

NEW WATERMAIN SYSTEMS REQUIREMENTS & PROCEDURES FOR ALL SUBDIVISIONS & SITE PLANS

In order for the City of Vaughan to ensure that its water supply is potable, the Engineering and Public Works Department requires all new watermains to be cleaned by foam swabbing, hydrostatically tested, disinfected, flushed and sampled as described in the following text.

Water connections must be constructed with a by-pass as per City standard I-9 on page 5.

Whether the new main is connected to the existing main and isolated by a valve or is completely isolated from the system will determine the steps to be followed:

- For a new main connected to existing mains and isolated by a valve, follow Procedure 1.1 on page 3.
- For a new main physically isolated from the system, follow Procedure 1.2 on page 4.

Only a M.O.E. qualified Public Works Serviceperson will witness the swabbing, the hydrostatic testing, sign off on the appropriate forms and take the water samples. The section of watermain being sampled must have 2 passing tests before it will be approved. The first sample(s) taken by the City will be done at no charge on a section of watermain. Additional watermain testing and flushing, on the same section of the watermain distribution system, will result in additional water use charges plus any engineering and administration fees.

TESTING AND SAMPLING REQUIREMENTS

In order for the Public Works Department to honour any request for testing or sampling, the Applicant shall fax the following information to the Public Works Department at 905-303-2005 to the attention of the Dispatch Office, otherwise the request will be denied.

- 1) A copy of **the general plan / key plan complete with street names and highlighting the limits by lot/block numbers** of the watermain testing area. The general plan must contain **ONLY** site servicing information. (No grading, landscaping...)
- 2) Identify the **Project Name, Project Type** (Subdivision, Special Development/Service, Site Plan), **Planning File Number** (19T- # or DA # or Building Permit/Municipal Address), **Phasing Number** (if applicable) and **Registered/Reference Plan Number(s)** (65M- #/ 65R- #, if available).
- 3) Identify whether it is for **swabbing and turbidity testing, hydrostatic testing** or for **sampling**.
- 4) Identify the **date, time and location**. A minimum of seventy-two (72) hours notice to the City shall be given.
- 5) Identify the **Consultant, Contact Person and office/cell numbers**.
- 6) Identify the **Contractor, Contact Person and office/cell numbers**.
- 7) Identify the **City of Vaughan's Municipal Services Inspector** for the project, if applicable.

AT THE PROJECT SITE, provide the serviceperson with **three (3) copies of the general servicing plan, two (2) 11" x 17" and one (1) 24"x36"**, **highlighting the limits by lot/block numbers of the watermain testing area.** These copies will be attached to the appropriate testing results and forwarded to the Engineering Services Division. The Consultant may request a copy, for a fee, as set out by the City's By-laws. (The general plan must contain **ONLY** site servicing information.(No grading, landscaping...).

FLUSHING REQUIREMENTS FOR NEW DEVELOPMENT & NEWLY CONSTRUCTED WATERMAINS

- 1) A Flushing Program must be in place within 15 calendar days from when the watermain samples passed. The Flushing Program must remain until consumption is adequate to ensure that water remains potable. **Failure to start the flushing program within 15 calendar days will results in water shut off and the bypass will be locked. In the event the flushing did not commence within the specified timeframe, scenario a or b will apply:**
 - (a) **When dealing with a new main, connected to an existing main and isolated by a valve Procedure 1.1 MUST be completed again. This process will start with flushing, followed by turbidity and continues through the entire procedure until all water testing parameters have passed and is available for distribution.**
 - (b) **When dealing with commissioning a new main physically isolated from the system, Procedure 1.2 must be repeated.**

Once all testing is completed, the flushing program must be commenced within 15 calendar days.

- 2) The following requirements must be specified:
 - a) weekly flushing.
 - b) daily residuals (3 days per week).
- 3) Water meters will be required at all flushing points and service points
 - a) water charges will be billed to the owner. Billing informatin is required on a monthly spreadsheet
 - b) all water meters provided by the developer shall be approved for use by the City. At the start of each flush, consumption readings are to be logged as part of the monthly report.
- 4) Documentation of all test results are required bi-weekly via email **or** by drop off to the Public Works Department at 2800 Rutherford Road. Distribution numbers must be shown on all documents.
 - a) daily residuals
 - b) copy of the lab report

Attention: ben.ciampichini@vaughan.ca

BACTERIA TESTING

The York/Durham lab is the only testing agency recognized by the City of Vaughan. All sample documents will have the City of Vaughan drinking water system number shown. Copies of all test results will be provided to the City directly from the labs.

