

925 MAIN STREET WEST (HAMILTON) LIMITED

925 Main St. W. WHA

C3W-231739



WATERMAIN HYDRAULIC ANALYSIS (FINAL)



CIMA+ file number: C3W-231739
25 June 2026 - Review 04



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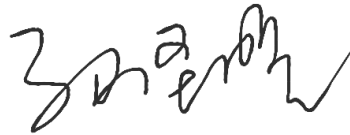
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WATERMAIN HYDRAULIC ANALYSIS (FINAL)

Prepared by:



Maria Rincon, EIT.

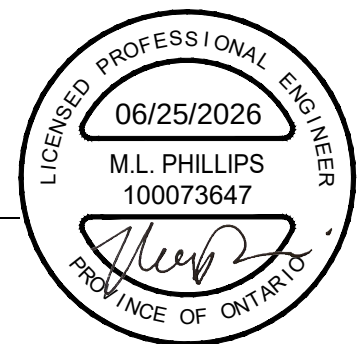


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Table of involved resources

In addition to the signatories of this report, the following individuals have also been involved in the study and writing of the report as technical experts within the project team:

Name	Engineering License Number	Discipline

Register of issues			
Issue N°	Reviewed by	Date	Description of the review
01	S. Ziemann	Sept. 20, 2023	Draft review
02	M. Phillips	Mar. 17, 2026	Draft review
03	M. Phillips	June 25, 2026	Revised draft review
04	M. Phillips	June 25, 2026	Final review

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Cover Letter

This report includes the Watermain Hydraulic Analysis for the proposed development located at 925 Main St. W & 150 Longwood Rd. in Hamilton, ON. This analysis includes individual hydraulic examination of the Average Day demand, Maximum Day plus fire flow and the Maximum (Peak) Hour demand of the Phase 1 and build-out of the development for the present (2021) and ultimate build-out (2031) demand conditions. The documents provided form a complete submission per City of Hamilton requirements.

Standard Declarations

The proposed works, under Phase 1 and build-out scenarios in both the existing (2021) and ultimate build-out (2031) conditions, satisfy MECP and CITY requirements and provide:

- Service pressures between 40 psi and 100 psi
- Requisite fire flows of 150 L/s under Maximum Day Demands conditions
- Pressures at ground level (throughout Pressure District No. 2) of 25 psi which meets the requisite 20 psi threshold

The proposed works, in both the existing (2021) and ultimate build-out (2031) conditions, withstand transient pressure plus maximum operating pressure.

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1. Introduction

1.1 Background

The proposed development at 925 Main Street West & 150 Longwood Road is located in Pressure District 2 (PD2) in Hamilton, Ontario. The development will consist of two 25-storey mixed-use condominium towers with a 6-storey and 5-storey podium, which will accommodate a total of 635 residential units. Figure 1-1 illustrates the proposed development area including the existing watermains on Main Street West and Longwood Road.

