



May 29, 2014

Mr. Jim Rogers
Executive Director
Elmhurst Park District
375 W. First Street
Elmhurst, Illinois 60126

RE: Peer Review Services – Park District Properties
City of Elmhurst Comprehensive Flooding Plan

Dear Mr. Rogers:

Per request of the Elmhurst Park District, V3 has performed a peer review of the concept design and hydrologic and hydraulic modeling information provided to our office relating to the City of Elmhurst Comprehensive Flooding Plan (CFP). Our review focused on those parks your office indicated were potential sites for flood mitigation improvements. Included in that list of parks were Wild Meadows Trace (WMT), York Commons (YC), the eastern section of Golden Meadows (GM) and East End (EE) parks. V3 was able to obtain the hydrologic and hydraulic models which were used by the City of Elmhurst consultants to develop concept flood protection plans. Pursuant to our review, we offer the following.

General Comments

Observation 1: Three of the four sites reviewed presently serve as playing fields for park district recreation activities. YC and EE parks appear to be used for baseball and/or softball activities. GM park appears to be used for soccer activities.

Comment 1: Dual use recreational facilities (i.e. recreation use & stormwater use) are generally compatible with flood storage only when the fields can (a) be kept free from saturation, (b) be kept dry for storm events of less than or equal to about the 10-year return interval (subject to the importance of the recreational field to the park district), (c) be sloped to drain well, usually about two percent on the playing surfaces and (d) the playing surface drainage is conveyed away from the playing surface without impact to teams or spectators.

In our discussion with Luke Sherry of CBBEL, it was evident that these playability considerations had not been included with the concept planning for the CFP at this stage. But we believe that the City and CBBEL intend to incorporate similar requests into their design moving forward and will evaluate the change in benefit to residents accordingly.

Observation 2: The proposed excavations range in depth from two to eight feet.

Comment 2a: Excessive excavation depths have the potential to impair playing surface vegetation during periods of extended inundation due to vegetation stress. Frequency of inundation is also an important factor which will influence vegetative health.

Comment 2b: Saturated conditions may persist, even during periods of no rainfall, due to presence of high groundwater that is encountered due to this excavation depth. This saturated condition can detract from recreation use of the fields.

Observation 3: The park sites with ball field or soccer recreation activities are proposed to be reconstructed with the playing fields at the lowest elevations within the proposed excavations.

Comment 3a: Similar to Comment 2 above, locating the playing surface at the lowest elevations within the park will have the potential to impair playing surface vegetation during periods of inundation, besides the undesirable condition of having playing fields saturated and unavailable for frequent rainfall events.

Comment 3b: Placing the recreation fields at the lowest elevation is not preferred since the park site will receive storm water from any storm event and be subject to the receipt of first flush contaminants. V3 would recommend elevating the recreation field sites to reduce minimizing receipt of first flush contaminants.

Observation 4: At least two of the park sites, the GM and EE parks, are identified as having a restricted outlet to be constructed as part of the flood control improvements.

Comment 4: The provision of a restricted outlet will likely cause playing surface inundation times to exceed two days for frequent rainfall events of one or two year return frequency and four days for rainfall events of ten year and larger magnitude return frequency.

Observation 5: East End Park. The NCalCritical existing condition model describes a short 8-inch diameter pipe (Link673) downstream of the junction of a 36-inch sewer and a 60-inch sewer (60-1). The junction is labeled Diversion and the short 8-inch diameter pipe joins to a 60-inch pipe further downstream (Link665) at node N724 (see Figure 5 below).