SERVICING TO CONDOMINIUM/COMMERCIAL/INDUSTRIAL & PRIVATE TOWNHOMES **(all non-residential sites)**

Under certain conditions, the City of Vaughan may require that the developer install a backflow preventer, within the water system, on the private side. This is to protect the quality of the City's drinking water supply.

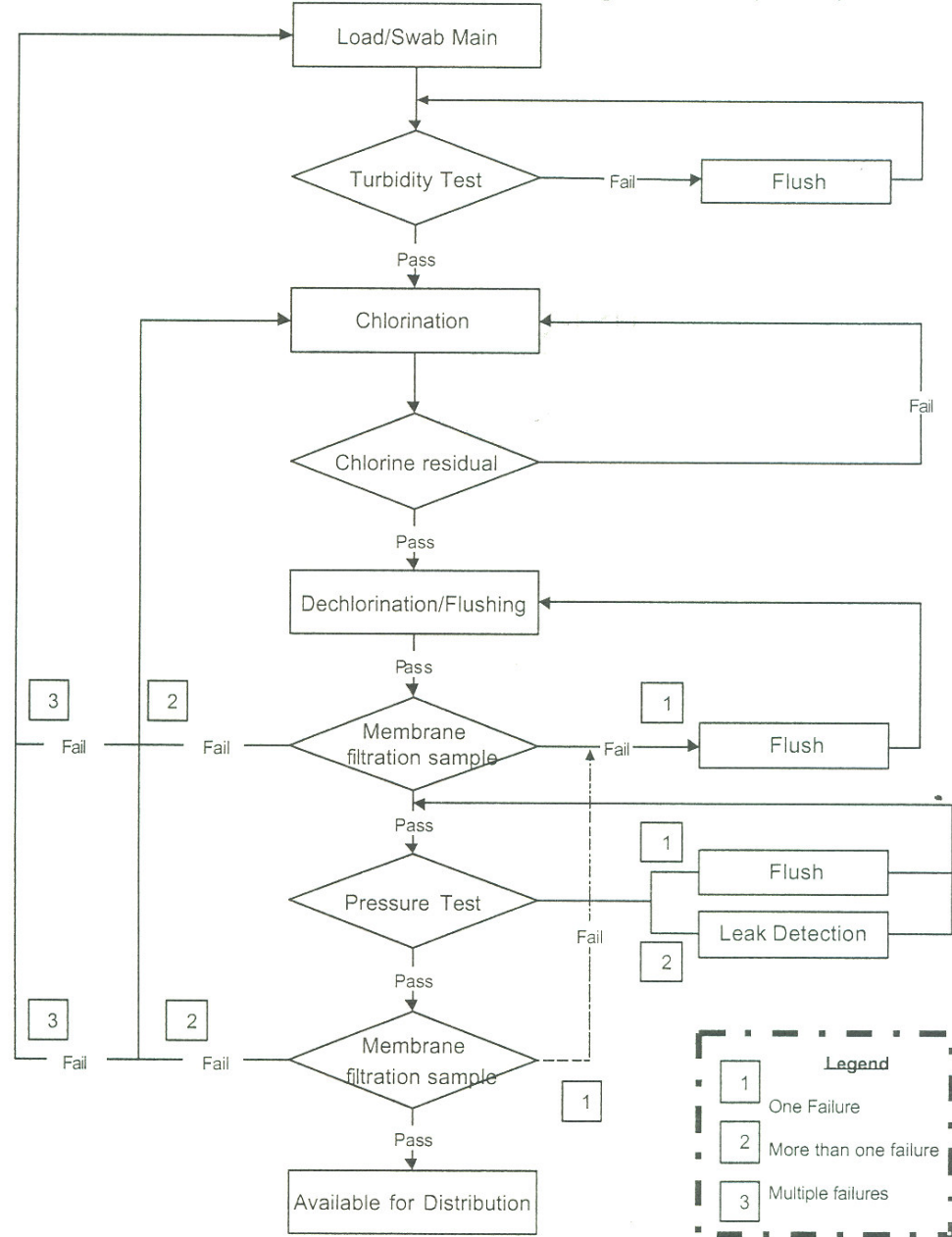
- 1) A backflow preventer (Watts 757DCDA or approved equal) will be installed in a chamber as per City of Vaughan's standard on page 6.
- 2) Backflow preventer is to be certified yearly by a certified plumber.