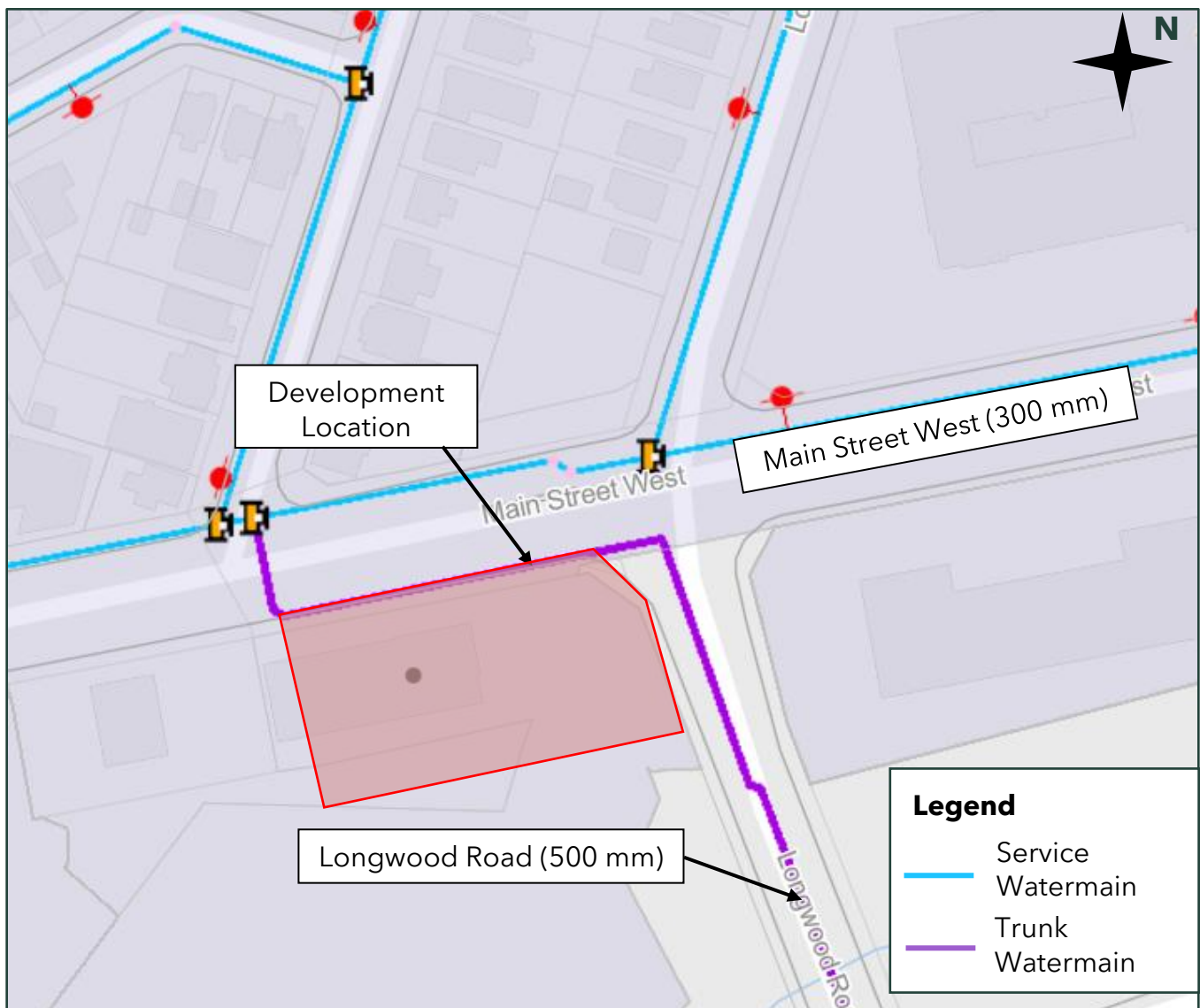


Figure 1-1: Development Area

PD2 is supplied by Pressure District 1 (PD1) through pumping station HD002, which consists of four pumps. PD2 has two storage reservoirs HDR02 and HDR2A that provide balancing storage. PD1 is supplied by the Woodward Avenue Water Treatment Plant (WTP) through pumps at the Woodward Avenue High Lift Pumping Station (HWHLP).

CIMA+ has been retained by 925 Main Street West (Hamilton) Limited to complete a watermain hydraulic analysis for the proposed development. This report provides the watermain hydraulic analysis for the proposed development in accordance with the City's Comprehensive Development Guidelines (2019) (Hamilton Guidelines) and the Ministry of Environment, Conservation and Parks (MECP) Design Guidelines for Drinking-Water Systems (2008) (MECP Guidelines). The hydraulic assessment was completed using the City's full pipe model, titled "Hamilton_EPS_200625_include_PD9_10" using Bentley WaterCAD Connect Edition Update 4 10.04.00.108 software.

1.2 Limitations

This technical memorandum (TM) is intended to provide servicing results for the proposed development based on the City's hydraulic water model. The City's water model was built and coarsely calibrated by others. As with any modelling assignment, limitations related to the state of the model, the software capabilities, and theoretical data inputs should be considered. The model software also has inherent limitations and assumptions related to the calculation engine and inputs.

2. Criteria

2.1 Pressure Requirements

The MECP Guidelines outline maximum and minimum system pressures for standard operating conditions as well as fire flow conditions. As outlined in the City's Water and Wastewater Masterplan (KMK, 2006), acceptable hydrant and service connection pressures under normal conditions range from 40 - 100 psi. Standard operating conditions were assessed for the proposed development to ensure that water services maintained acceptable pressure under various demand and fire flow conditions for existing (2021) and future (2031) scenarios. Table 2-1 provides the pressure criteria that were utilized.

Table 2-1: City of Hamilton Pressure Requirements

Pressure Requirement	Minimum	Maximum
Standard Operating Conditions	275 kPa (40 psi)	690 kPa (100 psi)
Maximum Day Demands + Fire Flows	140 kPa (20 psi)	

2.2 Domestic Demand

The peak hour demand (PHD) for the proposed development was calculated by S. Llewellyn & Associates Limited based on the fixture unit count. Peaking factors of 1.9 and 3, based on the City of Hamilton's WWWMP, were used to calculate the maximum day demand (MDD) and average day demand (ADD) scenarios, respectively. The ADD, MDD and PHD for the development are summarized in Table 2-2. The demand calculations are available in Appendix A.

Table 2-2: Estimated Domestic Demands for the Proposed Development

Development	Demand (L/s)		
	ADD	MDD	PHD
925 Main Street West & 150 Longwood Drive	16.4	31.3	49.1

2.3 Fire Flow Demand

The fire flow requirements for the proposed development were estimated using the Hamilton Watermain Fire Flow Requirement Design Guidelines Policy (PW19096). The City's residential fire flow requirements are summarized in Table 2-3. The development is required to meet a minimum target fire flow of 150 L/s at a residual pressure of 140 kPa under MDD conditions, as specified in Table 2-1.

Table 2-3: Hamilton Industrial Fire Flow Requirements

Development Type	Target Fire Flow (L/s)
Residential Multi (> 3 Units)	150
Residential Medium (≤ 3 Units)	125
Residential Single	75
Residential Single (Dead End)	50

3. Hydraulic Water Model

3.1 Boundary Conditions

The proposed development was modelled for the following demand scenarios for existing (2021) and future (2031) conditions:

- ADD
- MDD
- MDD plus Fire Flow
- PHD

Table 3-1 summarizes the initial boundary conditions set up in the model for PD2. The pumps at the WTP were turned off (reservoir only conditions). All pumps at pump station HD002 were turned off. The tank levels for reservoirs HDR02 and HDR2A were set to 50% full (144.33 m) and 75% full (146.08 m), respectively, as specified by the City.

Table 3-1: Model Boundary Conditions – Base Configuration

Element	Initial Status	
Tank HDR02 and HDR2A level	144.33 m (50%)	146.08 m (75%)
Treatment Pumps	Off	Off
HD002-PMP-1	Off	Off
HD002-PMP-2	Off	Off
HD002-PMP-3	Off	Off
HD002-PMP-4	Off	Off

3.2 Model Verification

The accuracy of the model near the proposed development was verified using hydrant test results completed by SCG Flowmetrix on August 10, 2023. The hydrant test results are summarized in Table 3-2. The location of the hydrants used for verification are provided in Figure 3-1. The hydrant test report is available in Appendix B.

