### SUBJECT: Mill Street Outfall Class Environmental Assessment (PW05136) - (Ward 15)

### RECOMMENDATION:

(a) That the General Manager, Public Works Department, be authorized and directed to file the Mill Street Outfall Class Environmental Assessment Project File Report with the City Clerk for a minimum 30 day public review period;

(b) That upon final approval of the 2006 Capital Budget, the General Manager, Public Works Department, be authorized and directed to proceed with the design and implementation of the proposed improvements to the Mill Street sewer and outfall, upon completion of the minimum thirty (30) day public review period; and,

(c) That the Real Estate Section of the Development and Real Estate Division of the Planning and Economic Development Department be authorized and directed to proceed with the acquisition of lands and easements required to implement the proposed improvements for the Mill Street storm sewer and outfall, subject to approval of the 2006 Capital Budget.

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**Scott Stewart, C.E.T.**  
General Manager  
Public Works

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### EXECUTIVE SUMMARY:

In 2004, the City of Hamilton (City) completed a condition assessment for a storm sewer and outfall near Mill Street in Waterdown (refer to location map in Appendix ‘A’). The condition assessment identified sections of the storm sewer and outfall that were...
deteriorating. In 2005, the City initiated a Class Environmental Assessment (Class EA) study to determine the need and preferred method for rehabilitating the sections of the storm sewer system that were in poor condition. The section of the storm sewer that is the subject of the Class EA study runs easterly from Mill Street through sloped terrain, under railway tracks owned by the Canadian Pacific (CP) Railway, and ends on lands owned by a private individual. All directly affected property owners have been consulted on this project. No comments were received that could not be addressed.

The Class EA study follows the planning and design process of the June 2000 Municipal Engineers Association (MEA) Municipal Class Environmental Assessment document for roads, water and wastewater projects. The preferred solution of the Class EA study is considered to be approved under the Environmental Assessment Act subject to a systematic evaluation and public screening process. The following alternative solutions were considered to address the structural condition of the subject storm sewer and outfall:

1. Do Nothing
2. Repair Sewer in Existing Location
3. Replace with New Sewer At or Alongside Existing Location
4. Decommission and Build New Sewer
5. Abandon Existing Sewer and Build in New Location

An evaluation of the alternative solutions was undertaken based on natural, social, economic and technical criteria. Based on the evaluation, Alternative (2) Repair Sewer in Existing Location is the preferred solution as it deals with the deficiencies of the Mill Street storm sewer and outfall in a cost effective manner with minimal impacts to the natural and social environments. The total maximum cost for the implementation of this project is approximately $150,000. This total includes the estimated cost for obtaining necessary easements for access and construction. These funds are proposed in the 2006 Capital Budget Account, Project Identification Number 5180661645, Mill Street Outfall.

As part of the Municipal Class EA process, the City is required to place the project file on the public record for a minimum 30-day review period. Subject to comments received during the review period, and approval of the 2006 Capital Budget, the City will proceed with the implementation phase for the proposed improvements to the Mill Street storm sewer and outfall. The study identifies potential effects that may arise as a result of implementation. These net impacts are minimal and can be mitigated.

**BACKGROUND:**

In 2004, the City of Hamilton (City) completed a condition assessment for a storm sewer and outfall connected to Mill Street in Waterdown (see location map in Appendix ‘A’). The storm sewer collects stormwater runoff through catchbasins in the local roads and conveys the stormwater runoff to Grindstone Creek. The condition assessment identified sections of the storm sewer and outfall that were deteriorating.

In 2005, the City initiated a Municipal Class Environmental Assessment (Class EA) study to determine the need and preferred method for rehabilitating the deteriorating conditions of the storm sewer and outfall. The section of the storm sewer that is the
subject of the Class EA study runs easterly from Mill Street through sloped terrain, under railway tracks owned by the Canadian Pacific (CP) Railway, and ends on lands owned by a private individual. The subject storm sewer is approximately 67 metres in length.

There are two sections of the subject storm sewer. The first section runs approximately 30 metres from Mill Street to a catchbasin-manhole near the CP Railway train tracks. This section is in good condition. The remainder of the storm sewer runs from the manhole near the rail tracks, for another 37 metres, to a headwall near Grindstone Creek. This second section is in fair to very poor condition.

**ANALYSIS/RATIONALE:**

The Class EA study follows the planning and design process of the June 2000 Municipal Engineers Association (MEA) Municipal Class Environmental Assessment document for roads, water and wastewater projects. The City is completing the Municipal Class EA planning process applicable to Schedule ‘B’ projects. Schedule ‘B’ projects include improvements to existing facilities and other undertakings that are considered to have a potential for minimal impacts. These projects are approved under the Environmental Assessment Act subject to public screening.