- 3) Chambers are to be installed on the private side, after the City's service connection.
- 4) Any fire service that is connected before the backflow preventer will require an additional backflow prevention. (device is to be the same size as the pipe)

Contact Ben Ciampichini, Supervisor of Water at 905 832-8562, ext. 6105 if you have any questions or concerns.

1.1 COMMISSIONING - New Mains Connected to Existing Mains and Isolated by a Valve

*All disinfection is to be completed in accordance with the MOE's Procedure for Disinfection of Drinking Water in Ontario and AWWA Standard for Disinfecting Water Mains (C651-99)

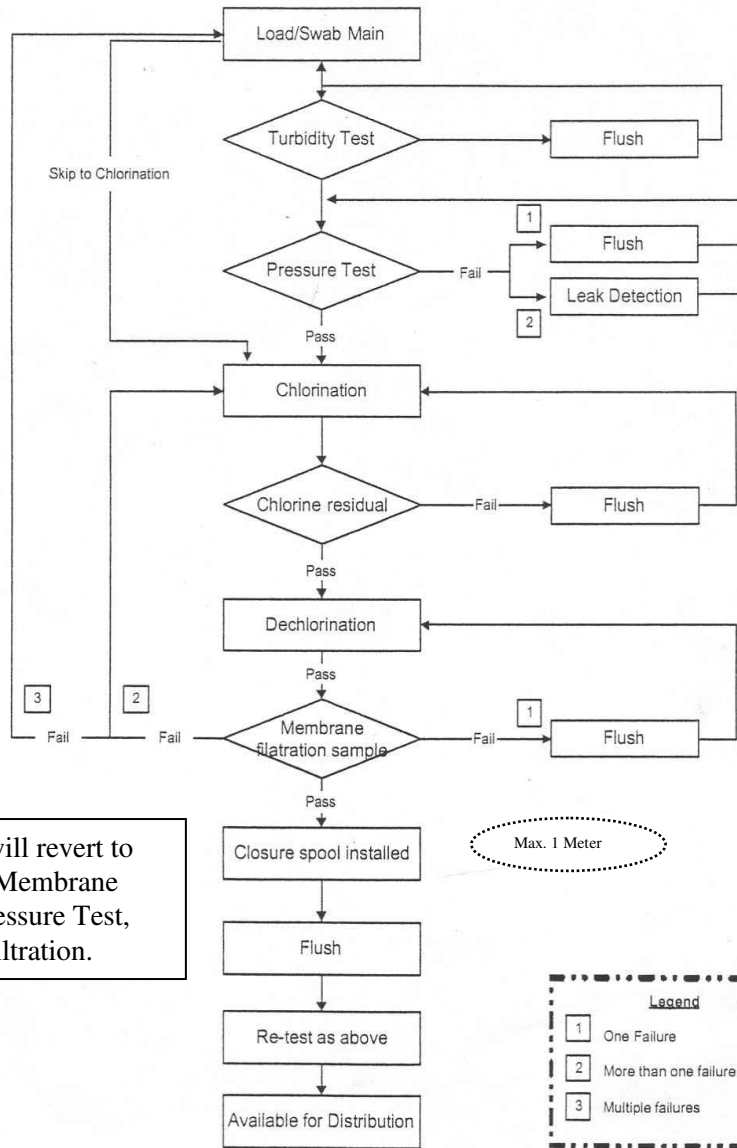


Standardized Water Operating Procedures	Page 1 of 1	Prepared by: Local Area Municipalities and Regional Municipality of York	Date Issued: TBD
COMMISSIONING – 1.1 New Mains Connected to Existing Mains and Isolate Valve		Approved by: Local Area Municipalities and Regional Municipality of York	

Standardized Water Operating Procedures

1.2 New Mains Physically Isolated from System

*All disinfection is to be completed in accordance with the MOE's Procedure for Disinfection of Drinking Water in Ontario and AWWA Standard for Disinfecting Water Mains (C651-99)