Table 3-2: Field Testing Results – Main Street West on August 10, 2023

Flow (L/s) at Hydrant HA40H007	Pressure (kPa) at Hydrant HA40H006
0	428
120.2	408
Theoretical Flow at 20 psi	
516.8	140

The theoretical fire flow on Main Street West at hydrant HA40H007 was extrapolated based on a 19 kPa (2.8 psi) difference between the hydrant test static and residual pressures. The pressure drop during the test was 5%. Typically, it is recommended that a 25% pressure drop be required to adequately estimate the pressures at 140 kPa (20 psi). A pressure drop of 107 kPa (15.5 psi) at hydrant HA40H006 would be required to satisfy this recommendation, based on the hydrant testing static pressure. The greater the headloss encountered during the test the higher the degree of confidence in the results.

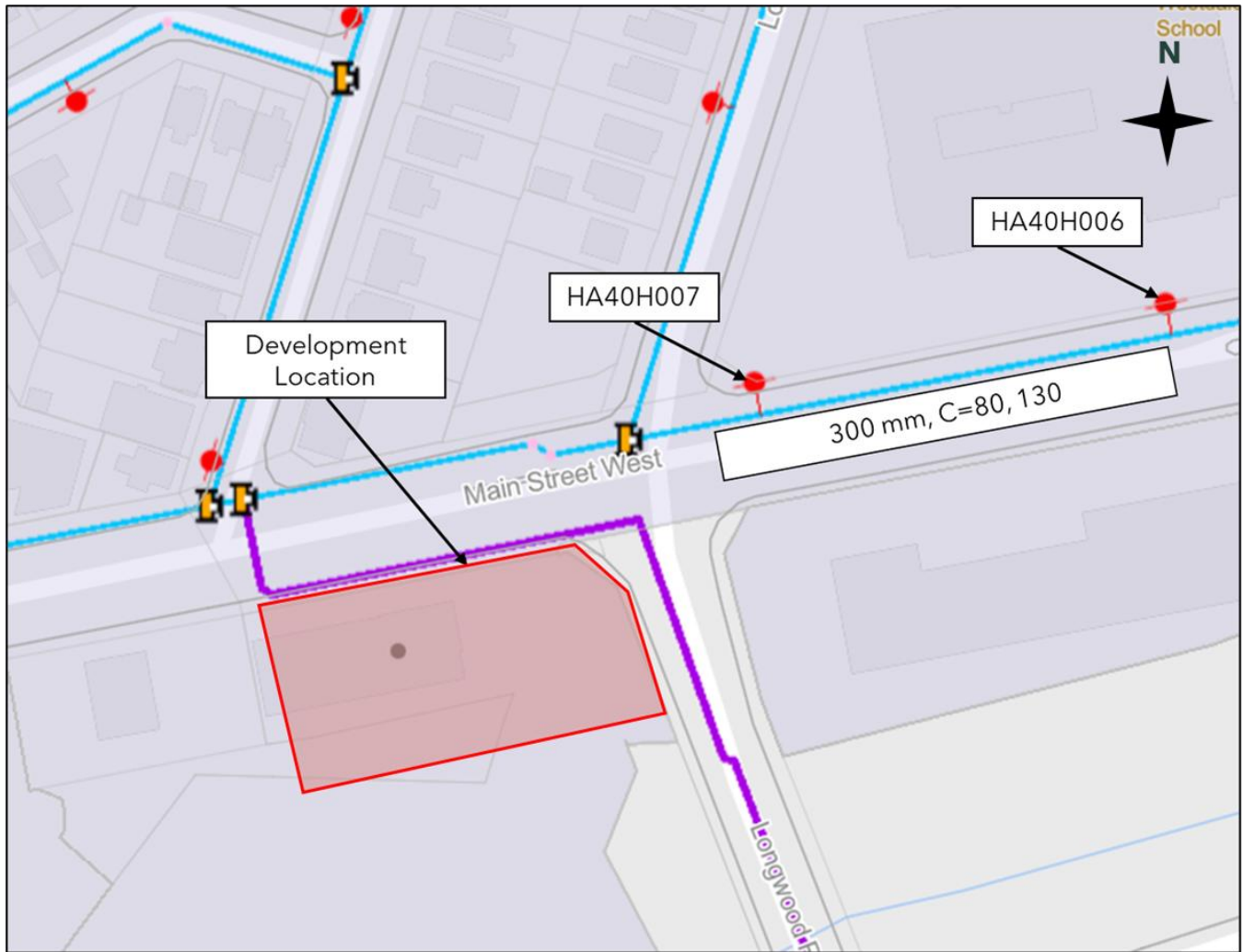


Figure 3-1: Hydrant Testing Hydrants used for Model Verification

PD2 SCADA data was requested from the City to determine the boundary conditions during the hydrant test. A summary of the boundary conditions used for the model verification is provided in

Table 3-3. The model was compared to the hydrant test results under 2021 ADD conditions.

Table 3-3: Summary of Hydrant Boundary Conditions used for Model Verification

Element	Flow Hydrant
	HA40H007
Time of Test	8:00 PM
Average Tank HDR02 Level	143.92 (40%)
Average Tank HDR2A Level	143.82 (38%)
WTP Pump 1	off
WTP Pump 2	off

Element	Flow Hydrant
	HA40H007
WTP Pump 3	Off
WTP Pump 4	Off
WTP Pump 5	Off
WTP Pump 6	Off
HD002-PMP-1	Off
HD002-PMP-2	Off
HD002-PMP-3	Off
HD002-PMP-4	Off

Figure 3-2 illustrates the hydrant test and model verification results for the hydrants on Main Street West. Field results beyond maximum testing flows are extrapolated. The focus of the model verification was on the drop in pressure caused by the hydrant test.

