



**CITY OF PROSPECT HEIGHTS
CITY COUNCIL WORKSHOP AGENDA**

July 8, 2013 – 6:30 p.m.
City Hall
8 North Elmhurst Road
Prospect Heights, IL 60070

Agenda

I. CALL TO ORDER

II. ROLL CALL

III. SPECIAL BUSINESS

- A. Approval of Contract to Purchase Speed Signs for School Zones.
- B. Update and Timeline of Phase III Roads Project (City Engineer Jim Johnson).
- C. An Ordinance Granting a Variance for a Required Yard Variation of 5' 9" and a Required Interior Side Yard Variation of 8' 10" for an Attached Garage and Principle Dwelling Addition at 203 Prospect Court (Waiver of 1st Reading).

IV. PRESENTATIONS

- D. Gruen & Gruen Draft Report – Aaron Gruen.
- E. Republic Services Refuse Contract – Rick Bulthuis.
- F. Baxter & Woodman Water Study – Steve Verseman.
- G. Welcome to Prospect Heights Signage – Assistant to the City Administrator Sabo.

V. SCHEDULED BUSINESS

- H. Discussion of a purchase of a vehicle for Building and Zoning/Emergency Response (Mayor Helmer).
- I. Discussion of Extension of a Resolution Establishing a Sales Tax Incentive Program for New or Expanded Businesses (Mayor Helmer).
- J. Discussion of Drainage and Flooding Issues on Willow Road and Hillcrest Drive near the Slough (Alderman Williamson).
- K. Discussion and Review of Existing Liquor License Hours, Limitations on B.Y.O.B., and License Classifications (Alderman Ludvigsen).
- L. Discussion of a Land Use Analysis (Alderman Ludvigsen).
- M. Discussion of Alderman Compensation for Fiscal Year 2015 (Alderman Mendez).

- N. Discussion of Recycling in Multi-family Dwellings (Alderman Higgins).
- O. Discussion of a Downtown Redevelopment Area (Alderman Williamson).
- P. Discussion of 4th of July Parade Special Events Director, 4th of July Parade Report. (Alderman Styler).

VI. APPROVAL OF EXPENDITURES

Q. Approval of Warrants

General Fund	\$106,804.17
MFT Fund	6,196.63
Palatine/Milwaukee TIF	524.00
Tourism District	54,000.00
Development Fund	7,565.37
Non-Home Rule Sales Tax Fund	-
DEA Fund	-
Solid Waste Fund	33,779.34
SS Area #1	-
SS Area #2	-
SS Area #3	-
SS Area #4	-
SS Area #5	102.28
SS Area #8 – Levee Wall #37	159.02
SS Area-Constr #6 (Water Main)	-
SS Area- Debt #6	-
Road Construction	1,199.72
Water Fund	350.00
Parking Fund	4,727.60
Road/Building Bond Escrow	1,877.21
TOTAL Expenditures	1,500.00
Wire Payments, Service Charges, & Payroll	\$123,639.41
TOTAL	\$218,785.34

VII. PUBLIC COMMENT

VIII. CLOSED SESSION

VII. ADJOURNMENT

Posted: July 3, 2013 4:30pm by Kimberly Trausch, Administrative Assistant

**This meeting will be televised on the following Prospect Heights Cable Channels:
Comcast and WOW Channel 17 and AT&T U-verse Channel 99**

Prospect Heights Police Department

James J. Dunne • Chief of Police

A

TO: City Administrator Anne Marrin
FROM: Chief James J. Dunne
DATE: July 1, 2013
SUBJECT: SPEED RADAR SIGNS – SCHOOL ZONES

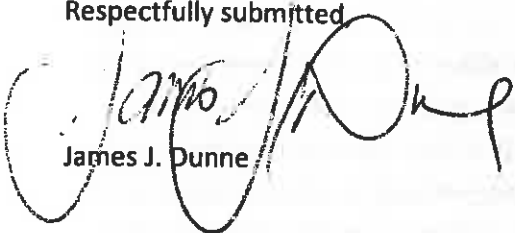
Attached is a researched proposal advocating the purchase of six speed measuring devices to be deployed in the city's three school zones. Two of these school zones are for D23 properties. D23 has agreed to share these costs.

I am requesting approval to acquire these devices and with the assistance of our public works departments install them as soon as possible. If after reading the proposal you have any questions, please do not hesitate to inquire further. I believe that there should be sufficient remaining funding in our road improvement funds to make this a reality.

I would love to say that if we moved quickly, we could have these devices installed for the upcoming school year, however; we will need to work closely with County government because they control portions of the roads.

I would like to acknowledge and thank Pete Deol who prepared this proposal.

Respectfully submitted


James J. Dunne

School zone speed radar school sign Proposal

City of Prospect Heights Police Department

Subject

This is a proposal for the purchase of speed radar signage for school speed zones located on Wheeling, Camp McDonald and Schoenbeck Roads. These signs are to be in addition to current signage and will not replace any signs. These signs are a response to the regulation of speed needed in the mentioned school zones. The following research will demonstrate how we chose a particular sign and the multiple agencies we worked with in order to come to the best choice for purchasing. This proposal will also define the locations for these signs and their uses.

Uses

The use of school zone radar signs is becoming more prominent than ever. These signs serve as tools in helping make school zones safer for students. Radar signs are designed to pick up speeds of drivers as they pass school speed zone signs. These signs use a built-in radar and display the speed of a driver as they pass the sign. If the driver's speed is over the speed limit, the speed will flash, alerting them of their unsafe speed. These radar signs help regulate drivers to safe speeds by directly notifying them with either flashing characters or a strobe. *Anytime the word "violator" or any version of it is used, it stands for unsafe speeds specifically for children in school speed zones.

During our last mini traffic study, the obvious outcome came that when either a speed radar trailer or a police vehicle is parked or posted in a school zone, speeds of drivers decrease tremendously. These signs would serve as alternative to having an officer park in school areas as this would not be an appropriate solution. This is because having an officer at all three schools zones for hours at a time at multiple times a day, would decrease our available force so severely that responding to normal calls would be impossible. These radar signs are bright, easy to use and most of all will alert drivers of their speeds. They can be programed to only run during certain times of the day and various models have 365 day programmability. Some signs even run traffic studies although those are more costly. Additionally these signs can be solar, hard-wire or battery powered depending on the location of use and preference.

