




CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Hamilton Water Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	November 16, 2020
SUBJECT/REPORT NO:	City of Hamilton Watermain Fire Flow Requirement Design Guidelines Policy (PW19096(a)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Udo Ehrenberg (905) 546-2424 Ext. 2499
SUBMITTED BY:	Mark Bainbridge Director, Water and Wastewater Planning and Capital Public Works Department
SIGNATURE:	

RECOMMENDATION(S)

That the City of Hamilton Watermain Fire Flow Requirement Design Guidelines Policy attached as Appendix "A" to Report PW19096(a) be approved.

EXECUTIVE SUMMARY

On November 18, 2019 the Public Works Committee considered the City of Hamilton (City) Watermain Fire Flow Requirement Design Guidelines Policy (PW19096). The report was amended to approve the Policy for a period of 10 months to allow for further consultation with the Hamilton-Halton Homebuilders' Association (HHHBA).

The 10-month period of implementation has been completed, and through a tracking database, staff have monitored the progress of the new policy related to development application submissions since December 2019. It was concluded that the overall benefit to development applications approvals was positive.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

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Engagement with HHHBA (recently renamed as West End Home Builders Association (WEHBA)) was completed through interactions with its' members on individual submissions, via the Development Industry Liaison Group (DILG) meetings, and at a dedicated workshop with WEHBA representatives. There is general agreement that the policy is beneficial as it is a simpler, and streamlines the approval process for the development community and staff resulting in:

- faster approvals;
- less mistakes in reports with fewer resubmissions; and,
- maintains adequate water service to customers.

With the above in mind, the recommendation to approve the policy permanently is being made through this report.

Alternatives for Consideration – See Page 5

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: NA
Staffing: NA
Legal: NA

HISTORICAL BACKGROUND

Prior to November 2019, the City's development community and stakeholders had expressed concern and raised a number of issues regarding implementation of the approach for fire flow design requirements, which were previously based on the Fire Underwriters Survey (FUS) guidelines methodology for fire flow calculations. In response to these concerns, Hamilton Water staff led the review and development of an enhanced policy which was presented to Public Works Committee in November 2019.

Council approved the recommendation to implement the City's Watermain Fire Flow Requirement Design Guidelines Policy for a period of 10 months to allow for further consultation with the HHHBA.

The new policy has been utilized since December 2019. Staff have maintained a tracking database to monitor the effectiveness of the new policy. A statistical analysis of the records and information in the database was conducted to understand its' effectiveness. The results of the analysis are discussed in the Analysis and Rationale section below.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Policies and by-laws that may require updating as a result of the recommendations of this report include:

- City's Comprehensive Development Guidelines and Financial Policies, 2018
- City's Adequate Services By-Law

Legislation requirements to which the recommendations of this report align include:

- *Safe Drinking Water Act, 2002*
- *Ontario Building Code and Building Code Act, 1992*
- *Fire Protection and Prevention Act, 1997*

RELEVANT CONSULTATION

Staff conducted several meetings which included staff from Planning and Economic Development and Public Works. Consultation with the WEHBA was completed through interactions with its' members on individual submissions, via DILG meetings in February and September 2020, and at a dedicated workshop on August 26, 2020 with WEHBA representatives.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

On August 26, 2020, a workshop was held with the WEHBA representatives to review the analysis of the data resulting from implementation of the new policy and to receive feedback. At the workshop, the representatives of the WEHBA indicated their encouragement and support of the data analysis findings. In summary, the new policy resulted in a streamlined approval process; faster approvals, a simpler process to follow for the development community and staff; less mistakes in reports with fewer resubmissions; and maintained adequate water service to customers.

The analysis of the data since December 2019 included 87 individual applications that were subjected to the condition of submitting fire flow calculations. There were 38 active applications prior to November 18, 2019, and as a result these were subject to the old fire flow policy once they reached that step in the process. However, eight (8) of the 38 elected to utilize the Transition Methodology and have their applications switched to a review under the new policy. This left 30 subjects to the old policy and 57 following the new policy. The analysis undertaken provided the following conclusions:

- Of the 30 applications under the old policy, 25 were satisfactory with five requiring additional refinement/resubmission pending final review which is typical regardless of old or new policy;

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- Of the eight applications that electively transitioned to the new policy, six were satisfactory with two requiring additional refinement/resubmission pending final review which is typical regardless of old or new policy;
- Of the 49 applications started under the new policy (PW19096), 27 were satisfactory with 22 requiring additional refinement/resubmission pending final review which is typical regardless of old or new policy;
- There were shorter overall durations required to demonstrate adequate fire flow services relative to the 10-year history of the old policy. The average time to achieve overall final approval was 25 days, and the average time to review an individual submission regardless of iteration number (first submission, last submission, or in between) was 8.5 days;
- Under the new policy it was rare to see incorrect/inadequate calculations as there are less opportunities for error due to lower complexity;
- There were less resubmissions than the past 10-year history of the old policy; and,
- Applications reviewed were either satisfactory or required additional refinement/resubmission pending final review, however none were denied.

Additional feedback from WEHBA including the following three items:

- Issues regarding National Fire Protection Association (NFPA 13) Sprinkler Flow methodology and proposing a credit for this within the new policy;
- Concern over cases where the new policy cannot be satisfied; and,
- Small industrial applications were identified and discussed.

With respect to inclusion of the existing NFPA13 Sprinkler Flow calculation methodology in the policy, it was explained that it was considered in the development of the new policy and remains an element of the Ontario Building Code (OBC) for buildings with sprinklers. However, the new policy was focused on providing a drinking water system robust enough to meet both the OBC and land use based target thresholds for fire protection, not lower values based on sprinkler needs. No changes to the policy were made at this time.

Further to this where the new policy threshold cannot be satisfied which is expected to be rare, the City is willing to review and discuss exceptional cases in further detail and work with the development community for mutually beneficial solutions.

With regard to concerns raised with the servicing of small industrial applications, it was clarified that a specific provision is included in the policy with a lower threshold for such scenarios.

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Minutes of the August 26, 2020 Workshop with WEHBA representatives and the related PowerPoint slide deck are included as Appendix “B” to Report PW19096(a) - Fire Flow Policy Review and Update with West End Homebuilders Association.

The above results are the basis for the recommendation to make permanent the policy of PW19096 and subsequent PW19096(a).

ALTERNATIVES FOR CONSIDERATION

Should Council elect not to implement the City’s Watermain Fire Flow Requirement Design Guidelines Policy herein, the default is to return to the old policy. The old policy would not address the development community and stakeholders’ concerns and issues regarding the former approach for fire flow design requirements.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement and Participation

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

Healthy and Safe Communities

Hamilton is a safe and supportive City where people are active, healthy, and have a high quality of life.

Our People and Performance

Hamiltonians have a high level of trust and confidence in their City government.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW19096(a) - City of Hamilton Watermain Fire Flow Requirement Design Guidelines Policy Summary Table.

Appendix “B” to Report PW19096(a) - Fire Flow Policy Review and Update with West End Homebuilders Group.