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Aqua Solutions 5 Inc.

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Delivered by email to: mkolberg@baird.com

Dec. 10, 2019

To: Mr. Mark Kolberg, P.Eng. Baird & Associates Coastal Engineers Ltd. 1267 Cornwall Road, Suite 100, Oakville, Ontario L6J 7T5

Phone: 416-508-9053

Re: Peer Review

Lakeview Village Erosion Hazard Design Life Technical Summary Document

Aqua Solutions 5 Inc. File No: BAI-01-19

Dear Mr. Kolberg:

Aqua Solutions 5 Inc. (AQ5) is pleased to provide the results of the peer review for the Lakeview Village Erosion Hazard Design Life Technical Summary by W.F. Baird and Associates (Baird). A separate attachment with AQ5 qualifications has been provided for your information.

In summary the document has been reviewed and it is the opinion of AQ5 that Baird adequately provides the justification for the use of a 60 year design life for the upgraded shoreline protection at Lakeview Village.

The Baird document provides an excellent summary of the following points for justification of the 60 year design life at this particular site;

- "well within internationally accepted practice guidelines
- existing Lakeview structures were professionally designed and well constructed and have remained functional for nearly 60 years demonstrating that such a design life is reasonably achievable
- there are other examples of major shoreline structures with a design life of 60 years or more
- it is consistent with CVC Lake Ontario Shoreline Hazards report (September 2005) and the Ontario Ministry of Natural Resources (OMNR) Technical Guide for Great Lakes St. Lawrence River Shorelines (2001) for major structures
- site is a "major marine structure", as describe by CVC (2005) and part of a substantial reach of publicly controlled artificial shoreline with well-protected adjacent shorelines at Lakefront Promenade Park to the west and Jim Tovey Lakeview Conservation Area to the east
- underlying bedrock substrate provides long-term stability and shallow nearshore depths limit wave action at the shoreline
- access for future maintenance will be provided
- site specific shoreline protection design to upgrade the existing structures will be completed by Baird in accordance with accepted practice. Baird is internationally recognized as a



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qualified, experienced coastal firm. (Dec. 10, 2019, Page 1 of Baird Lakeview Village Erosion Hazard Design Life Technical Summary Document.)", and AQ5 is in agreement with these.

From a policy perspective, one of the key aspects which makes this site unique is that the Lakeview Village shoreline structures "are part of a large artificial shoreline system that will extend approximately 2.7 kilometres along the Lake Ontario waterfront from Lakefront Promenade Park to the west and to Jim Tovey Lakeview Conservation Area lakefilling project presently under construction to the east." (Dec. 10, 2019, Page 3 of Baird Lakeview Village Erosion Hazard Design Life Technical Summary Document)" These shorelines are publically controlled, there is permanent access available to carry out the maintenance and the maintenance of these structures will be ensured through the responsibility of these public organizations. Therefore, as the Baird document has outlined, the "artificial shoreline' criteria under OMNR Technical Guide for Great Lakes — St. Lawrence River Shorelines (2001) can be applied to this site. The future maintenance combined with the underlying bedrock which is providing long-term stability, a well-designed structure by a fully qualified coastal engineer including measures taken to address flanking, will all be addressed and meet the OMNR Technical Guide (2001) and 2005 CVC Shoreline Hazards Report requirements.

Conclusion:

In conclusion, it is the opinion of AQ5 that Baird has sufficiently provided the justification for the use of a 60 year design life for the upgraded shoreline protection at Lakeview Village. This letter was prepared by Aqua Solutions 5 Inc.

AQ5 respectfully submits the attached letter report and trust that the foregoing is acceptable. Thank you for the opportunity to submit this report. If you have any questions regarding the enclosed or require additional information, please do not hesitate to contact the undersigned at 905-604-1295.

Respectfully Submitted,

President: Judy Sullivan, P. Eng.

Agua Solutions 5 Inc.

Attachment: AQ5 Qualifications