Research

During our research, our choice for the type of signs we preferred changed multiple times. Originally we were interested in solar powered signs do to the energy-efficiency and what seemed to be a lack of maintenance needed. While some companies ensure

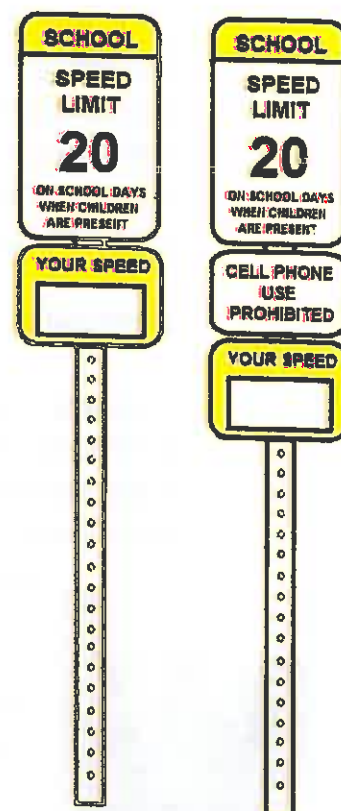
School zone speed radar school sign Proposal City of Prospect Heights Police Department

they will program the solar signs so they work in all types of weather, the guarantee that there will be enough sun to power these signs all year round is lacking thereof. Also when speaking with various sign providers, some even stated that going with hard-wire or battery powered signs would be a better choice because of the often questionable weather (especially with the current climate change), we will not be affected. In addition we spoke with the Deputy Chief from the Northfield Police Department who related that their department chose to purchase battery operated signs due to a hidden fact that these solar signs have a hard-wiring component.

Moreover, we decided to stay away from a fully hard-wired sign due to the cost of installation and upkeep. The current signs proposed have no electrical component, therefore earth would not have to be dug in order to reach electrical wire. Also often times many problems arise with electrical signs and the cost of having to dig up earth to get to underground wire can become a bigger project than the benefit of these small signs.

Location

By choosing to go with battery powered signs on already existing sign posts, allows us more room to purchase more radar signs. Our research has helped us gather that we are able to purchase six signs for the same cost of three fully solar powered new sign/ pole units. Therefore in total we are proposing the purchase a total of six radar signs. This would put two radar signs in each of our three school zone areas. These signs would be applied to "SCHOOL ZONE SPEED LIMIT 20" signs. They would not be applied to "SCHOOL ZONE AHEAD" signs as this is a means to lower driver's speed as they are currently in the zone. Often times drivers may think they are slowing down although not realizing they haven't slowed enough to the correct safe speed. We in-turn are choosing to post them in the zones instead of the approaching zone, causing drivers to notice their violation. These radar signs will also be posted on current post/poles, below the speed signs or any additional sign below that of the school zone speed sign. Consequently the radar sign will be at the eye level of the typical driver. This method will ensure these signs will not become a distraction by causing drivers to look up at the sign; rather it will be at the driver's eye level, being able to be seen at the driver's peripheral vision. Below you will find the breakdown of every sign and possible changes that may need to occur with them.



School zone speed radar school sign Proposal

City of Prospect Heights Police Department

Wheeling Road School Zone

1. Wheeling Road after Willow Road- *Northbound Traffic.*

- This sign in particular is double posted. This would mean that the school speed zone sign would have to be put on a single pole or it would to be fitted exactly to work with what is presently installed. There may also be a way to purchase a special bracket to fit this sign. This height of this sign will fit the use of the radar sign. This is also the only sign school speed zone sign in this specific school speed zone, for the given route of traffic.



2. Wheeling Road before Hillcrest Drive- *Southbound Traffic*

- This sign should not pose any problems with adding the radar sign. This is also the only sign school speed zone sign in this specific school speed zone, for the given route of traffic.



Camp McDonald and Schoenbeck Roads School Zone

3. Camp McDonald Road- *Westbound Traffic*

- This sign should not pose any problems with adding the radar sign. We chose to post this radar sign on the westbound traffic sign versus the eastbound due to the fact that the effecting traffic is that of westbound traffic since it borders the school. This is also the only sign school speed zone sign in this specific school speed zone, for the given route of traffic.



4. Schoenbeck Road after W Clarendon Street- *Southbound Traffic*

- Originally we decided to post an radar sign the on the northbound traffic side of Schoenbeck, however this northbound traffic school zone speed sign would be too close to the intersection (Camp McDonald and Schoenbeck) and would cause the radar sign to display mixed speeds. This would cause confusion to drivers and could present a potential hazard. Therefore we are proposing the radar sign be posted in the southbound traffic which is the only southbound school speed zone sign in the Dwight D Eisenhower school zone. Also this sign is in approaching of a crosswalk which will help in that regard.

- This particular sign however is slightly lower to the ground.



School zone speed radar school sign Proposal

City of Prospect Heights Police Department

Depending on Cook County Department of Transportation regulations, it may have to be raised. This is also the only sign school speed zone sign in this specific school speed zone, for the given route of traffic.

Schoenbeck School Zone near Palatine Road

5. Schoenbeck Road before W Kenilworth Avenue- *Northbound Traffic*



- This sign in particular is relatively low to the ground and will need to be raised when the speed radar sign is attached. If left as-is, it will be low to the ground and could pose as a potential hazard. If County deems it as unable to be raised, our backup option would be to have this sign solar powered; in which case it would be added to pole with the already solarized beacons that is seen next to the sign in the picture. The battery pack may need to be replaced so that both the beacons and the speed radar sign could be powered by solar. This is also the only sign school speed zone sign in this specific school speed zone, for the given route of traffic.

6. Schoenbeck Road in front of Anne Sullivan School- *Southbound Traffic*

-This sign is also relatively low to the ground and may need to be raised when the speed radar sign is attached depending on County regulations. If left as-is, it will be low to the ground and could pose a potential hazard. If County deems it as unable to be raised, our backup option would be to have this sign solar powered; in which case it would be added to the pole with the recently installed solarized beacons that is seen next to the sign in the picture. The battery pack may need to be replaced so both the beacons and the speed radar sign could be powered by solar.

