

MEMORANDUM

February 25, 2019

TO: Brigitte Berger-Raish, PE – Village of Wilmette Director of Engineering and Public Works

FROM: Darren T. Olson, PE, CFM, D.WRE

SUBJECT: Village of Wilmette West Side Neighborhood Storage Project
Underground Stormwater Storage Environmental Analysis and Permitting
(CBBEL Project 18-0245)

The purpose of this memorandum is to summarize the Christopher B. Burke Engineering, Ltd. (CBBEL) environmental analysis and permitting for the proposed underground stormwater storage basins on Park District property as part of the West Side Neighborhood Storage Project in Wilmette, IL. The underground storage basins will consist of below ground vaults made of concrete or other material such as plastic or metal that is consistent with the existing Village below-grade stormwater infrastructure. As part of the design process, an environmental analysis and permitting has been or will be completed as follows.

Environmental Analysis

The environmental analysis consists of a topographic survey, tree survey, wetland analysis, Threatened and Endangered Species consultation, noise and air evaluation, water quality analysis and soil sampling at each of the parks under consideration for stormwater storage; Hibbard Park, Community Playfield and Thornwood Park. This analysis was similar to the process that would typically be followed under the National Environmental Policy Act (NEPA) if that were to be required.

- Topographic Survey: A topographic survey for Thornwood Park and Community Playfield has been completed. This survey included all topographic features, visible underground utilities, trees and manmade features such as recreational equipment, signs, etc. The topographic survey at Hibbard Park will be completed once the location of the proposed underground storage basin is finalized.
- Tree Survey: The tree survey within the scope of improvements is currently underway, and the tree species and sizes within the project footprints will be added to the survey collected for the project. Tree impacts will be mitigated per the Village Code and Intergovernmental Agreement (IGA) between the Village and Park District.
- Soil Testing: Soil borings have been completed for each park. The soil survey will indicate groundwater elevation, type of soil, and any existing soil that may affect soil handling and disposal. The results of the soil survey are as follows:
 - Community Playfield:
 - Results of the soil laboratory analysis for Community Playfield indicate that the excavated soil is suitable for disposal at a Clean Construction and Demolition Debris (CCDD) site.
 - Based on the borings, the subgrade soil is anticipated to consist mostly of natural medium dense silt or sandy silt soils.



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- The bottom of the underground vault is anticipated to be located below the estimated long-term groundwater level, and measures will be required to accommodate this in the design.
- Hibbard Park:
 - Results of the soil laboratory analysis for Community Playfield indicate that the excavated soil is suitable for disposal at a Clean Construction and Demolition Debris (CCDD) site.
 - Based on the borings, the subgrade soil is anticipated to consist mostly of natural stiff to hard Silty Clay/Lean Clay soils.
 - The bottom of the underground vault is anticipated to be located below the estimated long-term groundwater level, and measures will be required to accommodate this in the design.
- Thornwood Park:
 - Results of the soil laboratory analysis for Community Playfield indicate that the excavated soil is suitable for disposal at a Clean Construction and Demolition Debris (CCDD) site.
 - Based on the borings, the subgrade soil is anticipated to consist mostly of natural stiff to hard silty clay or loose to medium dense clayey silt soils.
 - The bottom of the underground vault is anticipated to be located below the estimated long-term groundwater level, and measures will be required to accommodate this in the design.
- Noise and Air Assessment: The construction noise will be limited to the work hours allowed by the Village Code. Dust suppression will also be required per the Village Code and other applicable permits outlined below. Upon completion of construction, there will be no noise associated with the normal operation of the system. Similar to the other components of the Village's stormwater system, with proper maintenance there should be no odors.
- Water Quality: During construction, soil erosion and sediment control measures will be employed to limit the migration of sediment from the work sites. Upon completion of construction, the underground basins will allow settling of pollutants and sediment during flood events and Green Infrastructure will promote infiltration and cleansing of stormwater. This will improve water quality discharging from the storm sewer system to the North Branch of the Chicago River.
- Wetlands: Based on a desktop review of available information, there are likely no wetlands located in the project areas on the park sites. This will be field verified for each in the Spring of 2019 pending weather. There are existing above ground stormwater detention basins at Community Playfield and Hibbard Park as part of previous facility projects at those sites permitted through the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC). The MRDGC permit documents and plans associated with these projects (95-178 And 00-431) have been obtained and reviewed by CBBEL.
- Threatened and Endangered Species (T&E) Consultation: This was completed through the Illinois Department of Natural Resources (IDNR) for the park sites. The T&E did not indicate any State listed endangered plants or animals were located within the parks.
- Floodplains and Drainage Concerns: There is no Special Flood Hazard Areas (100-year regulatory floodplain) on the sites per the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). The FIRM shows that Thornwood Park is



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located within a Zone X area associated with the 500-year (0.2% chance flood event) associated with the North Branch of the Chicago River, which will not be affected by the proposed project. The local drainage concerns at the parks have been identified through the 2015 Stormwater Management Study and meetings with Park District Staff. These concerns will be addressed during design of the park site drainage systems.

Permitting

In addition to the IGA between the Village and Park District, the following permits will be required for construction of the underground stormwater storage basins at each of the park sites. These permits will require documentation of compliance with the applicable local, state and federal regulations for the environmental items in the previous section.

- **National Pollutant Discharge Elimination System (NPDES) ILR10 General Construction Permit from the Illinois Environmental Protection Agency (IEPA):** This permit is required for all construction sites greater than an acre in size. A soil erosion and sediment control plan and stormwater management system must be provided to comply with the permit requirements. Weekly soil erosion and sediment control inspections during the project duration are also required as part of the permit.
 - A T&E evaluation from IDNR is required as part of this permit.
 - A Historic Preservation consultation is required as part of this permit.
- **Wetland Permit:** Wetland permitting should not be required as there are likely no wetlands within the construction areas in the parks. If wetlands are found to be present at the sites, any impacts will be mitigated.
- **MWRDGC:** The projects are considered flood control projects and will not require a Watershed Management Ordinance (WMO) Permit unless they modify the stormwater detention basins previously permitted by MWRDGC or require sanitary sewer relocations. It is anticipated that all projects may require modification to the previously permitted stormwater detention basins or sanitary sewer relocations. Therefore, MWRDGC permits may be required.
- **Illinois Department of Transportation (IDOT):** An IDOT permit may be required for work at Hibbard Park if it encroaches onto Skokie Boulevard, which is under IDOT jurisdiction.
- **Village Permit:** A Village permit will be required for the construction work in the parks.

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