



**CITY OF HAMILTON**  
**PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT**  
**Growth Management Division**

<b>TO:</b>	Chair and Members Planning Committee
<b>COMMITTEE DATE:</b>	August 9, 2022
<b>SUBJECT/REPORT NO:</b>	Residential Drainage Assistance Program (RDAP) (PED22164) (Ward 7)
<b>WARD(S) AFFECTED:</b>	Ward 7
<b>PREPARED BY:</b>	Carlo Ammendolia (905) 546-2424 Ext. 2155 Elizabeth Panicker (905) 546-2424 Ext. 5514
<b>SUBMITTED BY:</b>	Ashraf Hanna Director, Growth Management Planning and Economic Development Department
<b>SIGNATURE:</b>	

**RECOMMENDATION**

- (a) That with respect to the properties bounded by East 37<sup>th</sup> Street, Seventh Avenue, East 36<sup>th</sup> Street and Fennell Avenue, the City implements and funds the construction of two private rear yard catch-basins (Public Portion Only), as recommended in Option 2 of the report prepared by AECOM, dated May 25, 2022, shown in Appendix “B” attached to Report PED22164, at a cost of \$44,500 for works within the Right of Way;
- (b) That with respect to the properties bounded by East 37<sup>th</sup> Street, Seventh Avenue, East 36<sup>th</sup> Street and Macassa Avenue, the City funds the costs of all Site Alteration Permits for the implementation of Option 4 as recommended in the report prepared by AECOM, dated May 25, 2022, shown in Appendix “B” attached to Report PED22164, comprised of the installation of individual soakaway pits, at a cost of \$965 per property totalling \$9,650;
- (c) That funding for work on the City Right of Way in Recommendation (a) estimated at \$44,500, as well as City permits be funded from Capital Account No. 518216, in accordance with the Residential Assistance Program (RDAP);

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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.

- (d) That funding for the work on private properties bounded by East 37th Street, Seventh Avenue, East 36th Street and Fennell Avenue; and by East 37th Street, Seventh Avenue, East 36th Street and Macassa Avenue, estimated at \$59,000 and \$48,000 respectively be apportioned among the benefiting property owners;
- (e) That prior to proceeding with any work on City property, appropriate agreements with the benefiting property owners in properties bounded by a) East 37<sup>th</sup> Street, Seventh Avenue, East 36<sup>th</sup> Street and Fennell Avenue; and b) East 37<sup>th</sup> Street, Seventh Avenue, East 36<sup>th</sup> Street and Macassa Avenue, are entered into to the satisfaction of the City Solicitor.

## **EXECUTIVE SUMMARY**

The Residential Drainage Assistance (RDAP) is a program originally approved by City Council in October 2011 that is designed to aid residential property owners regarding drainage issues.

This report is intended to obtain approval to proceed with the Recommendations for drainage improvements identified in the Residential Drainage Study for the Block bounded by East 36<sup>th</sup> Street, East 37<sup>th</sup> Street, Macassa Avenue. and Seventh Avenue and for the Block bounded by East 36<sup>th</sup> Street, East 37<sup>th</sup> Street, Seventh Avenue and Fennell Avenue. East (Ward 7) and to authorize funding for the construction of works identified within the public portion only; as well as any permits required for the recommended works on private property.

The residents within the Study Areas have raised concerns about the amount of storm runoff from rainfalls or snow melts that results in the significant ponding of water within the rear yards. The ponding has limited the use of their properties because of the soggy conditions created by a lack of drainage from the rear yards.

These properties are located in older neighbourhoods of the City where no grading and drainage plans exist, and multiple properties are affected. Over time, changes to the landscape have resulted in the inability of these properties to drain to an appropriate drainage outlet. Given the absence of grading and drainage plans the City does not have the ability to enforce changes in grade or blocked swales through any by-law enforcement tools.