- This sign is near an intersection (Palatine and Schoenbeck) although there is enough of a distance where the cross traffic should not pose a threat to the speed the radar will be displaying. This is also the only sign school speed zone sign in this specific school speed zone, for the given route of traffic.



School zone speed radar school sign Proposal

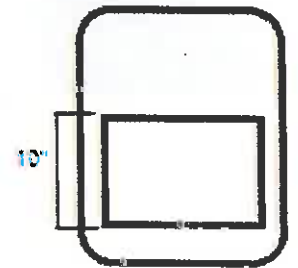
City of Prospect Heights Police Department

Requirements

When choosing sign providers for radar signs, one can be intimidated by the vast range of different sizes and options available. Therefore the following will establish standards for the purpose of this proposal. These standards are what we deem necessary for the specific use of these signs along with up keep that may come from them. These standards may also be changed at any time to fit regulations set by the Cook County Department of Transportation.

Display

Amongst the most important part of these signs is the display. The display shall not be any smaller than 10". This minimum is set to ensure the visibility of the sign to drivers. The characters must also be in either standard white or amber with a black background display. For violating speeders, the characters shall either flash to display the violating speed or there will be a centered strobe to flash in order to catch the attention of the driver, causing them to understand the seriousness of their increased speed. Additionally the chosen radar signs shall read "YOUR SPEED" on the top portion of the signs.



Power

Already having decided on battery powered signs (where applicable), the length of life of the internal battery on a single charge becomes a major element. These signs shall be able to run on a charged battery or battery pack for no less than three weeks. Therefore these batteries must be either 3-cell (21 days) or 4-cell (30 days) in order to ensure they last the minimum proposed time. These batteries are preferred to be Lithium-ion, due to the slow loss of charge when not in use and its light weight. Additionally it is proposed to purchase an extra battery for every sign so that one is charging as the other is in use. This will ensure for a quick swap of the batteries and next to no down time for the signs. Also, there must be no battery box needed for the chosen sign. These battery boxes add more weight to the sign post as well as more of a hazard added to the sign.

Programmability

These signs must be able to be programed. This can be either on site or via computer. It is preferred that there be no additional need of purchase for any special software. These signs must be able to be programed to power on and off during certain times of the day and certain days of the week. Some signs offer a 365-day programmability which is preferred but not an essential. These mentioned abilities will allow us to program these signs to run only during school hours, causing no confusion for drivers.

School zone speed radar school sign Proposal City of Prospect Heights Police Department

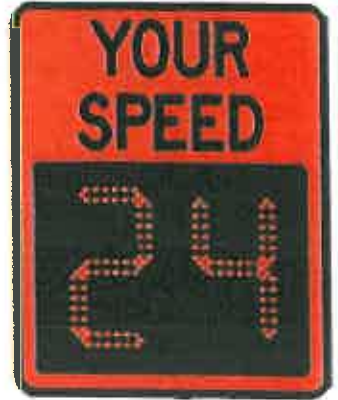
In the following you will find summaries for eight different providers located in various parts of the United States. You may notice many of them sell the same unit made by Traffic Logix, therefore there is also a quote directly from Traffic Logix. The quotes go from least to most expensive costing signs. There is also a picture the provider's sign included. Most of the signs are available in yellow or white, but vary in option available.

School zone speed radar school sign Proposal City of Prospect Heights Police Department

Traffic Control Corporation- Woodridge, IL

This corporation has a benefit of being local however many of their products do come from Traffic Logix which is based out of New York. This Safe Pace 100 unit that is offered also comes with various options such as traffic data collection.

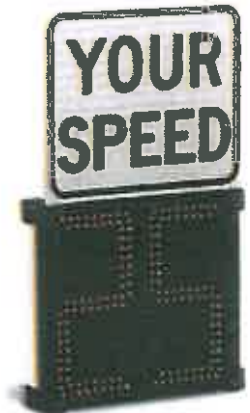
- This sign unit has an 11" display with flashing digits and/or strobe when driver's speed is above the limit.
- Width: 23 "
- Height: 29 "
- Depth: 3.0 "
- Weight: 21 lbs
- Includes programming software with PC connection cable
- 1 year warranty
- Range of 300-400 feet
 - o \$2,200.00 per unit
 - o Includes one 3-cell rechargeable battery and charger (up to 30 days on a single charge)
 - o +199.00 additional 3-cell battery
 - = \$2,399.00 per unit including shipping



All Traffic Solutions- State College, PA

One of our pricier providers offers a similar unit to the others. This unit, Shield 12 is smaller in size and has advanced programming capabilities however not without an additional cost.

- This sign unit has an 12" display with a option of a white strobe at an additional cost.
- Width: 15.5 "
- Height: 13.5 "
- Depth: 2.6 "
- Weight: 12 lbs
- This unit has requires the purchasing of a software license and Bluetooth capabilities in order to program times of operation. Which this purchases however, options such as traffic data collection are accessible.
- Possible need of battery box
- 1 year warranty
- Range of 300+ feet
 - o \$3,500.00 per unit
 - o + \$675.00 for 2 rechargeable batteries (14 days on a single charge)
 - o + \$100.00 Mobile interface license
 - = \$4,275.00 per unit + shipping.



School zone speed radar school sign Proposal City of Prospect Heights Police Department

K&K Systems- Tupelo, Mississippi

This company we worked with offered a radar similar to the one shown, model number ER10-P-DC599

- This sign unit has an 10" display with a built-in white strobe light that flashes when the driver's speed is above the limit.
- Length: 18 ¾"
- Height: 13 ¾"
- Depth: 4 ¼"
- This unit has onsite module for time programming with optional computer based software.
- Possible need of battery box
- 1 year warranty
- Range of 300+ feet



- o \$2,042.35 per unit
- o + \$481.16 for 1 rechargeable battery (20-30 days on a single charge)
- = \$2,523.51 per unit + shipping.

Traffic Logix- Spring Valley, New York

This quote is directly from the manufacturer of the SafePace 100 that many of these companies provide. There is also a tamperproof bracket with security screws for an additional \$125 per sign.

