.03 | 50.54 | 0.00 |
| CRU-4      | 0.11 | 147.00 | 50.51 | 0.00 |
| CRU-3      | 0.17 | 147.00 | 50.51 | 0.00 |
| TEE-BEND6  | 0.00 | 147.38 | 50.73 | 0.00 |
| CRU-5      | 0.02 | 147.00 | 50.27 | 0.00 |
| TEE-BEND4  | 0.00 | 147.38 | 50.63 | 0.00 |
| TEE-BEND3  | 0.00 | 147.53 | 50.78 | 0.00 |
| TEE-BEND2  | 0.00 | 147.38 | 50.60 | 0.00 |
| TEE-BEND1  | 0.00 | 147.38 | 50.58 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.41 | 50.59      | 0.00           |
| R1       | -31.98     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -35.69     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 35.69    | 1.14         | 9.36          | Open   |
| WM100   | 35.58    | 1.13         | 9.31          | Open   |
| WM101   | 25.93    | 0.83         | 5.18          | Open   |
| WM102   | 25.93    | 0.83         | 5.18          | Open   |
| WM103   | 25.63    | 0.82         | 5.07          | Open   |
| WM104   | 25.63    | 0.82         | 5.07          | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM105 | -0.23  | 0.01 | 0.00  | Open |
| WM106 | -0.23  | 0.01 | 0.00  | Open |
| WM107 | -0.23  | 0.01 | 0.00  | Open |
| WM108 | -0.23  | 0.01 | 0.00  | Open |
| WM109 | -0.23  | 0.01 | 0.00  | Open |
| WM110 | -67.03 | 2.13 | 30.08 | Open |
| WM111 | -67.03 | 2.13 | 30.08 | Open |
| WM112 | -41.40 | 1.32 | 12.32 | Open |
| WM113 | -41.40 | 1.32 | 12.32 | Open |
| WM114 | -41.40 | 1.32 | 12.32 | Open |
| WM115 | -31.94 | 1.02 | 7.62  | Open |
| WM116 | -31.98 | 1.02 | 7.64  | Open |
| WM117 | -31.98 | 1.02 | 7.64  | Open |
| WM118 | -31.98 | 1.02 | 7.64  | Open |
| WM119 | -31.98 | 1.02 | 7.64  | Open |
| WM120 | 0.11   | 0.00 | 0.00  | Open |
| WM121 | 0.11   | 0.00 | 0.00  | Open |
| WM122 | 0.11   | 0.00 | 0.00  | Open |
| WM123 | 0.11   | 0.00 | 0.00  | Open |
| WM124 | 0.11   | 0.00 | 0.00  | Open |
| WM125 | 9.64   | 0.31 | 0.83  | Open |
| WM126 | 9.64   | 0.31 | 0.83  | Open |
| WM127 | 9.64   | 0.31 | 0.83  | Open |
| WM128 | 9.64   | 0.31 | 0.83  | Open |
| WM129 | 9.64   | 0.31 | 0.83  | Open |
| WM130 | 9.45   | 0.30 | 0.80  | Open |
| WM131 | 9.45   | 0.30 | 0.80  | Open |
| WM132 | -0.02  | 0.00 | 0.00  | Open |
| WM133 | 0.30   | 0.01 | 0.00  | Open |
| WM134 | 0.30   | 0.01 | 0.00  | Open |
| WM135 | 0.28   | 0.01 | 0.00  | Open |
| WM136 | 0.28   | 0.01 | 0.00  | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -66.80   | 2.13         | 35.67              | Open   |
| WM145   | -66.80   | 2.13         | 35.66              | Open   |
| WM146   | -66.80   | 2.13         | 35.66              | Open   |
| WM147   | -31.94   | 1.02         | 7.62               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 35.69  | 1.14 | 9.36    | Open      |
| WM165 | -31.98 | 1.02 | 7.64    | Open      |
| 1     | 31.98  | 0.00 | -147.30 | Open Pump |
| 2     | 35.69  | 0.00 | -147.53 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 66.80      | 143.44 | 48.08      | 0.00    |
| TEE-BEND24 | 0.00       | 143.51 | 48.14      | 0.00    |
| TEE-BEND23 | 0.00       | 143.58 | 48.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.20 | 51.73      | 0.00    |
| TEE-BEND44 | 0.00       | 147.18 | 51.64      | 0.00    |
| CHAMBER2   | 0.00       | 147.23 | 51.67      | 0.00    |
| TEE-BEND18 | 0.00       | 147.03 | 51.35      | 0.00    |
| TEE-BEND46 | 0.00       | 146.44 | 50.64      | 0.00    |
| TEE-BEND53 | 0.00       | 144.76 | 48.89      | 0.00    |
| TEE-BEND47 | 0.00       | 146.34 | 50.47      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.01 | 51.13      | 0.00    |
| CRU-1      | 0.23       | 144.76 | 48.83      | 0.00    |
| TEE-BEND52 | 0.00       | 144.76 | 48.81      | 0.00    |
| HYD3       | 0.00       | 146.44 | 50.47      | 0.00    |
| TEE-BEND45 | 0.00       | 146.94 | 50.96      | 0.00    |
| TEE-BEND16 | 0.00       | 147.03 | 51.03      | 0.00    |
| HYD2       | 0.00       | 146.63 | 50.61      | 0.00    |
| HYD7       | 0.00       | 147.07 | 51.04      | 0.00    |
| TEE-BEND51 | 0.00       | 144.76 | 48.72      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND34 | 0.00 | 147.04 | 50.00 | 0.00 |
| TEE-BEND36 | 0.00 | 147.08 | 51.02 | 0.00 |
| TEE-BEND55 | 0.00 | 146.20 | 50.14 | 0.00 |
| TEE-BEND35 | 0.00 | 147.07 | 51.00 | 0.00 |
| HYD1       | 0.00 | 147.08 | 51.00 | 0.00 |
| HYD6       | 0.00 | 146.99 | 50.90 | 0.00 |
| TEE-BEND37 | 0.00 | 147.09 | 50.98 | 0.00 |
| TEE-BEND50 | 0.00 | 144.76 | 48.64 | 0.00 |
| TEE-BEND33 | 0.00 | 146.99 | 50.87 | 0.00 |
| TEE-BEND17 | 0.00 | 147.03 | 50.88 | 0.00 |
| TEE-BEND21 | 0.00 | 147.18 | 51.03 | 0.00 |
| TEE-BEND49 | 0.00 | 144.76 | 48.60 | 0.00 |
| TEE-BEND48 | 0.00 | 146.05 | 49.88 | 0.00 |
| TEE-BEND12 | 0.00 | 147.03 | 50.85 | 0.00 |
| TEE-BEND40 | 0.00 | 147.30 | 51.11 | 0.00 |
| TEE-BEND20 | 0.00 | 147.18 | 50.99 | 0.00 |
| TEE-BEND38 | 0.00 | 147.14 | 50.94 | 0.00 |
| TEE-BEND57 | 0.00 | 147.00 | 50.80 | 0.00 |
| TEE-BEND56 | 0.00 | 146.63 | 50.42 | 0.00 |
| TEE-BEND58 | 0.00 | 147.08 | 50.85 | 0.00 |
| TEE-BEND32 | 0.00 | 147.00 | 50.77 | 0.00 |
| TEE-BEND31 | 0.00 | 147.00 | 50.74 | 0.00 |
| TEE-BEND30 | 0.00 | 147.00 | 50.73 | 0.00 |
| HYD5       | 0.00 | 147.01 | 50.71 | 0.00 |
| CRU-8      | 0.04 | 147.03 | 50.69 | 0.00 |
| TEE-BEND28 | 0.00 | 147.00 | 50.65 | 0.00 |
| CRU-10     | 0.04 | 147.18 | 50.83 | 0.00 |
| TEE-BEND39 | 0.00 | 147.38 | 51.01 | 0.00 |
| TEE-BEND26 | 0.00 | 147.00 | 50.63 | 0.00 |
| TEE-BEND15 | 0.00 | 147.03 | 50.65 | 0.00 |
| TEE-BEND29 | 0.00 | 147.00 | 50.60 | 0.00 |
| TEE-BEND13 | 0.00 | 147.03 | 50.63 | 0.00 |
| TEE-BEND59 | 0.00 | 147.15 | 50.74 | 0.00 |
| TEE-BEND27 | 0.00 | 147.00 | 50.57 | 0.00 |
| TEE-BEND41 | 0.00 | 147.28 | 50.83 | 0.00 |
| TEE-BEND42 | 0.00 | 147.25 | 50.80 | 0.00 |
| CRU-6      | 0.11 | 147.38 | 50.89 | 0.00 |
| CRU-9      | 0.07 | 147.03 | 50.54 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 147.03 | 50.54      | 0.00    |
| CRU-4     | 0.11       | 147.00 | 50.51      | 0.00    |
| CRU-3     | 0.17       | 147.00 | 50.51      | 0.00    |
| TEE-BEND6 | 0.00       | 147.38 | 50.73      | 0.00    |
| CRU-5     | 0.02       | 147.00 | 50.27      | 0.00    |
| TEE-BEND4 | 0.00       | 147.38 | 50.63      | 0.00    |

|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.53 | 50.60 | 0.00           |
| TEE-BEND2 | 0.00   | 147.38 | 50.60 | 0.00           |
| TEE-BEND1 | 0.00   | 147.38 | 50.58 | 0.00           |
| CHAMBER1  | 0.00   | 147.41 | 50.59 | 0.00           |
| R1        | -31.98 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -35.69 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 35.69    | 1.14         | 9.36               | Open   |
| WM100   | 35.58    | 1.13         | 9.31               | Open   |
| WM101   | 25.93    | 0.83         | 5.18               | Open   |
| WM102   | 25.93    | 0.83         | 5.18               | Open   |
| WM103   | 25.63    | 0.82         | 5.07               | Open   |
| WM104   | 25.63    | 0.82         | 5.07               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -67.03   | 2.13         | 30.08              | Open   |
| WM111   | -67.03   | 2.13         | 30.08              | Open   |
| WM112   | -41.40   | 1.32         | 12.32              | Open   |
| WM113   | -41.40   | 1.32         | 12.32              | Open   |
| WM114   | -41.40   | 1.32         | 12.32              | Open   |
| WM115   | -31.94   | 1.02         | 7.62               | Open   |
| WM116   | -31.98   | 1.02         | 7.64               | Open   |
| WM117   | -31.98   | 1.02         | 7.64               | Open   |
| WM118   | -31.98   | 1.02         | 7.64               | Open   |
| WM119   | -31.98   | 1.02         | 7.64               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 9.64     | 0.31         | 0.83               | Open   |
| WM126   | 9.64     | 0.31         | 0.83               | Open   |
| WM127   | 9.64     | 0.31         | 0.83               | Open   |



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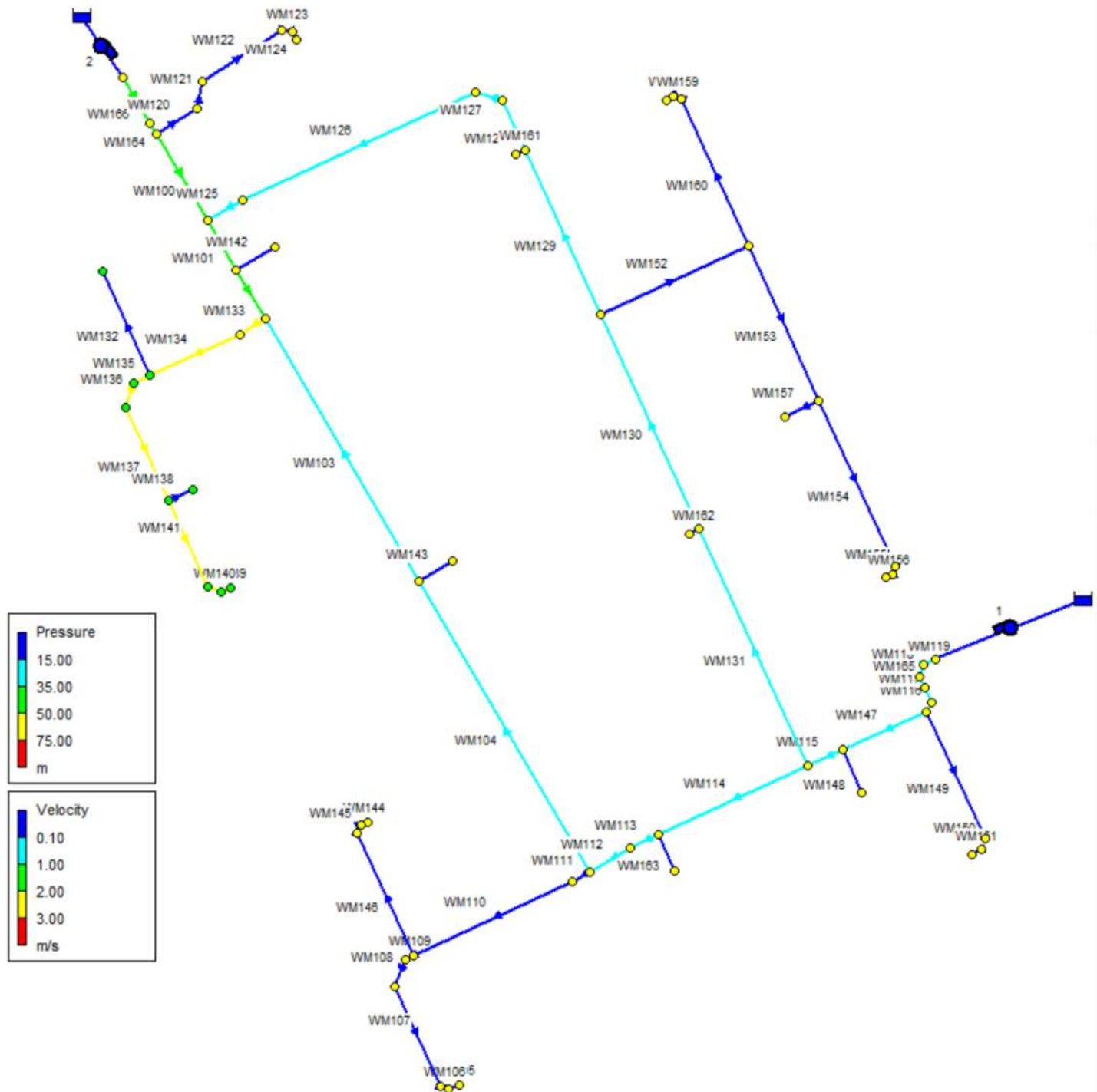
Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | 9.64     | 0.31         | 0.83               | Open   |
| WM129   | 9.64     | 0.31         | 0.83               | Open   |
| WM130   | 9.45     | 0.30         | 0.80               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | 9.45   | 0.30 | 0.00    | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 0.30   | 0.01 | 0.00    | Open      |
| WM134 | 0.30   | 0.01 | 0.00    | Open      |
| WM135 | 0.28   | 0.01 | 0.00    | Open      |
| WM136 | 0.28   | 0.01 | 0.00    | Open      |
| WM137 | 0.28   | 0.01 | 0.00    | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -66.80 | 2.13 | 35.67   | Open      |
| WM145 | -66.80 | 2.13 | 35.66   | Open      |
| WM146 | -66.80 | 2.13 | 35.66   | Open      |
| WM147 | -31.94 | 1.02 | 7.62    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 35.69  | 1.14 | 9.36    | Open      |
| WM165 | -31.98 | 1.02 | 7.64    | Open      |
| 1     | 31.98  | 0.00 | -147.30 | Open Pump |
| 2     | 35.69  | 0.00 | -147.53 | Open Pump |



## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR3



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU3)+pumps.net

# Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |

|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 51.49   | 51.49   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 78.90   | 78.90   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 146.95 | 51.58      | 0.00    |
| TEE-BEND24 | 0.00       | 146.95 | 51.58      | 0.00    |
| TEE-BEND23 | 0.00       | 146.95 | 51.51      | 0.00    |
| TEE-BEND43 | 0.00       | 147.31 | 51.84      | 0.00    |
| TEE-BEND44 | 0.00       | 147.30 | 51.75      | 0.00    |
| CHAMBER2   | 0.00       | 147.33 | 51.77      | 0.00    |
| TEE-BEND18 | 0.00       | 147.05 | 51.37      | 0.00    |
| TEE-BEND46 | 0.00       | 147.01 | 51.21      | 0.00    |
| TEE-BEND53 | 0.00       | 146.95 | 51.08      | 0.00    |
| TEE-BEND47 | 0.00       | 146.98 | 51.11      | 0.00    |
| TEE-BEND22 | 0.00       | 147.17 | 51.30      | 0.00    |
| CRU-1      | 0.23       | 146.95 | 51.03      | 0.00    |
| TEE-BEND52 | 0.00       | 146.95 | 51.01      | 0.00    |
| HYD3       | 0.00       | 147.01 | 51.04      | 0.00    |
| TEE-BEND45 | 0.00       | 147.12 | 51.14      | 0.00    |
| TEE-BEND16 | 0.00       | 147.05 | 51.05      | 0.00    |
| HYD2       | 0.00       | 146.72 | 50.71      | 0.00    |
| HYD7       | 0.00       | 147.03 | 51.00      | 0.00    |
| TEE-BEND51 | 0.00       | 146.95 | 50.92      | 0.00    |
| TEE-BEND34 | 0.00       | 147.05 | 50.99      | 0.00    |
| TEE-BEND36 | 0.00       | 147.02 | 50.96      | 0.00    |
| TEE-BEND55 | 0.00       | 146.95 | 50.88      | 0.00    |
| TEE-BEND35 | 0.00       | 147.03 | 50.96      | 0.00    |
| HYD1       | 0.00       | 146.75 | 50.67      | 0.00    |
| HYD6       | 0.00       | 147.09 | 50.99      | 0.00    |
| TEE-BEND37 | 0.00       | 147.02 | 50.91      | 0.00    |
| TEE-BEND50 | 0.00       | 146.95 | 50.84      | 0.00    |
| TEE-BEND33 | 0.00       | 147.09 | 50.97      | 0.00    |
| TEE-BEND17 | 0.00       | 147.05 | 50.90      | 0.00    |
| TEE-BEND21 | 0.00       | 147.30 | 51.14      | 0.00    |
| TEE-BEND49 | 0.00       | 146.95 | 50.79      | 0.00    |
| TEE-BEND48 | 0.00       | 146.95 | 50.78      | 0.00    |
| TEE-BEND12 | 0.00       | 147.05 | 50.87      | 0.00    |
| TEE-BEND40 | 0.00       | 147.38 | 51.19      | 0.00    |
| TEE-BEND20 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND38 | 0.00       | 146.98 | 50.78      | 0.00    |
| TEE-BEND57 | 0.00       | 146.51 | 50.31      | 0.00    |
| TEE-BEND56 | 0.00       | 146.72 | 50.51      | 0.00    |
| TEE-BEND58 | 0.00       | 146.75 | 50.52      | 0.00    |
| TEE-BEND32 | 0.00       | 145.56 | 49.33      | 0.00    |
| TEE-BEND31 | 0.00       | 146.29 | 50.03      | 0.00    |
| TEE-BEND30 | 0.00       | 145.44 | 49.16      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 147.17 | 50.00 | 0.00 |
| CRU-8      | 0.04 | 147.05 | 50.71 | 0.00 |
| TEE-BEND28 | 0.00 | 144.48 | 48.13 | 0.00 |
| CRU-10     | 0.04 | 147.30 | 50.95 | 0.00 |
| TEE-BEND39 | 0.00 | 147.27 | 50.90 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 143.79 | 47.42      | 0.00           |
| TEE-BEND15 | 0.00       | 147.05 | 50.67      | 0.00           |
| TEE-BEND29 | 0.00       | 145.25 | 48.84      | 0.00           |
| TEE-BEND13 | 0.00       | 147.05 | 50.65      | 0.00           |
| TEE-BEND59 | 0.00       | 146.98 | 50.57      | 0.00           |
| TEE-BEND27 | 0.00       | 143.69 | 47.25      | 0.00           |
| TEE-BEND41 | 0.00       | 147.37 | 50.92      | 0.00           |
| TEE-BEND42 | 0.00       | 147.35 | 50.90      | 0.00           |
| CRU-6      | 0.11       | 147.27 | 50.79      | 0.00           |
| CRU-9      | 0.07       | 147.05 | 50.56      | 0.00           |
| CRU-7      | 0.08       | 147.05 | 50.56      | 0.00           |
| CRU-4      | 0.11       | 144.48 | 47.99      | 0.00           |
| CRU-3      | 66.83      | 143.62 | 47.12      | 0.00           |
| TEE-BEND6  | 0.00       | 147.27 | 50.62      | 0.00           |
| CRU-5      | 0.02       | 145.56 | 48.83      | 0.00           |
| TEE-BEND4  | 0.00       | 147.27 | 50.53      | 0.00           |
| TEE-BEND3  | 0.00       | 147.47 | 50.72      | 0.00           |
| TEE-BEND2  | 0.00       | 147.27 | 50.50      | 0.00           |
| TEE-BEND1  | 0.00       | 147.27 | 50.47      | 0.00           |
| CHAMBER1   | 0.00       | 147.31 | 50.50      | 0.00           |
| R1         | -26.73     | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -40.94     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 40.94    | 1.30         | 12.07         | Open   |
| WM100   | 40.83    | 1.30         | 12.01         | Open   |
| WM101   | 48.47    | 1.54         | 16.50         | Open   |
| WM102   | 48.47    | 1.54         | 16.50         | Open   |
| WM103   | -18.49   | 0.59         | 2.77          | Open   |
| WM104   | -18.49   | 0.59         | 2.77          | Open   |
| WM105   | -0.23    | 0.01         | 0.00          | Open   |
| WM106   | -0.23    | 0.01         | 0.00          | Open   |
| WM107   | -0.23    | 0.01         | 0.00          | Open   |
| WM108   | -0.23    | 0.01         | 0.00          | Open   |
| WM109   | -0.23    | 0.01         | 0.00          | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | -18.86 | 0.60 | 2.87 | Open |
| WM113 | -18.86 | 0.60 | 2.87 | Open |
| WM114 | -18.86 | 0.60 | 2.87 | Open |
| WM115 | -26.69 | 0.85 | 5.47 | Open |
| WM116 | -26.73 | 0.85 | 5.48 | Open |
| WM117 | -26.73 | 0.85 | 5.48 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -26.73   | 0.85         | 5.48               | Open   |
| WM119   | -26.73   | 0.85         | 5.48               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -7.64    | 0.24         | 0.54               | Open   |
| WM126   | -7.64    | 0.24         | 0.54               | Open   |
| WM127   | -7.64    | 0.24         | 0.54               | Open   |
| WM128   | -7.64    | 0.24         | 0.54               | Open   |
| WM129   | -7.64    | 0.24         | 0.54               | Open   |
| WM130   | -7.83    | 0.25         | 0.56               | Open   |
| WM131   | -7.83    | 0.25         | 0.56               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 66.96    | 2.13         | 30.02              | Open   |
| WM134   | 66.96    | 2.13         | 30.02              | Open   |
| WM135   | 66.94    | 2.13         | 30.01              | Open   |
| WM136   | 66.94    | 2.13         | 30.01              | Open   |
| WM137   | 66.94    | 2.13         | 30.01              | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -66.83   | 2.13         | 29.91              | Open   |
| WM140   | -66.83   | 2.13         | 29.92              | Open   |
| WM141   | -66.83   | 2.13         | 29.92              | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -26.69   | 0.85         | 5.47               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 0.19     | 0.01         | 0.00               | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |

|       |       |      |       |      |
|-------|-------|------|-------|------|
| WM154 | 0.07  | 0.00 | 0.00  | Open |
| WM155 | 0.07  | 0.00 | 0.00  | Open |
| WM156 | 0.07  | 0.00 | 0.00  | Open |
| WM157 | 0.04  | 0.00 | 0.00  | Open |
| WM158 | -0.08 | 0.00 | 0.00  | Open |
| WM159 | -0.08 | 0.00 | 0.00  | Open |
| WM160 | -0.08 | 0.00 | 0.00  | Open |
| WM161 | 0.00  | 0.00 | 0.00  | Open |
| WM162 | 0.00  | 0.00 | 0.00  | Open |
| WM163 | 0.00  | 0.00 | 0.00  | Open |
| WM164 | 40.94 | 1.30 | 12.07 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -26.73   | 0.85         | 5.48               | Open      |
| 1       | 26.73    | 0.00         | -147.38            | Open Pump |
| 2       | 40.94    | 0.00         | -147.47            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 146.95 | 51.58      | 0.00    |
| TEE-BEND24 | 0.00       | 146.95 | 51.58      | 0.00    |
| TEE-BEND23 | 0.00       | 146.95 | 51.51      | 0.00    |
| TEE-BEND43 | 0.00       | 147.31 | 51.84      | 0.00    |
| TEE-BEND44 | 0.00       | 147.30 | 51.75      | 0.00    |
| CHAMBER2   | 0.00       | 147.33 | 51.77      | 0.00    |
| TEE-BEND18 | 0.00       | 147.05 | 51.37      | 0.00    |
| TEE-BEND46 | 0.00       | 147.01 | 51.21      | 0.00    |
| TEE-BEND53 | 0.00       | 146.95 | 51.08      | 0.00    |
| TEE-BEND47 | 0.00       | 146.98 | 51.11      | 0.00    |
| TEE-BEND22 | 0.00       | 147.17 | 51.30      | 0.00    |
| CRU-1      | 0.23       | 146.95 | 51.03      | 0.00    |
| TEE-BEND52 | 0.00       | 146.95 | 51.01      | 0.00    |
| HYD3       | 0.00       | 147.01 | 51.04      | 0.00    |
| TEE-BEND45 | 0.00       | 147.12 | 51.14      | 0.00    |
| TEE-BEND16 | 0.00       | 147.05 | 51.05      | 0.00    |
| HYD2       | 0.00       | 146.72 | 50.71      | 0.00    |
| HYD7       | 0.00       | 147.03 | 51.00      | 0.00    |
| TEE-BEND51 | 0.00       | 146.95 | 50.92      | 0.00    |
| TEE-BEND34 | 0.00       | 147.05 | 50.99      | 0.00    |
| TEE-BEND36 | 0.00       | 147.02 | 50.96      | 0.00    |
| TEE-BEND55 | 0.00       | 146.95 | 50.88      | 0.00    |
| TEE-BEND35 | 0.00       | 147.03 | 50.96      | 0.00    |
| HYD1       | 0.00       | 146.75 | 50.67      | 0.00    |



|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 147.09 | 50.00 | 0.00 |
| TEE-BEND37 | 0.00 | 147.02 | 50.91 | 0.00 |
| TEE-BEND50 | 0.00 | 146.95 | 50.84 | 0.00 |
| TEE-BEND33 | 0.00 | 147.09 | 50.97 | 0.00 |
| TEE-BEND17 | 0.00 | 147.05 | 50.90 | 0.00 |
| TEE-BEND21 | 0.00 | 147.30 | 51.14 | 0.00 |
| TEE-BEND49 | 0.00 | 146.95 | 50.79 | 0.00 |
| TEE-BEND48 | 0.00 | 146.95 | 50.78 | 0.00 |
| TEE-BEND12 | 0.00 | 147.05 | 50.87 | 0.00 |
| TEE-BEND40 | 0.00 | 147.38 | 51.19 | 0.00 |
| TEE-BEND20 | 0.00 | 147.30 | 51.10 | 0.00 |
| TEE-BEND38 | 0.00 | 146.98 | 50.78 | 0.00 |
| TEE-BEND57 | 0.00 | 146.51 | 50.31 | 0.00 |
| TEE-BEND56 | 0.00 | 146.72 | 50.51 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 146.75 | 50.52      | 0.00           |
| TEE-BEND32 | 0.00       | 145.56 | 49.33      | 0.00           |
| TEE-BEND31 | 0.00       | 146.29 | 50.03      | 0.00           |
| TEE-BEND30 | 0.00       | 145.44 | 49.16      | 0.00           |
| HYD5       | 0.00       | 147.17 | 50.87      | 0.00           |
| CRU-8      | 0.04       | 147.05 | 50.71      | 0.00           |
| TEE-BEND28 | 0.00       | 144.48 | 48.13      | 0.00           |
| CRU-10     | 0.04       | 147.30 | 50.95      | 0.00           |
| TEE-BEND39 | 0.00       | 147.27 | 50.90      | 0.00           |
| TEE-BEND26 | 0.00       | 143.79 | 47.42      | 0.00           |
| TEE-BEND15 | 0.00       | 147.05 | 50.67      | 0.00           |
| TEE-BEND29 | 0.00       | 145.25 | 48.84      | 0.00           |
| TEE-BEND13 | 0.00       | 147.05 | 50.65      | 0.00           |
| TEE-BEND59 | 0.00       | 146.98 | 50.57      | 0.00           |
| TEE-BEND27 | 0.00       | 143.69 | 47.25      | 0.00           |
| TEE-BEND41 | 0.00       | 147.37 | 50.92      | 0.00           |
| TEE-BEND42 | 0.00       | 147.35 | 50.90      | 0.00           |
| CRU-6      | 0.11       | 147.27 | 50.79      | 0.00           |
| CRU-9      | 0.07       | 147.05 | 50.56      | 0.00           |
| CRU-7      | 0.08       | 147.05 | 50.56      | 0.00           |
| CRU-4      | 0.11       | 144.48 | 47.99      | 0.00           |
| CRU-3      | 66.83      | 143.62 | 47.12      | 0.00           |
| TEE-BEND6  | 0.00       | 147.27 | 50.62      | 0.00           |
| CRU-5      | 0.02       | 145.56 | 48.83      | 0.00           |
| TEE-BEND4  | 0.00       | 147.27 | 50.53      | 0.00           |
| TEE-BEND3  | 0.00       | 147.47 | 50.72      | 0.00           |
| TEE-BEND2  | 0.00       | 147.27 | 50.50      | 0.00           |
| TEE-BEND1  | 0.00       | 147.27 | 50.47      | 0.00           |
| CHAMBER1   | 0.00       | 147.31 | 50.50      | 0.00           |
| R1         | -26.73     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -40.94 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 40.94    | 1.30         | 12.07              | Open   |
| WM100   | 40.83    | 1.30         | 12.01              | Open   |
| WM101   | 48.47    | 1.54         | 16.50              | Open   |
| WM102   | 48.47    | 1.54         | 16.50              | Open   |
| WM103   | -18.49   | 0.59         | 2.77               | Open   |
| WM104   | -18.49   | 0.59         | 2.77               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -18.86   | 0.60         | 2.87               | Open   |
| WM113   | -18.86   | 0.60         | 2.87               | Open   |
| WM114   | -18.86   | 0.60         | 2.87               | Open   |
| WM115   | -26.69   | 0.85         | 5.47               | Open   |
| WM116   | -26.73   | 0.85         | 5.48               | Open   |
| WM117   | -26.73   | 0.85         | 5.48               | Open   |
| WM118   | -26.73   | 0.85         | 5.48               | Open   |
| WM119   | -26.73   | 0.85         | 5.48               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -7.64    | 0.24         | 0.54               | Open   |
| WM126   | -7.64    | 0.24         | 0.54               | Open   |
| WM127   | -7.64    | 0.24         | 0.54               | Open   |
| WM128   | -7.64    | 0.24         | 0.54               | Open   |
| WM129   | -7.64    | 0.24         | 0.54               | Open   |
| WM130   | -7.83    | 0.25         | 0.56               | Open   |
| WM131   | -7.83    | 0.25         | 0.56               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 66.96    | 2.13         | 30.02              | Open   |
| WM134   | 66.96    | 2.13         | 30.02              | Open   |
| WM135   | 66.94    | 2.13         | 30.01              | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM136 | 66.94  | 2.13 | 30.01 | Open |
| WM137 | 66.94  | 2.13 | 30.01 | Open |
| WM138 | 0.11   | 0.01 | 0.00  | Open |
| WM139 | -66.83 | 2.13 | 29.91 | Open |
| WM140 | -66.83 | 2.13 | 29.92 | Open |
| WM141 | -66.83 | 2.13 | 29.92 | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -0.14  | 0.00 | 0.00  | Open |
| WM145 | -0.14  | 0.00 | 0.00  | Open |
| WM146 | -0.14  | 0.00 | 0.00  | Open |
| WM147 | -26.69 | 0.85 | 5.47  | Open |
| WM148 | 0.00   | 0.00 | 0.00  | Open |
| WM149 | 0.04   | 0.00 | 0.00  | Open |
| WM150 | 0.04   | 0.00 | 0.00  | Open |
| WM151 | 0.04   | 0.00 | 0.00  | Open |
| WM152 | 0.19   | 0.01 | 0.00  | Open |
| WM153 | 0.11   | 0.01 | 0.00  | Open |
| WM154 | 0.07   | 0.00 | 0.00  | Open |
| WM155 | 0.07   | 0.00 | 0.00  | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 40.94    | 1.30         | 12.07              | Open      |
| WM165   | -26.73   | 0.85         | 5.48               | Open      |
| 1       | 26.73    | 0.00         | -147.38            | Open Pump |
| 2       | 40.94    | 0.00         | -147.47            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 146.95 | 51.58      | 0.00    |
| TEE-BEND24 | 0.00       | 146.95 | 51.58      | 0.00    |
| TEE-BEND23 | 0.00       | 146.95 | 51.51      | 0.00    |
| TEE-BEND43 | 0.00       | 147.31 | 51.84      | 0.00    |
| TEE-BEND44 | 0.00       | 147.30 | 51.75      | 0.00    |
| CHAMBER2   | 0.00       | 147.33 | 51.77      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 147.05 | 51.00 | 0.00 |
| TEE-BEND46 | 0.00 | 147.01 | 51.21 | 0.00 |
| TEE-BEND53 | 0.00 | 146.95 | 51.08 | 0.00 |
| TEE-BEND47 | 0.00 | 146.98 | 51.11 | 0.00 |
| TEE-BEND22 | 0.00 | 147.17 | 51.30 | 0.00 |
| CRU-1      | 0.23 | 146.95 | 51.03 | 0.00 |
| TEE-BEND52 | 0.00 | 146.95 | 51.01 | 0.00 |
| HYD3       | 0.00 | 147.01 | 51.04 | 0.00 |
| TEE-BEND45 | 0.00 | 147.12 | 51.14 | 0.00 |
| TEE-BEND16 | 0.00 | 147.05 | 51.05 | 0.00 |
| HYD2       | 0.00 | 146.72 | 50.71 | 0.00 |
| HYD7       | 0.00 | 147.03 | 51.00 | 0.00 |
| TEE-BEND51 | 0.00 | 146.95 | 50.92 | 0.00 |
| TEE-BEND34 | 0.00 | 147.05 | 50.99 | 0.00 |
| TEE-BEND36 | 0.00 | 147.02 | 50.96 | 0.00 |
| TEE-BEND55 | 0.00 | 146.95 | 50.88 | 0.00 |
| TEE-BEND35 | 0.00 | 147.03 | 50.96 | 0.00 |
| HYD1       | 0.00 | 146.75 | 50.67 | 0.00 |
| HYD6       | 0.00 | 147.09 | 50.99 | 0.00 |
| TEE-BEND37 | 0.00 | 147.02 | 50.91 | 0.00 |
| TEE-BEND50 | 0.00 | 146.95 | 50.84 | 0.00 |
| TEE-BEND33 | 0.00 | 147.09 | 50.97 | 0.00 |
| TEE-BEND17 | 0.00 | 147.05 | 50.90 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.30 | 51.14      | 0.00    |
| TEE-BEND49 | 0.00       | 146.95 | 50.79      | 0.00    |
| TEE-BEND48 | 0.00       | 146.95 | 50.78      | 0.00    |
| TEE-BEND12 | 0.00       | 147.05 | 50.87      | 0.00    |
| TEE-BEND40 | 0.00       | 147.38 | 51.19      | 0.00    |
| TEE-BEND20 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND38 | 0.00       | 146.98 | 50.78      | 0.00    |
| TEE-BEND57 | 0.00       | 146.51 | 50.31      | 0.00    |
| TEE-BEND56 | 0.00       | 146.72 | 50.51      | 0.00    |
| TEE-BEND58 | 0.00       | 146.75 | 50.52      | 0.00    |
| TEE-BEND32 | 0.00       | 145.56 | 49.33      | 0.00    |
| TEE-BEND31 | 0.00       | 146.29 | 50.03      | 0.00    |
| TEE-BEND30 | 0.00       | 145.44 | 49.16      | 0.00    |
| HYD5       | 0.00       | 147.17 | 50.87      | 0.00    |
| CRU-8      | 0.04       | 147.05 | 50.71      | 0.00    |
| TEE-BEND28 | 0.00       | 144.48 | 48.13      | 0.00    |
| CRU-10     | 0.04       | 147.30 | 50.95      | 0.00    |
| TEE-BEND39 | 0.00       | 147.27 | 50.90      | 0.00    |
| TEE-BEND26 | 0.00       | 143.79 | 47.42      | 0.00    |
| TEE-BEND15 | 0.00       | 147.05 | 50.67      | 0.00    |
| TEE-BEND29 | 0.00       | 145.25 | 48.84      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 147.05 | 50.00 | 0.00           |
| TEE-BEND59 | 0.00   | 146.98 | 50.57 | 0.00           |
| TEE-BEND27 | 0.00   | 143.69 | 47.25 | 0.00           |
| TEE-BEND41 | 0.00   | 147.37 | 50.92 | 0.00           |
| TEE-BEND42 | 0.00   | 147.35 | 50.90 | 0.00           |
| CRU-6      | 0.11   | 147.27 | 50.79 | 0.00           |
| CRU-9      | 0.07   | 147.05 | 50.56 | 0.00           |
| CRU-7      | 0.08   | 147.05 | 50.56 | 0.00           |
| CRU-4      | 0.11   | 144.48 | 47.99 | 0.00           |
| CRU-3      | 66.83  | 143.62 | 47.12 | 0.00           |
| TEE-BEND6  | 0.00   | 147.27 | 50.62 | 0.00           |
| CRU-5      | 0.02   | 145.56 | 48.83 | 0.00           |
| TEE-BEND4  | 0.00   | 147.27 | 50.53 | 0.00           |
| TEE-BEND3  | 0.00   | 147.47 | 50.72 | 0.00           |
| TEE-BEND2  | 0.00   | 147.27 | 50.50 | 0.00           |
| TEE-BEND1  | 0.00   | 147.27 | 50.47 | 0.00           |
| CHAMBER1   | 0.00   | 147.31 | 50.50 | 0.00           |
| R1         | -26.73 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -40.94 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | VelocityUnit m/s | Headloss m/km | Status |
|---------|----------|------------------|---------------|--------|
| WM166   | 40.94    | 1.30             | 12.07         | Open   |
| WM100   | 40.83    | 1.30             | 12.01         | Open   |
| WM101   | 48.47    | 1.54             | 16.50         | Open   |
| WM102   | 48.47    | 1.54             | 16.50         | Open   |
| WM103   | -18.49   | 0.59             | 2.77          | Open   |
| WM104   | -18.49   | 0.59             | 2.77          | Open   |
| WM105   | -0.23    | 0.01             | 0.00          | Open   |
| WM106   | -0.23    | 0.01             | 0.00          | Open   |
| WM107   | -0.23    | 0.01             | 0.00          | Open   |
| WM108   | -0.23    | 0.01             | 0.00          | Open   |
| WM109   | -0.23    | 0.01             | 0.00          | Open   |
| WM110   | -0.37    | 0.01             | 0.00          | Open   |
| WM111   | -0.37    | 0.01             | 0.00          | Open   |
| WM112   | -18.86   | 0.60             | 2.87          | Open   |
| WM113   | -18.86   | 0.60             | 2.87          | Open   |
| WM114   | -18.86   | 0.60             | 2.87          | Open   |
| WM115   | -26.69   | 0.85             | 5.47          | Open   |
| WM116   | -26.73   | 0.85             | 5.48          | Open   |
| WM117   | -26.73   | 0.85             | 5.48          | Open   |
| WM118   | -26.73   | 0.85             | 5.48          | Open   |
| WM119   | -26.73   | 0.85             | 5.48          | Open   |
| WM120   | 0.11     | 0.00             | 0.00          | Open   |
| WM121   | 0.11     | 0.00             | 0.00          | Open   |
| WM122   | 0.11     | 0.00             | 0.00          | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM123 | 0.11   | 0.00 | 0.00  | Open |
| WM124 | 0.11   | 0.00 | 0.00  | Open |
| WM125 | -7.64  | 0.24 | 0.54  | Open |
| WM126 | -7.64  | 0.24 | 0.54  | Open |
| WM127 | -7.64  | 0.24 | 0.54  | Open |
| WM128 | -7.64  | 0.24 | 0.54  | Open |
| WM129 | -7.64  | 0.24 | 0.54  | Open |
| WM130 | -7.83  | 0.25 | 0.56  | Open |
| WM131 | -7.83  | 0.25 | 0.56  | Open |
| WM132 | -0.02  | 0.00 | 0.00  | Open |
| WM133 | 66.96  | 2.13 | 30.02 | Open |
| WM134 | 66.96  | 2.13 | 30.02 | Open |
| WM135 | 66.94  | 2.13 | 30.01 | Open |
| WM136 | 66.94  | 2.13 | 30.01 | Open |
| WM137 | 66.94  | 2.13 | 30.01 | Open |
| WM138 | 0.11   | 0.01 | 0.00  | Open |
| WM139 | -66.83 | 2.13 | 29.91 | Open |
| WM140 | -66.83 | 2.13 | 29.92 | Open |
| WM141 | -66.83 | 2.13 | 29.92 | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -0.14  | 0.00 | 0.00  | Open |
| WM145 | -0.14  | 0.00 | 0.00  | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -26.69   | 0.85         | 5.47               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 0.19     | 0.01         | 0.00               | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 40.94    | 1.30         | 12.07              | Open      |
| WM165   | -26.73   | 0.85         | 5.48               | Open      |
| 1       | 26.73    | 0.00         | -147.38            | Open Pump |



## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 146.95 | 51.58      | 0.00    |
| TEE-BEND24 | 0.00       | 146.95 | 51.58      | 0.00    |
| TEE-BEND23 | 0.00       | 146.95 | 51.51      | 0.00    |
| TEE-BEND43 | 0.00       | 147.31 | 51.84      | 0.00    |
| TEE-BEND44 | 0.00       | 147.30 | 51.75      | 0.00    |
| CHAMBER2   | 0.00       | 147.33 | 51.77      | 0.00    |
| TEE-BEND18 | 0.00       | 147.05 | 51.37      | 0.00    |
| TEE-BEND46 | 0.00       | 147.01 | 51.21      | 0.00    |
| TEE-BEND53 | 0.00       | 146.95 | 51.08      | 0.00    |
| TEE-BEND47 | 0.00       | 146.98 | 51.11      | 0.00    |
| TEE-BEND22 | 0.00       | 147.17 | 51.30      | 0.00    |
| CRU-1      | 0.23       | 146.95 | 51.03      | 0.00    |
| TEE-BEND52 | 0.00       | 146.95 | 51.01      | 0.00    |
| HYD3       | 0.00       | 147.01 | 51.04      | 0.00    |
| TEE-BEND45 | 0.00       | 147.12 | 51.14      | 0.00    |
| TEE-BEND16 | 0.00       | 147.05 | 51.05      | 0.00    |
| HYD2       | 0.00       | 146.72 | 50.71      | 0.00    |
| HYD7       | 0.00       | 147.03 | 51.00      | 0.00    |
| TEE-BEND51 | 0.00       | 146.95 | 50.92      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 147.05 | 50.99      | 0.00    |
| TEE-BEND36 | 0.00       | 147.02 | 50.96      | 0.00    |
| TEE-BEND55 | 0.00       | 146.95 | 50.88      | 0.00    |
| TEE-BEND35 | 0.00       | 147.03 | 50.96      | 0.00    |
| HYD1       | 0.00       | 146.75 | 50.67      | 0.00    |
| HYD6       | 0.00       | 147.09 | 50.99      | 0.00    |
| TEE-BEND37 | 0.00       | 147.02 | 50.91      | 0.00    |
| TEE-BEND50 | 0.00       | 146.95 | 50.84      | 0.00    |
| TEE-BEND33 | 0.00       | 147.09 | 50.97      | 0.00    |
| TEE-BEND17 | 0.00       | 147.05 | 50.90      | 0.00    |
| TEE-BEND21 | 0.00       | 147.30 | 51.14      | 0.00    |
| TEE-BEND49 | 0.00       | 146.95 | 50.79      | 0.00    |
| TEE-BEND48 | 0.00       | 146.95 | 50.78      | 0.00    |
| TEE-BEND12 | 0.00       | 147.05 | 50.87      | 0.00    |
| TEE-BEND40 | 0.00       | 147.38 | 51.19      | 0.00    |
| TEE-BEND20 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND38 | 0.00       | 146.98 | 50.78      | 0.00    |
| TEE-BEND57 | 0.00       | 146.51 | 50.31      | 0.00    |



|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND56 | 0.00  | 146.72 | 50.00 | 0.00 |
| TEE-BEND58 | 0.00  | 146.75 | 50.52 | 0.00 |
| TEE-BEND32 | 0.00  | 145.56 | 49.33 | 0.00 |
| TEE-BEND31 | 0.00  | 146.29 | 50.03 | 0.00 |
| TEE-BEND30 | 0.00  | 145.44 | 49.16 | 0.00 |
| HYD5       | 0.00  | 147.17 | 50.87 | 0.00 |
| CRU-8      | 0.04  | 147.05 | 50.71 | 0.00 |
| TEE-BEND28 | 0.00  | 144.48 | 48.13 | 0.00 |
| CRU-10     | 0.04  | 147.30 | 50.95 | 0.00 |
| TEE-BEND39 | 0.00  | 147.27 | 50.90 | 0.00 |
| TEE-BEND26 | 0.00  | 143.79 | 47.42 | 0.00 |
| TEE-BEND15 | 0.00  | 147.05 | 50.67 | 0.00 |
| TEE-BEND29 | 0.00  | 145.25 | 48.84 | 0.00 |
| TEE-BEND13 | 0.00  | 147.05 | 50.65 | 0.00 |
| TEE-BEND59 | 0.00  | 146.98 | 50.57 | 0.00 |
| TEE-BEND27 | 0.00  | 143.69 | 47.25 | 0.00 |
| TEE-BEND41 | 0.00  | 147.37 | 50.92 | 0.00 |
| TEE-BEND42 | 0.00  | 147.35 | 50.90 | 0.00 |
| CRU-6      | 0.11  | 147.27 | 50.79 | 0.00 |
| CRU-9      | 0.07  | 147.05 | 50.56 | 0.00 |
| CRU-7      | 0.08  | 147.05 | 50.56 | 0.00 |
| CRU-4      | 0.11  | 144.48 | 47.99 | 0.00 |
| CRU-3      | 66.83 | 143.62 | 47.12 | 0.00 |
| TEE-BEND6  | 0.00  | 147.27 | 50.62 | 0.00 |
| CRU-5      | 0.02  | 145.56 | 48.83 | 0.00 |
| TEE-BEND4  | 0.00  | 147.27 | 50.53 | 0.00 |
| TEE-BEND3  | 0.00  | 147.47 | 50.72 | 0.00 |
| TEE-BEND2  | 0.00  | 147.27 | 50.50 | 0.00 |
| TEE-BEND1  | 0.00  | 147.27 | 50.47 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.31 | 50.50      | 0.00           |
| R1       | -26.73     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -40.94     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 40.94    | 1.30         | 12.07         | Open   |
| WM100   | 40.83    | 1.30         | 12.01         | Open   |
| WM101   | 48.47    | 1.54         | 16.50         | Open   |
| WM102   | 48.47    | 1.54         | 16.50         | Open   |
| WM103   | -18.49   | 0.59         | 2.77          | Open   |
| WM104   | -18.49   | 0.59         | 2.77          | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM105 | -0.23  | 0.01 | 0.00  | Open |
| WM106 | -0.23  | 0.01 | 0.00  | Open |
| WM107 | -0.23  | 0.01 | 0.00  | Open |
| WM108 | -0.23  | 0.01 | 0.00  | Open |
| WM109 | -0.23  | 0.01 | 0.00  | Open |
| WM110 | -0.37  | 0.01 | 0.00  | Open |
| WM111 | -0.37  | 0.01 | 0.00  | Open |
| WM112 | -18.86 | 0.60 | 2.87  | Open |
| WM113 | -18.86 | 0.60 | 2.87  | Open |
| WM114 | -18.86 | 0.60 | 2.87  | Open |
| WM115 | -26.69 | 0.85 | 5.47  | Open |
| WM116 | -26.73 | 0.85 | 5.48  | Open |
| WM117 | -26.73 | 0.85 | 5.48  | Open |
| WM118 | -26.73 | 0.85 | 5.48  | Open |
| WM119 | -26.73 | 0.85 | 5.48  | Open |
| WM120 | 0.11   | 0.00 | 0.00  | Open |
| WM121 | 0.11   | 0.00 | 0.00  | Open |
| WM122 | 0.11   | 0.00 | 0.00  | Open |
| WM123 | 0.11   | 0.00 | 0.00  | Open |
| WM124 | 0.11   | 0.00 | 0.00  | Open |
| WM125 | -7.64  | 0.24 | 0.54  | Open |
| WM126 | -7.64  | 0.24 | 0.54  | Open |
| WM127 | -7.64  | 0.24 | 0.54  | Open |
| WM128 | -7.64  | 0.24 | 0.54  | Open |
| WM129 | -7.64  | 0.24 | 0.54  | Open |
| WM130 | -7.83  | 0.25 | 0.56  | Open |
| WM131 | -7.83  | 0.25 | 0.56  | Open |
| WM132 | -0.02  | 0.00 | 0.00  | Open |
| WM133 | 66.96  | 2.13 | 30.02 | Open |
| WM134 | 66.96  | 2.13 | 30.02 | Open |
| WM135 | 66.94  | 2.13 | 30.01 | Open |
| WM136 | 66.94  | 2.13 | 30.01 | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 66.94    | 2.13         | 30.01              | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -66.83   | 2.13         | 29.91              | Open   |
| WM140   | -66.83   | 2.13         | 29.92              | Open   |
| WM141   | -66.83   | 2.13         | 29.92              | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -26.69   | 0.85         | 5.47               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 40.94  | 1.30 | 12.07   | Open      |
| WM165 | -26.73 | 0.85 | 5.48    | Open      |
| 1     | 26.73  | 0.00 | -147.38 | Open Pump |
| 2     | 40.94  | 0.00 | -147.47 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 146.95 | 51.58      | 0.00    |
| TEE-BEND24 | 0.00       | 146.95 | 51.58      | 0.00    |
| TEE-BEND23 | 0.00       | 146.95 | 51.51      | 0.00    |
| TEE-BEND43 | 0.00       | 147.31 | 51.84      | 0.00    |
| TEE-BEND44 | 0.00       | 147.30 | 51.75      | 0.00    |
| CHAMBER2   | 0.00       | 147.33 | 51.77      | 0.00    |
| TEE-BEND18 | 0.00       | 147.05 | 51.37      | 0.00    |
| TEE-BEND46 | 0.00       | 147.01 | 51.21      | 0.00    |
| TEE-BEND53 | 0.00       | 146.95 | 51.08      | 0.00    |
| TEE-BEND47 | 0.00       | 146.98 | 51.11      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.17 | 51.30      | 0.00    |
| CRU-1      | 0.23       | 146.95 | 51.03      | 0.00    |
| TEE-BEND52 | 0.00       | 146.95 | 51.01      | 0.00    |
| HYD3       | 0.00       | 147.01 | 51.04      | 0.00    |
| TEE-BEND45 | 0.00       | 147.12 | 51.14      | 0.00    |
| TEE-BEND16 | 0.00       | 147.05 | 51.05      | 0.00    |
| HYD2       | 0.00       | 146.72 | 50.71      | 0.00    |
| HYD7       | 0.00       | 147.03 | 51.00      | 0.00    |
| TEE-BEND51 | 0.00       | 146.95 | 50.92      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND34 | 0.00 | 147.05 | 50.96 | 0.00 |
| TEE-BEND36 | 0.00 | 147.02 | 50.96 | 0.00 |
| TEE-BEND55 | 0.00 | 146.95 | 50.88 | 0.00 |
| TEE-BEND35 | 0.00 | 147.03 | 50.96 | 0.00 |
| HYD1       | 0.00 | 146.75 | 50.67 | 0.00 |
| HYD6       | 0.00 | 147.09 | 50.99 | 0.00 |
| TEE-BEND37 | 0.00 | 147.02 | 50.91 | 0.00 |
| TEE-BEND50 | 0.00 | 146.95 | 50.84 | 0.00 |
| TEE-BEND33 | 0.00 | 147.09 | 50.97 | 0.00 |
| TEE-BEND17 | 0.00 | 147.05 | 50.90 | 0.00 |
| TEE-BEND21 | 0.00 | 147.30 | 51.14 | 0.00 |
| TEE-BEND49 | 0.00 | 146.95 | 50.79 | 0.00 |
| TEE-BEND48 | 0.00 | 146.95 | 50.78 | 0.00 |
| TEE-BEND12 | 0.00 | 147.05 | 50.87 | 0.00 |
| TEE-BEND40 | 0.00 | 147.38 | 51.19 | 0.00 |
| TEE-BEND20 | 0.00 | 147.30 | 51.10 | 0.00 |
| TEE-BEND38 | 0.00 | 146.98 | 50.78 | 0.00 |
| TEE-BEND57 | 0.00 | 146.51 | 50.31 | 0.00 |
| TEE-BEND56 | 0.00 | 146.72 | 50.51 | 0.00 |
| TEE-BEND58 | 0.00 | 146.75 | 50.52 | 0.00 |
| TEE-BEND32 | 0.00 | 145.56 | 49.33 | 0.00 |
| TEE-BEND31 | 0.00 | 146.29 | 50.03 | 0.00 |
| TEE-BEND30 | 0.00 | 145.44 | 49.16 | 0.00 |
| HYD5       | 0.00 | 147.17 | 50.87 | 0.00 |
| CRU-8      | 0.04 | 147.05 | 50.71 | 0.00 |
| TEE-BEND28 | 0.00 | 144.48 | 48.13 | 0.00 |
| CRU-10     | 0.04 | 147.30 | 50.95 | 0.00 |
| TEE-BEND39 | 0.00 | 147.27 | 50.90 | 0.00 |
| TEE-BEND26 | 0.00 | 143.79 | 47.42 | 0.00 |
| TEE-BEND15 | 0.00 | 147.05 | 50.67 | 0.00 |
| TEE-BEND29 | 0.00 | 145.25 | 48.84 | 0.00 |
| TEE-BEND13 | 0.00 | 147.05 | 50.65 | 0.00 |
| TEE-BEND59 | 0.00 | 146.98 | 50.57 | 0.00 |
| TEE-BEND27 | 0.00 | 143.69 | 47.25 | 0.00 |
| TEE-BEND41 | 0.00 | 147.37 | 50.92 | 0.00 |
| TEE-BEND42 | 0.00 | 147.35 | 50.90 | 0.00 |
| CRU-6      | 0.11 | 147.27 | 50.79 | 0.00 |
| CRU-9      | 0.07 | 147.05 | 50.56 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 147.05 | 50.56      | 0.00    |
| CRU-4     | 0.11       | 144.48 | 47.99      | 0.00    |
| CRU-3     | 66.83      | 143.62 | 47.12      | 0.00    |
| TEE-BEND6 | 0.00       | 147.27 | 50.62      | 0.00    |
| CRU-5     | 0.02       | 145.56 | 48.83      | 0.00    |
| TEE-BEND4 | 0.00       | 147.27 | 50.53      | 0.00    |



|           |        |        |       |      |           |
|-----------|--------|--------|-------|------|-----------|
| TEE-BEND3 | 0.00   | 147.47 | 50    | 0.00 |           |
| TEE-BEND2 | 0.00   | 147.27 | 50.50 | 0.00 |           |
| TEE-BEND1 | 0.00   | 147.27 | 50.47 | 0.00 |           |
| CHAMBER1  | 0.00   | 147.31 | 50.50 | 0.00 |           |
| R1        | -26.73 | 0.00   | 0.00  | 0.00 | Reservoir |
| R2        | -40.94 | 0.00   | 0.00  | 0.00 | Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 40.94    | 1.30         | 12.07              | Open   |
| WM100   | 40.83    | 1.30         | 12.01              | Open   |
| WM101   | 48.47    | 1.54         | 16.50              | Open   |
| WM102   | 48.47    | 1.54         | 16.50              | Open   |
| WM103   | -18.49   | 0.59         | 2.77               | Open   |
| WM104   | -18.49   | 0.59         | 2.77               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -18.86   | 0.60         | 2.87               | Open   |
| WM113   | -18.86   | 0.60         | 2.87               | Open   |
| WM114   | -18.86   | 0.60         | 2.87               | Open   |
| WM115   | -26.69   | 0.85         | 5.47               | Open   |
| WM116   | -26.73   | 0.85         | 5.48               | Open   |
| WM117   | -26.73   | 0.85         | 5.48               | Open   |
| WM118   | -26.73   | 0.85         | 5.48               | Open   |
| WM119   | -26.73   | 0.85         | 5.48               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -7.64    | 0.24         | 0.54               | Open   |
| WM126   | -7.64    | 0.24         | 0.54               | Open   |
| WM127   | -7.64    | 0.24         | 0.54               | Open   |



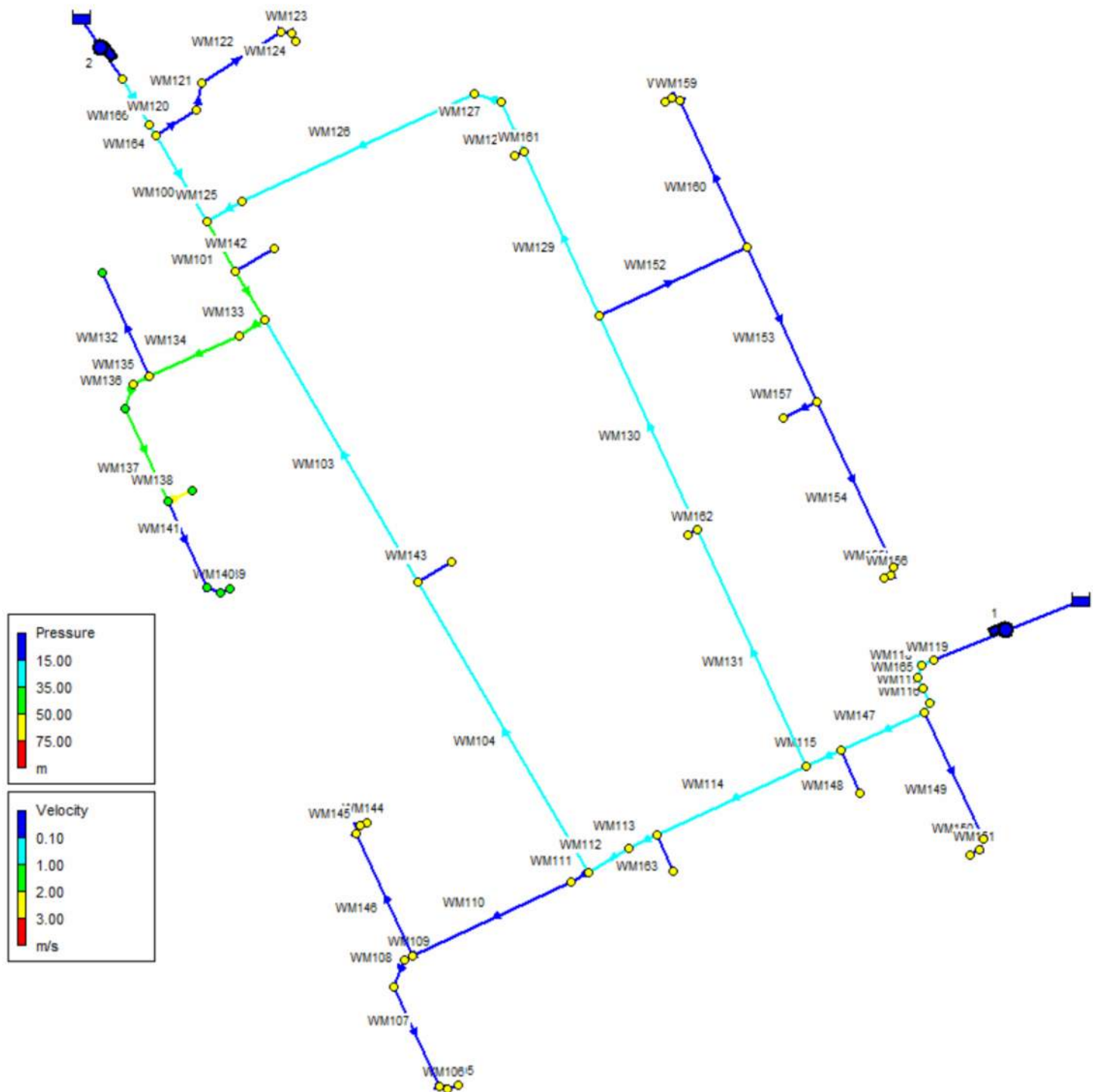
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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | -7.64    | 0.24         | 0.54               | Open   |
| WM129   | -7.64    | 0.24         | 0.54               | Open   |
| WM130   | -7.83    | 0.25         | 0.56               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | -7.83  | 0.25 | 0       | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 66.96  | 2.13 | 30.02   | Open      |
| WM134 | 66.96  | 2.13 | 30.02   | Open      |
| WM135 | 66.94  | 2.13 | 30.01   | Open      |
| WM136 | 66.94  | 2.13 | 30.01   | Open      |
| WM137 | 66.94  | 2.13 | 30.01   | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -66.83 | 2.13 | 29.91   | Open      |
| WM140 | -66.83 | 2.13 | 29.92   | Open      |
| WM141 | -66.83 | 2.13 | 29.92   | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.00    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | -26.69 | 0.85 | 5.47    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 40.94  | 1.30 | 12.07   | Open      |
| WM165 | -26.73 | 0.85 | 5.48    | Open      |
| 1     | 26.73  | 0.00 | -147.38 | Open Pump |
| 2     | 40.94  | 0.00 | -147.47 | Open Pump |

## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR4



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU4)+pumps.net

# Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |



|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 38.20   | 38.20   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 60.18   | 60.18   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.27 | 51.90      | 0.00    |
| TEE-BEND24 | 0.00       | 147.27 | 51.90      | 0.00    |
| TEE-BEND23 | 0.00       | 147.27 | 51.83      | 0.00    |
| TEE-BEND43 | 0.00       | 147.48 | 52.01      | 0.00    |
| TEE-BEND44 | 0.00       | 147.47 | 51.93      | 0.00    |
| CHAMBER2   | 0.00       | 147.49 | 51.93      | 0.00    |
| TEE-BEND18 | 0.00       | 147.33 | 51.65      | 0.00    |
| TEE-BEND46 | 0.00       | 147.30 | 51.50      | 0.00    |
| TEE-BEND53 | 0.00       | 147.27 | 51.40      | 0.00    |
| TEE-BEND47 | 0.00       | 147.29 | 51.42      | 0.00    |
| TEE-BEND22 | 0.00       | 147.40 | 51.52      | 0.00    |
| CRU-1      | 0.23       | 147.27 | 51.34      | 0.00    |
| TEE-BEND52 | 0.00       | 147.27 | 51.32      | 0.00    |
| HYD3       | 0.00       | 147.30 | 51.33      | 0.00    |
| TEE-BEND45 | 0.00       | 147.37 | 51.39      | 0.00    |
| TEE-BEND16 | 0.00       | 147.33 | 51.33      | 0.00    |
| HYD2       | 0.00       | 147.14 | 51.12      | 0.00    |
| HYD7       | 0.00       | 147.32 | 51.29      | 0.00    |
| TEE-BEND51 | 0.00       | 147.27 | 51.24      | 0.00    |
| TEE-BEND34 | 0.00       | 147.33 | 51.27      | 0.00    |
| TEE-BEND36 | 0.00       | 147.31 | 51.25      | 0.00    |
| TEE-BEND55 | 0.00       | 147.27 | 51.20      | 0.00    |
| TEE-BEND35 | 0.00       | 147.32 | 51.25      | 0.00    |
| HYD1       | 0.00       | 147.15 | 51.08      | 0.00    |
| HYD6       | 0.00       | 147.35 | 51.26      | 0.00    |
| TEE-BEND37 | 0.00       | 147.31 | 51.20      | 0.00    |
| TEE-BEND50 | 0.00       | 147.27 | 51.15      | 0.00    |
| TEE-BEND33 | 0.00       | 147.35 | 51.23      | 0.00    |
| TEE-BEND17 | 0.00       | 147.33 | 51.17      | 0.00    |
| TEE-BEND21 | 0.00       | 147.47 | 51.31      | 0.00    |
| TEE-BEND49 | 0.00       | 147.27 | 51.11      | 0.00    |
| TEE-BEND48 | 0.00       | 147.27 | 51.10      | 0.00    |
| TEE-BEND12 | 0.00       | 147.33 | 51.14      | 0.00    |
| TEE-BEND40 | 0.00       | 147.52 | 51.33      | 0.00    |
| TEE-BEND20 | 0.00       | 147.47 | 51.27      | 0.00    |
| TEE-BEND38 | 0.00       | 147.29 | 51.09      | 0.00    |
| TEE-BEND57 | 0.00       | 147.02 | 50.81      | 0.00    |
| TEE-BEND56 | 0.00       | 147.14 | 50.93      | 0.00    |
| TEE-BEND58 | 0.00       | 147.15 | 50.92      | 0.00    |
| TEE-BEND32 | 0.00       | 146.46 | 50.22      | 0.00    |
| TEE-BEND31 | 0.00       | 146.89 | 50.62      | 0.00    |
| TEE-BEND30 | 0.00       | 146.38 | 50.11      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 147.40 | 51.10 | 0.00 |
| CRU-8      | 0.04 | 147.33 | 50.99 | 0.00 |
| TEE-BEND28 | 0.00 | 145.82 | 49.47 | 0.00 |
| CRU-10     | 0.04 | 147.47 | 51.12 | 0.00 |
| TEE-BEND39 | 0.00 | 147.47 | 51.10 | 0.00 |