To better assess the drainage concerns, the City commenced a Study through the RDAP and retained AECOM to:

- Assess the causes of the drainage issues;
- Determine if there were any mitigation measures that could be put in place to alleviate some of the flooding concerns; and/or,

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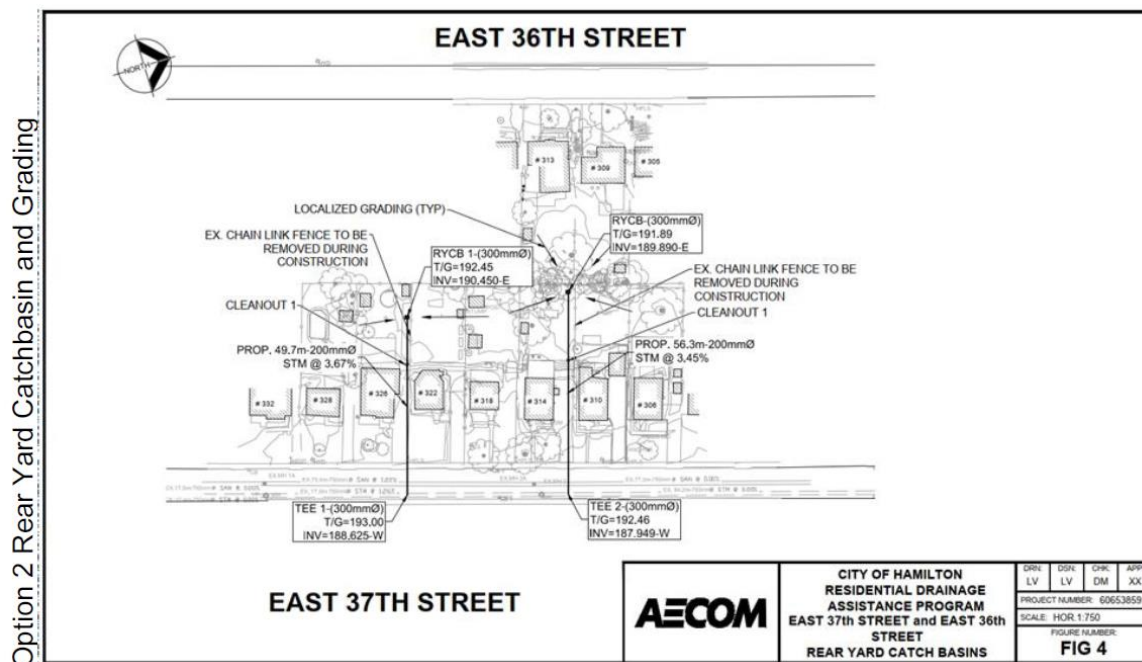
- Determine if a drainage outlet solution could be put in place to eliminate or reduce the flooding concerns.

Staff retained AECOM Consultants to complete drainage studies under the terms of reference of the RDAP.

**Recommended Solutions**

With respect to the properties bounded by East 37th Street, Seventh Avenue, East 36th Street and Fennell Avenue:

To reduce the chronic flooding issues on nine properties that participated in the program, it is recommended that Option 2 be implemented as detailed in the report prepared by AECOM, dated May 25, 2022 in Appendix “B” attached to Report PED22164. It is recommended that rear yard catch basin systems be installed, and the rear yards be re-graded to include drainage swales directed toward the rear yard catch basins. Although this solution will have an impact on the rear yards during construction, the catch basins would provide a permanent solution to the flooding issue. This solution should include an agreement amongst the property owners to ensure that the drainage swales/grading are not interfered/damaged and the overall drainage design can continue to work in the future.



Should funding for the work within the City Right of Way required to facilitate this Recommendation be approved and finalized, including only the installation of two rear

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yard catch-basin leads from the mainline sewer to the property line, it is expected that the cost of the infrastructure on private property (subject to tendering) will be shared among the proponents of this study.

The anticipated total cost of the installation of the recommended Option 2 is approximately \$44,500 for work within the municipal Right of Way and \$59,000 for work on the private side. The final costs for the construction of the rear yard catch basins will depend on the ability of the approved contractor to gain access to the rear yard with their equipment due to buildings, fences, landscaping, and other obstructions.

With respect to the properties bounded by East 37th Street, Seventh Avenue, East 36th Street and Macassa Avenue:

Based on a review of ten properties who participated in the program and the various options reviewed, staff support Option 4 as detailed in the report prepared by AECOM, dated May 25, 2022 in Appendix “C” attached to Report PED22164 . The recommended option to reduce rear yard flooding and soggy rear yards is the installation of individual soakaway pits in the rear yards of each of the ten affected properties. The residents will see the immediate benefit after the construction of the drainage pits.

