

MEMORANDUM

May 28, 2015

TO: John J. Ingram – Infrastructure Maintenance Director

FROM: Travis Parry, PE, CFM

SUBJECT: Caro Vista Pond and Parkview Estates Detention Basin Benefits
Evergreen View Park Pond Expansion - Village of Orland Park
(CBBEL Job No. 12-0342)

As requested by the Village of Orland Park (Village), Christopher B. Burke Engineering, Ltd. (CBBEL) has prepared this memorandum to summarize the results of the hydrologic and hydraulic analysis and the improvements proposed for the portion of the Mill Creek Watershed that discharges from the Caro Vista and Evergreen View detention basins and are tributary to the Parkview Estates Subdivision. Additionally, CBBEL has prepared Engineer's Estimates of Probable Cost and estimated timeframes for the various types of design and construction proposed.

The results of the existing conditions analysis concluded that areas near the ComEd right-of-way (ROW) including Caro Vista and Villa West, as well as Parkview Estates Subdivision, experience flooding due to the large amount of undetained runoff primarily located upstream of the ROW. CBBEL recommended the construction of a regional storage facility located within the Evergreen View Park property, south of the ROW. Two basin options were analyzed to quantify the benefits that any new upstream storage would have on the Parkview Subdivision in addition to reducing overland flooding through the entire study area.

As a follow-up to this study, the Village requested that CBBEL determine what benefits could be obtained at the Caro Vista Pond if a direct connection was made to the new regional facility. The following table summarizes the existing conditions level of protection in the areas surrounding both the Parkview Basin and the Caro Vista Pond and the proposed level of protection that will be obtained with both basin expansion options.

Table 1. Summary of Existing and Proposed Levels of Protection

Location	Existing 100-year (NAVD 88)	Level of Protection	Option A 100-year (NAVD 88)	Level of Protection	Option B 100-year (NAVD 88)	Level of Protection
Caro Vista Pond	693.8	10-year	691.8	100-year	691.6	100-year
Parkview Stage I	683.5	5-year	682.8	25-year	682.8	25-year
Parkview Stage II	683.5	5-year	682.8	100-year	682.8	100-year



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The primary benefit to constructing the larger basin is a reduced water surface elevation that could be utilized for future regional flood control or detention storage projects. The total amount of storage available for future use is approximately 5.5 acre-feet.

Provided below in Table 2 is a summary of the projected costs for each option and the timeframe anticipated to design and construct the project utilizing the traditional design/bid/build method and the alternative design/build methodology.

Table 2. Cost and Timeframe Summary

Alternative	Cost	Timeframe	
		Design/Bid/Build	Design/Build
Option A	\$5,750,000	Const.Start 3/2016 Completed 10/2016	Const.Start 8/2015 Completed 5/2016
Option B	\$6,750,000	Const.Start 3/2016 Completed 11/2016	Const.Start 8/2015 Completed 6/2016