- This sign unit has an 11" display with a built-in white strobe light that flashes when the driver's speed is above the limit, with the option of characters flashing also.
- Length: 23"
- Height: 29"
- Depth: 3.0"
- This unit has onsite settings as well as programming software with PC connection cable
- 1 year warranty
- No battery box
- 21 lbs
- Range of 300+ feet



- o \$2,199.00 per unit
- o including 1 rechargeable batteries (30 days on a single charge)
- o + \$325.00 additional battery
- = \$2,524.00 per unit + shipping.

School zone speed radar school sign Proposal

City of Prospect Heights Police Department

Tapco- Brown Deer, WI

This company may provide the best price for the unit they offer.

The Village of Northfield also purchased their signs from them and are very happy with the product. This unit is the Safe Pace 100 also sold by Traffic Logix..



- This sign unit has an 11" display with flashing digits and/or strobe when driver's speed is above the limit.
- Width: 23 "
- Height: 29 "
- Depth: 3.0 "
- Weight: 21 lbs
- Includes programming software with PC connection cable
- 1 year warranty
- Range of 300-400 feet
 - o \$2,095.00 per unit
 - o – includes 1 rechargeable 4-cell battery and charger (runs up to 30 days on a charge)
 - o + \$295.00 for extra rechargeable battery
 - o + \$ 143.00 special mounting bracket
 - = \$ 2,533.00 per sign + shipping

Traffic Safety Corporation- Sacramento, PA

This provider is another that offers the Safe Pace 100. Much of the information is the same except the pricing.



- This sign unit has an 11" display with flashing digits and/or strobe when driver's speed is above the limit.
- Width: 23 "
- Height: 29 "
- Depth: 3.0 "
- Weight: 21 lbs
- Includes programming software with PC connection cable
- 1 year warranty
- Range of 300-400 feet
 - o \$2,399.00 per unit
 - o Includes 1 rechargeable 4-cell battery and charger (runs up to 30 days on a charge)
 - o + \$325.00 for additional battery pack
 - = \$ 2,724.00 per sign + shipping

School zone speed radar school sign Proposal

City of Prospect Heights Police Department

Lightcast Public Safety- Pell City, Alabama

This company we worked with offered a radar similar to the one shown, model number LCER11-299.

- This sign unit has an 11" display with a built-in white strobe light that flashes when the driver's speed is above the limit, with option of characters flashing also.
 - Length: 18 $\frac{3}{4}$ "
 - Height: 13 $\frac{3}{4}$ "
 - Depth: 4 $\frac{1}{4}$ "
 - This unit has onsite module for time programming with optional computer based software.
 - Range of 300+ feet
 - o \$2,720.00 per unit
 - o Includes 1 rechargeable battery and charger (20-30 days on a charge)
 - o + \$130.00 for 1 additional rechargeable battery
- = \$2,850 per unit + shipping.



Information Display Company "Speed Check"- Beaverton, Oregon

This company had many different options and products. Their signs however are on the larger side and are very brightly colored. In addition, this company is the supreme of radar sign providers, having a top rated warranty and easy to use sign. This company also will work to ensure they meet the standards and requirements of government agencies such as the Cook County Department of Transportation. This company also falls in requirements of the Safe Routes to School program and guarantees their solar powered units to run 365 days a year.

- This sign unit has a 15" display that has flashing characters. Depending on how fast the driver is going, the speed flashes respectively. The faster the speed, the faster the flash and visa-versa. For an additional cost, this unit also has an option to flash "SLOW DOWN" and the speed.
 - Size: 30"x 42"
 - Onsite device manager to program timings.
 - 35 lbs
 - Modular design (onsite repair-easier)
 - 3-year warranty
 - Requires an external battery box***
 - o \$ 3,159.00 per unit
 - o + \$ 608.00 for a battery box and 2 rechargeable batteries (20-30 days on a single charge)
 - o + \$ 129.00 special flat brackets
- = \$3,896.00 per unit + shipping.



School zone speed radar school sign Proposal

City of Prospect Heights Police Department

Recommendation

Following weeks of research and working with these radar sign providers, our recommendation has formed to support purchasing the Safe Pace 100 made by Traffic Logix and sold by Traffic Control Corporation out of Woodridge, Illinois. This recommendation will follow our request of funding for these signs.

These signs are at a cost of \$2,399.00 per unit, equaling a total of \$14,394.00 for six signs. District 23 will be covering the charges for two of the units equaling \$4,798.00. Therefore we respectfully request funding in the amount of \$9,596.00 to cover the costs of the signs.

The Safe Pace 100 offers all of our requirements along with user friendly programmable software. These units are highly recommended by both Northfield Police Department and the City of Evanston. Additionally the City of Evanston purchased their signs from Traffic Control Corporation and their Engineering Department had nothing but positives about the corporation. They further mentioned that this corporation goes above and beyond to help their customers and will come out if we need help with installation or troubleshooting the signs. This is a definite benefit of purchasing from a local provider. The Northfield Police Department however purchased from Tapco and they also had high ratings of the provider, although Traffic Control Corporation had a lower price per sign.

Since these signs will be permanently fixated to the current school zones signs, the final choice for signs will ultimately lie in the regulations of the Cook County Department of Transportation. There is a permit application process that needs to be completed through the CCDT which will be started following the submitting of this proposal to the Prospect Heights City Council. This permit process must start as soon as possible as there are many different approvals needed from different parts of the CCDT including the approval of their Engineering Department. The City of Prospect Heights will hold the liability of the signs and since Public Works will be installing them, we are able to short cut a few of the permit application processes and the permit fee will be waived.

C

Jack Day
203 Prospect Court
Prospect Heights, IL 60070

July 1, 2013

Mr. Nicholas Helmer
Mayor
City of Prospect Heights
8 N. Elmhurst Rd.
Prospect Heights, IL 60070

RE: Request to Waive First Reading of Ordinance (ZBA Case 13-04V)

Dear Mayor Helmer,

A zoning variance has been requested for the above noted property and was presented to the Zoning Board at their June 27, 2013 meeting. The Board unanimously voted to recommend approval of the variance.

Pursuant to section III of the procedures packet I understand that after zoning approval, the application must go through three city council meetings. I understand that I may petition the council through you to waive the first reading so as to expedite the process.