When using the original C-factors in the City's model, the pressure drop caused by the hydrant flow on Main Street West was found to be less than what was recorded in the field. The C-factors for the existing cast iron (CI) watermain near the proposed development in PD2 were reduced such that the model results more closely represented the hydrant test results. The C-factors were reduced from 80-130 to 45. In C3W's opinion, a C-factor of 45 is conservative but still reasonable for CI pipe; however, further reducing the C-factor may be unrealistic. There may be other factors involved in the limited hydraulic capacity of the system such as the accuracy of the following data:

- Hydrant test results due to the low pressure drop
- Watermain diameters
- System connectivity and/or interconnections between service and trunk watermain
- Valve status (open/closed)
- Other C-factors throughout the PD2 zone.

A detailed C-factor change log can be found in Appendix C. The model was updated to best match the hydrant test results within reasonable accuracy, and the adjusted C-factors were used for the remaining analysis.

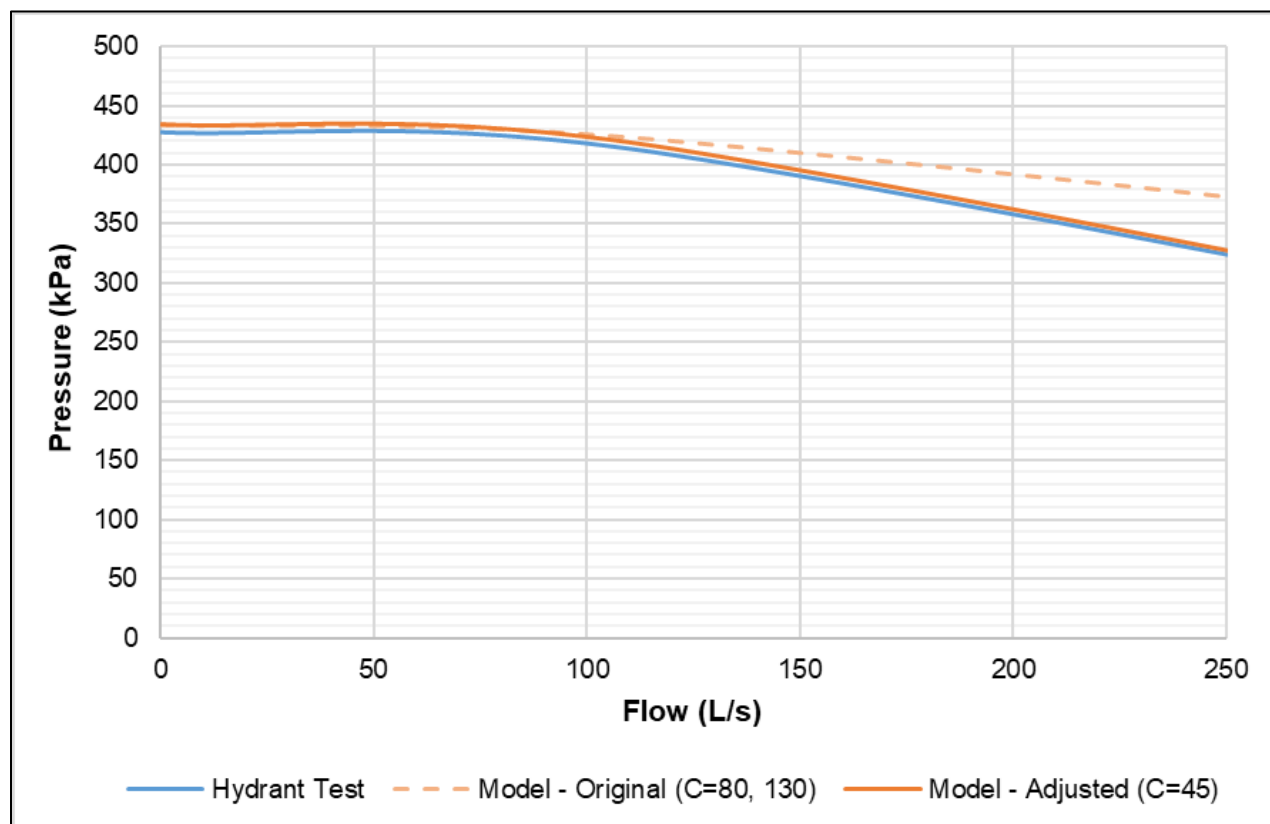


Figure 3-2: Verification Results - Main Street West

3.3 Development

Figure 3-3 illustrates the location of the proposed development. The development was modelled with a service connection to the existing 300 mm watermain on Main Street West. Domestic demands for the development were applied to the development node (J-Service) shown in Figure 3-3. The elevation of the demand node (99.00 m) was estimated by interpolating between known elevations in the model. There is a proposed hydrant within the boulevard fronting the proposed development on Main Street West to meet the fire protection requirements.