**Alternative Solutions**

The Class EA study identified the following alternative solutions to address the structural condition of the Mill Street storm sewer and outfall:

<table>
<thead>
<tr>
<th>Alternative Solution</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>(1) Do Nothing</td>
<td>The MEA Municipal Class EA requires that the municipality consider the status quo as an alternative solution.</td>
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<tr>
<td>(2) Repair Sewer in Existing Location</td>
<td>This alternative involves repairing the sewer in its existing location by inserting a lining and replacing the headwall.</td>
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<tr>
<td>(3) Replace with New Sewer At or Alongside Existing Sewer</td>
<td>This alternative involves replacing the sewer sections that are in fair to poor condition in the same general location; and, replacing the headwall.</td>
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<tr>
<td>(4) Decommission and Build New Sewer</td>
<td>This alternative involves taking the existing storm sewer out of service by plugging the outfall and filling the sewer pipe with concrete; and, constructing a new storm sewer under the pavement along Mill Street from a catchbasin-manhole north of Union Street to a culvert over Grindstone Creek.</td>
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<tr>
<td>(5) Abandon Existing Sewer and Build in New Location</td>
<td>This alternative involves replacing the storm sewer and outfall with a new storm sewer and outfall in a different location, either upstream or downstream of the existing system.</td>
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</table>
Alternative (5) was screened out early in the Class EA planning process based on field observations. It was determined that there were no other alternative locations that would offer an advantage over the sites already identified in the study. For example, other potential locations could not offer to minimize impact on the natural environment, improve construction methods or reduce cost.

**Evaluation of Alternative Solutions**

The objective of the Class EA study is to identify improvements to the Mill Street storm sewer and outfall that will alleviate the deficiencies in a cost effective manner with minimal impacts to the natural and social environments. The following criteria were used in evaluating the alternatives:

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Environment</td>
<td>• Impact on natural environment features</td>
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<tr>
<td>Social Environment</td>
<td>• Displacement or disruption to residents, community features and institutions</td>
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<td></td>
<td>• Potential for contaminants</td>
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<td></td>
<td>• Potential for impact on future land uses</td>
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<td></td>
<td>• Impact on the heritage character of the area</td>
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<td></td>
<td>• Impact on archaeological resources</td>
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<tr>
<td>Technical Environment</td>
<td>• Level of improvement to structural condition</td>
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<td></td>
<td>• Ability to construct</td>
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<tr>
<td></td>
<td>• Impacts on operation and maintenance</td>
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<tr>
<td>Economic Environment</td>
<td>• Estimated construction costs</td>
</tr>
<tr>
<td></td>
<td>• Estimated maintenance costs</td>
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</tbody>
</table>

The evaluation of alternatives was based on an assessment of potential impacts for each of the criteria noted above. The alternative that had the most advantages and least disadvantages was identified as the preferred alternative. The Do Nothing alternative is not feasible as it would not address the structural deficiencies of the storm sewer, and leaving the system as status quo may lead to slope stability issues which could affect the natural environment and the rail line. Repairing the sewer in its existing location is preferred to replacing the sewer at or alongside the existing location for nearly all criteria. The impacts of sewer repair on the natural environment are similar to the natural environmental impacts of decommissioning the existing sewer and building a new sewer along Mill Street. However, key tradeoffs had to be made between Alternatives (2) and (4) from the social, cost and technical perspective:

- Alternative (4) is preferred from a technical perspective as it is easier to construct outside of the steep slopes of the Grindstone Creek Valley, and within an easily accessible right-of-way. However, because the right-of-way is relatively constrained, there may be challenges to locate the storm sewer with all other services currently placed within the same road allowance.

- Alternative (2) is preferred from a social perspective as the work will not involve road restrictions as it would for Alternative (4); and, therefore pose less disruption to local residents.
Alternative (2) is preferred from a cost perspective as it involves less construction costs (approximately $150,000 for Alternative (2) compared with approximately $435,000 to $510,000 for Alternative (4)).

Preferred Alternative Solution

Based on the evaluation, Alternative (2) Repair Sewer in Existing Location is the preferred solution to rehabilitate the Mill Street storm sewer and outfall. The preferred solution includes:

- Repair of the sewer in its existing location using trenchless technology to reline the pipe;
- Construction of an access road to the headwall for equipment and trucks;
- Removal of most trees in the construction area and along the access road;
- Demolition of the existing headwall and sewer pipe immediately upstream of the headwall, removal of debris, and reconstruction of the end section of pipe and headwall;
- A path to the headwall will remain for future maintenance access;
- Grouting of the walls of the catchbasin-manhole upstream of the CP Railway tracks; and,
- Revegetation of construction area with native species.