It is for this reason I am hereby requesting that the City Council waive the first reading of my zoning application (which takes place at the second meeting) for the following reasons:

1. It is important to break ground as soon as possible in order to be enclosed before the first bad weather this fall.
2. Construction work is always performed better, and it is much easier for the inspections to take place in good weather.
3. Our son is entering 8th grade in the fall and we would like to minimize the impacts of the remodeling and construction during the academic school year.

Please let me know if additional information is required.

Sincerely,



Jack Day
Cell 847-910-1837
jday@rockettbrand.com

AGENDA
June 27, 2013

PLAN/ZONING BOARD OF APPEALS
Prospect Heights City Hall
8 North Elmhurst Road – 7 p.m.

I. CALL TO ORDER

II. ROLL CALL

III. APPROVAL OF MINUTES
February 28, 2013

IV. Case No. ZBA-13-04V

Applicant: Jack Day, (*Represented by ALA Architects & Planners Inc., Christopher Russo, Project Manager*).

Address: 203 Prospect Ct.
(PIN 03-22-300-031-0000)

Requesting a variance to allow for a required rear yard variation of 5' 9" (five feet, nine inches), and a required interior side yard variation of 8' 10" (eight feet, ten inches) for an attached garage and principle dwelling addition.

V. COMMUNICATIONS

VI. OLD BUSINESS

- City Council Action

VII. NEW BUSINESS

VIII. ADJOURNMENT

RECEIVED
CITY OF PROSPECT HEIGHTS

2013 MAY 30 AM 7:09

FOR OFFICE USE ONLY:
FEE PAID 150.00
RECEIPT #
DATE 5-30-13
REC'D BY
CASE # 13-04V
MEETING DATE 6-27-13

PLAN/ZONING BOARD OF APPEALS
APPLICATION

- ☐ Special Use (\$400)
☒ Variation (\$150)
☐ Text Amendment (\$300)

- ☐ Map Amendment (Refer to Ord. 0-03-18)
☐ Subdivision/PUD (Refer to Ord. 0-03-18)
☐ Lot Consolidation (Refer to Ord. 0-03-18)

APPLICANT: JACK DAY (represented by ALA Architects + Planners Inc.
ADDRESS: 203 PROSPECT COURT
PROSPECT HEIGHTS, IL 60070
Christopher Russo
815/788-9200

PHONE: Home: 847.910.1837 Work: 847.778.9609

ADDRESS OF SUBJECT PROPERTY: 203 PROSPECT COURT, PROSPECT HEIGHTS, IL 60070

PROPERTY IS LOCATED IN THE R-1 ZONING DISTRICT.

APPLICABLE SECTION OF ORDINANCE: 5-6-1-E

DESCRIPTION OF REQUEST:

REQUESTING VARIANCE FOR REAR & SIDE YARD SETBACK

Are there any covenants, conditions, restrictions or floodplain issues concerning type of improvements, setbacks, area or height requirements, occupancy or use limitations, etc. placed on the property and now of record: YES ☐ NO ☒ If yes, please describe:

NOT TO OUR KNOWLEDGE

Has the property been the subject of previous or pending administrative legislative or court action: YES ☐ NO ☒ If yes, give details:

NOT TO OUR KNOWLEDGE

The following items MUST be submitted at time of filing:

1. Application (12 copies)
2. Plat of Survey (12 copies) - must be drawn to scale and indicate the location of the proposed addition or construction and must contain the legal description of the property, along with additional information to support the application (12 copies). (Note*- please include one copy for file no larger than 11"x17").
3. Proof of Ownership (1 copy)
4. Letter indicating Hardship (for variations only -12 copies)
5. Notice to Property Owners (1 copy)
6. List of Property Owners (1 copy) obtained from the Wheeling Township Office, 1616 N. Arlington Heights Rd., Arlington Heights, IL 60004 - Tel: 847/259-1515 of all properties lying within 350 ft. of property line/subject's property once approved confirmation letter from the City of Prospect Heights is received.
7. Application Fee (cash or check made payable to: City of Prospect Heights)

Date: 5/30/13

ALA ARCHITECTS + PLANNERS
Signature of Applicant



MURRY AND MOODY, LTD.

