

Berkshire Regional Planning Commission Clearinghouse Review Report

July 2, 2009

SUBJECT: Marchesio Park Channel Improvements
EOEA#: 14434
LOCATION: West of Dalton Division Rd. and South of McIntosh Dr., Pittsfield, MA
ESTIMATED COST: \$200,000
REVIEW TYPE: ENF
PROPONENT: City of Pittsfield, Dept. of Public Works and Utilities
COMMENTS DUE: July 14, 2009

PROJECT DESCRIPTION:

Existing Conditions: Brattle Brook runs along the northern edge of Marchesio Park, behind several residences located on McIntosh Drive. Under large storm events the stream creates a local flooding condition for the residences at 112 to 136 McIntosh Drive.

The existing channel is a natural channel with cobbles, gravel and moderate vegetation. The cross-section varies in size from approximately 6-8 feet bottom width and a depth varying from 12" to 4 feet. The channel had received significant sediment loading from upstream stormwater collection systems, which has significantly reduced its capacity, causing flooding.

Since 1999 the City has constructed some improvements in an attempt to prevent stormwater from entering the properties on McIntosh Drive, including a bypass device and sandbag berm, but these attempts have not created a significant improvement in local flooding.

Project Summary: To minimize the frequency of future flooding, the channel will be widened to increase capacity while maintaining the existing horizontal alignment. A trapezoidal channel is proposed with a 12 foot bottom width and 2:1 side slopes. A berm will be constructed along the north bank to further protect the residences to the north under large (but less than 10 year) storm events. The south bank will be constructed to a minimum 2-foot depth to match existing. Under larger events (greater than 10 year) the stream will overtop the banks to the south similar to existing conditions. The stream bottom will be stabilized using medium sized riprap material similar to existing conditions, and the banks will be vegetated.

Approximately 255 cubic yards of material will be excavated from the stream to create the desired channel configuration. Approximately 158 cubic yards of material will be removed from the proposed grading and restoration work outside the bank, resulting in a net cut of approximately 413 cubic yards overall.

This project includes an extensive restoration and replication plan to mitigate impacts to wetland resource areas. An existing pedestrian bridge will be removed and replaced. A 24-inch storm drain outfall from the north will be relocated, and a concrete culvert end and riprap scour hole will be constructed at the outfall.

CONSIDERATIONS AND POTENTIAL ISSUES:

Wetlands and Wetland/Aquatic Habitat: This project requires review under MEPA, requires a Local Order of Conditions, 401 Water Quality Certification, Army Corps PGP

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Plans include dredging sediment and impacting approximately 1,100' of natural channel, as well as onsite disposal of 399CY of material.

Notice of Intent filed on 3/10/08 file No. WE 262-0916

Consistency with Local & Regional Plans: The project will occur within a public park and will have no impact on local or regional land-use or open space plans.

Alternatives Analysis: The Proponent has outlined 4 alternative plans, includes a narrative description, approximate costs and schematics for each, as well as advantages and disadvantages of each. The Proponent ultimately recommends Alternative #2, summarized in this ENF.

Alternative # 1 – install a double concrete box culvert (two @ 8' wide by 4' deep) to carry Brattle Brook through Marchesio Park, at an approximate cost of \$731,900. This alternative would increase the carrying capacity of the channel to carry the 25-year storm and relocates the flow away from private property. The disadvantages of this plan is the significant capital cost, long term maintenance, requires fill of the existing channel, may have floodplain impacts and wetlands disturbance.

Alternative # 2 – Widen existing channel to increase capacity at a cost of \$177,060 (see project summary above).

Alternative # 3 – Widen and re-align existing channel to increase capacity to carry the 25 year storm, relocating flow off private property, but requiring relocation of the channel and wetlands, at a cost of \$188,565.

Alternative # 4 - Use the park for flood storage. Since the park is a recreational area it would be feasible to simply allow its use for temporary storage of excess flow. However the Proponent eliminated this option based on estimates of insufficient holding capacity during peak flow for the 25 year storm.

COMMENTS AND RECOMMENDATIONS:

Although BRPC does not foresee the need of an Environmental Impact Report, there remain some issues not resolved during the onsite meeting on July 1, 2009 that should be resolved during the permitting process. The site visit did serve to illuminate the severity of the problem, however, as the result of recent heavy rain and flooding was evident on the property of private homeowners located along the stream bank; this was evidenced in one case by sandbags that had failed to protect at least one property from inundation.

The following comments and recommendations are offered to further address these issues and technical details:

BRPC urges the City of Pittsfield and the Town of Dalton to work together to understand the cause of the continued sedimentation of Brattle Brook and to eliminate the need in the future for routine dredging. We are concerned about the interruption of connectivity periodic dredging causes between the upstream and downstream habitats, and further, are not convinced that this project will serve to resolve the problem over the long term. To that end, BRPC would be happy to assist the two communities in identifying funding resources for a watershed study that would help guide more comprehensive solutions.

The Proponent and area residents state that sediment buildup, historic flooding and routine dredging of this natural channel occurred prior to the enactment of the Wetlands Act, but that volume has increased greatly over the last few years. BRPC has outstanding concerns regarding the upstream origin of the sediment deposited in the channel and further watershed study should be conducted as part of this project to identify any alternative methods for longer term solutions to the problem.

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Several technical issues regarding the volume of material to be removed and its eventual disposal location(s) remain unclear and should be resolved through the 401 permitting process. Additionally, the final carrying and storage capacity of the channel in the Proponent's plan was described as being designed to accept "something between the 10 year and 25 year storm". The actual calculations should be clarified prior to permitting.

The Proponent's plan identified certain trees to be removed as required by the establishment of the berm to protect private property. However, during the site visit the Proponent's description of the project was unclear as to which trees would remain and which would be removed. This should be clarified prior to permitting.

The Berkshire Regional Planning Commission Executive Committee approved these comments at their July 2, 2009 meeting.