City of Elmhurst

Bryan Middle School (Gravel Lot) 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 most cost-effective solution identified to reduce flooding is the creation of flood storage open spaces within the City. Several open areas identified in the comprehensive flood plan involve property owned by the Elmhurst Community Unit School District 205, including the existing gravel lot located south of Bryan Middle School. The gravel lot is currently used by the school district as a maintenance/equipment storage area. The creation of flood storage at the Bryan Middle School gravel lot would benefit many homes in the southwest portion of the City.

Conceptual Solution

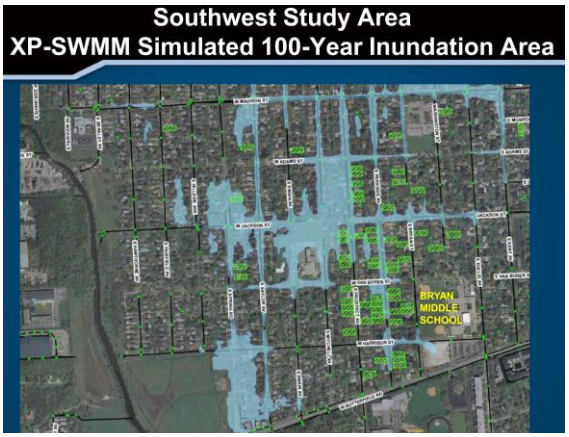
Project Details

Creating flood storage in the open space area adjacent to Bryan Middle School would significantly reduce the risk of flooding in two of Southwest Elmhurst's flood-prone areas, specifically:

- Saylor Avenue and Jackson Street
- Spring Road and Harrison Street

Key Benefits and Facts

This project would provide flood-reduction benefits to 121 homes in a 100-year design storm event. Approximately 23 acre-feet of flood storage can be provided at the Bryan Middle School gravel lot site. The conceptual project cost is $4.4 million and construction timeline is estimated to be approximately one year.



Inundation Area

Project Description

The goal of this project is to provide a location to safely hold stormwater during severe storm events. As seen in the picture at the top, conceptual facility improvement plans were developed to maximize the potential flood storage volume that can be provided on the site. Because there are no recreational uses for the site, the objective is to provide the maximum volume of flood storage in this location. Since the site will be excavated below the elevations of the existing storm sewer system, a pump station will be required to dewater this area following a storm event.

To ensure that pumping costs are kept at a minimum, stormwater would not be diverted into the site unless the capacity of the existing storm sewer system is exceeded. Stormwater during the less frequent, non-flood causing events would bypass this site. During significant storm events, pipes would divert water away from flood-prone areas and convey it into the proposed flood storage site. The facility would be designed to completely fill for the 100-year design storm event; stormwater would be held temporarily at the site and then be pumped out to the existing storm sewer system following the storm. For storm events that exceed a 100-year frequency, an emergency overland flow route will be constructed that passes excess flows to the west. This maintains the current drainage patterns in this area and protects the homes located adjacent to the site.