Land Surveyors

933 S. Plum Grove Road

Suite 101

Palatine, Illinois 60067

(C) Box 608

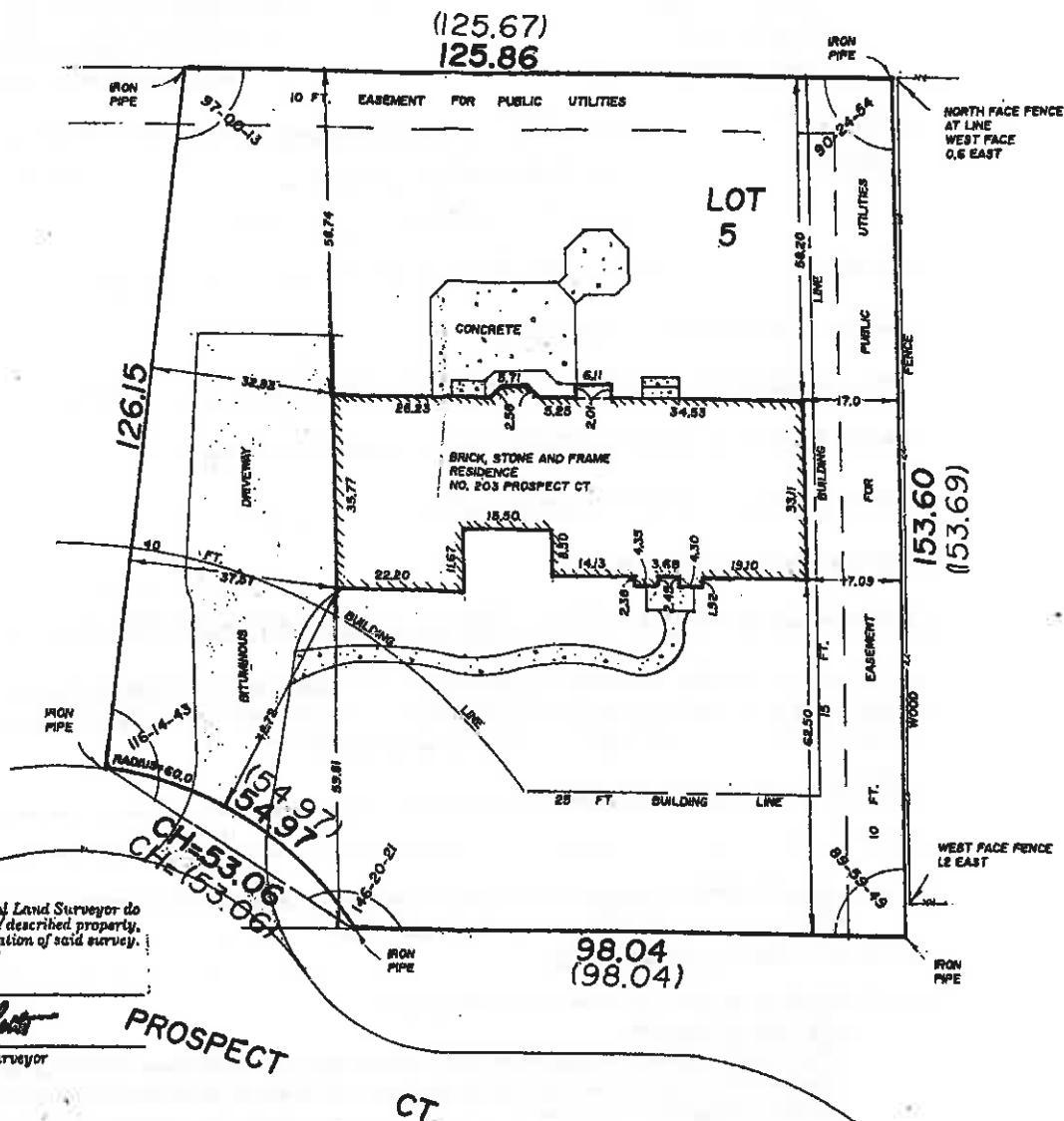
Huntley, Illinois 60142

Phone: (847) 358-5960



PLAT OF SURVEY OF

LOT 5 IN STRAUSS SUBDIVISION OF PART OF THE SOUTHWEST 1/4 OF SECTION 22, TOWNSHIP 42 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.



STATE OF ILLINOIS } ss.
COUNTY OF McHENRY }

I, Thomas M. Sheets an Illinois Professional Land Surveyor do hereby certify that I have updated the above described property, and that the above plat is a correct representation of said survey.

Huntley, Illinois JUNE 30, 1999

Thomas M. Sheets
Illinois Professional Land Surveyor

LEGEND AND NOTES

Dimensions shown thus: 50.25 are feet and decimal parts thereof. Angular data shown thus: 90° 00' 00" indicate degrees, minutes and seconds.

50.25 / N 90° 00' 00" E indicates measure dimension / bearing
(50.25) / (N 90° 00' 00" E) indicates record dimension / bearing
(50.25 d) / (N 90° 00' 00" E d) indicates deed call dimension / bearing

Bearings shown hereon, if any, per local or assumed data, unless shown otherwise.

Compare your points before using same and report any differences immediately.

Check legal description with deed or title policy and report any discrepancy immediately. Building lines and easements, if any, shown hereon are as shown on the recorded subdivision plat or as indicated.

STATE OF ILLINOIS } ss.
COUNTY OF McHENRY }

I, Thomas M. Sheets an Illinois Professional Land Surveyor do hereby certify that I have surveyed the above described property, and that the above plat is a correct representation of said survey.

Huntley, Illinois JULY 7, 1999

Illinois Professional Land Surveyor

ORDER No. 98-1484 155L58-59
(199-138)

SURVEY MADE FOR DAVID T. ONIXT, ATTORNEY AT LAW
RECEIVED FOR: JOHN DAY

SCALE 1" = 20'



Architects & Planners, Inc.

2600 Behan Road (at Route 176)
Crystal Lake, IL 60014

Phone: 815-788-9200
Fax: 815-788-9201

May 30, 2013

Dear Planning / Zoning Board of Appeals,

This letter is to request a variance with regards to the rear and side setbacks for the residence located at 203 Prospect Court, Prospect Heights, IL. The current required rear setback is 50'-0" and we would like to request a 5'-9" variance for a rear setback of 44'-3". The current required side yard setback is 15'-0" and we would like to request an 8'-10" variance on the West side of the lot for a side setback of 6'-2".

The homeowners love the current house, location, and property and feel that improving the house to meet their current needs is the best option. The proposed design would include both increased living space along with a garage addition. The hardship that is faced with proposing an addition to this home is a result of its unique shaped lot. The lot is located on a cul-de-sac and requires the setbacks to follow the shape of the street. This resulted in the house being located further back from the street than other houses with regular shaped lots. The placement of the home further back than normal has resulted in the need for a variance for a proposed addition.

If granted the variance, it is our intent to create a design that is aesthetically pleasing and will keep in character with the original house and the neighborhood. The proposed design will also have no impact on neighboring properties and will conform with the current easements.

Thank you for considering our request.

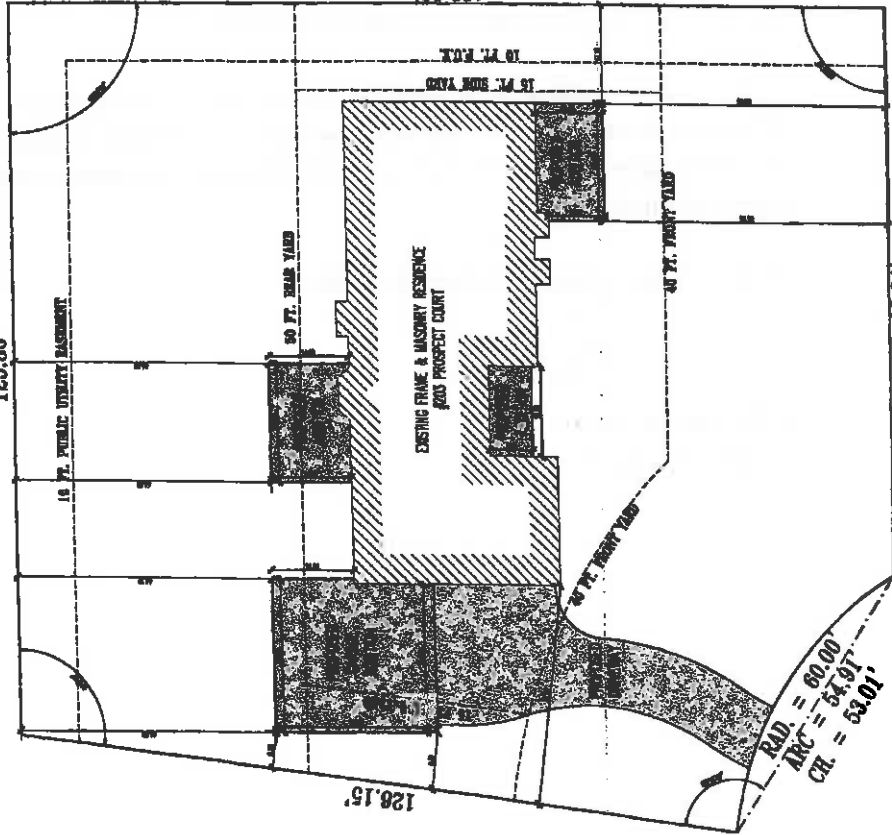
A handwritten signature in black ink, appearing to read 'CR', is written over a horizontal line.