Page 4  
Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 145.82 | 49.45      | 0.00           |
| TEE-BEND15 | 0.00       | 147.33 | 50.95      | 0.00           |
| TEE-BEND29 | 0.00       | 146.27 | 49.86      | 0.00           |
| TEE-BEND13 | 0.00       | 147.33 | 50.92      | 0.00           |
| TEE-BEND59 | 0.00       | 147.29 | 50.88      | 0.00           |
| TEE-BEND27 | 0.00       | 145.82 | 49.38      | 0.00           |
| TEE-BEND41 | 0.00       | 147.51 | 51.06      | 0.00           |
| TEE-BEND42 | 0.00       | 147.50 | 51.05      | 0.00           |
| CRU-6      | 0.11       | 147.47 | 50.98      | 0.00           |
| CRU-9      | 0.07       | 147.33 | 50.84      | 0.00           |
| CRU-7      | 0.08       | 147.33 | 50.84      | 0.00           |
| CRU-4      | 50.11      | 145.27 | 48.78      | 0.00           |
| CRU-3      | 0.17       | 145.82 | 49.32      | 0.00           |
| TEE-BEND6  | 0.00       | 147.47 | 50.82      | 0.00           |
| CRU-5      | 0.02       | 146.46 | 49.72      | 0.00           |
| TEE-BEND4  | 0.00       | 147.47 | 50.72      | 0.00           |
| TEE-BEND3  | 0.00       | 147.59 | 50.84      | 0.00           |
| TEE-BEND2  | 0.00       | 147.47 | 50.70      | 0.00           |
| TEE-BEND1  | 0.00       | 147.47 | 50.67      | 0.00           |
| CHAMBER1   | 0.00       | 147.49 | 50.68      | 0.00           |
| R1         | -19.81     | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -31.20     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 31.20    | 0.99         | 7.30          | Open   |
| WM100   | 31.09    | 0.99         | 7.25          | Open   |
| WM101   | 36.54    | 1.16         | 9.78          | Open   |
| WM102   | 36.54    | 1.16         | 9.78          | Open   |
| WM103   | -13.76   | 0.44         | 1.60          | Open   |
| WM104   | -13.76   | 0.44         | 1.60          | Open   |
| WM105   | -0.23    | 0.01         | 0.00          | Open   |
| WM106   | -0.23    | 0.01         | 0.00          | Open   |
| WM107   | -0.23    | 0.01         | 0.00          | Open   |
| WM108   | -0.23    | 0.01         | 0.00          | Open   |
| WM109   | -0.23    | 0.01         | 0.00          | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | -14.13 | 0.45 | 1.68 | Open |
| WM113 | -14.13 | 0.45 | 1.68 | Open |
| WM114 | -14.13 | 0.45 | 1.68 | Open |
| WM115 | -19.77 | 0.63 | 3.14 | Open |
| WM116 | -19.81 | 0.63 | 3.15 | Open |
| WM117 | -19.81 | 0.63 | 3.15 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -19.81   | 0.63         | 3.15               | Open   |
| WM119   | -19.81   | 0.63         | 3.15               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -5.45    | 0.17         | 0.29               | Open   |
| WM126   | -5.45    | 0.17         | 0.29               | Open   |
| WM127   | -5.45    | 0.17         | 0.29               | Open   |
| WM128   | -5.45    | 0.17         | 0.29               | Open   |
| WM129   | -5.45    | 0.17         | 0.29               | Open   |
| WM130   | -5.64    | 0.18         | 0.31               | Open   |
| WM131   | -5.64    | 0.18         | 0.31               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 50.30    | 1.60         | 17.68              | Open   |
| WM134   | 50.30    | 1.60         | 17.67              | Open   |
| WM135   | 50.28    | 1.60         | 17.66              | Open   |
| WM136   | 50.28    | 1.60         | 17.66              | Open   |
| WM137   | 50.28    | 1.60         | 17.66              | Open   |
| WM138   | 50.11    | 2.84         | 85.03              | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -19.77   | 0.63         | 3.14               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 0.19     | 0.01         | 0.00               | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM154 | 0.07  | 0.00 | 0.00 | Open |
| WM155 | 0.07  | 0.00 | 0.00 | Open |
| WM156 | 0.07  | 0.00 | 0.00 | Open |
| WM157 | 0.04  | 0.00 | 0.00 | Open |
| WM158 | -0.08 | 0.00 | 0.00 | Open |
| WM159 | -0.08 | 0.00 | 0.00 | Open |
| WM160 | -0.08 | 0.00 | 0.00 | Open |
| WM161 | 0.00  | 0.00 | 0.00 | Open |
| WM162 | 0.00  | 0.00 | 0.00 | Open |
| WM163 | 0.00  | 0.00 | 0.00 | Open |
| WM164 | 31.20 | 0.99 | 7.30 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -19.81   | 0.63         | 3.15               | Open      |
| 1       | 19.81    | 0.00         | -147.52            | Open Pump |
| 2       | 31.20    | 0.00         | -147.59            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.27 | 51.90      | 0.00    |
| TEE-BEND24 | 0.00       | 147.27 | 51.90      | 0.00    |
| TEE-BEND23 | 0.00       | 147.27 | 51.83      | 0.00    |
| TEE-BEND43 | 0.00       | 147.48 | 52.01      | 0.00    |
| TEE-BEND44 | 0.00       | 147.47 | 51.93      | 0.00    |
| CHAMBER2   | 0.00       | 147.49 | 51.93      | 0.00    |
| TEE-BEND18 | 0.00       | 147.33 | 51.65      | 0.00    |
| TEE-BEND46 | 0.00       | 147.30 | 51.50      | 0.00    |
| TEE-BEND53 | 0.00       | 147.27 | 51.40      | 0.00    |
| TEE-BEND47 | 0.00       | 147.29 | 51.42      | 0.00    |
| TEE-BEND22 | 0.00       | 147.40 | 51.52      | 0.00    |
| CRU-1      | 0.23       | 147.27 | 51.34      | 0.00    |
| TEE-BEND52 | 0.00       | 147.27 | 51.32      | 0.00    |
| HYD3       | 0.00       | 147.30 | 51.33      | 0.00    |
| TEE-BEND45 | 0.00       | 147.37 | 51.39      | 0.00    |
| TEE-BEND16 | 0.00       | 147.33 | 51.33      | 0.00    |
| HYD2       | 0.00       | 147.14 | 51.12      | 0.00    |
| HYD7       | 0.00       | 147.32 | 51.29      | 0.00    |
| TEE-BEND51 | 0.00       | 147.27 | 51.24      | 0.00    |
| TEE-BEND34 | 0.00       | 147.33 | 51.27      | 0.00    |
| TEE-BEND36 | 0.00       | 147.31 | 51.25      | 0.00    |
| TEE-BEND55 | 0.00       | 147.27 | 51.20      | 0.00    |
| TEE-BEND35 | 0.00       | 147.32 | 51.25      | 0.00    |
| HYD1       | 0.00       | 147.15 | 51.08      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 147.35 | 51.15 | 0.00 |
| TEE-BEND37 | 0.00 | 147.31 | 51.20 | 0.00 |
| TEE-BEND50 | 0.00 | 147.27 | 51.15 | 0.00 |
| TEE-BEND33 | 0.00 | 147.35 | 51.23 | 0.00 |
| TEE-BEND17 | 0.00 | 147.33 | 51.17 | 0.00 |
| TEE-BEND21 | 0.00 | 147.47 | 51.31 | 0.00 |
| TEE-BEND49 | 0.00 | 147.27 | 51.11 | 0.00 |
| TEE-BEND48 | 0.00 | 147.27 | 51.10 | 0.00 |
| TEE-BEND12 | 0.00 | 147.33 | 51.14 | 0.00 |
| TEE-BEND40 | 0.00 | 147.52 | 51.33 | 0.00 |
| TEE-BEND20 | 0.00 | 147.47 | 51.27 | 0.00 |
| TEE-BEND38 | 0.00 | 147.29 | 51.09 | 0.00 |
| TEE-BEND57 | 0.00 | 147.02 | 50.81 | 0.00 |
| TEE-BEND56 | 0.00 | 147.14 | 50.93 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 147.15 | 50.92      | 0.00           |
| TEE-BEND32 | 0.00       | 146.46 | 50.22      | 0.00           |
| TEE-BEND31 | 0.00       | 146.89 | 50.62      | 0.00           |
| TEE-BEND30 | 0.00       | 146.38 | 50.11      | 0.00           |
| HYD5       | 0.00       | 147.40 | 51.10      | 0.00           |
| CRU-8      | 0.04       | 147.33 | 50.99      | 0.00           |
| TEE-BEND28 | 0.00       | 145.82 | 49.47      | 0.00           |
| CRU-10     | 0.04       | 147.47 | 51.12      | 0.00           |
| TEE-BEND39 | 0.00       | 147.47 | 51.10      | 0.00           |
| TEE-BEND26 | 0.00       | 145.82 | 49.45      | 0.00           |
| TEE-BEND15 | 0.00       | 147.33 | 50.95      | 0.00           |
| TEE-BEND29 | 0.00       | 146.27 | 49.86      | 0.00           |
| TEE-BEND13 | 0.00       | 147.33 | 50.92      | 0.00           |
| TEE-BEND59 | 0.00       | 147.29 | 50.88      | 0.00           |
| TEE-BEND27 | 0.00       | 145.82 | 49.38      | 0.00           |
| TEE-BEND41 | 0.00       | 147.51 | 51.06      | 0.00           |
| TEE-BEND42 | 0.00       | 147.50 | 51.05      | 0.00           |
| CRU-6      | 0.11       | 147.47 | 50.98      | 0.00           |
| CRU-9      | 0.07       | 147.33 | 50.84      | 0.00           |
| CRU-7      | 0.08       | 147.33 | 50.84      | 0.00           |
| CRU-4      | 50.11      | 145.27 | 48.78      | 0.00           |
| CRU-3      | 0.17       | 145.82 | 49.32      | 0.00           |
| TEE-BEND6  | 0.00       | 147.47 | 50.82      | 0.00           |
| CRU-5      | 0.02       | 146.46 | 49.72      | 0.00           |
| TEE-BEND4  | 0.00       | 147.47 | 50.72      | 0.00           |
| TEE-BEND3  | 0.00       | 147.59 | 50.84      | 0.00           |
| TEE-BEND2  | 0.00       | 147.47 | 50.70      | 0.00           |
| TEE-BEND1  | 0.00       | 147.47 | 50.67      | 0.00           |
| CHAMBER1   | 0.00       | 147.49 | 50.68      | 0.00           |
| R1         | -19.81     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -31.20 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 31.20    | 0.99         | 7.30               | Open   |
| WM100   | 31.09    | 0.99         | 7.25               | Open   |
| WM101   | 36.54    | 1.16         | 9.78               | Open   |
| WM102   | 36.54    | 1.16         | 9.78               | Open   |
| WM103   | -13.76   | 0.44         | 1.60               | Open   |
| WM104   | -13.76   | 0.44         | 1.60               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -14.13   | 0.45         | 1.68               | Open   |
| WM113   | -14.13   | 0.45         | 1.68               | Open   |
| WM114   | -14.13   | 0.45         | 1.68               | Open   |
| WM115   | -19.77   | 0.63         | 3.13               | Open   |
| WM116   | -19.81   | 0.63         | 3.14               | Open   |
| WM117   | -19.81   | 0.63         | 3.15               | Open   |
| WM118   | -19.81   | 0.63         | 3.15               | Open   |
| WM119   | -19.81   | 0.63         | 3.15               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -5.45    | 0.17         | 0.29               | Open   |
| WM126   | -5.45    | 0.17         | 0.29               | Open   |
| WM127   | -5.45    | 0.17         | 0.29               | Open   |
| WM128   | -5.45    | 0.17         | 0.29               | Open   |
| WM129   | -5.45    | 0.17         | 0.29               | Open   |
| WM130   | -5.64    | 0.18         | 0.31               | Open   |
| WM131   | -5.64    | 0.18         | 0.31               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 50.30    | 1.60         | 17.67              | Open   |
| WM134   | 50.30    | 1.60         | 17.68              | Open   |
| WM135   | 50.28    | 1.60         | 17.66              | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM136 | 50.28  | 1.60 | 17.66 | Open |
| WM137 | 50.28  | 1.60 | 17.66 | Open |
| WM138 | 50.11  | 2.84 | 85.03 | Open |
| WM139 | -0.17  | 0.01 | 0.00  | Open |
| WM140 | -0.17  | 0.01 | 0.00  | Open |
| WM141 | -0.17  | 0.01 | 0.00  | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -0.14  | 0.00 | 0.01  | Open |
| WM145 | -0.14  | 0.00 | 0.00  | Open |
| WM146 | -0.14  | 0.00 | 0.00  | Open |
| WM147 | -19.77 | 0.63 | 3.14  | Open |
| WM148 | 0.00   | 0.00 | 0.00  | Open |
| WM149 | 0.04   | 0.00 | 0.00  | Open |
| WM150 | 0.04   | 0.00 | 0.00  | Open |
| WM151 | 0.04   | 0.00 | 0.00  | Open |
| WM152 | 0.19   | 0.01 | 0.00  | Open |
| WM153 | 0.11   | 0.01 | 0.00  | Open |
| WM154 | 0.07   | 0.00 | 0.00  | Open |
| WM155 | 0.07   | 0.00 | 0.00  | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 31.20    | 0.99         | 7.30               | Open      |
| WM165   | -19.81   | 0.63         | 3.15               | Open      |
| 1       | 19.81    | 0.00         | -147.52            | Open Pump |
| 2       | 31.20    | 0.00         | -147.59            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.27 | 51.90      | 0.00    |
| TEE-BEND24 | 0.00       | 147.27 | 51.90      | 0.00    |
| TEE-BEND23 | 0.00       | 147.27 | 51.83      | 0.00    |
| TEE-BEND43 | 0.00       | 147.48 | 52.01      | 0.00    |
| TEE-BEND44 | 0.00       | 147.47 | 51.93      | 0.00    |
| CHAMBER2   | 0.00       | 147.49 | 51.93      | 0.00    |



|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 147.33 | 51.34 | 0.00 |
| TEE-BEND46 | 0.00 | 147.30 | 51.50 | 0.00 |
| TEE-BEND53 | 0.00 | 147.27 | 51.40 | 0.00 |
| TEE-BEND47 | 0.00 | 147.29 | 51.42 | 0.00 |
| TEE-BEND22 | 0.00 | 147.40 | 51.52 | 0.00 |
| CRU-1      | 0.23 | 147.27 | 51.34 | 0.00 |
| TEE-BEND52 | 0.00 | 147.27 | 51.32 | 0.00 |
| HYD3       | 0.00 | 147.30 | 51.33 | 0.00 |
| TEE-BEND45 | 0.00 | 147.37 | 51.39 | 0.00 |
| TEE-BEND16 | 0.00 | 147.33 | 51.33 | 0.00 |
| HYD2       | 0.00 | 147.14 | 51.12 | 0.00 |
| HYD7       | 0.00 | 147.32 | 51.29 | 0.00 |
| TEE-BEND51 | 0.00 | 147.27 | 51.24 | 0.00 |
| TEE-BEND34 | 0.00 | 147.33 | 51.27 | 0.00 |
| TEE-BEND36 | 0.00 | 147.31 | 51.25 | 0.00 |
| TEE-BEND55 | 0.00 | 147.27 | 51.20 | 0.00 |
| TEE-BEND35 | 0.00 | 147.32 | 51.25 | 0.00 |
| HYD1       | 0.00 | 147.15 | 51.08 | 0.00 |
| HYD6       | 0.00 | 147.35 | 51.26 | 0.00 |
| TEE-BEND37 | 0.00 | 147.31 | 51.20 | 0.00 |
| TEE-BEND50 | 0.00 | 147.27 | 51.15 | 0.00 |
| TEE-BEND33 | 0.00 | 147.35 | 51.23 | 0.00 |
| TEE-BEND17 | 0.00 | 147.33 | 51.17 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.47 | 51.31      | 0.00    |
| TEE-BEND49 | 0.00       | 147.27 | 51.11      | 0.00    |
| TEE-BEND48 | 0.00       | 147.27 | 51.10      | 0.00    |
| TEE-BEND12 | 0.00       | 147.33 | 51.14      | 0.00    |
| TEE-BEND40 | 0.00       | 147.52 | 51.33      | 0.00    |
| TEE-BEND20 | 0.00       | 147.47 | 51.27      | 0.00    |
| TEE-BEND38 | 0.00       | 147.29 | 51.09      | 0.00    |
| TEE-BEND57 | 0.00       | 147.02 | 50.81      | 0.00    |
| TEE-BEND56 | 0.00       | 147.14 | 50.93      | 0.00    |
| TEE-BEND58 | 0.00       | 147.15 | 50.92      | 0.00    |
| TEE-BEND32 | 0.00       | 146.46 | 50.22      | 0.00    |
| TEE-BEND31 | 0.00       | 146.89 | 50.62      | 0.00    |
| TEE-BEND30 | 0.00       | 146.38 | 50.11      | 0.00    |
| HYD5       | 0.00       | 147.40 | 51.10      | 0.00    |
| CRU-8      | 0.04       | 147.33 | 50.99      | 0.00    |
| TEE-BEND28 | 0.00       | 145.82 | 49.47      | 0.00    |
| CRU-10     | 0.04       | 147.47 | 51.12      | 0.00    |
| TEE-BEND39 | 0.00       | 147.47 | 51.10      | 0.00    |
| TEE-BEND26 | 0.00       | 145.82 | 49.45      | 0.00    |
| TEE-BEND15 | 0.00       | 147.33 | 50.95      | 0.00    |
| TEE-BEND29 | 0.00       | 146.27 | 49.86      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 147.33 | 50.22 | 0.00           |
| TEE-BEND59 | 0.00   | 147.29 | 50.88 | 0.00           |
| TEE-BEND27 | 0.00   | 145.82 | 49.38 | 0.00           |
| TEE-BEND41 | 0.00   | 147.51 | 51.06 | 0.00           |
| TEE-BEND42 | 0.00   | 147.50 | 51.05 | 0.00           |
| CRU-6      | 0.11   | 147.47 | 50.98 | 0.00           |
| CRU-9      | 0.07   | 147.33 | 50.84 | 0.00           |
| CRU-7      | 0.08   | 147.33 | 50.84 | 0.00           |
| CRU-4      | 50.11  | 145.27 | 48.78 | 0.00           |
| CRU-3      | 0.17   | 145.82 | 49.32 | 0.00           |
| TEE-BEND6  | 0.00   | 147.47 | 50.82 | 0.00           |
| CRU-5      | 0.02   | 146.46 | 49.72 | 0.00           |
| TEE-BEND4  | 0.00   | 147.47 | 50.72 | 0.00           |
| TEE-BEND3  | 0.00   | 147.59 | 50.84 | 0.00           |
| TEE-BEND2  | 0.00   | 147.47 | 50.70 | 0.00           |
| TEE-BEND1  | 0.00   | 147.47 | 50.67 | 0.00           |
| CHAMBER1   | 0.00   | 147.49 | 50.68 | 0.00           |
| R1         | -19.81 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -31.20 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | VelocityUnit m/s | Headloss m/km | Status |
|---------|----------|------------------|---------------|--------|
| WM166   | 31.20    | 0.99             | 7.30          | Open   |
| WM100   | 31.09    | 0.99             | 7.25          | Open   |
| WM101   | 36.54    | 1.16             | 9.78          | Open   |
| WM102   | 36.54    | 1.16             | 9.78          | Open   |
| WM103   | -13.76   | 0.44             | 1.60          | Open   |
| WM104   | -13.76   | 0.44             | 1.60          | Open   |
| WM105   | -0.23    | 0.01             | 0.00          | Open   |
| WM106   | -0.23    | 0.01             | 0.00          | Open   |
| WM107   | -0.23    | 0.01             | 0.00          | Open   |
| WM108   | -0.23    | 0.01             | 0.00          | Open   |
| WM109   | -0.23    | 0.01             | 0.00          | Open   |
| WM110   | -0.37    | 0.01             | 0.00          | Open   |
| WM111   | -0.37    | 0.01             | 0.00          | Open   |
| WM112   | -14.13   | 0.45             | 1.68          | Open   |
| WM113   | -14.13   | 0.45             | 1.68          | Open   |
| WM114   | -14.13   | 0.45             | 1.68          | Open   |
| WM115   | -19.77   | 0.63             | 3.14          | Open   |
| WM116   | -19.81   | 0.63             | 3.15          | Open   |
| WM117   | -19.81   | 0.63             | 3.15          | Open   |
| WM118   | -19.81   | 0.63             | 3.15          | Open   |
| WM119   | -19.81   | 0.63             | 3.15          | Open   |
| WM120   | 0.11     | 0.00             | 0.00          | Open   |
| WM121   | 0.11     | 0.00             | 0.00          | Open   |
| WM122   | 0.11     | 0.00             | 0.00          | Open   |

|       |       |      |       |      |
|-------|-------|------|-------|------|
| WM123 | 0.11  | 0.00 | 0.00  | Open |
| WM124 | 0.11  | 0.00 | 0.00  | Open |
| WM125 | -5.45 | 0.17 | 0.29  | Open |
| WM126 | -5.45 | 0.17 | 0.29  | Open |
| WM127 | -5.45 | 0.17 | 0.29  | Open |
| WM128 | -5.45 | 0.17 | 0.29  | Open |
| WM129 | -5.45 | 0.17 | 0.29  | Open |
| WM130 | -5.64 | 0.18 | 0.31  | Open |
| WM131 | -5.64 | 0.18 | 0.31  | Open |
| WM132 | -0.02 | 0.00 | 0.00  | Open |
| WM133 | 50.30 | 1.60 | 17.68 | Open |
| WM134 | 50.30 | 1.60 | 17.67 | Open |
| WM135 | 50.28 | 1.60 | 17.66 | Open |
| WM136 | 50.28 | 1.60 | 17.66 | Open |
| WM137 | 50.28 | 1.60 | 17.66 | Open |
| WM138 | 50.11 | 2.84 | 85.03 | Open |
| WM139 | -0.17 | 0.01 | 0.00  | Open |
| WM140 | -0.17 | 0.01 | 0.00  | Open |
| WM141 | -0.17 | 0.01 | 0.00  | Open |
| WM142 | 0.00  | 0.00 | 0.00  | Open |
| WM143 | 0.00  | 0.00 | 0.00  | Open |
| WM144 | -0.14 | 0.00 | 0.00  | Open |
| WM145 | -0.14 | 0.00 | 0.00  | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -19.77   | 0.63         | 3.14               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 0.19     | 0.01         | 0.00               | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 31.20    | 0.99         | 7.30               | Open      |
| WM165   | -19.81   | 0.63         | 3.15               | Open      |
| 1       | 19.81    | 0.00         | -147.52            | Open Pump |



## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.27 | 51.90      | 0.00    |
| TEE-BEND24 | 0.00       | 147.27 | 51.90      | 0.00    |
| TEE-BEND23 | 0.00       | 147.27 | 51.83      | 0.00    |
| TEE-BEND43 | 0.00       | 147.48 | 52.01      | 0.00    |
| TEE-BEND44 | 0.00       | 147.47 | 51.93      | 0.00    |
| CHAMBER2   | 0.00       | 147.49 | 51.93      | 0.00    |
| TEE-BEND18 | 0.00       | 147.33 | 51.65      | 0.00    |
| TEE-BEND46 | 0.00       | 147.30 | 51.50      | 0.00    |
| TEE-BEND53 | 0.00       | 147.27 | 51.40      | 0.00    |
| TEE-BEND47 | 0.00       | 147.29 | 51.42      | 0.00    |
| TEE-BEND22 | 0.00       | 147.40 | 51.52      | 0.00    |
| CRU-1      | 0.23       | 147.27 | 51.34      | 0.00    |
| TEE-BEND52 | 0.00       | 147.27 | 51.32      | 0.00    |
| HYD3       | 0.00       | 147.30 | 51.33      | 0.00    |
| TEE-BEND45 | 0.00       | 147.37 | 51.39      | 0.00    |
| TEE-BEND16 | 0.00       | 147.33 | 51.33      | 0.00    |
| HYD2       | 0.00       | 147.14 | 51.12      | 0.00    |
| HYD7       | 0.00       | 147.32 | 51.29      | 0.00    |
| TEE-BEND51 | 0.00       | 147.27 | 51.24      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 147.33 | 51.27      | 0.00    |
| TEE-BEND36 | 0.00       | 147.31 | 51.25      | 0.00    |
| TEE-BEND55 | 0.00       | 147.27 | 51.20      | 0.00    |
| TEE-BEND35 | 0.00       | 147.32 | 51.25      | 0.00    |
| HYD1       | 0.00       | 147.15 | 51.08      | 0.00    |
| HYD6       | 0.00       | 147.35 | 51.26      | 0.00    |
| TEE-BEND37 | 0.00       | 147.31 | 51.20      | 0.00    |
| TEE-BEND50 | 0.00       | 147.27 | 51.15      | 0.00    |
| TEE-BEND33 | 0.00       | 147.35 | 51.23      | 0.00    |
| TEE-BEND17 | 0.00       | 147.33 | 51.17      | 0.00    |
| TEE-BEND21 | 0.00       | 147.47 | 51.31      | 0.00    |
| TEE-BEND49 | 0.00       | 147.27 | 51.11      | 0.00    |
| TEE-BEND48 | 0.00       | 147.27 | 51.10      | 0.00    |
| TEE-BEND12 | 0.00       | 147.33 | 51.14      | 0.00    |
| TEE-BEND40 | 0.00       | 147.52 | 51.33      | 0.00    |
| TEE-BEND20 | 0.00       | 147.47 | 51.27      | 0.00    |
| TEE-BEND38 | 0.00       | 147.29 | 51.09      | 0.00    |
| TEE-BEND57 | 0.00       | 147.02 | 50.81      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND56 | 0.00  | 147.14 | 50.92 | 0.00 |
| TEE-BEND58 | 0.00  | 147.15 | 50.92 | 0.00 |
| TEE-BEND32 | 0.00  | 146.46 | 50.22 | 0.00 |
| TEE-BEND31 | 0.00  | 146.89 | 50.62 | 0.00 |
| TEE-BEND30 | 0.00  | 146.38 | 50.11 | 0.00 |
| HYD5       | 0.00  | 147.40 | 51.10 | 0.00 |
| CRU-8      | 0.04  | 147.33 | 50.99 | 0.00 |
| TEE-BEND28 | 0.00  | 145.82 | 49.47 | 0.00 |
| CRU-10     | 0.04  | 147.47 | 51.12 | 0.00 |
| TEE-BEND39 | 0.00  | 147.47 | 51.10 | 0.00 |
| TEE-BEND26 | 0.00  | 145.82 | 49.45 | 0.00 |
| TEE-BEND15 | 0.00  | 147.33 | 50.95 | 0.00 |
| TEE-BEND29 | 0.00  | 146.27 | 49.86 | 0.00 |
| TEE-BEND13 | 0.00  | 147.33 | 50.92 | 0.00 |
| TEE-BEND59 | 0.00  | 147.29 | 50.88 | 0.00 |
| TEE-BEND27 | 0.00  | 145.82 | 49.38 | 0.00 |
| TEE-BEND41 | 0.00  | 147.51 | 51.06 | 0.00 |
| TEE-BEND42 | 0.00  | 147.50 | 51.05 | 0.00 |
| CRU-6      | 0.11  | 147.47 | 50.98 | 0.00 |
| CRU-9      | 0.07  | 147.33 | 50.84 | 0.00 |
| CRU-7      | 0.08  | 147.33 | 50.84 | 0.00 |
| CRU-4      | 50.11 | 145.27 | 48.78 | 0.00 |
| CRU-3      | 0.17  | 145.82 | 49.32 | 0.00 |
| TEE-BEND6  | 0.00  | 147.47 | 50.82 | 0.00 |
| CRU-5      | 0.02  | 146.46 | 49.72 | 0.00 |
| TEE-BEND4  | 0.00  | 147.47 | 50.72 | 0.00 |
| TEE-BEND3  | 0.00  | 147.59 | 50.84 | 0.00 |
| TEE-BEND2  | 0.00  | 147.47 | 50.70 | 0.00 |
| TEE-BEND1  | 0.00  | 147.47 | 50.67 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.49 | 50.68      | 0.00           |
| R1       | -19.81     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -31.20     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 31.20    | 0.99         | 7.30          | Open   |
| WM100   | 31.09    | 0.99         | 7.25          | Open   |
| WM101   | 36.54    | 1.16         | 9.78          | Open   |
| WM102   | 36.54    | 1.16         | 9.78          | Open   |
| WM103   | -13.76   | 0.44         | 1.60          | Open   |
| WM104   | -13.76   | 0.44         | 1.60          | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM105 | -0.23  | 0.01 | 0.00  | Open |
| WM106 | -0.23  | 0.01 | 0.00  | Open |
| WM107 | -0.23  | 0.01 | 0.00  | Open |
| WM108 | -0.23  | 0.01 | 0.00  | Open |
| WM109 | -0.23  | 0.01 | 0.00  | Open |
| WM110 | -0.37  | 0.01 | 0.00  | Open |
| WM111 | -0.37  | 0.01 | 0.00  | Open |
| WM112 | -14.13 | 0.45 | 1.68  | Open |
| WM113 | -14.13 | 0.45 | 1.68  | Open |
| WM114 | -14.13 | 0.45 | 1.68  | Open |
| WM115 | -19.77 | 0.63 | 3.13  | Open |
| WM116 | -19.81 | 0.63 | 3.14  | Open |
| WM117 | -19.81 | 0.63 | 3.15  | Open |
| WM118 | -19.81 | 0.63 | 3.15  | Open |
| WM119 | -19.81 | 0.63 | 3.15  | Open |
| WM120 | 0.11   | 0.00 | 0.00  | Open |
| WM121 | 0.11   | 0.00 | 0.00  | Open |
| WM122 | 0.11   | 0.00 | 0.00  | Open |
| WM123 | 0.11   | 0.00 | 0.00  | Open |
| WM124 | 0.11   | 0.00 | 0.00  | Open |
| WM125 | -5.45  | 0.17 | 0.29  | Open |
| WM126 | -5.45  | 0.17 | 0.29  | Open |
| WM127 | -5.45  | 0.17 | 0.29  | Open |
| WM128 | -5.45  | 0.17 | 0.29  | Open |
| WM129 | -5.45  | 0.17 | 0.29  | Open |
| WM130 | -5.64  | 0.18 | 0.31  | Open |
| WM131 | -5.64  | 0.18 | 0.31  | Open |
| WM132 | -0.02  | 0.00 | 0.00  | Open |
| WM133 | 50.30  | 1.60 | 17.67 | Open |
| WM134 | 50.30  | 1.60 | 17.68 | Open |
| WM135 | 50.28  | 1.60 | 17.66 | Open |
| WM136 | 50.28  | 1.60 | 17.66 | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 50.28    | 1.60         | 17.66              | Open   |
| WM138   | 50.11    | 2.84         | 85.03              | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -19.77   | 0.63         | 3.14               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.01    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 31.20  | 0.99 | 7.30    | Open      |
| WM165 | -19.81 | 0.63 | 3.15    | Open      |
| 1     | 19.81  | 0.00 | -147.52 | Open Pump |
| 2     | 31.20  | 0.00 | -147.59 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.27 | 51.90      | 0.00    |
| TEE-BEND24 | 0.00       | 147.27 | 51.90      | 0.00    |
| TEE-BEND23 | 0.00       | 147.27 | 51.83      | 0.00    |
| TEE-BEND43 | 0.00       | 147.48 | 52.01      | 0.00    |
| TEE-BEND44 | 0.00       | 147.47 | 51.93      | 0.00    |
| CHAMBER2   | 0.00       | 147.49 | 51.93      | 0.00    |
| TEE-BEND18 | 0.00       | 147.33 | 51.65      | 0.00    |
| TEE-BEND46 | 0.00       | 147.30 | 51.50      | 0.00    |
| TEE-BEND53 | 0.00       | 147.27 | 51.40      | 0.00    |
| TEE-BEND47 | 0.00       | 147.29 | 51.42      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.40 | 51.52      | 0.00    |
| CRU-1      | 0.23       | 147.27 | 51.34      | 0.00    |
| TEE-BEND52 | 0.00       | 147.27 | 51.32      | 0.00    |
| HYD3       | 0.00       | 147.30 | 51.33      | 0.00    |
| TEE-BEND45 | 0.00       | 147.37 | 51.39      | 0.00    |
| TEE-BEND16 | 0.00       | 147.33 | 51.33      | 0.00    |
| HYD2       | 0.00       | 147.14 | 51.12      | 0.00    |
| HYD7       | 0.00       | 147.32 | 51.29      | 0.00    |
| TEE-BEND51 | 0.00       | 147.27 | 51.24      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND34 | 0.00 | 147.33 | 51.25 | 0.00 |
| TEE-BEND36 | 0.00 | 147.31 | 51.25 | 0.00 |
| TEE-BEND55 | 0.00 | 147.27 | 51.20 | 0.00 |
| TEE-BEND35 | 0.00 | 147.32 | 51.25 | 0.00 |
| HYD1       | 0.00 | 147.15 | 51.08 | 0.00 |
| HYD6       | 0.00 | 147.35 | 51.26 | 0.00 |
| TEE-BEND37 | 0.00 | 147.31 | 51.20 | 0.00 |
| TEE-BEND50 | 0.00 | 147.27 | 51.15 | 0.00 |
| TEE-BEND33 | 0.00 | 147.35 | 51.23 | 0.00 |
| TEE-BEND17 | 0.00 | 147.33 | 51.17 | 0.00 |
| TEE-BEND21 | 0.00 | 147.47 | 51.31 | 0.00 |
| TEE-BEND49 | 0.00 | 147.27 | 51.11 | 0.00 |
| TEE-BEND48 | 0.00 | 147.27 | 51.10 | 0.00 |
| TEE-BEND12 | 0.00 | 147.33 | 51.14 | 0.00 |
| TEE-BEND40 | 0.00 | 147.52 | 51.33 | 0.00 |
| TEE-BEND20 | 0.00 | 147.47 | 51.27 | 0.00 |
| TEE-BEND38 | 0.00 | 147.29 | 51.09 | 0.00 |
| TEE-BEND57 | 0.00 | 147.02 | 50.81 | 0.00 |
| TEE-BEND56 | 0.00 | 147.14 | 50.93 | 0.00 |
| TEE-BEND58 | 0.00 | 147.15 | 50.92 | 0.00 |
| TEE-BEND32 | 0.00 | 146.46 | 50.22 | 0.00 |
| TEE-BEND31 | 0.00 | 146.89 | 50.62 | 0.00 |
| TEE-BEND30 | 0.00 | 146.38 | 50.11 | 0.00 |
| HYD5       | 0.00 | 147.40 | 51.10 | 0.00 |
| CRU-8      | 0.04 | 147.33 | 50.99 | 0.00 |
| TEE-BEND28 | 0.00 | 145.82 | 49.47 | 0.00 |
| CRU-10     | 0.04 | 147.47 | 51.12 | 0.00 |
| TEE-BEND39 | 0.00 | 147.47 | 51.10 | 0.00 |
| TEE-BEND26 | 0.00 | 145.82 | 49.45 | 0.00 |
| TEE-BEND15 | 0.00 | 147.33 | 50.95 | 0.00 |
| TEE-BEND29 | 0.00 | 146.27 | 49.86 | 0.00 |
| TEE-BEND13 | 0.00 | 147.33 | 50.92 | 0.00 |
| TEE-BEND59 | 0.00 | 147.29 | 50.88 | 0.00 |
| TEE-BEND27 | 0.00 | 145.82 | 49.38 | 0.00 |
| TEE-BEND41 | 0.00 | 147.51 | 51.06 | 0.00 |
| TEE-BEND42 | 0.00 | 147.50 | 51.05 | 0.00 |
| CRU-6      | 0.11 | 147.47 | 50.98 | 0.00 |
| CRU-9      | 0.07 | 147.33 | 50.84 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 147.33 | 50.84      | 0.00    |
| CRU-4     | 50.11      | 145.27 | 48.78      | 0.00    |
| CRU-3     | 0.17       | 145.82 | 49.32      | 0.00    |
| TEE-BEND6 | 0.00       | 147.47 | 50.82      | 0.00    |
| CRU-5     | 0.02       | 146.46 | 49.72      | 0.00    |
| TEE-BEND4 | 0.00       | 147.47 | 50.72      | 0.00    |



|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.59 | 50.70 | 0.00           |
| TEE-BEND2 | 0.00   | 147.47 | 50.70 | 0.00           |
| TEE-BEND1 | 0.00   | 147.47 | 50.67 | 0.00           |
| CHAMBER1  | 0.00   | 147.49 | 50.68 | 0.00           |
| R1        | -19.81 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -31.20 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 31.20    | 0.99         | 7.30               | Open   |
| WM100   | 31.09    | 0.99         | 7.25               | Open   |
| WM101   | 36.54    | 1.16         | 9.78               | Open   |
| WM102   | 36.54    | 1.16         | 9.78               | Open   |
| WM103   | -13.76   | 0.44         | 1.60               | Open   |
| WM104   | -13.76   | 0.44         | 1.60               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -14.13   | 0.45         | 1.68               | Open   |
| WM113   | -14.13   | 0.45         | 1.68               | Open   |
| WM114   | -14.13   | 0.45         | 1.68               | Open   |
| WM115   | -19.77   | 0.63         | 3.14               | Open   |
| WM116   | -19.81   | 0.63         | 3.15               | Open   |
| WM117   | -19.81   | 0.63         | 3.15               | Open   |
| WM118   | -19.81   | 0.63         | 3.14               | Open   |
| WM119   | -19.81   | 0.63         | 3.15               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -5.45    | 0.17         | 0.29               | Open   |
| WM126   | -5.45    | 0.17         | 0.29               | Open   |
| WM127   | -5.45    | 0.17         | 0.29               | Open   |



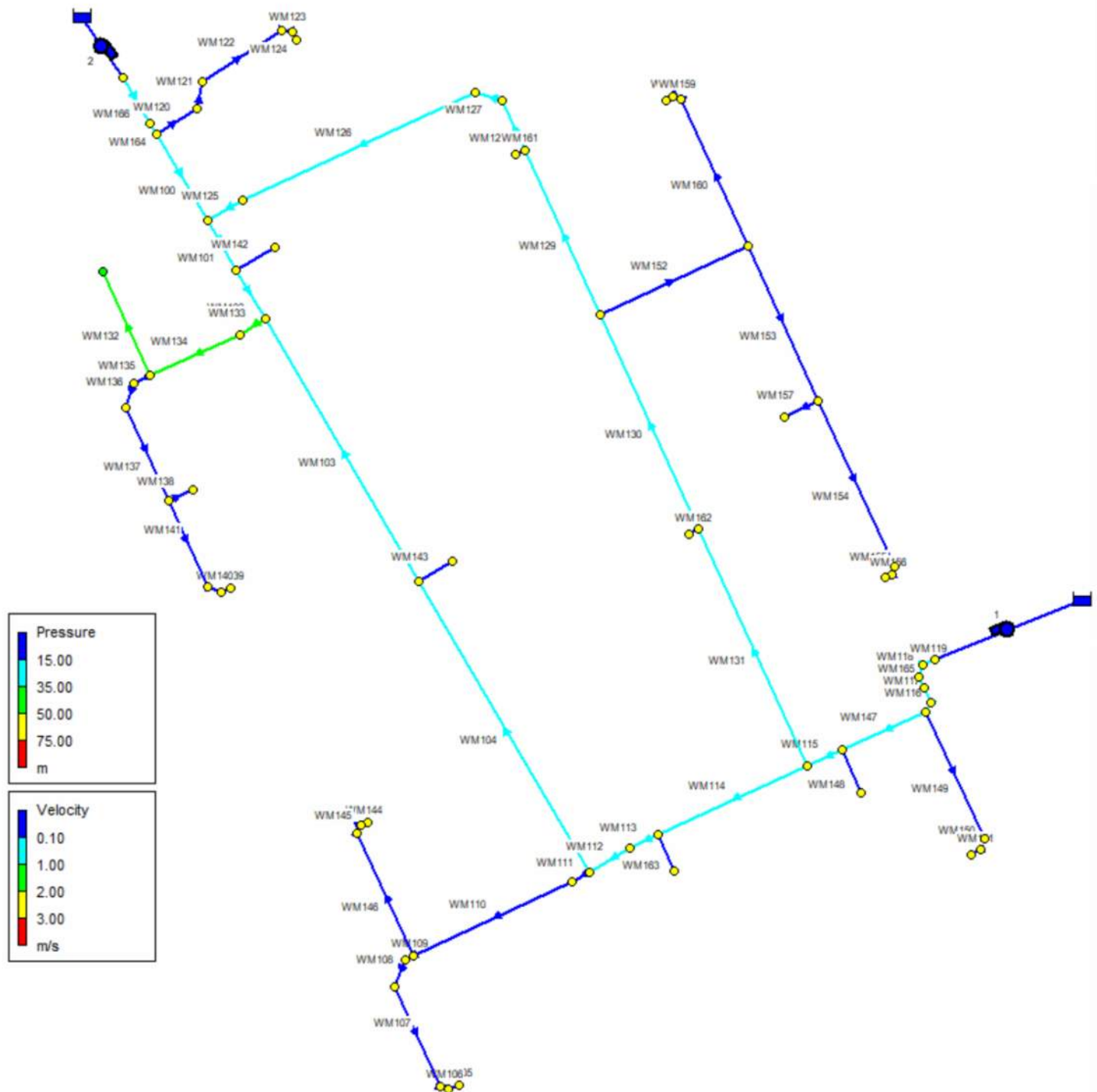
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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | -5.45    | 0.17         | 0.29               | Open   |
| WM129   | -5.45    | 0.17         | 0.29               | Open   |
| WM130   | -5.64    | 0.18         | 0.31               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | -5.64  | 0.18 | 0       | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 50.30  | 1.60 | 17.67   | Open      |
| WM134 | 50.30  | 1.60 | 17.68   | Open      |
| WM135 | 50.28  | 1.60 | 17.66   | Open      |
| WM136 | 50.28  | 1.60 | 17.66   | Open      |
| WM137 | 50.28  | 1.60 | 17.66   | Open      |
| WM138 | 50.11  | 2.84 | 85.03   | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.01    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | -19.77 | 0.63 | 3.14    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 31.20  | 0.99 | 7.30    | Open      |
| WM165 | -19.81 | 0.63 | 3.15    | Open      |
| 1     | 19.81  | 0.00 | -147.52 | Open Pump |
| 2     | 31.20  | 0.00 | -147.59 | Open Pump |

## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR5



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU5).net

#### Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |

|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |      |
|---------|------------|------------|----------|-------------|------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |      |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |      |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |      |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |      |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |      |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |      |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |      |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |      |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |      |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |      |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |      |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |      |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |      |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |      |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |      |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |      |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |      |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |      |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |      |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |      |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |      |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |      |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |      |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |      |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |      |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |      |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |      |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |      |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |      |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |      |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A        | Pump |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A        | Pump |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 25.10   | 25.10   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 41.20   | 41.20   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.59 | 52.22      | 0.00    |
| TEE-BEND24 | 0.00       | 147.59 | 52.22      | 0.00    |
| TEE-BEND23 | 0.00       | 147.59 | 52.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.68 | 52.22      | 0.00    |
| TEE-BEND44 | 0.00       | 147.68 | 52.14      | 0.00    |
| CHAMBER2   | 0.00       | 147.69 | 52.12      | 0.00    |
| TEE-BEND18 | 0.00       | 147.62 | 51.94      | 0.00    |
| TEE-BEND46 | 0.00       | 147.60 | 51.80      | 0.00    |
| TEE-BEND53 | 0.00       | 147.59 | 51.72      | 0.00    |
| TEE-BEND47 | 0.00       | 147.60 | 51.72      | 0.00    |
| TEE-BEND22 | 0.00       | 147.65 | 51.77      | 0.00    |
| CRU-1      | 0.23       | 147.59 | 51.66      | 0.00    |
| TEE-BEND52 | 0.00       | 147.59 | 51.64      | 0.00    |
| HYD3       | 0.00       | 147.60 | 51.63      | 0.00    |
| TEE-BEND45 | 0.00       | 147.63 | 51.66      | 0.00    |
| TEE-BEND16 | 0.00       | 147.62 | 51.62      | 0.00    |
| HYD2       | 0.00       | 147.53 | 51.51      | 0.00    |
| HYD7       | 0.00       | 147.61 | 51.58      | 0.00    |
| TEE-BEND51 | 0.00       | 147.59 | 51.55      | 0.00    |
| TEE-BEND34 | 0.00       | 147.62 | 51.56      | 0.00    |
| TEE-BEND36 | 0.00       | 147.61 | 51.55      | 0.00    |
| TEE-BEND55 | 0.00       | 147.59 | 51.52      | 0.00    |
| TEE-BEND35 | 0.00       | 147.61 | 51.54      | 0.00    |
| HYD1       | 0.00       | 147.54 | 51.46      | 0.00    |
| HYD6       | 0.00       | 147.63 | 51.53      | 0.00    |
| TEE-BEND37 | 0.00       | 147.61 | 51.50      | 0.00    |
| TEE-BEND50 | 0.00       | 147.59 | 51.47      | 0.00    |
| TEE-BEND33 | 0.00       | 147.63 | 51.51      | 0.00    |
| TEE-BEND17 | 0.00       | 147.62 | 51.46      | 0.00    |
| TEE-BEND21 | 0.00       | 147.68 | 51.52      | 0.00    |
| TEE-BEND49 | 0.00       | 147.59 | 51.43      | 0.00    |
| TEE-BEND48 | 0.00       | 147.59 | 51.42      | 0.00    |
| TEE-BEND12 | 0.00       | 147.62 | 51.43      | 0.00    |
| TEE-BEND40 | 0.00       | 147.70 | 51.51      | 0.00    |
| TEE-BEND20 | 0.00       | 147.68 | 51.48      | 0.00    |
| TEE-BEND38 | 0.00       | 147.60 | 51.40      | 0.00    |
| TEE-BEND57 | 0.00       | 147.47 | 51.27      | 0.00    |
| TEE-BEND56 | 0.00       | 147.53 | 51.32      | 0.00    |
| TEE-BEND58 | 0.00       | 147.54 | 51.31      | 0.00    |
| TEE-BEND32 | 0.00       | 147.20 | 50.97      | 0.00    |
| TEE-BEND31 | 0.00       | 147.41 | 51.14      | 0.00    |
| TEE-BEND30 | 0.00       | 147.20 | 50.93      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 147.65 | 51.32 | 0.00 |
| CRU-8      | 0.04 | 147.62 | 51.27 | 0.00 |
| TEE-BEND28 | 0.00 | 147.20 | 50.85 | 0.00 |
| CRU-10     | 0.04 | 147.68 | 51.33 | 0.00 |
| TEE-BEND39 | 0.00 | 147.69 | 51.32 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 147.20 | 50.83      | 0.00           |
| TEE-BEND15 | 0.00       | 147.62 | 51.23      | 0.00           |
| TEE-BEND29 | 0.00       | 147.20 | 50.80      | 0.00           |
| TEE-BEND13 | 0.00       | 147.62 | 51.21      | 0.00           |
| TEE-BEND59 | 0.00       | 147.60 | 51.19      | 0.00           |
| TEE-BEND27 | 0.00       | 147.20 | 50.77      | 0.00           |
| TEE-BEND41 | 0.00       | 147.70 | 51.25      | 0.00           |
| TEE-BEND42 | 0.00       | 147.69 | 51.24      | 0.00           |
| CRU-6      | 0.11       | 147.69 | 51.20      | 0.00           |
| CRU-9      | 0.07       | 147.62 | 51.12      | 0.00           |
| CRU-7      | 0.08       | 147.62 | 51.12      | 0.00           |
| CRU-4      | 0.11       | 147.20 | 50.71      | 0.00           |
| CRU-3      | 0.17       | 147.20 | 50.71      | 0.00           |
| TEE-BEND6  | 0.00       | 147.69 | 51.04      | 0.00           |
| CRU-5      | 33.35      | 146.08 | 49.35      | 0.00           |
| TEE-BEND4  | 0.00       | 147.69 | 50.94      | 0.00           |
| TEE-BEND3  | 0.00       | 147.75 | 51.00      | 0.00           |
| TEE-BEND2  | 0.00       | 147.69 | 50.92      | 0.00           |
| TEE-BEND1  | 0.00       | 147.69 | 50.89      | 0.00           |
| CHAMBER1   | 0.00       | 147.70 | 50.89      | 0.00           |
| R1         | -13.00     | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -21.34     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 21.34    | 0.68         | 3.61          | Open   |
| WM100   | 21.23    | 0.68         | 3.58          | Open   |
| WM101   | 24.57    | 0.78         | 4.69          | Open   |
| WM102   | 24.57    | 0.78         | 4.69          | Open   |
| WM103   | -9.06    | 0.29         | 0.74          | Open   |
| WM104   | -9.06    | 0.29         | 0.74          | Open   |
| WM105   | -0.23    | 0.01         | 0.00          | Open   |
| WM106   | -0.23    | 0.01         | 0.00          | Open   |
| WM107   | -0.23    | 0.01         | 0.00          | Open   |
| WM108   | -0.23    | 0.01         | 0.00          | Open   |
| WM109   | -0.23    | 0.01         | 0.00          | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | -9.43  | 0.30 | 0.80 | Open |
| WM113 | -9.43  | 0.30 | 0.80 | Open |
| WM114 | -9.43  | 0.30 | 0.80 | Open |
| WM115 | -12.96 | 0.41 | 1.43 | Open |
| WM116 | -13.00 | 0.41 | 1.44 | Open |
| WM117 | -13.00 | 0.41 | 1.44 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -13.00   | 0.41         | 1.44               | Open   |
| WM119   | -13.00   | 0.41         | 1.45               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -3.34    | 0.11         | 0.12               | Open   |
| WM126   | -3.34    | 0.11         | 0.12               | Open   |
| WM127   | -3.34    | 0.11         | 0.12               | Open   |
| WM128   | -3.34    | 0.11         | 0.12               | Open   |
| WM129   | -3.34    | 0.11         | 0.12               | Open   |
| WM130   | -3.53    | 0.11         | 0.13               | Open   |
| WM131   | -3.53    | 0.11         | 0.13               | Open   |
| WM132   | -33.35   | 1.89         | 40.00              | Open   |
| WM133   | 33.63    | 1.07         | 8.39               | Open   |
| WM134   | 33.63    | 1.07         | 8.39               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -12.96   | 0.41         | 1.44               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 0.19     | 0.01         | 0.00               | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |



|       |       |      |      |      |
|-------|-------|------|------|------|
| WM154 | 0.07  | 0.00 | 0.00 | Open |
| WM155 | 0.07  | 0.00 | 0.00 | Open |
| WM156 | 0.07  | 0.00 | 0.00 | Open |
| WM157 | 0.04  | 0.00 | 0.00 | Open |
| WM158 | -0.08 | 0.00 | 0.00 | Open |
| WM159 | -0.08 | 0.00 | 0.00 | Open |
| WM160 | -0.08 | 0.00 | 0.00 | Open |
| WM161 | 0.00  | 0.00 | 0.00 | Open |
| WM162 | 0.00  | 0.00 | 0.00 | Open |
| WM163 | 0.00  | 0.00 | 0.00 | Open |
| WM164 | 21.34 | 0.68 | 3.61 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -13.00   | 0.41         | 1.44               | Open      |
| 1       | 13.00    | 0.00         | -147.70            | Open Pump |
| 2       | 21.34    | 0.00         | -147.75            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.59 | 52.22      | 0.00    |
| TEE-BEND24 | 0.00       | 147.59 | 52.22      | 0.00    |
| TEE-BEND23 | 0.00       | 147.59 | 52.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.68 | 52.22      | 0.00    |
| TEE-BEND44 | 0.00       | 147.68 | 52.14      | 0.00    |
| CHAMBER2   | 0.00       | 147.69 | 52.12      | 0.00    |
| TEE-BEND18 | 0.00       | 147.62 | 51.94      | 0.00    |
| TEE-BEND46 | 0.00       | 147.60 | 51.80      | 0.00    |
| TEE-BEND53 | 0.00       | 147.59 | 51.72      | 0.00    |
| TEE-BEND47 | 0.00       | 147.60 | 51.72      | 0.00    |
| TEE-BEND22 | 0.00       | 147.65 | 51.77      | 0.00    |
| CRU-1      | 0.23       | 147.59 | 51.66      | 0.00    |
| TEE-BEND52 | 0.00       | 147.59 | 51.64      | 0.00    |
| HYD3       | 0.00       | 147.60 | 51.63      | 0.00    |
| TEE-BEND45 | 0.00       | 147.63 | 51.66      | 0.00    |
| TEE-BEND16 | 0.00       | 147.62 | 51.62      | 0.00    |
| HYD2       | 0.00       | 147.53 | 51.51      | 0.00    |
| HYD7       | 0.00       | 147.61 | 51.58      | 0.00    |
| TEE-BEND51 | 0.00       | 147.59 | 51.55      | 0.00    |
| TEE-BEND34 | 0.00       | 147.62 | 51.56      | 0.00    |
| TEE-BEND36 | 0.00       | 147.61 | 51.55      | 0.00    |
| TEE-BEND55 | 0.00       | 147.59 | 51.52      | 0.00    |
| TEE-BEND35 | 0.00       | 147.61 | 51.54      | 0.00    |
| HYD1       | 0.00       | 147.54 | 51.46      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 147.63 | 51.50 | 0.00 |
| TEE-BEND37 | 0.00 | 147.61 | 51.50 | 0.00 |
| TEE-BEND50 | 0.00 | 147.59 | 51.47 | 0.00 |
| TEE-BEND33 | 0.00 | 147.63 | 51.51 | 0.00 |
| TEE-BEND17 | 0.00 | 147.62 | 51.46 | 0.00 |
| TEE-BEND21 | 0.00 | 147.68 | 51.52 | 0.00 |
| TEE-BEND49 | 0.00 | 147.59 | 51.43 | 0.00 |
| TEE-BEND48 | 0.00 | 147.59 | 51.42 | 0.00 |
| TEE-BEND12 | 0.00 | 147.62 | 51.43 | 0.00 |
| TEE-BEND40 | 0.00 | 147.70 | 51.51 | 0.00 |
| TEE-BEND20 | 0.00 | 147.68 | 51.48 | 0.00 |
| TEE-BEND38 | 0.00 | 147.60 | 51.40 | 0.00 |
| TEE-BEND57 | 0.00 | 147.47 | 51.27 | 0.00 |
| TEE-BEND56 | 0.00 | 147.53 | 51.32 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 147.54 | 51.31      | 0.00           |
| TEE-BEND32 | 0.00       | 147.20 | 50.97      | 0.00           |
| TEE-BEND31 | 0.00       | 147.41 | 51.14      | 0.00           |
| TEE-BEND30 | 0.00       | 147.20 | 50.93      | 0.00           |
| HYD5       | 0.00       | 147.65 | 51.35      | 0.00           |
| CRU-8      | 0.04       | 147.62 | 51.27      | 0.00           |
| TEE-BEND28 | 0.00       | 147.20 | 50.85      | 0.00           |
| CRU-10     | 0.04       | 147.68 | 51.33      | 0.00           |
| TEE-BEND39 | 0.00       | 147.69 | 51.32      | 0.00           |
| TEE-BEND26 | 0.00       | 147.20 | 50.83      | 0.00           |
| TEE-BEND15 | 0.00       | 147.62 | 51.23      | 0.00           |
| TEE-BEND29 | 0.00       | 147.20 | 50.80      | 0.00           |
| TEE-BEND13 | 0.00       | 147.62 | 51.21      | 0.00           |
| TEE-BEND59 | 0.00       | 147.60 | 51.19      | 0.00           |
| TEE-BEND27 | 0.00       | 147.20 | 50.77      | 0.00           |
| TEE-BEND41 | 0.00       | 147.70 | 51.25      | 0.00           |
| TEE-BEND42 | 0.00       | 147.69 | 51.24      | 0.00           |
| CRU-6      | 0.11       | 147.69 | 51.20      | 0.00           |
| CRU-9      | 0.07       | 147.62 | 51.12      | 0.00           |
| CRU-7      | 0.08       | 147.62 | 51.12      | 0.00           |
| CRU-4      | 0.11       | 147.20 | 50.71      | 0.00           |
| CRU-3      | 0.17       | 147.20 | 50.71      | 0.00           |
| TEE-BEND6  | 0.00       | 147.69 | 51.04      | 0.00           |
| CRU-5      | 33.35      | 146.08 | 49.35      | 0.00           |
| TEE-BEND4  | 0.00       | 147.69 | 50.94      | 0.00           |
| TEE-BEND3  | 0.00       | 147.75 | 51.00      | 0.00           |
| TEE-BEND2  | 0.00       | 147.69 | 50.92      | 0.00           |
| TEE-BEND1  | 0.00       | 147.69 | 50.89      | 0.00           |
| CHAMBER1   | 0.00       | 147.70 | 50.89      | 0.00           |
| R1         | -13.00     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -21.34 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 21.34    | 0.68         | 3.61               | Open   |
| WM100   | 21.23    | 0.68         | 3.58               | Open   |
| WM101   | 24.57    | 0.78         | 4.69               | Open   |
| WM102   | 24.57    | 0.78         | 4.69               | Open   |
| WM103   | -9.06    | 0.29         | 0.74               | Open   |
| WM104   | -9.06    | 0.29         | 0.74               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -9.43    | 0.30         | 0.80               | Open   |
| WM113   | -9.43    | 0.30         | 0.80               | Open   |
| WM114   | -9.43    | 0.30         | 0.80               | Open   |
| WM115   | -12.96   | 0.41         | 1.43               | Open   |
| WM116   | -13.00   | 0.41         | 1.44               | Open   |
| WM117   | -13.00   | 0.41         | 1.44               | Open   |
| WM118   | -13.00   | 0.41         | 1.45               | Open   |
| WM119   | -13.00   | 0.41         | 1.44               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -3.34    | 0.11         | 0.12               | Open   |
| WM126   | -3.34    | 0.11         | 0.12               | Open   |
| WM127   | -3.34    | 0.11         | 0.12               | Open   |
| WM128   | -3.34    | 0.11         | 0.12               | Open   |
| WM129   | -3.34    | 0.11         | 0.12               | Open   |
| WM130   | -3.53    | 0.11         | 0.13               | Open   |
| WM131   | -3.53    | 0.11         | 0.13               | Open   |
| WM132   | -33.35   | 1.89         | 40.00              | Open   |
| WM133   | 33.63    | 1.07         | 8.39               | Open   |
| WM134   | 33.63    | 1.07         | 8.39               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM136 | 0.28   | 0.01 | 0.00 | Open |
| WM137 | 0.28   | 0.01 | 0.00 | Open |
| WM138 | 0.11   | 0.01 | 0.00 | Open |
| WM139 | -0.17  | 0.01 | 0.00 | Open |
| WM140 | -0.17  | 0.01 | 0.00 | Open |
| WM141 | -0.17  | 0.01 | 0.00 | Open |
| WM142 | 0.00   | 0.00 | 0.00 | Open |
| WM143 | 0.00   | 0.00 | 0.00 | Open |
| WM144 | -0.14  | 0.00 | 0.00 | Open |
| WM145 | -0.14  | 0.00 | 0.00 | Open |
| WM146 | -0.14  | 0.00 | 0.00 | Open |
| WM147 | -12.96 | 0.41 | 1.44 | Open |
| WM148 | 0.00   | 0.00 | 0.00 | Open |
| WM149 | 0.04   | 0.00 | 0.00 | Open |
| WM150 | 0.04   | 0.00 | 0.00 | Open |
| WM151 | 0.04   | 0.00 | 0.00 | Open |
| WM152 | 0.19   | 0.01 | 0.00 | Open |
| WM153 | 0.11   | 0.01 | 0.00 | Open |
| WM154 | 0.07   | 0.00 | 0.00 | Open |
| WM155 | 0.07   | 0.00 | 0.00 | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 21.34    | 0.68         | 3.61               | Open      |
| WM165   | -13.00   | 0.41         | 1.44               | Open      |
| 1       | 13.00    | 0.00         | -147.70            | Open Pump |
| 2       | 21.34    | 0.00         | -147.75            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.59 | 52.22      | 0.00    |
| TEE-BEND24 | 0.00       | 147.59 | 52.22      | 0.00    |
| TEE-BEND23 | 0.00       | 147.59 | 52.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.68 | 52.22      | 0.00    |
| TEE-BEND44 | 0.00       | 147.68 | 52.14      | 0.00    |
| CHAMBER2   | 0.00       | 147.69 | 52.12      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 147.62 | 51.51 | 0.00 |
| TEE-BEND46 | 0.00 | 147.60 | 51.80 | 0.00 |
| TEE-BEND53 | 0.00 | 147.59 | 51.72 | 0.00 |
| TEE-BEND47 | 0.00 | 147.60 | 51.72 | 0.00 |
| TEE-BEND22 | 0.00 | 147.65 | 51.77 | 0.00 |
| CRU-1      | 0.23 | 147.59 | 51.66 | 0.00 |
| TEE-BEND52 | 0.00 | 147.59 | 51.64 | 0.00 |
| HYD3       | 0.00 | 147.60 | 51.63 | 0.00 |
| TEE-BEND45 | 0.00 | 147.63 | 51.66 | 0.00 |
| TEE-BEND16 | 0.00 | 147.62 | 51.62 | 0.00 |
| HYD2       | 0.00 | 147.53 | 51.51 | 0.00 |
| HYD7       | 0.00 | 147.61 | 51.58 | 0.00 |
| TEE-BEND51 | 0.00 | 147.59 | 51.55 | 0.00 |
| TEE-BEND34 | 0.00 | 147.62 | 51.56 | 0.00 |
| TEE-BEND36 | 0.00 | 147.61 | 51.55 | 0.00 |
| TEE-BEND55 | 0.00 | 147.59 | 51.52 | 0.00 |
| TEE-BEND35 | 0.00 | 147.61 | 51.54 | 0.00 |
| HYD1       | 0.00 | 147.54 | 51.46 | 0.00 |
| HYD6       | 0.00 | 147.63 | 51.53 | 0.00 |
| TEE-BEND37 | 0.00 | 147.61 | 51.50 | 0.00 |
| TEE-BEND50 | 0.00 | 147.59 | 51.47 | 0.00 |
| TEE-BEND33 | 0.00 | 147.63 | 51.51 | 0.00 |
| TEE-BEND17 | 0.00 | 147.62 | 51.46 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.68 | 51.52      | 0.00    |
| TEE-BEND49 | 0.00       | 147.59 | 51.43      | 0.00    |
| TEE-BEND48 | 0.00       | 147.59 | 51.42      | 0.00    |
| TEE-BEND12 | 0.00       | 147.62 | 51.43      | 0.00    |
| TEE-BEND40 | 0.00       | 147.70 | 51.51      | 0.00    |
| TEE-BEND20 | 0.00       | 147.68 | 51.48      | 0.00    |
| TEE-BEND38 | 0.00       | 147.60 | 51.40      | 0.00    |
| TEE-BEND57 | 0.00       | 147.47 | 51.27      | 0.00    |
| TEE-BEND56 | 0.00       | 147.53 | 51.32      | 0.00    |
| TEE-BEND58 | 0.00       | 147.54 | 51.31      | 0.00    |
| TEE-BEND32 | 0.00       | 147.20 | 50.97      | 0.00    |
| TEE-BEND31 | 0.00       | 147.41 | 51.14      | 0.00    |
| TEE-BEND30 | 0.00       | 147.20 | 50.93      | 0.00    |
| HYD5       | 0.00       | 147.65 | 51.35      | 0.00    |
| CRU-8      | 0.04       | 147.62 | 51.27      | 0.00    |
| TEE-BEND28 | 0.00       | 147.20 | 50.85      | 0.00    |
| CRU-10     | 0.04       | 147.68 | 51.33      | 0.00    |
| TEE-BEND39 | 0.00       | 147.69 | 51.32      | 0.00    |
| TEE-BEND26 | 0.00       | 147.20 | 50.83      | 0.00    |
| TEE-BEND15 | 0.00       | 147.62 | 51.23      | 0.00    |
| TEE-BEND29 | 0.00       | 147.20 | 50.80      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 147.62 | 51.19 | 0.00           |
| TEE-BEND59 | 0.00   | 147.60 | 51.19 | 0.00           |
| TEE-BEND27 | 0.00   | 147.20 | 50.77 | 0.00           |
| TEE-BEND41 | 0.00   | 147.70 | 51.25 | 0.00           |
| TEE-BEND42 | 0.00   | 147.69 | 51.24 | 0.00           |
| CRU-6      | 0.11   | 147.69 | 51.20 | 0.00           |
| CRU-9      | 0.07   | 147.62 | 51.12 | 0.00           |
| CRU-7      | 0.08   | 147.62 | 51.12 | 0.00           |
| CRU-4      | 0.11   | 147.20 | 50.71 | 0.00           |
| CRU-3      | 0.17   | 147.20 | 50.71 | 0.00           |
| TEE-BEND6  | 0.00   | 147.69 | 51.04 | 0.00           |
| CRU-5      | 33.35  | 146.08 | 49.35 | 0.00           |
| TEE-BEND4  | 0.00   | 147.69 | 50.94 | 0.00           |
| TEE-BEND3  | 0.00   | 147.75 | 51.00 | 0.00           |
| TEE-BEND2  | 0.00   | 147.69 | 50.92 | 0.00           |
| TEE-BEND1  | 0.00   | 147.69 | 50.89 | 0.00           |
| CHAMBER1   | 0.00   | 147.70 | 50.89 | 0.00           |
| R1         | -13.00 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -21.34 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 21.34    | 0.68         | 3.61               | Open   |
| WM100   | 21.23    | 0.68         | 3.58               | Open   |
| WM101   | 24.57    | 0.78         | 4.69               | Open   |
| WM102   | 24.57    | 0.78         | 4.69               | Open   |
| WM103   | -9.06    | 0.29         | 0.74               | Open   |
| WM104   | -9.06    | 0.29         | 0.74               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -9.43    | 0.30         | 0.80               | Open   |
| WM113   | -9.43    | 0.30         | 0.80               | Open   |
| WM114   | -9.43    | 0.30         | 0.80               | Open   |
| WM115   | -12.96   | 0.41         | 1.43               | Open   |
| WM116   | -13.00   | 0.41         | 1.44               | Open   |
| WM117   | -13.00   | 0.41         | 1.44               | Open   |
| WM118   | -13.00   | 0.41         | 1.44               | Open   |
| WM119   | -13.00   | 0.41         | 1.45               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM123 | 0.11   | 0.00 | 0.00  | Open |
| WM124 | 0.11   | 0.00 | 0.00  | Open |
| WM125 | -3.34  | 0.11 | 0.12  | Open |
| WM126 | -3.34  | 0.11 | 0.12  | Open |
| WM127 | -3.34  | 0.11 | 0.12  | Open |
| WM128 | -3.34  | 0.11 | 0.12  | Open |
| WM129 | -3.34  | 0.11 | 0.12  | Open |
| WM130 | -3.53  | 0.11 | 0.13  | Open |
| WM131 | -3.53  | 0.11 | 0.13  | Open |
| WM132 | -33.35 | 1.89 | 40.00 | Open |
| WM133 | 33.63  | 1.07 | 8.39  | Open |
| WM134 | 33.63  | 1.07 | 8.39  | Open |
| WM135 | 0.28   | 0.01 | 0.00  | Open |
| WM136 | 0.28   | 0.01 | 0.00  | Open |
| WM137 | 0.28   | 0.01 | 0.00  | Open |
| WM138 | 0.11   | 0.01 | 0.00  | Open |
| WM139 | -0.17  | 0.01 | 0.00  | Open |
| WM140 | -0.17  | 0.01 | 0.00  | Open |
| WM141 | -0.17  | 0.01 | 0.00  | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -0.14  | 0.00 | 0.00  | Open |
| WM145 | -0.14  | 0.00 | 0.00  | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -12.96   | 0.41         | 1.44               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 0.19     | 0.01         | 0.00               | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 21.34    | 0.68         | 3.61               | Open      |
| WM165   | -13.00   | 0.41         | 1.44               | Open      |
| 1       | 13.00    | 0.00         | -147.70            | Open Pump |

## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.59 | 52.22      | 0.00    |
| TEE-BEND24 | 0.00       | 147.59 | 52.22      | 0.00    |
| TEE-BEND23 | 0.00       | 147.59 | 52.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.68 | 52.22      | 0.00    |
| TEE-BEND44 | 0.00       | 147.68 | 52.14      | 0.00    |
| CHAMBER2   | 0.00       | 147.69 | 52.12      | 0.00    |
| TEE-BEND18 | 0.00       | 147.62 | 51.94      | 0.00    |
| TEE-BEND46 | 0.00       | 147.60 | 51.80      | 0.00    |
| TEE-BEND53 | 0.00       | 147.59 | 51.72      | 0.00    |
| TEE-BEND47 | 0.00       | 147.60 | 51.72      | 0.00    |
| TEE-BEND22 | 0.00       | 147.65 | 51.77      | 0.00    |
| CRU-1      | 0.23       | 147.59 | 51.66      | 0.00    |
| TEE-BEND52 | 0.00       | 147.59 | 51.64      | 0.00    |
| HYD3       | 0.00       | 147.60 | 51.63      | 0.00    |
| TEE-BEND45 | 0.00       | 147.63 | 51.66      | 0.00    |
| TEE-BEND16 | 0.00       | 147.62 | 51.62      | 0.00    |
| HYD2       | 0.00       | 147.53 | 51.51      | 0.00    |
| HYD7       | 0.00       | 147.61 | 51.58      | 0.00    |
| TEE-BEND51 | 0.00       | 147.59 | 51.55      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 147.62 | 51.56      | 0.00    |
| TEE-BEND36 | 0.00       | 147.61 | 51.55      | 0.00    |
| TEE-BEND55 | 0.00       | 147.59 | 51.52      | 0.00    |
| TEE-BEND35 | 0.00       | 147.61 | 51.54      | 0.00    |
| HYD1       | 0.00       | 147.54 | 51.46      | 0.00    |
| HYD6       | 0.00       | 147.63 | 51.53      | 0.00    |
| TEE-BEND37 | 0.00       | 147.61 | 51.50      | 0.00    |
| TEE-BEND50 | 0.00       | 147.59 | 51.47      | 0.00    |
| TEE-BEND33 | 0.00       | 147.63 | 51.51      | 0.00    |
| TEE-BEND17 | 0.00       | 147.62 | 51.46      | 0.00    |
| TEE-BEND21 | 0.00       | 147.68 | 51.52      | 0.00    |
| TEE-BEND49 | 0.00       | 147.59 | 51.43      | 0.00    |
| TEE-BEND48 | 0.00       | 147.59 | 51.42      | 0.00    |
| TEE-BEND12 | 0.00       | 147.62 | 51.43      | 0.00    |
| TEE-BEND40 | 0.00       | 147.70 | 51.51      | 0.00    |
| TEE-BEND20 | 0.00       | 147.68 | 51.48      | 0.00    |
| TEE-BEND38 | 0.00       | 147.60 | 51.40      | 0.00    |
| TEE-BEND57 | 0.00       | 147.47 | 51.27      | 0.00    |



|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND56 | 0.00  | 147.53 | 51.31 | 0.00 |
| TEE-BEND58 | 0.00  | 147.54 | 51.31 | 0.00 |
| TEE-BEND32 | 0.00  | 147.20 | 50.97 | 0.00 |
| TEE-BEND31 | 0.00  | 147.41 | 51.14 | 0.00 |
| TEE-BEND30 | 0.00  | 147.20 | 50.93 | 0.00 |
| HYD5       | 0.00  | 147.65 | 51.35 | 0.00 |
| CRU-8      | 0.04  | 147.62 | 51.27 | 0.00 |
| TEE-BEND28 | 0.00  | 147.20 | 50.85 | 0.00 |
| CRU-10     | 0.04  | 147.68 | 51.33 | 0.00 |
| TEE-BEND39 | 0.00  | 147.69 | 51.32 | 0.00 |
| TEE-BEND26 | 0.00  | 147.20 | 50.83 | 0.00 |
| TEE-BEND15 | 0.00  | 147.62 | 51.23 | 0.00 |
| TEE-BEND29 | 0.00  | 147.20 | 50.80 | 0.00 |
| TEE-BEND13 | 0.00  | 147.62 | 51.21 | 0.00 |
| TEE-BEND59 | 0.00  | 147.60 | 51.19 | 0.00 |
| TEE-BEND27 | 0.00  | 147.20 | 50.77 | 0.00 |
| TEE-BEND41 | 0.00  | 147.70 | 51.25 | 0.00 |
| TEE-BEND42 | 0.00  | 147.69 | 51.24 | 0.00 |
| CRU-6      | 0.11  | 147.69 | 51.20 | 0.00 |
| CRU-9      | 0.07  | 147.62 | 51.12 | 0.00 |
| CRU-7      | 0.08  | 147.62 | 51.12 | 0.00 |
| CRU-4      | 0.11  | 147.20 | 50.71 | 0.00 |
| CRU-3      | 0.17  | 147.20 | 50.71 | 0.00 |
| TEE-BEND6  | 0.00  | 147.69 | 51.04 | 0.00 |
| CRU-5      | 33.35 | 146.08 | 49.35 | 0.00 |
| TEE-BEND4  | 0.00  | 147.69 | 50.94 | 0.00 |
| TEE-BEND3  | 0.00  | 147.75 | 51.00 | 0.00 |
| TEE-BEND2  | 0.00  | 147.69 | 50.92 | 0.00 |
| TEE-BEND1  | 0.00  | 147.69 | 50.89 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.70 | 50.89      | 0.00           |
| R1       | -13.00     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -21.34     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 21.34    | 0.68         | 3.61          | Open   |
| WM100   | 21.23    | 0.68         | 3.58          | Open   |
| WM101   | 24.57    | 0.78         | 4.69          | Open   |
| WM102   | 24.57    | 0.78         | 4.69          | Open   |
| WM103   | -9.06    | 0.29         | 0.74          | Open   |
| WM104   | -9.06    | 0.29         | 0.74          | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM105 | -0.23  | 0.01 | 0.00  | Open |
| WM106 | -0.23  | 0.01 | 0.00  | Open |
| WM107 | -0.23  | 0.01 | 0.00  | Open |
| WM108 | -0.23  | 0.01 | 0.00  | Open |
| WM109 | -0.23  | 0.01 | 0.00  | Open |
| WM110 | -0.37  | 0.01 | 0.00  | Open |
| WM111 | -0.37  | 0.01 | 0.00  | Open |
| WM112 | -9.43  | 0.30 | 0.80  | Open |
| WM113 | -9.43  | 0.30 | 0.80  | Open |
| WM114 | -9.43  | 0.30 | 0.80  | Open |
| WM115 | -12.96 | 0.41 | 1.43  | Open |
| WM116 | -13.00 | 0.41 | 1.44  | Open |
| WM117 | -13.00 | 0.41 | 1.44  | Open |
| WM118 | -13.00 | 0.41 | 1.44  | Open |
| WM119 | -13.00 | 0.41 | 1.45  | Open |
| WM120 | 0.11   | 0.00 | 0.00  | Open |
| WM121 | 0.11   | 0.00 | 0.00  | Open |
| WM122 | 0.11   | 0.00 | 0.00  | Open |
| WM123 | 0.11   | 0.00 | 0.00  | Open |
| WM124 | 0.11   | 0.00 | 0.00  | Open |
| WM125 | -3.34  | 0.11 | 0.12  | Open |
| WM126 | -3.34  | 0.11 | 0.12  | Open |
| WM127 | -3.34  | 0.11 | 0.12  | Open |
| WM128 | -3.34  | 0.11 | 0.12  | Open |
| WM129 | -3.34  | 0.11 | 0.12  | Open |
| WM130 | -3.53  | 0.11 | 0.13  | Open |
| WM131 | -3.53  | 0.11 | 0.13  | Open |
| WM132 | -33.35 | 1.89 | 40.00 | Open |
| WM133 | 33.63  | 1.07 | 8.39  | Open |
| WM134 | 33.63  | 1.07 | 8.39  | Open |
| WM135 | 0.28   | 0.01 | 0.00  | Open |
| WM136 | 0.28   | 0.01 | 0.00  | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -12.96   | 0.41         | 1.44               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 21.34  | 0.68 | 3.61    | Open      |
| WM165 | -13.00 | 0.41 | 1.44    | Open      |
| 1     | 13.00  | 0.00 | -147.70 | Open Pump |
| 2     | 21.34  | 0.00 | -147.75 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.59 | 52.22      | 0.00    |
| TEE-BEND24 | 0.00       | 147.59 | 52.22      | 0.00    |
| TEE-BEND23 | 0.00       | 147.59 | 52.14      | 0.00    |
| TEE-BEND43 | 0.00       | 147.68 | 52.22      | 0.00    |
| TEE-BEND44 | 0.00       | 147.68 | 52.14      | 0.00    |
| CHAMBER2   | 0.00       | 147.69 | 52.12      | 0.00    |
| TEE-BEND18 | 0.00       | 147.62 | 51.94      | 0.00    |
| TEE-BEND46 | 0.00       | 147.60 | 51.80      | 0.00    |
| TEE-BEND53 | 0.00       | 147.59 | 51.72      | 0.00    |
| TEE-BEND47 | 0.00       | 147.60 | 51.72      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.65 | 51.77      | 0.00    |
| CRU-1      | 0.23       | 147.59 | 51.66      | 0.00    |
| TEE-BEND52 | 0.00       | 147.59 | 51.64      | 0.00    |
| HYD3       | 0.00       | 147.60 | 51.63      | 0.00    |
| TEE-BEND45 | 0.00       | 147.63 | 51.66      | 0.00    |
| TEE-BEND16 | 0.00       | 147.62 | 51.62      | 0.00    |
| HYD2       | 0.00       | 147.53 | 51.51      | 0.00    |
| HYD7       | 0.00       | 147.61 | 51.58      | 0.00    |
| TEE-BEND51 | 0.00       | 147.59 | 51.55      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND34 | 0.00 | 147.62 | 51.55 | 0.00 |
| TEE-BEND36 | 0.00 | 147.61 | 51.55 | 0.00 |
| TEE-BEND55 | 0.00 | 147.59 | 51.52 | 0.00 |
| TEE-BEND35 | 0.00 | 147.61 | 51.54 | 0.00 |
| HYD1       | 0.00 | 147.54 | 51.46 | 0.00 |
| HYD6       | 0.00 | 147.63 | 51.53 | 0.00 |
| TEE-BEND37 | 0.00 | 147.61 | 51.50 | 0.00 |
| TEE-BEND50 | 0.00 | 147.59 | 51.47 | 0.00 |
| TEE-BEND33 | 0.00 | 147.63 | 51.51 | 0.00 |
| TEE-BEND17 | 0.00 | 147.62 | 51.46 | 0.00 |
| TEE-BEND21 | 0.00 | 147.68 | 51.52 | 0.00 |
| TEE-BEND49 | 0.00 | 147.59 | 51.43 | 0.00 |
| TEE-BEND48 | 0.00 | 147.59 | 51.42 | 0.00 |
| TEE-BEND12 | 0.00 | 147.62 | 51.43 | 0.00 |
| TEE-BEND40 | 0.00 | 147.70 | 51.51 | 0.00 |
| TEE-BEND20 | 0.00 | 147.68 | 51.48 | 0.00 |
| TEE-BEND38 | 0.00 | 147.60 | 51.40 | 0.00 |
| TEE-BEND57 | 0.00 | 147.47 | 51.27 | 0.00 |
| TEE-BEND56 | 0.00 | 147.53 | 51.32 | 0.00 |
| TEE-BEND58 | 0.00 | 147.54 | 51.30 | 0.00 |
| TEE-BEND32 | 0.00 | 147.20 | 50.97 | 0.00 |
| TEE-BEND31 | 0.00 | 147.41 | 51.14 | 0.00 |
| TEE-BEND30 | 0.00 | 147.20 | 50.93 | 0.00 |
| HYD5       | 0.00 | 147.65 | 51.35 | 0.00 |
| CRU-8      | 0.04 | 147.62 | 51.27 | 0.00 |
| TEE-BEND28 | 0.00 | 147.20 | 50.85 | 0.00 |
| CRU-10     | 0.04 | 147.68 | 51.33 | 0.00 |
| TEE-BEND39 | 0.00 | 147.69 | 51.32 | 0.00 |
| TEE-BEND26 | 0.00 | 147.20 | 50.83 | 0.00 |
| TEE-BEND15 | 0.00 | 147.62 | 51.23 | 0.00 |
| TEE-BEND29 | 0.00 | 147.20 | 50.80 | 0.00 |
| TEE-BEND13 | 0.00 | 147.62 | 51.21 | 0.00 |
| TEE-BEND59 | 0.00 | 147.60 | 51.19 | 0.00 |
| TEE-BEND27 | 0.00 | 147.20 | 50.77 | 0.00 |
| TEE-BEND41 | 0.00 | 147.70 | 51.25 | 0.00 |
| TEE-BEND42 | 0.00 | 147.69 | 51.24 | 0.00 |
| CRU-6      | 0.11 | 147.69 | 51.20 | 0.00 |
| CRU-9      | 0.07 | 147.62 | 51.12 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 147.62 | 51.12      | 0.00    |
| CRU-4     | 0.11       | 147.20 | 50.71      | 0.00    |
| CRU-3     | 0.17       | 147.20 | 50.71      | 0.00    |
| TEE-BEND6 | 0.00       | 147.69 | 51.04      | 0.00    |
| CRU-5     | 33.35      | 146.08 | 49.35      | 0.00    |
| TEE-BEND4 | 0.00       | 147.69 | 50.94      | 0.00    |

|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.75 | 51.00 | 0.00           |
| TEE-BEND2 | 0.00   | 147.69 | 50.92 | 0.00           |
| TEE-BEND1 | 0.00   | 147.69 | 50.89 | 0.00           |
| CHAMBER1  | 0.00   | 147.70 | 50.89 | 0.00           |
| R1        | -13.00 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -21.34 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 21.34    | 0.68         | 3.61               | Open   |
| WM100   | 21.23    | 0.68         | 3.58               | Open   |
| WM101   | 24.57    | 0.78         | 4.69               | Open   |
| WM102   | 24.57    | 0.78         | 4.69               | Open   |
| WM103   | -9.06    | 0.29         | 0.74               | Open   |
| WM104   | -9.06    | 0.29         | 0.74               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -9.43    | 0.30         | 0.80               | Open   |
| WM113   | -9.43    | 0.30         | 0.80               | Open   |
| WM114   | -9.43    | 0.30         | 0.80               | Open   |
| WM115   | -12.96   | 0.41         | 1.43               | Open   |
| WM116   | -13.00   | 0.41         | 1.45               | Open   |
| WM117   | -13.00   | 0.41         | 1.44               | Open   |
| WM118   | -13.00   | 0.41         | 1.44               | Open   |
| WM119   | -13.00   | 0.41         | 1.45               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | -3.34    | 0.11         | 0.12               | Open   |
| WM126   | -3.34    | 0.11         | 0.12               | Open   |
| WM127   | -3.34    | 0.11         | 0.12               | Open   |



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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | -3.34    | 0.11         | 0.12               | Open   |
| WM129   | -3.34    | 0.11         | 0.12               | Open   |
| WM130   | -3.53    | 0.11         | 0.13               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | -3.53  | 0.11 | 0       | Open      |
| WM132 | -33.35 | 1.89 | 40.00   | Open      |
| WM133 | 33.63  | 1.07 | 8.39    | Open      |
| WM134 | 33.63  | 1.07 | 8.39    | Open      |
| WM135 | 0.28   | 0.01 | 0.00    | Open      |
| WM136 | 0.28   | 0.01 | 0.00    | Open      |
| WM137 | 0.28   | 0.01 | 0.00    | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.00    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | -12.96 | 0.41 | 1.44    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 21.34  | 0.68 | 3.61    | Open      |
| WM165 | -13.00 | 0.41 | 1.44    | Open      |
| 1     | 13.00  | 0.00 | -147.70 | Open Pump |
| 2     | 21.34  | 0.00 | -147.75 | Open Pump |



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU6)+pumps.net

Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |



|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |      |
|---------|------------|------------|----------|-------------|------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |      |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |      |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |      |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |      |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |      |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |      |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |      |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |      |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |      |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |      |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |      |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |      |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |      |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |      |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |      |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |      |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |      |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |      |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |      |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |      |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |      |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |      |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |      |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |      |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |      |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |      |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |      |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |      |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |      |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |      |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A        | Pump |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A        | Pump |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 29.32   | 29.32   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 69.06   | 69.06   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.51 | 52.14      | 0.00    |
| TEE-BEND24 | 0.00       | 147.51 | 52.14      | 0.00    |
| TEE-BEND23 | 0.00       | 147.51 | 52.07      | 0.00    |
| TEE-BEND43 | 0.00       | 147.61 | 52.14      | 0.00    |
| TEE-BEND44 | 0.00       | 147.61 | 52.06      | 0.00    |
| CHAMBER2   | 0.00       | 147.62 | 52.05      | 0.00    |
| TEE-BEND18 | 0.00       | 147.48 | 51.80      | 0.00    |
| TEE-BEND46 | 0.00       | 147.52 | 51.72      | 0.00    |
| TEE-BEND53 | 0.00       | 147.51 | 51.64      | 0.00    |
| TEE-BEND47 | 0.00       | 147.52 | 51.65      | 0.00    |
| TEE-BEND22 | 0.00       | 147.56 | 51.69      | 0.00    |
| CRU-1      | 0.23       | 147.51 | 51.59      | 0.00    |
| TEE-BEND52 | 0.00       | 147.51 | 51.57      | 0.00    |
| HYD3       | 0.00       | 147.52 | 51.55      | 0.00    |
| TEE-BEND45 | 0.00       | 147.54 | 51.56      | 0.00    |
| TEE-BEND16 | 0.00       | 147.48 | 51.48      | 0.00    |
| HYD2       | 0.00       | 147.47 | 51.46      | 0.00    |
| HYD7       | 0.00       | 147.46 | 51.43      | 0.00    |
| TEE-BEND51 | 0.00       | 147.51 | 51.48      | 0.00    |
| TEE-BEND34 | 0.00       | 147.48 | 51.42      | 0.00    |
| TEE-BEND36 | 0.00       | 147.45 | 51.39      | 0.00    |
| TEE-BEND55 | 0.00       | 147.51 | 51.44      | 0.00    |
| TEE-BEND35 | 0.00       | 147.46 | 51.39      | 0.00    |
| HYD1       | 0.00       | 147.42 | 51.35      | 0.00    |
| HYD6       | 0.00       | 147.51 | 51.42      | 0.00    |
| TEE-BEND37 | 0.00       | 147.45 | 51.34      | 0.00    |
| TEE-BEND50 | 0.00       | 147.51 | 51.40      | 0.00    |
| TEE-BEND33 | 0.00       | 147.51 | 51.39      | 0.00    |
| TEE-BEND17 | 0.00       | 147.48 | 51.33      | 0.00    |
| TEE-BEND21 | 0.00       | 147.61 | 51.45      | 0.00    |
| TEE-BEND49 | 0.00       | 147.51 | 51.35      | 0.00    |
| TEE-BEND48 | 0.00       | 147.51 | 51.34      | 0.00    |
| TEE-BEND12 | 0.00       | 147.48 | 51.30      | 0.00    |
| TEE-BEND40 | 0.00       | 147.64 | 51.44      | 0.00    |
| TEE-BEND20 | 0.00       | 147.61 | 51.41      | 0.00    |
| TEE-BEND38 | 0.00       | 147.42 | 51.22      | 0.00    |
| TEE-BEND57 | 0.00       | 147.43 | 51.23      | 0.00    |
| TEE-BEND56 | 0.00       | 147.47 | 51.26      | 0.00    |
| TEE-BEND58 | 0.00       | 147.42 | 51.19      | 0.00    |
| TEE-BEND32 | 0.00       | 147.43 | 51.19      | 0.00    |
| TEE-BEND31 | 0.00       | 147.43 | 51.17      | 0.00    |
| TEE-BEND30 | 0.00       | 147.43 | 51.15      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 147.56 | 51.00 | 0.00 |
| CRU-8      | 0.04 | 147.48 | 51.14 | 0.00 |
| TEE-BEND28 | 0.00 | 147.43 | 51.08 | 0.00 |
| CRU-10     | 0.04 | 147.61 | 51.25 | 0.00 |
| TEE-BEND39 | 0.00 | 146.59 | 50.23 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 147.43 | 51.06      | 0.00           |
| TEE-BEND15 | 0.00       | 147.48 | 51.10      | 0.00           |
| TEE-BEND29 | 0.00       | 147.43 | 51.02      | 0.00           |
| TEE-BEND13 | 0.00       | 147.48 | 51.08      | 0.00           |
| TEE-BEND59 | 0.00       | 147.42 | 51.00      | 0.00           |
| TEE-BEND27 | 0.00       | 147.43 | 50.99      | 0.00           |
| TEE-BEND41 | 0.00       | 147.63 | 51.18      | 0.00           |
| TEE-BEND42 | 0.00       | 147.62 | 51.17      | 0.00           |
| CRU-6      | 50.11      | 146.56 | 50.07      | 0.00           |
| CRU-9      | 0.07       | 147.48 | 50.99      | 0.00           |
| CRU-7      | 0.08       | 147.48 | 50.99      | 0.00           |
| CRU-4      | 0.11       | 147.43 | 50.93      | 0.00           |
| CRU-3      | 0.17       | 147.43 | 50.93      | 0.00           |
| TEE-BEND6  | 0.00       | 147.17 | 50.52      | 0.00           |
| CRU-5      | 0.02       | 147.43 | 50.69      | 0.00           |
| TEE-BEND4  | 0.00       | 146.64 | 49.89      | 0.00           |
| TEE-BEND3  | 0.00       | 147.53 | 50.78      | 0.00           |
| TEE-BEND2  | 0.00       | 147.37 | 50.60      | 0.00           |
| TEE-BEND1  | 0.00       | 147.05 | 50.25      | 0.00           |
| CHAMBER1   | 0.00       | 147.41 | 50.59      | 0.00           |
| R1         | -15.19     | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -35.82     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 35.82    | 1.14         | 9.42               | Open   |
| WM100   | -14.29   | 0.46         | 1.72               | Open   |
| WM101   | -7.13    | 0.23         | 0.47               | Open   |
| WM102   | -7.13    | 0.23         | 0.47               | Open   |
| WM103   | -7.43    | 0.24         | 0.51               | Open   |
| WM104   | -7.43    | 0.24         | 0.51               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | -7.80  | 0.25 | 0.56 | Open |
| WM113 | -7.80  | 0.25 | 0.56 | Open |
| WM114 | -7.80  | 0.25 | 0.56 | Open |
| WM115 | -15.15 | 0.48 | 1.92 | Open |
| WM116 | -15.19 | 0.48 | 1.93 | Open |
| WM117 | -15.19 | 0.48 | 1.93 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -15.19   | 0.48         | 1.92               | Open   |
| WM119   | -15.19   | 0.48         | 1.93               | Open   |
| WM120   | 50.11    | 1.60         | 17.55              | Open   |
| WM121   | 50.11    | 1.60         | 17.55              | Open   |
| WM122   | 50.11    | 1.60         | 17.55              | Open   |
| WM123   | 50.11    | 1.60         | 17.55              | Open   |
| WM124   | 50.11    | 1.60         | 17.55              | Open   |
| WM125   | -7.17    | 0.23         | 0.48               | Open   |
| WM126   | -7.17    | 0.23         | 0.48               | Open   |
| WM127   | -7.17    | 0.23         | 0.48               | Open   |
| WM128   | -7.17    | 0.23         | 0.48               | Open   |
| WM129   | -7.17    | 0.23         | 0.48               | Open   |
| WM130   | -7.36    | 0.23         | 0.50               | Open   |
| WM131   | -7.36    | 0.23         | 0.50               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -15.15   | 0.48         | 1.92               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 0.19     | 0.01         | 0.00               | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM154 | 0.07  | 0.00 | 0.00 | Open |
| WM155 | 0.07  | 0.00 | 0.00 | Open |
| WM156 | 0.07  | 0.00 | 0.00 | Open |
| WM157 | 0.04  | 0.00 | 0.00 | Open |
| WM158 | -0.08 | 0.00 | 0.00 | Open |
| WM159 | -0.08 | 0.00 | 0.00 | Open |
| WM160 | -0.08 | 0.00 | 0.00 | Open |
| WM161 | 0.00  | 0.00 | 0.00 | Open |
| WM162 | 0.00  | 0.00 | 0.00 | Open |
| WM163 | 0.00  | 0.00 | 0.00 | Open |
| WM164 | 35.82 | 1.14 | 9.42 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -15.19   | 0.48         | 1.93               | Open      |
| 1       | 15.19    | 0.00         | -147.64            | Open Pump |
| 2       | 35.82    | 0.00         | -147.53            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.51 | 52.14      | 0.00    |
| TEE-BEND24 | 0.00       | 147.51 | 52.14      | 0.00    |
| TEE-BEND23 | 0.00       | 147.51 | 52.07      | 0.00    |
| TEE-BEND43 | 0.00       | 147.61 | 52.14      | 0.00    |
| TEE-BEND44 | 0.00       | 147.61 | 52.06      | 0.00    |
| CHAMBER2   | 0.00       | 147.62 | 52.05      | 0.00    |
| TEE-BEND18 | 0.00       | 147.48 | 51.80      | 0.00    |
| TEE-BEND46 | 0.00       | 147.52 | 51.72      | 0.00    |
| TEE-BEND53 | 0.00       | 147.51 | 51.64      | 0.00    |
| TEE-BEND47 | 0.00       | 147.52 | 51.65      | 0.00    |
| TEE-BEND22 | 0.00       | 147.56 | 51.69      | 0.00    |
| CRU-1      | 0.23       | 147.51 | 51.59      | 0.00    |
| TEE-BEND52 | 0.00       | 147.51 | 51.57      | 0.00    |
| HYD3       | 0.00       | 147.52 | 51.55      | 0.00    |
| TEE-BEND45 | 0.00       | 147.54 | 51.56      | 0.00    |
| TEE-BEND16 | 0.00       | 147.48 | 51.48      | 0.00    |
| HYD2       | 0.00       | 147.47 | 51.46      | 0.00    |
| HYD7       | 0.00       | 147.46 | 51.43      | 0.00    |
| TEE-BEND51 | 0.00       | 147.51 | 51.48      | 0.00    |
| TEE-BEND34 | 0.00       | 147.48 | 51.42      | 0.00    |
| TEE-BEND36 | 0.00       | 147.45 | 51.39      | 0.00    |
| TEE-BEND55 | 0.00       | 147.51 | 51.44      | 0.00    |
| TEE-BEND35 | 0.00       | 147.46 | 51.39      | 0.00    |
| HYD1       | 0.00       | 147.42 | 51.35      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 147.51 | 51.34 | 0.00 |
| TEE-BEND37 | 0.00 | 147.45 | 51.34 | 0.00 |
| TEE-BEND50 | 0.00 | 147.51 | 51.40 | 0.00 |
| TEE-BEND33 | 0.00 | 147.51 | 51.39 | 0.00 |
| TEE-BEND17 | 0.00 | 147.48 | 51.33 | 0.00 |
| TEE-BEND21 | 0.00 | 147.61 | 51.45 | 0.00 |
| TEE-BEND49 | 0.00 | 147.51 | 51.35 | 0.00 |
| TEE-BEND48 | 0.00 | 147.51 | 51.34 | 0.00 |
| TEE-BEND12 | 0.00 | 147.48 | 51.30 | 0.00 |
| TEE-BEND40 | 0.00 | 147.64 | 51.44 | 0.00 |
| TEE-BEND20 | 0.00 | 147.61 | 51.41 | 0.00 |
| TEE-BEND38 | 0.00 | 147.42 | 51.22 | 0.00 |
| TEE-BEND57 | 0.00 | 147.43 | 51.23 | 0.00 |
| TEE-BEND56 | 0.00 | 147.47 | 51.26 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 147.42 | 51.19      | 0.00           |
| TEE-BEND32 | 0.00       | 147.43 | 51.19      | 0.00           |
| TEE-BEND31 | 0.00       | 147.43 | 51.17      | 0.00           |
| TEE-BEND30 | 0.00       | 147.43 | 51.15      | 0.00           |
| HYD5       | 0.00       | 147.56 | 51.26      | 0.00           |
| CRU-8      | 0.04       | 147.48 | 51.14      | 0.00           |
| TEE-BEND28 | 0.00       | 147.43 | 51.08      | 0.00           |
| CRU-10     | 0.04       | 147.61 | 51.25      | 0.00           |
| TEE-BEND39 | 0.00       | 146.59 | 50.23      | 0.00           |
| TEE-BEND26 | 0.00       | 147.43 | 51.06      | 0.00           |
| TEE-BEND15 | 0.00       | 147.48 | 51.10      | 0.00           |
| TEE-BEND29 | 0.00       | 147.43 | 51.02      | 0.00           |
| TEE-BEND13 | 0.00       | 147.48 | 51.08      | 0.00           |
| TEE-BEND59 | 0.00       | 147.42 | 51.00      | 0.00           |
| TEE-BEND27 | 0.00       | 147.43 | 50.99      | 0.00           |
| TEE-BEND41 | 0.00       | 147.63 | 51.18      | 0.00           |
| TEE-BEND42 | 0.00       | 147.62 | 51.17      | 0.00           |
| CRU-6      | 50.11      | 146.56 | 50.07      | 0.00           |
| CRU-9      | 0.07       | 147.48 | 50.99      | 0.00           |
| CRU-7      | 0.08       | 147.48 | 50.99      | 0.00           |
| CRU-4      | 0.11       | 147.43 | 50.93      | 0.00           |
| CRU-3      | 0.17       | 147.43 | 50.93      | 0.00           |
| TEE-BEND6  | 0.00       | 147.17 | 50.52      | 0.00           |
| CRU-5      | 0.02       | 147.43 | 50.69      | 0.00           |
| TEE-BEND4  | 0.00       | 146.64 | 49.89      | 0.00           |
| TEE-BEND3  | 0.00       | 147.53 | 50.78      | 0.00           |
| TEE-BEND2  | 0.00       | 147.37 | 50.60      | 0.00           |
| TEE-BEND1  | 0.00       | 147.05 | 50.25      | 0.00           |
| CHAMBER1   | 0.00       | 147.41 | 50.59      | 0.00           |
| R1         | -15.19     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -35.82 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 35.82    | 1.14         | 9.42               | Open   |
| WM100   | -14.29   | 0.46         | 1.72               | Open   |
| WM101   | -7.13    | 0.23         | 0.47               | Open   |
| WM102   | -7.13    | 0.23         | 0.47               | Open   |
| WM103   | -7.43    | 0.24         | 0.51               | Open   |
| WM104   | -7.43    | 0.24         | 0.51               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -7.80    | 0.25         | 0.56               | Open   |
| WM113   | -7.80    | 0.25         | 0.56               | Open   |
| WM114   | -7.80    | 0.25         | 0.56               | Open   |
| WM115   | -15.15   | 0.48         | 1.92               | Open   |
| WM116   | -15.19   | 0.48         | 1.93               | Open   |
| WM117   | -15.19   | 0.48         | 1.93               | Open   |
| WM118   | -15.19   | 0.48         | 1.92               | Open   |
| WM119   | -15.19   | 0.48         | 1.93               | Open   |
| WM120   | 50.11    | 1.60         | 17.55              | Open   |
| WM121   | 50.11    | 1.60         | 17.55              | Open   |
| WM122   | 50.11    | 1.60         | 17.55              | Open   |
| WM123   | 50.11    | 1.60         | 17.55              | Open   |
| WM124   | 50.11    | 1.60         | 17.55              | Open   |
| WM125   | -7.17    | 0.23         | 0.48               | Open   |
| WM126   | -7.17    | 0.23         | 0.48               | Open   |
| WM127   | -7.17    | 0.23         | 0.48               | Open   |
| WM128   | -7.17    | 0.23         | 0.48               | Open   |
| WM129   | -7.17    | 0.23         | 0.48               | Open   |
| WM130   | -7.36    | 0.23         | 0.50               | Open   |
| WM131   | -7.36    | 0.23         | 0.50               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM136 | 0.28   | 0.01 | 0.00 | Open |
| WM137 | 0.28   | 0.01 | 0.00 | Open |
| WM138 | 0.11   | 0.01 | 0.00 | Open |
| WM139 | -0.17  | 0.01 | 0.00 | Open |
| WM140 | -0.17  | 0.01 | 0.00 | Open |
| WM141 | -0.17  | 0.01 | 0.00 | Open |
| WM142 | 0.00   | 0.00 | 0.00 | Open |
| WM143 | 0.00   | 0.00 | 0.00 | Open |
| WM144 | -0.14  | 0.00 | 0.01 | Open |
| WM145 | -0.14  | 0.00 | 0.00 | Open |
| WM146 | -0.14  | 0.00 | 0.00 | Open |
| WM147 | -15.15 | 0.48 | 1.92 | Open |
| WM148 | 0.00   | 0.00 | 0.00 | Open |
| WM149 | 0.04   | 0.00 | 0.00 | Open |
| WM150 | 0.04   | 0.00 | 0.00 | Open |
| WM151 | 0.04   | 0.00 | 0.00 | Open |
| WM152 | 0.19   | 0.01 | 0.00 | Open |
| WM153 | 0.11   | 0.01 | 0.00 | Open |
| WM154 | 0.07   | 0.00 | 0.00 | Open |
| WM155 | 0.07   | 0.00 | 0.00 | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 35.82    | 1.14         | 9.42               | Open      |
| WM165   | -15.19   | 0.48         | 1.93               | Open      |
| 1       | 15.19    | 0.00         | -147.64            | Open Pump |
| 2       | 35.82    | 0.00         | -147.53            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.51 | 52.14      | 0.00    |
| TEE-BEND24 | 0.00       | 147.51 | 52.14      | 0.00    |
| TEE-BEND23 | 0.00       | 147.51 | 52.07      | 0.00    |
| TEE-BEND43 | 0.00       | 147.61 | 52.14      | 0.00    |
| TEE-BEND44 | 0.00       | 147.61 | 52.06      | 0.00    |
| CHAMBER2   | 0.00       | 147.62 | 52.05      | 0.00    |



|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 147.48 | 51.51 | 0.00 |
| TEE-BEND46 | 0.00 | 147.52 | 51.72 | 0.00 |
| TEE-BEND53 | 0.00 | 147.51 | 51.64 | 0.00 |
| TEE-BEND47 | 0.00 | 147.52 | 51.65 | 0.00 |
| TEE-BEND22 | 0.00 | 147.56 | 51.69 | 0.00 |
| CRU-1      | 0.23 | 147.51 | 51.59 | 0.00 |
| TEE-BEND52 | 0.00 | 147.51 | 51.57 | 0.00 |
| HYD3       | 0.00 | 147.52 | 51.55 | 0.00 |
| TEE-BEND45 | 0.00 | 147.54 | 51.56 | 0.00 |
| TEE-BEND16 | 0.00 | 147.48 | 51.48 | 0.00 |
| HYD2       | 0.00 | 147.47 | 51.46 | 0.00 |
| HYD7       | 0.00 | 147.46 | 51.43 | 0.00 |
| TEE-BEND51 | 0.00 | 147.51 | 51.48 | 0.00 |
| TEE-BEND34 | 0.00 | 147.48 | 51.42 | 0.00 |
| TEE-BEND36 | 0.00 | 147.45 | 51.39 | 0.00 |
| TEE-BEND55 | 0.00 | 147.51 | 51.44 | 0.00 |
| TEE-BEND35 | 0.00 | 147.46 | 51.39 | 0.00 |
| HYD1       | 0.00 | 147.42 | 51.35 | 0.00 |
| HYD6       | 0.00 | 147.51 | 51.42 | 0.00 |
| TEE-BEND37 | 0.00 | 147.45 | 51.34 | 0.00 |
| TEE-BEND50 | 0.00 | 147.51 | 51.40 | 0.00 |
| TEE-BEND33 | 0.00 | 147.51 | 51.39 | 0.00 |
| TEE-BEND17 | 0.00 | 147.48 | 51.33 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.61 | 51.45      | 0.00    |
| TEE-BEND49 | 0.00       | 147.51 | 51.35      | 0.00    |
| TEE-BEND48 | 0.00       | 147.51 | 51.34      | 0.00    |
| TEE-BEND12 | 0.00       | 147.48 | 51.30      | 0.00    |
| TEE-BEND40 | 0.00       | 147.64 | 51.44      | 0.00    |
| TEE-BEND20 | 0.00       | 147.61 | 51.41      | 0.00    |
| TEE-BEND38 | 0.00       | 147.42 | 51.22      | 0.00    |
| TEE-BEND57 | 0.00       | 147.43 | 51.23      | 0.00    |
| TEE-BEND56 | 0.00       | 147.47 | 51.26      | 0.00    |
| TEE-BEND58 | 0.00       | 147.42 | 51.19      | 0.00    |
| TEE-BEND32 | 0.00       | 147.43 | 51.19      | 0.00    |
| TEE-BEND31 | 0.00       | 147.43 | 51.17      | 0.00    |
| TEE-BEND30 | 0.00       | 147.43 | 51.15      | 0.00    |
| HYD5       | 0.00       | 147.56 | 51.26      | 0.00    |
| CRU-8      | 0.04       | 147.48 | 51.14      | 0.00    |
| TEE-BEND28 | 0.00       | 147.43 | 51.08      | 0.00    |
| CRU-10     | 0.04       | 147.61 | 51.25      | 0.00    |
| TEE-BEND39 | 0.00       | 146.59 | 50.23      | 0.00    |
| TEE-BEND26 | 0.00       | 147.43 | 51.06      | 0.00    |
| TEE-BEND15 | 0.00       | 147.48 | 51.10      | 0.00    |
| TEE-BEND29 | 0.00       | 147.43 | 51.02      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 147.48 | 51.00 | 0.00           |
| TEE-BEND59 | 0.00   | 147.42 | 51.00 | 0.00           |
| TEE-BEND27 | 0.00   | 147.43 | 50.99 | 0.00           |
| TEE-BEND41 | 0.00   | 147.63 | 51.18 | 0.00           |
| TEE-BEND42 | 0.00   | 147.62 | 51.17 | 0.00           |
| CRU-6      | 50.11  | 146.56 | 50.07 | 0.00           |
| CRU-9      | 0.07   | 147.48 | 50.99 | 0.00           |
| CRU-7      | 0.08   | 147.48 | 50.99 | 0.00           |
| CRU-4      | 0.11   | 147.43 | 50.93 | 0.00           |
| CRU-3      | 0.17   | 147.43 | 50.93 | 0.00           |
| TEE-BEND6  | 0.00   | 147.17 | 50.52 | 0.00           |
| CRU-5      | 0.02   | 147.43 | 50.69 | 0.00           |
| TEE-BEND4  | 0.00   | 146.64 | 49.89 | 0.00           |
| TEE-BEND3  | 0.00   | 147.53 | 50.78 | 0.00           |
| TEE-BEND2  | 0.00   | 147.37 | 50.60 | 0.00           |
| TEE-BEND1  | 0.00   | 147.05 | 50.25 | 0.00           |
| CHAMBER1   | 0.00   | 147.41 | 50.59 | 0.00           |
| R1         | -15.19 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -35.82 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 35.82    | 1.14         | 9.42               | Open   |
| WM100   | -14.29   | 0.46         | 1.72               | Open   |
| WM101   | -7.13    | 0.23         | 0.47               | Open   |
| WM102   | -7.13    | 0.23         | 0.47               | Open   |
| WM103   | -7.43    | 0.24         | 0.51               | Open   |
| WM104   | -7.43    | 0.24         | 0.51               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -7.80    | 0.25         | 0.56               | Open   |
| WM113   | -7.80    | 0.25         | 0.56               | Open   |
| WM114   | -7.80    | 0.25         | 0.56               | Open   |
| WM115   | -15.15   | 0.48         | 1.92               | Open   |
| WM116   | -15.19   | 0.48         | 1.93               | Open   |
| WM117   | -15.19   | 0.48         | 1.93               | Open   |
| WM118   | -15.19   | 0.48         | 1.92               | Open   |
| WM119   | -15.19   | 0.48         | 1.93               | Open   |
| WM120   | 50.11    | 1.60         | 17.55              | Open   |
| WM121   | 50.11    | 1.60         | 17.55              | Open   |
| WM122   | 50.11    | 1.60         | 17.55              | Open   |

|       |       |      |       |      |
|-------|-------|------|-------|------|
| WM123 | 50.11 | 1.60 | 17.55 | Open |
| WM124 | 50.11 | 1.60 | 17.55 | Open |
| WM125 | -7.17 | 0.23 | 0.48  | Open |
| WM126 | -7.17 | 0.23 | 0.48  | Open |
| WM127 | -7.17 | 0.23 | 0.48  | Open |
| WM128 | -7.17 | 0.23 | 0.48  | Open |
| WM129 | -7.17 | 0.23 | 0.48  | Open |
| WM130 | -7.36 | 0.23 | 0.50  | Open |
| WM131 | -7.36 | 0.23 | 0.50  | Open |
| WM132 | -0.02 | 0.00 | 0.00  | Open |
| WM133 | 0.30  | 0.01 | 0.00  | Open |
| WM134 | 0.30  | 0.01 | 0.00  | Open |
| WM135 | 0.28  | 0.01 | 0.00  | Open |
| WM136 | 0.28  | 0.01 | 0.00  | Open |
| WM137 | 0.28  | 0.01 | 0.00  | Open |
| WM138 | 0.11  | 0.01 | 0.00  | Open |
| WM139 | -0.17 | 0.01 | 0.00  | Open |
| WM140 | -0.17 | 0.01 | 0.00  | Open |
| WM141 | -0.17 | 0.01 | 0.00  | Open |
| WM142 | 0.00  | 0.00 | 0.00  | Open |
| WM143 | 0.00  | 0.00 | 0.00  | Open |
| WM144 | -0.14 | 0.00 | 0.00  | Open |
| WM145 | -0.14 | 0.00 | 0.00  | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -15.15   | 0.48         | 1.92               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 0.19     | 0.01         | 0.00               | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 35.82    | 1.14         | 9.42               | Open      |
| WM165   | -15.19   | 0.48         | 1.93               | Open      |
| 1       | 15.19    | 0.00         | -147.64            | Open Pump |



## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.51 | 52.14      | 0.00    |
| TEE-BEND24 | 0.00       | 147.51 | 52.14      | 0.00    |
| TEE-BEND23 | 0.00       | 147.51 | 52.07      | 0.00    |
| TEE-BEND43 | 0.00       | 147.61 | 52.14      | 0.00    |
| TEE-BEND44 | 0.00       | 147.61 | 52.06      | 0.00    |
| CHAMBER2   | 0.00       | 147.62 | 52.05      | 0.00    |
| TEE-BEND18 | 0.00       | 147.48 | 51.80      | 0.00    |
| TEE-BEND46 | 0.00       | 147.52 | 51.72      | 0.00    |
| TEE-BEND53 | 0.00       | 147.51 | 51.64      | 0.00    |
| TEE-BEND47 | 0.00       | 147.52 | 51.65      | 0.00    |
| TEE-BEND22 | 0.00       | 147.56 | 51.69      | 0.00    |
| CRU-1      | 0.23       | 147.51 | 51.59      | 0.00    |
| TEE-BEND52 | 0.00       | 147.51 | 51.57      | 0.00    |
| HYD3       | 0.00       | 147.52 | 51.55      | 0.00    |
| TEE-BEND45 | 0.00       | 147.54 | 51.56      | 0.00    |
| TEE-BEND16 | 0.00       | 147.48 | 51.48      | 0.00    |
| HYD2       | 0.00       | 147.47 | 51.46      | 0.00    |
| HYD7       | 0.00       | 147.46 | 51.43      | 0.00    |
| TEE-BEND51 | 0.00       | 147.51 | 51.48      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 147.48 | 51.42      | 0.00    |
| TEE-BEND36 | 0.00       | 147.45 | 51.39      | 0.00    |
| TEE-BEND55 | 0.00       | 147.51 | 51.44      | 0.00    |
| TEE-BEND35 | 0.00       | 147.46 | 51.39      | 0.00    |
| HYD1       | 0.00       | 147.42 | 51.35      | 0.00    |
| HYD6       | 0.00       | 147.51 | 51.42      | 0.00    |
| TEE-BEND37 | 0.00       | 147.45 | 51.34      | 0.00    |
| TEE-BEND50 | 0.00       | 147.51 | 51.40      | 0.00    |
| TEE-BEND33 | 0.00       | 147.51 | 51.39      | 0.00    |
| TEE-BEND17 | 0.00       | 147.48 | 51.33      | 0.00    |
| TEE-BEND21 | 0.00       | 147.61 | 51.45      | 0.00    |
| TEE-BEND49 | 0.00       | 147.51 | 51.35      | 0.00    |
| TEE-BEND48 | 0.00       | 147.51 | 51.34      | 0.00    |
| TEE-BEND12 | 0.00       | 147.48 | 51.30      | 0.00    |
| TEE-BEND40 | 0.00       | 147.64 | 51.44      | 0.00    |
| TEE-BEND20 | 0.00       | 147.61 | 51.41      | 0.00    |
| TEE-BEND38 | 0.00       | 147.42 | 51.22      | 0.00    |
| TEE-BEND57 | 0.00       | 147.43 | 51.23      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND56 | 0.00  | 147.47 | 51.19 | 0.00 |
| TEE-BEND58 | 0.00  | 147.42 | 51.19 | 0.00 |
| TEE-BEND32 | 0.00  | 147.43 | 51.19 | 0.00 |
| TEE-BEND31 | 0.00  | 147.43 | 51.17 | 0.00 |
| TEE-BEND30 | 0.00  | 147.43 | 51.15 | 0.00 |
| HYD5       | 0.00  | 147.56 | 51.26 | 0.00 |
| CRU-8      | 0.04  | 147.48 | 51.14 | 0.00 |
| TEE-BEND28 | 0.00  | 147.43 | 51.08 | 0.00 |
| CRU-10     | 0.04  | 147.61 | 51.25 | 0.00 |
| TEE-BEND39 | 0.00  | 146.59 | 50.23 | 0.00 |
| TEE-BEND26 | 0.00  | 147.43 | 51.06 | 0.00 |
| TEE-BEND15 | 0.00  | 147.48 | 51.10 | 0.00 |
| TEE-BEND29 | 0.00  | 147.43 | 51.02 | 0.00 |
| TEE-BEND13 | 0.00  | 147.48 | 51.08 | 0.00 |
| TEE-BEND59 | 0.00  | 147.42 | 51.00 | 0.00 |
| TEE-BEND27 | 0.00  | 147.43 | 50.99 | 0.00 |
| TEE-BEND41 | 0.00  | 147.63 | 51.18 | 0.00 |
| TEE-BEND42 | 0.00  | 147.62 | 51.17 | 0.00 |
| CRU-6      | 50.11 | 146.56 | 50.07 | 0.00 |
| CRU-9      | 0.07  | 147.48 | 50.99 | 0.00 |
| CRU-7      | 0.08  | 147.48 | 50.99 | 0.00 |
| CRU-4      | 0.11  | 147.43 | 50.93 | 0.00 |
| CRU-3      | 0.17  | 147.43 | 50.93 | 0.00 |
| TEE-BEND6  | 0.00  | 147.17 | 50.52 | 0.00 |
| CRU-5      | 0.02  | 147.43 | 50.69 | 0.00 |
| TEE-BEND4  | 0.00  | 146.64 | 49.89 | 0.00 |
| TEE-BEND3  | 0.00  | 147.53 | 50.78 | 0.00 |
| TEE-BEND2  | 0.00  | 147.37 | 50.60 | 0.00 |
| TEE-BEND1  | 0.00  | 147.05 | 50.25 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.41 | 50.59      | 0.00           |
| R1       | -15.19     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -35.82     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 35.82    | 1.14         | 9.42          | Open   |
| WM100   | -14.29   | 0.46         | 1.72          | Open   |
| WM101   | -7.13    | 0.23         | 0.47          | Open   |
| WM102   | -7.13    | 0.23         | 0.47          | Open   |
| WM103   | -7.43    | 0.24         | 0.51          | Open   |
| WM104   | -7.43    | 0.24         | 0.51          | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM105 | -0.23  | 0.01 | 0.00  | Open |
| WM106 | -0.23  | 0.01 | 0.00  | Open |
| WM107 | -0.23  | 0.01 | 0.00  | Open |
| WM108 | -0.23  | 0.01 | 0.00  | Open |
| WM109 | -0.23  | 0.01 | 0.00  | Open |
| WM110 | -0.37  | 0.01 | 0.00  | Open |
| WM111 | -0.37  | 0.01 | 0.00  | Open |
| WM112 | -7.80  | 0.25 | 0.56  | Open |
| WM113 | -7.80  | 0.25 | 0.56  | Open |
| WM114 | -7.80  | 0.25 | 0.56  | Open |
| WM115 | -15.15 | 0.48 | 1.92  | Open |
| WM116 | -15.19 | 0.48 | 1.93  | Open |
| WM117 | -15.19 | 0.48 | 1.93  | Open |
| WM118 | -15.19 | 0.48 | 1.92  | Open |
| WM119 | -15.19 | 0.48 | 1.93  | Open |
| WM120 | 50.11  | 1.60 | 17.55 | Open |
| WM121 | 50.11  | 1.60 | 17.55 | Open |
| WM122 | 50.11  | 1.60 | 17.55 | Open |
| WM123 | 50.11  | 1.60 | 17.55 | Open |
| WM124 | 50.11  | 1.60 | 17.55 | Open |
| WM125 | -7.17  | 0.23 | 0.48  | Open |
| WM126 | -7.17  | 0.23 | 0.48  | Open |
| WM127 | -7.17  | 0.23 | 0.48  | Open |
| WM128 | -7.17  | 0.23 | 0.48  | Open |
| WM129 | -7.17  | 0.23 | 0.48  | Open |
| WM130 | -7.36  | 0.23 | 0.50  | Open |
| WM131 | -7.36  | 0.23 | 0.50  | Open |
| WM132 | -0.02  | 0.00 | 0.00  | Open |
| WM133 | 0.30   | 0.01 | 0.00  | Open |
| WM134 | 0.30   | 0.01 | 0.00  | Open |
| WM135 | 0.28   | 0.01 | 0.00  | Open |
| WM136 | 0.28   | 0.01 | 0.00  | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -15.15   | 0.48         | 1.92               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 35.82  | 1.14 | 9.42    | Open      |
| WM165 | -15.19 | 0.48 | 1.93    | Open      |
| 1     | 15.19  | 0.00 | -147.64 | Open Pump |
| 2     | 35.82  | 0.00 | -147.53 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.51 | 52.14      | 0.00    |
| TEE-BEND24 | 0.00       | 147.51 | 52.14      | 0.00    |
| TEE-BEND23 | 0.00       | 147.51 | 52.07      | 0.00    |
| TEE-BEND43 | 0.00       | 147.61 | 52.14      | 0.00    |
| TEE-BEND44 | 0.00       | 147.61 | 52.06      | 0.00    |
| CHAMBER2   | 0.00       | 147.62 | 52.05      | 0.00    |
| TEE-BEND18 | 0.00       | 147.48 | 51.80      | 0.00    |
| TEE-BEND46 | 0.00       | 147.52 | 51.72      | 0.00    |
| TEE-BEND53 | 0.00       | 147.51 | 51.64      | 0.00    |
| TEE-BEND47 | 0.00       | 147.52 | 51.65      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.56 | 51.69      | 0.00    |
| CRU-1      | 0.23       | 147.51 | 51.59      | 0.00    |
| TEE-BEND52 | 0.00       | 147.51 | 51.57      | 0.00    |
| HYD3       | 0.00       | 147.52 | 51.55      | 0.00    |
| TEE-BEND45 | 0.00       | 147.54 | 51.56      | 0.00    |
| TEE-BEND16 | 0.00       | 147.48 | 51.48      | 0.00    |
| HYD2       | 0.00       | 147.47 | 51.46      | 0.00    |
| HYD7       | 0.00       | 147.46 | 51.43      | 0.00    |
| TEE-BEND51 | 0.00       | 147.51 | 51.48      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND34 | 0.00  | 147.48 | 51.39 | 0.00 |
| TEE-BEND36 | 0.00  | 147.45 | 51.39 | 0.00 |
| TEE-BEND55 | 0.00  | 147.51 | 51.44 | 0.00 |
| TEE-BEND35 | 0.00  | 147.46 | 51.39 | 0.00 |
| HYD1       | 0.00  | 147.42 | 51.35 | 0.00 |
| HYD6       | 0.00  | 147.51 | 51.42 | 0.00 |
| TEE-BEND37 | 0.00  | 147.45 | 51.34 | 0.00 |
| TEE-BEND50 | 0.00  | 147.51 | 51.40 | 0.00 |
| TEE-BEND33 | 0.00  | 147.51 | 51.39 | 0.00 |
| TEE-BEND17 | 0.00  | 147.48 | 51.33 | 0.00 |
| TEE-BEND21 | 0.00  | 147.61 | 51.45 | 0.00 |
| TEE-BEND49 | 0.00  | 147.51 | 51.35 | 0.00 |
| TEE-BEND48 | 0.00  | 147.51 | 51.34 | 0.00 |
| TEE-BEND12 | 0.00  | 147.48 | 51.30 | 0.00 |
| TEE-BEND40 | 0.00  | 147.64 | 51.44 | 0.00 |
| TEE-BEND20 | 0.00  | 147.61 | 51.41 | 0.00 |
| TEE-BEND38 | 0.00  | 147.42 | 51.22 | 0.00 |
| TEE-BEND57 | 0.00  | 147.43 | 51.23 | 0.00 |
| TEE-BEND56 | 0.00  | 147.47 | 51.26 | 0.00 |
| TEE-BEND58 | 0.00  | 147.42 | 51.19 | 0.00 |
| TEE-BEND32 | 0.00  | 147.43 | 51.19 | 0.00 |
| TEE-BEND31 | 0.00  | 147.43 | 51.17 | 0.00 |
| TEE-BEND30 | 0.00  | 147.43 | 51.15 | 0.00 |
| HYD5       | 0.00  | 147.56 | 51.26 | 0.00 |
| CRU-8      | 0.04  | 147.48 | 51.14 | 0.00 |
| TEE-BEND28 | 0.00  | 147.43 | 51.08 | 0.00 |
| CRU-10     | 0.04  | 147.61 | 51.25 | 0.00 |
| TEE-BEND39 | 0.00  | 146.59 | 50.23 | 0.00 |
| TEE-BEND26 | 0.00  | 147.43 | 51.06 | 0.00 |
| TEE-BEND15 | 0.00  | 147.48 | 51.10 | 0.00 |
| TEE-BEND29 | 0.00  | 147.43 | 51.02 | 0.00 |
| TEE-BEND13 | 0.00  | 147.48 | 51.08 | 0.00 |
| TEE-BEND59 | 0.00  | 147.42 | 51.00 | 0.00 |
| TEE-BEND27 | 0.00  | 147.43 | 50.99 | 0.00 |
| TEE-BEND41 | 0.00  | 147.63 | 51.18 | 0.00 |
| TEE-BEND42 | 0.00  | 147.62 | 51.17 | 0.00 |
| CRU-6      | 50.11 | 146.56 | 50.07 | 0.00 |
| CRU-9      | 0.07  | 147.48 | 50.99 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 147.48 | 50.99      | 0.00    |
| CRU-4     | 0.11       | 147.43 | 50.93      | 0.00    |
| CRU-3     | 0.17       | 147.43 | 50.93      | 0.00    |
| TEE-BEND6 | 0.00       | 147.17 | 50.52      | 0.00    |
| CRU-5     | 0.02       | 147.43 | 50.69      | 0.00    |
| TEE-BEND4 | 0.00       | 146.64 | 49.89      | 0.00    |



|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.53 | 50.00 | 0.00           |
| TEE-BEND2 | 0.00   | 147.37 | 50.60 | 0.00           |
| TEE-BEND1 | 0.00   | 147.05 | 50.25 | 0.00           |
| CHAMBER1  | 0.00   | 147.41 | 50.59 | 0.00           |
| R1        | -15.19 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -35.82 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 35.82    | 1.14         | 9.42               | Open   |
| WM100   | -14.29   | 0.46         | 1.72               | Open   |
| WM101   | -7.13    | 0.23         | 0.47               | Open   |
| WM102   | -7.13    | 0.23         | 0.47               | Open   |
| WM103   | -7.43    | 0.24         | 0.51               | Open   |
| WM104   | -7.43    | 0.24         | 0.51               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | -7.80    | 0.25         | 0.56               | Open   |
| WM113   | -7.80    | 0.25         | 0.56               | Open   |
| WM114   | -7.80    | 0.25         | 0.56               | Open   |
| WM115   | -15.15   | 0.48         | 1.92               | Open   |
| WM116   | -15.19   | 0.48         | 1.93               | Open   |
| WM117   | -15.19   | 0.48         | 1.93               | Open   |
| WM118   | -15.19   | 0.48         | 1.92               | Open   |
| WM119   | -15.19   | 0.48         | 1.93               | Open   |
| WM120   | 50.11    | 1.60         | 17.55              | Open   |
| WM121   | 50.11    | 1.60         | 17.55              | Open   |
| WM122   | 50.11    | 1.60         | 17.55              | Open   |
| WM123   | 50.11    | 1.60         | 17.55              | Open   |
| WM124   | 50.11    | 1.60         | 17.55              | Open   |
| WM125   | -7.17    | 0.23         | 0.48               | Open   |
| WM126   | -7.17    | 0.23         | 0.48               | Open   |
| WM127   | -7.17    | 0.23         | 0.48               | Open   |



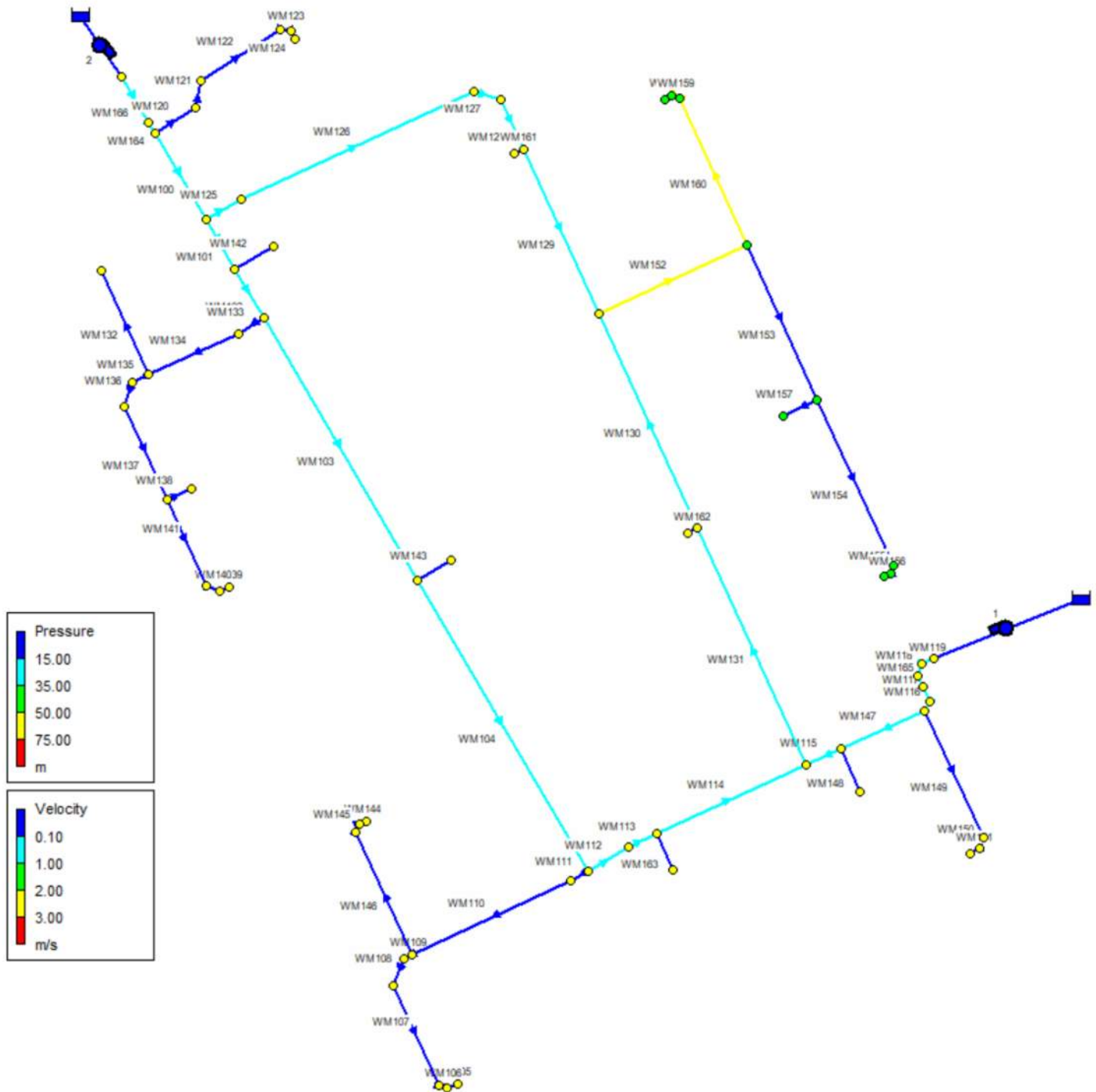
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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | -7.17    | 0.23         | 0.48               | Open   |
| WM129   | -7.17    | 0.23         | 0.48               | Open   |
| WM130   | -7.36    | 0.23         | 0.50               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | -7.36  | 0.23 | 0.00    | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 0.30   | 0.01 | 0.00    | Open      |
| WM134 | 0.30   | 0.01 | 0.00    | Open      |
| WM135 | 0.28   | 0.01 | 0.00    | Open      |
| WM136 | 0.28   | 0.01 | 0.00    | Open      |
| WM137 | 0.28   | 0.01 | 0.00    | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.01    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | -15.15 | 0.48 | 1.92    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 35.82  | 1.14 | 9.42    | Open      |
| WM165 | -15.19 | 0.48 | 1.93    | Open      |
| 1     | 15.19  | 0.00 | -147.64 | Open Pump |
| 2     | 35.82  | 0.00 | -147.53 | Open Pump |

## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR7



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU7)+pumps.net

Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |

|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 41.65   | 41.65   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 56.73   | 56.73   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |
| TEE-BEND18 | 0.00       | 143.27 | 47.59      | 0.00    |
| TEE-BEND46 | 0.00       | 147.31 | 51.51      | 0.00    |
| TEE-BEND53 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND47 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND22 | 0.00       | 147.34 | 51.46      | 0.00    |
| CRU-1      | 0.23       | 147.31 | 51.39      | 0.00    |
| TEE-BEND52 | 0.00       | 147.31 | 51.37      | 0.00    |
| HYD3       | 0.00       | 147.31 | 51.34      | 0.00    |
| TEE-BEND45 | 0.00       | 147.30 | 51.32      | 0.00    |
| TEE-BEND16 | 0.00       | 143.27 | 47.27      | 0.00    |
| HYD2       | 0.00       | 147.33 | 51.32      | 0.00    |
| HYD7       | 0.00       | 146.90 | 50.87      | 0.00    |
| TEE-BEND51 | 0.00       | 147.31 | 51.28      | 0.00    |
| TEE-BEND34 | 0.00       | 146.69 | 50.63      | 0.00    |
| TEE-BEND36 | 0.00       | 146.97 | 50.90      | 0.00    |
| TEE-BEND55 | 0.00       | 147.31 | 51.24      | 0.00    |
| TEE-BEND35 | 0.00       | 146.90 | 50.83      | 0.00    |
| HYD1       | 0.00       | 147.34 | 51.27      | 0.00    |
| HYD6       | 0.00       | 146.98 | 50.89      | 0.00    |
| TEE-BEND37 | 0.00       | 147.00 | 50.89      | 0.00    |
| TEE-BEND50 | 0.00       | 147.31 | 51.20      | 0.00    |
| TEE-BEND33 | 0.00       | 146.98 | 50.86      | 0.00    |
| TEE-BEND17 | 0.00       | 143.27 | 47.12      | 0.00    |
| TEE-BEND21 | 0.00       | 147.42 | 51.27      | 0.00    |
| TEE-BEND49 | 0.00       | 147.31 | 51.15      | 0.00    |
| TEE-BEND48 | 0.00       | 147.31 | 51.14      | 0.00    |
| TEE-BEND12 | 0.00       | 139.90 | 43.72      | 0.00    |
| TEE-BEND40 | 0.00       | 147.48 | 51.29      | 0.00    |
| TEE-BEND20 | 0.00       | 147.42 | 51.23      | 0.00    |
| TEE-BEND38 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND57 | 0.00       | 147.34 | 51.14      | 0.00    |
| TEE-BEND56 | 0.00       | 147.33 | 51.12      | 0.00    |
| TEE-BEND58 | 0.00       | 147.34 | 51.11      | 0.00    |
| TEE-BEND32 | 0.00       | 147.34 | 51.10      | 0.00    |
| TEE-BEND31 | 0.00       | 147.34 | 51.08      | 0.00    |
| TEE-BEND30 | 0.00       | 147.34 | 51.06      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 147.34 | 51.00 | 0.00 |
| CRU-8      | 0.04 | 143.27 | 46.93 | 0.00 |
| TEE-BEND28 | 0.00 | 147.34 | 50.99 | 0.00 |
| CRU-10     | 0.04 | 147.42 | 51.07 | 0.00 |
| TEE-BEND39 | 0.00 | 147.51 | 51.14 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node<br>ID | Demand<br>LPS | Head<br>m | Pressure<br>m | Quality        |
|------------|---------------|-----------|---------------|----------------|
| TEE-BEND26 | 0.00          | 147.34    | 50.97         | 0.00           |
| TEE-BEND15 | 0.00          | 143.27    | 46.89         | 0.00           |
| TEE-BEND29 | 0.00          | 147.34    | 50.94         | 0.00           |
| TEE-BEND13 | 0.00          | 139.73    | 43.32         | 0.00           |
| TEE-BEND59 | 0.00          | 147.35    | 50.94         | 0.00           |
| TEE-BEND27 | 0.00          | 147.34    | 50.90         | 0.00           |
| TEE-BEND41 | 0.00          | 147.47    | 51.02         | 0.00           |
| TEE-BEND42 | 0.00          | 147.46    | 51.00         | 0.00           |
| CRU-6      | 0.11          | 147.51    | 51.02         | 0.00           |
| CRU-9      | 0.07          | 143.27    | 46.78         | 0.00           |
| CRU-7      | 50.08         | 139.57    | 43.07         | 0.00           |
| CRU-4      | 0.11          | 147.34    | 50.85         | 0.00           |
| CRU-3      | 0.17          | 147.34    | 50.84         | 0.00           |
| TEE-BEND6  | 0.00          | 147.51    | 50.86         | 0.00           |
| CRU-5      | 0.02          | 147.34    | 50.61         | 0.00           |
| TEE-BEND4  | 0.00          | 147.51    | 50.76         | 0.00           |
| TEE-BEND3  | 0.00          | 147.61    | 50.86         | 0.00           |
| TEE-BEND2  | 0.00          | 147.51    | 50.73         | 0.00           |
| TEE-BEND1  | 0.00          | 147.51    | 50.71         | 0.00           |
| CHAMBER1   | 0.00          | 147.53    | 50.71         | 0.00           |
| R1         | -21.61        | 0.00      | 0.00          | 0.00 Reservoir |
| R2         | -29.40        | 0.00      | 0.00          | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link<br>ID | Flow<br>LPS | Velocity<br>m/s | Unit<br>Headloss<br>m/km | Status |
|------------|-------------|-----------------|--------------------------|--------|
| WM166      | 29.40       | 0.94            | 6.54                     | Open   |
| WM100      | 29.29       | 0.93            | 6.49                     | Open   |
| WM101      | 4.56        | 0.15            | 0.21                     | Open   |
| WM102      | 4.56        | 0.15            | 0.21                     | Open   |
| WM103      | 4.26        | 0.14            | 0.18                     | Open   |
| WM104      | 4.26        | 0.14            | 0.18                     | Open   |
| WM105      | -0.23       | 0.01            | 0.00                     | Open   |
| WM106      | -0.23       | 0.01            | 0.00                     | Open   |
| WM107      | -0.23       | 0.01            | 0.00                     | Open   |
| WM108      | -0.23       | 0.01            | 0.00                     | Open   |
| WM109      | -0.23       | 0.01            | 0.00                     | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | 3.89   | 0.12 | 0.15 | Open |
| WM113 | 3.89   | 0.12 | 0.15 | Open |
| WM114 | 3.89   | 0.12 | 0.15 | Open |
| WM115 | -21.57 | 0.69 | 3.68 | Open |
| WM116 | -21.61 | 0.69 | 3.69 | Open |
| WM117 | -21.61 | 0.69 | 3.70 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -21.61   | 0.69         | 3.70               | Open   |
| WM119   | -21.61   | 0.69         | 3.69               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 24.74    | 0.79         | 4.75               | Open   |
| WM126   | 24.74    | 0.79         | 4.75               | Open   |
| WM127   | 24.74    | 0.79         | 4.75               | Open   |
| WM128   | 24.74    | 0.79         | 4.75               | Open   |
| WM129   | 24.74    | 0.79         | 4.75               | Open   |
| WM130   | -25.45   | 0.81         | 5.01               | Open   |
| WM131   | -25.45   | 0.81         | 5.01               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.01               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -21.57   | 0.69         | 3.68               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 50.19    | 2.84         | 85.28              | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |



|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM154 | 0.07   | 0.00 | 0.00  | Open |
| WM155 | 0.07   | 0.00 | 0.00  | Open |
| WM156 | 0.07   | 0.00 | 0.00  | Open |
| WM157 | 0.04   | 0.00 | 0.00  | Open |
| WM158 | -50.08 | 2.83 | 84.93 | Open |
| WM159 | -50.08 | 2.83 | 84.93 | Open |
| WM160 | -50.08 | 2.83 | 84.93 | Open |
| WM161 | 0.00   | 0.00 | 0.00  | Open |
| WM162 | 0.00   | 0.00 | 0.00  | Open |
| WM163 | 0.00   | 0.00 | 0.00  | Open |
| WM164 | 29.40  | 0.94 | 6.54  | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -21.61   | 0.69         | 3.70               | Open      |
| 1       | 21.61    | 0.00         | -147.48            | Open Pump |
| 2       | 29.40    | 0.00         | -147.61            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |
| TEE-BEND18 | 0.00       | 143.27 | 47.59      | 0.00    |
| TEE-BEND46 | 0.00       | 147.31 | 51.51      | 0.00    |
| TEE-BEND53 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND47 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND22 | 0.00       | 147.34 | 51.46      | 0.00    |
| CRU-1      | 0.23       | 147.31 | 51.39      | 0.00    |
| TEE-BEND52 | 0.00       | 147.31 | 51.37      | 0.00    |
| HYD3       | 0.00       | 147.31 | 51.34      | 0.00    |
| TEE-BEND45 | 0.00       | 147.30 | 51.32      | 0.00    |
| TEE-BEND16 | 0.00       | 143.27 | 47.27      | 0.00    |
| HYD2       | 0.00       | 147.33 | 51.32      | 0.00    |
| HYD7       | 0.00       | 146.90 | 50.87      | 0.00    |
| TEE-BEND51 | 0.00       | 147.31 | 51.28      | 0.00    |
| TEE-BEND34 | 0.00       | 146.69 | 50.63      | 0.00    |
| TEE-BEND36 | 0.00       | 146.97 | 50.90      | 0.00    |
| TEE-BEND55 | 0.00       | 147.31 | 51.24      | 0.00    |
| TEE-BEND35 | 0.00       | 146.90 | 50.83      | 0.00    |
| HYD1       | 0.00       | 147.34 | 51.27      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 146.98 | 50.89 | 0.00 |
| TEE-BEND37 | 0.00 | 147.00 | 50.89 | 0.00 |
| TEE-BEND50 | 0.00 | 147.31 | 51.20 | 0.00 |
| TEE-BEND33 | 0.00 | 146.98 | 50.86 | 0.00 |
| TEE-BEND17 | 0.00 | 143.27 | 47.12 | 0.00 |
| TEE-BEND21 | 0.00 | 147.42 | 51.27 | 0.00 |
| TEE-BEND49 | 0.00 | 147.31 | 51.15 | 0.00 |
| TEE-BEND48 | 0.00 | 147.31 | 51.14 | 0.00 |
| TEE-BEND12 | 0.00 | 139.90 | 43.72 | 0.00 |
| TEE-BEND40 | 0.00 | 147.48 | 51.29 | 0.00 |
| TEE-BEND20 | 0.00 | 147.42 | 51.23 | 0.00 |
| TEE-BEND38 | 0.00 | 147.30 | 51.10 | 0.00 |
| TEE-BEND57 | 0.00 | 147.34 | 51.14 | 0.00 |
| TEE-BEND56 | 0.00 | 147.33 | 51.12 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 147.34 | 51.11      | 0.00           |
| TEE-BEND32 | 0.00       | 147.34 | 51.10      | 0.00           |
| TEE-BEND31 | 0.00       | 147.34 | 51.08      | 0.00           |
| TEE-BEND30 | 0.00       | 147.34 | 51.06      | 0.00           |
| HYD5       | 0.00       | 147.34 | 51.04      | 0.00           |
| CRU-8      | 0.04       | 143.27 | 46.93      | 0.00           |
| TEE-BEND28 | 0.00       | 147.34 | 50.99      | 0.00           |
| CRU-10     | 0.04       | 147.42 | 51.07      | 0.00           |
| TEE-BEND39 | 0.00       | 147.51 | 51.14      | 0.00           |
| TEE-BEND26 | 0.00       | 147.34 | 50.97      | 0.00           |
| TEE-BEND15 | 0.00       | 143.27 | 46.89      | 0.00           |
| TEE-BEND29 | 0.00       | 147.34 | 50.94      | 0.00           |
| TEE-BEND13 | 0.00       | 139.73 | 43.32      | 0.00           |
| TEE-BEND59 | 0.00       | 147.35 | 50.94      | 0.00           |
| TEE-BEND27 | 0.00       | 147.34 | 50.90      | 0.00           |
| TEE-BEND41 | 0.00       | 147.47 | 51.02      | 0.00           |
| TEE-BEND42 | 0.00       | 147.46 | 51.00      | 0.00           |
| CRU-6      | 0.11       | 147.51 | 51.02      | 0.00           |
| CRU-9      | 0.07       | 143.27 | 46.78      | 0.00           |
| CRU-7      | 50.08      | 139.57 | 43.07      | 0.00           |
| CRU-4      | 0.11       | 147.34 | 50.85      | 0.00           |
| CRU-3      | 0.17       | 147.34 | 50.84      | 0.00           |
| TEE-BEND6  | 0.00       | 147.51 | 50.86      | 0.00           |
| CRU-5      | 0.02       | 147.34 | 50.61      | 0.00           |
| TEE-BEND4  | 0.00       | 147.51 | 50.76      | 0.00           |
| TEE-BEND3  | 0.00       | 147.61 | 50.86      | 0.00           |
| TEE-BEND2  | 0.00       | 147.51 | 50.73      | 0.00           |
| TEE-BEND1  | 0.00       | 147.51 | 50.71      | 0.00           |
| CHAMBER1   | 0.00       | 147.53 | 50.71      | 0.00           |
| R1         | -21.61     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -29.40 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 29.40    | 0.94         | 6.54               | Open   |
| WM100   | 29.29    | 0.93         | 6.49               | Open   |
| WM101   | 4.56     | 0.15         | 0.21               | Open   |
| WM102   | 4.56     | 0.15         | 0.21               | Open   |
| WM103   | 4.26     | 0.14         | 0.18               | Open   |
| WM104   | 4.26     | 0.14         | 0.18               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.89     | 0.12         | 0.15               | Open   |
| WM113   | 3.89     | 0.12         | 0.15               | Open   |
| WM114   | 3.89     | 0.12         | 0.15               | Open   |
| WM115   | -21.57   | 0.69         | 3.68               | Open   |
| WM116   | -21.61   | 0.69         | 3.70               | Open   |
| WM117   | -21.61   | 0.69         | 3.69               | Open   |
| WM118   | -21.61   | 0.69         | 3.70               | Open   |
| WM119   | -21.61   | 0.69         | 3.70               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 24.74    | 0.79         | 4.75               | Open   |
| WM126   | 24.74    | 0.79         | 4.75               | Open   |
| WM127   | 24.74    | 0.79         | 4.75               | Open   |
| WM128   | 24.74    | 0.79         | 4.75               | Open   |
| WM129   | 24.74    | 0.79         | 4.75               | Open   |
| WM130   | -25.45   | 0.81         | 5.01               | Open   |
| WM131   | -25.45   | 0.81         | 5.01               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM136 | 0.28   | 0.01 | 0.00  | Open |
| WM137 | 0.28   | 0.01 | 0.00  | Open |
| WM138 | 0.11   | 0.01 | 0.00  | Open |
| WM139 | -0.17  | 0.01 | 0.00  | Open |
| WM140 | -0.17  | 0.01 | 0.00  | Open |
| WM141 | -0.17  | 0.01 | 0.00  | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -0.14  | 0.00 | 0.00  | Open |
| WM145 | -0.14  | 0.00 | 0.00  | Open |
| WM146 | -0.14  | 0.00 | 0.00  | Open |
| WM147 | -21.57 | 0.69 | 3.68  | Open |
| WM148 | 0.00   | 0.00 | 0.00  | Open |
| WM149 | 0.04   | 0.00 | 0.00  | Open |
| WM150 | 0.04   | 0.00 | 0.00  | Open |
| WM151 | 0.04   | 0.00 | 0.00  | Open |
| WM152 | 50.19  | 2.84 | 85.28 | Open |
| WM153 | 0.11   | 0.01 | 0.00  | Open |
| WM154 | 0.07   | 0.00 | 0.00  | Open |
| WM155 | 0.07   | 0.00 | 0.00  | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -50.08   | 2.83         | 84.93              | Open      |
| WM159   | -50.08   | 2.83         | 84.93              | Open      |
| WM160   | -50.08   | 2.83         | 84.93              | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 29.40    | 0.94         | 6.54               | Open      |
| WM165   | -21.61   | 0.69         | 3.70               | Open      |
| 1       | 21.61    | 0.00         | -147.48            | Open Pump |
| 2       | 29.40    | 0.00         | -147.61            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 143.27 | 47.27 | 0.00 |
| TEE-BEND46 | 0.00 | 147.31 | 51.51 | 0.00 |
| TEE-BEND53 | 0.00 | 147.31 | 51.44 | 0.00 |
| TEE-BEND47 | 0.00 | 147.31 | 51.44 | 0.00 |
| TEE-BEND22 | 0.00 | 147.34 | 51.46 | 0.00 |
| CRU-1      | 0.23 | 147.31 | 51.39 | 0.00 |
| TEE-BEND52 | 0.00 | 147.31 | 51.37 | 0.00 |
| HYD3       | 0.00 | 147.31 | 51.34 | 0.00 |
| TEE-BEND45 | 0.00 | 147.30 | 51.32 | 0.00 |
| TEE-BEND16 | 0.00 | 143.27 | 47.27 | 0.00 |
| HYD2       | 0.00 | 147.33 | 51.32 | 0.00 |
| HYD7       | 0.00 | 146.90 | 50.87 | 0.00 |
| TEE-BEND51 | 0.00 | 147.31 | 51.28 | 0.00 |
| TEE-BEND34 | 0.00 | 146.69 | 50.63 | 0.00 |
| TEE-BEND36 | 0.00 | 146.97 | 50.90 | 0.00 |
| TEE-BEND55 | 0.00 | 147.31 | 51.24 | 0.00 |
| TEE-BEND35 | 0.00 | 146.90 | 50.83 | 0.00 |
| HYD1       | 0.00 | 147.34 | 51.27 | 0.00 |
| HYD6       | 0.00 | 146.98 | 50.89 | 0.00 |
| TEE-BEND37 | 0.00 | 147.00 | 50.89 | 0.00 |
| TEE-BEND50 | 0.00 | 147.31 | 51.20 | 0.00 |
| TEE-BEND33 | 0.00 | 146.98 | 50.86 | 0.00 |
| TEE-BEND17 | 0.00 | 143.27 | 47.12 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.42 | 51.27      | 0.00    |
| TEE-BEND49 | 0.00       | 147.31 | 51.15      | 0.00    |
| TEE-BEND48 | 0.00       | 147.31 | 51.14      | 0.00    |
| TEE-BEND12 | 0.00       | 139.90 | 43.72      | 0.00    |
| TEE-BEND40 | 0.00       | 147.48 | 51.29      | 0.00    |
| TEE-BEND20 | 0.00       | 147.42 | 51.23      | 0.00    |
| TEE-BEND38 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND57 | 0.00       | 147.34 | 51.14      | 0.00    |
| TEE-BEND56 | 0.00       | 147.33 | 51.12      | 0.00    |
| TEE-BEND58 | 0.00       | 147.34 | 51.11      | 0.00    |
| TEE-BEND32 | 0.00       | 147.34 | 51.10      | 0.00    |
| TEE-BEND31 | 0.00       | 147.34 | 51.08      | 0.00    |
| TEE-BEND30 | 0.00       | 147.34 | 51.06      | 0.00    |
| HYD5       | 0.00       | 147.34 | 51.04      | 0.00    |
| CRU-8      | 0.04       | 143.27 | 46.93      | 0.00    |
| TEE-BEND28 | 0.00       | 147.34 | 50.99      | 0.00    |
| CRU-10     | 0.04       | 147.42 | 51.07      | 0.00    |
| TEE-BEND39 | 0.00       | 147.51 | 51.14      | 0.00    |
| TEE-BEND26 | 0.00       | 147.34 | 50.97      | 0.00    |
| TEE-BEND15 | 0.00       | 143.27 | 46.89      | 0.00    |
| TEE-BEND29 | 0.00       | 147.34 | 50.94      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 139.73 | 43    | 0.00           |
| TEE-BEND59 | 0.00   | 147.35 | 50.94 | 0.00           |
| TEE-BEND27 | 0.00   | 147.34 | 50.90 | 0.00           |
| TEE-BEND41 | 0.00   | 147.47 | 51.02 | 0.00           |
| TEE-BEND42 | 0.00   | 147.46 | 51.00 | 0.00           |
| CRU-6      | 0.11   | 147.51 | 51.02 | 0.00           |
| CRU-9      | 0.07   | 143.27 | 46.78 | 0.00           |
| CRU-7      | 50.08  | 139.57 | 43.07 | 0.00           |
| CRU-4      | 0.11   | 147.34 | 50.85 | 0.00           |
| CRU-3      | 0.17   | 147.34 | 50.84 | 0.00           |
| TEE-BEND6  | 0.00   | 147.51 | 50.86 | 0.00           |
| CRU-5      | 0.02   | 147.34 | 50.61 | 0.00           |
| TEE-BEND4  | 0.00   | 147.51 | 50.76 | 0.00           |
| TEE-BEND3  | 0.00   | 147.61 | 50.86 | 0.00           |
| TEE-BEND2  | 0.00   | 147.51 | 50.73 | 0.00           |
| TEE-BEND1  | 0.00   | 147.51 | 50.71 | 0.00           |
| CHAMBER1   | 0.00   | 147.53 | 50.71 | 0.00           |
| R1         | -21.61 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -29.40 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 29.40    | 0.94         | 6.54               | Open   |
| WM100   | 29.29    | 0.93         | 6.49               | Open   |
| WM101   | 4.56     | 0.15         | 0.21               | Open   |
| WM102   | 4.56     | 0.15         | 0.21               | Open   |
| WM103   | 4.26     | 0.14         | 0.18               | Open   |
| WM104   | 4.26     | 0.14         | 0.18               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.89     | 0.12         | 0.15               | Open   |
| WM113   | 3.89     | 0.12         | 0.15               | Open   |
| WM114   | 3.89     | 0.12         | 0.15               | Open   |
| WM115   | -21.57   | 0.69         | 3.68               | Open   |
| WM116   | -21.61   | 0.69         | 3.70               | Open   |
| WM117   | -21.61   | 0.69         | 3.69               | Open   |
| WM118   | -21.61   | 0.69         | 3.70               | Open   |
| WM119   | -21.61   | 0.69         | 3.70               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM123 | 0.11   | 0.00 | 0.00 | Open |
| WM124 | 0.11   | 0.00 | 0.00 | Open |
| WM125 | 24.74  | 0.79 | 4.75 | Open |
| WM126 | 24.74  | 0.79 | 4.75 | Open |
| WM127 | 24.74  | 0.79 | 4.75 | Open |
| WM128 | 24.74  | 0.79 | 4.75 | Open |
| WM129 | 24.74  | 0.79 | 4.75 | Open |
| WM130 | -25.45 | 0.81 | 5.01 | Open |
| WM131 | -25.45 | 0.81 | 5.01 | Open |
| WM132 | -0.02  | 0.00 | 0.00 | Open |
| WM133 | 0.30   | 0.01 | 0.00 | Open |
| WM134 | 0.30   | 0.01 | 0.00 | Open |
| WM135 | 0.28   | 0.01 | 0.00 | Open |
| WM136 | 0.28   | 0.01 | 0.00 | Open |
| WM137 | 0.28   | 0.01 | 0.00 | Open |
| WM138 | 0.11   | 0.01 | 0.00 | Open |
| WM139 | -0.17  | 0.01 | 0.00 | Open |
| WM140 | -0.17  | 0.01 | 0.00 | Open |
| WM141 | -0.17  | 0.01 | 0.00 | Open |
| WM142 | 0.00   | 0.00 | 0.00 | Open |
| WM143 | 0.00   | 0.00 | 0.00 | Open |
| WM144 | -0.14  | 0.00 | 0.00 | Open |
| WM145 | -0.14  | 0.00 | 0.00 | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -21.57   | 0.69         | 3.68               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 50.19    | 2.84         | 85.28              | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.01               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -50.08   | 2.83         | 84.93              | Open      |
| WM159   | -50.08   | 2.83         | 84.93              | Open      |
| WM160   | -50.08   | 2.83         | 84.93              | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 29.40    | 0.94         | 6.54               | Open      |
| WM165   | -21.61   | 0.69         | 3.70               | Open      |
| 1       | 21.61    | 0.00         | -147.48            | Open Pump |

## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |
| TEE-BEND18 | 0.00       | 143.27 | 47.59      | 0.00    |
| TEE-BEND46 | 0.00       | 147.31 | 51.51      | 0.00    |
| TEE-BEND53 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND47 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND22 | 0.00       | 147.34 | 51.46      | 0.00    |
| CRU-1      | 0.23       | 147.31 | 51.39      | 0.00    |
| TEE-BEND52 | 0.00       | 147.31 | 51.37      | 0.00    |
| HYD3       | 0.00       | 147.31 | 51.34      | 0.00    |
| TEE-BEND45 | 0.00       | 147.30 | 51.32      | 0.00    |
| TEE-BEND16 | 0.00       | 143.27 | 47.27      | 0.00    |
| HYD2       | 0.00       | 147.33 | 51.32      | 0.00    |
| HYD7       | 0.00       | 146.90 | 50.87      | 0.00    |
| TEE-BEND51 | 0.00       | 147.31 | 51.28      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 146.69 | 50.63      | 0.00    |
| TEE-BEND36 | 0.00       | 146.97 | 50.90      | 0.00    |
| TEE-BEND55 | 0.00       | 147.31 | 51.24      | 0.00    |
| TEE-BEND35 | 0.00       | 146.90 | 50.83      | 0.00    |
| HYD1       | 0.00       | 147.34 | 51.27      | 0.00    |
| HYD6       | 0.00       | 146.98 | 50.89      | 0.00    |
| TEE-BEND37 | 0.00       | 147.00 | 50.89      | 0.00    |
| TEE-BEND50 | 0.00       | 147.31 | 51.20      | 0.00    |
| TEE-BEND33 | 0.00       | 146.98 | 50.86      | 0.00    |
| TEE-BEND17 | 0.00       | 143.27 | 47.12      | 0.00    |
| TEE-BEND21 | 0.00       | 147.42 | 51.27      | 0.00    |
| TEE-BEND49 | 0.00       | 147.31 | 51.15      | 0.00    |
| TEE-BEND48 | 0.00       | 147.31 | 51.14      | 0.00    |
| TEE-BEND12 | 0.00       | 139.90 | 43.72      | 0.00    |
| TEE-BEND40 | 0.00       | 147.48 | 51.29      | 0.00    |
| TEE-BEND20 | 0.00       | 147.42 | 51.23      | 0.00    |
| TEE-BEND38 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND57 | 0.00       | 147.34 | 51.14      | 0.00    |



|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND56 | 0.00  | 147.33 | 51.11 | 0.00 |
| TEE-BEND58 | 0.00  | 147.34 | 51.11 | 0.00 |
| TEE-BEND32 | 0.00  | 147.34 | 51.10 | 0.00 |
| TEE-BEND31 | 0.00  | 147.34 | 51.08 | 0.00 |
| TEE-BEND30 | 0.00  | 147.34 | 51.06 | 0.00 |
| HYD5       | 0.00  | 147.34 | 51.04 | 0.00 |
| CRU-8      | 0.04  | 143.27 | 46.93 | 0.00 |
| TEE-BEND28 | 0.00  | 147.34 | 50.99 | 0.00 |
| CRU-10     | 0.04  | 147.42 | 51.07 | 0.00 |
| TEE-BEND39 | 0.00  | 147.51 | 51.14 | 0.00 |
| TEE-BEND26 | 0.00  | 147.34 | 50.97 | 0.00 |
| TEE-BEND15 | 0.00  | 143.27 | 46.89 | 0.00 |
| TEE-BEND29 | 0.00  | 147.34 | 50.94 | 0.00 |
| TEE-BEND13 | 0.00  | 139.73 | 43.32 | 0.00 |
| TEE-BEND59 | 0.00  | 147.35 | 50.94 | 0.00 |
| TEE-BEND27 | 0.00  | 147.34 | 50.90 | 0.00 |
| TEE-BEND41 | 0.00  | 147.47 | 51.02 | 0.00 |
| TEE-BEND42 | 0.00  | 147.46 | 51.00 | 0.00 |
| CRU-6      | 0.11  | 147.51 | 51.02 | 0.00 |
| CRU-9      | 0.07  | 143.27 | 46.78 | 0.00 |
| CRU-7      | 50.08 | 139.57 | 43.07 | 0.00 |
| CRU-4      | 0.11  | 147.34 | 50.85 | 0.00 |
| CRU-3      | 0.17  | 147.34 | 50.84 | 0.00 |
| TEE-BEND6  | 0.00  | 147.51 | 50.86 | 0.00 |
| CRU-5      | 0.02  | 147.34 | 50.61 | 0.00 |
| TEE-BEND4  | 0.00  | 147.51 | 50.76 | 0.00 |
| TEE-BEND3  | 0.00  | 147.61 | 50.86 | 0.00 |
| TEE-BEND2  | 0.00  | 147.51 | 50.73 | 0.00 |
| TEE-BEND1  | 0.00  | 147.51 | 50.71 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.53 | 50.71      | 0.00           |
| R1       | -21.61     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -29.40     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 29.40    | 0.94         | 6.54          | Open   |
| WM100   | 29.29    | 0.93         | 6.49          | Open   |
| WM101   | 4.56     | 0.15         | 0.21          | Open   |
| WM102   | 4.56     | 0.15         | 0.21          | Open   |
| WM103   | 4.26     | 0.14         | 0.18          | Open   |
| WM104   | 4.26     | 0.14         | 0.18          | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM105 | -0.23  | 0.01 | 0.00 | Open |
| WM106 | -0.23  | 0.01 | 0.00 | Open |
| WM107 | -0.23  | 0.01 | 0.00 | Open |
| WM108 | -0.23  | 0.01 | 0.00 | Open |
| WM109 | -0.23  | 0.01 | 0.00 | Open |
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | 3.89   | 0.12 | 0.15 | Open |
| WM113 | 3.89   | 0.12 | 0.16 | Open |
| WM114 | 3.89   | 0.12 | 0.15 | Open |
| WM115 | -21.57 | 0.69 | 3.68 | Open |
| WM116 | -21.61 | 0.69 | 3.70 | Open |
| WM117 | -21.61 | 0.69 | 3.69 | Open |
| WM118 | -21.61 | 0.69 | 3.70 | Open |
| WM119 | -21.61 | 0.69 | 3.70 | Open |
| WM120 | 0.11   | 0.00 | 0.00 | Open |
| WM121 | 0.11   | 0.00 | 0.00 | Open |
| WM122 | 0.11   | 0.00 | 0.00 | Open |
| WM123 | 0.11   | 0.00 | 0.00 | Open |
| WM124 | 0.11   | 0.00 | 0.00 | Open |
| WM125 | 24.74  | 0.79 | 4.75 | Open |
| WM126 | 24.74  | 0.79 | 4.75 | Open |
| WM127 | 24.74  | 0.79 | 4.75 | Open |
| WM128 | 24.74  | 0.79 | 4.75 | Open |
| WM129 | 24.74  | 0.79 | 4.75 | Open |
| WM130 | -25.45 | 0.81 | 5.01 | Open |
| WM131 | -25.45 | 0.81 | 5.01 | Open |
| WM132 | -0.02  | 0.00 | 0.00 | Open |
| WM133 | 0.30   | 0.01 | 0.00 | Open |
| WM134 | 0.30   | 0.01 | 0.00 | Open |
| WM135 | 0.28   | 0.01 | 0.00 | Open |
| WM136 | 0.28   | 0.01 | 0.00 | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -21.57   | 0.69         | 3.68               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 50.19  | 2.84 | 85.28   | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -50.08 | 2.83 | 84.93   | Open      |
| WM159 | -50.08 | 2.83 | 84.93   | Open      |
| WM160 | -50.08 | 2.83 | 84.93   | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 29.40  | 0.94 | 6.54    | Open      |
| WM165 | -21.61 | 0.69 | 3.70    | Open      |
| 1     | 21.61  | 0.00 | -147.48 | Open Pump |
| 2     | 29.40  | 0.00 | -147.61 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |
| TEE-BEND18 | 0.00       | 143.27 | 47.59      | 0.00    |
| TEE-BEND46 | 0.00       | 147.31 | 51.51      | 0.00    |
| TEE-BEND53 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND47 | 0.00       | 147.31 | 51.44      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.34 | 51.46      | 0.00    |
| CRU-1      | 0.23       | 147.31 | 51.39      | 0.00    |
| TEE-BEND52 | 0.00       | 147.31 | 51.37      | 0.00    |
| HYD3       | 0.00       | 147.31 | 51.34      | 0.00    |
| TEE-BEND45 | 0.00       | 147.30 | 51.32      | 0.00    |
| TEE-BEND16 | 0.00       | 143.27 | 47.27      | 0.00    |
| HYD2       | 0.00       | 147.33 | 51.32      | 0.00    |
| HYD7       | 0.00       | 146.90 | 50.87      | 0.00    |
| TEE-BEND51 | 0.00       | 147.31 | 51.28      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND34 | 0.00 | 146.69 | 50.00 | 0.00 |
| TEE-BEND36 | 0.00 | 146.97 | 50.90 | 0.00 |
| TEE-BEND55 | 0.00 | 147.31 | 51.24 | 0.00 |
| TEE-BEND35 | 0.00 | 146.90 | 50.83 | 0.00 |
| HYD1       | 0.00 | 147.34 | 51.27 | 0.00 |
| HYD6       | 0.00 | 146.98 | 50.89 | 0.00 |
| TEE-BEND37 | 0.00 | 147.00 | 50.89 | 0.00 |
| TEE-BEND50 | 0.00 | 147.31 | 51.20 | 0.00 |
| TEE-BEND33 | 0.00 | 146.98 | 50.86 | 0.00 |
| TEE-BEND17 | 0.00 | 143.27 | 47.12 | 0.00 |
| TEE-BEND21 | 0.00 | 147.42 | 51.27 | 0.00 |
| TEE-BEND49 | 0.00 | 147.31 | 51.15 | 0.00 |
| TEE-BEND48 | 0.00 | 147.31 | 51.14 | 0.00 |
| TEE-BEND12 | 0.00 | 139.90 | 43.72 | 0.00 |
| TEE-BEND40 | 0.00 | 147.48 | 51.29 | 0.00 |
| TEE-BEND20 | 0.00 | 147.42 | 51.23 | 0.00 |
| TEE-BEND38 | 0.00 | 147.30 | 51.10 | 0.00 |
| TEE-BEND57 | 0.00 | 147.34 | 51.14 | 0.00 |
| TEE-BEND56 | 0.00 | 147.33 | 51.12 | 0.00 |
| TEE-BEND58 | 0.00 | 147.34 | 51.11 | 0.00 |
| TEE-BEND32 | 0.00 | 147.34 | 51.10 | 0.00 |
| TEE-BEND31 | 0.00 | 147.34 | 51.08 | 0.00 |
| TEE-BEND30 | 0.00 | 147.34 | 51.06 | 0.00 |
| HYD5       | 0.00 | 147.34 | 51.04 | 0.00 |
| CRU-8      | 0.04 | 143.27 | 46.93 | 0.00 |
| TEE-BEND28 | 0.00 | 147.34 | 50.99 | 0.00 |
| CRU-10     | 0.04 | 147.42 | 51.07 | 0.00 |
| TEE-BEND39 | 0.00 | 147.51 | 51.14 | 0.00 |
| TEE-BEND26 | 0.00 | 147.34 | 50.97 | 0.00 |
| TEE-BEND15 | 0.00 | 143.27 | 46.89 | 0.00 |
| TEE-BEND29 | 0.00 | 147.34 | 50.94 | 0.00 |
| TEE-BEND13 | 0.00 | 139.73 | 43.32 | 0.00 |
| TEE-BEND59 | 0.00 | 147.35 | 50.94 | 0.00 |
| TEE-BEND27 | 0.00 | 147.34 | 50.90 | 0.00 |
| TEE-BEND41 | 0.00 | 147.47 | 51.02 | 0.00 |
| TEE-BEND42 | 0.00 | 147.46 | 51.00 | 0.00 |
| CRU-6      | 0.11 | 147.51 | 51.02 | 0.00 |
| CRU-9      | 0.07 | 143.27 | 46.78 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 50.08      | 139.57 | 43.07      | 0.00    |
| CRU-4     | 0.11       | 147.34 | 50.85      | 0.00    |
| CRU-3     | 0.17       | 147.34 | 50.84      | 0.00    |
| TEE-BEND6 | 0.00       | 147.51 | 50.86      | 0.00    |
| CRU-5     | 0.02       | 147.34 | 50.61      | 0.00    |
| TEE-BEND4 | 0.00       | 147.51 | 50.76      | 0.00    |

|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.61 | 50.73 | 0.00           |
| TEE-BEND2 | 0.00   | 147.51 | 50.73 | 0.00           |
| TEE-BEND1 | 0.00   | 147.51 | 50.71 | 0.00           |
| CHAMBER1  | 0.00   | 147.53 | 50.71 | 0.00           |
| R1        | -21.61 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -29.40 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 29.40    | 0.94         | 6.54               | Open   |
| WM100   | 29.29    | 0.93         | 6.49               | Open   |
| WM101   | 4.56     | 0.15         | 0.21               | Open   |
| WM102   | 4.56     | 0.15         | 0.21               | Open   |
| WM103   | 4.26     | 0.14         | 0.18               | Open   |
| WM104   | 4.26     | 0.14         | 0.18               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.89     | 0.12         | 0.15               | Open   |
| WM113   | 3.89     | 0.12         | 0.16               | Open   |
| WM114   | 3.89     | 0.12         | 0.15               | Open   |
| WM115   | -21.57   | 0.69         | 3.68               | Open   |
| WM116   | -21.61   | 0.69         | 3.70               | Open   |
| WM117   | -21.61   | 0.69         | 3.69               | Open   |
| WM118   | -21.61   | 0.69         | 3.70               | Open   |
| WM119   | -21.61   | 0.69         | 3.70               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 24.74    | 0.79         | 4.75               | Open   |
| WM126   | 24.74    | 0.79         | 4.75               | Open   |
| WM127   | 24.74    | 0.79         | 4.75               | Open   |



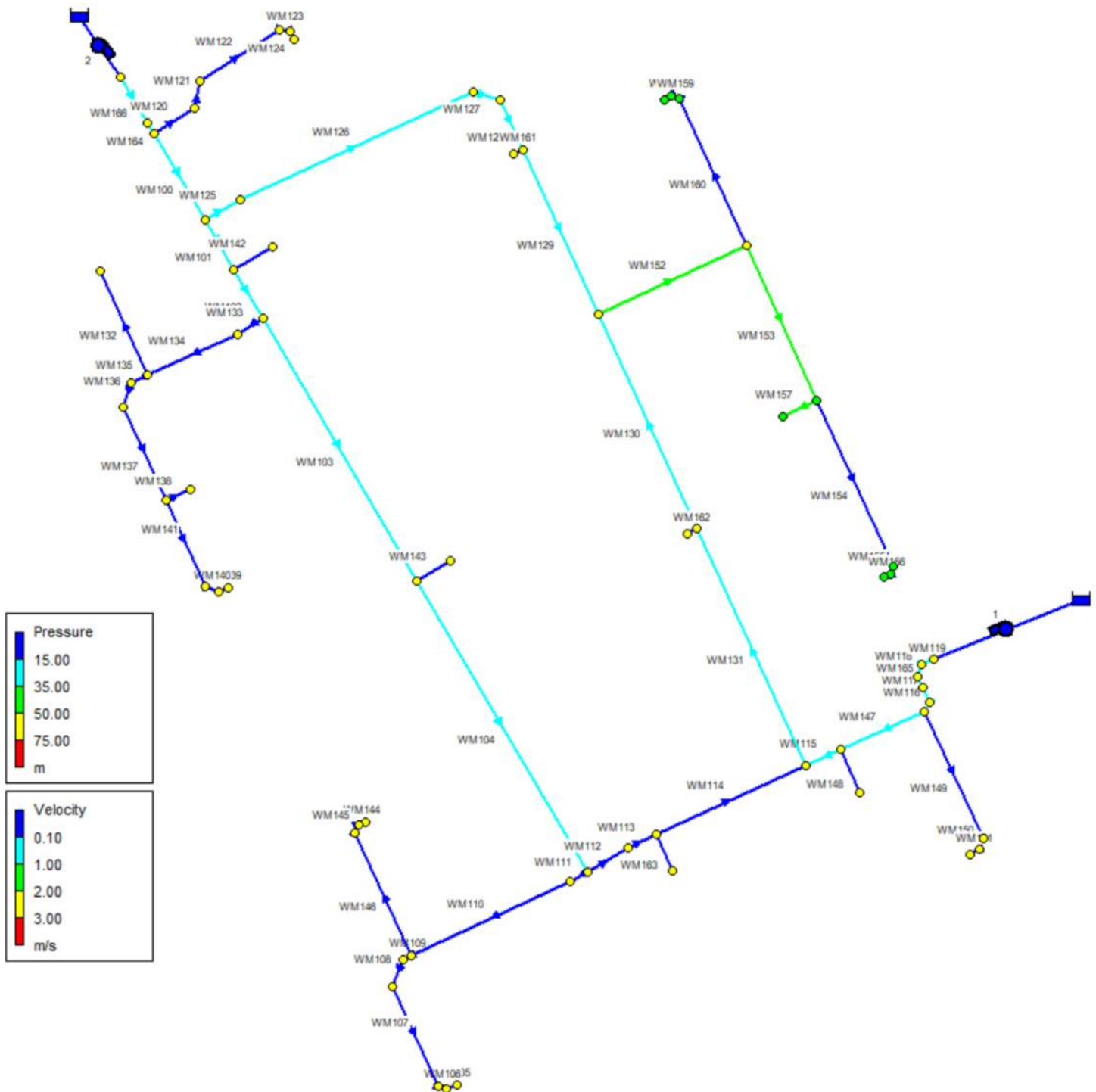
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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | 24.74    | 0.79         | 4.75               | Open   |
| WM129   | 24.74    | 0.79         | 4.75               | Open   |
| WM130   | -25.45   | 0.81         | 5.01               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | -25.45 | 0.81 | 5       | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 0.30   | 0.01 | 0.00    | Open      |
| WM134 | 0.30   | 0.01 | 0.00    | Open      |
| WM135 | 0.28   | 0.01 | 0.00    | Open      |
| WM136 | 0.28   | 0.01 | 0.00    | Open      |
| WM137 | 0.28   | 0.01 | 0.00    | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.00    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | -21.57 | 0.69 | 3.68    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 50.19  | 2.84 | 85.28   | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -50.08 | 2.83 | 84.93   | Open      |
| WM159 | -50.08 | 2.83 | 84.93   | Open      |
| WM160 | -50.08 | 2.83 | 84.93   | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 29.40  | 0.94 | 6.54    | Open      |
| WM165 | -21.61 | 0.69 | 3.70    | Open      |
| 1     | 21.61  | 0.00 | -147.48 | Open Pump |
| 2     | 29.40  | 0.00 | -147.61 | Open Pump |

## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR8



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU8)+pumps.net

# Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |



|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 26.69   | 26.69   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 39.62   | 39.62   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.61 | 52.24      | 0.00    |
| TEE-BEND24 | 0.00       | 147.61 | 52.24      | 0.00    |
| TEE-BEND23 | 0.00       | 147.61 | 52.16      | 0.00    |
| TEE-BEND43 | 0.00       | 147.66 | 52.19      | 0.00    |
| TEE-BEND44 | 0.00       | 147.65 | 52.11      | 0.00    |
| CHAMBER2   | 0.00       | 147.66 | 52.10      | 0.00    |
| TEE-BEND18 | 0.00       | 145.70 | 50.01      | 0.00    |
| TEE-BEND46 | 0.00       | 147.60 | 51.80      | 0.00    |
| TEE-BEND53 | 0.00       | 147.61 | 51.74      | 0.00    |
| TEE-BEND47 | 0.00       | 147.60 | 51.73      | 0.00    |
| TEE-BEND22 | 0.00       | 147.61 | 51.74      | 0.00    |
| CRU-1      | 0.23       | 147.61 | 51.68      | 0.00    |
| TEE-BEND52 | 0.00       | 147.61 | 51.66      | 0.00    |
| HYD3       | 0.00       | 147.60 | 51.63      | 0.00    |
| TEE-BEND45 | 0.00       | 147.60 | 51.62      | 0.00    |
| TEE-BEND16 | 0.00       | 144.02 | 48.02      | 0.00    |
| HYD2       | 0.00       | 147.62 | 51.60      | 0.00    |
| HYD7       | 0.00       | 147.42 | 51.39      | 0.00    |
| TEE-BEND51 | 0.00       | 147.61 | 51.57      | 0.00    |
| TEE-BEND34 | 0.00       | 147.31 | 51.25      | 0.00    |
| TEE-BEND36 | 0.00       | 147.45 | 51.38      | 0.00    |
| TEE-BEND55 | 0.00       | 147.61 | 51.54      | 0.00    |
| TEE-BEND35 | 0.00       | 147.42 | 51.34      | 0.00    |
| HYD1       | 0.00       | 147.63 | 51.55      | 0.00    |
| HYD6       | 0.00       | 147.45 | 51.36      | 0.00    |
| TEE-BEND37 | 0.00       | 147.46 | 51.35      | 0.00    |
| TEE-BEND50 | 0.00       | 147.61 | 51.49      | 0.00    |
| TEE-BEND33 | 0.00       | 147.45 | 51.33      | 0.00    |
| TEE-BEND17 | 0.00       | 144.02 | 47.87      | 0.00    |
| TEE-BEND21 | 0.00       | 147.65 | 51.49      | 0.00    |
| TEE-BEND49 | 0.00       | 147.61 | 51.45      | 0.00    |
| TEE-BEND48 | 0.00       | 147.61 | 51.44      | 0.00    |
| TEE-BEND12 | 0.00       | 145.70 | 49.51      | 0.00    |
| TEE-BEND40 | 0.00       | 147.68 | 51.49      | 0.00    |
| TEE-BEND20 | 0.00       | 147.65 | 51.45      | 0.00    |
| TEE-BEND38 | 0.00       | 147.61 | 51.40      | 0.00    |
| TEE-BEND57 | 0.00       | 147.62 | 51.42      | 0.00    |
| TEE-BEND56 | 0.00       | 147.62 | 51.41      | 0.00    |
| TEE-BEND58 | 0.00       | 147.63 | 51.40      | 0.00    |
| TEE-BEND32 | 0.00       | 147.62 | 51.39      | 0.00    |
| TEE-BEND31 | 0.00       | 147.62 | 51.36      | 0.00    |
| TEE-BEND30 | 0.00       | 147.62 | 51.35      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| HYD5       | 0.00  | 147.61 | 51.34 | 0.00 |
| CRU-8      | 33.37 | 143.65 | 47.31 | 0.00 |
| TEE-BEND28 | 0.00  | 147.62 | 51.27 | 0.00 |
| CRU-10     | 0.04  | 147.65 | 51.30 | 0.00 |
| TEE-BEND39 | 0.00  | 147.71 | 51.34 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node<br>ID | Demand<br>LPS | Head<br>m | Pressure<br>m | Quality        |
|------------|---------------|-----------|---------------|----------------|
| TEE-BEND26 | 0.00          | 147.62    | 51.25         | 0.00           |
| TEE-BEND15 | 0.00          | 144.02    | 47.64         | 0.00           |
| TEE-BEND29 | 0.00          | 147.62    | 51.22         | 0.00           |
| TEE-BEND13 | 0.00          | 145.70    | 49.29         | 0.00           |
| TEE-BEND59 | 0.00          | 147.63    | 51.22         | 0.00           |
| TEE-BEND27 | 0.00          | 147.62    | 51.19         | 0.00           |
| TEE-BEND41 | 0.00          | 147.67    | 51.22         | 0.00           |
| TEE-BEND42 | 0.00          | 147.67    | 51.21         | 0.00           |
| CRU-6      | 0.11          | 147.71    | 51.22         | 0.00           |
| CRU-9      | 0.07          | 144.02    | 47.53         | 0.00           |
| CRU-7      | 0.08          | 145.70    | 49.20         | 0.00           |
| CRU-4      | 0.11          | 147.62    | 51.13         | 0.00           |
| CRU-3      | 0.17          | 147.62    | 51.13         | 0.00           |
| TEE-BEND6  | 0.00          | 147.71    | 51.06         | 0.00           |
| CRU-5      | 0.02          | 147.62    | 50.89         | 0.00           |
| TEE-BEND4  | 0.00          | 147.71    | 50.96         | 0.00           |
| TEE-BEND3  | 0.00          | 147.76    | 51.01         | 0.00           |
| TEE-BEND2  | 0.00          | 147.71    | 50.94         | 0.00           |
| TEE-BEND1  | 0.00          | 147.71    | 50.91         | 0.00           |
| CHAMBER1   | 0.00          | 147.72    | 50.91         | 0.00           |
| R1         | -13.83        | 0.00      | 0.00          | 0.00 Reservoir |
| R2         | -20.51        | 0.00      | 0.00          | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link<br>ID | Flow<br>LPS | Velocity<br>m/s | Headloss<br>m/km | Status |
|------------|-------------|-----------------|------------------|--------|
| WM166      | 20.51       | 0.65            | 3.36             | Open   |
| WM100      | 20.40       | 0.65            | 3.32             | Open   |
| WM101      | 3.75        | 0.12            | 0.14             | Open   |
| WM102      | 3.75        | 0.12            | 0.14             | Open   |
| WM103      | 3.45        | 0.11            | 0.12             | Open   |
| WM104      | 3.45        | 0.11            | 0.12             | Open   |
| WM105      | -0.23       | 0.01            | 0.00             | Open   |
| WM106      | -0.23       | 0.01            | 0.00             | Open   |
| WM107      | -0.23       | 0.01            | 0.00             | Open   |
| WM108      | -0.23       | 0.01            | 0.00             | Open   |
| WM109      | -0.23       | 0.01            | 0.00             | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | 3.08   | 0.10 | 0.10 | Open |
| WM113 | 3.08   | 0.10 | 0.10 | Open |
| WM114 | 3.08   | 0.10 | 0.10 | Open |
| WM115 | -13.79 | 0.44 | 1.61 | Open |
| WM116 | -13.83 | 0.44 | 1.62 | Open |
| WM117 | -13.83 | 0.44 | 1.62 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -13.83   | 0.44         | 1.62               | Open   |
| WM119   | -13.83   | 0.44         | 1.62               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 16.65    | 0.53         | 2.28               | Open   |
| WM126   | 16.65    | 0.53         | 2.28               | Open   |
| WM127   | 16.65    | 0.53         | 2.28               | Open   |
| WM128   | 16.65    | 0.53         | 2.28               | Open   |
| WM129   | 16.65    | 0.53         | 2.28               | Open   |
| WM130   | -16.87   | 0.54         | 2.34               | Open   |
| WM131   | -16.87   | 0.54         | 2.34               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -13.79   | 0.44         | 1.61               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 33.52    | 1.90         | 40.38              | Open   |
| WM153   | 33.44    | 1.89         | 40.20              | Open   |

|       |       |      |       |      |
|-------|-------|------|-------|------|
| WM154 | 0.07  | 0.00 | 0.00  | Open |
| WM155 | 0.07  | 0.00 | 0.00  | Open |
| WM156 | 0.07  | 0.00 | 0.01  | Open |
| WM157 | 33.37 | 1.89 | 40.04 | Open |
| WM158 | -0.08 | 0.00 | 0.00  | Open |
| WM159 | -0.08 | 0.00 | 0.00  | Open |
| WM160 | -0.08 | 0.00 | 0.00  | Open |
| WM161 | 0.00  | 0.00 | 0.00  | Open |
| WM162 | 0.00  | 0.00 | 0.00  | Open |
| WM163 | 0.00  | 0.00 | 0.00  | Open |
| WM164 | 20.51 | 0.65 | 3.36  | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -13.83   | 0.44         | 1.62               | Open      |
| 1       | 13.83    | 0.00         | -147.68            | Open Pump |
| 2       | 20.51    | 0.00         | -147.76            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.61 | 52.24      | 0.00    |
| TEE-BEND24 | 0.00       | 147.61 | 52.24      | 0.00    |
| TEE-BEND23 | 0.00       | 147.61 | 52.16      | 0.00    |
| TEE-BEND43 | 0.00       | 147.66 | 52.19      | 0.00    |
| TEE-BEND44 | 0.00       | 147.65 | 52.11      | 0.00    |
| CHAMBER2   | 0.00       | 147.66 | 52.10      | 0.00    |
| TEE-BEND18 | 0.00       | 145.70 | 50.01      | 0.00    |
| TEE-BEND46 | 0.00       | 147.60 | 51.80      | 0.00    |
| TEE-BEND53 | 0.00       | 147.61 | 51.74      | 0.00    |
| TEE-BEND47 | 0.00       | 147.60 | 51.73      | 0.00    |
| TEE-BEND22 | 0.00       | 147.61 | 51.74      | 0.00    |
| CRU-1      | 0.23       | 147.61 | 51.68      | 0.00    |
| TEE-BEND52 | 0.00       | 147.61 | 51.66      | 0.00    |
| HYD3       | 0.00       | 147.60 | 51.63      | 0.00    |
| TEE-BEND45 | 0.00       | 147.60 | 51.62      | 0.00    |
| TEE-BEND16 | 0.00       | 144.02 | 48.02      | 0.00    |
| HYD2       | 0.00       | 147.62 | 51.60      | 0.00    |
| HYD7       | 0.00       | 147.42 | 51.39      | 0.00    |
| TEE-BEND51 | 0.00       | 147.61 | 51.57      | 0.00    |
| TEE-BEND34 | 0.00       | 147.31 | 51.25      | 0.00    |
| TEE-BEND36 | 0.00       | 147.45 | 51.38      | 0.00    |
| TEE-BEND55 | 0.00       | 147.61 | 51.54      | 0.00    |
| TEE-BEND35 | 0.00       | 147.42 | 51.34      | 0.00    |
| HYD1       | 0.00       | 147.63 | 51.55      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 147.45 | 51.35 | 0.00 |
| TEE-BEND37 | 0.00 | 147.46 | 51.35 | 0.00 |
| TEE-BEND50 | 0.00 | 147.61 | 51.49 | 0.00 |
| TEE-BEND33 | 0.00 | 147.45 | 51.33 | 0.00 |
| TEE-BEND17 | 0.00 | 144.02 | 47.87 | 0.00 |
| TEE-BEND21 | 0.00 | 147.65 | 51.49 | 0.00 |
| TEE-BEND49 | 0.00 | 147.61 | 51.45 | 0.00 |
| TEE-BEND48 | 0.00 | 147.61 | 51.44 | 0.00 |
| TEE-BEND12 | 0.00 | 145.70 | 49.51 | 0.00 |
| TEE-BEND40 | 0.00 | 147.68 | 51.49 | 0.00 |
| TEE-BEND20 | 0.00 | 147.65 | 51.45 | 0.00 |
| TEE-BEND38 | 0.00 | 147.61 | 51.40 | 0.00 |
| TEE-BEND57 | 0.00 | 147.62 | 51.42 | 0.00 |
| TEE-BEND56 | 0.00 | 147.62 | 51.41 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 147.63 | 51.40      | 0.00           |
| TEE-BEND32 | 0.00       | 147.62 | 51.39      | 0.00           |
| TEE-BEND31 | 0.00       | 147.62 | 51.36      | 0.00           |
| TEE-BEND30 | 0.00       | 147.62 | 51.35      | 0.00           |
| HYD5       | 0.00       | 147.61 | 51.31      | 0.00           |
| CRU-8      | 33.37      | 143.65 | 47.31      | 0.00           |
| TEE-BEND28 | 0.00       | 147.62 | 51.27      | 0.00           |
| CRU-10     | 0.04       | 147.65 | 51.30      | 0.00           |
| TEE-BEND39 | 0.00       | 147.71 | 51.34      | 0.00           |
| TEE-BEND26 | 0.00       | 147.62 | 51.25      | 0.00           |
| TEE-BEND15 | 0.00       | 144.02 | 47.64      | 0.00           |
| TEE-BEND29 | 0.00       | 147.62 | 51.22      | 0.00           |
| TEE-BEND13 | 0.00       | 145.70 | 49.29      | 0.00           |
| TEE-BEND59 | 0.00       | 147.63 | 51.22      | 0.00           |
| TEE-BEND27 | 0.00       | 147.62 | 51.19      | 0.00           |
| TEE-BEND41 | 0.00       | 147.67 | 51.22      | 0.00           |
| TEE-BEND42 | 0.00       | 147.67 | 51.21      | 0.00           |
| CRU-6      | 0.11       | 147.71 | 51.22      | 0.00           |
| CRU-9      | 0.07       | 144.02 | 47.53      | 0.00           |
| CRU-7      | 0.08       | 145.70 | 49.20      | 0.00           |
| CRU-4      | 0.11       | 147.62 | 51.13      | 0.00           |
| CRU-3      | 0.17       | 147.62 | 51.13      | 0.00           |
| TEE-BEND6  | 0.00       | 147.71 | 51.06      | 0.00           |
| CRU-5      | 0.02       | 147.62 | 50.89      | 0.00           |
| TEE-BEND4  | 0.00       | 147.71 | 50.96      | 0.00           |
| TEE-BEND3  | 0.00       | 147.76 | 51.01      | 0.00           |
| TEE-BEND2  | 0.00       | 147.71 | 50.94      | 0.00           |
| TEE-BEND1  | 0.00       | 147.71 | 50.91      | 0.00           |
| CHAMBER1   | 0.00       | 147.72 | 50.91      | 0.00           |
| R1         | -13.83     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -20.51 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 20.51    | 0.65         | 3.36               | Open   |
| WM100   | 20.40    | 0.65         | 3.32               | Open   |
| WM101   | 3.75     | 0.12         | 0.14               | Open   |
| WM102   | 3.75     | 0.12         | 0.14               | Open   |
| WM103   | 3.45     | 0.11         | 0.12               | Open   |
| WM104   | 3.45     | 0.11         | 0.12               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.08     | 0.10         | 0.10               | Open   |
| WM113   | 3.08     | 0.10         | 0.10               | Open   |
| WM114   | 3.08     | 0.10         | 0.10               | Open   |
| WM115   | -13.79   | 0.44         | 1.61               | Open   |
| WM116   | -13.83   | 0.44         | 1.62               | Open   |
| WM117   | -13.83   | 0.44         | 1.62               | Open   |
| WM118   | -13.83   | 0.44         | 1.62               | Open   |
| WM119   | -13.83   | 0.44         | 1.62               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 16.65    | 0.53         | 2.28               | Open   |
| WM126   | 16.65    | 0.53         | 2.28               | Open   |
| WM127   | 16.65    | 0.53         | 2.28               | Open   |
| WM128   | 16.65    | 0.53         | 2.28               | Open   |
| WM129   | 16.65    | 0.53         | 2.28               | Open   |
| WM130   | -16.87   | 0.54         | 2.34               | Open   |
| WM131   | -16.87   | 0.54         | 2.34               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM136 | 0.28   | 0.01 | 0.00  | Open |
| WM137 | 0.28   | 0.01 | 0.00  | Open |
| WM138 | 0.11   | 0.01 | 0.00  | Open |
| WM139 | -0.17  | 0.01 | 0.00  | Open |
| WM140 | -0.17  | 0.01 | 0.00  | Open |
| WM141 | -0.17  | 0.01 | 0.00  | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -0.14  | 0.00 | 0.00  | Open |
| WM145 | -0.14  | 0.00 | 0.00  | Open |
| WM146 | -0.14  | 0.00 | 0.00  | Open |
| WM147 | -13.79 | 0.44 | 1.61  | Open |
| WM148 | 0.00   | 0.00 | 0.00  | Open |
| WM149 | 0.04   | 0.00 | 0.00  | Open |
| WM150 | 0.04   | 0.00 | 0.00  | Open |
| WM151 | 0.04   | 0.00 | 0.00  | Open |
| WM152 | 33.52  | 1.90 | 40.38 | Open |
| WM153 | 33.44  | 1.89 | 40.20 | Open |
| WM154 | 0.07   | 0.00 | 0.00  | Open |
| WM155 | 0.07   | 0.00 | 0.00  | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 33.37    | 1.89         | 40.04              | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 20.51    | 0.65         | 3.36               | Open      |
| WM165   | -13.83   | 0.44         | 1.62               | Open      |
| 1       | 13.83    | 0.00         | -147.68            | Open Pump |
| 2       | 20.51    | 0.00         | -147.76            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.61 | 52.24      | 0.00    |
| TEE-BEND24 | 0.00       | 147.61 | 52.24      | 0.00    |
| TEE-BEND23 | 0.00       | 147.61 | 52.16      | 0.00    |
| TEE-BEND43 | 0.00       | 147.66 | 52.19      | 0.00    |
| TEE-BEND44 | 0.00       | 147.65 | 52.11      | 0.00    |
| CHAMBER2   | 0.00       | 147.66 | 52.10      | 0.00    |



|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 145.70 | 50.00 | 0.00 |
| TEE-BEND46 | 0.00 | 147.60 | 51.80 | 0.00 |
| TEE-BEND53 | 0.00 | 147.61 | 51.74 | 0.00 |
| TEE-BEND47 | 0.00 | 147.60 | 51.73 | 0.00 |
| TEE-BEND22 | 0.00 | 147.61 | 51.74 | 0.00 |
| CRU-1      | 0.23 | 147.61 | 51.68 | 0.00 |
| TEE-BEND52 | 0.00 | 147.61 | 51.66 | 0.00 |
| HYD3       | 0.00 | 147.60 | 51.63 | 0.00 |
| TEE-BEND45 | 0.00 | 147.60 | 51.62 | 0.00 |
| TEE-BEND16 | 0.00 | 144.02 | 48.02 | 0.00 |
| HYD2       | 0.00 | 147.62 | 51.60 | 0.00 |
| HYD7       | 0.00 | 147.42 | 51.39 | 0.00 |
| TEE-BEND51 | 0.00 | 147.61 | 51.57 | 0.00 |
| TEE-BEND34 | 0.00 | 147.31 | 51.25 | 0.00 |
| TEE-BEND36 | 0.00 | 147.45 | 51.38 | 0.00 |
| TEE-BEND55 | 0.00 | 147.61 | 51.54 | 0.00 |
| TEE-BEND35 | 0.00 | 147.42 | 51.34 | 0.00 |
| HYD1       | 0.00 | 147.63 | 51.55 | 0.00 |
| HYD6       | 0.00 | 147.45 | 51.36 | 0.00 |
| TEE-BEND37 | 0.00 | 147.46 | 51.35 | 0.00 |
| TEE-BEND50 | 0.00 | 147.61 | 51.49 | 0.00 |
| TEE-BEND33 | 0.00 | 147.45 | 51.33 | 0.00 |
| TEE-BEND17 | 0.00 | 144.02 | 47.87 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.65 | 51.49      | 0.00    |
| TEE-BEND49 | 0.00       | 147.61 | 51.45      | 0.00    |
| TEE-BEND48 | 0.00       | 147.61 | 51.44      | 0.00    |
| TEE-BEND12 | 0.00       | 145.70 | 49.51      | 0.00    |
| TEE-BEND40 | 0.00       | 147.68 | 51.49      | 0.00    |
| TEE-BEND20 | 0.00       | 147.65 | 51.45      | 0.00    |
| TEE-BEND38 | 0.00       | 147.61 | 51.40      | 0.00    |
| TEE-BEND57 | 0.00       | 147.62 | 51.42      | 0.00    |
| TEE-BEND56 | 0.00       | 147.62 | 51.41      | 0.00    |
| TEE-BEND58 | 0.00       | 147.63 | 51.40      | 0.00    |
| TEE-BEND32 | 0.00       | 147.62 | 51.39      | 0.00    |
| TEE-BEND31 | 0.00       | 147.62 | 51.36      | 0.00    |
| TEE-BEND30 | 0.00       | 147.62 | 51.35      | 0.00    |
| HYD5       | 0.00       | 147.61 | 51.31      | 0.00    |
| CRU-8      | 33.37      | 143.65 | 47.31      | 0.00    |
| TEE-BEND28 | 0.00       | 147.62 | 51.27      | 0.00    |
| CRU-10     | 0.04       | 147.65 | 51.30      | 0.00    |
| TEE-BEND39 | 0.00       | 147.71 | 51.34      | 0.00    |
| TEE-BEND26 | 0.00       | 147.62 | 51.25      | 0.00    |
| TEE-BEND15 | 0.00       | 144.02 | 47.64      | 0.00    |
| TEE-BEND29 | 0.00       | 147.62 | 51.22      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 145.70 | 49.20 | 0.00           |
| TEE-BEND59 | 0.00   | 147.63 | 51.22 | 0.00           |
| TEE-BEND27 | 0.00   | 147.62 | 51.19 | 0.00           |
| TEE-BEND41 | 0.00   | 147.67 | 51.22 | 0.00           |
| TEE-BEND42 | 0.00   | 147.67 | 51.21 | 0.00           |
| CRU-6      | 0.11   | 147.71 | 51.22 | 0.00           |
| CRU-9      | 0.07   | 144.02 | 47.53 | 0.00           |
| CRU-7      | 0.08   | 145.70 | 49.20 | 0.00           |
| CRU-4      | 0.11   | 147.62 | 51.13 | 0.00           |
| CRU-3      | 0.17   | 147.62 | 51.13 | 0.00           |
| TEE-BEND6  | 0.00   | 147.71 | 51.06 | 0.00           |
| CRU-5      | 0.02   | 147.62 | 50.89 | 0.00           |
| TEE-BEND4  | 0.00   | 147.71 | 50.96 | 0.00           |
| TEE-BEND3  | 0.00   | 147.76 | 51.01 | 0.00           |
| TEE-BEND2  | 0.00   | 147.71 | 50.94 | 0.00           |
| TEE-BEND1  | 0.00   | 147.71 | 50.91 | 0.00           |
| CHAMBER1   | 0.00   | 147.72 | 50.91 | 0.00           |
| R1         | -13.83 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -20.51 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 20.51    | 0.65         | 3.36               | Open   |
| WM100   | 20.40    | 0.65         | 3.32               | Open   |
| WM101   | 3.75     | 0.12         | 0.14               | Open   |
| WM102   | 3.75     | 0.12         | 0.14               | Open   |
| WM103   | 3.45     | 0.11         | 0.12               | Open   |
| WM104   | 3.45     | 0.11         | 0.12               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.08     | 0.10         | 0.10               | Open   |
| WM113   | 3.08     | 0.10         | 0.10               | Open   |
| WM114   | 3.08     | 0.10         | 0.10               | Open   |
| WM115   | -13.79   | 0.44         | 1.61               | Open   |
| WM116   | -13.83   | 0.44         | 1.62               | Open   |
| WM117   | -13.83   | 0.44         | 1.62               | Open   |
| WM118   | -13.83   | 0.44         | 1.62               | Open   |
| WM119   | -13.83   | 0.44         | 1.62               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM123 | 0.11   | 0.00 | 0.00 | Open |
| WM124 | 0.11   | 0.00 | 0.00 | Open |
| WM125 | 16.65  | 0.53 | 2.28 | Open |
| WM126 | 16.65  | 0.53 | 2.28 | Open |
| WM127 | 16.65  | 0.53 | 2.28 | Open |
| WM128 | 16.65  | 0.53 | 2.28 | Open |
| WM129 | 16.65  | 0.53 | 2.28 | Open |
| WM130 | -16.87 | 0.54 | 2.34 | Open |
| WM131 | -16.87 | 0.54 | 2.34 | Open |
| WM132 | -0.02  | 0.00 | 0.00 | Open |
| WM133 | 0.30   | 0.01 | 0.00 | Open |
| WM134 | 0.30   | 0.01 | 0.00 | Open |
| WM135 | 0.28   | 0.01 | 0.00 | Open |
| WM136 | 0.28   | 0.01 | 0.00 | Open |
| WM137 | 0.28   | 0.01 | 0.00 | Open |
| WM138 | 0.11   | 0.01 | 0.00 | Open |
| WM139 | -0.17  | 0.01 | 0.00 | Open |
| WM140 | -0.17  | 0.01 | 0.00 | Open |
| WM141 | -0.17  | 0.01 | 0.00 | Open |
| WM142 | 0.00   | 0.00 | 0.00 | Open |
| WM143 | 0.00   | 0.00 | 0.00 | Open |
| WM144 | -0.14  | 0.00 | 0.00 | Open |
| WM145 | -0.14  | 0.00 | 0.00 | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -13.79   | 0.44         | 1.61               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 33.52    | 1.90         | 40.38              | Open      |
| WM153   | 33.44    | 1.89         | 40.20              | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.01               | Open      |
| WM157   | 33.37    | 1.89         | 40.04              | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 20.51    | 0.65         | 3.36               | Open      |
| WM165   | -13.83   | 0.44         | 1.62               | Open      |
| 1       | 13.83    | 0.00         | -147.68            | Open Pump |



## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.61 | 52.24      | 0.00    |
| TEE-BEND24 | 0.00       | 147.61 | 52.24      | 0.00    |
| TEE-BEND23 | 0.00       | 147.61 | 52.16      | 0.00    |
| TEE-BEND43 | 0.00       | 147.66 | 52.19      | 0.00    |
| TEE-BEND44 | 0.00       | 147.65 | 52.11      | 0.00    |
| CHAMBER2   | 0.00       | 147.66 | 52.10      | 0.00    |
| TEE-BEND18 | 0.00       | 145.70 | 50.01      | 0.00    |
| TEE-BEND46 | 0.00       | 147.60 | 51.80      | 0.00    |
| TEE-BEND53 | 0.00       | 147.61 | 51.74      | 0.00    |
| TEE-BEND47 | 0.00       | 147.60 | 51.73      | 0.00    |
| TEE-BEND22 | 0.00       | 147.61 | 51.74      | 0.00    |
| CRU-1      | 0.23       | 147.61 | 51.68      | 0.00    |
| TEE-BEND52 | 0.00       | 147.61 | 51.66      | 0.00    |
| HYD3       | 0.00       | 147.60 | 51.63      | 0.00    |
| TEE-BEND45 | 0.00       | 147.60 | 51.62      | 0.00    |
| TEE-BEND16 | 0.00       | 144.02 | 48.02      | 0.00    |
| HYD2       | 0.00       | 147.62 | 51.60      | 0.00    |
| HYD7       | 0.00       | 147.42 | 51.39      | 0.00    |
| TEE-BEND51 | 0.00       | 147.61 | 51.57      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 147.31 | 51.25      | 0.00    |
| TEE-BEND36 | 0.00       | 147.45 | 51.38      | 0.00    |
| TEE-BEND55 | 0.00       | 147.61 | 51.54      | 0.00    |
| TEE-BEND35 | 0.00       | 147.42 | 51.34      | 0.00    |
| HYD1       | 0.00       | 147.63 | 51.55      | 0.00    |
| HYD6       | 0.00       | 147.45 | 51.36      | 0.00    |
| TEE-BEND37 | 0.00       | 147.46 | 51.35      | 0.00    |
| TEE-BEND50 | 0.00       | 147.61 | 51.49      | 0.00    |
| TEE-BEND33 | 0.00       | 147.45 | 51.33      | 0.00    |
| TEE-BEND17 | 0.00       | 144.02 | 47.87      | 0.00    |
| TEE-BEND21 | 0.00       | 147.65 | 51.49      | 0.00    |
| TEE-BEND49 | 0.00       | 147.61 | 51.45      | 0.00    |
| TEE-BEND48 | 0.00       | 147.61 | 51.44      | 0.00    |
| TEE-BEND12 | 0.00       | 145.70 | 49.51      | 0.00    |
| TEE-BEND40 | 0.00       | 147.68 | 51.49      | 0.00    |
| TEE-BEND20 | 0.00       | 147.65 | 51.45      | 0.00    |
| TEE-BEND38 | 0.00       | 147.61 | 51.40      | 0.00    |
| TEE-BEND57 | 0.00       | 147.62 | 51.42      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND56 | 0.00  | 147.62 | 51.40 | 0.00 |
| TEE-BEND58 | 0.00  | 147.63 | 51.40 | 0.00 |
| TEE-BEND32 | 0.00  | 147.62 | 51.39 | 0.00 |
| TEE-BEND31 | 0.00  | 147.62 | 51.36 | 0.00 |
| TEE-BEND30 | 0.00  | 147.62 | 51.35 | 0.00 |
| HYD5       | 0.00  | 147.61 | 51.31 | 0.00 |
| CRU-8      | 33.37 | 143.65 | 47.31 | 0.00 |
| TEE-BEND28 | 0.00  | 147.62 | 51.27 | 0.00 |
| CRU-10     | 0.04  | 147.65 | 51.30 | 0.00 |
| TEE-BEND39 | 0.00  | 147.71 | 51.34 | 0.00 |
| TEE-BEND26 | 0.00  | 147.62 | 51.25 | 0.00 |
| TEE-BEND15 | 0.00  | 144.02 | 47.64 | 0.00 |
| TEE-BEND29 | 0.00  | 147.62 | 51.22 | 0.00 |
| TEE-BEND13 | 0.00  | 145.70 | 49.29 | 0.00 |
| TEE-BEND59 | 0.00  | 147.63 | 51.22 | 0.00 |
| TEE-BEND27 | 0.00  | 147.62 | 51.19 | 0.00 |
| TEE-BEND41 | 0.00  | 147.67 | 51.22 | 0.00 |
| TEE-BEND42 | 0.00  | 147.67 | 51.21 | 0.00 |
| CRU-6      | 0.11  | 147.71 | 51.22 | 0.00 |
| CRU-9      | 0.07  | 144.02 | 47.53 | 0.00 |
| CRU-7      | 0.08  | 145.70 | 49.20 | 0.00 |
| CRU-4      | 0.11  | 147.62 | 51.13 | 0.00 |
| CRU-3      | 0.17  | 147.62 | 51.13 | 0.00 |
| TEE-BEND6  | 0.00  | 147.71 | 51.06 | 0.00 |
| CRU-5      | 0.02  | 147.62 | 50.89 | 0.00 |
| TEE-BEND4  | 0.00  | 147.71 | 50.96 | 0.00 |
| TEE-BEND3  | 0.00  | 147.76 | 51.01 | 0.00 |
| TEE-BEND2  | 0.00  | 147.71 | 50.94 | 0.00 |
| TEE-BEND1  | 0.00  | 147.71 | 50.91 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.72 | 50.91      | 0.00           |
| R1       | -13.83     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -20.51     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 20.51    | 0.65         | 3.36          | Open   |
| WM100   | 20.40    | 0.65         | 3.32          | Open   |
| WM101   | 3.75     | 0.12         | 0.14          | Open   |
| WM102   | 3.75     | 0.12         | 0.14          | Open   |
| WM103   | 3.45     | 0.11         | 0.12          | Open   |
| WM104   | 3.45     | 0.11         | 0.12          | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM105 | -0.23  | 0.01 | 0.00 | Open |
| WM106 | -0.23  | 0.01 | 0.00 | Open |
| WM107 | -0.23  | 0.01 | 0.00 | Open |
| WM108 | -0.23  | 0.01 | 0.00 | Open |
| WM109 | -0.23  | 0.01 | 0.00 | Open |
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | 3.08   | 0.10 | 0.10 | Open |
| WM113 | 3.08   | 0.10 | 0.10 | Open |
| WM114 | 3.08   | 0.10 | 0.10 | Open |
| WM115 | -13.79 | 0.44 | 1.61 | Open |
| WM116 | -13.83 | 0.44 | 1.62 | Open |
| WM117 | -13.83 | 0.44 | 1.62 | Open |
| WM118 | -13.83 | 0.44 | 1.62 | Open |
| WM119 | -13.83 | 0.44 | 1.62 | Open |
| WM120 | 0.11   | 0.00 | 0.00 | Open |
| WM121 | 0.11   | 0.00 | 0.00 | Open |
| WM122 | 0.11   | 0.00 | 0.00 | Open |
| WM123 | 0.11   | 0.00 | 0.00 | Open |
| WM124 | 0.11   | 0.00 | 0.00 | Open |
| WM125 | 16.65  | 0.53 | 2.28 | Open |
| WM126 | 16.65  | 0.53 | 2.28 | Open |
| WM127 | 16.65  | 0.53 | 2.28 | Open |
| WM128 | 16.65  | 0.53 | 2.28 | Open |
| WM129 | 16.65  | 0.53 | 2.28 | Open |
| WM130 | -16.87 | 0.54 | 2.34 | Open |
| WM131 | -16.87 | 0.54 | 2.34 | Open |
| WM132 | -0.02  | 0.00 | 0.00 | Open |
| WM133 | 0.30   | 0.01 | 0.00 | Open |
| WM134 | 0.30   | 0.01 | 0.00 | Open |
| WM135 | 0.28   | 0.01 | 0.00 | Open |
| WM136 | 0.28   | 0.01 | 0.00 | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -13.79   | 0.44         | 1.61               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 33.52  | 1.90 | 40.38   | Open      |
| WM153 | 33.44  | 1.89 | 40.20   | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 33.37  | 1.89 | 40.04   | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 20.51  | 0.65 | 3.36    | Open      |
| WM165 | -13.83 | 0.44 | 1.62    | Open      |
| 1     | 13.83  | 0.00 | -147.68 | Open Pump |
| 2     | 20.51  | 0.00 | -147.76 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.61 | 52.24      | 0.00    |
| TEE-BEND24 | 0.00       | 147.61 | 52.24      | 0.00    |
| TEE-BEND23 | 0.00       | 147.61 | 52.16      | 0.00    |
| TEE-BEND43 | 0.00       | 147.66 | 52.19      | 0.00    |
| TEE-BEND44 | 0.00       | 147.65 | 52.11      | 0.00    |
| CHAMBER2   | 0.00       | 147.66 | 52.10      | 0.00    |
| TEE-BEND18 | 0.00       | 145.70 | 50.01      | 0.00    |
| TEE-BEND46 | 0.00       | 147.60 | 51.80      | 0.00    |
| TEE-BEND53 | 0.00       | 147.61 | 51.74      | 0.00    |
| TEE-BEND47 | 0.00       | 147.60 | 51.73      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.61 | 51.74      | 0.00    |
| CRU-1      | 0.23       | 147.61 | 51.68      | 0.00    |
| TEE-BEND52 | 0.00       | 147.61 | 51.66      | 0.00    |
| HYD3       | 0.00       | 147.60 | 51.63      | 0.00    |
| TEE-BEND45 | 0.00       | 147.60 | 51.62      | 0.00    |
| TEE-BEND16 | 0.00       | 144.02 | 48.02      | 0.00    |
| HYD2       | 0.00       | 147.62 | 51.60      | 0.00    |
| HYD7       | 0.00       | 147.42 | 51.39      | 0.00    |
| TEE-BEND51 | 0.00       | 147.61 | 51.57      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND34 | 0.00  | 147.31 | 51.38 | 0.00 |
| TEE-BEND36 | 0.00  | 147.45 | 51.38 | 0.00 |
| TEE-BEND55 | 0.00  | 147.61 | 51.54 | 0.00 |
| TEE-BEND35 | 0.00  | 147.42 | 51.34 | 0.00 |
| HYD1       | 0.00  | 147.63 | 51.55 | 0.00 |
| HYD6       | 0.00  | 147.45 | 51.36 | 0.00 |
| TEE-BEND37 | 0.00  | 147.46 | 51.35 | 0.00 |
| TEE-BEND50 | 0.00  | 147.61 | 51.49 | 0.00 |
| TEE-BEND33 | 0.00  | 147.45 | 51.33 | 0.00 |
| TEE-BEND17 | 0.00  | 144.02 | 47.87 | 0.00 |
| TEE-BEND21 | 0.00  | 147.65 | 51.49 | 0.00 |
| TEE-BEND49 | 0.00  | 147.61 | 51.45 | 0.00 |
| TEE-BEND48 | 0.00  | 147.61 | 51.44 | 0.00 |
| TEE-BEND12 | 0.00  | 145.70 | 49.51 | 0.00 |
| TEE-BEND40 | 0.00  | 147.68 | 51.49 | 0.00 |
| TEE-BEND20 | 0.00  | 147.65 | 51.45 | 0.00 |
| TEE-BEND38 | 0.00  | 147.61 | 51.40 | 0.00 |
| TEE-BEND57 | 0.00  | 147.62 | 51.42 | 0.00 |
| TEE-BEND56 | 0.00  | 147.62 | 51.41 | 0.00 |
| TEE-BEND58 | 0.00  | 147.63 | 51.40 | 0.00 |
| TEE-BEND32 | 0.00  | 147.62 | 51.39 | 0.00 |
| TEE-BEND31 | 0.00  | 147.62 | 51.36 | 0.00 |
| TEE-BEND30 | 0.00  | 147.62 | 51.35 | 0.00 |
| HYD5       | 0.00  | 147.61 | 51.31 | 0.00 |
| CRU-8      | 33.37 | 143.65 | 47.31 | 0.00 |
| TEE-BEND28 | 0.00  | 147.62 | 51.27 | 0.00 |
| CRU-10     | 0.04  | 147.65 | 51.30 | 0.00 |
| TEE-BEND39 | 0.00  | 147.71 | 51.34 | 0.00 |
| TEE-BEND26 | 0.00  | 147.62 | 51.25 | 0.00 |
| TEE-BEND15 | 0.00  | 144.02 | 47.64 | 0.00 |
| TEE-BEND29 | 0.00  | 147.62 | 51.22 | 0.00 |
| TEE-BEND13 | 0.00  | 145.70 | 49.29 | 0.00 |
| TEE-BEND59 | 0.00  | 147.63 | 51.22 | 0.00 |
| TEE-BEND27 | 0.00  | 147.62 | 51.19 | 0.00 |
| TEE-BEND41 | 0.00  | 147.67 | 51.22 | 0.00 |
| TEE-BEND42 | 0.00  | 147.67 | 51.21 | 0.00 |
| CRU-6      | 0.11  | 147.71 | 51.22 | 0.00 |
| CRU-9      | 0.07  | 144.02 | 47.53 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 145.70 | 49.20      | 0.00    |
| CRU-4     | 0.11       | 147.62 | 51.13      | 0.00    |
| CRU-3     | 0.17       | 147.62 | 51.13      | 0.00    |
| TEE-BEND6 | 0.00       | 147.71 | 51.06      | 0.00    |
| CRU-5     | 0.02       | 147.62 | 50.89      | 0.00    |
| TEE-BEND4 | 0.00       | 147.71 | 50.96      | 0.00    |



|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.76 | 51.00 | 0.00           |
| TEE-BEND2 | 0.00   | 147.71 | 50.94 | 0.00           |
| TEE-BEND1 | 0.00   | 147.71 | 50.91 | 0.00           |
| CHAMBER1  | 0.00   | 147.72 | 50.91 | 0.00           |
| R1        | -13.83 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -20.51 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 20.51    | 0.65         | 3.36               | Open   |
| WM100   | 20.40    | 0.65         | 3.32               | Open   |
| WM101   | 3.75     | 0.12         | 0.14               | Open   |
| WM102   | 3.75     | 0.12         | 0.14               | Open   |
| WM103   | 3.45     | 0.11         | 0.12               | Open   |
| WM104   | 3.45     | 0.11         | 0.12               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.08     | 0.10         | 0.10               | Open   |
| WM113   | 3.08     | 0.10         | 0.10               | Open   |
| WM114   | 3.08     | 0.10         | 0.10               | Open   |
| WM115   | -13.79   | 0.44         | 1.61               | Open   |
| WM116   | -13.83   | 0.44         | 1.62               | Open   |
| WM117   | -13.83   | 0.44         | 1.62               | Open   |
| WM118   | -13.83   | 0.44         | 1.62               | Open   |
| WM119   | -13.83   | 0.44         | 1.62               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 16.65    | 0.53         | 2.28               | Open   |
| WM126   | 16.65    | 0.53         | 2.28               | Open   |
| WM127   | 16.65    | 0.53         | 2.28               | Open   |



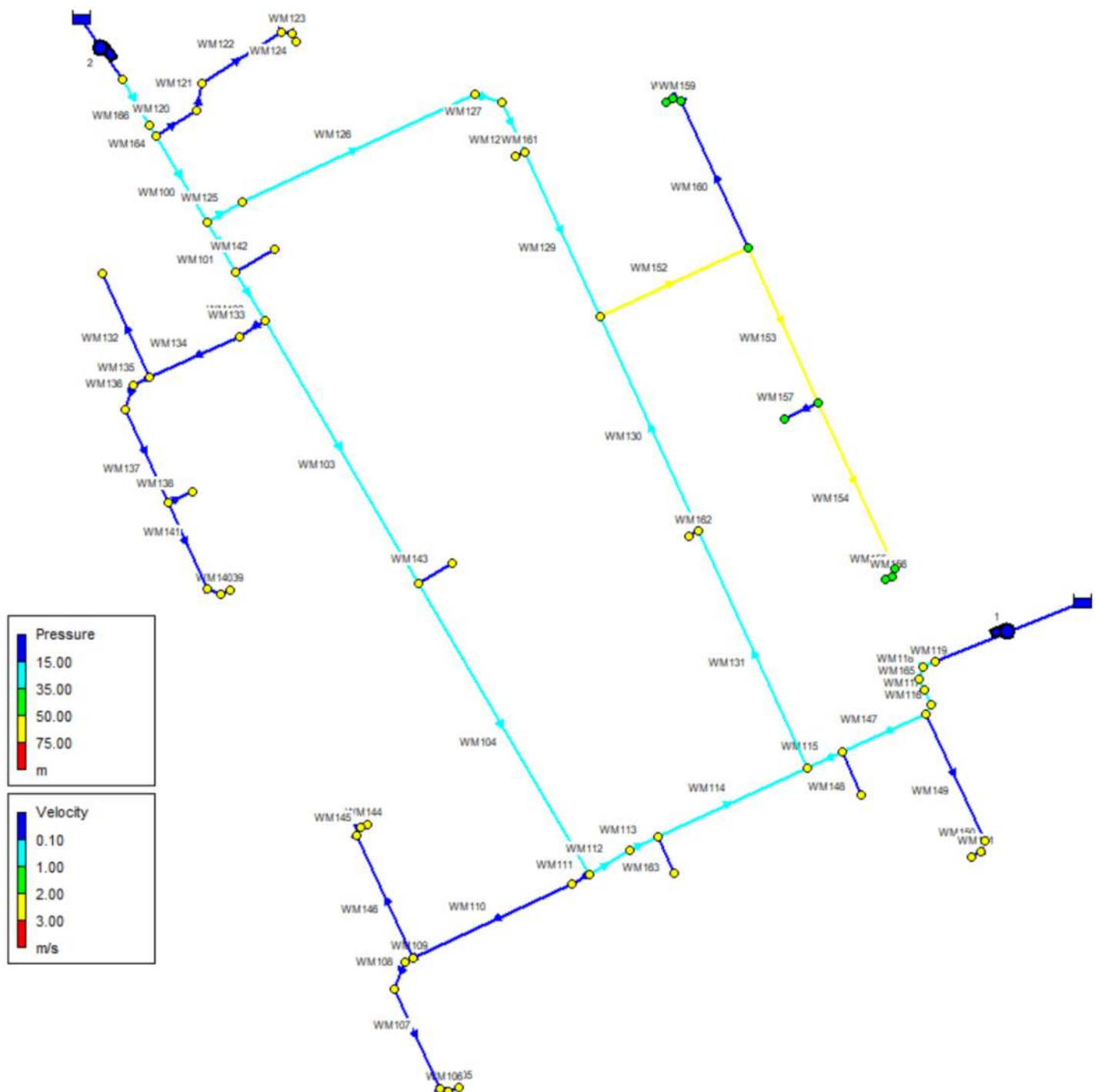
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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | 16.65    | 0.53         | 2.28               | Open   |
| WM129   | 16.65    | 0.53         | 2.28               | Open   |
| WM130   | -16.87   | 0.54         | 2.34               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | -16.87 | 0.54 | 2       | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 0.30   | 0.01 | 0.00    | Open      |
| WM134 | 0.30   | 0.01 | 0.00    | Open      |
| WM135 | 0.28   | 0.01 | 0.00    | Open      |
| WM136 | 0.28   | 0.01 | 0.00    | Open      |
| WM137 | 0.28   | 0.01 | 0.00    | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.00    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | -13.79 | 0.44 | 1.61    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 33.52  | 1.90 | 40.38   | Open      |
| WM153 | 33.44  | 1.89 | 40.20   | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 33.37  | 1.89 | 40.04   | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 20.51  | 0.65 | 3.36    | Open      |
| WM165 | -13.83 | 0.44 | 1.62    | Open      |
| 1     | 13.83  | 0.00 | -147.68 | Open Pump |
| 2     | 20.51  | 0.00 | -147.76 | Open Pump |

## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR9



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU9)+pumps.net

# Link - Node Table:

| Link<br>ID | Start<br>Node | End<br>Node | Length<br>m | Diameter<br>mm |
|------------|---------------|-------------|-------------|----------------|
| WM166      | TEE-BEND3     | CHAMBER1    | 13.008      | 200            |
| WM100      | TEE-BEND2     | TEE-BEND59  | 24.428      | 200            |
| WM101      | TEE-BEND59    | TEE-BEND58  | 14.105      | 200            |
| WM102      | TEE-BEND58    | TEE-BEND57  | 14.07       | 200            |
| WM103      | TEE-BEND57    | TEE-BEND56  | 74.594      | 200            |
| WM104      | TEE-BEND56    | TEE-BEND55  | 83.148      | 200            |
| WM105      | CRU-1         | TEE-BEND53  | 2.742       | 200            |
| WM106      | TEE-BEND53    | TEE-BEND52  | 2.121       | 200            |
| WM107      | TEE-BEND52    | TEE-BEND51  | 27.06       | 200            |
| WM108      | TEE-BEND51    | TEE-BEND50  | 7.071       | 200            |
| WM109      | TEE-BEND50    | TEE-BEND49  | 2.273       | 200            |
| WM110      | TEE-BEND49    | TEE-BEND48  | 43.09       | 200            |
| WM111      | TEE-BEND48    | TEE-BEND55  | 5.039       | 200            |
| WM112      | TEE-BEND55    | TEE-BEND47  | 11.407      | 200            |
| WM113      | TEE-BEND47    | TEE-BEND46  | 7.671       | 200            |
| WM114      | TEE-BEND46    | TEE-BEND45  | 40.486      | 200            |
| WM115      | TEE-BEND45    | TEE-BEND22  | 9.344       | 200            |
| WM116      | TEE-BEND44    | TEE-BEND43  | 2.594       | 200            |
| WM117      | TEE-BEND43    | CHAMBER2    | 4.079       | 200            |
| WM118      | TEE-BEND42    | TEE-BEND41  | 3.05        | 200            |
| WM119      | TEE-BEND41    | TEE-BEND40  | 3.256       | 200            |
| WM120      | TEE-BEND2     | TEE-BEND6   | 11.711      | 200            |
| WM121      | TEE-BEND6     | TEE-BEND1   | 6.787       | 200            |
| WM122      | TEE-BEND1     | TEE-BEND4   | 23.393      | 200            |
| WM123      | TEE-BEND4     | TEE-BEND39  | 2.505       | 200            |
| WM124      | TEE-BEND39    | CRU-6       | 2.125       | 200            |
| WM125      | TEE-BEND59    | TEE-BEND38  | 10.059      | 200            |
| WM126      | TEE-BEND38    | TEE-BEND37  | 63.282      | 200            |
| WM127      | TEE-BEND37    | TEE-BEND36  | 6.851       | 200            |
| WM128      | TEE-BEND36    | TEE-BEND35  | 13.346      | 200            |
| WM129      | TEE-BEND35    | TEE-BEND34  | 44.459      | 200            |
| WM130      | TEE-BEND34    | TEE-BEND33  | 58.093      | 200            |
| WM131      | TEE-BEND33    | TEE-BEND45  | 64.037      | 200            |
| WM132      | CRU-5         | TEE-BEND32  | 28.008      | 150            |
| WM133      | TEE-BEND57    | TEE-BEND31  | 7.36        | 200            |

|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 41.65   | 41.65   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 56.73   | 56.73   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |
| TEE-BEND18 | 0.00       | 143.27 | 47.59      | 0.00    |
| TEE-BEND46 | 0.00       | 147.31 | 51.51      | 0.00    |
| TEE-BEND53 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND47 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND22 | 0.00       | 147.34 | 51.46      | 0.00    |
| CRU-1      | 0.23       | 147.31 | 51.39      | 0.00    |
| TEE-BEND52 | 0.00       | 147.31 | 51.37      | 0.00    |
| HYD3       | 0.00       | 147.31 | 51.34      | 0.00    |
| TEE-BEND45 | 0.00       | 147.30 | 51.32      | 0.00    |
| TEE-BEND16 | 0.00       | 135.93 | 39.93      | 0.00    |
| HYD2       | 0.00       | 147.33 | 51.32      | 0.00    |
| HYD7       | 0.00       | 146.90 | 50.87      | 0.00    |
| TEE-BEND51 | 0.00       | 147.31 | 51.28      | 0.00    |
| TEE-BEND34 | 0.00       | 146.69 | 50.63      | 0.00    |
| TEE-BEND36 | 0.00       | 146.97 | 50.90      | 0.00    |
| TEE-BEND55 | 0.00       | 147.31 | 51.24      | 0.00    |
| TEE-BEND35 | 0.00       | 146.90 | 50.83      | 0.00    |
| HYD1       | 0.00       | 147.34 | 51.27      | 0.00    |
| HYD6       | 0.00       | 146.98 | 50.89      | 0.00    |
| TEE-BEND37 | 0.00       | 147.00 | 50.89      | 0.00    |
| TEE-BEND50 | 0.00       | 147.31 | 51.20      | 0.00    |
| TEE-BEND33 | 0.00       | 146.98 | 50.86      | 0.00    |
| TEE-BEND17 | 0.00       | 139.74 | 43.58      | 0.00    |
| TEE-BEND21 | 0.00       | 147.42 | 51.27      | 0.00    |
| TEE-BEND49 | 0.00       | 147.31 | 51.15      | 0.00    |
| TEE-BEND48 | 0.00       | 147.31 | 51.14      | 0.00    |
| TEE-BEND12 | 0.00       | 143.27 | 47.09      | 0.00    |
| TEE-BEND40 | 0.00       | 147.48 | 51.29      | 0.00    |
| TEE-BEND20 | 0.00       | 147.42 | 51.23      | 0.00    |
| TEE-BEND38 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND57 | 0.00       | 147.34 | 51.14      | 0.00    |
| TEE-BEND56 | 0.00       | 147.33 | 51.12      | 0.00    |
| TEE-BEND58 | 0.00       | 147.34 | 51.11      | 0.00    |
| TEE-BEND32 | 0.00       | 147.34 | 51.10      | 0.00    |
| TEE-BEND31 | 0.00       | 147.34 | 51.08      | 0.00    |
| TEE-BEND30 | 0.00       | 147.34 | 51.06      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD5       | 0.00 | 147.34 | 51.00 | 0.00 |
| CRU-8      | 0.04 | 139.74 | 43.39 | 0.00 |
| TEE-BEND28 | 0.00 | 147.34 | 50.99 | 0.00 |
| CRU-10     | 0.04 | 147.42 | 51.07 | 0.00 |
| TEE-BEND39 | 0.00 | 147.51 | 51.14 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 147.34 | 50.97      | 0.00           |
| TEE-BEND15 | 0.00       | 135.75 | 39.37      | 0.00           |
| TEE-BEND29 | 0.00       | 147.34 | 50.94      | 0.00           |
| TEE-BEND13 | 0.00       | 143.27 | 46.87      | 0.00           |
| TEE-BEND59 | 0.00       | 147.35 | 50.94      | 0.00           |
| TEE-BEND27 | 0.00       | 147.34 | 50.90      | 0.00           |
| TEE-BEND41 | 0.00       | 147.47 | 51.02      | 0.00           |
| TEE-BEND42 | 0.00       | 147.46 | 51.00      | 0.00           |
| CRU-6      | 0.11       | 147.51 | 51.02      | 0.00           |
| CRU-9      | 50.07      | 135.60 | 39.10      | 0.00           |
| CRU-7      | 0.08       | 143.27 | 46.78      | 0.00           |
| CRU-4      | 0.11       | 147.34 | 50.85      | 0.00           |
| CRU-3      | 0.17       | 147.34 | 50.84      | 0.00           |
| TEE-BEND6  | 0.00       | 147.51 | 50.86      | 0.00           |
| CRU-5      | 0.02       | 147.34 | 50.61      | 0.00           |
| TEE-BEND4  | 0.00       | 147.51 | 50.76      | 0.00           |
| TEE-BEND3  | 0.00       | 147.61 | 50.86      | 0.00           |
| TEE-BEND2  | 0.00       | 147.51 | 50.73      | 0.00           |
| TEE-BEND1  | 0.00       | 147.51 | 50.71      | 0.00           |
| CHAMBER1   | 0.00       | 147.53 | 50.71      | 0.00           |
| R1         | -21.61     | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -29.40     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 29.40    | 0.94         | 6.54               | Open   |
| WM100   | 29.29    | 0.93         | 6.49               | Open   |
| WM101   | 4.56     | 0.15         | 0.21               | Open   |
| WM102   | 4.56     | 0.15         | 0.21               | Open   |
| WM103   | 4.26     | 0.14         | 0.18               | Open   |
| WM104   | 4.26     | 0.14         | 0.18               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | 3.89   | 0.12 | 0.15 | Open |
| WM113 | 3.89   | 0.12 | 0.15 | Open |
| WM114 | 3.89   | 0.12 | 0.15 | Open |
| WM115 | -21.57 | 0.69 | 3.68 | Open |
| WM116 | -21.61 | 0.69 | 3.70 | Open |
| WM117 | -21.61 | 0.69 | 3.69 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -21.61   | 0.69         | 3.70               | Open   |
| WM119   | -21.61   | 0.69         | 3.70               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 24.74    | 0.79         | 4.75               | Open   |
| WM126   | 24.74    | 0.79         | 4.75               | Open   |
| WM127   | 24.74    | 0.79         | 4.75               | Open   |
| WM128   | 24.74    | 0.79         | 4.75               | Open   |
| WM129   | 24.74    | 0.79         | 4.75               | Open   |
| WM130   | -25.45   | 0.81         | 5.01               | Open   |
| WM131   | -25.45   | 0.81         | 5.01               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -21.57   | 0.69         | 3.68               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 0.04     | 0.00         | 0.00               | Open   |
| WM150   | 0.04     | 0.00         | 0.00               | Open   |
| WM151   | 0.04     | 0.00         | 0.00               | Open   |
| WM152   | 50.19    | 2.84         | 85.28              | Open   |
| WM153   | 50.11    | 2.84         | 85.03              | Open   |



|       |       |      |       |      |
|-------|-------|------|-------|------|
| WM154 | 50.07 | 2.83 | 84.90 | Open |
| WM155 | 50.07 | 2.83 | 84.90 | Open |
| WM156 | 50.07 | 2.83 | 84.90 | Open |
| WM157 | 0.04  | 0.00 | 0.00  | Open |
| WM158 | -0.08 | 0.00 | 0.00  | Open |
| WM159 | -0.08 | 0.00 | 0.00  | Open |
| WM160 | -0.08 | 0.00 | 0.00  | Open |
| WM161 | 0.00  | 0.00 | 0.00  | Open |
| WM162 | 0.00  | 0.00 | 0.00  | Open |
| WM163 | 0.00  | 0.00 | 0.00  | Open |
| WM164 | 29.40 | 0.94 | 6.54  | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -21.61   | 0.69         | 3.70               | Open      |
| 1       | 21.61    | 0.00         | -147.48            | Open Pump |
| 2       | 29.40    | 0.00         | -147.61            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |
| TEE-BEND18 | 0.00       | 143.27 | 47.59      | 0.00    |
| TEE-BEND46 | 0.00       | 147.31 | 51.51      | 0.00    |
| TEE-BEND53 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND47 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND22 | 0.00       | 147.34 | 51.46      | 0.00    |
| CRU-1      | 0.23       | 147.31 | 51.39      | 0.00    |
| TEE-BEND52 | 0.00       | 147.31 | 51.37      | 0.00    |
| HYD3       | 0.00       | 147.31 | 51.34      | 0.00    |
| TEE-BEND45 | 0.00       | 147.30 | 51.32      | 0.00    |
| TEE-BEND16 | 0.00       | 135.93 | 39.93      | 0.00    |
| HYD2       | 0.00       | 147.33 | 51.32      | 0.00    |
| HYD7       | 0.00       | 146.90 | 50.87      | 0.00    |
| TEE-BEND51 | 0.00       | 147.31 | 51.28      | 0.00    |
| TEE-BEND34 | 0.00       | 146.69 | 50.63      | 0.00    |
| TEE-BEND36 | 0.00       | 146.97 | 50.90      | 0.00    |
| TEE-BEND55 | 0.00       | 147.31 | 51.24      | 0.00    |
| TEE-BEND35 | 0.00       | 146.90 | 50.83      | 0.00    |
| HYD1       | 0.00       | 147.34 | 51.27      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 146.98 | 50.89 | 0.00 |
| TEE-BEND37 | 0.00 | 147.00 | 50.89 | 0.00 |
| TEE-BEND50 | 0.00 | 147.31 | 51.20 | 0.00 |
| TEE-BEND33 | 0.00 | 146.98 | 50.86 | 0.00 |
| TEE-BEND17 | 0.00 | 139.74 | 43.58 | 0.00 |
| TEE-BEND21 | 0.00 | 147.42 | 51.27 | 0.00 |
| TEE-BEND49 | 0.00 | 147.31 | 51.15 | 0.00 |
| TEE-BEND48 | 0.00 | 147.31 | 51.14 | 0.00 |
| TEE-BEND12 | 0.00 | 143.27 | 47.09 | 0.00 |
| TEE-BEND40 | 0.00 | 147.48 | 51.29 | 0.00 |
| TEE-BEND20 | 0.00 | 147.42 | 51.23 | 0.00 |
| TEE-BEND38 | 0.00 | 147.30 | 51.10 | 0.00 |
| TEE-BEND57 | 0.00 | 147.34 | 51.14 | 0.00 |
| TEE-BEND56 | 0.00 | 147.33 | 51.12 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 147.34 | 51.11      | 0.00           |
| TEE-BEND32 | 0.00       | 147.34 | 51.10      | 0.00           |
| TEE-BEND31 | 0.00       | 147.34 | 51.08      | 0.00           |
| TEE-BEND30 | 0.00       | 147.34 | 51.06      | 0.00           |
| HYD5       | 0.00       | 147.34 | 51.04      | 0.00           |
| CRU-8      | 0.04       | 139.74 | 43.39      | 0.00           |
| TEE-BEND28 | 0.00       | 147.34 | 50.99      | 0.00           |
| CRU-10     | 0.04       | 147.42 | 51.07      | 0.00           |
| TEE-BEND39 | 0.00       | 147.51 | 51.14      | 0.00           |
| TEE-BEND26 | 0.00       | 147.34 | 50.97      | 0.00           |
| TEE-BEND15 | 0.00       | 135.75 | 39.37      | 0.00           |
| TEE-BEND29 | 0.00       | 147.34 | 50.94      | 0.00           |
| TEE-BEND13 | 0.00       | 143.27 | 46.87      | 0.00           |
| TEE-BEND59 | 0.00       | 147.35 | 50.94      | 0.00           |
| TEE-BEND27 | 0.00       | 147.34 | 50.90      | 0.00           |
| TEE-BEND41 | 0.00       | 147.47 | 51.02      | 0.00           |
| TEE-BEND42 | 0.00       | 147.46 | 51.00      | 0.00           |
| CRU-6      | 0.11       | 147.51 | 51.02      | 0.00           |
| CRU-9      | 50.07      | 135.60 | 39.10      | 0.00           |
| CRU-7      | 0.08       | 143.27 | 46.78      | 0.00           |
| CRU-4      | 0.11       | 147.34 | 50.85      | 0.00           |
| CRU-3      | 0.17       | 147.34 | 50.84      | 0.00           |
| TEE-BEND6  | 0.00       | 147.51 | 50.86      | 0.00           |
| CRU-5      | 0.02       | 147.34 | 50.61      | 0.00           |
| TEE-BEND4  | 0.00       | 147.51 | 50.76      | 0.00           |
| TEE-BEND3  | 0.00       | 147.61 | 50.86      | 0.00           |
| TEE-BEND2  | 0.00       | 147.51 | 50.73      | 0.00           |
| TEE-BEND1  | 0.00       | 147.51 | 50.71      | 0.00           |
| CHAMBER1   | 0.00       | 147.53 | 50.71      | 0.00           |
| R1         | -21.61     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -29.40 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 29.40    | 0.94         | 6.54               | Open   |
| WM100   | 29.29    | 0.93         | 6.49               | Open   |
| WM101   | 4.56     | 0.15         | 0.21               | Open   |
| WM102   | 4.56     | 0.15         | 0.21               | Open   |
| WM103   | 4.26     | 0.14         | 0.18               | Open   |
| WM104   | 4.26     | 0.14         | 0.18               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.89     | 0.12         | 0.15               | Open   |
| WM113   | 3.89     | 0.12         | 0.16               | Open   |
| WM114   | 3.89     | 0.12         | 0.15               | Open   |
| WM115   | -21.57   | 0.69         | 3.68               | Open   |
| WM116   | -21.61   | 0.69         | 3.70               | Open   |
| WM117   | -21.61   | 0.69         | 3.69               | Open   |
| WM118   | -21.61   | 0.69         | 3.70               | Open   |
| WM119   | -21.61   | 0.69         | 3.70               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 24.74    | 0.79         | 4.75               | Open   |
| WM126   | 24.74    | 0.79         | 4.75               | Open   |
| WM127   | 24.74    | 0.79         | 4.75               | Open   |
| WM128   | 24.74    | 0.79         | 4.75               | Open   |
| WM129   | 24.74    | 0.79         | 4.75               | Open   |
| WM130   | -25.45   | 0.81         | 5.01               | Open   |
| WM131   | -25.45   | 0.81         | 5.01               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |        |      |       |      |
|-------|--------|------|-------|------|
| WM136 | 0.28   | 0.01 | 0.00  | Open |
| WM137 | 0.28   | 0.01 | 0.00  | Open |
| WM138 | 0.11   | 0.01 | 0.00  | Open |
| WM139 | -0.17  | 0.01 | 0.00  | Open |
| WM140 | -0.17  | 0.01 | 0.00  | Open |
| WM141 | -0.17  | 0.01 | 0.00  | Open |
| WM142 | 0.00   | 0.00 | 0.00  | Open |
| WM143 | 0.00   | 0.00 | 0.00  | Open |
| WM144 | -0.14  | 0.00 | 0.00  | Open |
| WM145 | -0.14  | 0.00 | 0.00  | Open |
| WM146 | -0.14  | 0.00 | 0.00  | Open |
| WM147 | -21.57 | 0.69 | 3.68  | Open |
| WM148 | 0.00   | 0.00 | 0.00  | Open |
| WM149 | 0.04   | 0.00 | 0.00  | Open |
| WM150 | 0.04   | 0.00 | 0.00  | Open |
| WM151 | 0.04   | 0.00 | 0.00  | Open |
| WM152 | 50.19  | 2.84 | 85.28 | Open |
| WM153 | 50.11  | 2.84 | 85.03 | Open |
| WM154 | 50.07  | 2.83 | 84.90 | Open |
| WM155 | 50.07  | 2.83 | 84.90 | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 50.07    | 2.83         | 84.90              | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 29.40    | 0.94         | 6.54               | Open      |
| WM165   | -21.61   | 0.69         | 3.70               | Open      |
| 1       | 21.61    | 0.00         | -147.48            | Open Pump |
| 2       | 29.40    | 0.00         | -147.61            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 143.27 | 47.00 | 0.00 |
| TEE-BEND46 | 0.00 | 147.31 | 51.51 | 0.00 |
| TEE-BEND53 | 0.00 | 147.31 | 51.44 | 0.00 |
| TEE-BEND47 | 0.00 | 147.31 | 51.44 | 0.00 |
| TEE-BEND22 | 0.00 | 147.34 | 51.46 | 0.00 |
| CRU-1      | 0.23 | 147.31 | 51.39 | 0.00 |
| TEE-BEND52 | 0.00 | 147.31 | 51.37 | 0.00 |
| HYD3       | 0.00 | 147.31 | 51.34 | 0.00 |
| TEE-BEND45 | 0.00 | 147.30 | 51.32 | 0.00 |
| TEE-BEND16 | 0.00 | 135.93 | 39.93 | 0.00 |
| HYD2       | 0.00 | 147.33 | 51.32 | 0.00 |
| HYD7       | 0.00 | 146.90 | 50.87 | 0.00 |
| TEE-BEND51 | 0.00 | 147.31 | 51.28 | 0.00 |
| TEE-BEND34 | 0.00 | 146.69 | 50.63 | 0.00 |
| TEE-BEND36 | 0.00 | 146.97 | 50.90 | 0.00 |
| TEE-BEND55 | 0.00 | 147.31 | 51.24 | 0.00 |
| TEE-BEND35 | 0.00 | 146.90 | 50.83 | 0.00 |
| HYD1       | 0.00 | 147.34 | 51.27 | 0.00 |
| HYD6       | 0.00 | 146.98 | 50.89 | 0.00 |
| TEE-BEND37 | 0.00 | 147.00 | 50.89 | 0.00 |
| TEE-BEND50 | 0.00 | 147.31 | 51.20 | 0.00 |
| TEE-BEND33 | 0.00 | 146.98 | 50.86 | 0.00 |
| TEE-BEND17 | 0.00 | 139.74 | 43.58 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 147.42 | 51.27      | 0.00    |
| TEE-BEND49 | 0.00       | 147.31 | 51.15      | 0.00    |
| TEE-BEND48 | 0.00       | 147.31 | 51.14      | 0.00    |
| TEE-BEND12 | 0.00       | 143.27 | 47.09      | 0.00    |
| TEE-BEND40 | 0.00       | 147.48 | 51.29      | 0.00    |
| TEE-BEND20 | 0.00       | 147.42 | 51.23      | 0.00    |
| TEE-BEND38 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND57 | 0.00       | 147.34 | 51.14      | 0.00    |
| TEE-BEND56 | 0.00       | 147.33 | 51.12      | 0.00    |
| TEE-BEND58 | 0.00       | 147.34 | 51.11      | 0.00    |
| TEE-BEND32 | 0.00       | 147.34 | 51.10      | 0.00    |
| TEE-BEND31 | 0.00       | 147.34 | 51.08      | 0.00    |
| TEE-BEND30 | 0.00       | 147.34 | 51.06      | 0.00    |
| HYD5       | 0.00       | 147.34 | 51.04      | 0.00    |
| CRU-8      | 0.04       | 139.74 | 43.39      | 0.00    |
| TEE-BEND28 | 0.00       | 147.34 | 50.99      | 0.00    |
| CRU-10     | 0.04       | 147.42 | 51.07      | 0.00    |
| TEE-BEND39 | 0.00       | 147.51 | 51.14      | 0.00    |
| TEE-BEND26 | 0.00       | 147.34 | 50.97      | 0.00    |
| TEE-BEND15 | 0.00       | 135.75 | 39.37      | 0.00    |
| TEE-BEND29 | 0.00       | 147.34 | 50.94      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 143.27 | 46    | 0.00           |
| TEE-BEND59 | 0.00   | 147.35 | 50.94 | 0.00           |
| TEE-BEND27 | 0.00   | 147.34 | 50.90 | 0.00           |
| TEE-BEND41 | 0.00   | 147.47 | 51.02 | 0.00           |
| TEE-BEND42 | 0.00   | 147.46 | 51.00 | 0.00           |
| CRU-6      | 0.11   | 147.51 | 51.02 | 0.00           |
| CRU-9      | 50.07  | 135.60 | 39.10 | 0.00           |
| CRU-7      | 0.08   | 143.27 | 46.78 | 0.00           |
| CRU-4      | 0.11   | 147.34 | 50.85 | 0.00           |
| CRU-3      | 0.17   | 147.34 | 50.84 | 0.00           |
| TEE-BEND6  | 0.00   | 147.51 | 50.86 | 0.00           |
| CRU-5      | 0.02   | 147.34 | 50.61 | 0.00           |
| TEE-BEND4  | 0.00   | 147.51 | 50.76 | 0.00           |
| TEE-BEND3  | 0.00   | 147.61 | 50.86 | 0.00           |
| TEE-BEND2  | 0.00   | 147.51 | 50.73 | 0.00           |
| TEE-BEND1  | 0.00   | 147.51 | 50.71 | 0.00           |
| CHAMBER1   | 0.00   | 147.53 | 50.71 | 0.00           |
| R1         | -21.61 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -29.40 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 29.40    | 0.94         | 6.54               | Open   |
| WM100   | 29.29    | 0.93         | 6.49               | Open   |
| WM101   | 4.56     | 0.15         | 0.21               | Open   |
| WM102   | 4.56     | 0.15         | 0.21               | Open   |
| WM103   | 4.26     | 0.14         | 0.18               | Open   |
| WM104   | 4.26     | 0.14         | 0.18               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.89     | 0.12         | 0.15               | Open   |
| WM113   | 3.89     | 0.12         | 0.15               | Open   |
| WM114   | 3.89     | 0.12         | 0.15               | Open   |
| WM115   | -21.57   | 0.69         | 3.68               | Open   |
| WM116   | -21.61   | 0.69         | 3.70               | Open   |
| WM117   | -21.61   | 0.69         | 3.69               | Open   |
| WM118   | -21.61   | 0.69         | 3.70               | Open   |
| WM119   | -21.61   | 0.69         | 3.70               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM123 | 0.11   | 0.00 | 0.00 | Open |
| WM124 | 0.11   | 0.00 | 0.00 | Open |
| WM125 | 24.74  | 0.79 | 4.75 | Open |
| WM126 | 24.74  | 0.79 | 4.75 | Open |
| WM127 | 24.74  | 0.79 | 4.75 | Open |
| WM128 | 24.74  | 0.79 | 4.75 | Open |
| WM129 | 24.74  | 0.79 | 4.75 | Open |
| WM130 | -25.45 | 0.81 | 5.01 | Open |
| WM131 | -25.45 | 0.81 | 5.01 | Open |
| WM132 | -0.02  | 0.00 | 0.00 | Open |
| WM133 | 0.30   | 0.01 | 0.00 | Open |
| WM134 | 0.30   | 0.01 | 0.00 | Open |
| WM135 | 0.28   | 0.01 | 0.00 | Open |
| WM136 | 0.28   | 0.01 | 0.00 | Open |
| WM137 | 0.28   | 0.01 | 0.00 | Open |
| WM138 | 0.11   | 0.01 | 0.00 | Open |
| WM139 | -0.17  | 0.01 | 0.00 | Open |
| WM140 | -0.17  | 0.01 | 0.00 | Open |
| WM141 | -0.17  | 0.01 | 0.00 | Open |
| WM142 | 0.00   | 0.00 | 0.00 | Open |
| WM143 | 0.00   | 0.00 | 0.00 | Open |
| WM144 | -0.14  | 0.00 | 0.00 | Open |
| WM145 | -0.14  | 0.00 | 0.00 | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | -21.57   | 0.69         | 3.68               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 0.04     | 0.00         | 0.00               | Open      |
| WM150   | 0.04     | 0.00         | 0.00               | Open      |
| WM151   | 0.04     | 0.00         | 0.00               | Open      |
| WM152   | 50.19    | 2.84         | 85.28              | Open      |
| WM153   | 50.11    | 2.84         | 85.03              | Open      |
| WM154   | 50.07    | 2.83         | 84.90              | Open      |
| WM155   | 50.07    | 2.83         | 84.90              | Open      |
| WM156   | 50.07    | 2.83         | 84.90              | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 29.40    | 0.94         | 6.54               | Open      |
| WM165   | -21.61   | 0.69         | 3.70               | Open      |
| 1       | 21.61    | 0.00         | -147.48            | Open Pump |

## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |
| TEE-BEND18 | 0.00       | 143.27 | 47.59      | 0.00    |
| TEE-BEND46 | 0.00       | 147.31 | 51.51      | 0.00    |
| TEE-BEND53 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND47 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND22 | 0.00       | 147.34 | 51.46      | 0.00    |
| CRU-1      | 0.23       | 147.31 | 51.39      | 0.00    |
| TEE-BEND52 | 0.00       | 147.31 | 51.37      | 0.00    |
| HYD3       | 0.00       | 147.31 | 51.34      | 0.00    |
| TEE-BEND45 | 0.00       | 147.30 | 51.32      | 0.00    |
| TEE-BEND16 | 0.00       | 135.93 | 39.93      | 0.00    |
| HYD2       | 0.00       | 147.33 | 51.32      | 0.00    |
| HYD7       | 0.00       | 146.90 | 50.87      | 0.00    |
| TEE-BEND51 | 0.00       | 147.31 | 51.28      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 146.69 | 50.63      | 0.00    |
| TEE-BEND36 | 0.00       | 146.97 | 50.90      | 0.00    |
| TEE-BEND55 | 0.00       | 147.31 | 51.24      | 0.00    |
| TEE-BEND35 | 0.00       | 146.90 | 50.83      | 0.00    |
| HYD1       | 0.00       | 147.34 | 51.27      | 0.00    |
| HYD6       | 0.00       | 146.98 | 50.89      | 0.00    |
| TEE-BEND37 | 0.00       | 147.00 | 50.89      | 0.00    |
| TEE-BEND50 | 0.00       | 147.31 | 51.20      | 0.00    |
| TEE-BEND33 | 0.00       | 146.98 | 50.86      | 0.00    |
| TEE-BEND17 | 0.00       | 139.74 | 43.58      | 0.00    |
| TEE-BEND21 | 0.00       | 147.42 | 51.27      | 0.00    |
| TEE-BEND49 | 0.00       | 147.31 | 51.15      | 0.00    |
| TEE-BEND48 | 0.00       | 147.31 | 51.14      | 0.00    |
| TEE-BEND12 | 0.00       | 143.27 | 47.09      | 0.00    |
| TEE-BEND40 | 0.00       | 147.48 | 51.29      | 0.00    |
| TEE-BEND20 | 0.00       | 147.42 | 51.23      | 0.00    |
| TEE-BEND38 | 0.00       | 147.30 | 51.10      | 0.00    |
| TEE-BEND57 | 0.00       | 147.34 | 51.14      | 0.00    |



|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND56 | 0.00  | 147.33 | 51.11 | 0.00 |
| TEE-BEND58 | 0.00  | 147.34 | 51.11 | 0.00 |
| TEE-BEND32 | 0.00  | 147.34 | 51.10 | 0.00 |
| TEE-BEND31 | 0.00  | 147.34 | 51.08 | 0.00 |
| TEE-BEND30 | 0.00  | 147.34 | 51.06 | 0.00 |
| HYD5       | 0.00  | 147.34 | 51.04 | 0.00 |
| CRU-8      | 0.04  | 139.74 | 43.39 | 0.00 |
| TEE-BEND28 | 0.00  | 147.34 | 50.99 | 0.00 |
| CRU-10     | 0.04  | 147.42 | 51.07 | 0.00 |
| TEE-BEND39 | 0.00  | 147.51 | 51.14 | 0.00 |
| TEE-BEND26 | 0.00  | 147.34 | 50.97 | 0.00 |
| TEE-BEND15 | 0.00  | 135.75 | 39.37 | 0.00 |
| TEE-BEND29 | 0.00  | 147.34 | 50.94 | 0.00 |
| TEE-BEND13 | 0.00  | 143.27 | 46.87 | 0.00 |
| TEE-BEND59 | 0.00  | 147.35 | 50.94 | 0.00 |
| TEE-BEND27 | 0.00  | 147.34 | 50.90 | 0.00 |
| TEE-BEND41 | 0.00  | 147.47 | 51.02 | 0.00 |
| TEE-BEND42 | 0.00  | 147.46 | 51.00 | 0.00 |
| CRU-6      | 0.11  | 147.51 | 51.02 | 0.00 |
| CRU-9      | 50.07 | 135.60 | 39.10 | 0.00 |
| CRU-7      | 0.08  | 143.27 | 46.78 | 0.00 |
| CRU-4      | 0.11  | 147.34 | 50.85 | 0.00 |
| CRU-3      | 0.17  | 147.34 | 50.84 | 0.00 |
| TEE-BEND6  | 0.00  | 147.51 | 50.86 | 0.00 |
| CRU-5      | 0.02  | 147.34 | 50.61 | 0.00 |
| TEE-BEND4  | 0.00  | 147.51 | 50.76 | 0.00 |
| TEE-BEND3  | 0.00  | 147.61 | 50.86 | 0.00 |
| TEE-BEND2  | 0.00  | 147.51 | 50.73 | 0.00 |
| TEE-BEND1  | 0.00  | 147.51 | 50.71 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.53 | 50.71      | 0.00           |
| R1       | -21.61     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -29.40     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 29.40    | 0.94         | 6.54          | Open   |
| WM100   | 29.29    | 0.93         | 6.49          | Open   |
| WM101   | 4.56     | 0.15         | 0.21          | Open   |
| WM102   | 4.56     | 0.15         | 0.21          | Open   |
| WM103   | 4.26     | 0.14         | 0.18          | Open   |
| WM104   | 4.26     | 0.14         | 0.18          | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM105 | -0.23  | 0.01 | 0.00 | Open |
| WM106 | -0.23  | 0.01 | 0.00 | Open |
| WM107 | -0.23  | 0.01 | 0.00 | Open |
| WM108 | -0.23  | 0.01 | 0.00 | Open |
| WM109 | -0.23  | 0.01 | 0.00 | Open |
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | 3.89   | 0.12 | 0.15 | Open |
| WM113 | 3.89   | 0.12 | 0.15 | Open |
| WM114 | 3.89   | 0.12 | 0.15 | Open |
| WM115 | -21.57 | 0.69 | 3.68 | Open |
| WM116 | -21.61 | 0.69 | 3.70 | Open |
| WM117 | -21.61 | 0.69 | 3.69 | Open |
| WM118 | -21.61 | 0.69 | 3.70 | Open |
| WM119 | -21.61 | 0.69 | 3.70 | Open |
| WM120 | 0.11   | 0.00 | 0.00 | Open |
| WM121 | 0.11   | 0.00 | 0.00 | Open |
| WM122 | 0.11   | 0.00 | 0.00 | Open |
| WM123 | 0.11   | 0.00 | 0.00 | Open |
| WM124 | 0.11   | 0.00 | 0.00 | Open |
| WM125 | 24.74  | 0.79 | 4.75 | Open |
| WM126 | 24.74  | 0.79 | 4.75 | Open |
| WM127 | 24.74  | 0.79 | 4.75 | Open |
| WM128 | 24.74  | 0.79 | 4.75 | Open |
| WM129 | 24.74  | 0.79 | 4.75 | Open |
| WM130 | -25.45 | 0.81 | 5.01 | Open |
| WM131 | -25.45 | 0.81 | 5.01 | Open |
| WM132 | -0.02  | 0.00 | 0.00 | Open |
| WM133 | 0.30   | 0.01 | 0.00 | Open |
| WM134 | 0.30   | 0.01 | 0.00 | Open |
| WM135 | 0.28   | 0.01 | 0.00 | Open |
| WM136 | 0.28   | 0.01 | 0.00 | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | -21.57   | 0.69         | 3.68               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 50.19  | 2.84 | 85.28   | Open      |
| WM153 | 50.11  | 2.84 | 85.03   | Open      |
| WM154 | 50.07  | 2.83 | 84.90   | Open      |
| WM155 | 50.07  | 2.83 | 84.90   | Open      |
| WM156 | 50.07  | 2.83 | 84.90   | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 29.40  | 0.94 | 6.54    | Open      |
| WM165 | -21.61 | 0.69 | 3.70    | Open      |
| 1     | 21.61  | 0.00 | -147.48 | Open Pump |
| 2     | 29.40  | 0.00 | -147.61 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.31 | 51.95      | 0.00    |
| TEE-BEND24 | 0.00       | 147.31 | 51.95      | 0.00    |
| TEE-BEND23 | 0.00       | 147.31 | 51.87      | 0.00    |
| TEE-BEND43 | 0.00       | 147.43 | 51.96      | 0.00    |
| TEE-BEND44 | 0.00       | 147.42 | 51.88      | 0.00    |
| CHAMBER2   | 0.00       | 147.45 | 51.88      | 0.00    |
| TEE-BEND18 | 0.00       | 143.27 | 47.59      | 0.00    |
| TEE-BEND46 | 0.00       | 147.31 | 51.51      | 0.00    |
| TEE-BEND53 | 0.00       | 147.31 | 51.44      | 0.00    |
| TEE-BEND47 | 0.00       | 147.31 | 51.44      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.34 | 51.46      | 0.00    |
| CRU-1      | 0.23       | 147.31 | 51.39      | 0.00    |
| TEE-BEND52 | 0.00       | 147.31 | 51.37      | 0.00    |
| HYD3       | 0.00       | 147.31 | 51.34      | 0.00    |
| TEE-BEND45 | 0.00       | 147.30 | 51.32      | 0.00    |
| TEE-BEND16 | 0.00       | 135.93 | 39.93      | 0.00    |
| HYD2       | 0.00       | 147.33 | 51.32      | 0.00    |
| HYD7       | 0.00       | 146.90 | 50.87      | 0.00    |
| TEE-BEND51 | 0.00       | 147.31 | 51.28      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND34 | 0.00  | 146.69 | 50.00 | 0.00 |
| TEE-BEND36 | 0.00  | 146.97 | 50.90 | 0.00 |
| TEE-BEND55 | 0.00  | 147.31 | 51.24 | 0.00 |
| TEE-BEND35 | 0.00  | 146.90 | 50.83 | 0.00 |
| HYD1       | 0.00  | 147.34 | 51.27 | 0.00 |
| HYD6       | 0.00  | 146.98 | 50.89 | 0.00 |
| TEE-BEND37 | 0.00  | 147.00 | 50.89 | 0.00 |
| TEE-BEND50 | 0.00  | 147.31 | 51.20 | 0.00 |
| TEE-BEND33 | 0.00  | 146.98 | 50.86 | 0.00 |
| TEE-BEND17 | 0.00  | 139.74 | 43.58 | 0.00 |
| TEE-BEND21 | 0.00  | 147.42 | 51.27 | 0.00 |
| TEE-BEND49 | 0.00  | 147.31 | 51.15 | 0.00 |
| TEE-BEND48 | 0.00  | 147.31 | 51.14 | 0.00 |
| TEE-BEND12 | 0.00  | 143.27 | 47.09 | 0.00 |
| TEE-BEND40 | 0.00  | 147.48 | 51.29 | 0.00 |
| TEE-BEND20 | 0.00  | 147.42 | 51.23 | 0.00 |
| TEE-BEND38 | 0.00  | 147.30 | 51.10 | 0.00 |
| TEE-BEND57 | 0.00  | 147.34 | 51.14 | 0.00 |
| TEE-BEND56 | 0.00  | 147.33 | 51.12 | 0.00 |
| TEE-BEND58 | 0.00  | 147.34 | 51.11 | 0.00 |
| TEE-BEND32 | 0.00  | 147.34 | 51.10 | 0.00 |
| TEE-BEND31 | 0.00  | 147.34 | 51.08 | 0.00 |
| TEE-BEND30 | 0.00  | 147.34 | 51.06 | 0.00 |
| HYD5       | 0.00  | 147.34 | 51.04 | 0.00 |
| CRU-8      | 0.04  | 139.74 | 43.39 | 0.00 |
| TEE-BEND28 | 0.00  | 147.34 | 50.99 | 0.00 |
| CRU-10     | 0.04  | 147.42 | 51.07 | 0.00 |
| TEE-BEND39 | 0.00  | 147.51 | 51.14 | 0.00 |
| TEE-BEND26 | 0.00  | 147.34 | 50.97 | 0.00 |
| TEE-BEND15 | 0.00  | 135.75 | 39.37 | 0.00 |
| TEE-BEND29 | 0.00  | 147.34 | 50.94 | 0.00 |
| TEE-BEND13 | 0.00  | 143.27 | 46.87 | 0.00 |
| TEE-BEND59 | 0.00  | 147.35 | 50.94 | 0.00 |
| TEE-BEND27 | 0.00  | 147.34 | 50.90 | 0.00 |
| TEE-BEND41 | 0.00  | 147.47 | 51.02 | 0.00 |
| TEE-BEND42 | 0.00  | 147.46 | 51.00 | 0.00 |
| CRU-6      | 0.11  | 147.51 | 51.02 | 0.00 |
| CRU-9      | 50.07 | 135.60 | 39.10 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 143.27 | 46.78      | 0.00    |
| CRU-4     | 0.11       | 147.34 | 50.85      | 0.00    |
| CRU-3     | 0.17       | 147.34 | 50.84      | 0.00    |
| TEE-BEND6 | 0.00       | 147.51 | 50.86      | 0.00    |
| CRU-5     | 0.02       | 147.34 | 50.61      | 0.00    |
| TEE-BEND4 | 0.00       | 147.51 | 50.76      | 0.00    |

|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.61 | 50.73 | 0.00           |
| TEE-BEND2 | 0.00   | 147.51 | 50.73 | 0.00           |
| TEE-BEND1 | 0.00   | 147.51 | 50.71 | 0.00           |
| CHAMBER1  | 0.00   | 147.53 | 50.71 | 0.00           |
| R1        | -21.61 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -29.40 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 29.40    | 0.94         | 6.54               | Open   |
| WM100   | 29.29    | 0.93         | 6.49               | Open   |
| WM101   | 4.56     | 0.15         | 0.21               | Open   |
| WM102   | 4.56     | 0.15         | 0.21               | Open   |
| WM103   | 4.26     | 0.14         | 0.18               | Open   |
| WM104   | 4.26     | 0.14         | 0.18               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 3.89     | 0.12         | 0.15               | Open   |
| WM113   | 3.89     | 0.12         | 0.15               | Open   |
| WM114   | 3.89     | 0.12         | 0.15               | Open   |
| WM115   | -21.57   | 0.69         | 3.68               | Open   |
| WM116   | -21.61   | 0.69         | 3.70               | Open   |
| WM117   | -21.61   | 0.69         | 3.69               | Open   |
| WM118   | -21.61   | 0.69         | 3.70               | Open   |
| WM119   | -21.61   | 0.69         | 3.70               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 24.74    | 0.79         | 4.75               | Open   |
| WM126   | 24.74    | 0.79         | 4.75               | Open   |
| WM127   | 24.74    | 0.79         | 4.75               | Open   |



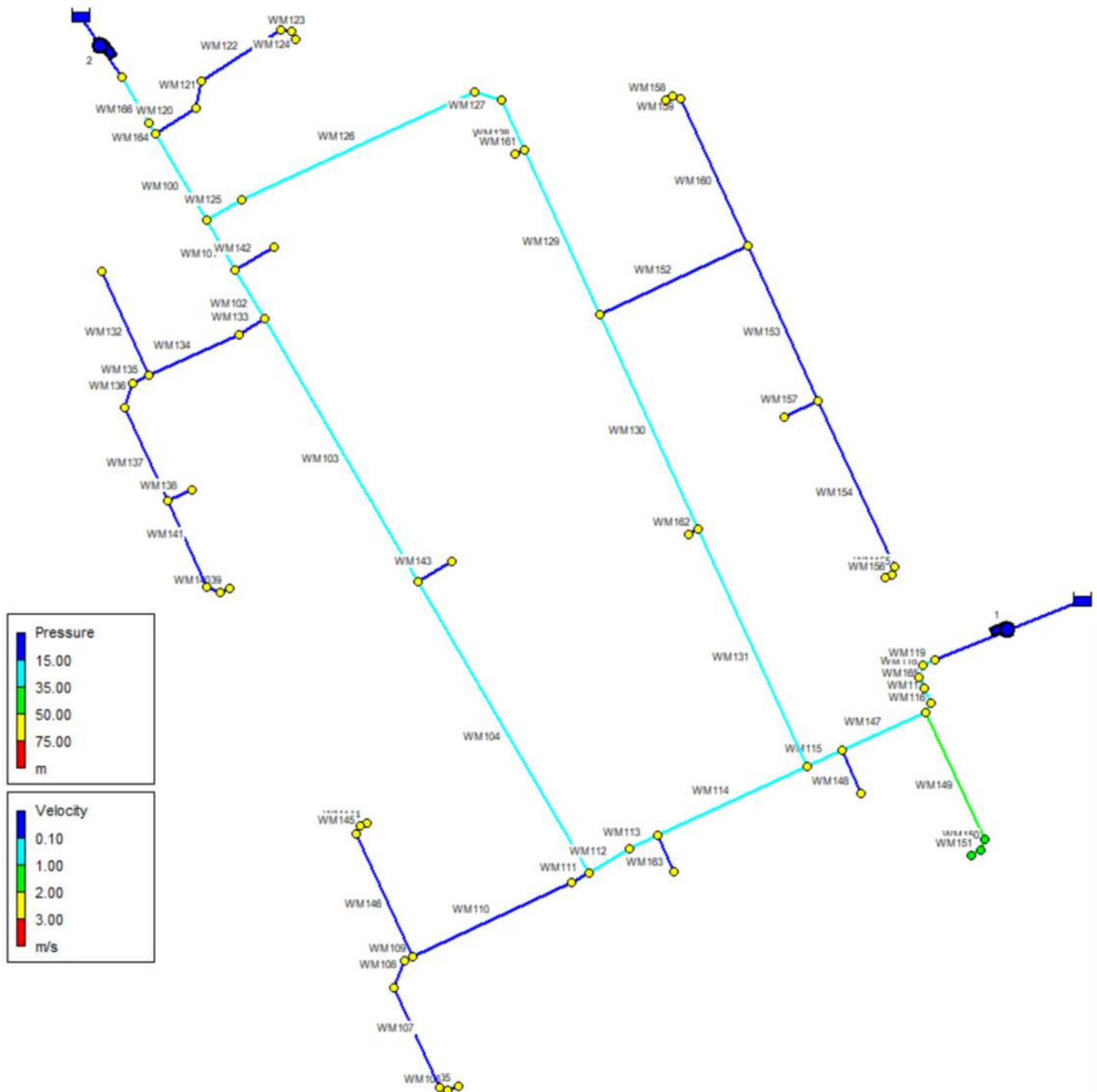
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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | 24.74    | 0.79         | 4.75               | Open   |
| WM129   | 24.74    | 0.79         | 4.75               | Open   |
| WM130   | -25.45   | 0.81         | 5.01               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | -25.45 | 0.81 | 5       | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 0.30   | 0.01 | 0.00    | Open      |
| WM134 | 0.30   | 0.01 | 0.00    | Open      |
| WM135 | 0.28   | 0.01 | 0.00    | Open      |
| WM136 | 0.28   | 0.01 | 0.00    | Open      |
| WM137 | 0.28   | 0.01 | 0.00    | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.00    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | -21.57 | 0.69 | 3.68    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 0.04   | 0.00 | 0.00    | Open      |
| WM150 | 0.04   | 0.00 | 0.00    | Open      |
| WM151 | 0.04   | 0.00 | 0.00    | Open      |
| WM152 | 50.19  | 2.84 | 85.28   | Open      |
| WM153 | 50.11  | 2.84 | 85.03   | Open      |
| WM154 | 50.07  | 2.83 | 84.90   | Open      |
| WM155 | 50.07  | 2.83 | 84.90   | Open      |
| WM156 | 50.07  | 2.83 | 84.90   | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 29.40  | 0.94 | 6.54    | Open      |
| WM165 | -21.61 | 0.69 | 3.70    | Open      |
| 1     | 21.61  | 0.00 | -147.48 | Open Pump |
| 2     | 29.40  | 0.00 | -147.61 | Open Pump |

## EPANET Model Schematic Maximum Day Plus Fire Demand @ CR10



```
*****
*                               E P A N E T                               *
*                               Hydraulic and Water Quality                 *
*                               Analysis for Pipe Networks                   *
*                               Version 2.2                                 *
*****
```

Input File: 263560\_Proposed Conditions - Max Day + Fire(CRU10)+pumps.net

Link - Node Table:

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM166   | TEE-BEND3  | CHAMBER1   | 13.008   | 200         |
| WM100   | TEE-BEND2  | TEE-BEND59 | 24.428   | 200         |
| WM101   | TEE-BEND59 | TEE-BEND58 | 14.105   | 200         |
| WM102   | TEE-BEND58 | TEE-BEND57 | 14.07    | 200         |
| WM103   | TEE-BEND57 | TEE-BEND56 | 74.594   | 200         |
| WM104   | TEE-BEND56 | TEE-BEND55 | 83.148   | 200         |
| WM105   | CRU-1      | TEE-BEND53 | 2.742    | 200         |
| WM106   | TEE-BEND53 | TEE-BEND52 | 2.121    | 200         |
| WM107   | TEE-BEND52 | TEE-BEND51 | 27.06    | 200         |
| WM108   | TEE-BEND51 | TEE-BEND50 | 7.071    | 200         |
| WM109   | TEE-BEND50 | TEE-BEND49 | 2.273    | 200         |
| WM110   | TEE-BEND49 | TEE-BEND48 | 43.09    | 200         |
| WM111   | TEE-BEND48 | TEE-BEND55 | 5.039    | 200         |
| WM112   | TEE-BEND55 | TEE-BEND47 | 11.407   | 200         |
| WM113   | TEE-BEND47 | TEE-BEND46 | 7.671    | 200         |
| WM114   | TEE-BEND46 | TEE-BEND45 | 40.486   | 200         |
| WM115   | TEE-BEND45 | TEE-BEND22 | 9.344    | 200         |
| WM116   | TEE-BEND44 | TEE-BEND43 | 2.594    | 200         |
| WM117   | TEE-BEND43 | CHAMBER2   | 4.079    | 200         |
| WM118   | TEE-BEND42 | TEE-BEND41 | 3.05     | 200         |
| WM119   | TEE-BEND41 | TEE-BEND40 | 3.256    | 200         |
| WM120   | TEE-BEND2  | TEE-BEND6  | 11.711   | 200         |
| WM121   | TEE-BEND6  | TEE-BEND1  | 6.787    | 200         |
| WM122   | TEE-BEND1  | TEE-BEND4  | 23.393   | 200         |
| WM123   | TEE-BEND4  | TEE-BEND39 | 2.505    | 200         |
| WM124   | TEE-BEND39 | CRU-6      | 2.125    | 200         |
| WM125   | TEE-BEND59 | TEE-BEND38 | 10.059   | 200         |
| WM126   | TEE-BEND38 | TEE-BEND37 | 63.282   | 200         |
| WM127   | TEE-BEND37 | TEE-BEND36 | 6.851    | 200         |
| WM128   | TEE-BEND36 | TEE-BEND35 | 13.346   | 200         |
| WM129   | TEE-BEND35 | TEE-BEND34 | 44.459   | 200         |
| WM130   | TEE-BEND34 | TEE-BEND33 | 58.093   | 200         |
| WM131   | TEE-BEND33 | TEE-BEND45 | 64.037   | 200         |
| WM132   | CRU-5      | TEE-BEND32 | 28.008   | 150         |
| WM133   | TEE-BEND57 | TEE-BEND31 | 7.36     | 200         |



|       |            |            |       |     |
|-------|------------|------------|-------|-----|
| WM134 | TEE-BEND31 | TEE-BEND32 | 24.33 | 200 |
| WM135 | TEE-BEND32 | TEE-BEND30 | 4.156 | 200 |



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Link - Node Table: (continued)

| Link ID | Start Node | End Node   | Length m | Diameter mm |
|---------|------------|------------|----------|-------------|
| WM136   | TEE-BEND30 | TEE-BEND29 | 6.364    | 200         |
| WM137   | TEE-BEND29 | TEE-BEND28 | 25.455   | 200         |
| WM138   | TEE-BEND28 | CRU-4      | 6.415    | 150         |
| WM139   | CRU-3      | TEE-BEND27 | 2.385    | 200         |
| WM140   | TEE-BEND27 | TEE-BEND26 | 3.536    | 200         |
| WM141   | TEE-BEND26 | TEE-BEND28 | 23.086   | 200         |
| WM142   | TEE-BEND58 | HYD1       | 10.887   | 150         |
| WM143   | TEE-BEND56 | HYD2       | 9.503    | 150         |
| WM144   | CRU-2      | TEE-BEND24 | 1.762    | 200         |
| WM145   | TEE-BEND24 | TEE-BEND23 | 2.121    | 200         |
| WM146   | TEE-BEND23 | TEE-BEND49 | 32.909   | 200         |
| WM147   | TEE-BEND22 | TEE-BEND44 | 22.758   | 200         |
| WM148   | TEE-BEND22 | HYD5       | 11.496   | 150         |
| WM149   | TEE-BEND44 | TEE-BEND21 | 34.44    | 150         |
| WM150   | TEE-BEND21 | TEE-BEND20 | 2.828    | 150         |
| WM151   | TEE-BEND20 | CRU-10     | 2.565    | 150         |
| WM152   | TEE-BEND34 | TEE-BEND18 | 40.078   | 150         |
| WM153   | TEE-BEND18 | TEE-BEND17 | 41.623   | 150         |
| WM154   | TEE-BEND17 | TEE-BEND16 | 44.771   | 150         |
| WM155   | TEE-BEND16 | TEE-BEND15 | 2.121    | 150         |
| WM156   | TEE-BEND15 | CRU-9      | 1.839    | 150         |
| WM157   | TEE-BEND17 | CRU-8      | 9.273    | 150         |
| WM158   | CRU-7      | TEE-BEND13 | 1.895    | 150         |
| WM159   | TEE-BEND13 | TEE-BEND12 | 2.082    | 150         |
| WM160   | TEE-BEND12 | TEE-BEND18 | 39.698   | 150         |
| WM161   | TEE-BEND35 | HYD7       | 2.581    | 150         |
| WM162   | TEE-BEND33 | HYD6       | 2.581    | 150         |
| WM163   | TEE-BEND46 | HYD3       | 9.67     | 150         |
| WM164   | CHAMBER1   | TEE-BEND2  | 3.351    | 200         |
| WM165   | CHAMBER2   | TEE-BEND42 | 2.85     | 200         |
| 1       | R1         | TEE-BEND40 | #N/A     | #N/A Pump   |
| 2       | R2         | TEE-BEND3  | #N/A     | #N/A Pump   |

Energy Usage:

| Pump           | Usage Factor | Avg. Effic. | Kw-hr /m3 | Avg. Kw | Peak Kw | Cost /day |
|----------------|--------------|-------------|-----------|---------|---------|-----------|
| 1              | 100.00       | 75.00       | 0.54      | 33.80   | 33.80   | 0.00      |
| 2              | 100.00       | 75.00       | 0.54      | 32.49   | 32.49   | 0.00      |
| Demand Charge: |              |             |           |         |         | 0.00      |



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Node Results at 0:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.63 | 52.27      | 0.00    |
| TEE-BEND24 | 0.00       | 147.63 | 52.27      | 0.00    |
| TEE-BEND23 | 0.00       | 147.63 | 52.19      | 0.00    |
| TEE-BEND43 | 0.00       | 147.54 | 52.07      | 0.00    |
| TEE-BEND44 | 0.00       | 147.53 | 51.99      | 0.00    |
| CHAMBER2   | 0.00       | 147.55 | 51.99      | 0.00    |
| TEE-BEND18 | 0.00       | 147.67 | 51.99      | 0.00    |
| TEE-BEND46 | 0.00       | 147.62 | 51.82      | 0.00    |
| TEE-BEND53 | 0.00       | 147.63 | 51.76      | 0.00    |
| TEE-BEND47 | 0.00       | 147.63 | 51.76      | 0.00    |
| TEE-BEND22 | 0.00       | 147.58 | 51.71      | 0.00    |
| CRU-1      | 0.23       | 147.63 | 51.71      | 0.00    |
| TEE-BEND52 | 0.00       | 147.63 | 51.69      | 0.00    |
| HYD3       | 0.00       | 147.62 | 51.65      | 0.00    |
| TEE-BEND45 | 0.00       | 147.60 | 51.62      | 0.00    |
| TEE-BEND16 | 0.00       | 147.67 | 51.67      | 0.00    |
| HYD2       | 0.00       | 147.69 | 51.68      | 0.00    |
| HYD7       | 0.00       | 147.70 | 51.67      | 0.00    |
| TEE-BEND51 | 0.00       | 147.63 | 51.60      | 0.00    |
| TEE-BEND34 | 0.00       | 147.67 | 51.61      | 0.00    |
| TEE-BEND36 | 0.00       | 147.71 | 51.64      | 0.00    |
| TEE-BEND55 | 0.00       | 147.63 | 51.57      | 0.00    |
| TEE-BEND35 | 0.00       | 147.70 | 51.63      | 0.00    |
| HYD1       | 0.00       | 147.74 | 51.67      | 0.00    |
| HYD6       | 0.00       | 147.64 | 51.54      | 0.00    |
| TEE-BEND37 | 0.00       | 147.71 | 51.60      | 0.00    |
| TEE-BEND50 | 0.00       | 147.63 | 51.52      | 0.00    |
| TEE-BEND33 | 0.00       | 147.64 | 51.52      | 0.00    |
| TEE-BEND17 | 0.00       | 147.67 | 51.51      | 0.00    |
| TEE-BEND21 | 0.00       | 146.15 | 50.00      | 0.00    |
| TEE-BEND49 | 0.00       | 147.63 | 51.47      | 0.00    |
| TEE-BEND48 | 0.00       | 147.63 | 51.47      | 0.00    |
| TEE-BEND12 | 0.00       | 147.67 | 51.48      | 0.00    |
| TEE-BEND40 | 0.00       | 147.57 | 51.38      | 0.00    |
| TEE-BEND20 | 0.00       | 146.04 | 49.84      | 0.00    |
| TEE-BEND38 | 0.00       | 147.75 | 51.54      | 0.00    |
| TEE-BEND57 | 0.00       | 147.73 | 51.53      | 0.00    |
| TEE-BEND56 | 0.00       | 147.69 | 51.48      | 0.00    |
| TEE-BEND58 | 0.00       | 147.74 | 51.51      | 0.00    |
| TEE-BEND32 | 0.00       | 147.73 | 51.50      | 0.00    |
| TEE-BEND31 | 0.00       | 147.73 | 51.47      | 0.00    |
| TEE-BEND30 | 0.00       | 147.73 | 51.46      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| HYD5       | 0.00  | 147.58 | 51.33 | 0.00 |
| CRU-8      | 0.04  | 147.67 | 51.33 | 0.00 |
| TEE-BEND28 | 0.00  | 147.73 | 51.38 | 0.00 |
| CRU-10     | 33.37 | 145.94 | 49.59 | 0.00 |
| TEE-BEND39 | 0.00  | 147.81 | 51.44 | 0.00 |



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Node Results at 0:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND26 | 0.00       | 147.73 | 51.36      | 0.00           |
| TEE-BEND15 | 0.00       | 147.67 | 51.29      | 0.00           |
| TEE-BEND29 | 0.00       | 147.73 | 51.33      | 0.00           |
| TEE-BEND13 | 0.00       | 147.67 | 51.26      | 0.00           |
| TEE-BEND59 | 0.00       | 147.75 | 51.34      | 0.00           |
| TEE-BEND27 | 0.00       | 147.73 | 51.30      | 0.00           |
| TEE-BEND41 | 0.00       | 147.57 | 51.11      | 0.00           |
| TEE-BEND42 | 0.00       | 147.56 | 51.10      | 0.00           |
| CRU-6      | 0.11       | 147.81 | 51.32      | 0.00           |
| CRU-9      | 0.07       | 147.67 | 51.18      | 0.00           |
| CRU-7      | 0.08       | 147.67 | 51.18      | 0.00           |
| CRU-4      | 0.11       | 147.73 | 51.24      | 0.00           |
| CRU-3      | 0.17       | 147.73 | 51.24      | 0.00           |
| TEE-BEND6  | 0.00       | 147.81 | 51.16      | 0.00           |
| CRU-5      | 0.02       | 147.73 | 51.00      | 0.00           |
| TEE-BEND4  | 0.00       | 147.81 | 51.06      | 0.00           |
| TEE-BEND3  | 0.00       | 147.85 | 51.10      | 0.00           |
| TEE-BEND2  | 0.00       | 147.81 | 51.04      | 0.00           |
| TEE-BEND1  | 0.00       | 147.81 | 51.01      | 0.00           |
| CHAMBER1   | 0.00       | 147.82 | 51.00      | 0.00           |
| R1         | -17.53     | 0.00   | 0.00       | 0.00 Reservoir |
| R2         | -16.81     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 0:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 16.81    | 0.54         | 2.32          | Open   |
| WM100   | 16.70    | 0.53         | 2.29          | Open   |
| WM101   | 8.61     | 0.27         | 0.67          | Open   |
| WM102   | 8.61     | 0.27         | 0.67          | Open   |
| WM103   | 8.31     | 0.26         | 0.63          | Open   |
| WM104   | 8.31     | 0.26         | 0.63          | Open   |
| WM105   | -0.23    | 0.01         | 0.00          | Open   |
| WM106   | -0.23    | 0.01         | 0.00          | Open   |
| WM107   | -0.23    | 0.01         | 0.00          | Open   |
| WM108   | -0.23    | 0.01         | 0.00          | Open   |
| WM109   | -0.23    | 0.01         | 0.00          | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | 7.94   | 0.25 | 0.58 | Open |
| WM113 | 7.94   | 0.25 | 0.58 | Open |
| WM114 | 7.94   | 0.25 | 0.58 | Open |
| WM115 | 15.84  | 0.50 | 2.08 | Open |
| WM116 | -17.53 | 0.56 | 2.51 | Open |
| WM117 | -17.53 | 0.56 | 2.51 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM118   | -17.53   | 0.56         | 2.51               | Open   |
| WM119   | -17.53   | 0.56         | 2.51               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 8.09     | 0.26         | 0.60               | Open   |
| WM126   | 8.09     | 0.26         | 0.60               | Open   |
| WM127   | 8.09     | 0.26         | 0.60               | Open   |
| WM128   | 8.09     | 0.26         | 0.60               | Open   |
| WM129   | 8.09     | 0.26         | 0.60               | Open   |
| WM130   | 7.90     | 0.25         | 0.57               | Open   |
| WM131   | 7.90     | 0.25         | 0.57               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |
| WM136   | 0.28     | 0.01         | 0.00               | Open   |
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | 15.84    | 0.50         | 2.08               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |
| WM149   | 33.37    | 1.89         | 40.04              | Open   |
| WM150   | 33.37    | 1.89         | 40.05              | Open   |
| WM151   | 33.37    | 1.89         | 40.05              | Open   |
| WM152   | 0.19     | 0.01         | 0.00               | Open   |
| WM153   | 0.11     | 0.01         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM154 | 0.07  | 0.00 | 0.00 | Open |
| WM155 | 0.07  | 0.00 | 0.00 | Open |
| WM156 | 0.07  | 0.00 | 0.00 | Open |
| WM157 | 0.04  | 0.00 | 0.00 | Open |
| WM158 | -0.08 | 0.00 | 0.00 | Open |
| WM159 | -0.08 | 0.00 | 0.00 | Open |
| WM160 | -0.08 | 0.00 | 0.00 | Open |
| WM161 | 0.00  | 0.00 | 0.00 | Open |
| WM162 | 0.00  | 0.00 | 0.00 | Open |
| WM163 | 0.00  | 0.00 | 0.00 | Open |
| WM164 | 16.81 | 0.54 | 2.32 | Open |



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Link Results at 0:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM165   | -17.53   | 0.56         | 2.51               | Open      |
| 1       | 17.53    | 0.00         | -147.57            | Open Pump |
| 2       | 16.81    | 0.00         | -147.85            | Open Pump |

Node Results at 1:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.63 | 52.27      | 0.00    |
| TEE-BEND24 | 0.00       | 147.63 | 52.27      | 0.00    |
| TEE-BEND23 | 0.00       | 147.63 | 52.19      | 0.00    |
| TEE-BEND43 | 0.00       | 147.54 | 52.07      | 0.00    |
| TEE-BEND44 | 0.00       | 147.53 | 51.99      | 0.00    |
| CHAMBER2   | 0.00       | 147.55 | 51.99      | 0.00    |
| TEE-BEND18 | 0.00       | 147.67 | 51.99      | 0.00    |
| TEE-BEND46 | 0.00       | 147.62 | 51.82      | 0.00    |
| TEE-BEND53 | 0.00       | 147.63 | 51.76      | 0.00    |
| TEE-BEND47 | 0.00       | 147.63 | 51.76      | 0.00    |
| TEE-BEND22 | 0.00       | 147.58 | 51.71      | 0.00    |
| CRU-1      | 0.23       | 147.63 | 51.71      | 0.00    |
| TEE-BEND52 | 0.00       | 147.63 | 51.69      | 0.00    |
| HYD3       | 0.00       | 147.62 | 51.65      | 0.00    |
| TEE-BEND45 | 0.00       | 147.60 | 51.62      | 0.00    |
| TEE-BEND16 | 0.00       | 147.67 | 51.67      | 0.00    |
| HYD2       | 0.00       | 147.69 | 51.68      | 0.00    |
| HYD7       | 0.00       | 147.70 | 51.67      | 0.00    |
| TEE-BEND51 | 0.00       | 147.63 | 51.60      | 0.00    |
| TEE-BEND34 | 0.00       | 147.67 | 51.61      | 0.00    |
| TEE-BEND36 | 0.00       | 147.71 | 51.64      | 0.00    |
| TEE-BEND55 | 0.00       | 147.63 | 51.57      | 0.00    |
| TEE-BEND35 | 0.00       | 147.70 | 51.63      | 0.00    |
| HYD1       | 0.00       | 147.74 | 51.67      | 0.00    |

|            |      |        |       |      |
|------------|------|--------|-------|------|
| HYD6       | 0.00 | 147.64 | 51.51 | 0.00 |
| TEE-BEND37 | 0.00 | 147.71 | 51.60 | 0.00 |
| TEE-BEND50 | 0.00 | 147.63 | 51.52 | 0.00 |
| TEE-BEND33 | 0.00 | 147.64 | 51.52 | 0.00 |
| TEE-BEND17 | 0.00 | 147.67 | 51.51 | 0.00 |
| TEE-BEND21 | 0.00 | 146.15 | 50.00 | 0.00 |
| TEE-BEND49 | 0.00 | 147.63 | 51.47 | 0.00 |
| TEE-BEND48 | 0.00 | 147.63 | 51.47 | 0.00 |
| TEE-BEND12 | 0.00 | 147.67 | 51.48 | 0.00 |
| TEE-BEND40 | 0.00 | 147.57 | 51.38 | 0.00 |
| TEE-BEND20 | 0.00 | 146.04 | 49.84 | 0.00 |
| TEE-BEND38 | 0.00 | 147.75 | 51.54 | 0.00 |
| TEE-BEND57 | 0.00 | 147.73 | 51.53 | 0.00 |
| TEE-BEND56 | 0.00 | 147.69 | 51.48 | 0.00 |



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Node Results at 1:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality        |
|------------|------------|--------|------------|----------------|
| TEE-BEND58 | 0.00       | 147.74 | 51.51      | 0.00           |
| TEE-BEND32 | 0.00       | 147.73 | 51.50      | 0.00           |
| TEE-BEND31 | 0.00       | 147.73 | 51.47      | 0.00           |
| TEE-BEND30 | 0.00       | 147.73 | 51.46      | 0.00           |
| HYD5       | 0.00       | 147.58 | 51.28      | 0.00           |
| CRU-8      | 0.04       | 147.67 | 51.33      | 0.00           |
| TEE-BEND28 | 0.00       | 147.73 | 51.38      | 0.00           |
| CRU-10     | 33.37      | 145.94 | 49.59      | 0.00           |
| TEE-BEND39 | 0.00       | 147.81 | 51.44      | 0.00           |
| TEE-BEND26 | 0.00       | 147.73 | 51.36      | 0.00           |
| TEE-BEND15 | 0.00       | 147.67 | 51.29      | 0.00           |
| TEE-BEND29 | 0.00       | 147.73 | 51.33      | 0.00           |
| TEE-BEND13 | 0.00       | 147.67 | 51.26      | 0.00           |
| TEE-BEND59 | 0.00       | 147.75 | 51.34      | 0.00           |
| TEE-BEND27 | 0.00       | 147.73 | 51.30      | 0.00           |
| TEE-BEND41 | 0.00       | 147.57 | 51.11      | 0.00           |
| TEE-BEND42 | 0.00       | 147.56 | 51.10      | 0.00           |
| CRU-6      | 0.11       | 147.81 | 51.32      | 0.00           |
| CRU-9      | 0.07       | 147.67 | 51.18      | 0.00           |
| CRU-7      | 0.08       | 147.67 | 51.18      | 0.00           |
| CRU-4      | 0.11       | 147.73 | 51.24      | 0.00           |
| CRU-3      | 0.17       | 147.73 | 51.24      | 0.00           |
| TEE-BEND6  | 0.00       | 147.81 | 51.16      | 0.00           |
| CRU-5      | 0.02       | 147.73 | 51.00      | 0.00           |
| TEE-BEND4  | 0.00       | 147.81 | 51.06      | 0.00           |
| TEE-BEND3  | 0.00       | 147.85 | 51.10      | 0.00           |
| TEE-BEND2  | 0.00       | 147.81 | 51.04      | 0.00           |
| TEE-BEND1  | 0.00       | 147.81 | 51.01      | 0.00           |
| CHAMBER1   | 0.00       | 147.82 | 51.00      | 0.00           |
| R1         | -17.53     | 0.00   | 0.00       | 0.00 Reservoir |

R2 -16.81 0.00 0 0.00 Reservoir

Link Results at 1:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 16.81    | 0.54         | 2.32               | Open   |
| WM100   | 16.70    | 0.53         | 2.29               | Open   |
| WM101   | 8.61     | 0.27         | 0.67               | Open   |
| WM102   | 8.61     | 0.27         | 0.67               | Open   |
| WM103   | 8.31     | 0.26         | 0.63               | Open   |
| WM104   | 8.31     | 0.26         | 0.63               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 7.94     | 0.25         | 0.58               | Open   |
| WM113   | 7.94     | 0.25         | 0.58               | Open   |
| WM114   | 7.94     | 0.25         | 0.58               | Open   |
| WM115   | 15.84    | 0.50         | 2.08               | Open   |
| WM116   | -17.53   | 0.56         | 2.51               | Open   |
| WM117   | -17.53   | 0.56         | 2.51               | Open   |
| WM118   | -17.53   | 0.56         | 2.51               | Open   |
| WM119   | -17.53   | 0.56         | 2.51               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 8.09     | 0.26         | 0.60               | Open   |
| WM126   | 8.09     | 0.26         | 0.60               | Open   |
| WM127   | 8.09     | 0.26         | 0.60               | Open   |
| WM128   | 8.09     | 0.26         | 0.60               | Open   |
| WM129   | 8.09     | 0.26         | 0.60               | Open   |
| WM130   | 7.90     | 0.25         | 0.57               | Open   |
| WM131   | 7.90     | 0.25         | 0.57               | Open   |
| WM132   | -0.02    | 0.00         | 0.00               | Open   |
| WM133   | 0.30     | 0.01         | 0.00               | Open   |
| WM134   | 0.30     | 0.01         | 0.00               | Open   |
| WM135   | 0.28     | 0.01         | 0.00               | Open   |

|       |       |      |       |      |
|-------|-------|------|-------|------|
| WM136 | 0.28  | 0.01 | 0.00  | Open |
| WM137 | 0.28  | 0.01 | 0.00  | Open |
| WM138 | 0.11  | 0.01 | 0.00  | Open |
| WM139 | -0.17 | 0.01 | 0.00  | Open |
| WM140 | -0.17 | 0.01 | 0.00  | Open |
| WM141 | -0.17 | 0.01 | 0.00  | Open |
| WM142 | 0.00  | 0.00 | 0.00  | Open |
| WM143 | 0.00  | 0.00 | 0.00  | Open |
| WM144 | -0.14 | 0.00 | 0.00  | Open |
| WM145 | -0.14 | 0.00 | 0.00  | Open |
| WM146 | -0.14 | 0.00 | 0.00  | Open |
| WM147 | 15.84 | 0.50 | 2.08  | Open |
| WM148 | 0.00  | 0.00 | 0.00  | Open |
| WM149 | 33.37 | 1.89 | 40.04 | Open |
| WM150 | 33.37 | 1.89 | 40.04 | Open |
| WM151 | 33.37 | 1.89 | 40.05 | Open |
| WM152 | 0.19  | 0.01 | 0.00  | Open |
| WM153 | 0.11  | 0.01 | 0.00  | Open |
| WM154 | 0.07  | 0.00 | 0.00  | Open |
| WM155 | 0.07  | 0.00 | 0.00  | Open |



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Link Results at 1:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 16.81    | 0.54         | 2.32               | Open      |
| WM165   | -17.53   | 0.56         | 2.51               | Open      |
| 1       | 17.53    | 0.00         | -147.57            | Open Pump |
| 2       | 16.81    | 0.00         | -147.85            | Open Pump |

Node Results at 2:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.63 | 52.27      | 0.00    |
| TEE-BEND24 | 0.00       | 147.63 | 52.27      | 0.00    |
| TEE-BEND23 | 0.00       | 147.63 | 52.19      | 0.00    |
| TEE-BEND43 | 0.00       | 147.54 | 52.07      | 0.00    |
| TEE-BEND44 | 0.00       | 147.53 | 51.99      | 0.00    |
| CHAMBER2   | 0.00       | 147.55 | 51.99      | 0.00    |



|            |      |        |       |      |
|------------|------|--------|-------|------|
| TEE-BEND18 | 0.00 | 147.67 | 51.51 | 0.00 |
| TEE-BEND46 | 0.00 | 147.62 | 51.82 | 0.00 |
| TEE-BEND53 | 0.00 | 147.63 | 51.76 | 0.00 |
| TEE-BEND47 | 0.00 | 147.63 | 51.76 | 0.00 |
| TEE-BEND22 | 0.00 | 147.58 | 51.71 | 0.00 |
| CRU-1      | 0.23 | 147.63 | 51.71 | 0.00 |
| TEE-BEND52 | 0.00 | 147.63 | 51.69 | 0.00 |
| HYD3       | 0.00 | 147.62 | 51.65 | 0.00 |
| TEE-BEND45 | 0.00 | 147.60 | 51.62 | 0.00 |
| TEE-BEND16 | 0.00 | 147.67 | 51.67 | 0.00 |
| HYD2       | 0.00 | 147.69 | 51.68 | 0.00 |
| HYD7       | 0.00 | 147.70 | 51.67 | 0.00 |
| TEE-BEND51 | 0.00 | 147.63 | 51.60 | 0.00 |
| TEE-BEND34 | 0.00 | 147.67 | 51.61 | 0.00 |
| TEE-BEND36 | 0.00 | 147.71 | 51.64 | 0.00 |
| TEE-BEND55 | 0.00 | 147.63 | 51.57 | 0.00 |
| TEE-BEND35 | 0.00 | 147.70 | 51.63 | 0.00 |
| HYD1       | 0.00 | 147.74 | 51.67 | 0.00 |
| HYD6       | 0.00 | 147.64 | 51.54 | 0.00 |
| TEE-BEND37 | 0.00 | 147.71 | 51.60 | 0.00 |
| TEE-BEND50 | 0.00 | 147.63 | 51.52 | 0.00 |
| TEE-BEND33 | 0.00 | 147.64 | 51.52 | 0.00 |
| TEE-BEND17 | 0.00 | 147.67 | 51.51 | 0.00 |



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Node Results at 2:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND21 | 0.00       | 146.15 | 50.00      | 0.00    |
| TEE-BEND49 | 0.00       | 147.63 | 51.47      | 0.00    |
| TEE-BEND48 | 0.00       | 147.63 | 51.47      | 0.00    |
| TEE-BEND12 | 0.00       | 147.67 | 51.48      | 0.00    |
| TEE-BEND40 | 0.00       | 147.57 | 51.38      | 0.00    |
| TEE-BEND20 | 0.00       | 146.04 | 49.84      | 0.00    |
| TEE-BEND38 | 0.00       | 147.75 | 51.54      | 0.00    |
| TEE-BEND57 | 0.00       | 147.73 | 51.53      | 0.00    |
| TEE-BEND56 | 0.00       | 147.69 | 51.48      | 0.00    |
| TEE-BEND58 | 0.00       | 147.74 | 51.51      | 0.00    |
| TEE-BEND32 | 0.00       | 147.73 | 51.50      | 0.00    |
| TEE-BEND31 | 0.00       | 147.73 | 51.47      | 0.00    |
| TEE-BEND30 | 0.00       | 147.73 | 51.46      | 0.00    |
| HYD5       | 0.00       | 147.58 | 51.28      | 0.00    |
| CRU-8      | 0.04       | 147.67 | 51.33      | 0.00    |
| TEE-BEND28 | 0.00       | 147.73 | 51.38      | 0.00    |
| CRU-10     | 33.37      | 145.94 | 49.59      | 0.00    |
| TEE-BEND39 | 0.00       | 147.81 | 51.44      | 0.00    |
| TEE-BEND26 | 0.00       | 147.73 | 51.36      | 0.00    |
| TEE-BEND15 | 0.00       | 147.67 | 51.29      | 0.00    |
| TEE-BEND29 | 0.00       | 147.73 | 51.33      | 0.00    |

|            |        |        |       |                |
|------------|--------|--------|-------|----------------|
| TEE-BEND13 | 0.00   | 147.67 | 51.34 | 0.00           |
| TEE-BEND59 | 0.00   | 147.75 | 51.34 | 0.00           |
| TEE-BEND27 | 0.00   | 147.73 | 51.30 | 0.00           |
| TEE-BEND41 | 0.00   | 147.57 | 51.11 | 0.00           |
| TEE-BEND42 | 0.00   | 147.56 | 51.10 | 0.00           |
| CRU-6      | 0.11   | 147.81 | 51.32 | 0.00           |
| CRU-9      | 0.07   | 147.67 | 51.18 | 0.00           |
| CRU-7      | 0.08   | 147.67 | 51.18 | 0.00           |
| CRU-4      | 0.11   | 147.73 | 51.24 | 0.00           |
| CRU-3      | 0.17   | 147.73 | 51.24 | 0.00           |
| TEE-BEND6  | 0.00   | 147.81 | 51.16 | 0.00           |
| CRU-5      | 0.02   | 147.73 | 51.00 | 0.00           |
| TEE-BEND4  | 0.00   | 147.81 | 51.06 | 0.00           |
| TEE-BEND3  | 0.00   | 147.85 | 51.10 | 0.00           |
| TEE-BEND2  | 0.00   | 147.81 | 51.04 | 0.00           |
| TEE-BEND1  | 0.00   | 147.81 | 51.01 | 0.00           |
| CHAMBER1   | 0.00   | 147.82 | 51.00 | 0.00           |
| R1         | -17.53 | 0.00   | 0.00  | 0.00 Reservoir |
| R2         | -16.81 | 0.00   | 0.00  | 0.00 Reservoir |



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Link Results at 2:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 16.81    | 0.54         | 2.32               | Open   |
| WM100   | 16.70    | 0.53         | 2.29               | Open   |
| WM101   | 8.61     | 0.27         | 0.67               | Open   |
| WM102   | 8.61     | 0.27         | 0.67               | Open   |
| WM103   | 8.31     | 0.26         | 0.63               | Open   |
| WM104   | 8.31     | 0.26         | 0.63               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 7.94     | 0.25         | 0.58               | Open   |
| WM113   | 7.94     | 0.25         | 0.58               | Open   |
| WM114   | 7.94     | 0.25         | 0.58               | Open   |
| WM115   | 15.84    | 0.50         | 2.08               | Open   |
| WM116   | -17.53   | 0.56         | 2.51               | Open   |
| WM117   | -17.53   | 0.56         | 2.51               | Open   |
| WM118   | -17.53   | 0.56         | 2.51               | Open   |
| WM119   | -17.53   | 0.56         | 2.51               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |

|       |       |      |      |      |
|-------|-------|------|------|------|
| WM123 | 0.11  | 0.00 | 0.00 | Open |
| WM124 | 0.11  | 0.00 | 0.00 | Open |
| WM125 | 8.09  | 0.26 | 0.60 | Open |
| WM126 | 8.09  | 0.26 | 0.60 | Open |
| WM127 | 8.09  | 0.26 | 0.60 | Open |
| WM128 | 8.09  | 0.26 | 0.60 | Open |
| WM129 | 8.09  | 0.26 | 0.60 | Open |
| WM130 | 7.90  | 0.25 | 0.57 | Open |
| WM131 | 7.90  | 0.25 | 0.57 | Open |
| WM132 | -0.02 | 0.00 | 0.00 | Open |
| WM133 | 0.30  | 0.01 | 0.00 | Open |
| WM134 | 0.30  | 0.01 | 0.00 | Open |
| WM135 | 0.28  | 0.01 | 0.00 | Open |
| WM136 | 0.28  | 0.01 | 0.00 | Open |
| WM137 | 0.28  | 0.01 | 0.00 | Open |
| WM138 | 0.11  | 0.01 | 0.00 | Open |
| WM139 | -0.17 | 0.01 | 0.00 | Open |
| WM140 | -0.17 | 0.01 | 0.00 | Open |
| WM141 | -0.17 | 0.01 | 0.00 | Open |
| WM142 | 0.00  | 0.00 | 0.00 | Open |
| WM143 | 0.00  | 0.00 | 0.00 | Open |
| WM144 | -0.14 | 0.00 | 0.00 | Open |
| WM145 | -0.14 | 0.00 | 0.00 | Open |



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Link Results at 2:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status    |
|---------|----------|--------------|--------------------|-----------|
| WM146   | -0.14    | 0.00         | 0.00               | Open      |
| WM147   | 15.84    | 0.50         | 2.08               | Open      |
| WM148   | 0.00     | 0.00         | 0.00               | Open      |
| WM149   | 33.37    | 1.89         | 40.04              | Open      |
| WM150   | 33.37    | 1.89         | 40.05              | Open      |
| WM151   | 33.37    | 1.89         | 40.05              | Open      |
| WM152   | 0.19     | 0.01         | 0.00               | Open      |
| WM153   | 0.11     | 0.01         | 0.00               | Open      |
| WM154   | 0.07     | 0.00         | 0.00               | Open      |
| WM155   | 0.07     | 0.00         | 0.00               | Open      |
| WM156   | 0.07     | 0.00         | 0.00               | Open      |
| WM157   | 0.04     | 0.00         | 0.00               | Open      |
| WM158   | -0.08    | 0.00         | 0.00               | Open      |
| WM159   | -0.08    | 0.00         | 0.00               | Open      |
| WM160   | -0.08    | 0.00         | 0.00               | Open      |
| WM161   | 0.00     | 0.00         | 0.00               | Open      |
| WM162   | 0.00     | 0.00         | 0.00               | Open      |
| WM163   | 0.00     | 0.00         | 0.00               | Open      |
| WM164   | 16.81    | 0.54         | 2.32               | Open      |
| WM165   | -17.53   | 0.56         | 2.51               | Open      |
| 1       | 17.53    | 0.00         | -147.57            | Open Pump |

## Node Results at 3:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.63 | 52.27      | 0.00    |
| TEE-BEND24 | 0.00       | 147.63 | 52.27      | 0.00    |
| TEE-BEND23 | 0.00       | 147.63 | 52.19      | 0.00    |
| TEE-BEND43 | 0.00       | 147.54 | 52.07      | 0.00    |
| TEE-BEND44 | 0.00       | 147.53 | 51.99      | 0.00    |
| CHAMBER2   | 0.00       | 147.55 | 51.99      | 0.00    |
| TEE-BEND18 | 0.00       | 147.67 | 51.99      | 0.00    |
| TEE-BEND46 | 0.00       | 147.62 | 51.82      | 0.00    |
| TEE-BEND53 | 0.00       | 147.63 | 51.76      | 0.00    |
| TEE-BEND47 | 0.00       | 147.63 | 51.76      | 0.00    |
| TEE-BEND22 | 0.00       | 147.58 | 51.71      | 0.00    |
| CRU-1      | 0.23       | 147.63 | 51.71      | 0.00    |
| TEE-BEND52 | 0.00       | 147.63 | 51.69      | 0.00    |
| HYD3       | 0.00       | 147.62 | 51.65      | 0.00    |
| TEE-BEND45 | 0.00       | 147.60 | 51.62      | 0.00    |
| TEE-BEND16 | 0.00       | 147.67 | 51.67      | 0.00    |
| HYD2       | 0.00       | 147.69 | 51.68      | 0.00    |
| HYD7       | 0.00       | 147.70 | 51.67      | 0.00    |
| TEE-BEND51 | 0.00       | 147.63 | 51.60      | 0.00    |



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## Node Results at 3:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND34 | 0.00       | 147.67 | 51.61      | 0.00    |
| TEE-BEND36 | 0.00       | 147.71 | 51.64      | 0.00    |
| TEE-BEND55 | 0.00       | 147.63 | 51.57      | 0.00    |
| TEE-BEND35 | 0.00       | 147.70 | 51.63      | 0.00    |
| HYD1       | 0.00       | 147.74 | 51.67      | 0.00    |
| HYD6       | 0.00       | 147.64 | 51.54      | 0.00    |
| TEE-BEND37 | 0.00       | 147.71 | 51.60      | 0.00    |
| TEE-BEND50 | 0.00       | 147.63 | 51.52      | 0.00    |
| TEE-BEND33 | 0.00       | 147.64 | 51.52      | 0.00    |
| TEE-BEND17 | 0.00       | 147.67 | 51.51      | 0.00    |
| TEE-BEND21 | 0.00       | 146.15 | 50.00      | 0.00    |
| TEE-BEND49 | 0.00       | 147.63 | 51.47      | 0.00    |
| TEE-BEND48 | 0.00       | 147.63 | 51.47      | 0.00    |
| TEE-BEND12 | 0.00       | 147.67 | 51.48      | 0.00    |
| TEE-BEND40 | 0.00       | 147.57 | 51.38      | 0.00    |
| TEE-BEND20 | 0.00       | 146.04 | 49.84      | 0.00    |
| TEE-BEND38 | 0.00       | 147.75 | 51.54      | 0.00    |
| TEE-BEND57 | 0.00       | 147.73 | 51.53      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND56 | 0.00  | 147.69 | 51.51 | 0.00 |
| TEE-BEND58 | 0.00  | 147.74 | 51.51 | 0.00 |
| TEE-BEND32 | 0.00  | 147.73 | 51.50 | 0.00 |
| TEE-BEND31 | 0.00  | 147.73 | 51.47 | 0.00 |
| TEE-BEND30 | 0.00  | 147.73 | 51.46 | 0.00 |
| HYD5       | 0.00  | 147.58 | 51.28 | 0.00 |
| CRU-8      | 0.04  | 147.67 | 51.33 | 0.00 |
| TEE-BEND28 | 0.00  | 147.73 | 51.38 | 0.00 |
| CRU-10     | 33.37 | 145.94 | 49.59 | 0.00 |
| TEE-BEND39 | 0.00  | 147.81 | 51.44 | 0.00 |
| TEE-BEND26 | 0.00  | 147.73 | 51.36 | 0.00 |
| TEE-BEND15 | 0.00  | 147.67 | 51.29 | 0.00 |
| TEE-BEND29 | 0.00  | 147.73 | 51.33 | 0.00 |
| TEE-BEND13 | 0.00  | 147.67 | 51.26 | 0.00 |
| TEE-BEND59 | 0.00  | 147.75 | 51.34 | 0.00 |
| TEE-BEND27 | 0.00  | 147.73 | 51.30 | 0.00 |
| TEE-BEND41 | 0.00  | 147.57 | 51.11 | 0.00 |
| TEE-BEND42 | 0.00  | 147.56 | 51.10 | 0.00 |
| CRU-6      | 0.11  | 147.81 | 51.32 | 0.00 |
| CRU-9      | 0.07  | 147.67 | 51.18 | 0.00 |
| CRU-7      | 0.08  | 147.67 | 51.18 | 0.00 |
| CRU-4      | 0.11  | 147.73 | 51.24 | 0.00 |
| CRU-3      | 0.17  | 147.73 | 51.24 | 0.00 |
| TEE-BEND6  | 0.00  | 147.81 | 51.16 | 0.00 |
| CRU-5      | 0.02  | 147.73 | 51.00 | 0.00 |
| TEE-BEND4  | 0.00  | 147.81 | 51.06 | 0.00 |
| TEE-BEND3  | 0.00  | 147.85 | 51.10 | 0.00 |
| TEE-BEND2  | 0.00  | 147.81 | 51.04 | 0.00 |
| TEE-BEND1  | 0.00  | 147.81 | 51.01 | 0.00 |



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Node Results at 3:00 Hrs: (continued)

| Node ID  | Demand LPS | Head m | Pressure m | Quality        |
|----------|------------|--------|------------|----------------|
| CHAMBER1 | 0.00       | 147.82 | 51.00      | 0.00           |
| R1       | -17.53     | 0.00   | 0.00       | 0.00 Reservoir |
| R2       | -16.81     | 0.00   | 0.00       | 0.00 Reservoir |

Link Results at 3:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Headloss m/km | Status |
|---------|----------|--------------|---------------|--------|
| WM166   | 16.81    | 0.54         | 2.32          | Open   |
| WM100   | 16.70    | 0.53         | 2.29          | Open   |
| WM101   | 8.61     | 0.27         | 0.67          | Open   |
| WM102   | 8.61     | 0.27         | 0.67          | Open   |
| WM103   | 8.31     | 0.26         | 0.63          | Open   |
| WM104   | 8.31     | 0.26         | 0.63          | Open   |

|       |        |      |      |      |
|-------|--------|------|------|------|
| WM105 | -0.23  | 0.01 | 0.00 | Open |
| WM106 | -0.23  | 0.01 | 0.00 | Open |
| WM107 | -0.23  | 0.01 | 0.00 | Open |
| WM108 | -0.23  | 0.01 | 0.00 | Open |
| WM109 | -0.23  | 0.01 | 0.00 | Open |
| WM110 | -0.37  | 0.01 | 0.00 | Open |
| WM111 | -0.37  | 0.01 | 0.00 | Open |
| WM112 | 7.94   | 0.25 | 0.58 | Open |
| WM113 | 7.94   | 0.25 | 0.58 | Open |
| WM114 | 7.94   | 0.25 | 0.58 | Open |
| WM115 | 15.84  | 0.50 | 2.08 | Open |
| WM116 | -17.53 | 0.56 | 2.51 | Open |
| WM117 | -17.53 | 0.56 | 2.51 | Open |
| WM118 | -17.53 | 0.56 | 2.51 | Open |
| WM119 | -17.53 | 0.56 | 2.51 | Open |
| WM120 | 0.11   | 0.00 | 0.00 | Open |
| WM121 | 0.11   | 0.00 | 0.00 | Open |
| WM122 | 0.11   | 0.00 | 0.00 | Open |
| WM123 | 0.11   | 0.00 | 0.00 | Open |
| WM124 | 0.11   | 0.00 | 0.00 | Open |
| WM125 | 8.09   | 0.26 | 0.60 | Open |
| WM126 | 8.09   | 0.26 | 0.60 | Open |
| WM127 | 8.09   | 0.26 | 0.60 | Open |
| WM128 | 8.09   | 0.26 | 0.60 | Open |
| WM129 | 8.09   | 0.26 | 0.60 | Open |
| WM130 | 7.90   | 0.25 | 0.57 | Open |
| WM131 | 7.90   | 0.25 | 0.57 | Open |
| WM132 | -0.02  | 0.00 | 0.00 | Open |
| WM133 | 0.30   | 0.01 | 0.00 | Open |
| WM134 | 0.30   | 0.01 | 0.00 | Open |
| WM135 | 0.28   | 0.01 | 0.00 | Open |
| WM136 | 0.28   | 0.01 | 0.00 | Open |



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Link Results at 3:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM137   | 0.28     | 0.01         | 0.00               | Open   |
| WM138   | 0.11     | 0.01         | 0.00               | Open   |
| WM139   | -0.17    | 0.01         | 0.00               | Open   |
| WM140   | -0.17    | 0.01         | 0.00               | Open   |
| WM141   | -0.17    | 0.01         | 0.00               | Open   |
| WM142   | 0.00     | 0.00         | 0.00               | Open   |
| WM143   | 0.00     | 0.00         | 0.00               | Open   |
| WM144   | -0.14    | 0.00         | 0.00               | Open   |
| WM145   | -0.14    | 0.00         | 0.00               | Open   |
| WM146   | -0.14    | 0.00         | 0.00               | Open   |
| WM147   | 15.84    | 0.50         | 2.08               | Open   |
| WM148   | 0.00     | 0.00         | 0.00               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM149 | 33.37  | 1.89 | 40      | Open      |
| WM150 | 33.37  | 1.89 | 40.04   | Open      |
| WM151 | 33.37  | 1.89 | 40.05   | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 16.81  | 0.54 | 2.32    | Open      |
| WM165 | -17.53 | 0.56 | 2.51    | Open      |
| 1     | 17.53  | 0.00 | -147.57 | Open Pump |
| 2     | 16.81  | 0.00 | -147.85 | Open Pump |

Node Results at 4:00 Hrs:

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| CRU-2      | 0.14       | 147.63 | 52.27      | 0.00    |
| TEE-BEND24 | 0.00       | 147.63 | 52.27      | 0.00    |
| TEE-BEND23 | 0.00       | 147.63 | 52.19      | 0.00    |
| TEE-BEND43 | 0.00       | 147.54 | 52.07      | 0.00    |
| TEE-BEND44 | 0.00       | 147.53 | 51.99      | 0.00    |
| CHAMBER2   | 0.00       | 147.55 | 51.99      | 0.00    |
| TEE-BEND18 | 0.00       | 147.67 | 51.99      | 0.00    |
| TEE-BEND46 | 0.00       | 147.62 | 51.82      | 0.00    |
| TEE-BEND53 | 0.00       | 147.63 | 51.76      | 0.00    |
| TEE-BEND47 | 0.00       | 147.63 | 51.76      | 0.00    |



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Node Results at 4:00 Hrs: (continued)

| Node ID    | Demand LPS | Head m | Pressure m | Quality |
|------------|------------|--------|------------|---------|
| TEE-BEND22 | 0.00       | 147.58 | 51.71      | 0.00    |
| CRU-1      | 0.23       | 147.63 | 51.71      | 0.00    |
| TEE-BEND52 | 0.00       | 147.63 | 51.69      | 0.00    |
| HYD3       | 0.00       | 147.62 | 51.65      | 0.00    |
| TEE-BEND45 | 0.00       | 147.60 | 51.62      | 0.00    |
| TEE-BEND16 | 0.00       | 147.67 | 51.67      | 0.00    |
| HYD2       | 0.00       | 147.69 | 51.68      | 0.00    |
| HYD7       | 0.00       | 147.70 | 51.67      | 0.00    |
| TEE-BEND51 | 0.00       | 147.63 | 51.60      | 0.00    |

|            |       |        |       |      |
|------------|-------|--------|-------|------|
| TEE-BEND34 | 0.00  | 147.67 | 51.64 | 0.00 |
| TEE-BEND36 | 0.00  | 147.71 | 51.64 | 0.00 |
| TEE-BEND55 | 0.00  | 147.63 | 51.57 | 0.00 |
| TEE-BEND35 | 0.00  | 147.70 | 51.63 | 0.00 |
| HYD1       | 0.00  | 147.74 | 51.67 | 0.00 |
| HYD6       | 0.00  | 147.64 | 51.54 | 0.00 |
| TEE-BEND37 | 0.00  | 147.71 | 51.60 | 0.00 |
| TEE-BEND50 | 0.00  | 147.63 | 51.52 | 0.00 |
| TEE-BEND33 | 0.00  | 147.64 | 51.52 | 0.00 |
| TEE-BEND17 | 0.00  | 147.67 | 51.51 | 0.00 |
| TEE-BEND21 | 0.00  | 146.15 | 50.00 | 0.00 |
| TEE-BEND49 | 0.00  | 147.63 | 51.47 | 0.00 |
| TEE-BEND48 | 0.00  | 147.63 | 51.47 | 0.00 |
| TEE-BEND12 | 0.00  | 147.67 | 51.48 | 0.00 |
| TEE-BEND40 | 0.00  | 147.57 | 51.38 | 0.00 |
| TEE-BEND20 | 0.00  | 146.04 | 49.84 | 0.00 |
| TEE-BEND38 | 0.00  | 147.75 | 51.54 | 0.00 |
| TEE-BEND57 | 0.00  | 147.73 | 51.53 | 0.00 |
| TEE-BEND56 | 0.00  | 147.69 | 51.48 | 0.00 |
| TEE-BEND58 | 0.00  | 147.74 | 51.51 | 0.00 |
| TEE-BEND32 | 0.00  | 147.73 | 51.50 | 0.00 |
| TEE-BEND31 | 0.00  | 147.73 | 51.47 | 0.00 |
| TEE-BEND30 | 0.00  | 147.73 | 51.46 | 0.00 |
| HYD5       | 0.00  | 147.58 | 51.28 | 0.00 |
| CRU-8      | 0.04  | 147.67 | 51.33 | 0.00 |
| TEE-BEND28 | 0.00  | 147.73 | 51.38 | 0.00 |
| CRU-10     | 33.37 | 145.94 | 49.59 | 0.00 |
| TEE-BEND39 | 0.00  | 147.81 | 51.44 | 0.00 |
| TEE-BEND26 | 0.00  | 147.73 | 51.36 | 0.00 |
| TEE-BEND15 | 0.00  | 147.67 | 51.29 | 0.00 |
| TEE-BEND29 | 0.00  | 147.73 | 51.33 | 0.00 |
| TEE-BEND13 | 0.00  | 147.67 | 51.26 | 0.00 |
| TEE-BEND59 | 0.00  | 147.75 | 51.34 | 0.00 |
| TEE-BEND27 | 0.00  | 147.73 | 51.30 | 0.00 |
| TEE-BEND41 | 0.00  | 147.57 | 51.11 | 0.00 |
| TEE-BEND42 | 0.00  | 147.56 | 51.10 | 0.00 |
| CRU-6      | 0.11  | 147.81 | 51.32 | 0.00 |
| CRU-9      | 0.07  | 147.67 | 51.18 | 0.00 |



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Node Results at 4:00 Hrs: (continued)

| Node ID   | Demand LPS | Head m | Pressure m | Quality |
|-----------|------------|--------|------------|---------|
| CRU-7     | 0.08       | 147.67 | 51.18      | 0.00    |
| CRU-4     | 0.11       | 147.73 | 51.24      | 0.00    |
| CRU-3     | 0.17       | 147.73 | 51.24      | 0.00    |
| TEE-BEND6 | 0.00       | 147.81 | 51.16      | 0.00    |
| CRU-5     | 0.02       | 147.73 | 51.00      | 0.00    |
| TEE-BEND4 | 0.00       | 147.81 | 51.06      | 0.00    |



|           |        |        |       |                |
|-----------|--------|--------|-------|----------------|
| TEE-BEND3 | 0.00   | 147.85 | 51.00 | 0.00           |
| TEE-BEND2 | 0.00   | 147.81 | 51.04 | 0.00           |
| TEE-BEND1 | 0.00   | 147.81 | 51.01 | 0.00           |
| CHAMBER1  | 0.00   | 147.82 | 51.00 | 0.00           |
| R1        | -17.53 | 0.00   | 0.00  | 0.00 Reservoir |
| R2        | -16.81 | 0.00   | 0.00  | 0.00 Reservoir |

Link Results at 4:00 Hrs:

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM166   | 16.81    | 0.54         | 2.32               | Open   |
| WM100   | 16.70    | 0.53         | 2.29               | Open   |
| WM101   | 8.61     | 0.27         | 0.67               | Open   |
| WM102   | 8.61     | 0.27         | 0.67               | Open   |
| WM103   | 8.31     | 0.26         | 0.63               | Open   |
| WM104   | 8.31     | 0.26         | 0.63               | Open   |
| WM105   | -0.23    | 0.01         | 0.00               | Open   |
| WM106   | -0.23    | 0.01         | 0.00               | Open   |
| WM107   | -0.23    | 0.01         | 0.00               | Open   |
| WM108   | -0.23    | 0.01         | 0.00               | Open   |
| WM109   | -0.23    | 0.01         | 0.00               | Open   |
| WM110   | -0.37    | 0.01         | 0.00               | Open   |
| WM111   | -0.37    | 0.01         | 0.00               | Open   |
| WM112   | 7.94     | 0.25         | 0.58               | Open   |
| WM113   | 7.94     | 0.25         | 0.58               | Open   |
| WM114   | 7.94     | 0.25         | 0.58               | Open   |
| WM115   | 15.84    | 0.50         | 2.08               | Open   |
| WM116   | -17.53   | 0.56         | 2.51               | Open   |
| WM117   | -17.53   | 0.56         | 2.51               | Open   |
| WM118   | -17.53   | 0.56         | 2.51               | Open   |
| WM119   | -17.53   | 0.56         | 2.51               | Open   |
| WM120   | 0.11     | 0.00         | 0.00               | Open   |
| WM121   | 0.11     | 0.00         | 0.00               | Open   |
| WM122   | 0.11     | 0.00         | 0.00               | Open   |
| WM123   | 0.11     | 0.00         | 0.00               | Open   |
| WM124   | 0.11     | 0.00         | 0.00               | Open   |
| WM125   | 8.09     | 0.26         | 0.60               | Open   |
| WM126   | 8.09     | 0.26         | 0.60               | Open   |
| WM127   | 8.09     | 0.26         | 0.60               | Open   |



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Link Results at 4:00 Hrs: (continued)

| Link ID | Flow LPS | Velocity m/s | Unit Headloss m/km | Status |
|---------|----------|--------------|--------------------|--------|
| WM128   | 8.09     | 0.26         | 0.60               | Open   |
| WM129   | 8.09     | 0.26         | 0.60               | Open   |
| WM130   | 7.90     | 0.25         | 0.57               | Open   |

|       |        |      |         |           |
|-------|--------|------|---------|-----------|
| WM131 | 7.90   | 0.25 | 0.00    | Open      |
| WM132 | -0.02  | 0.00 | 0.00    | Open      |
| WM133 | 0.30   | 0.01 | 0.00    | Open      |
| WM134 | 0.30   | 0.01 | 0.00    | Open      |
| WM135 | 0.28   | 0.01 | 0.00    | Open      |
| WM136 | 0.28   | 0.01 | 0.00    | Open      |
| WM137 | 0.28   | 0.01 | 0.00    | Open      |
| WM138 | 0.11   | 0.01 | 0.00    | Open      |
| WM139 | -0.17  | 0.01 | 0.00    | Open      |
| WM140 | -0.17  | 0.01 | 0.00    | Open      |
| WM141 | -0.17  | 0.01 | 0.00    | Open      |
| WM142 | 0.00   | 0.00 | 0.00    | Open      |
| WM143 | 0.00   | 0.00 | 0.00    | Open      |
| WM144 | -0.14  | 0.00 | 0.00    | Open      |
| WM145 | -0.14  | 0.00 | 0.00    | Open      |
| WM146 | -0.14  | 0.00 | 0.00    | Open      |
| WM147 | 15.84  | 0.50 | 2.08    | Open      |
| WM148 | 0.00   | 0.00 | 0.00    | Open      |
| WM149 | 33.37  | 1.89 | 40.04   | Open      |
| WM150 | 33.37  | 1.89 | 40.05   | Open      |
| WM151 | 33.37  | 1.89 | 40.05   | Open      |
| WM152 | 0.19   | 0.01 | 0.00    | Open      |
| WM153 | 0.11   | 0.01 | 0.00    | Open      |
| WM154 | 0.07   | 0.00 | 0.00    | Open      |
| WM155 | 0.07   | 0.00 | 0.00    | Open      |
| WM156 | 0.07   | 0.00 | 0.00    | Open      |
| WM157 | 0.04   | 0.00 | 0.00    | Open      |
| WM158 | -0.08  | 0.00 | 0.00    | Open      |
| WM159 | -0.08  | 0.00 | 0.00    | Open      |
| WM160 | -0.08  | 0.00 | 0.00    | Open      |
| WM161 | 0.00   | 0.00 | 0.00    | Open      |
| WM162 | 0.00   | 0.00 | 0.00    | Open      |
| WM163 | 0.00   | 0.00 | 0.00    | Open      |
| WM164 | 16.81  | 0.54 | 2.32    | Open      |
| WM165 | -17.53 | 0.56 | 2.51    | Open      |
| 1     | 17.53  | 0.00 | -147.57 | Open Pump |
| 2     | 16.81  | 0.00 | -147.85 | Open Pump |

# Appendix C

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## Sanitary Servicing

- Sanitary Demand Calculations
- Sanitary Design Sheet Sanitary Design Sheet
- Excerpt of CITI Gate 416 Corporate Campus, Detailed Servicing and Management Report (Phase 1) with Allowable Sanitary Flows

## Counterpoint Engineering Inc.

### PROPOSED BUILDING/SITE SANITARY FLOWS

**Project:** 4175 Stranherd Drive  
**Project No:** 263560  
**Location:** Ottawa  
**Site Area:** 5.273 ha

#### Per Capita Flow for External Reviews

|                    |                                        |
|--------------------|----------------------------------------|
| Residential        | 280 litres/person/day                  |
| Retail/Commercial  | 5.00 litres/floor m <sup>2</sup> /day  |
| Restaurant         | 25.00 litres/floor m <sup>2</sup> /day |
| Infiltration (Dry) | 0.33 litres/ha/sec                     |

As per Appendix A-4.

Based on 125 litres/seat/day as per Appendix A-4, and one seat per 5 m<sup>2</sup> of restaurant floor area.

#### Residential Population Criteria

|           |         |
|-----------|---------|
| Bachelor  | 1.4 ppu |
| 1 Bedroom | 1.4 ppu |
| 2 Bedroom | 2.1 ppu |
| 3 Bedroom | 3.1 ppu |
| Townhome  | 2.7 ppu |

#### Proposed Buildings

**Site Area:** 5.273 ha

| Building     | No. of Res. Units | Bachelor/<br>1 Bedroom | 2 Bedroom | 3 Bedroom | Townhome | Total Res Population | Parcel Area (Ha) | Retail /Commercial Floor Area (Ha) | Restaurant Floor Area (Ha) | Average Building Flows (litres/s) | Peak Building Flows (litres/s) | Infiltration (litres/s) | Total Flows (litres/s) |
|--------------|-------------------|------------------------|-----------|-----------|----------|----------------------|------------------|------------------------------------|----------------------------|-----------------------------------|--------------------------------|-------------------------|------------------------|
| CRU1         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 1.015            | 0.2515                             | 0.0132                     | 0.184                             | 0.276                          | 0.335                   | 0.611                  |
| CRU2         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.523            | 0.1592                             | 0.0000                     | 0.092                             | 0.138                          | 0.173                   | 0.311                  |
| CRU3         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.488            | 0.1915                             | 0.0000                     | 0.111                             | 0.166                          | 0.161                   | 0.327                  |
| CRU4         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.513            | 0.1230                             | 0.0000                     | 0.071                             | 0.107                          | 0.169                   | 0.276                  |
| CRU5         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.238            | 0.0000                             | 0.0196                     | 0.057                             | 0.085                          | 0.079                   | 0.164                  |
| CRU6         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.508            | 0.0564                             | 0.0694                     | 0.233                             | 0.350                          | 0.168                   | 0.518                  |
| CRU7         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.489            | 0.0333                             | 0.0628                     | 0.201                             | 0.301                          | 0.161                   | 0.463                  |
| CRU8         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.580            | 0.0000                             | 0.0409                     | 0.118                             | 0.178                          | 0.191                   | 0.369                  |
| CRU9         | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.377            | 0.0000                             | 0.0751                     | 0.217                             | 0.326                          | 0.124                   | 0.450                  |
| CRU10        | 0                 | 0                      | 0         | 0         | 0        | 0                    | 0.542            | 0.0000                             | 0.0464                     | 0.134                             | 0.201                          | 0.179                   | 0.380                  |
| <b>TOTAL</b> | <b>0</b>          | <b>0</b>               | <b>0</b>  | <b>0</b>  | <b>0</b> | <b>0</b>             | <b>5.273</b>     | <b>0.8149</b>                      | <b>0.3274</b>              | <b>1.42</b>                       | <b>2.13</b>                    | <b>1.74</b>             | <b>3.87</b>            |

#### Harmon Peaking Factor Residential: (Min=2.0, Max=4.0)

| Building    | Total Population | Harmon Peak Factor |
|-------------|------------------|--------------------|
| Residential | 0                | 3.8                |

#### Peaking Factor

|                       |      |
|-----------------------|------|
| Retail and Restaurant | 1.50 |
|-----------------------|------|

|                                       |      |     |
|---------------------------------------|------|-----|
| Total Average Residential Flow:       | 0.00 | l/s |
| Total Average Retail/Commercial Flow: | 0.47 | l/s |
| Total Average Restaurant Flow:        | 0.95 | l/s |

|                                     |             |            |
|-------------------------------------|-------------|------------|
| Proposed Buildings Total Peak Flow: | 2.13        | l/s        |
| 0.33 l/s/ha Infiltration:           | 1.74        | l/s        |
| <b>Total Peak Flows</b>             | <b>3.87</b> | <b>l/s</b> |

## Proposed Conditions - Sanitary Sewer Design Sheet

**Project: 4175 Stranherd Drive**

**Date: August 2026**

**Designed by:** GR  
**Designed by:** GD

Design Flow- Retail Commercial Use = 5.00 L/Floor m<sup>2</sup>/day  
 Design Flow- Restaurant Use = 25.00 L/Floor m<sup>2</sup>/day  
 (125 L/day per restaurant seat and 5 m<sup>2</sup> per seat).