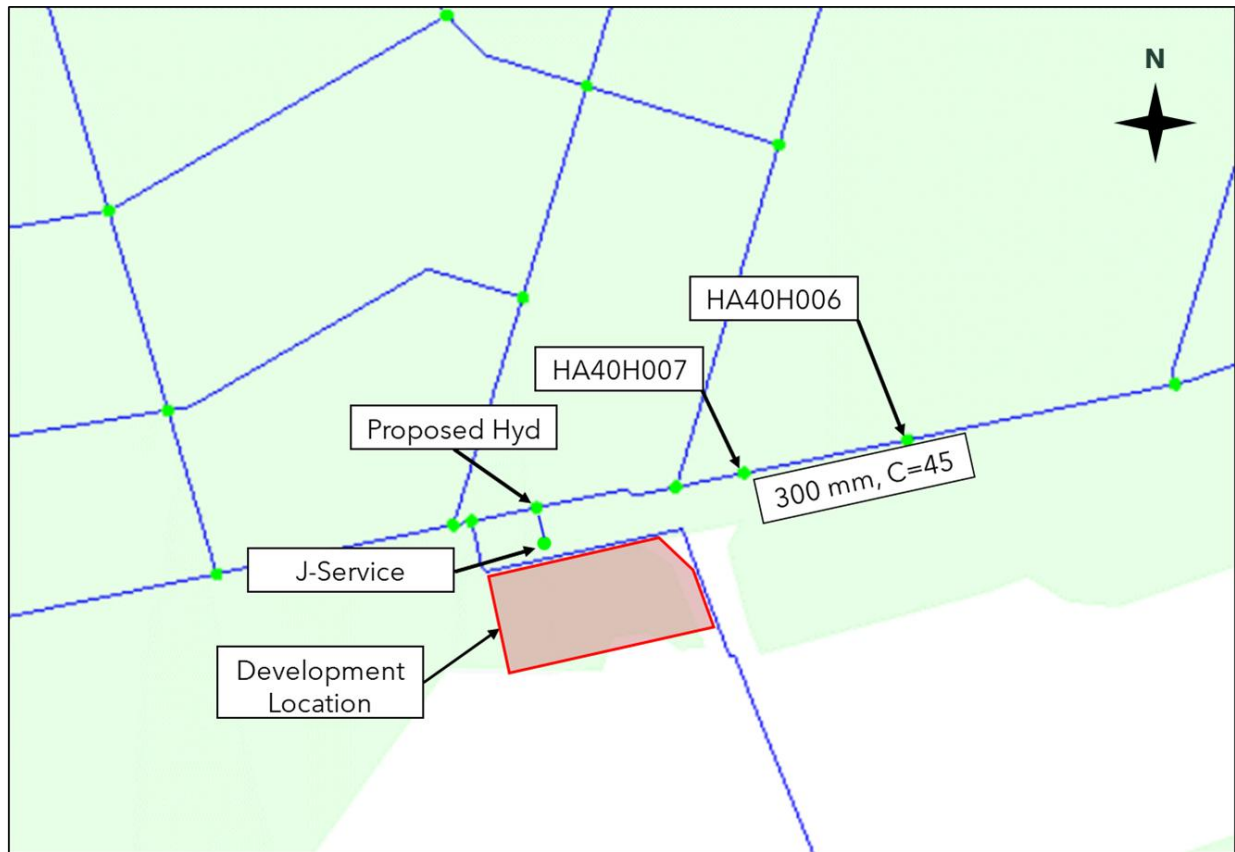


Figure 3-3: Model Layout for the Proposed Development

4. Analysis

4.1 Available Fire Flow

Table 4-1 summarizes the available fire flows at the development node (J-Service) and the proposed and existing hydrants on Main Street West under 2021 and 2031 MDD conditions, at a residual pressure of 140 kPa. The PD2 tank levels were set at 50% and 75% and all of the PD2 and WTP pumps were turned off for the analysis. The complete system fire flow results can be found in Appendix D.

The target available fire flow requirement of 150 L/s was met at the development servicing connection and the existing and proposed hydrants near the development under MDD 2021 and 2031 conditions, with the tank levels set at 50% and 75%.

Table 4-1: Available Fire Flow (L/s) for the Proposed Development

Node	2021		2031		Meets FF Criteria? (150 L/s)
	Tank Level				
	50%	75%	50%	75%	
HA40H007	407	420	405	418	True
Proposed Hydrant & Service Connection	595	614	592	611	True

4.2 System Pressures

The pressure results for the development node (J-Service) and the proposed and existing hydrants on Main Street West are summarized in Table 4-2 and Table 4-3, under the 2021 and 2031 scenarios (ADD, MDD and PHD) with the PD2 tank levels set to 50% and 75%, respectively. All of the PD2 and WTP pumps were turned off for the analysis.

Under each of the scenarios, the pressures ranged between 60 – 66 psi, which are within the City’s allowable operating pressure range of 40 – 100 psi. Under MDD plus required fire flows for existing and ultimate conditions, the minimum pressure in the PD2 distribution system was 25 psi, which is above the requirement of 20 psi. The complete system pressure results are available in Appendix E.

Table 4-2: Pressure Results (psi) with Tank Set at 50%

Node	ADD		MDD		PHD	
	2021	2031	2021	2031	2021	2031
Proposed Hyd	64	63	63	62	61	60
J-Service	64	63	63	62	61	60
HA40H007	64	63	63	62	61	60

Table 4-3: Pressure Results (psi) with Tank Set at 75%

Node	ADD		MDD		PHD	
	2021	2031	2021	2031	2021	2031
Proposed Hyd	66	66	65	65	63	63
J-Service	66	66	65	65	63	63
HA40H007	66	66	65	65	63	63

5. Conclusions and Recommendations

This analysis was based on the City's existing hydraulic water model. The model was verified using the hydrant test results and SCADA data. The C-factors of the watermains near the development area were adjusted to provide a closer representation of the hydraulic capacity of the water system based on hydrant testing data provided. The watermain hydraulic assessment of the proposed at 925 Main Street West & 150 Longwood Road development demonstrated that:

- The target available fire flow requirement of 150 L/s was achieved at the development node (J-service) and the existing hydrants on Main Street West under existing (MDD 2021) and ultimate build-out (currently MDD 2031*) conditions with the PD2 tank levels set at 50% and 75% and the PD2 and WTP pumps offline.
- The service pressures under existing (2021) and ultimate build-out (currently 2031*) conditions are expected to range between 60 – 66 psi, with the PD2 tank levels set at 50% and 75% and the PD2 and WTP pumps offline. The service pressures are within the standards established by the MECP and City of Hamilton Guidelines.
- Under maximum day plus required fire flows for existing and ultimate build-out (currently 2031*) conditions, the PD2 distribution system was able to maintain pressures above 138 kPa (20 psi) at ground level at all points in the district.

