AMENDED AGENDA

1. Call to Order and Roll Call
2. Recognition of Visitors
3. Approval of Agenda
4. Approval of Minutes
   a. Regular Board Meeting of December 7, 2016
   b. Special Board Meeting of December 19, 2016
5. Board Committee Reports
6. Consent Agenda
   The matters listed for consideration on the Consent Agenda have been discussed by the Board of Commissioners previously at the January 2017 Committee Meetings and are matters on which there was unanimity for placement on the Consent Agenda at this meeting. Consent Agenda items are those that are approved by one motion, unless any Board Member or staff requests an item be removed. If a Consent Agenda item(s) is removed it is then relocated to Action Items for discussion and consideration.
   a. Approval of November and December 2016 Vouchers
   b. Approval of Amendment to Bus Transportation Services Contract for Fiscal Year 2016-17
7. Executive Director Report
8. Commissioner Reports
9. President’s Report
10. Unfinished Business
   a. Discuss West Park Storm Water Management Concepts
11. New Business
12. Next Meeting
   a. Regular Board Meeting, February 22, 2017, 7:00pm, Joe Doud Administration Building, 545 Academy Drive
13. Adjourn

Copies to: Park Board, Attorney, Directors, All Staff and Park District Facilities, Northbrook Star, Village of Northbrook,
Posted on Park District Website: nbparks.org

Persons with disabilities requiring reasonable accommodation to participate in this meeting should contact Eileen Loftus, the Park District’s ADA Compliance Officer, at the Park District’s Administration Building by mail at 545 Academy Drive, Northbrook, Illinois 60062, by phone at (847) 291-2960, Monday through Friday 8:30am until 5:00pm, or by email to eloftus@nbparks.org at least 48 hours prior to the meeting. Requests for a qualified ASL interpreter generally require at least 5 business days advance notice. For the deaf or hearing impaired, please use the Illinois Relay Center voice only operator at (800) 526-0857.
MEMORANDUM

To: Board of Commissioners
From: Ed Dalton, Director of Parks and Properties
Agenda Item: 10. a. Discuss West Park Storm Water Management Concepts
Date: January 24, 2017

Background & Analysis:
As we have discussed at the January 16th Parks and Properties Committee meetings, the Village of Northbrook is looking to lessen the impact of flooding in the neighborhood around Keystone and Chartres, which is located north and west of West Park.
After the presentation from the Village staff, several questions requiring follow-up information were asked of both the Village and Park District staff, those questions were:

Village
1. What is the typical length of time designed for the detention basins to be empty of stormwater after a major rain event?
2. How often will the parking lot be underwater?
3. What areas will be wet during these significant storm events?
4. How often will the basin hold 6-inches of water and for what duration of time?
5. Can underdrain be installed?
Please see the attached for these answers?

Park District
1. Are there concerns from PDRMA having a basin in the close proximity to the playground and playing fields?
   - The location does not pose an undue concern. To be proactive we can consider signage stating "No Swimming" during high water occurrences.
2. How much impervious area could we add to the park/ Sports Center with a 1.0 to 1.6 Acre foot credit?
   - With 1.0 acre/ft we could add 109,772 sq ft of additional impervious surface
   - With 1.6 acre/ ft we could add 176,418 sq ft of additional impervious surface
   - For reference the current Sport Center building is 89,000 sq. ft

Upon the review of this information, staff would like to determine if there are any additional questions related to this project and a potential cooperation with the Village of Northbrook.

Pc: Molly Hamer
This memo is in response to the questions from the Northbrook Park District Board during the January 16th Board Committee meeting. The Village appreciates the opportunity to address the Board and offers the following exhibits and Questions/Answers below.