Potential Effects and Proposed Mitigation

As with any alternative, the preferred solution will generate some minor potential effects. These are described below and will be mitigated as follows:

- Historically there have been no formal easements registered for the storm sewer and outfall. The City has relied on the provisions of the Municipal Act that give a municipality the right to access private lands in order to maintain necessary infrastructure. Formal easements should be obtained to allow the City to repair and maintain the storm sewer and outfall. Private land will be required for temporary or permanent easements. These easements will be negotiated with the private landowner and CP Railway during design.
- The extent of vegetation removal will be confirmed during design and will be kept to a minimum through the development of a tree management plan;
- In-water works will be carried out between July 1st and March 31st to avoid fish spawning season.
- Erosion and sediment controls will be put in place during construction; the slope at the outfall will be stabilized and revegetated immediately after construction; the permanent access path will be designed to minimize potential long term erosion as a result of drainage down the path.
- Significant species will be avoided where possible. Conservation Halton has identified species at risk which are known to be in the general vicinity of the study area; however, a field inventory of natural features in the immediate vicinity of the storm sewer and outfall did not identify any rare species. Consultation
with Conservation Halton will continue beyond the Class EA study to monitor for the presence of rare species based on the details of design.

- The Class EA study has identified a general location for an access route that will use the most gradual slope available to minimize potential for slope stability issues. The location of this route will be confirmed upon detail design and consultation with Conservation Halton will continue to identify the best access route location.

- Construction activities will be limited to regular business hours when possible; dust suppressants will be used as necessary.

- Appropriate permits will be obtained from CP Railway and safety measures will be employed when crossing the rail tracks.

- Periodic access to the sewer for inspection and maintenance will be required; an easement will remain in place and the path to the headwall will be maintained; the path will be gated to minimize potential for trespassing.

**ALTERNATIVES FOR CONSIDERATION:**

The preferred alternative solution has been identified using an evaluation and screening process that fulfils the requirements of the MEA Municipal Class EA document for Schedule ‘B’ projects. Municipal projects of this category are considered to be approved under the Environmental Assessment Act provided that the project follows the Schedule ‘B’ planning and design process outlined in the MEA Municipal Class EA document.

The MEA Municipal Class EA document was approved under the Environmental Assessment Act. If the City does not follow the process outlined in the Municipal Class EA document, the City would be in violation of the document and as a result would have contravened the EA Act. The Ministry of Environment could revisit the approval of a project or take away the City’s right to use the Municipal Class EA document.

The preferred alternative solution is not normally reconsidered at the end of the process unless there is an issue that is proven to affect the outcome of the evaluation process. There are two alternatives for Council to consider with respect to the recommendations of this report:

1. To file the Mill Street Outfall Class Environmental Assessment Project File Report with the City Clerk for a minimum 30 day public review period and proceed with implementation, including land and easement acquisition, subject to comments received and funding approval.

2. To not file the Mill Street Outfall Class Environmental Assessment Project File Report with the City Clerk for a minimum 30 day public review period and, as a consequence, not proceed with implementation, including land and easement acquisition.

Should Council not wish to approve the filing of the project file report, the Municipal Class EA process will be considered by the provincial government as incomplete and the City will not have approval under provincial environmental legislation to implement the improvements required to rehabilitate the subject storm sewer and outfall. The
outcome would be equivalent to the do nothing alternative, which would lead to eventual
disruption to the infrastructure, the overlying railway tracks and the surrounding natural
environment. Eventually the City would have to repeat the Class EA process, which
would likely result in the same recommendations or in a more costly recommendation
should the structural condition of the infrastructure further deteriorate.

**FINANCIAL/STAFFING/LEGAL IMPLICATIONS:**

**Financial**
The estimated cost to replace the sewer in the existing location is $140,000. Costs to
register and obtain the necessary easements may range from $5,000 to $10,000. In
total, the maximum cost for the implementation of this project is approximately
$150,000. The funds required for full implementation of this project are proposed in the
2006 Capital Budget Account, Project Identification Number 5180661645, Mill Street
Outfall.

**Staffing**
There are no staffing implications.

**Legal**
Currently there are no easements registered on title for this storm sewer; however, the
City has a right to access its facilities under the Ontario Municipal Act. It is preferable to
obtain legal easements to secure access rights for the type of work necessary to repair
the storm sewer outfall in the short term and maintain the storm sewer outfall in the long
term. The City will register and obtain appropriate easements prior to construction.