* as amended from time to time as per Official Plan Report Content

A

Appendix A Demand Calculations

Table 4.1 – Proposed Domestic Water Demand (Residential)

Component	FU/ Fixture	No. of Fixtures*	Total FU
Lavatory (8.3L/min or less) (Private)	0.7	924	646.8
Water Closet (6 LPF or less with flush tank) (Private)	2.2	924	2032.8
Sink, kitchen, domestic, 8.3L/min or less (Private)	1.4	635	889
Bathtub with or without showerhead (Private)	1.4	924	1293.6
Clothes washer, 3.5 kg	1.4	635	889
Dish Washer, domestic	1.4	635	889
Total FU:			6640.2
* The number of fixtures <u>have</u> been assumed based on the following: - 1 kitchen per unit - 346 units with 1 bathroom - 289 units with 2 bathrooms			

Table 4.2 – Proposed Domestic Water Demand (Commercial)

Component	FU/ Fixture	No. of Fixtures*	Total FU
Lavatory (8.3L/min or less) (Public)	2	8	16
Water Closet (6 LPF or less with flush tank) (Private)	2.2	8	17.6
Sink, kitchen, commercial (Public)	4	4	16
Dish Washer, commercial	4	4	16
Total FU:			65.6
* The number of fixtures <u>have</u> been assumed based on 1 kitchen and 2 washrooms per commercial unit			

Total peak water usage for the complete site was derived below from the fixture unit count as per Table 7.4.10.5 of the Ontario Building Code.

Total Fixture Unit Count = 6640.2 + 65.6 = 6705.8 FU

Water Usage: 648 IGPM (49.1 L/s)

B

Appendix B Hydrant Test

Fire Flow Testing Report

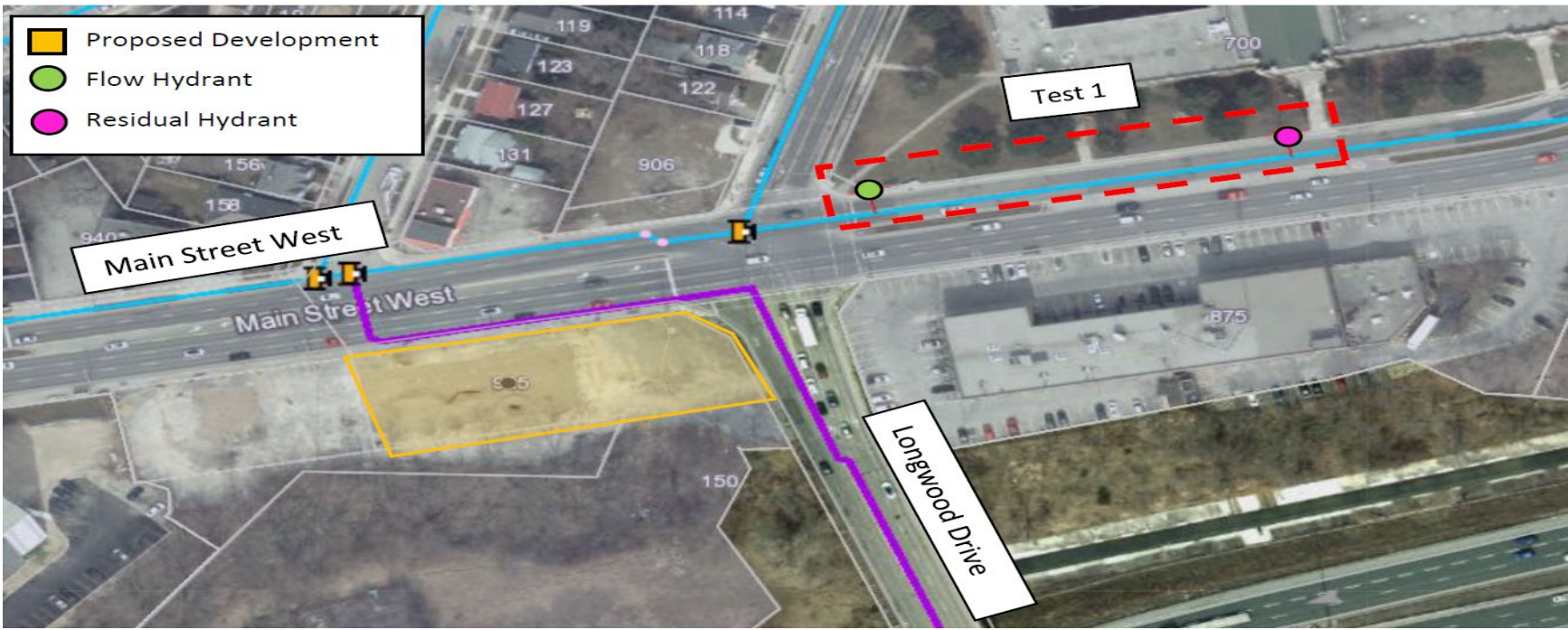


Residual Hydrant #

HA40H006

NFPA Colour Code

BLUE



RESIDUAL HYDRANT INFO.