**Exhibits:**

Enclosed are four exhibits to graphically depict the existing and proposed stormwater design for West Park, including three site plans overlaid on the Master Plan for West Park and representative cross sections through the basin from south to north. These exhibits show the areas of inundation associated with a particular rain event and depth of water likely to be seen within the stormwater detention area. We have also extended the storm sewer further into West Park to assist with creating a level area to cross between playing fields without walking in wet/soggy areas. The Modified Existing Condition represents the existing site which is associated with the current Park District Project permitted through the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) and the Village. Site Plan Alternates B & C include the limits of flooding for the 2, 10, 50 & 100 year rain events which have been outlined and illustrated in different colors in the drawing legend. Shown in the cross-section is the naturalized stormwater detention basin, bottom of pond, and normal water level. The elevation difference of 0.42 feet is required to sustain plan life within this area.

**Questions from Meeting:**

Q. What is the typical length of time designed for the detention basins to be empty of stormwater after a major rain event?

A. The stormwater detention basins are designed to release drainage water within twenty–four hours of a rain event in the locations outside of the naturalized stormwater detention basin. This is also dependent on the control structure being free of any type of blockage and all downstream storm sewer capacity.

Q. How often will the parking lot be underwater?

A. Under the current design, the tributary area for the Park District and rear yards of the neighboring properties inundate the parking lot in the two year event. The proposed design also inundates the parking lot in the two year event.

Q. What areas will be wet during these significant storm events?
A. The proposed designs in Alternate B & C improve the existing 2 year high water condition as the on-site stormwater detention area will be inundated less often than the Park District’s current approved engineering plan. The proposed design the fifty and one hundred year events are similar to the Park District’s approved plan. Please refer to enclosed sheets for more information.

Q. How often will the basin hold 6-inches of water and for what duration of time?
A. During heavy rains, the basin is designed to drain within 24 hours. The stormwater runoff during light rain events will be directed and contained in the naturalized stormwater detention basin. All playing fields will remain dry and removed from the flooding zone with 6” of water in the basin. The naturalized detention basin is intended to hold some water until it absorbs into the ground to keep this area wet to sustain plant life.

Q. Can underdrain be installed?
A. Underdrain can be installed in the soccer fields with the pipe outlet flowing into the naturalized stormwater detention basin; however the proposed grading of the soccer fields will be designed in a manner to drain surface water to this same area. Underdrains could pose as an additional separate maintenance issue.

Attached
Modified Existing Conditions
Alternate B
Alternate C
Detention Pond Cross Sections
Keystone/Chartres Stormwater Project
Northbrook, Cook County, IL

MODIFIED EXISTING CONDITIONS
Proposed Park District Pool Renovation Project
Considering On-site and Off-site Tributary Area

Keystone/Chartres Stormwater Project
Northbrook, Cook County, IL

Legend
- Storm Structure
- 2-yr High Water Level
- Storm Sewer
- 10-yr High Water Level
- Pond Area
- 50 & 100-yr High Water Level

SCALE:
DATE:
BASE LAYER:
TITLE:
"The Vision To Transform With Excellence"
Keystone/Chartres Stormwater Project
Northbrook, Cook County, IL

ALTERNATIVE B
West Park Detention & Storm Sewer

Legends:
- Storm Structure
- 2-yr High Water Level
- 50 & 100-yr High Water Level
- Fill Area
- Pond Area
- 10-yr High Water Level

Scale: 50 Feet

Base Layer: ESRI Aerial (2016)

See Scale Bar
EXISTING PARKING LOT TO REMAIN

DEEP-ROOTED, NATIVE PLANTS TOLERANT OF WET AND DRY CYCLES

SOCCER FIELD ELEVATED ABOVE POND HWL

10-yr HWL = 673.96
50 & 100-yr HWL = 674.13
2-yr HWL = 672.91

5" BOTTOM = 668.58
NORMAL WATER LEVEL = 669.00

1 4 MAX

MODIFIED EXISTING CONDITIONS

ALTERNATIVE B

ALTERNATIVE C

DETENTION POND CROSS SECTIONS

Keystone/Chartres Stormwater Project
Northbrook, Cook County, IL

Northbrook, Cook County, IL