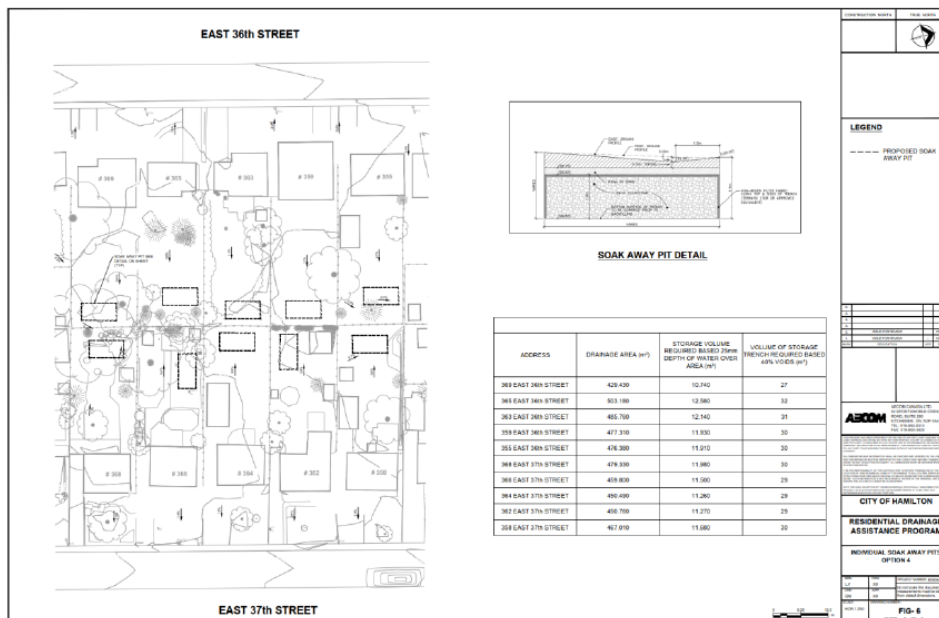


Fig. 6 Option 4 – Individual Soak Away Pits\*

Since the pits would be constructed on the individual resident’s property, the timing of construction could be arranged by each of the residents.

The soakaway pits can be placed and orientated to minimize damage to existing properties (trees, building, etc).

After construction the residents would have full use of their rear yards and the drainage pits would provide for storage of stormwater underground, for most local storms, thereby decreasing the time for yards to return to normal usage.

The anticipated total cost of the installation of the rear yard soakaway pits is approx. \$7,000 to \$10,000 per lot. The final costs for the construction of the soakaway pits will depend on the ability of the approved contractor to gain access to the rear yard. As noted previously, the timing and construction of soakaway pits can be arranged by the individual residents. It is proposed that the pits are constructed under a Site Alteration Permit with the City and that the City absorb the cost of the permit at \$965 per property.

It should be noted that the preferred option amongst the residents was the installation of rear yard catch-basins, shown as Option 2 in the drainage study. While the public work portion for this option would be approximately \$44,000, the estimated cost of works on private property to be shared amongst the homeowners would be in excess of \$103,000 due to the catch-basin installation costs and re-grading which would involve the removal of trees, fencing concrete and driveway replacements. After further discussions with the property owners, it was pointed out that the proposed swale locations would reduce the usability of the rear yards and would prefer that the swales be relocated to the rear property lines. This would ultimately require the removal of additional trees, additional survey and extensive grading work thereby further increasing the costs to the residents.

### **Alternatives for Consideration – See Page 8**

### **FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

**Financial:** If approved, funding for both these projects estimated at approximately \$54,150 is to be funded from Capital Account No. 518216. These costs include \$44,000 for the public portion of the catch-basin installations and the cost of Site Alteration Permits for the installation of ten soakaway pits. Additional Capital funding will be required to support future projects related to the RDAP. Any Capital submission will be included as part of the annual budget submission process.

**Staffing:** No additional staffing would be required for the implementation of the works.

**Legal:** An appropriate agreement to the satisfaction of the City Solicitor will be required prior to the implementation or works on City property.

It is recommended that any Ward specific funding initiatives be vetted by Legal Services to ensure compliance with existing Council Approved Policy and Procedure.

## **HISTORICAL BACKGROUND**

The City has several drainage and grading related tools and processes which can be utilized to assist property owners. Some of these are listed below along with a brief description of recent changes:

- Changes to the Site Alteration By-Law (see August 2013 Staff Report PED12084(b));
- Revisions to improve the Property Standards By-Law (see May 2013 Staff Report PED13084);
- Creation of a Program for Enforcement of Blocked Swales (staffed in September 2013 by Municipal Law Enforcement as per Report PED13084);
- RDAP along with the Blocked Swale Program allows the City to continue to aid residents with lot level drainage issues that would otherwise be difficult to resolve. (As per Report PED14105);
- Comprehensive Development Guidelines and Financial Policies Manual 2019;
- Revisions to Lot Grading Approval Process for new developments (October 2011) (As per Report PED10091(d).);
- Development Agreements; and,
- Drainage Easements, Right-of-Ways.