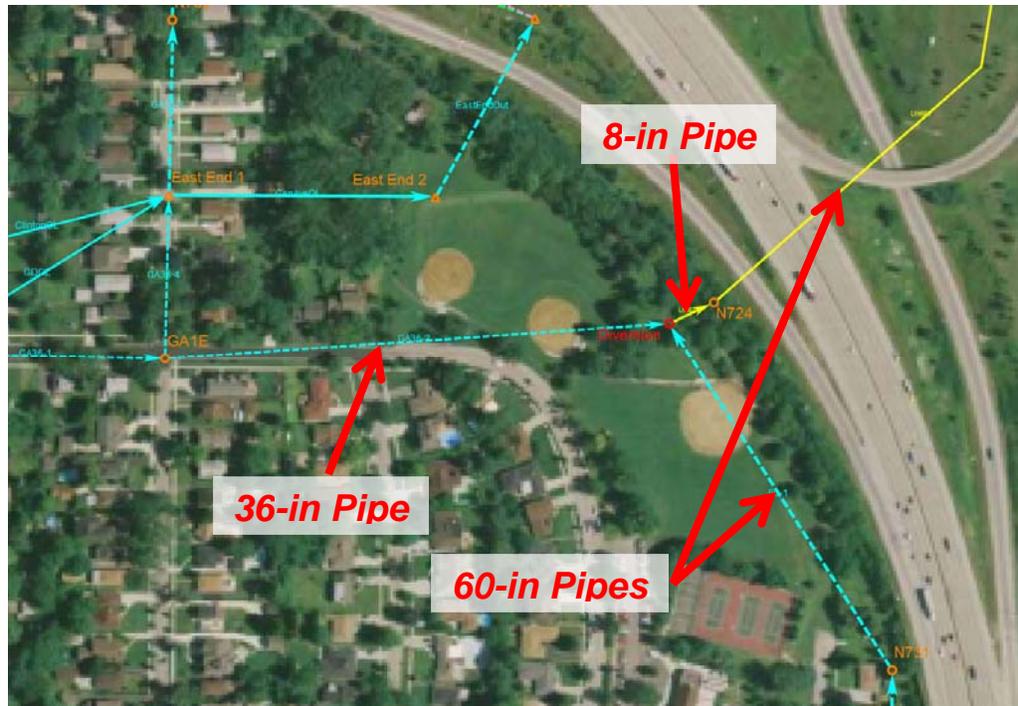


Figure 5. Plan View of EE Site in the CFP NCalCritical Existing Model

Comment 5a: The presence of an 8-inch pipe restrictor in the system shown above may be the existing condition, but it seems unusual given the size of the incoming storm sewers, and should be confirmed. It seems that the presence of such a restricted condition would result in high elevations within the Geneva Avenue area and would exacerbate flooding conditions there and at EE. The fact that the calibration run gives higher elevations than reported by approximately one-foot might be due in part to this situation.

Comment 5b: There may be potential to work with the Illinois Tollway to remove the 8” restriction in this location and utilize the full capacity of the 60” storm sewer under the highway, without impacting downstream property owners.

Observation 6: The conceptual plan details propose use of an underdrain system in the parks.

Comment 6: It is not clear that an available downstream connection is feasible as currently designed. We do recommend underdrains be installed under recreational fields that hold stormwater. This would become feasible when the recreational fields are elevated above the outlet, and underdrains can connect by gravity.

Observation 7: The number of homes benefited through the proposed projects within the Elmhurst Park District sites is small compared to the thousands of Elmhurst residents who utilize these parks for recreational activities.

Comment 7: Revisions to the proposed Elmhurst Park District concept drainage plans should focus on preserving the recreational potential of these highly utilized facilities, while still achieving flood reduction benefits for impacted homes.

Thank you for the opportunity to assist the Elmhurst Park District with a review of the proposed City of Elmhurst Comprehensive Flooding Plan as it relates to your park district properties. We trust these comments will help your office with timely decisions regarding the proposed dual use of your properties. If you have any questions, please do not hesitate to contact our office. Thank you.

Sincerely,
V3 COMPANIES, LTD.

A handwritten signature in black ink, appearing to read "G. Wolterstorff", with a long horizontal line extending to the right.

Gregory V. Wolterstorff, P.E.
Director of Natural Resources

cc:
V3 File