Christopher Russo
Project Manager

RESIDENTIAL ADDITION DAY-HELBLING RESIDENT 203 PROSPECT COURT PROSPECT HEIGHTS, IL

LOT 5 IN STRAUSS SUBDIVISION OF PART OF THE SOUTHWEST 1/4 OF SECTION 22, TOWNSHIP 42 NORTH,
RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

125.86'



PROSPECT COURT

SITE PLAN

PREPARED AND EXAMINED AND FOUND CORRECT TO BE SHOWN BY THESE PLANS OF SURVEY BY HARRY AND SONS, INC., DATED JAN. 20, 1964.

1"=50'-0"

Address & Planning, Inc.
1000 North Dearborn
Chicago, Illinois 60610

PROJECT INFORMATION
GENERAL NOTES
REVISIONS
DATE
BY

RESIDENTIAL ADDITION
DAY-HELBLING RESIDENT
203 PROSPECT COURT
PROSPECT HEIGHTS, IL

DATE
BY

**City of Prospect Heights
Plan/Zoning Board of Appeals
February 28, 2013**

The regular meeting of the Plan/Zoning Board of Appeals was called to order at 7:00 pm by Chairman Weidman, at City Hall, 8 N. Elmhurst Road, in Prospect Heights, Illinois.

ROLL CALL:

Present: Commissioners Dash, Jones, Roscoe, Tammen, Wyatt and Chairman Weidman
Absent: Commissioner Frank-Watson (Absent by prior notice)

A Quorum was present. Also present at the meeting: Director of Building and Zoning Steve Skiber and Assistant Director of Building and Zoning Steve Cutaia.

APPROVAL OF JANUARY 24, 2013 MINUTES

Motion made by Commissioner Tammen, seconded by Commissioner Roscoe, to approve the meeting minutes from January 24, 2013 as amended. The motion was approved by a roll call vote.

ROLL CALL VOTE:

AYES: Commissioners Dash, Jones, Roscoe, Tammen, and Chairman Weidman
NAYS: None
ABSENT: Commissioner Frank-Watson
ABSTAIN: Commissioners Wyatt
Motion carried.

Case No. ZBA-13-03V

Applicant: John Reynolds
Address: 5 Marberry Drive (Pin# 03-27-202-011-0000)
Requesting a variance to allow for a one foot, two inch (1'2") yard encroachment into the required west, interior, side yard to facilitate the construction of a one hundred and seventy six (176) square foot addition, onto the existing single-family home.

Chairman Weidman entered the following exhibits into the record:

ZBA Exhibit 1: Application
ZBA Exhibit 2: Plat of survey
ZBA Exhibit 3: Assignment to the agenda
ZBA Exhibit 4: Hardship letter
ZBA Exhibit 5: Building plans
ZBA Exhibit 6: Letter from neighbor to the west
ZBA Exhibit 7: Public hearing notice
ZBA Exhibit 8: Certificate of publication
ZBA Exhibit 9: List of property owners
ZBA Exhibit 10: Notice to property owners
ZBA Exhibit 11: Owners deed

Mr. Reynolds presented the green cards from the notices to Chairman Weidman. Chairman Weidman swore in Mr. John Reynolds, 5 Marberry Dr., Prospect Heights, IL.

Mr. Reynolds explained that his wife wanted an extra closet built. The closet will be built out eight feet (8') by twenty two feet (22').

Chairman Weidman commented that the eight feet (8') would be going out to the west which is the purpose for the variance.

Mr. Reynolds commented that Chairman Weidman was correct and that the closet will be eight feet to the west and that he spoke with the neighbor who had no problem with the addition or the variance.

Chairman Weidman commented that he had no problem with the application and feels that it is a good plan.

Director of Building and Zoning Skiber commented that this request is a minimal yard variation of one foot two inches (1'2") into the west yard. There is no negative impact. The neighbor to the west at 3 Marberry has a garage and some landscaping on their side yard that this addition would face. The City supports this petition.

Motion made by Commissioner Jones, seconded by Commissioner Tammen, to approve case ZBA-13-03V as presented. The motion was approved by a roll call vote.

ROLL CALL VOTE:

AYES: Commissioners Dash, Jones, Roscoe, Tammen, Wyatt and
Chairman Weidman

NAYS: None

ABSENT: Commissioner Frank-Watson

Motion carried.

COMMUNICATIONS

Director of Building and Zoning Skiber reported that the Assistant Building and Zoning Director Steve Cutaia has started with the City of Prospect Heights and had come to the City from the City of Park Ridge. There have been no petitions for the month of March.

OLD BUSINESS

The City Council did approve the second reading for the special use permits for the cases for Penny's Place at 7B E. Camp McDonald Road and 694 N. Milwaukee Avenue.

NEW BUSINESS

There was none.

ADJOURNMENT

The February 28, 2013 Plan/Zoning Board of Appeals meeting was adjourned by unanimous voice vote, at 7:10 pm with a motion by Commissioner Tammen, seconded by Commissioner Roscoe.

