

March 18, 2016

Village of Mamaroneck  
Village Hall  
123 Mamaroneck Avenue  
Mamaroneck, NY 10543

Attn: Richard Slingerland, Village Manager

Re: **Harbor and Coastal Zone Management Commission Public Hearing  
regarding USCOE Village Mamaroneck Flood Control Project March 16,  
2016**  
LJA # 16017

Dear Mr. Slingerland:

The following are my observations regarding the subject public hearing:

The purpose of the public hearing was to provide testimony for the consideration of the Harbor and Coastal Zone Management Commission in making their recommendation to the NYS DOS regarding the consistency of the proposed US Army Corps of Engineers Mamaroneck and Sheldrake River Flood Control project, with their policies.

At the conclusion of the hearing, the Commission found that the proposed project was not consistent with the Commission's policies based primarily on aesthetic/historic and environmental considerations.

The proposed project as planned will reduce flooding elevations and floodplain widths on the Mamaroneck and Sheldrake Rivers by replacing existing constrictive bridges and culverts with larger bridges and culverts, by widening and deepening existing channels, and by providing a floodwater bypass.

The project incorporates vertical concrete channel walls where existing vertical rock channel walls are deteriorated and where channels must be widened and deepened in close proximity to existing buildings which line the existing channelized river systems.

Members of the Commission and the public expressed many concerns during the course of the hearing including the following:

1. Some people didn't think that the project will work, and that flood reductions would therefore not be achieved.
2. Some felt that the project did not look aesthetically pleasing.
3. Some expressed concern that the project was environmentally unsound as it destroyed the existing ecology of the rivers.

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4. Some Commission members expressed concern that the project couldn't work unless the Halstead Avenue Bridge is replaced.
5. Some advised that the project should incorporate fluvial geomorphic methods [A green river revitalization project].

The following are my observations, some of which I addressed in my testimony to the Commission.

## **1. Will the project work?**

I advised the Commission that the Corps of Engineers analysis and design methodology has been successfully incorporated into the thousands of completed flood control projects over the course of more than 100 years. The proposed project configuration analyzed and designed by the Corps of Engineers will function just as the Corps of Engineers states that it will, and will provide the levels of protection that it was designed to provide. Laypersons who believe that the project will not function, but who have no understanding of the basics of Hydrologic and Hydraulic principles should defer to the expertise and of the Corps of Engineers to deliver a functioning project.

## **2. The aesthetics of the project**

I advised the Commission that concrete channel walls must be utilized in order to construct channels wide enough and deep enough to convey the design flood discharges as there is no room to construct channels large enough without them. A channel utilizing side slopes in lieu of vertical walls would be significantly wider and would require the demolition of adjacent buildings that the project is intended to protect. These buildings would have to be purchased for demolition and the costs would be added to the project cost which could then not be justified. There is no other cost effective way to construct this flood control project without utilizing walls. I recommended that the Commission request that the Corps of Engineers "face" the walls to make them more aesthetically pleasing, or to provide a step near the tops of the walls where planting might be provided where possible for aesthetical purposes.

## **3. The affect on existing ecology**

I advised the Commission that the reconstruction of the existing channelized river system with an adequate larger system cannot be accomplished without the temporary disturbance of the ecology of the existing system. Environmentalists can determine what mitigative measures can be incorporated into the new channels to benefit its ecology, but there is no alternative but to excavate and temporarily disturb the existing channels during the construction of a new improved channel system.

## **4. The Halstead Bridge replacement**

I advised the Commission the final project configuration proposed by the Corps of Engineers will provide the flood control benefits that it is designed to provide

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without the Halstead Bridge replacement. The project is not dependent upon the Halstead Avenue Bridge replacement nor any other improvement. If future improvements are made after the completion of the Corps project, then additional flood reduction benefits will result. The Corps project is stand-alone and will deliver the flood control benefits that the Corps proposes.

## **5. The project should incorporate fluvial geomorphic methods (A Green river revitalization project).**

The Commission has retained the services of a Hydrogeologist (Mr. Rubin) who provided the Commission and the public with a dissertation on the revitalization of rivers by creating meandering, ecologically enhanced, "green" waterways. I believe he was suggesting that such a system be constructed in lieu of the proposed channelized Corps of Engineers flood control project in the Village of Mamaroneck. A meandering green waterway project would not necessarily eliminate flooding [although it could, if designed to be large enough] but in order to replace the straight vertical walled channels that now exist, a meandering waterway would require the extensive demolition of existing buildings, and roads, and utility infrastructure with their replacement to serve whatever was left to serve.

While the Corps of Engineers flood control project entails the reconstruction of a channelized river system with a larger similar system designed to minimize the disturbance to existing buildings, roads and infrastructure, Mr. Rubin's suggested meandering waterway system would require the wholesale reconstruction of an entire segment of the Village at a cost that would make the proposed 70 million dollar cost of the Corps of Engineers project seem miniscule. It is simply not economically feasible.

## **Summary**

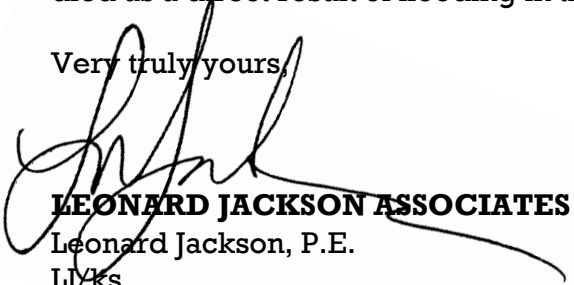
The proposed Corps of Engineers flood control project will replace an existing channelized river system flowing through the Village of Mamaroneck with a larger channelized river system following essentially the existing alignment. It is designed to current standards that provide flood protection up to the 100-year level. The Village Harbor and Coastal Zone Management Commission has found that this proposal is not consistent with their policies. Their finding was based primarily on aesthetic and environmental concerns expressed at the public hearing. From my perspective the proposed Corps of Engineers project, when completed, is aesthetically and environmentally identical to the existing channelized river system, except that the new system will safely convey floodwaters up to a 100-year event thereby protecting lives and property, thereby providing significant environmental and economic benefits.

In weighing these benefits of protecting the lives and property of the residents of the Village of Mamaroneck against the detriment to the aesthetic views of the replaced concrete channels and the temporary detriment to the environment during the construction, the Commission has found that the project is inconsistent with their policies and that the project's detriments outweighs its benefits.

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This finding by the Commission suggests that its policies should be revised to give greater consideration to preventing millions of dollars of future flood damages and to protecting the lives of Village residents, two of whom, I am advised are known to have died as a direct result of flooding in the Village.

Very truly yours,

A handwritten signature in black ink, appearing to read 'LJ', with a long horizontal flourish extending to the right.

**LEONARD JACKSON ASSOCIATES**

Leonard Jackson, P.E.

LJ/ks

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