Peaking Factor Retail and Restaurant = 1.50

Infiltration = 0.33 L/s/ha

Infiltration= 0.33 l/s/ha x Gross Area ha

q = 280 l/person/day (For the analysis of existing sewers - residential)

q = 28,000 l/gross hectares/day inc. infiltration and peaking effect (For the analysis of existing sewers - comm/ind/office)

| LOCATION<br>BUILDING | MANHOLE |       | GROSS<br>AREA<br>ha | ACCUM.<br>GROSS<br>AREA<br>ha | Total Residential Pop. |                              | Commercial Retail Use |                               |                   |                     | Commercial Restaurant Use |                                |                   |                     | Infiltration                      |          | Prop.<br>Foundation<br>drain<br>l/s | Total Design Flow<br>Q Total<br>l/s | Pipe design   |              |                  |                          |                  |                 |                           |                             |                 |
|----------------------|---------|-------|---------------------|-------------------------------|------------------------|------------------------------|-----------------------|-------------------------------|-------------------|---------------------|---------------------------|--------------------------------|-------------------|---------------------|-----------------------------------|----------|-------------------------------------|-------------------------------------|---------------|--------------|------------------|--------------------------|------------------|-----------------|---------------------------|-----------------------------|-----------------|
|                      | FROM    | TO    |                     |                               | EQUIV.<br>POP<br>P     | ACCUM.<br>EQUIV.<br>POP<br>P | FLOOR<br>AREA<br>ha   | ACCUM.<br>FLOOR<br>Area<br>ha | Peaking<br>Factor | Peak<br>Flow<br>l/s | Floor<br>Area<br>ha       | Accum.<br>Floor.<br>Area<br>ha | Peaking<br>Factor | Peak<br>Flow<br>l/s | Area<br>Infiltrated<br>Area<br>ha | I<br>l/s |                                     |                                     | Length<br>(m) | Slope<br>S % | Diameter<br>(mm) | Pipe<br>Material<br>PIPE | Rough.<br>Coeff. | Q Full<br>(L/s) | Velocity<br>Full<br>(m/s) | Velocity<br>Actual<br>(m/s) | Capacity<br>(%) |
|                      |         |       |                     |                               |                        |                              |                       |                               |                   |                     |                           |                                |                   |                     |                                   |          |                                     |                                     |               |              |                  |                          |                  |                 |                           |                             |                 |
| CRU 10               | Stub    | MH12A | 0.542               | 0.542                         | 0                      | 0                            | 0                     | 0                             | 1.50              | 0.000               | 464                       | 464                            | 1.50              | 0.201               | 0.542                             | 0.18     | 0.00                                | 0.38                                | 7.0           | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.43                        | 1%              |
|                      | MH12A   | MH11A | 0.000               | 0.542                         | 0                      | 0                            | 0                     | 0                             | 1.50              | 0.000               | 0                         | 464                            | 1.50              | 0.201               | 0.542                             | 0.18     | 0.00                                | 0.38                                | 70.7          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.25                        | 1%              |
| CRU 9                | Stub    | MH11A | 0.377               | 0.919                         | 0                      | 0                            | 0                     | 0                             | 1.50              | 0.000               | 751                       | 751                            | 1.50              | 0.326               | 0.919                             | 0.30     | 0.00                                | 0.63                                | 4.7           | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.48                        | 1%              |
|                      | MH11A   | MH10A | 0.000               | 0.919                         | 0                      | 0                            | 0                     | 0                             | 1.50              | 0.000               | 0                         | 1,215                          | 1.50              | 0.527               | 0.919                             | 0.30     | 0.00                                | 0.83                                | 57.3          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.32                        | 2%              |
| CRU 8                | Stub    | MH10A | 0.580               | 1.499                         | 0                      | 0                            | 0                     | 0                             | 1.50              | 0.000               | 409                       | 409                            | 1.50              | 0.178               | 1.499                             | 0.49     | 0.00                                | 0.67                                | 9.6           | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.52                        | 1%              |
|                      | MH10A   | MH9A  | 0.000               | 1.499                         | 0                      | 0                            | 0                     | 0                             | 1.50              | 0.000               | 0                         | 1,624                          | 1.50              | 0.705               | 1.499                             | 0.49     | 0.00                                | 1.20                                | 90.0          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.37                        | 3%              |
| CRU 7                | Stub    | MH9A  | 0.489               | 1.988                         | 0                      | 0                            | 333                   | 333                           | 1.50              | 0.029               | 628                       | 628                            | 1.50              | 0.273               | 1.988                             | 0.66     | 0.00                                | 0.96                                | 10.7          | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.56                        | 2%              |
| CRU 6                | Stub    | MH9A  | 0.508               | 2.496                         | 0                      | 0                            | 564                   | 564                           | 1.50              | 0.049               | 694                       | 694                            | 1.50              | 0.301               | 2.496                             | 0.82     | 0.00                                | 1.17                                | 10.8          | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.60                        | 2%              |
|                      | MH9A    | MH3A  | 0.000               | 2.496                         | 0                      | 0                            | 0                     | 897                           | 1.50              | 0.078               | 0                         | 2,946                          | 1.50              | 1.279               | 2.496                             | 0.82     | 0.00                                | 2.18                                | 81.4          | 2.00         | 250              | PVC                      | 0.013            | 87.7            | 1.73                      | 0.69                        | 2%              |
|                      |         |       |                     |                               |                        |                              |                       |                               |                   |                     |                           |                                |                   |                     |                                   |          |                                     |                                     |               |              |                  |                          |                  |                 |                           |                             |                 |
| CRU 1                | Stub    | MH8A  | 1.015               | 1.015                         | 0                      | 0                            | 2,515                 | 2,515                         | 1.50              | 0.218               | 132                       | 132                            | 1.50              | 0.057               | 1.015                             | 0.33     | 0.00                                | 0.61                                | 13.5          | 2.00         | 250              | PVC                      | 0.013            | 87.7            | 1.73                      | 0.44                        | 1%              |
|                      | MH8A    | MH7A  | 0.000               | 1.015                         | 0                      | 0                            | 0                     | 2,515                         | 1.50              | 0.218               | 0                         | 132                            | 1.50              | 0.057               | 1.015                             | 0.33     | 0.00                                | 0.61                                | 26.5          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.30                        | 1%              |
| CRU 2                | MH7A    | MH6A  | 0.000               | 1.015                         | 0                      | 0                            | 0                     | 2,515                         | 1.50              | 0.218               | 0                         | 132                            | 1.50              | 0.057               | 1.015                             | 0.33     | 0.00                                | 0.61                                | 33.2          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.30                        | 1%              |
|                      | Stub    | MH6A  | 0.523               | 1.538                         | 0                      | 0                            | 1,592                 | 1,592                         | 1.50              | 0.138               | 0                         | 0                              | 1.50              | 0.000               | 1.538                             | 0.51     | 0.00                                | 0.65                                | 7.3           | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.52                        | 1%              |
| CRU 3                | MH6A    | MH5A  | 0.000               | 1.538                         | 0                      | 0                            | 0                     | 4,107                         | 1.50              | 0.356               | 0                         | 132                            | 1.50              | 0.057               | 1.538                             | 0.51     | 0.00                                | 0.92                                | 52.6          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.35                        | 2%              |
|                      | Stub    | MH5A  | 0.488               | 2.026                         | 0                      | 0                            | 1,915                 | 1,915                         | 1.50              | 0.166               | 0                         | 0                              | 1.50              | 0.000               | 2.026                             | 0.67     | 0.00                                | 0.83                                | 7.1           | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.56                        | 2%              |
| CRU 4                | MH5A    | MH4A  | 0.000               | 2.026                         | 0                      | 0                            | 0                     | 6,022                         | 1.50              | 0.523               | 0                         | 132                            | 1.50              | 0.057               | 2.026                             | 0.67     | 0.00                                | 1.25                                | 50.3          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.37                        | 3%              |
|                      | Stub    | MH4A  | 0.513               | 2.539                         | 0                      | 0                            | 1,230                 | 1,230                         | 1.50              | 0.107               | 0                         | 0                              | 1.50              | 0.000               | 2.539                             | 0.84     | 0.00                                | 0.94                                | 7.1           | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.56                        | 2%              |
| CRU 5                | MH4A    | MH3A  | 0.000               | 2.539                         | 0                      | 0                            | 0                     | 7,252                         | 1.50              | 0.629               | 0                         | 132                            | 1.50              | 0.057               | 2.539                             | 0.84     | 0.00                                | 1.52                                | 42.6          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.39                        | 3%              |
|                      | Stub    | MH3A  | 0.238               | 0.238                         | 0                      | 0                            | 0                     | 0                             | 1.50              | 0.000               | 196                       | 196                            | 1.50              | 0.085               | 0.238                             | 0.08     | 0.00                                | 0.16                                | 7.1           | 2.00         | 200              | PVC                      | 0.013            | 48.3            | 1.49                      | 0.33                        | 0%              |
| Municipal Connection | MH3A    | MH2A  | 0.000               | 5.273                         | 0                      | 0                            | 0                     | 8,149                         | 1.50              | 0.707               | 0                         | 3,274                          | 1.50              | 1.421               | 5.273                             | 1.74     | 0.00                                | 3.87                                | 27.2          | 0.50         | 250              | PVC                      | 0.013            | 43.9            | 0.87                      | 0.53                        | 9%              |
|                      | MH2A    | MH1A  | 0.000               | 5.273                         | 0                      | 0                            | 0                     | 8,149                         | 1.50              | 0.707               | 0                         | 3,274                          | 1.50              | 1.421               | 5.273                             | 1.74     | 0.00                                | 3.87                                | 14.1          | 2.00         | 250              | PVC                      | 0.013            | 87.7            | 1.73                      | 0.86                        | 4%              |

PROJECT : 109203  
DESIGNED BY: LAB  
CHECKED BY: MER  
Prepared: March 31, 2014  
Revised: August 10, 2014

SANITARY SEWER DESIGN SHEET  
Citi Gate 416 Corporate Campus



| Location                                                                                                                 |                    |              |         |       |           | Wastewater Flow Q(w)                          |                                 | Extraneous Flow Q(i)                           |                                    | Design Flow Q(d)       | Proposed Sanitary Sewer |                |              |         |                |                          |                        |
|--------------------------------------------------------------------------------------------------------------------------|--------------------|--------------|---------|-------|-----------|-----------------------------------------------|---------------------------------|------------------------------------------------|------------------------------------|------------------------|-------------------------|----------------|--------------|---------|----------------|--------------------------|------------------------|
| Area I.D.                                                                                                                | Street             | Block Number | From MH | To MH | Area (ha) | Individual Peak Flow Rate 50,000 L/ha/d (L/s) | Cumulative Peak Flow Rate (L/s) | Individual Infiltration Rate 0.28 L/s/ha (L/s) | Cumulative Infiltration Rate (L/s) | Peak Design Flow (L/s) | Length (m)              | Pipe Size (mm) | Type of Pipe | Grade % | Capacity (L/s) | Full Flow Velocity (m/s) | Percentage of Capacity |
| Sanitary Outlet A to Strandherd Drive at Maravista Drive<br>Plan Reference: Sanitary Drainage Area Plan (109203-CG-SAN1) |                    |              |         |       |           |                                               |                                 |                                                |                                    |                        |                         |                |              |         |                |                          |                        |
| A-1                                                                                                                      | Nortel Drive       |              | 201     | 203   | 0.40      | 0.35                                          | 0.35                            | 0.11                                           | 0.11                               | 0.46                   |                         |                |              |         |                |                          |                        |
| A-2                                                                                                                      | Nortel Drive       | Block 1      | 201     | 203   | 3.49      | 3.03                                          | 3.38                            | 0.98                                           | 1.09                               | 4.47                   |                         |                |              |         |                |                          |                        |
| A-3                                                                                                                      | Nortel Drive       | Block 16     | 201     | 203   | 2.50      | 2.17                                          | 5.55                            | 0.70                                           | 1.79                               | 7.34                   |                         |                |              |         |                |                          |                        |
| A-4                                                                                                                      | Nortel Drive       |              | 201     | 203   | 0.09      | 0.08                                          | 5.63                            | 0.03                                           | 1.81                               | 7.44                   | 36.7                    | 250            | PVC          | 0.24    | 30.39          | 0.60                     | 24%                    |
| A-5                                                                                                                      | Nortel Drive       |              | 203     | 205   | 0.13      | 0.11                                          | 5.74                            | 0.04                                           | 1.85                               | 7.59                   | 57.2                    | 250            | PVC          | 0.24    | 30.39          | 0.60                     | 25%                    |
| A-6                                                                                                                      | Nortel Drive       | Block 17     | 205     | 101   | 1.17      | 1.02                                          | 6.75                            | 0.33                                           | 2.18                               | 8.93                   |                         |                |              |         |                |                          |                        |
| A-7                                                                                                                      | Nortel Drive       |              | 205     | 101   | 0.20      | 0.17                                          | 6.93                            | 0.06                                           | 2.23                               | 9.16                   | 37.1                    | 250            | PVC          | 0.24    | 30.39          | 0.60                     | 30%                    |
| A-9                                                                                                                      | Crosskey Place     |              | 101     | 207   | 0.92      | 0.80                                          | 7.73                            | 0.26                                           | 7.54                               | 15.27                  |                         |                |              |         |                |                          |                        |
| A-8                                                                                                                      | Crosskey Place     | Block 14     | 101     | 207   | 18.03     | 15.65                                         | 23.38                           | 5.05                                           | 5.05                               | 28.43                  | 29.5                    | 300            | PVC          | 0.25    | 50.44          | 0.69                     | 56%                    |
| A-10                                                                                                                     | Nortel Drive       | Block 15     | 207     | 209   | 7.98      | 6.93                                          | 30.30                           | 2.23                                           | 9.77                               | 40.08                  |                         |                |              |         |                |                          |                        |
| A-11                                                                                                                     | Nortel Drive       |              | 207     | 209   | 0.30      | 0.26                                          | 30.56                           | 0.08                                           | 9.86                               | 40.42                  | 107.1                   | 300            | PVC          | 0.25    | 50.44          | 0.69                     | 80%                    |
| A-12                                                                                                                     | Nortel Drive       |              | 209     | 211   | 0.31      | 0.27                                          | 30.83                           | 0.09                                           | 9.95                               | 40.78                  | 118.3                   | 300            | PVC          | 0.25    | 50.44          | 0.69                     | 81%                    |
| A-13                                                                                                                     | Nortel Drive       |              | 211     | 213   | 0.31      | 0.27                                          | 31.10                           | 0.09                                           | 10.03                              | 41.13                  | 114.4                   | 300            | PVC          | 0.25    | 50.44          | 0.69                     | 82%                    |
| A-14                                                                                                                     | Systemhouse Street |              | 213     | 401   | 0.07      | 0.06                                          | 31.16                           | 0.02                                           | 10.05                              | 41.22                  | 26.4                    | 300            | PVC          | 0.25    | 50.44          | 0.69                     | 82%                    |
| A-15                                                                                                                     | Systemhouse Street |              | 401     | 403   | 0.21      | 0.18                                          | 31.35                           | 0.06                                           | 10.11                              | 41.46                  | 87.7                    | 300            | PVC          | 0.25    | 50.44          | 0.69                     | 82%                    |
| A-16                                                                                                                     | Systemhouse Street |              | 403     | 405   | 0.29      | 0.25                                          | 31.60                           | 0.08                                           | 10.19                              | 41.79                  | 118.4                   | 300            | PVC          | 0.25    | 50.44          | 0.69                     | 83%                    |
| A-17                                                                                                                     | Systemhouse Street | Block 18     | 405     | 407   | 2.29      | 1.99                                          | 33.59                           | 0.64                                           | 10.83                              | 44.42                  |                         |                |              |         |                |                          |                        |
| A-18                                                                                                                     | Systemhouse Street |              | 405     | 407   | 0.20      | 0.17                                          | 33.76                           | 0.06                                           | 10.89                              | 44.65                  | 81.2                    | 375            | PVC          | 0.14    | 68.44          | 0.60                     | 65%                    |
| A-19                                                                                                                     | Systemhouse Street | Block 2      | 407     | 409   | 11.95     | 10.37                                         | 44.13                           | 3.35                                           | 14.24                              | 58.37                  |                         |                |              |         |                |                          |                        |
| A-20                                                                                                                     | Systemhouse Street | Block 3      | 407     | 409   | 5.28      | 4.58                                          | 48.72                           | 1.48                                           | 15.71                              | 64.43                  |                         |                |              |         |                |                          |                        |
| A-21                                                                                                                     | Systemhouse Street |              | 407     | 409   | 0.30      | 0.26                                          | 48.98                           | 0.08                                           | 15.80                              | 64.77                  | 115.8                   | 375            | PVC          | 0.25    | 91.46          | 0.80                     | 71%                    |
| A-22                                                                                                                     | Systemhouse Street |              | 409     | 101   | 0.16      | 0.14                                          | 49.11                           | 0.04                                           | 15.84                              | 64.96                  | 53.5                    | 375            | PVC          | 0.25    | 91.46          | 0.80                     | 71%                    |
| 56.58                                                                                                                    |                    |              |         |       |           | 64.96                                         |                                 |                                                |                                    |                        |                         |                |              |         |                |                          |                        |

Notes:  
1. Q(d) = Q(w) + Q(i) , where  
2. Q(i) = 0.28 L/s/ha  
3. Peaking Factor = 1.5

Q(d) = Design Flow (L/s)  
Q(w) = Peak Wastewater Flow (L/s)  
Q(i) = Extraneous Flow (L/s)

Total Allowable Peak Flow from 4175 Strandherd Drive:  
4.58 L/s + 1.48 L/s = 6.06 L/s

Block 3 indicates the 4175 Stranherd Drive proposed development

# Appendix D

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## Storm Servicing

- Catch Basin Ponding Areas and Volumes
- Proposed Storm Sewer Design Sheets
- Uncontrolled Area Release rates
- Greenstorm Chambers Details Sheet
- InfoWorks HGL Model Results Summary, Schematic and Profiles.

**Project:** 4175 Strandherd Drive  
**Project No:** 46209  
**Location:** Ottawa

## CATCH BASIN PONDING ELEVATIONS, DEPTHS, AREAS AND VOLUMES

| Catch Basin | Contributing Area (ha) | Rim Elev. | Local Ponding Elev. <sup>1</sup> | Maximum Ponding Elev. <sup>2</sup> | Max. Depth of Ponding (h) | Max. Ponding Area <sub>3</sub> (A) | Max. Ponding Volume (V) | 100-Year Ponding Elevation | 100-Year Ponding Depth | 100-Year + 20% Ponding Elevation | 100-Year + 20% Ponding Depth |
|-------------|------------------------|-----------|----------------------------------|------------------------------------|---------------------------|------------------------------------|-------------------------|----------------------------|------------------------|----------------------------------|------------------------------|
| DCB1        | 0.246                  | 95.80     | 96.10                            | 96.10                              | 0.30                      | 967                                | 97                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| DCB2        | 0.245                  | 95.80     | 96.05                            | 96.05                              | 0.25                      | 658                                | 55                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB3         | 0.112                  | 95.80     | 96.00                            | 96.05                              | 0.25                      | 425                                | 35                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB4         | 0.109                  | 95.80     | 96.00                            | 96.05                              | 0.25                      | 390                                | 33                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB5         | 0.107                  | 95.80     | 96.05                            | 96.05                              | 0.25                      | 483                                | 40                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB6         | 0.100                  | 95.80     | 96.05                            | 96.05                              | 0.25                      | 416                                | 35                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB7         | 0.163                  | 95.80     | 96.05                            | 96.05                              | 0.25                      | 750                                | 63                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB8         | 0.177                  | 95.80     | 96.05                            | 96.05                              | 0.25                      | 836                                | 70                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB9         | 0.159                  | 95.80     | 96.05                            | 96.05                              | 0.25                      | 800                                | 67                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB10        | 0.148                  | 95.80     | 96.05                            | 96.05                              | 0.25                      | 686                                | 57                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB11        | 0.087                  | 95.80     | 96.00                            | 96.00                              | 0.20                      | 240                                | 16                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB12        | 0.080                  | 95.80     | 96.00                            | 96.00                              | 0.20                      | 234                                | 16                      | 95.92                      | 0.12                   | 95.99                            | 0.19                         |
| CB13        | 0.057                  | 95.75     | 96.00                            | 96.00                              | 0.25                      | 425                                | 35                      | 95.92                      | 0.17                   | 95.99                            | 0.24                         |
| CB14        | 0.074                  | 95.75     | 96.00                            | 96.00                              | 0.25                      | 295                                | 25                      | 95.92                      | 0.17                   | 95.99                            | 0.24                         |
| CB15        | 0.131                  | 95.70     | 96.00                            | 96.00                              | 0.30                      | 626                                | 63                      | 95.92                      | 0.22                   | 95.99                            | 0.29                         |
| CB16        | 0.170                  | 95.70     | 96.00                            | 96.00                              | 0.30                      | 811                                | 81                      | 95.92                      | 0.22                   | 95.99                            | 0.29                         |
| CB17        | 0.121                  | 95.70     | 96.00                            | 96.00                              | 0.30                      | 633                                | 63                      | 95.92                      | 0.22                   | 95.99                            | 0.29                         |
| CB18        | 0.169                  | 95.70     | 96.00                            | 96.00                              | 0.30                      | 709                                | 71                      | 95.92                      | 0.22                   | 95.99                            | 0.29                         |
|             |                        |           |                                  |                                    |                           |                                    |                         |                            |                        |                                  |                              |
| CB19        | 0.035                  | 95.95     | 96.07                            | 96.07                              | 0.12                      | 75                                 | 3                       | -                          | 0.00                   | -                                | 0.00                         |
| CB20        | 0.023                  | 95.95     | 96.04                            | 96.07                              | 0.09                      | 85                                 | 3                       | -                          | 0.00                   | -                                | 0.00                         |
| CB21        | 0.028                  | 96.07     | 96.16                            | 96.16                              | 0.09                      | 96                                 | 3                       | -                          | 0.00                   | -                                | 0.00                         |
| CB22        | 0.016                  | 96.07     | 96.16                            | 96.16                              | 0.09                      | 95                                 | 3                       | -                          | 0.00                   | -                                | 0.00                         |
| CB23        | 0.015                  | 96.15     | 96.23                            | 96.23                              | 0.08                      | 31                                 | 1                       | -                          | 0.00                   | -                                | 0.00                         |
| CB24        | 0.015                  | 96.17     | 96.28                            | 96.28                              | 0.11                      | 88                                 | 3                       | -                          | 0.00                   | -                                | 0.00                         |
| CBMH23      | 0.008                  | 96.34     | 96.45                            | 96.45                              | 0.11                      | 48                                 | 2                       | -                          | 0.00                   | -                                | 0.00                         |
| CB36        | 0.012                  | 96.38     | 96.43                            | 96.43                              | 0.05                      | 35                                 | 1                       | -                          | 0.00                   | -                                | 0.00                         |
| CB37        | 0.014                  | 96.38     | 96.43                            | 96.43                              | 0.05                      | 37                                 | 1                       | -                          | 0.00                   | -                                | 0.00                         |
| CB24        | 0.019                  | 96.17     | 96.28                            | 96.28                              | 0.11                      | 88                                 | 3                       | -                          | 0.00                   | -                                | 0.00                         |
| DCB26       | 0.051                  | 96.09     | 96.15                            | 96.15                              | 0.06                      | 26                                 | 1                       | -                          | 0.00                   | -                                | 0.00                         |
| CB27        | 0.028                  | 96.05     | 96.20                            | 96.20                              | 0.15                      | 145                                | 7                       | -                          | 0.00                   | -                                | 0.00                         |
| CB28        | 0.038                  | 96.05     | 96.20                            | 96.20                              | 0.15                      | 131                                | 7                       | -                          | 0.00                   | -                                | 0.00                         |
| CB29        | 0.071                  | 95.98     | 96.20                            | 96.20                              | 0.22                      | 424                                | 31                      | -                          | 0.00                   | 95.99                            | 0.01                         |
| CB30        | 0.061                  | 95.95     | 96.20                            | 96.20                              | 0.25                      | 378                                | 32                      | -                          | 0.00                   | 95.99                            | 0.04                         |
| CB31        | 0.091                  | 95.95     | 96.20                            | 96.20                              | 0.25                      | 436                                | 36                      | -                          | 0.00                   | 95.99                            | 0.04                         |
| CB32        | 0.052                  | 96.05     | 96.25                            | 96.25                              | 0.20                      | 197                                | 13                      | -                          | 0.00                   | 95.99                            | 0.00                         |
| CB33        | 0.045                  | 96.00     | 96.25                            | 96.25                              | 0.25                      | 188                                | 16                      | -                          | 0.00                   | -                                | 0.00                         |
| CB35        | 0.064                  | 96.22     | 96.32                            | 96.32                              | 0.10                      | 53                                 | 2                       | -                          | 0.00                   | -                                | 0.00                         |
| CBMH40      | 0.022                  | 96.40     | 96.49                            | 96.49                              | 0.09                      | 36                                 | 1                       | -                          | 0.00                   | -                                | 0.00                         |
| CB41        | 0.023                  | 96.20     | 96.30                            | 96.30                              | 0.10                      | 43                                 | 1                       | -                          | 0.00                   | -                                | 0.00                         |
| CB42        | 0.027                  | 96.05     | 96.20                            | 96.20                              | 0.15                      | 155                                | 8                       | -                          | 0.00                   | -                                | 0.00                         |
| CB45        | 0.020                  | 96.15     | 96.40                            | 96.40                              | 0.25                      | 55                                 | 5                       | -                          | 0.00                   | -                                | 0.00                         |
| CB46        | 0.023                  | 96.13     | 96.20                            | 96.20                              | 0.07                      | 33                                 | 1                       | -                          | 0.00                   | -                                | 0.00                         |
| CB47        | 0.047                  | 96.05     | 96.20                            | 96.20                              | 0.15                      | 164                                | 8                       | -                          | 0.00                   | -                                | 0.00                         |
| CB48        | 0.045                  | 96.04     | 96.25                            | 96.25                              | 0.21                      | 207                                | 14                      | -                          | 0.00                   | -                                | 0.00                         |
| CB49        | 0.027                  | 96.10     | 96.30                            | 96.30                              | 0.20                      | 158                                | 11                      | -                          | 0.00                   | -                                | 0.00                         |
| CB50        | 0.013                  | 96.16     | 96.28                            | 96.28                              | 0.12                      | 117                                | 5                       | -                          | 0.00                   | -                                | 0.00                         |
|             |                        |           |                                  |                                    |                           |                                    |                         |                            |                        |                                  |                              |

<sup>1</sup> Local ponding max. ponding to spill per catch basin.

<sup>2</sup> Max. ponding for a CB. Maybe join with ponding of another CB

<sup>3</sup> Max. ponding area for a CB.



## STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Project: 4175 Strandherd Drive  
Project No: 263560  
Location: Ottawa, ON  
Prepared by: G.R.  
Checked by: G.D.  
Date: August 14, 2026

Total Site area (including Strandherd Drive widening) = 5.273 ha  
Controlled Area = 3.732 ha  
Uncontrolled Area (including widening, RC=0.44) = 0.671 ha

Rainfall Data: a, b, c Values

|   | 2 Year  | 100 Year |
|---|---------|----------|
| a | 732.951 | 1735.688 |
| b | 6.199   | 6.014    |
| c | 0.81    | 0.82     |

Manning's Roughness Coefficient (All pipes)= 0.013

| LOCATION                 |           |         | FLOW  |      |       |            |                    |                    |             |                  |            | DESIGN CAPACITY |                 |                |                     |                  |                      |           |                     |                |                    |                |            |
|--------------------------|-----------|---------|-------|------|-------|------------|--------------------|--------------------|-------------|------------------|------------|-----------------|-----------------|----------------|---------------------|------------------|----------------------|-----------|---------------------|----------------|--------------------|----------------|------------|
| Notes                    | From Node | To Node | Area  | C    | A x C | Accum Ax C | Rainfall Intensity | Time of Conc. (Tc) | Area Flow Q | Controlled Flows | Total Flow | Diam. (nominal) | Length Pipe (m) | Slope Pipe (%) | Diameter Actual (m) | Pipe Area (sq.m) | Hydraulic Radius (m) | Pipe Mat. | Pipe Capacity (l/s) | Velocity (m/s) | Time of Flow (min) | Ratio Q/Q full | Cap. Check |
|                          |           |         | (ha)  |      | (ha)  | (ha)       | mm/hr              | (min)              | (l/s)       | (l/s)            | (l/s)      | (mm)            | (m)             |                | (m)                 |                  |                      |           |                     |                |                    |                |            |
| East Branch              |           |         |       |      |       |            |                    |                    |             |                  |            |                 |                 |                |                     |                  |                      |           |                     |                |                    |                |            |
| Behind CRU6              | CB45      | CRU 6   | 0.020 | 0.60 | 0.012 | 0.012      | 76.8               | 10.00              | 2.6         | 0.0              | 2.6        | 250             | 2.0             | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.03               | 0.04           | OK         |
| CRU6 Controlled Roof     | Stub      | MH18    | 0.126 | 0.90 | 0.113 | 0.012      | 76.7               | 10.03              | 2.6         | 5.3              | 7.8        | 300             | 19.1            | 1.00%          | 0.298               | 0.07             | 0.075                | PVC       | 95.0                | 1.36           | 0.23               | 0.08           | OK         |
| DCB1                     | DCB1      | MH18    | 0.246 | 0.90 | 0.222 | 0.222      | 76.8               | 10.00              | 47.3        | 0.0              | 47.3       | 300             | 7.8             | 1.00%          | 0.298               | 0.07             | 0.075                | PVC       | 95.0                | 1.36           | 0.10               | 0.50           | OK         |
|                          | MH18      | MH17    | 0.000 | 0.90 | 0.000 | 0.234      | 75.8               | 10.26              | 49.2        | 5.3              | 54.5       | 375             | 17.8            | 0.50%          | 0.381               | 0.11             | 0.095                | PVC       | 129.3               | 1.13           | 0.26               | 0.42           | OK         |
| CRU7 Controlled Roof     | Stub      | MH17    | 0.096 | 0.90 | 0.086 | 0.000      | 76.8               | 10.00              | 0.0         | 4.0              | 4.0        | 300             | 13.5            | 1.00%          | 0.298               | 0.07             | 0.075                | PVC       | 95.0                | 1.36           | 0.17               | 0.04           | OK         |
| AD1                      | AD1       | CBMH23  | 0.012 | 0.90 | 0.011 | 0.011      | 76.8               | 10.00              | 2.3         | 0.0              | 2.3        | 250             | 17.0            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.23               | 0.04           | OK         |
| AD2                      | AD2       | CBMH23  | 0.014 | 0.90 | 0.013 | 0.013      | 76.8               | 10.00              | 2.7         | 0.0              | 2.7        | 250             | 18.1            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.25               | 0.04           | OK         |
| Between CRU6 and CRU7    | CBMH23    | MH17    | 0.008 | 0.90 | 0.007 | 0.031      | 75.9               | 10.25              | 6.4         | 0.0              | 6.4        | 300             | 25.7            | 0.50%          | 0.298               | 0.07             | 0.075                | PVC       | 67.2                | 0.96           | 0.44               | 0.10           | OK         |
|                          | MH17      | MH22    | 0.000 | 0.90 | 0.000 | 0.264      | 74.9               | 10.52              | 54.97       | 9.3              | 64.3       | 675             | 37.8            | 0.12%          | 0.686               | 0.37             | 0.171                | PVC       | 303.8               | 0.82           | 0.77               | 0.21           | OK         |
| CB3                      | CB3       | MH38    | 0.112 | 0.90 | 0.101 | 0.101      | 76.8               | 10.00              | 21.5        | 0.0              | 21.5       | 250             | 9.0             | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.12               | 0.36           | OK         |
|                          | MH38      | MH22    | 0.000 | 0.90 | 0.000 | 0.101      | 76.8               | 10.00              | 21.5        | 0.0              | 21.5       | 300             | 13.1            | 1.00%          | 0.298               | 0.07             | 0.075                | PVC       | 95.0                | 1.36           | 0.16               | 0.23           | OK         |
| CB23                     | CB23      | MH22    | 0.015 | 0.90 | 0.015 | 0.015      | 76.8               | 10.00              | 3.2         | 0.0              | 3.2        | 250             | 14.5            | 2.00%          | 0.251               | 0.05             | 0.063                | PVC       | 85.0                | 1.72           | 0.14               | 0.04           | OK         |
| CB46                     | CB46      | PIPE    | 0.023 | 0.90 | 0.021 | 0.021      | 76.8               | 10.00              | 4.4         | 0.0              | 4.4        | 250             | 16.8            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.23               | 0.07           | OK         |
|                          | MH22      | MH16    | 0.000 | 0.90 | 0.000 | 0.401      | 72.2               | 11.29              | 80.4        | 9.3              | 89.7       | 675             | 47.6            | 0.12%          | 0.686               | 0.37             | 0.171                | PVC       | 303.8               | 0.82           | 0.96               | 0.30           | OK         |
| CRU8                     | Stub      | MH16    | 0.042 | 0.90 | 0.038 | 0.038      | 76.8               | 10.00              | 8.1         | 0.0              | 8.1        | 300             | 12.6            | 1.00%          | 0.298               | 0.07             | 0.075                | PVC       | 95.0                | 1.36           | 0.15               | 0.08           | OK         |
| CB6                      | CB6       | MH37    | 0.100 | 0.90 | 0.090 | 0.090      | 76.8               | 10.00              | 19.2        | 0.0              | 19.2       | 300             | 29.0            | 1.03%          | 0.298               | 0.07             | 0.075                | PVC       | 96.4                | 1.38           | 0.35               | 0.20           | OK         |
| CB8                      | CB8       | MH37    | 0.177 | 0.90 | 0.159 | 0.159      | 76.8               | 10.00              | 34.0        | 0.0              | 34.0       | 250             | 10.7            | 1.77%          | 0.251               | 0.05             | 0.063                | PVC       | 80.0                | 1.62           | 0.11               | 0.43           | OK         |
| CB6 and CB8              | MH37      | MH16    | 0.000 | 0.90 | 0.000 | 0.249      | 76.8               | 10.00              | 53.2        | 0.0              | 53.2       | 375             | 12.6            | 0.40%          | 0.381               | 0.11             | 0.095                | PVC       | 115.7               | 1.01           | 0.21               | 0.46           | OK         |
|                          | MH16      | MH15    | 0.000 | 0.90 | 0.000 | 0.688      | 69.1               | 12.25              | 132.1       | 9.3              | 141.4      | 750             | 19.2            | 0.10%          | 0.762               | 0.46             | 0.191                | PVC       | 367.3               | 0.81           | 0.40               | 0.39           | OK         |
|                          | CB24      | MH27    | 0.019 | 0.90 | 0.017 | 0.017      | 76.8               | 10.00              | 3.6         | 0.0              | 3.6        | 250             | 25.5            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.35               | 0.06           | OK         |
|                          | CB50      | MH27    | 0.013 | 0.90 | 0.012 | 0.012      | 76.8               | 10.00              | 2.5         | 0.0              | 2.5        | 250             | 2.9             | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.04               | 0.04           | OK         |
|                          | CB49      | PIPE    | 0.027 | 0.90 | 0.024 | 0.024      | 76.8               | 10.00              | 5.2         | 0.0              | 5.2        | 250             | 4.3             | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.06               | 0.09           | OK         |
|                          | CB48      | PIPE    | 0.045 | 0.90 | 0.041 | 0.041      | 76.8               | 10.00              | 8.6         | 0.0              | 8.6        | 250             | 17.3            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.24               | 0.14           | OK         |
| Northeast CRU8 Drivethru | MH27      | MH15    | 0.000 | 0.90 | 0.000 | 0.094      | 76.8               | 10.00              | 20.0        | 0.0              | 20.0       | 375             | 31.5            | 0.50%          | 0.381               | 0.11             | 0.095                | PVC       | 129.3               | 1.13           | 0.46               | 0.15           | OK         |
|                          | MH15      | MH36    | 0.000 | 0.90 | 0.000 | 0.782      | 67.9               | 12.65              | 147.5       | 9.3              | 156.8      | 750             | 52.9            | 0.10%          | 0.762               | 0.46             | 0.191                | PVC       | 367.3               | 0.81           | 1.09               | 0.43           | OK         |
| CRU9                     | Stub      | MH36    | 0.075 | 0.90 | 0.068 | 0.068      | 76.8               | 10.00              | 14.4        | 0.0              | 14.4       | 300             | 12.6            | 1.00%          | 0.298               | 0.07             | 0.075                | PVC       | 95.0                | 1.36           | 0.15               | 0.15           | OK         |
|                          | CB9       | MH41    | 0.159 | 0.90 | 0.143 | 0.143      | 76.8               | 10.00              | 30.5        | 0.0              | 30.5       | 250             | 27.9            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.38               | 0.51           | OK         |
| Connection to storage    | CB11      | MH41    | 0.087 | 0.90 | 0.078 | 0.078      | 76.8               | 10.00              | 16.7        | 0.0              | 16.7       | 250             | 9.6             | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.13               | 0.28           | OK         |
|                          | MH41      | MH36    | 0.000 | 0.90 | 0.000 | 0.221      | 76.8               | 10.00              | 47.2        | 0.0              | 47.2       | 525             | 18.1            | 0.50%          | 0.533               | 0.22             | 0.133                | PVC       | 317.2               | 1.42           | 0.21               | 0.15           | OK         |
|                          | CB13      | PIPE    | 0.057 | 0.90 | 0.051 | 0.051      | 76.8               | 10.00              | 10.9        | 0.0              | 10.9       | 250             | 18.3            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.25               | 0.18           | OK         |
|                          | MH36      | MH14    | 0.000 | 0.90 | 0.000 | 1.122      | 64.9               | 13.75              | 202.2       | 9.3              | 211.5      | 750             | 41.9            | 0.10%          | 0.762               | 0.46             | 0.191                | PVC       | 367.3               | 0.81           | 0.87               | 0.58           | OK         |
|                          | CB21      | MH26    | 0.028 | 0.90 | 0.025 | 0.025      | 76.8               | 10.00              | 5.4         | 0.0              | 5.4        | 250             | 18.0            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.25               | 0.09           | OK         |
| CRU10 Drivethru          | CB22      | MH26    | 0.016 | 0.90 | 0.014 | 0.014      | 76.8               | 10.00              | 3.1         | 0.0              | 3.1        | 250             | 4.7             | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.06               | 0.05           | OK         |
|                          | MH26      | MH14    | 0.000 | 0.90 | 0.000 | 0.040      | 76.8               | 10.00              | 8.4         | 0.0              | 8.4        | 300             | 13.7            | 0.40%          | 0.298               | 0.07             | 0.075                | PVC       | 60.1                | 0.86           | 0.27               | 0.14           | OK         |
|                          | MH14      | MH13    | 0.000 | 0.90 | 0.000 | 1.161      | 62.7               | 14.61              | 202.3       | 9.3              | 211.6      | 825             | 19.5            | 0.10%          | 0.838               | 0.55             | 0.210                | PVC       | 473.6               | 0.86           | 0.38               | 0.45           | OK         |
| CRU10                    | Stub      | MH13    | 0.046 | 0.90 | 0.041 | 0.041      | 76.8               | 10.00              | 8.8         | 0.0              | 8.8        | 300             | 8.7             | 1.00%          | 0.298               | 0.07             | 0.075                | PVC       | 95.0                | 1.36           | 0.11               | 0.09           | OK         |
|                          | CB15      | MH35    | 0.131 | 0.90 | 0.118 | 0.118      | 76.8               | 10.00              | 25.2        | 0.0              | 25.2       | 250             | 10.1            | 1.00%          | 0.251               | 0.05             | 0.063                | PVC       | 60.1                | 1.21           | 0.14               | 0.42           | OK         |
| Connection to storage    | MH35      | MH13    | 0.000 | 0.90 | 0.000 | 0.118      | 76.8               | 10.00              | 25.2        | 0.0              | 25.2       | 525             | 13.4            | 0.50%          | 0.533               | 0.22             | 0.133                | PVC       | 317.2               | 1.42           | 0.16               | 0.08           | OK         |

## STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Project: 4175 Strandherd Drive  
Project No: 263560  
Location: Ottawa, ON  
Prepared by: G.R.  
Checked by: G.D.  
Date: August 14, 2026

Total Site area (including Strandherd Drive widening) = 5.273 ha  
Controlled Area = 3.732 ha  
Uncontrolled Area (including widening, RC=0.44) = 0.671 ha

Rainfall Data: a, b, c Values

|   | 2 Year  | 100 Year |
|---|---------|----------|
| a | 732.951 | 1735.688 |
| b | 6.199   | 6.014    |
| c | 0.81    | 0.82     |

Manning's Roughness Coefficient (All pipes)= 0.013

| LOCATION              |           |         | FLOW  |      |       |            |                    |                    |             |                  |            | DESIGN CAPACITY |             |            |                 |           |                  |           |               |          |              |                |            |
|-----------------------|-----------|---------|-------|------|-------|------------|--------------------|--------------------|-------------|------------------|------------|-----------------|-------------|------------|-----------------|-----------|------------------|-----------|---------------|----------|--------------|----------------|------------|
| Notes                 | From Node | To Node | Area  | C    | A x C | Accum Ax C | Rainfall Intensity | Time of Conc. (Tc) | Area Flow Q | Controlled Flows | Total Flow | Diam. (nominal) | Length Pipe | Slope Pipe | Diameter Actual | Pipe Area | Hydraulic Radius | Pipe Mat. | Pipe Capacity | Velocity | Time of Flow | Ratio Q/Q full | Cap. Check |
|                       |           |         | (ha)  |      | (ha)  | (ha)       | mm/hr              | (min)              | (l/s)       | (l/s)            | (l/s)      | (mm)            | (m)         | (%)        | (m)             | (sq.m)    | (m)              | (l/s)     | (m/s)         | (min)    |              |                |            |
|                       | MH13      | MH12    | 0.000 | 0.90 | 0.000 | 1.321      | 61.8               | 14.99              | 226.7       | 9.3              | 236.0      | 825             | 35.0        | 0.10%      | 0.838           | 0.55      | 0.210            | PVC       | 473.6         | 0.86     | 0.68         | 0.50           | OK         |
| South of CRU10        | CB20      | MH24    | 0.023 | 0.90 | 0.021 | 0.021      | 76.8               | 10.00              | 4.4         | 0.0              | 4.4        | 250             | 17.4        | 1.01%      | 0.251           | 0.05      | 0.063            | PVC       | 60.4          | 1.22     | 0.24         | 0.07           | OK         |
|                       | CB19      | MH24    | 0.035 | 0.90 | 0.032 | 0.032      | 76.8               | 10.00              | 6.7         | 0.0              | 6.7        | 250             | 4.7         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.06         | 0.11           | OK         |
|                       | MH24      | MH12    | 0.000 | 0.90 | 0.000 | 0.052      | 76.8               | 10.00              | 11.1        | 0.0              | 11.1       | 300             | 17.1        | 0.50%      | 0.298           | 0.07      | 0.075            | PVC       | 67.2          | 0.96     | 0.30         | 0.17           | OK         |
|                       | MH12      | MH11    | 0.000 | 0.90 | 0.000 | 1.373      | 60.2               | 15.67              | 229.7       | 9.3              | 239.0      | 825             | 7.8         | 0.10%      | 0.838           | 0.55      | 0.210            | PVC       | 473.6         | 0.86     | 0.15         | 0.50           | OK         |
| Orifice Tube          | CB17      | PIPE    | 0.121 | 0.90 | 0.109 | 0.109      | 76.8               | 10.00              | 23.2        | 0.0              | 23.2       | 250             | 14.1        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.19         | 0.39           | OK         |
|                       | MH11      | MH2     | 0.000 | 0.90 | 0.000 | 1.482      | 62.7               | 14.61              | 258.1       | 9.3              | 267.4      | 825             | 37.7        | 0.10%      | 0.838           | 0.55      | 0.210            | PVC       | 473.6         | 0.86     | 0.73         | 0.56           | OK         |
| West Branch           |           |         |       |      |       |            |                    |                    |             |                  |            |                 |             |            |                 |           |                  |           |               |          |              |                |            |
|                       | CB27      | MH30    | 0.028 | 0.90 | 0.025 | 0.025      | 76.8               | 10.00              | 5.4         | 0.0              | 5.4        | 300             | 14.4        | 0.70%      | 0.298           | 0.07      | 0.075            | PVC       | 79.5          | 1.14     | 0.21         | 0.07           | OK         |
|                       | CB47      | PIPE    | 0.047 | 0.90 | 0.042 | 0.042      | 76.8               | 10.00              | 9.0         | 0.0              | 9.0        | 250             | 7.5         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.10         | 0.15           | OK         |
|                       | MH30      | MH31    | 0.000 | 0.90 | 0.000 | 0.068      | 76.0               | 10.21              | 14.3        | 0.0              | 14.3       | 375             | 39.4        | 0.50%      | 0.381           | 0.11      | 0.095            | PVC       | 129.3         | 1.13     | 0.58         | 0.11           | OK         |
|                       | MH31      | MH10    | 0.000 | 0.90 | 0.000 | 0.068      | 73.9               | 10.79              | 13.9        | 0.0              | 13.9       | 375             | 26.4        | 0.50%      | 0.381           | 0.11      | 0.095            | PVC       | 129.3         | 1.13     | 0.39         | 0.11           | OK         |
|                       | CB41      | MH39    | 0.023 | 0.90 | 0.021 | 0.021      | 76.8               | 10.00              | 4.4         | 0.0              | 4.4        | 250             | 6.3         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.09         | 0.07           | OK         |
|                       | CBMH40    | MH39    | 0.022 | 0.80 | 0.018 | 0.018      | 76.8               | 10.00              | 3.8         | 0.0              | 3.8        | 300             | 31.5        | 0.50%      | 0.298           | 0.07      | 0.075            | PVC       | 67.2          | 0.96     | 0.55         | 0.06           | OK         |
|                       | MH39      | MH10    | 0.000 | 0.90 | 0.000 | 0.038      | 74.8               | 10.55              | 8.0         | 0.0              | 8.0        | 300             | 12.9        | 0.50%      | 0.298           | 0.07      | 0.075            | PVC       | 67.2          | 0.96     | 0.22         | 0.12           | OK         |
| CRU5                  | Stub      | MH10    | 0.019 | 0.90 | 0.017 | 0.017      | 76.8               | 10.00              | 3.6         | 0.0              | 3.6        | 300             | 9.0         | 1.00%      | 0.298           | 0.07      | 0.075            | PVC       | 95.0          | 1.36     | 0.11         | 0.04           | OK         |
|                       | CB32      | PIPE    | 0.052 | 0.90 | 0.047 | 0.047      | 76.8               | 10.00              | 10.0        | 0.0              | 10.0       | 250             | 11.6        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.16         | 0.17           | OK         |
|                       | CB33      | PIPE    | 0.045 | 0.90 | 0.041 | 0.041      | 76.8               | 10.00              | 8.6         | 0.0              | 8.6        | 250             | 10.7        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.15         | 0.14           | OK         |
|                       | CB35      | PIPE    | 0.064 | 0.77 | 0.049 | 0.049      | 76.8               | 10.00              | 10.5        | 0.0              | 10.5       | 250             | 11.5        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.16         | 0.17           | OK         |
|                       | MH10      | MH9     | 0.000 | 0.90 | 0.000 | 0.259      | 72.6               | 11.18              | 52.30       | 0.0              | 52.3       | 600             | 32.8        | 0.20%      | 0.610           | 0.29      | 0.152            | PVC       | 286.5         | 0.98     | 0.56         | 0.18           | OK         |
|                       | DCB26     | MH9     | 0.051 | 0.90 | 0.046 | 0.046      | 76.8               | 10.00              | 9.8         | 0.0              | 9.8        | 250             | 24.3        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.33         | 0.16           | OK         |
|                       | MH9       | MH8     | 0.000 | 0.80 | 0.000 | 0.305      | 70.7               | 11.73              | 60.00       | 0.0              | 60.0       | 675             | 33.5        | 0.12%      | 0.686           | 0.37      | 0.171            | PVC       | 303.8         | 0.82     | 0.68         | 0.20           | OK         |
| CRU4 Controlled Roof  | Stub      | MH8     | 0.123 | 0.90 | 0.111 | 0.000      | 76.8               | 10.00              | 0.0         | 5.2              | 5.2        | 300             | 8.9         | 1.00%      | 0.298           | 0.07      | 0.075            | PVC       | 95.0          | 1.36     | 0.11         | 0.05           | OK         |
|                       | DCB2      | MH29    | 0.245 | 0.90 | 0.221 | 0.221      | 76.8               | 10.00              | 47.0        | 0.0              | 47.0       | 300             | 28.7        | 0.70%      | 0.298           | 0.07      | 0.075            | PVC       | 79.5          | 1.14     | 0.42         | 0.59           | OK         |
|                       | CB4       | MH29    | 0.109 | 0.90 | 0.098 | 0.098      | 76.8               | 10.00              | 20.9        | 0.0              | 20.9       | 250             | 10.8        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.15         | 0.35           | OK         |
|                       | MH29      | MH8     | 0.000 | 0.90 | 0.000 | 0.319      | 76.8               | 10.00              | 68.0        | 0.0              | 68.0       | 525             | 11.5        | 0.50%      | 0.533           | 0.22      | 0.133            | PVC       | 317.2         | 1.42     | 0.14         | 0.21           | OK         |
|                       | MH8       | MH7     | 0.000 | 0.90 | 0.000 | 0.624      | 68.6               | 12.41              | 118.96      | 5.2              | 124.1      | 675             | 48.1        | 0.12%      | 0.686           | 0.37      | 0.171            | PVC       | 303.8         | 0.82     | 0.97         | 0.41           | OK         |
| CRU3 Controlled Roof  | Stub      | MH7     | 0.192 | 0.90 | 0.172 | 0.000      | 76.8               | 10.00              | 0.0         | 8.0              | 8.0        | 300             | 11.9        | 1.00%      | 0.298           | 0.07      | 0.075            | PVC       | 95.0          | 1.36     | 0.15         | 0.08           | OK         |
|                       | CB5       | MH32    | 0.107 | 0.90 | 0.096 | 0.096      | 76.8               | 10.00              | 20.5        | 0.0              | 20.5       | 250             | 28.6        | 1.05%      | 0.251           | 0.05      | 0.063            | PVC       | 61.6          | 1.24     | 0.38         | 0.33           | OK         |
|                       | CB7       | MH32    | 0.163 | 0.90 | 0.147 | 0.147      | 76.8               | 10.00              | 31.3        | 0.0              | 31.3       | 250             | 9.1         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.12         | 0.52           | OK         |
| CB2 and CB7           | MH32      | MH7     | 0.000 | 0.90 | 0.000 | 0.243      | 76.8               | 10.00              | 51.8        | 0.0              | 51.8       | 300             | 12.9        | 0.50%      | 0.298           | 0.07      | 0.075            | PVC       | 67.2          | 0.96     | 0.22         | 0.77           | OK         |
|                       | MH7       | MH6     | 0.000 | 0.90 | 0.000 | 0.867      | 65.9               | 13.39              | 158.59      | 13.2             | 171.8      | 750             | 55.2        | 0.10%      | 0.762           | 0.46      | 0.191            | PVC       | 367.3         | 0.81     | 1.14         | 0.47           | OK         |
| CRU2 Controlled Roof  | Stub      | MH6     | 0.160 | 0.90 | 0.144 | 0.000      | 76.8               | 10.00              | 0.0         | 6.7              | 6.7        | 300             | 10.8        | 1.00%      | 0.298           | 0.07      | 0.075            | PVC       | 95.0          | 1.36     | 0.13         | 0.07           | OK         |
|                       | CB10      | MH34    | 0.148 | 0.90 | 0.133 | 0.133      | 76.8               | 10.00              | 28.4        | 0.0              | 28.4       | 250             | 9.7         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.13         | 0.47           | OK         |
|                       | CB12      | MH34    | 0.080 | 0.90 | 0.072 | 0.072      | 76.8               | 10.00              | 15.4        | 0.0              | 15.4       | 250             | 28.4        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.39         | 0.26           | OK         |
| Connection to storage | MH34      | MH6     | 0.000 | 0.90 | 0.000 | 0.205      | 76.8               | 10.00              | 43.8        | 0.0              | 43.8       | 525             | 11.6        | 0.50%      | 0.533           | 0.22      | 0.133            | PVC       | 317.2         | 1.42     | 0.14         | 0.14           | OK         |
|                       | MH6       | MH5     | 0.000 | 0.90 | 0.000 | 1.072      | 62.9               | 14.53              | 187.33      | 19.9             | 207.3      | 750             | 29.1        | 0.10%      | 0.762           | 0.46      | 0.191            | PVC       | 367.3         | 0.81     | 0.60         | 0.56           | OK         |
|                       | CB28      | MH21    | 0.038 | 0.90 | 0.034 | 0.034      | 76.8               | 10.00              | 7.3         | 0.0              | 7.3        | 300             | 6.4         | 0.62%      | 0.298           | 0.07      | 0.075            | PVC       | 74.8          | 1.07     | 0.10         | 0.10           | OK         |
|                       | CB42      | PIPE    | 0.027 | 0.90 | 0.024 | 0.024      | 76.8               | 10.00              | 5.2         | 0.0              | 5.2        | 250             | 3.7         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.05         | 0.09           | OK         |
| Behind CRU2           | MH21      | MH20    | 0.000 | 0.90 | 0.000 | 0.059      | 76.8               | 10.00              | 12.5        | 0.0              | 12.5       | 375             | 54.3        | 0.50%      | 0.381           | 0.11      | 0.095            | PVC       | 129.3         | 1.13     | 0.80         | 0.10           | OK         |

## STORM SEWER CALCULATION SHEET (RATIONAL METHOD)

Project: 4175 Strandherd Drive  
Project No: 263560  
Location: Ottawa, ON  
Prepared by: G.R.  
Checked by: G.D.  
Date: August 14, 2026

Total Site area (including Strandherd Drive widening) = 5.273 ha  
Controlled Area = 3.732 ha  
Uncontrolled Area (including widening, RC=0.44) = 0.671 ha

Rainfall Data: a, b, c Values

|   | 2 Year  | 100 Year |
|---|---------|----------|
| a | 732.951 | 1735.688 |
| b | 6.199   | 6.014    |
| c | 0.81    | 0.82     |

Manning's Roughness Coefficient (All pipes)= 0.013

| LOCATION                  |             |             | FLOW  |      |       |            |                    |                    |             |                  |            | DESIGN CAPACITY |             |            |                 |           |                  |           |               |          |              |                |            |
|---------------------------|-------------|-------------|-------|------|-------|------------|--------------------|--------------------|-------------|------------------|------------|-----------------|-------------|------------|-----------------|-----------|------------------|-----------|---------------|----------|--------------|----------------|------------|
| Notes                     | From Node   | To Node     | Area  | C    | A x C | Accum Ax C | Rainfall Intensity | Time of Conc. (Tc) | Area Flow Q | Controlled Flows | Total Flow | Diam. (nominal) | Length Pipe | Slope Pipe | Diameter Actual | Pipe Area | Hydraulic Radius | Pipe Mat. | Pipe Capacity | Velocity | Time of Flow | Ratio Q/Q full | Cap. Check |
|                           |             |             | (ha)  |      | (ha)  | (ha)       | mm/hr              | (min)              | (l/s)       | (l/s)            | (l/s)      | (mm)            | (m)         | (%)        | (m)             | (sq.m)    | (m)              | (l/s)     | (m/s)         | (min)    |              |                |            |
|                           | CB29        | MH20        | 0.071 | 0.90 | 0.064 | 0.064      | 76.8               | 10.00              | 13.6        | 0.0              | 13.6       | 250             | 12.2        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.17         | 0.23           | OK         |
| Pumped Loading Dock CRU2  | Pump Well 2 | MH20        | 0.026 | 0.90 | 0.023 | 0.023      | 76.8               | 10.00              | 5.0         | 0.0              | 5.0        |                 |             |            |                 |           |                  |           |               |          |              |                |            |
| Pumped Loading Dock CRU1  | Pump Well 1 | MH20        | 0.046 | 0.90 | 0.041 | 0.041      | 76.8               | 10.00              | 8.8         | 0.0              | 8.8        |                 |             |            |                 |           |                  |           |               |          |              |                |            |
|                           | CB30        | PIPE        | 0.061 | 0.90 | 0.055 | 0.055      | 178.6              | 10.00              | 27.2        | 0.0              | 27.2       | 250             | 6.6         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.09         | 0.45           | OK         |
|                           | CB31        | PIPE        | 0.091 | 0.90 | 0.082 | 0.082      | 178.6              | 10.00              | 40.6        | 13.8             | 54.4       | 250             | 8.2         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.11         | 0.91           | OK         |
|                           | MH20        | MH19        | 0.000 | 0.90 | 0.000 | 0.259      | 73.9               | 10.80              | 53.2        | 13.8             | 67.0       | 375             | 50.5        | 0.50%      | 0.381           | 0.11      | 0.095            | PVC       | 129.3         | 1.13     | 0.74         | 0.52           | OK         |
|                           | MH19        | MH5         | 0.000 | 0.90 | 0.000 | 0.259      | 71.4               | 11.54              | 51.4        | 13.8             | 65.2       | 375             | 13.5        | 0.50%      | 0.381           | 0.11      | 0.095            | PVC       | 129.3         | 1.13     | 0.20         | 0.50           | OK         |
|                           | MH5         | MH4         | 0.000 | 0.90 | 0.000 | 1.331      | 61.5               | 15.13              | 227.28      | 33.8             | 261.0      | 750             | 27.8        | 0.10%      | 0.762           | 0.46      | 0.191            | PVC       | 367.3         | 0.81     | 0.58         | 0.71           | OK         |
|                           | CB14        | PIPE        | 0.074 | 0.90 | 0.067 | 0.067      | 76.8               | 10.00              | 14.2        | 0.0              | 14.2       | 250             | 7.5         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.10         | 0.24           | OK         |
|                           | MH4         | MH3         | 0.000 | 0.90 | 0.000 | 1.398      | 60.1               | 15.71              | 233.56      | 33.8             | 267.3      | 825             | 26.3        | 0.10%      | 0.838           | 0.55      | 0.210            | PVC       | 473.6         | 0.86     | 0.51         | 0.56           | OK         |
| CRU1 Partially Controlled | Stub        | MH3         | 0.278 | 0.90 | 0.150 | 0.150      | 76.8               | 10.00              | 0.0         | 11.7             | 11.7       | 300             | 21.1        | 1.00%      | 0.298           | 0.07      | 0.075            | PVC       | 95.0          | 1.36     | 0.26         | 0.12           | OK         |
|                           | CB16        | MH33        | 0.170 | 0.90 | 0.153 | 0.153      | 76.8               | 10.00              | 32.6        | 0.0              | 32.6       | 250             | 10.2        | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.14         | 0.54           | OK         |
| Connection to storage     | MH33        | MH3         | 0.000 | 0.90 | 0.000 | 0.153      | 76.8               | 10.00              | 32.6        | 0.0              | 32.6       | 525             | 8.2         | 0.50%      | 0.533           | 0.22      | 0.133            | PVC       | 317.2         | 1.42     | 0.10         | 0.10           | OK         |
|                           | CB18        | PIPE        | 0.169 | 0.90 | 0.152 | 0.152      | 76.8               | 10.00              | 32.5        | 0.0              | 32.5       | 250             | 7.7         | 1.00%      | 0.251           | 0.05      | 0.063            | PVC       | 60.1          | 1.21     | 0.11         | 0.54           | OK         |
|                           | MH3         | MH2         | 0.000 | 0.90 | 0.000 | 1.853      | 59.0               | 16.22              | 303.89      | 45.4             | 349.3      | 825             | 45.9        | 0.10%      | 0.838           | 0.55      | 0.210            | PVC       | 473.6         | 0.86     | 0.89         | 0.74           | OK         |
| Common Branch             | MH2         | MH1         | 0.000 | 0.90 | 0.000 | 3.335      | 57.2               | 17.11              | 529.87      | 45.4             | 575.3      | 864x1345        | 74.9        | 0.10%      | 0.991           | 0.77      | 0.248            | PVC       | 739.3         | 0.96     | 1.30         | 0.78           | OK         |
|                           | MH1         | Ex. OGS1    | 0.000 | 0.90 | 0.000 | 3.335      | 54.7               | 18.41              | 507.06      | 45.4             | 552.5      | 864x1345        | 4.6         | 0.24%      | 0.991           | 0.77      | 0.248            | PVC       | 1145.4        | 1.49     | 0.05         | 0.48           | OK         |
|                           | Ex. OGS1    | Ex. OGS2    | 0.000 | 0.90 | 0.000 | 3.335      | 54.6               | 18.46              | 506.20      | 45.4             | 551.6      | 864x1345        | 4.1         | 0.25%      | 0.991           | 0.77      | 0.248            | PVC       | 1169.0        | 1.52     | 0.05         | 0.47           | OK         |
|                           | Ex. OGS2    | Ex. Outfall | 0.000 | 0.90 | 0.000 | 3.335      | 54.6               | 18.51              | 505.45      | 45.4             | 550.9      | 864x1345        | 13.2        | 0.22%      | 0.991           | 0.77      | 0.248            | PVC       | 1096.6        | 1.42     | 0.15         | 0.50           | OK         |

Recessed loading dock area flows to be pumped calculated based on the 100-year storm event.

**Post-Development Uncontrolled Area Release Rates**

Project Name: 4175 Strandherd Drive  
Project Number: 263560

**AREA 200**

**Rational Method - 2 Year Post Development**

Event: 2 years

ABC's: A 732.951  
B 6.199  
C 0.81

Time of Concentration: t 10 min

Runoff Coefficient: C 0.44

Site Area A 0.671 ha

Intensity  $i=A/(T)^c$  76.81 mm/hr

Flow Q 0.063 m<sup>3</sup>/s  
Q=CiA/360 63.0 l/s

**Rational Method - 25 Year Post Development**

Event: 25 years

ABC's: A 1402.884  
B 6.018  
C 0.819

Time of Concentration: t 10 min

Runoff Coefficient: C 0.44

Site Area A 0.671 ha

Intensity  $i=A/(T)^c$  144.69 mm/hr

Flow Q 0.12 m<sup>3</sup>/s  
Q=CiA/360 118.7 l/s

**Rational Method - 5 Year Post Development**

Event: 5 years

ABC's: A 998.071  
B 6.053  
C 0.814

Time of Concentration: t 10 min

Runoff Coefficient: C 0.44

Site Area A 0.671 ha

Intensity  $i=A/(T)^c$  104.19 mm/hr

Flow Q 0.09 m<sup>3</sup>/s  
Q=CiA/360 85.4 l/s

**Rational Method - 50 Year Post Development**

Event: 50 years

ABC's: A 1569.58  
B 6.014  
C 0.82

Time of Concentration: t 10 min

Runoff Coefficient: C 0.44

Site Area A 0.671 ha

Intensity  $i=A/(T)^c$  161.47 mm/hr

Flow Q 0.13 m<sup>3</sup>/s  
Q=CiA/360 132.4 l/s

**Rational Method - 10 Year Post Development**

Event: 10 years

ABC's: A 1174.184  
B 6.014  
C 0.816

Time of Concentration: t 10 min

Runoff Coefficient: C 0.44

Site Area A 0.671 ha

Intensity  $i=A/(T)^c$  122.14 mm/hr

Flow Q 0.10 m<sup>3</sup>/s  
Q=CiA/360 100.2 l/s

**Rational Method - 100 Year Post Development**

Event: 100 years

ABC's: A 1735.688  
B 6.014  
C 0.82

Time of Concentration: t 10 min

Runoff Coefficient: C 0.44

Site Area A 0.671 ha

Intensity  $i=A/(T)^c$  178.56 mm/hr

Flow Q 0.15 m<sup>3</sup>/s  
Q=CiA/360 146.4 l/s

**Rational Method - 100yr + 20% IDF Increase Post Development**

Event: 100yr + 20% IDF INC.