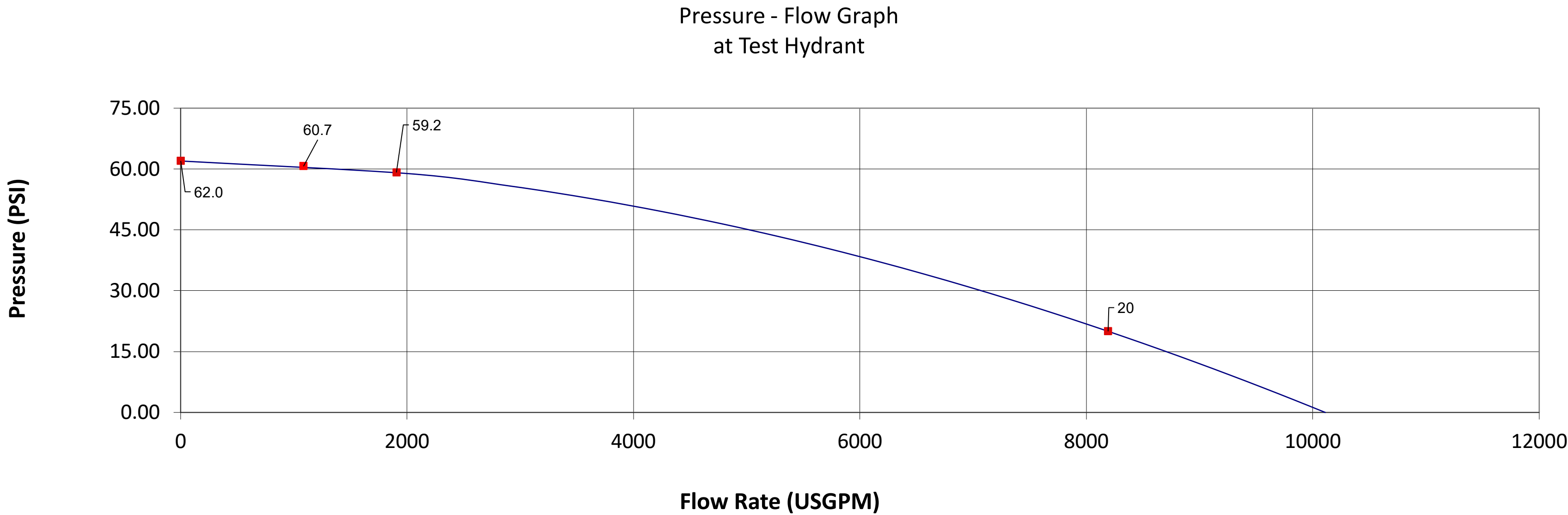
HYDRANT #	HA40H006	
N.F.P.A. COLOUR CODE	BLUE	
STATIC PRESSURE	62.0	psi
RESIDUAL PRESSURE - ONE PORT OPEN	60.7	psi
RESIDUAL PRESSURE - TWO PORTS OPEN	59.2	psi
PRESSURE DROP	2.8	psi
% PRESSURE DROP	4.5	% psi
Flow on Water Main At Test Hydrant	20 psi	8192 USGPM

DATE	August 10, 2023	
TIME	08:00 A.M	
ADDRESS	700 main St West Hamilton, ON L8S 1A5	
SIZE-inches/mm	12	300
MATERIAL	DI	
CONTACT INFO	Alec Orr C3 Water, a C3 Group Company (226) 339-6822 alec.orr@c3water.com	

FLOW HYDRANT(S) INFO.

HYDRANT ASSET ID	HYD. # PORTS	OUTLET DIAMETER (INCHES)	NOZZLE COEFFICIENT	DIFFUSER TYPE	DIFFUSER COEFFICIENT	PITOT READING (psi)	PITOT FLOW (USGPM)	FLOW METER (USGPM)
HA40H007	1	2.5	Round	Swivel	0.90	51.7	1085	0
								0
HA40H007	2	2.5	Round	Swivel	0.90	40.1	1906	0
		2.5	Round	Swivel	0.90	39.6		0

FIRE FLOW CHART



COMMENTS

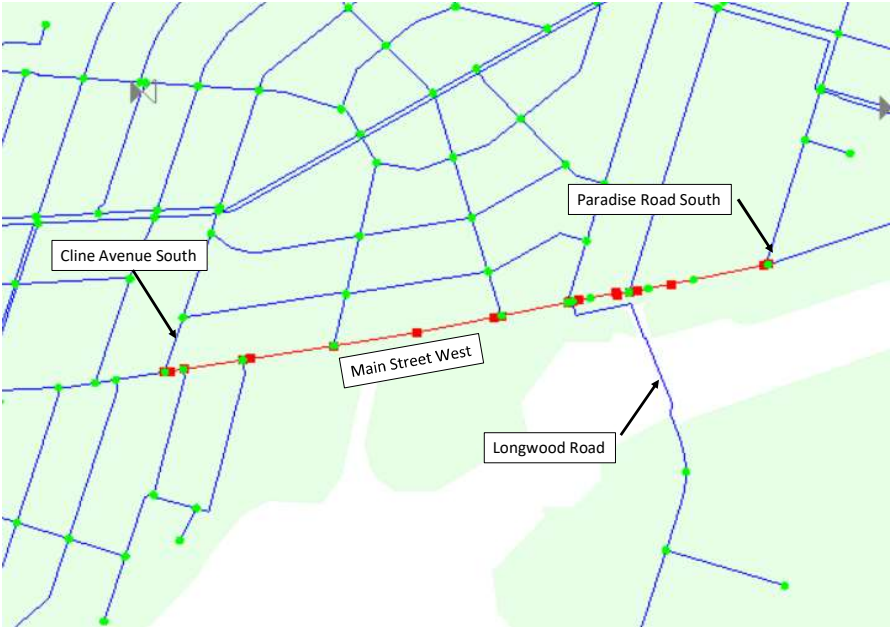
OPERATOR	FMX	Jordan Whitlock
OPERATOR	FMX	Humzah Ahmed
OPERATOR		City of Hamilton

