City of Elmhurst

Yorkfield Subdivision Project Fact Sheet

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Project Background

Following the widespread flooding that was experienced during the storm events of June and July 2010, and April 2013, Christopher B. Burke Engineering, Ltd. (CBBEL) was hired to develop a comprehensive flood plan for the City of Elmhurst (City). As part of the comprehensive flood plan, thirteen (13) flood-prone areas throughout the City were studied to determine proposed drainage improvements to alleviate the flooding in those areas.

The drainage for Yorkfield Subdivision is directed toward the existing detention basin located south of Harrison Street. By increasing the storage capacity of the existing detention basin, it would benefit several homes in this area.

Conceptual Solution

Project Details

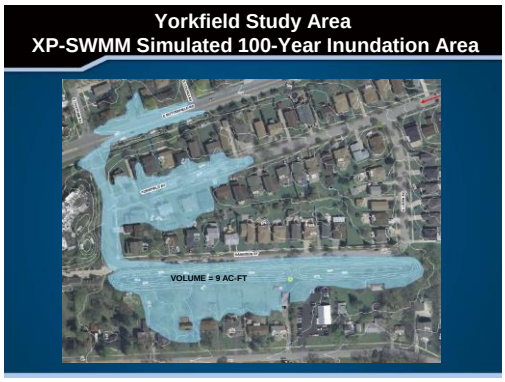
Creating additional flood storage in the existing detention basin located south of Harrison Street, in conjunction with the construction of a relief sewer, would significantly reduce the risk of flooding for homes in Yorkfield Subdivision.

Key Benefits and Facts

This project would provide flood-reduction benefits to 11 homes in a 100-year design storm event. Approximately 5 acre-feet of additional flood storage can be created in the existing detention basin at a conceptual cost of $2.1 million; the construction timeline is estimated at approximately six months.

Project Description

The existing detention basin is a dry-bottomed facility with a capacity of approximately 8 acre-feet. During small storm events, a 1-cfs capacity pump station is utilized to drain the detention basin but during more significant storm events when the level of the basin rises, an overflow grate structure drains the basin by gravity to the pipe network to the south.



Inundation Area

The goal of this project is to improve the function of the existing drainage system by increasing both the capacity of the existing pipe system and the capacity of the existing detention basin. The proposed project involves the construction of a 36-inch diameter relief sewer from the low spot on Yorkfield Avenue to the Harrison Street detention basin. By replacing portions of the detention basin side slopes with retaining walls and excavating deeper, the storage volume of the facility can be increased by approximately 5 acre-feet. Since the existing detention basin relies on a pump station for dewatering, the deeper excavation will not change the outlet configuration of the facility. These improvements provide a 100-year level of protection for the homes within Yorkfield Subdivision.