ABC's: A 1735.688  
B 6.014  
C 0.82

Time of Concentration: t 10 min

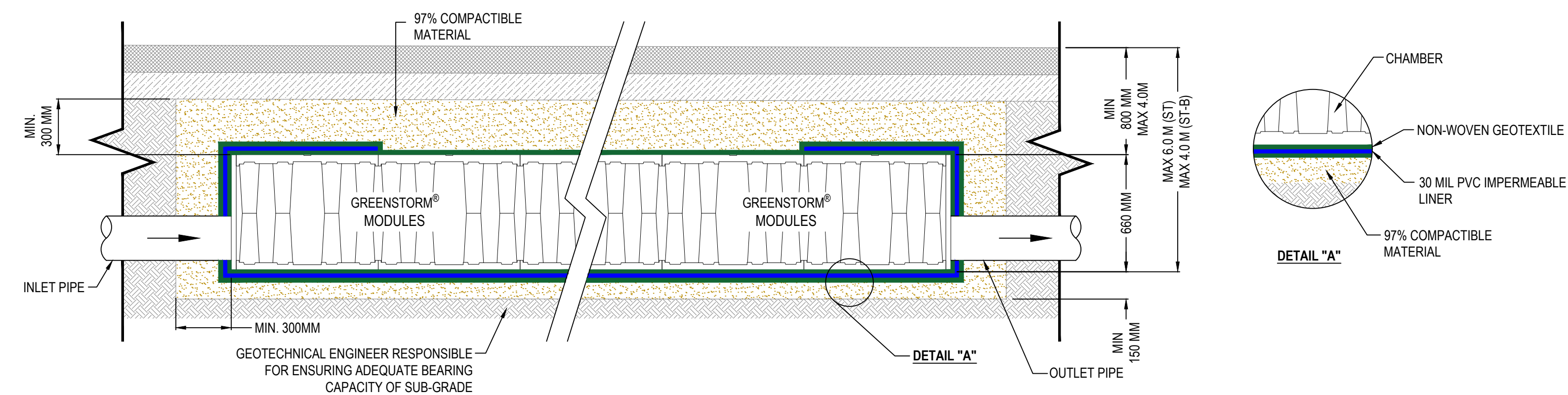
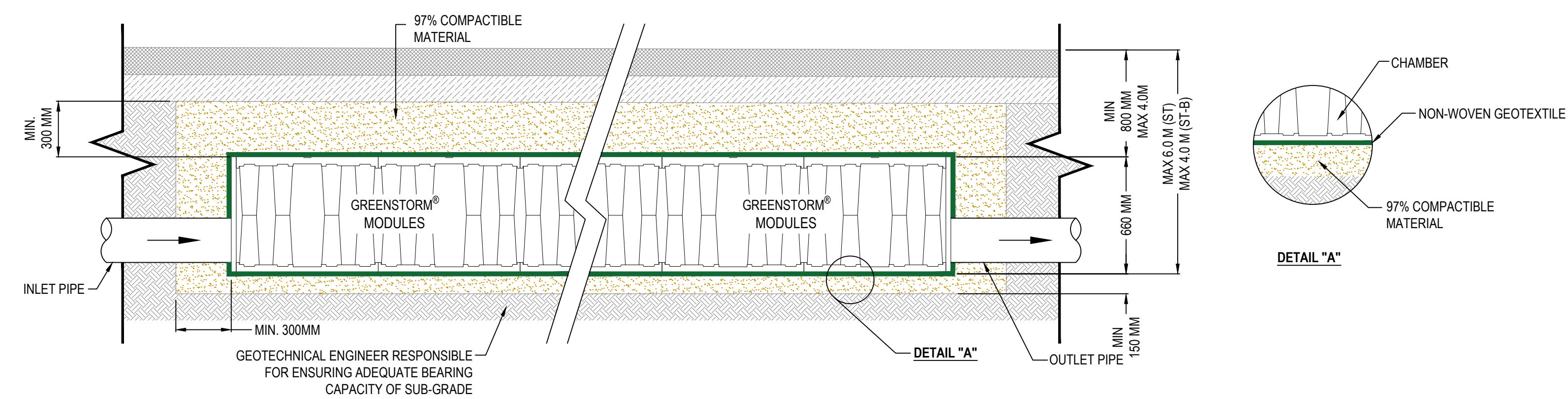
Runoff Coefficient: C 0.44

Site Area A 0.671 ha

Intensity  $i=A/(T)^c$  214.27 mm/hr 100-year x 20%

Flow Q 0.18 m<sup>3</sup>/s  
Q=CiA/360 175.7 l/s





\*\*Recommended bedding materials : HPB

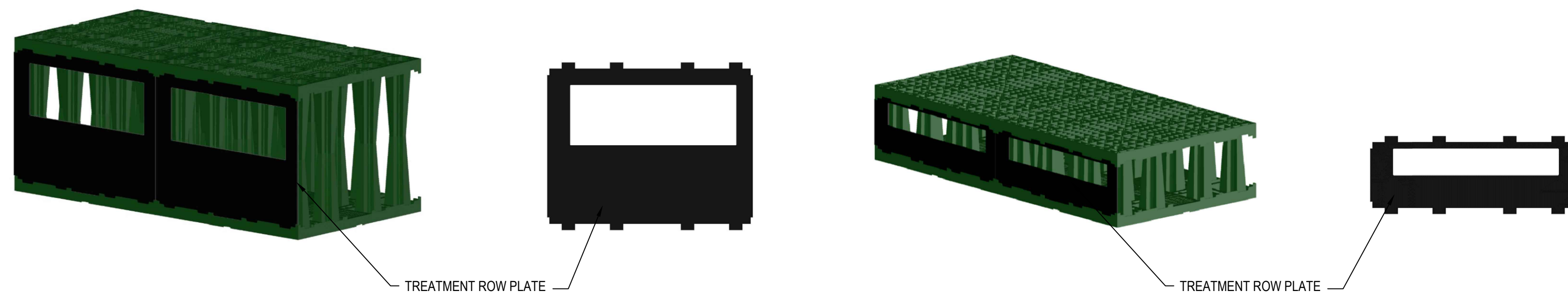
### COMPACTIBLE MATERIAL LIST

- GRANULAR A
- GRANULAR B
- 19mm CLEAR ANGULAR STONE
- HIGH PERFORMANCE BEDDING (HPB)
- HL6

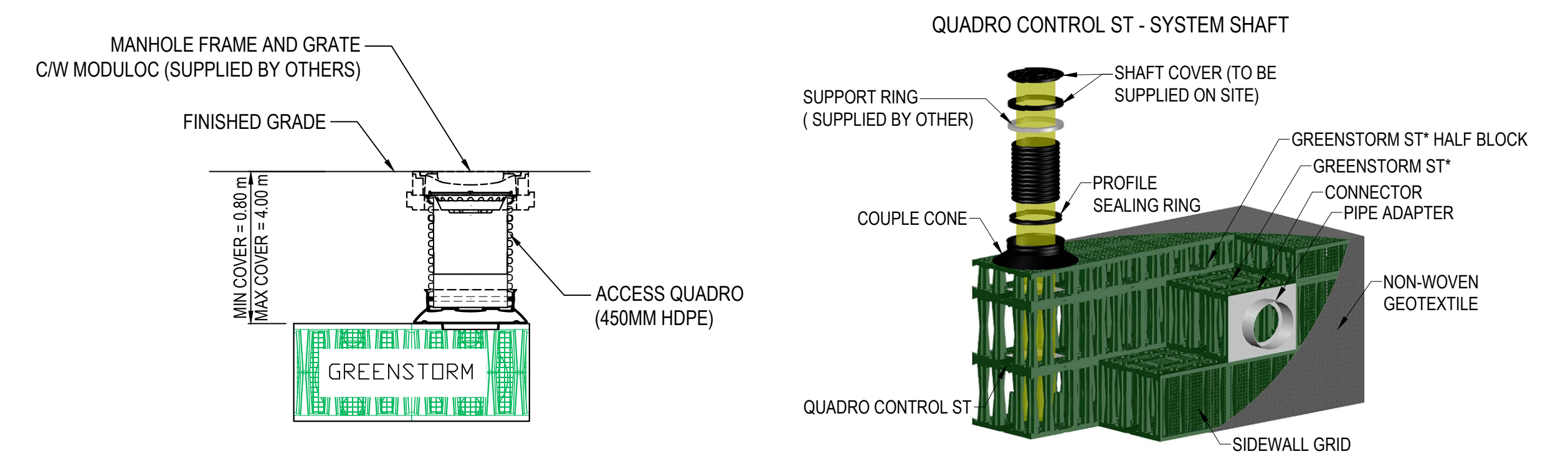
**LEGEND**

-  30MIL PVC IMPERMEABLE LINER  
 8 OZ NON-WOVEN GEOTEXTILE

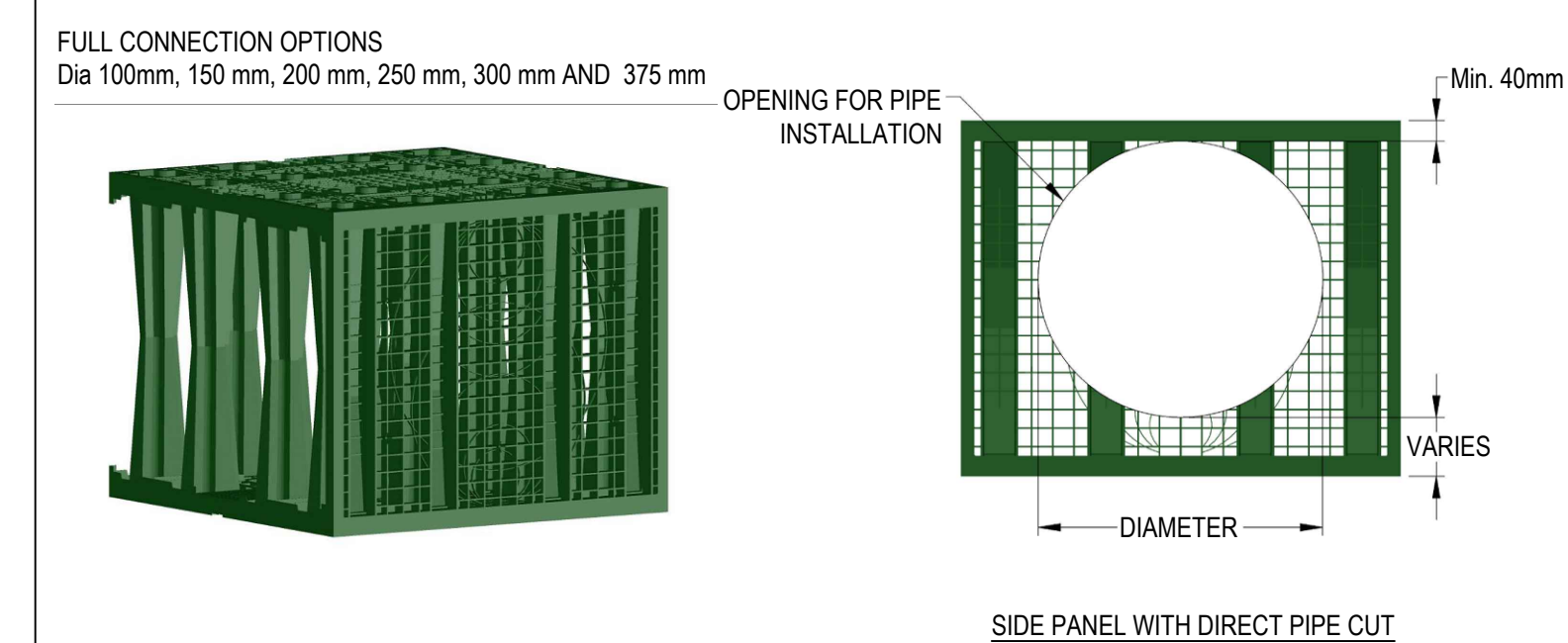
TYPICAL ONE LAYER GREENSTORM CROSS SECTION



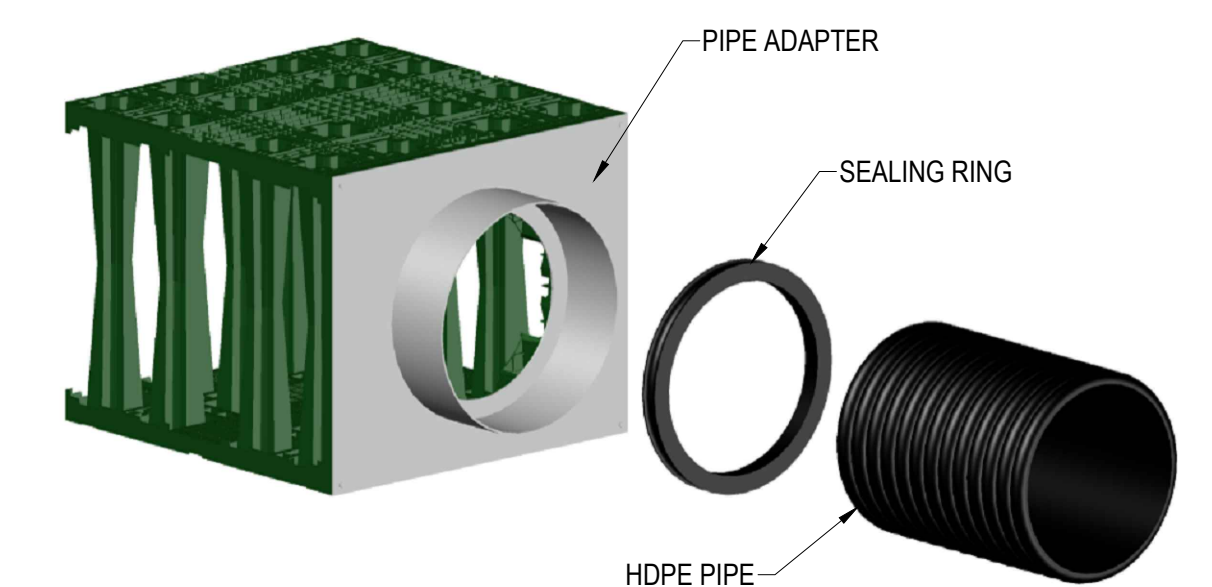
STANDARD TREATMENT ROW DETAIL (WHERE APPLICABLE)



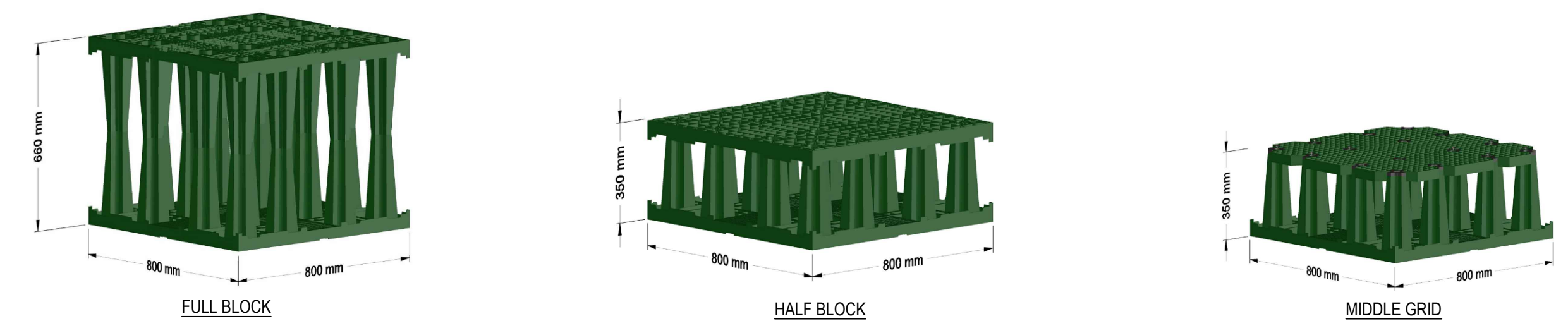
GREENSTORM ACCESS QUADRO DETAIL(WHERE APPLICABLE)



STANDARD SIDE PANEL WITH DIRECT PIPE CUT



|                                   |
|-----------------------------------|
| STD. ADAPTER PANEL W/ DIA 450&525 |
|-----------------------------------|



## STANDARD GREENSTORM BLOCK DETAIL



69 CONNIE CRESCENT  
CONCORD, ON  
L4K 1L3

**SALES@STORMCON.CA**  
**www.STORMCON.CA**

THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE GREENSTORM SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE CONTRACTOR OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE STORMCON PRODUCTS ARE DESIGNED IN ACCORDANCE WITH STORMCONS MINIMUM REQUIREMENTS. STORMCON DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

260 EIGHTH STREET  
TORONTO, ON

## DETAILS SHEET

## GREENSTORM STORMWATER CHAMBER

PROJECT NO: 2024-079

DATE: 05/23/2024

DESIGNED BY: JD

CHECKED BY: EC

SCALE: N.T.S.

SHEET NO: 12 OF 12





## Particle Size Distribution

Removing silt particles from runoff ensures that the majority of the pollutants, such as hydrocarbons and heavy metals that adhere to fine particles, are not discharged into our natural water courses. The table below lists the particle size distribution used to define the annual TSS removal.

| CLOCA (clay, silt and sand) |                   |                  |                          |                     |                   |                  |                          |
|-----------------------------|-------------------|------------------|--------------------------|---------------------|-------------------|------------------|--------------------------|
| Particle Size<br>µm         | Distribution<br>% | Specific Gravity | Settling Velocity<br>m/s | Particle Size<br>µm | Distribution<br>% | Specific Gravity | Settling Velocity<br>m/s |
| 850                         | 3.3               | 2.65             | 0.1465                   | 50                  | 3.9               | 2.65             | 0.0022                   |
| 425                         | 23.4              | 2.65             | 0.0698                   | 36                  | 2.6               | 2.65             | 0.0012                   |
| 300                         | 17.5              | 2.65             | 0.0439                   | 22                  | 1.3               | 2.65             | 0.0004                   |
| 250                         | 6.5               | 2.65             | 0.0335                   | 12                  | 1.9               | 2.65             | 0.0004                   |
| 212                         | 6.5               | 2.65             | 0.0259                   | 9                   | 0                 | 2.65             | 0.0004                   |
| 150                         | 11.7              | 2.65             | 0.0145                   | 6.5                 | 1.3               | 2.65             | 0.0004                   |
| 125                         | 5.2               | 2.65             | 0.0105                   | 3                   | 1.3               | 2.65             | 0.0004                   |
| 100                         | 3.9               | 2.65             | 0.0070                   | 1.5                 | 1.3               | 2.65             | 0.0004                   |
| 75                          | 3.9               | 2.65             | 0.0040                   | 1                   | 4.5               | 2.65             | 0.0004                   |

## Stormceptor Design Notes

- Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor version 1.0
- Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal.
- Only the STC 300 is adaptable to function with a catch basin inlet and/or inline pipes.
- Only the Stormceptor models STC 750 to STC 6000 may accommodate multiple inlet pipes.
- Inlet and outlet invert elevation differences are as follows:

### Inlet and Outlet Pipe Invert Elevations Differences

| Inlet Pipe Configuration | STC 300 | STC 750 to STC 6000 | STC 9000 to STC 14000 |
|--------------------------|---------|---------------------|-----------------------|
| Single inlet pipe        | 75 mm   | 25 mm               | 75 mm                 |
| Multiple inlet pipes     | 75 mm   | 75 mm               | Only one inlet pipe.  |

- Design estimates are based on stable site conditions only, after construction is completed.
- Design estimates assume that the storm drain is not submerged during zero flows. For submerged applications, please contact your local Stormceptor representative.
- Design estimates may be modified for specific spills controls. Please contact your local Stormceptor representative for further assistance.
- For pricing inquiries or assistance, please contact Imbrium Systems Inc., 1-800-565-4801.



## Stormceptor Design Summary

### PCSWMM for Stormceptor

#### Project Information

|                |                                |
|----------------|--------------------------------|
| Date           | 06/12/2013                     |
| Project Name   | Oil/Grit Separator #8          |
| Project Number | 109203 - Citi Gate (416) Lands |
| Location       | Block 3                        |

#### Designer Information

|         |                                       |
|---------|---------------------------------------|
| Company | Novatech Engineering Consultants Ltd. |
| Contact | Conrad Stang, M.A.Sc., P.Eng.         |

#### Rainfall

|                  |                                        |
|------------------|----------------------------------------|
| Name             | OTTAWA<br>MACDONALD-CARTIER INT'L<br>A |
| State            | ON                                     |
| ID               | 6000                                   |
| Years of Records | 1967 to 2003                           |
| Latitude         | 45°19'N                                |
| Longitude        | 75°40'W                                |

#### Notes

|     |
|-----|
| N/A |
|-----|

#### Water Quality Objective

|                 |    |
|-----------------|----|
| TSS Removal (%) | 80 |
|-----------------|----|

#### Drainage Area

|                    |      |
|--------------------|------|
| Total Area (ha)    | 6.31 |
| Imperviousness (%) | 85   |

The Stormceptor System model STC 9000 achieves the water quality objective removing 82% TSS for a CLOCA (clay, silt and sand) particle size distribution.

#### Upstream Storage

| Storage<br>(ha-m) | Discharge<br>(L/s) |
|-------------------|--------------------|
| 0                 | 0                  |

#### Stormceptor Sizing Summary

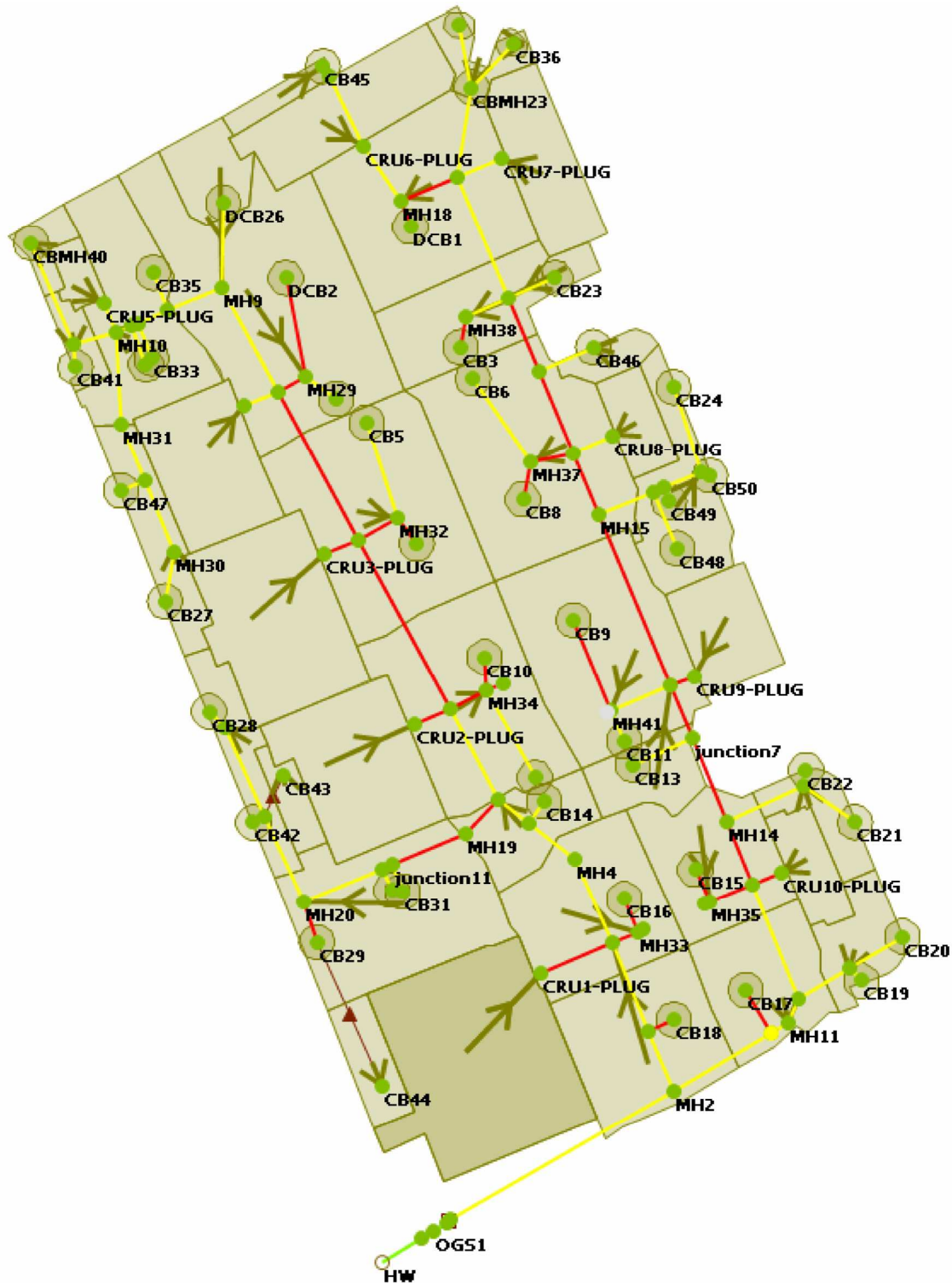
| Stormceptor Model | TSS Removal<br>% |
|-------------------|------------------|
| STC 300           | 41               |
| STC 750           | 56               |
| STC 1000          | 56               |
| STC 1500          | 57               |
| STC 2000          | 66               |
| STC 3000          | 67               |
| STC 4000          | 73               |
| STC 5000          | 74               |
| STC 6000          | 78               |
| <b>STC 9000</b>   | <b>82</b>        |
| STC 10000         | 82               |
| STC 14000         | 85               |

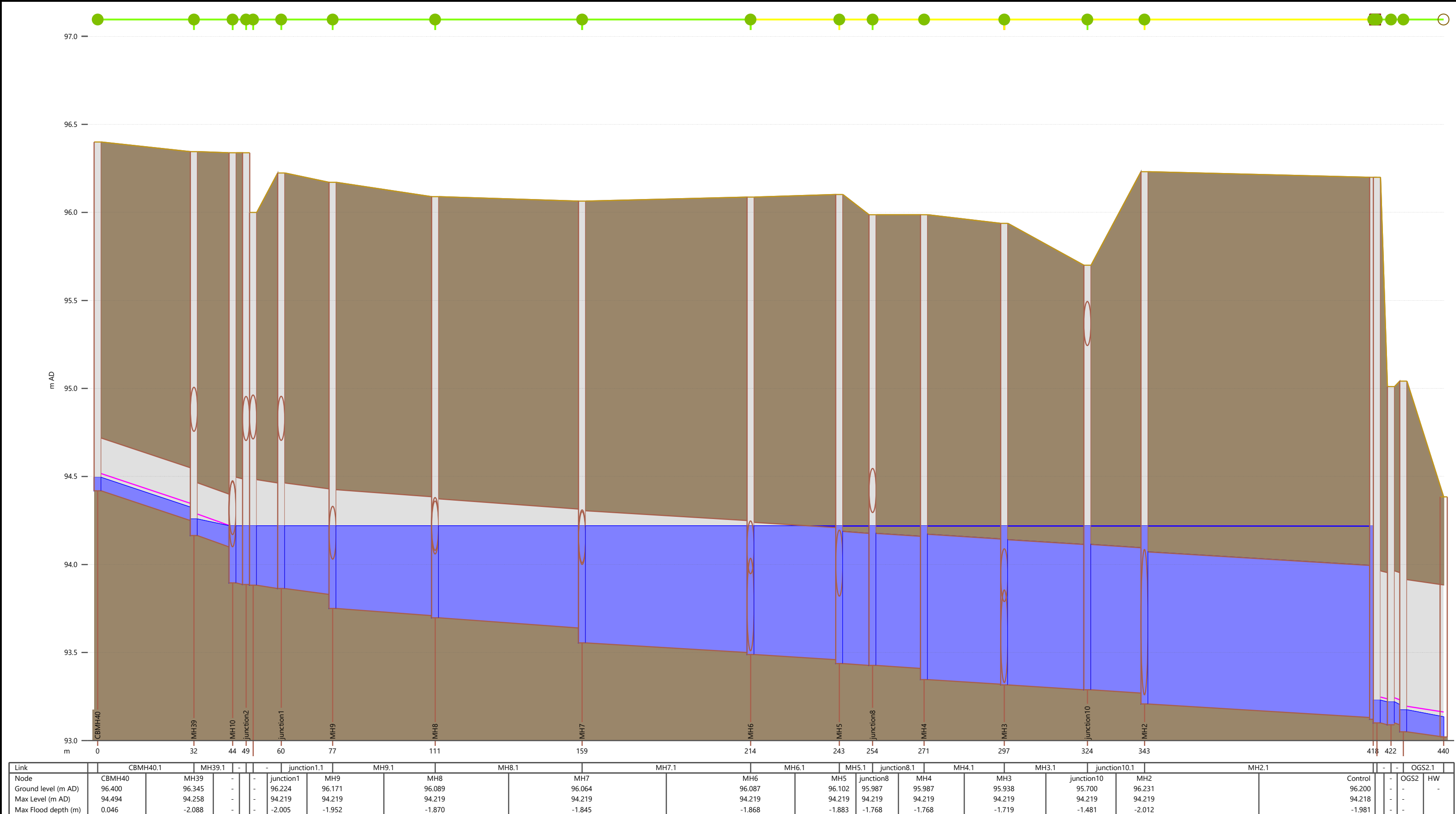
**InfoWorks HGL Model Results Summary Table for 25-year, 100-year and 100-year+20% Storm Events**

| Catch Basin | CB Type           | Contributing Area<br>(ha) | Rim Elev.<br>(m AD) | Local Ponding<br>Elev.<br>(m AD) | Maximum<br>Ponding Elev.<br>(m AD) | Available<br>Depth of<br>Ponding<br>(m) | Ponding Area<br>(ha) | 25-year Ponding<br>Elevation<br>(m AD) | 25-year<br>Ponding Depth<br>(m) | 100-year Ponding<br>Elevation<br>(m AD) | 100-year<br>Ponding Depth<br>(m) | 100-year+20%<br>Ponding Elevation<br>(m AD) | 100-year+20% Ponding<br>Depth<br>(m) |
|-------------|-------------------|---------------------------|---------------------|----------------------------------|------------------------------------|-----------------------------------------|----------------------|----------------------------------------|---------------------------------|-----------------------------------------|----------------------------------|---------------------------------------------|--------------------------------------|
| CB10        | Single CB - HozFB | 0.148                     | 95.800              | 96.05                            | 96.05                              | 0.25                                    | 0.0686               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB11        | Single CB - HozFB | 0.087                     | 95.800              | 96.00                            | 96.00                              | 0.20                                    | 0.0240               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB12        | Single CB - HozFB | 0.080                     | 95.800              | 96.00                            | 96.00                              | 0.20                                    | 0.0234               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB13        | Single CB - HozFB | 0.057                     | 95.750              | 96.00                            | 96.00                              | 0.25                                    | 0.0425               | 95.59                                  | 0.00                            | 95.92                                   | 0.17                             | 95.99                                       | 0.24                                 |
| CB14        | Single CB - HozFB | 0.074                     | 95.750              | 96.00                            | 96.00                              | 0.25                                    | 0.0295               | 95.59                                  | 0.00                            | 95.92                                   | 0.17                             | 95.99                                       | 0.24                                 |
| CB15        | Single CB - HozFB | 0.131                     | 95.700              | 96.00                            | 96.00                              | 0.30                                    | 0.0626               | 95.59                                  | 0.00                            | 95.92                                   | <b>0.22</b>                      | 95.99                                       | <b>0.29</b>                          |
| CB16        | Single CB - HozFB | 0.170                     | 95.700              | 96.00                            | 96.00                              | 0.30                                    | 0.0811               | 95.59                                  | 0.00                            | 95.92                                   | <b>0.22</b>                      | 95.99                                       | <b>0.29</b>                          |
| CB17        | Single CB - HozFB | 0.121                     | 95.700              | 96.00                            | 96.00                              | 0.30                                    | 0.0633               | 95.59                                  | 0.00                            | 95.92                                   | <b>0.22</b>                      | 95.99                                       | <b>0.29</b>                          |
| CB18        | Single CB - HozFB | 0.169                     | 95.700              | 96.00                            | 96.00                              | 0.30                                    | 0.0709               | 95.59                                  | 0.00                            | 95.92                                   | <b>0.22</b>                      | 95.99                                       | <b>0.29</b>                          |
| CB19        | Single CB - HozFB | 0.035                     | 95.950              | 96.07                            | 96.07                              | 0.12                                    | 0.0075               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.04                                 |
| CB20        | Single CB - HozFB | 0.023                     | 95.950              | 96.04                            | 96.07                              | 0.09                                    | 0.0085               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.04                                 |
| CB21        | Single CB - HozFB | 0.028                     | 96.070              | 96.16                            | 96.16                              | 0.09                                    | 0.0096               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB22        | Single CB - HozFB | 0.016                     | 96.070              | 96.16                            | 96.16                              | 0.09                                    | 0.0095               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB23        | Single CB - HozFB | 0.015                     | 96.150              | 96.23                            | 96.23                              | 0.08                                    | 0.0031               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB24        | Single CB - HozFB | 0.019                     | 96.170              | 96.28                            | 96.28                              | 0.11                                    | 0.0088               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB26        | Single CB - HozFB | 0.051                     | 96.090              | 96.15                            | 96.15                              | 0.06                                    | 0.0026               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB27        | Single CB - HozFB | 0.028                     | 96.050              | 96.20                            | 96.20                              | 0.15                                    | 0.0145               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB28        | Single CB - HozFB | 0.038                     | 96.050              | 96.20                            | 96.20                              | 0.15                                    | 0.0131               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB29        | Single CB - HozFB | 0.071                     | 95.980              | 96.20                            | 96.20                              | 0.22                                    | 0.0424               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.01                                 |
| CB3         | Single CB - HozFB | 0.112                     | 95.800              | 96.00                            | 96.05                              | 0.25                                    | 0.0425               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB30        | Single CB - HozFB | 0.061                     | 95.950              | 96.20                            | 96.20                              | 0.25                                    | 0.0378               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.04                                 |
| CB31        | Single CB - HozFB | 0.091                     | 95.950              | 96.20                            | 96.20                              | 0.25                                    | 0.0436               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.04                                 |
| CB32        | Single CB - HozFB | 0.052                     | 96.050              | 96.25                            | 96.25                              | 0.20                                    | 0.0197               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB33        | Single CB - HozFB | 0.045                     | 96.000              | 96.25                            | 96.25                              | 0.25                                    | 0.0188               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB35        | Single CB - HozFB | 0.064                     | 96.220              | 96.32                            | 96.32                              | 0.10                                    | 0.0053               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB36        | Single CB - HozFB | 0.012                     | 96.380              | 96.43                            | 96.43                              | 0.05                                    | 0.0035               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB37        | Single CB - HozFB | 0.014                     | 96.380              | 96.43                            | 96.43                              | 0.05                                    | 0.0037               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB4         | Single CB - HozFB | 0.109                     | 95.800              | 96.00                            | 96.05                              | 0.25                                    | 0.0390               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB41        | Single CB - HozFB | 0.023                     | 96.200              | 96.30                            | 96.30                              | 0.10                                    | 0.0043               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB42        | Single CB - HozFB | 0.027                     | 96.050              | 96.20                            | 96.20                              | 0.15                                    | 0.0155               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB45        | Single CB - HozFB | 0.020                     | 96.150              | 96.40                            | 96.40                              | 0.25                                    | 0.0055               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB46        | Single CB - HozFB | 0.023                     | 96.13               | 96.20                            | 96.20                              | 0.07                                    | 0.0033               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB47        | Single CB - HozFB | 0.047                     | 96.05               | 96.20                            | 96.20                              | 0.15                                    | 0.0164               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB48        | Single CB - HozFB | 0.045                     | 96.04               | 96.25                            | 96.25                              | 0.21                                    | 0.0207               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB49        | Single CB - HozFB | 0.027                     | 96.10               | 96.30                            | 96.30                              | 0.20                                    | 0.0158               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB5         | Single CB - HozFB | 0.107                     | 95.80               | 96.05                            | 96.05                              | 0.25                                    | 0.0483               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB50        | Single CB - HozFB | 0.013                     | 96.16               | 96.28                            | 96.28                              | 0.12                                    | 0.0117               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CB6         | Single CB - HozFB | 0.100                     | 95.80               | 96.05                            | 96.05                              | 0.25                                    | 0.0416               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB7         | Single CB - HozFB | 0.163                     | 95.80               | 96.05                            | 96.05                              | 0.25                                    | 0.0750               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB8         | Single CB - HozFB | 0.177                     | 95.80               | 96.05                            | 96.05                              | 0.25                                    | 0.0836               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CB9         | Single CB - HozFB | 0.159                     | 95.80               | 96.05                            | 96.05                              | 0.25                                    | 0.0800               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| CBMH23      | Single CB - HozFB | 0.008                     | 96.34               | 96.45                            | 96.45                              | 0.11                                    | 0.0048               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| CBMH40      | Single CB - HozFB | 0.022                     | 96.40               | 96.49                            | 96.49                              | 0.09                                    | 0.0036               | 95.59                                  | 0.00                            | 95.92                                   | 0.00                             | 95.99                                       | 0.00                                 |
| DCB1        | Dual CB - HozFB   | 0.246                     | 95.80               | 96.10                            | 96.10                              | 0.30                                    | 0.0967               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |
| DCB2        | Dual CB - HozFB   | 0.245                     | 95.80               | 96.05                            | 96.05                              | 0.25                                    | 0.0658               | 95.59                                  | 0.00                            | 95.92                                   | 0.12                             | 95.99                                       | 0.19                                 |



# InfoWorks Model Schematic Plan

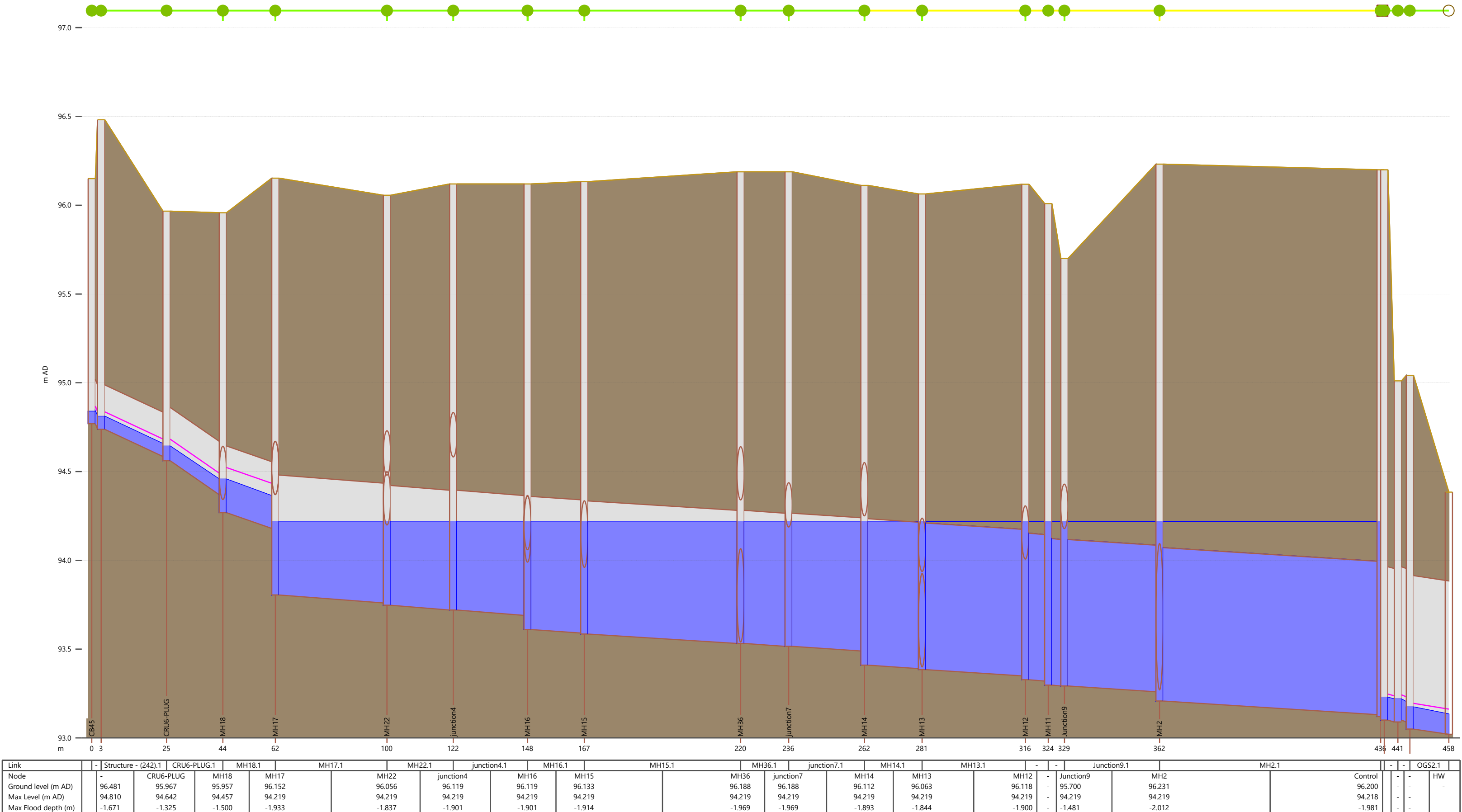




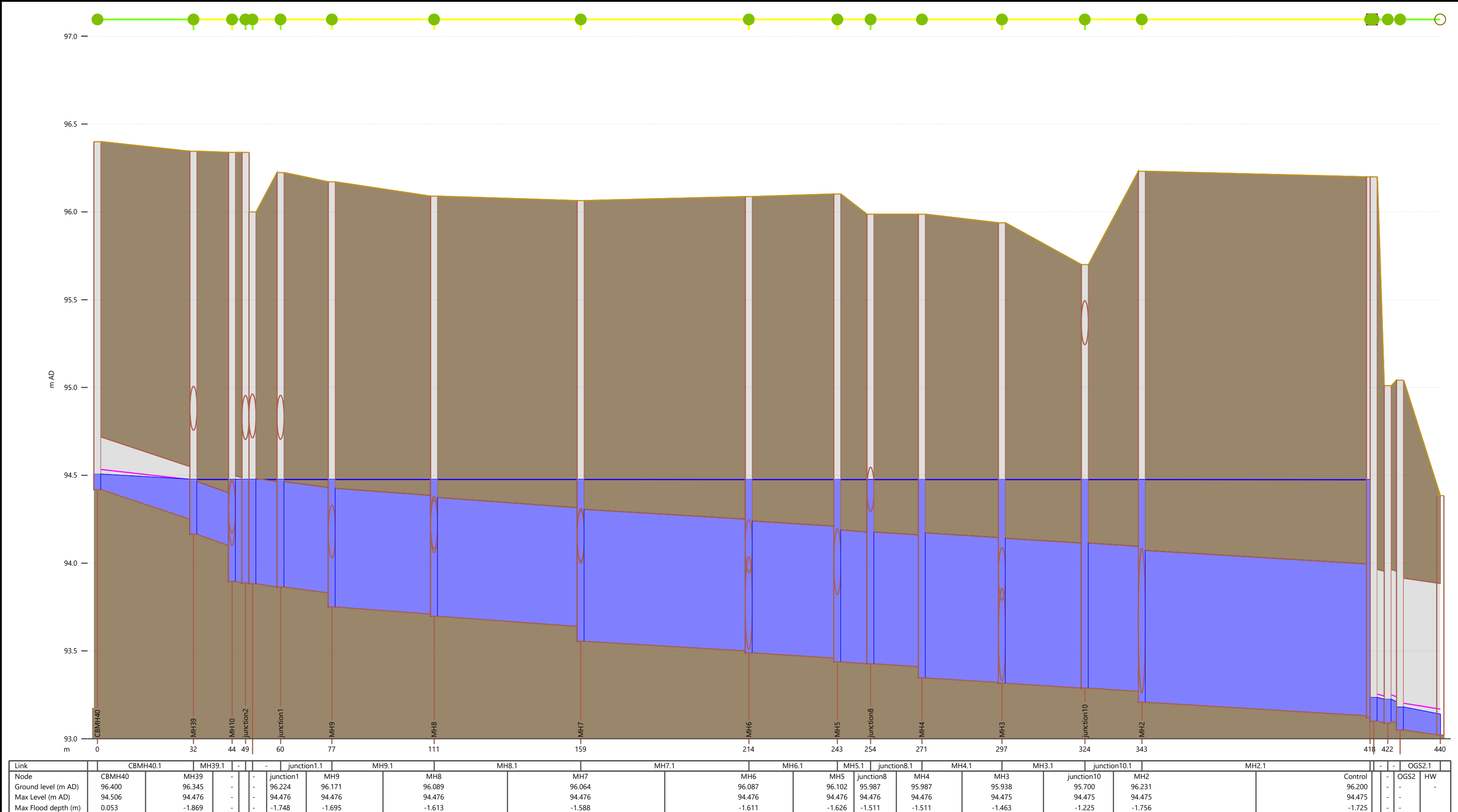
# 2-Year Storm Event Profile 1

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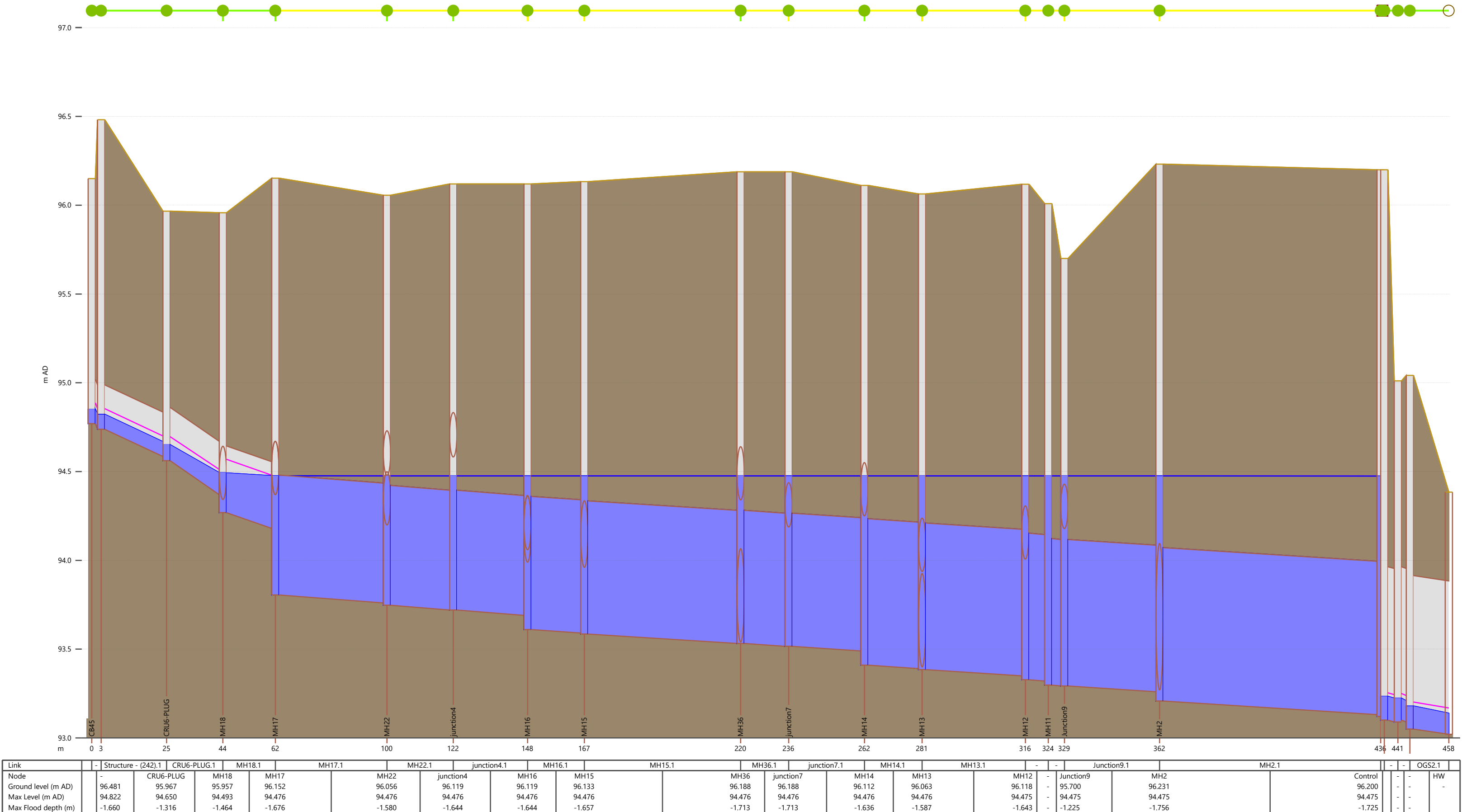
# 2-Year Storm Event Profile 2



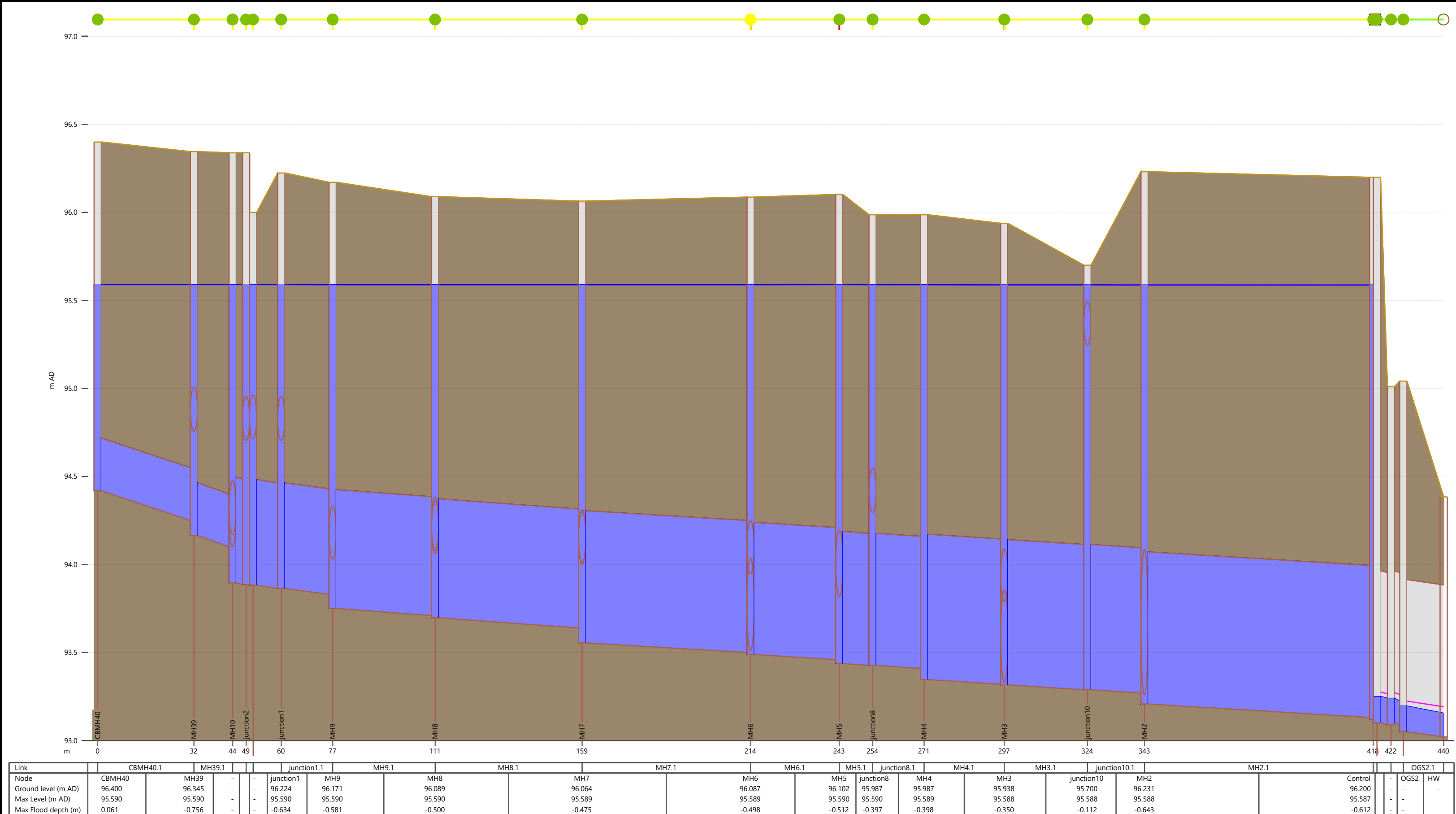
# 5-Year Storm Event Profile 1

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# 5-Year Storm Event Profile 2

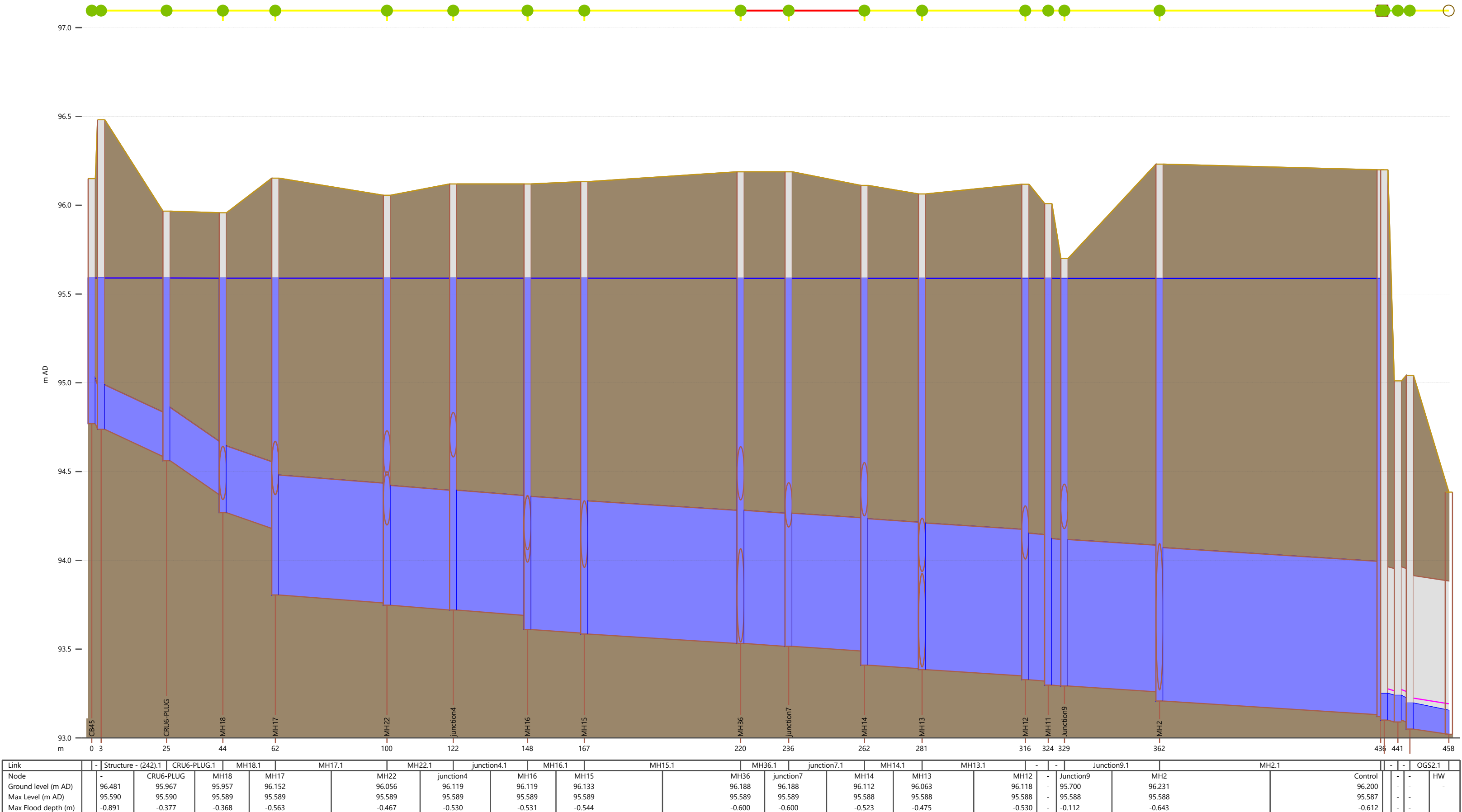


# 25-Year Storm Event Profile 1

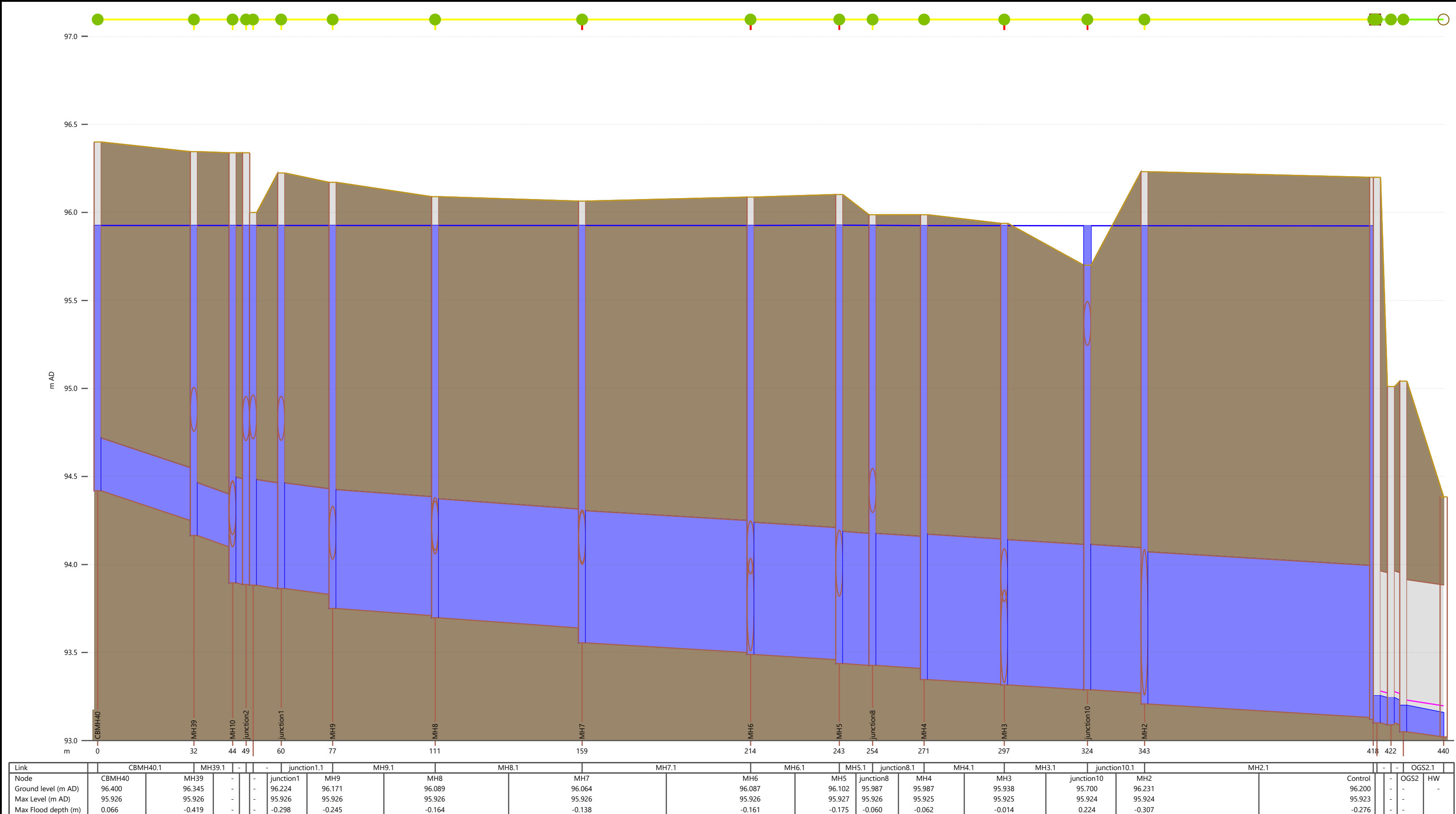
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# 25-Year Storm Event Profile 2

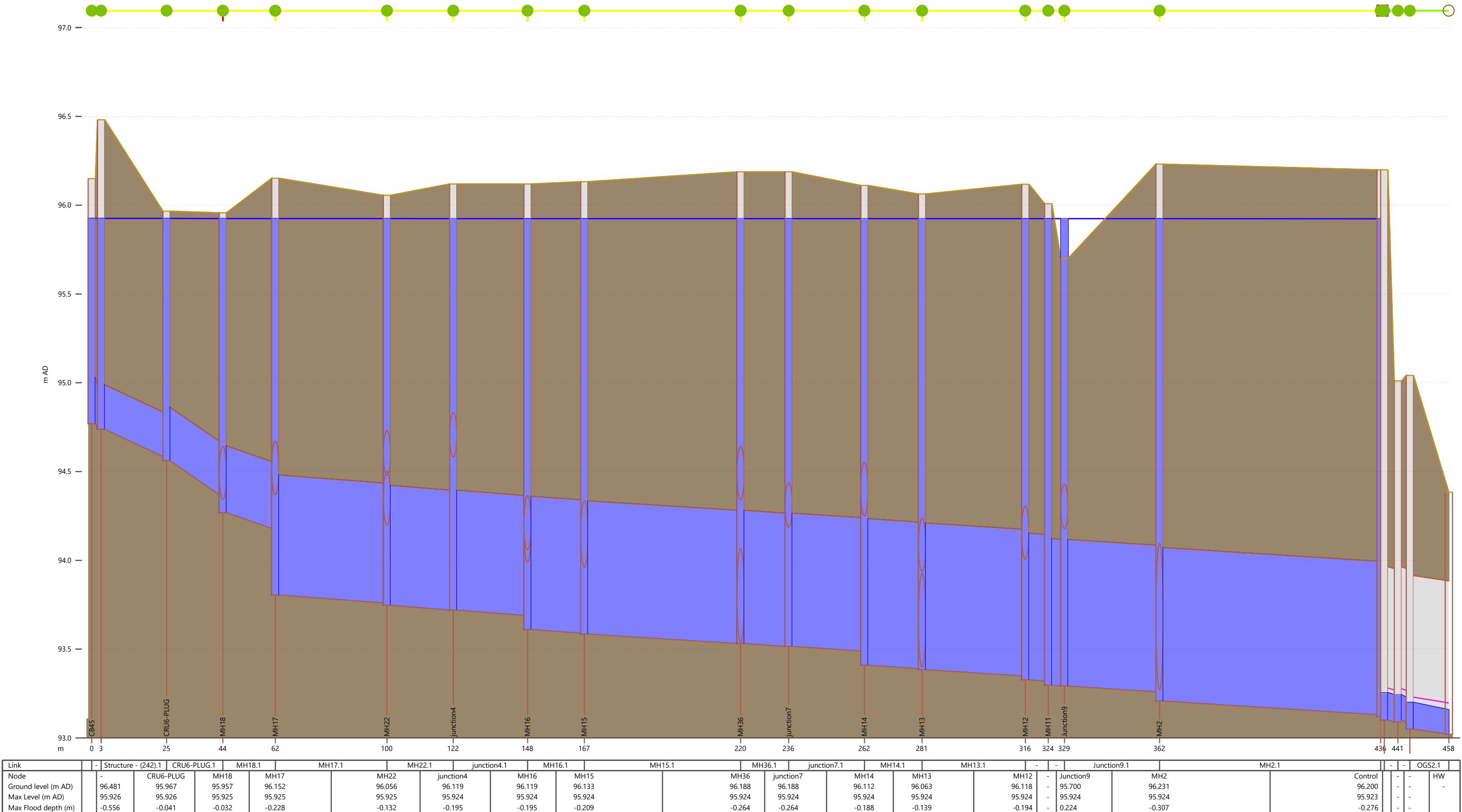


# 100-Year Storm Event Profile 1

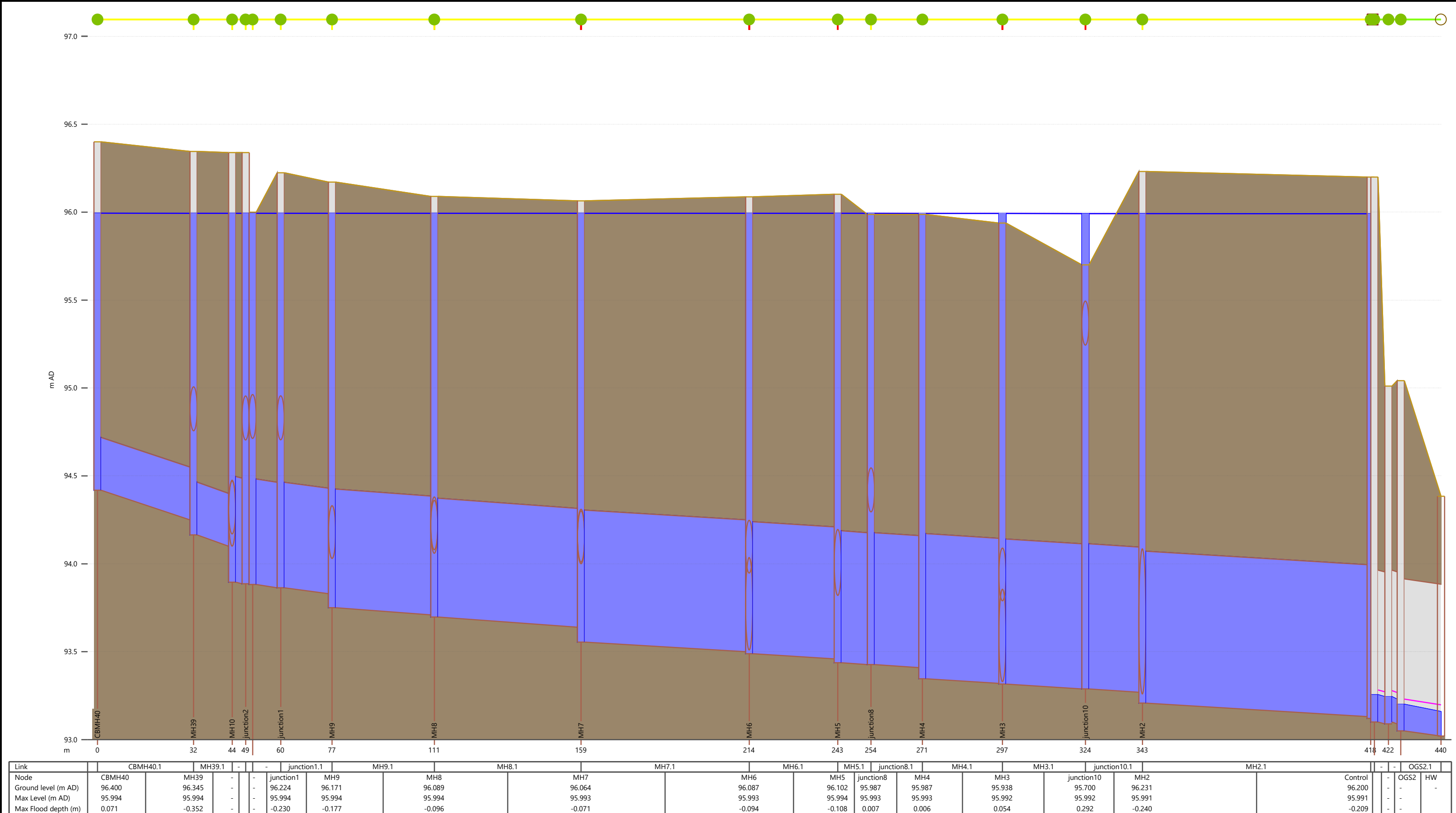
Powered by



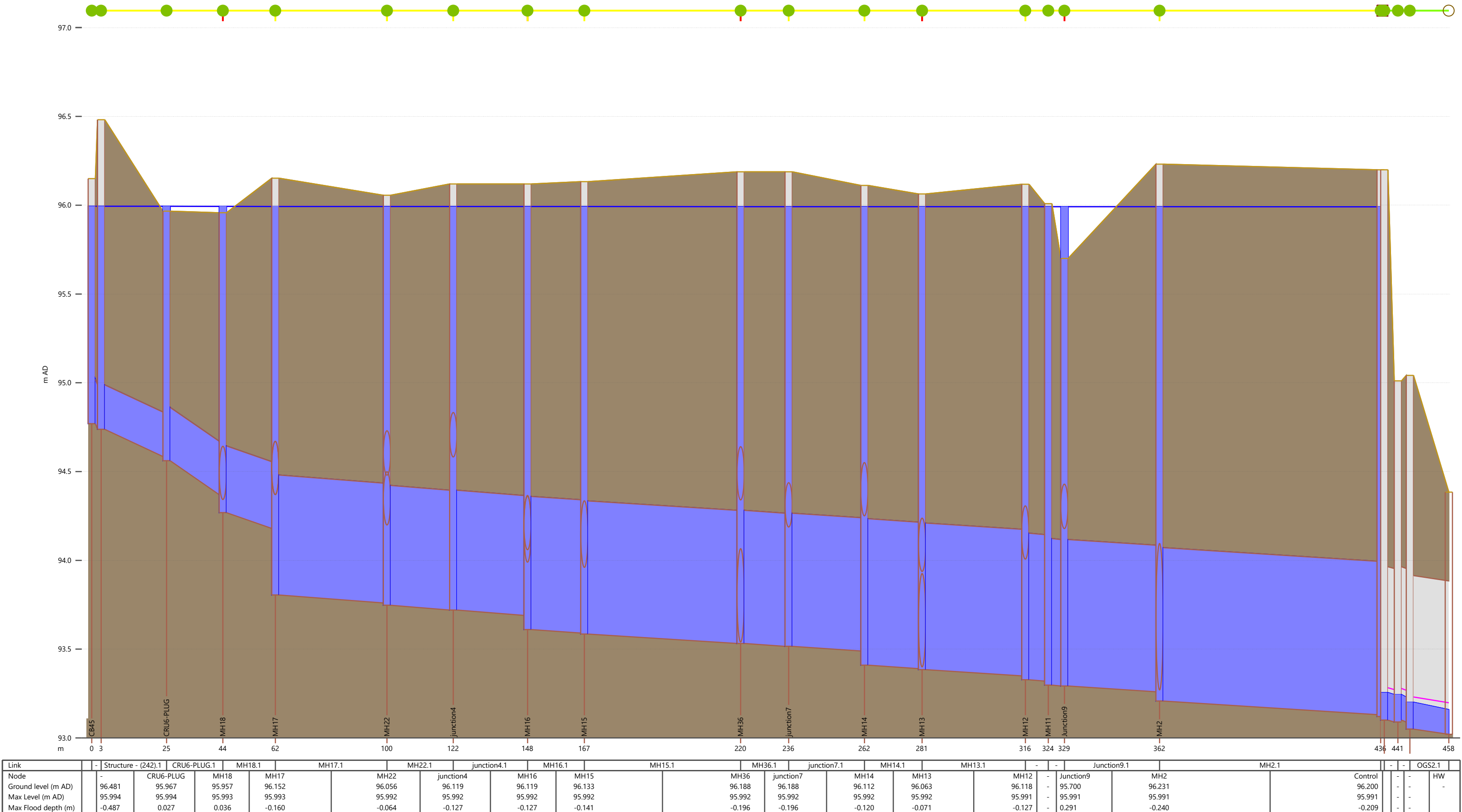




# 100-Year Storm Event Profile 2



# 100-Year Plus 20% Stress Test Storm Event Profile 1



# 100-Year Plus 20% Stress Test Storm Event Profile 2

## 8.5.2 Water Quantity

### Public Roads

The storm sewers in the public right-of-ways will convey stormwater uncontrolled for storm events up to and including the 5-year storm event. For storm greater than the 5-year storm event, the public right-of-ways will provide approximately 100 m<sup>3</sup>/ha of storage within the road sags.

While, peak flows from the right-of-ways will be higher than pre-development conditions, the SWM facility on the west-side of the O'Keefe Drain has been oversized to ensure that flows in the O'Keefe Drain do not exceed pre-development levels.

### Private Sites

The private sites east of the O'Keefe Drain will be designed to provide sufficient on-site storage to ensure that peak flows in the O'Keefe Drain are maintained to below pre-development levels at all stages of development. Per hectare release rates and on-site storage requirements (based on 85% impervious) are shown in **Table 8.13**.

**Table 8.13: SWM Targets for Areas East of the O'Keefe Drain**

| Design Event | Release Rate (L/s/ha) | On-Site Storage* (m <sup>3</sup> /ha) |
|--------------|-----------------------|---------------------------------------|
| 2-yr Event   | 20                    | 179                                   |
| 5-yr Event   | 35                    | 232                                   |
| 10-yr Event  | 45                    | 267                                   |
| 25-yr Event  | 64                    | 310                                   |
| 50-yr Event  | 75                    | 333                                   |
| 100-yr Event | 126                   | 351                                   |

\* Based on 85% imperviousness

Site-specific SWM reports will be required as part of the site plan application and detailed design of each individual site to demonstrate that the design adheres to the release rates listed in **Table 8.13**. Storage requirements will vary based on the imperviousness of each site. The allowable release rates for each Block are summarized in **Table 8.14**.

**Table 8.14: Allowable Release Rates for Areas East of the O'Keefe drain**

| Block        | Area (ha) | Allowable Release Rate (L/s) |     |      |      |      |       |
|--------------|-----------|------------------------------|-----|------|------|------|-------|
|              |           | 2yr                          | 5yr | 10yr | 25yr | 50yr | 100yr |
| Block 16     | 2.50      | 50                           | 88  | 113  | 160  | 188  | 315   |
| Block 1      | 3.51      | 70                           | 123 | 158  | 225  | 263  | 442   |
| Block 2      | 12.04     | 241                          | 421 | 542  | 771  | 903  | 1,517 |
| Block 3      | 5.30      | 106                          | 186 | 239  | 339  | 398  | 668   |
| Block 4      | 3.41      | 68                           | 119 | 153  | 218  | 256  | 430   |
| Blocks 5 & 6 | 3.49      | 70                           | 122 | 157  | 223  | 262  | 440   |

### Temperature Mitigation

Best-management practices for temperature mitigation are encouraged for development on the east side of the O'Keefe Drain. Examples of suitable BMPs are provided in **Section 9.2.5**.

**DILLON**