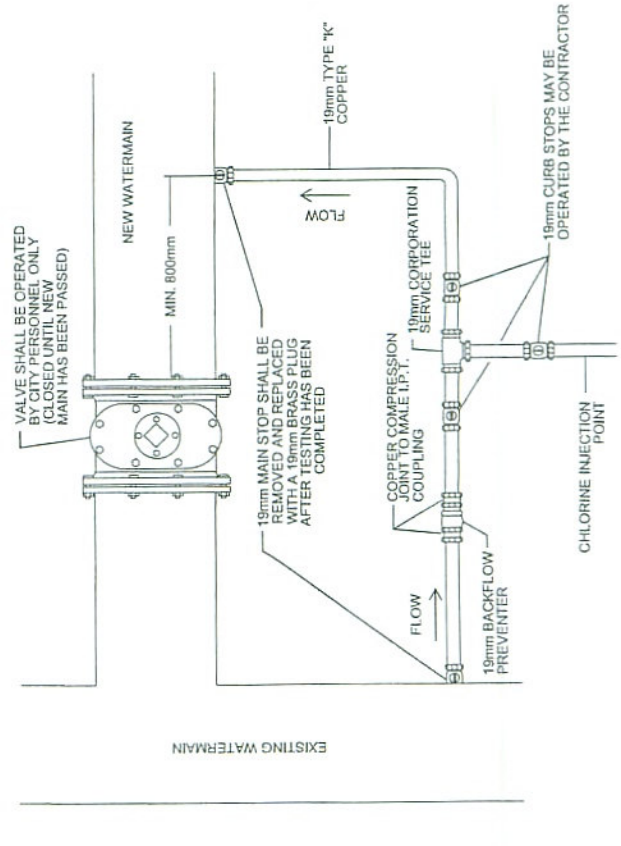
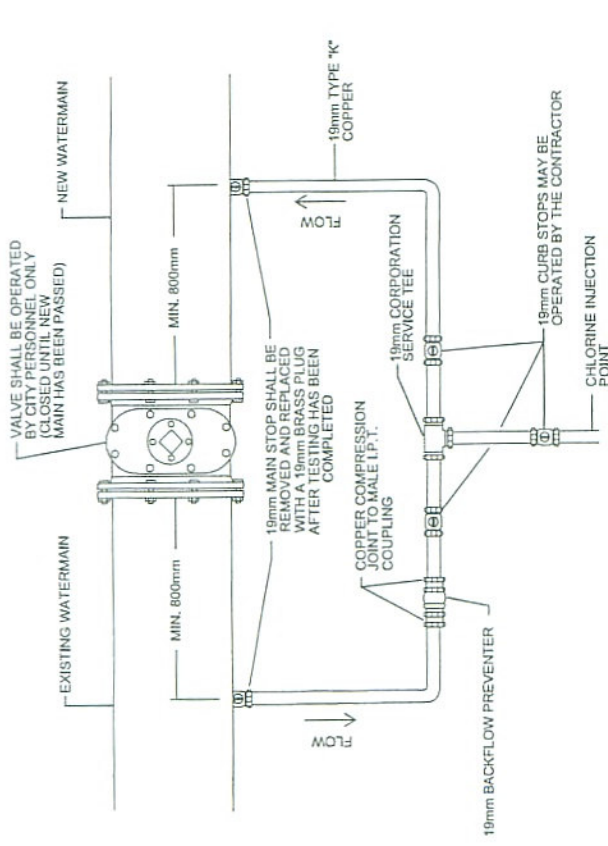


Failure of sample will revert to Standard 1.1 from Membrane filtration, PASS Pressure Test, PASS Membrane filtration.

Standardized Water Operating Procedures	Page 1 of 1	Prepared by: Local Area Municipalities and Regional Municipality of York	Date Issued: (yy/mm/dd) 04-04-5
COMMISSIONING – 1.2 New Mains Physically Isolated from System		Approved by: Local Area Municipalities and Regional Municipality of York	

NOTES

1. TRENCH SHALL BE LEFT OPEN AND FENCED IN ACCORDANCE WITH SAFETY REGULATIONS.
2. INSULATION OF WATERMAIN BY-PASS REQUIRED DURING FREEZING CONDITIONS.
3. BACKFLOW PREVENTER TO BE APPROVED BY CERTIFIED PLUMBER.
4. SYSTEM TO BE APPROVED AND INSPECTED BY PUBLIC WORKS SERVICEPERSON.
5. PIPE SIZE FOR BYPASS:
 - MAIN SIZE: 4"(100mm)-6"(150mm)=2"(50mm) DIAMETER BY-PASS.
 - MAIN SIZE: 8"(200mm)-16"(400mm)=4"(100mm) DIAMETER BY-PASS
6. WATERMAIN BY-PASS TO BE REMOVED AFTER PASSING ALL TESTS.