**POLICIES AFFECTING PROPOSAL:**
The recommendations of this report will not bind the corporation or alter or contravene
any established City Policy.

**RELEVANT CONSULTATION:**

**Agency Consultation**
The following departments were contacted for this project:

- Planning and Economic Development (Community Planning and Design,
  Development Planning for the Environmentally Significant Areas Impact
  Evaluation Group, Real Estate Section)
- Public Works (Water and Wastewater, Capital Planning and Implementation)

The following agencies were contacted for this project:

- Conservation Halton
- Hamilton Conservation Authority
- Ontario Ministry of Culture
- Niagara Escarpment Commission
- Ontario Ministry of Natural Resources
- Ontario Ministry of Environment
- Federal Department of Fisheries and Oceans
Environment Canada
Transport Canada (Navigable Waterways Protection Act)
Utility Companies
Canadian Pacific Railway

All agency comments received have been addressed and are documented in the project file report.

Public Consultation

A Notice of Study Commencement and Public Information Centre was placed in two separate issues of the At Your Service page in the Hamilton Spectator. Additional notices were mailed to residents within the vicinity of the storm sewer outfall. A formal letter was addressed and mailed to landowners directly affected by the project, such as the CP Railway and a private landowner.

A Public Information Centre (PIC) was held during the evening of June 2, 2005, at the Bohemian Banquet Centre in Waterdown to review this project with the public and agencies. Three people attended the PIC. No formal comments were submitted during the PIC; however, formal comments were received during the Class EA study. All public and agency comments received have been addressed and are documented in the project file report.

Key Comments

Potential for slope stability issues and erosion or slope failure

Improvements to the outfall will decrease the erosion currently resulting from the deteriorated headwall. During construction the City plans to remove as little vegetation as possible, use appropriate erosion control methods and revegetate the lands immediately after construction is complete.

Potential damage to trees in the valley; Minimize removal of vegetation

Vegetation removal will be limited to that required for construction. The City will look into the opportunity to cut back trees rather than remove them entirely. The lands will be revegetated to the extent possible with native species.

Permanent access path resulting in trespassing

The City will gate the path to limit access to City staff only.

Long term drainage effects associated with the permanent access path

The City will ensure that the design of the path and the revegetation plan address these issues.

Constructing a new sewer along Mill Street and under the CP Railway overpass will require a structural analysis

A new sewer along Mill Street was not identified as the preferred solution. CP Railway expressed no concerns with the lining of the existing storm sewer under the tracks or any significant issues with respect to a temporary crossing over the tracks. All required permits will be obtained during the design phase of the project.
Notice of Completion

Upon Council approval of the recommendations contained in this report, the City will place a Notice of Study Completion in two separate issues of the At Your Service page of the Hamilton Spectator, announcing the minimum 30 day review period for the Project File Report. The notice will also be mailed to the study mailing list and residents within the vicinity of the storm sewer and outfall.

CITY STRATEGIC COMMITMENT:

By evaluating the “Triple Bottom Line”, (community, environment, economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

Community Well-Being is enhanced. ☑ Yes □ No
The public are involved in the definition and development of local solutions.

Environmental Well-Being is enhanced. ☑ Yes □ No
Human health and safety are protected.

To do nothing would have no construction related impact on the environment and was considered as an alternative solution for the project. It was noted, however, that sections of the sewer and outfall were in poor condition and if left unattended the infrastructure would eventually affect the overlying railway tracks and surrounding natural environment.

Economic Well-Being is enhanced. ☑ Yes □ No
The preferred solution to address the deficiencies associated with the Mill Street sewer and outfall minimizes impact on all three bottom lines. It rehabilitates the structural deficiencies of the sewer and outfall in a cost effective manner with the least disruption to residents. Addressing the deficiencies associated with the sewer and outfall at this time would be more cost effective than addressing the same in the event of a slope failure.

Does the option you are recommending create value across all three bottom lines? 
☑ Yes □ No

The Municipal Class Environmental Assessment process ensures that all aspects of the natural, social and economic environments have been considered as part of the evaluation criteria in choosing a sustainable solution to infrastructure problems. The Project File Report for this Class EA study identifies ways to minimize any negative impact on the natural, social and economic features within the study area.

Do the options you are recommending make Hamilton a City of choice for high performance public servants? 
□ Yes ☑ No

The recommendations in this report have no impact on the desired results for this commitment (e.g. lifelong learning, supportive workplace).