

090211

MEMORANDUM

March 31, 2009

TO: Dave Gorman, PE – Assistant Director of Public Works

FROM: Jeff Julkowski, PE – CBBEL
Jeana Gowin, PE – CBBEL

SUBJECT: **Vista Pond Watershed – Flood Alleviation**
Village of Lombard, DuPage County, Illinois
(CBBEL Project No. 08-712)

As requested by the Village of Lombard, Christopher B. Burke Engineering, Ltd. (CBBEL) is performing an XP-SWMM hydraulic analysis of alternatives to alleviate flooding in the Vista Pond watershed. In March 2009, CBBEL performed a hydraulic analysis of a proposed supplemental pumping plan for Vista Pond. The Village is proposing to install two manholes on both ends of the abandoned 18-inch storm sewer that is located along Westwood Avenue. The existing sewer was previously used as a gravity outlet for Vista Pond, in addition to the existing pump outlet, it was determined that the gravity flow pipe should be eliminated, therefore the sewer was abandoned by bulkheads. As a result, the gravity release was eliminated and Vista Pond is only pump evacuated into the existing storm sewer system that traverses from west to east along the south side of the railroad and then continues south into Gatz Pond. In the September 2008 storm event, the Vista Pond overflowed and the surrounding area experienced severe flooding as shown in the exhibit below. The Village is concerned that spring runoff could cause further problems in the Vista Pond area and would like to take preventative measures.



Vista Pond Inundation – September 14, 2008



CHRISTOPHER B. BURKE ENGINEERING, LTD.

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It is CBBEL's understanding that the Village would like to install two manholes on both ends of the abandoned 18" storm sewer. Because the 18" storm sewer is currently connected to the sanitary sewer, a new manhole on the south side of the railroad would connect to the existing 12-inch storm sewer via an 18" DIP at 0.00% slope.

CBBEL used the XP-SWMM model to determine the impacts that additional pumped flow would have on the existing downstream system. We assumed that the existing 2.2 cfs pump capacity could be doubled to 4.8 cfs. Based on our results, the plan will not create downstream flooding. The increased pump rate from Vista Pond is a temporary situation and will be attenuated by Gatz Pond. The pumping will need to be monitored to verify that no downstream properties are adversely affected.

Permanent solutions being analyzed by CBBEL include reimplementing a gravity drain out of Vista Pond to be directed towards Gatz Pond. As part of this analysis CBBEL is determining the maximum flow out of Vista Pond, including the existing pumped flow that will not cause downstream impacts within the Gatz Pond watershed. CBBEL is currently collecting additional information to determine where surcharging of the storm sewer system may occur downstream due to the increased runoff and if the existing overland flow path has the capacity to convey the flow to Gatz Pond. These additional analyses are ongoing and a progress report cannot be given at this time.

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