C

Appendix C C-Factor Adjustment Log

C-Factor Adjustment Log

ID	Label	Is Active?	Start Node	Stop Node	Diameter (mm)	Hazen-Williams C	Has Check Valve?	Flow (L/s)	Velocity (m/s)	Has User Defined Length?	Length (m)	Adjusted C-Factor
33541	HA40W13156(1)	TRUE	HA40T005	HA40H007	300	130	FALSE	7	0.1	TRUE	29	45
33544	HA40W13156(2)(1)	TRUE	HA40H007	HA40H006	300	130	FALSE	7	0.1	TRUE	90	45
33545	HA40W13156(2)(2)	TRUE	HA40H006	HA40T018	300	130	FALSE	7	0.1	TRUE	87	45
17633	HA47W12841	TRUE	HA47T001	HA47T006	300	80	FALSE	-9	0.13	TRUE	248	45
17635	HA47W12843	TRUE	HA47T003	HA47T006	300	80	FALSE	13	0.18	TRUE	98	45
17639	HA47W12844	TRUE	HA47T004	HA47T003	300	80	FALSE	26	0.37	TRUE	8	45
17645	HA47W13147	TRUE	HA47T004	HA40T005	300	80	FALSE	10	0.14	TRUE	85	45
17533	HA51W12831	TRUE	HA51T001	HA51T016	300	80	FALSE	-6	0.08	TRUE	27	45
17537	HA51W12838	TRUE	HA51T016	HA51T017	300	80	FALSE	-7	0.09	TRUE	87	45
17538	HA51W12839	TRUE	HA51T017	HA47T001	300	80	FALSE	-8	0.11	TRUE	134	45



D

Appendix D Fire Flow Results

Fire Flow Results - Post Development

MDD 2021 - PD2 & WTP Pumps OFF, Tank at 50%

Label	Zone	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (L/s)	Fire Flow (Available) (L/s)	Flow (Total Needed) (L/s)	Flow (Total Available) (L/s)	Pressure (Residual Lower Limit) (psi)
HA40H007	2	TRUE	150	407	150	407	20
J-470	2	TRUE	150	564	181	595	20

MDD 2021 - PD2 & WTP Pumps OFF, Tank at 75%

Label	Zone	Flow Constraints?	Fire Flow (Needed) (L/s)	Fire Flow (Available) (L/s)	Flow (Total Needed) (L/s)	Flow (Total Available) (L/s)	Pressure (Residual Lower Limit) (psi)
HA40H007	2	TRUE	150	420	150	420	20
J-470	2	TRUE	150	583	181	614	20

MDD 2031 - PD2 & WTP Pumps OFF, Tank at 50%

Label	Zone	Satisfies Fire Flow	Fire Flow (Needed) (L/s)	Fire Flow (Available) (L/s)	Flow (Total Needed) (L/s)	Flow (Total Available) (L/s)	Pressure (Residual Lower Limit) (psi)
HA40H007	2	TRUE	150	405	150	405	20
J-470	2	TRUE	150	561	181	592	20

MDD 2031 - PD2 & WTP Pumps OFF, Tank at 75%

Label	Zone	Flow Constraints?	Fire Flow (Needed) (L/s)	Fire Flow (Available) (L/s)	Flow (Total Needed) (L/s)	Flow (Total Available) (L/s)	Pressure (Residual Lower Limit) (psi)
HA40H007	2	TRUE	150	418	150	418	20
J-470	2	TRUE	150	580	181	611	20

E

Appendix E Pressure Results

Pressure Results - Post-Development

ADD 2021 - Tank at 50%, PD2 & WTP Pumps OFF

ID	Label	Elevation (m)	Zone	Demand (L/s)	Hydraulic Grade (m)			Pressure (kPa)
ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	64
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	64
33547	J-470		99	2	<Collection: 1 item>	16.4	143.23	64

ADD 2021 - Tank at 70%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	66
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	66
33547	J-470		99	2	<Collection: 1 item>	16.4	143.23	66

MDD 2021 - Tank at 50%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	63
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	63
33547	J-470		99	2	<Collection: 1 item>	31.1	143.23	63

MDD 2021 - Tank at 70%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	66
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	66
33547	J-470		99	2	<Collection: 1 item>	31.1	143.23	66

PHD 2021 - Tank at 50%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	63
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	63
33547	J-470		99	2	<Collection: 1 item>	49.1	143.23	63

PHD 2021 - Tank at 70%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	65
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	65
33547	J-470		99	2	<Collection: 1 item>	49.1	143.23	65

ADD 2031 - Tank at 50%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	62
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	62
33547	J-470		99	2	<Collection: 1 item>	16.4	143.23	62

ADD 2031 - Tank at 70%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	65
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	65
33547	J-470		99	2	<Collection: 1 item>	16.4	143.23	65

MDD 2031 - Tank at 50%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	61
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	61
33547	J-470		99	2	<Collection: 1 item>	31.1	143.23	61

MDD 2031 - Tank at 70%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	63
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	63
33547	J-470		99	2	<Collection: 1 item>	31.1	143.23	63

PHD 2031 - Tank at 50%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	141.48	60
33543	HA40H006		99	2	<Collection: 0 items>	0	141.47	60
33547	J-470		99	2	<Collection: 1 item>	49.1	141.48	60

PHD 2031 - Tank at 70%, PD2 & WTP Pumps OFF

ID	Label	Notes	Elevation (m)	Zone	Demand Collection	Demand (L/s)	Hydraulic Grade (m)	Pressure (psi)
33540	HA40H007		99	2	<Collection: 0 items>	0	143.23	63
33543	HA40H006		99	2	<Collection: 0 items>	0	143.22	63
33547	J-470		99	2	<Collection: 1 item>	49.1	143.23	63