The RDAP became a permanent City Program in January 2016 to assist residents where no drainage control plans existed at the time of development and multiple properties were impacted by a change in the landscape due to past site alterations and landscaping.

## **POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

### **RELEVANT CONSULTATION**

Planning and Economic Development Department, Licensing & By-law Enforcement Division, Municipal Law Enforcement Section;  
Corporate Services Department, Finance Division and Legal Services Division; and, Public Works Department, Hamilton Water Division, Water/Wastewater System Planning

Homeowners within the East 36<sup>th</sup>, East 37<sup>th</sup>, Macassa Avenue. and Seventh Avenue. Study Area were consulted and indicated a willingness to co-operate and utilize the RDAP. A virtual public meeting for identified residents was held on February 22, 2022.

Homeowners within the East 36<sup>th</sup>, East 37<sup>th</sup>, Seventh Avenue. and Fennell Avenue. East Study Area were consulted and indicated a willingness to co-operate and utilize the pilot RDAP. A virtual public meeting for identified residents was held on March 22, 2022.

### **ANALYSIS AND RATIONALE FOR RECOMMENDATION**

With respect to the properties bounded by East 37<sup>th</sup> Street, Seventh Avenue, East 36<sup>th</sup> Street and Fennell Avenue:

Staff retained the AECOM Consulting firm to conduct a study of the drainage area and propose possible solutions in order to mitigate flooding in the rear yards of the subject properties attached in Appendix “B” attached to Report PED22164. The study proposed several options involving the installation of rear yard catch-basins, the installation of drainage swales and the construction of soakaway pits on each property. The recommended solution, which is supported by staff, would be Option 2 involving the installation of two rear yard catch-basins and drainage swales.

Multiple options were studied and reviewed with respect to constructability and immediate and long term benefits for the residents in order to increase the usability of their rear yards by either mitigating the flooding or creating a drainage outlet.

- The catchbasin system would provide a year-round outlet for the flooding. By maintaining the swale in proper working order, the outlet will continue to function during summer rain events and winter thaws.
- The catchbasins can be placed and orientated to minimize damage existing properties (trees, building, etc);
- After construction, the residents would have almost full use of their rear yards.

With respect to the properties bounded by East 37<sup>th</sup> Street, Seventh Avenue, East 36<sup>th</sup> Street and Macassa Avenue:

Staff retained the AECOM Consulting firm to conduct a study of the drainage area and propose possible solutions in order to mitigate flooding in the rear yards of the subject properties in Appendix “C” attached to Report PED22164. The study proposed several options involving the installation of rear yard catch basins, the installation of drainage swales and the construction of soakaway pits on each property. The recommended solution, which is supported by staff, would be Option 4 involving the installation of soakaway pits in each of the resident’s backyards.

- Since the pits would be constructed on the individual resident’s property, the timing of construction could be arranged by each of the residents;

- The soak away pits can be placed and orientated to minimize damage existing properties (trees, building, etc);
- After construction the residents would have full use of their rear yards; and,
- The drainage pits would provide for storage of stormwater underground, for most local storms, thereby decreasing the time for yards to return to normal usage.

## **ALTERNATIVES FOR CONSIDERATION**

The following alternatives are available to Committee:

The City provides the Studies to the residents who can collectively obtain the necessary permits and approvals for the construction of the recommended works at their own cost with no assistance from the City.

## **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.

### **Clean and Green**

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

### **Built Environment and Infrastructure**

Hamilton is supported by state-of-the-art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

### **Culture and Diversity**

Hamilton is a thriving, vibrant place for arts, culture, and heritage where diversity and inclusivity are embraced and celebrated.

### **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 PED22164 - Residential Drainage Assistance Program Terms of Reference
- Appendix “B” to Report PED22164 - AECOM Study Report East 36<sup>th</sup>, East 37<sup>th</sup>, Macassa Avenue. and Seventh Avenue.
- Appendix “C” to Report PED22164 - AECOM Study Report East 36<sup>th</sup>, East 37<sup>th</sup>, Seventh Avenue. and Fennell Avenue. East