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EXCEPT AS NOTED

NO.	REVISIONS	DATE
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Vaughan
The City Above Tomorrow

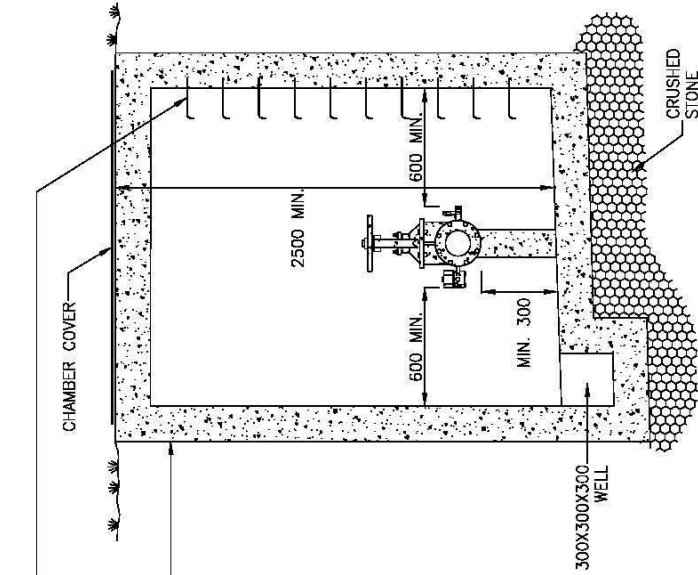
ENGINEERING DEPARTMENT

CITY OF VAUGHAN ENGINEERING STANDARD

WATERMAIN TEST BY-PASS & CHLORINATION

NOT TO SCALE DESIGNED: PUBLIC WORKS STD. DWG.

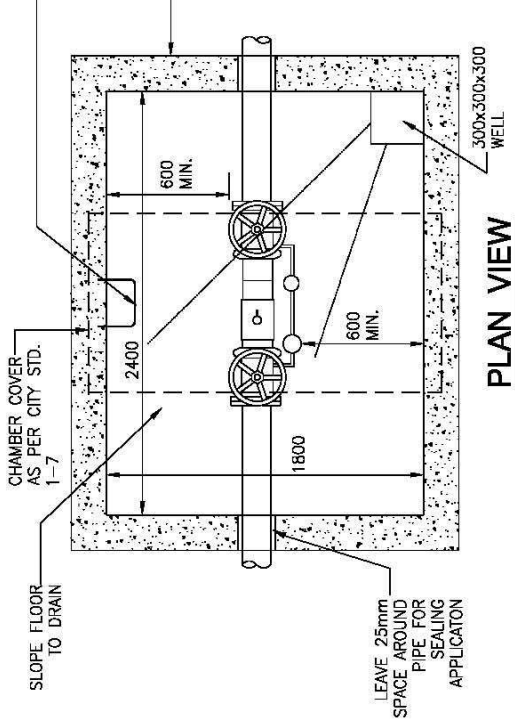
REVISION: _____ DATE: AUGUST 2005 1-9



PLAN VIEW

END VIEW

- NOTES**
1. WATTS SERIES 757DCDA BACKFLOW PREVENTER OR APPROVED BY CITY.
 2. BACKFLOW DEVICE TO REMAIN ACCESSIBLE AT ALL TIMES.
 3. TEST COCKS ARE TO BE PROVIDED WITH NIPPLES & CAPS.
 4. THIS DRAWING INDICATES MINIMUM CLEARANCE AND ACCESS ONLY.
 5. ACCESS DOOR TO BE LOCKED.
 6. CHAMBER TO BE OF WATER TIGHT CONSTRUCTION.
 7. 100mm DIA. DRAIN COMPLETE WITH 'p' TRAP AND BACK FLOW PREVENTER VALVE TO BE CONNECTED TO STORM SEWER.
 8. MUST USE SUMP PUMP IF GRAVITY DRAIN IS NOT FEASIBLE.
 9. MAINTENANCE HOLE STEPS AS PER OPSD 405.020
 10. TEST COCKS ARE TO BE PROTECTED WITH WATER TIGHT PLUGS.
 11. MINIMUM DEPTH OF CHAMBER = 2.5 METRES.



SIDE VIEW

REVISIONS	APR/D	DATE
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Vaughan
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ENGINEERING DEPARTMENT

CITY OF VAUGHAN ENGINEERING STANDARD

BACKFLOW PREVENTER & CHAMBER FOR 2-1/2" THROUGH 10" DOUBLE CHECK VALVE ASSEMBLY

NOT TO SCALE DESIGNED: PUB WORKS STD. DWG.

REVISION: _____ DATE: FEB. 2007 REVISION: _____

mm DIMENSIONS IN MILLIMETRES EXCEPT AS NOTED