Respectfully Submitted,

Robert Sabo, Recording Secretary

ORDINANCE NO. _____

**AN ORDINANCE GRANTING CERTAIN VARIATIONS FOR
THE PROPERTY AT
203 PROSPECT COURT, PROSPECT HEIGHTS, ILLINOIS**

WHEREAS, the provisions of the Prospect Heights Zoning Ordinance applicable to the property legally described in Exhibit A attached hereto (hereinafter "Property") and commonly known as 203 Prospect Court prescribe a minimum rear yard setback of fifty feet (50') and minimum side yard setback of fifteen feet (15'); and

WHEREAS, the owner of the Property has submitted an application for a 5'9" rear yard variation so as to reduce the required rear yard setback to forty-four feet 3 inches (44'3") and a 8'10" side yard variation so as to reduce the required side yard setback to six feet nine inches (6'2") ("Requested Variations") to allow for the construction of an addition and an attached garage to the existing single family dwelling; and

WHEREAS, the Plan/Zoning Board of Appeals held a public hearing on June 27, 2013 regarding said application; and

WHEREAS, the Plan/Zoning Board of Appeals has recommended the Requested Variations be approved and has made the necessary finding therefore; and

WHEREAS, the Mayor and City Council have reviewed the recommendation of the Plan/Zoning Board of Appeals;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PROSPECT HEIGHTS, COOK COUNTY, ILLINOIS as follows:

Section 1. The City Council hereby finds and determines that the facts set forth in the preamble hereto are true and correct and hereby incorporates them as part of this Ordinance.

Section 2. The Requested Variations are hereby granted.

Section 3. That these variations are conditioned upon applicant's construction of the addition and attached garage substantially in accordance with the approved plans and documents submitted at the public hearing on this matter and with applicable codes.

Section 4. That this Ordinance and all exhibits attached hereto shall be recorded at the Cook County Recorder's Office at the expense of the Owners.

Section 5. The City Clerk is directed to publish this ordinance in pamphlet form and this Ordinance shall be in full force and effect from and after its passage and approval as required by law.

PASSED AND APPROVED this _____ day of _____ 2013.

Mayor

ATTEST:

City Clerk

AYES:

NAYS:

ABSENT:

Published in pamphlet form:

Effective Date:

Exhibit A

Legal Description of 203 Prospect Court, Prospect Heights, IL

LOT 5 IN STRAUSS SUBDIVISION OF PART OF THE SOUTHWEST 1/4 OF SECTION 22, TOWNSHIP 42 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.



To: Mayor Nicholas J. Helmer, City of Prospect Heights City Council

From: Anne Marrin, City Administrator

Date: July 8, 2013

Re: Draft Market Report from Gruen Gruen & Associates

The Council approved a study that will assist the council to evaluate the land use options associated with all of our city-owned property on the north and south sides of Piper Lane.

The attached is a first draft of the initial report. GG&A will present their current findings and screen out which land uses are worth pursuing further with the input and guidance of the Council.

**THE MARKET FOR POTENTIALLY DEVELOPABLE
LAND USE OPTIONS FOR CITY-OWNED PROPERTY**

A Report to

THE CITY OF PROSPECT HEIGHTS, ILLINOIS

From

GRUEN GRUEN + ASSOCIATES

Urban Economists, Market Strategists, and Land Use/Public Policy Analysts

June 2013

C1359



**THE MARKET FOR POTENTIALLY DEVELOPABLE
LAND USE OPTIONS FOR CITY-OWNED PROPERTY**

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June 2013

APPLYING KNOWLEDGE
CREATING RESULTS
ADDING VALUE

C1359

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The Market for Potentially Developable Land Use Options for City-Owned Property

CHAPTER I

OUTPUTS OF INITIAL WORK

INTRODUCTION

The output of the initial market analysis summarized in this report includes a screening or sorting out of land use options according to likely market potential for approximately 12 acres of city-owned property on the north and south sides of Piper Lane, east of Pinecrest Drive and west of Burning Bush Lane.

Development of the property will succeed by responding to market demands, the timing and extent of which vary by use. In the absence of responding to obtainable demands, development is unlikely to be accomplished, or worse, will create unsuccessful projects that preclude or will significantly raise the public costs of responding to future market opportunities.

We present below the results of our initial research of potential land uses for the above. This research included the following:

- a meeting with city staff and tour of the property and surrounding area;
- interviews with the Manager of the Chicago Executive Airport and real estate brokers, developers, and property owners including representatives of The Alter Group, CB Richard Ellis, Hansen Radler, Jones Lang LaSalle, Korman/Lederer and Associates, Newmark Knight Grubb & Frank, Prologis, and Zilber Property Group;
- analysis of real estate market data conditions and trends for industrial, retail, and office uses and identification of inventory of land supply in relevant geographic areas; and
- analysis of employment data by economic sector.

We have synthesized the results of the research and analysis to reach some initial conclusions summarized in the following section.

BASIC PRELIMINARY CONCLUSIONS

Industrial Use

The primary market area within which the city-owned property will compete for industrial uses is North Cook County. Most demand will originate from businesses already operating in North Cook locations, particularly Wheeling.

The mature, largely built-out primary market area is characterized by a large amount of older space no longer well attuned to the contemporary preferences of some types of manufacturing and distribution uses.

High Cook County property taxes represent a primary disadvantage. Limited alternative land supply and an accessible location with ready ingress and egress represent primary competitive

The Market for Potentially Developable Land Use Options for City-Owned Property

advantages for the development of industrial uses at the city-owned property. The control of land by a single ownership and the ability to reduce or eliminate regulatory uncertainty represent important advantages.

Given the O'Hare submarket offers superior access to transportation linkages and Lake County locations offer a newer stock of inventory and lower tax rates, the city-owned property will need to be competitively priced relative to these alternative locations for industrial uses.

Sources of demand will include firms with multiple sites in the region or in obsolete space within the North Cook submarket which would experience productivity increases and efficiency gains by consolidating operations (including different functions) into a new facility. Smaller to midsize users in the food, electronics, plastics, and home improvement, and fulfillment sectors are examples of the types of firms which could be candidates for new space at the city-owned property. In addition, some types of businesses such as electrical contractors, which conduct significant business with or in Cook County, need to locate within Cook County. Moreover, as indicated by the expansion of FedEx Ground from Northbrook to a 107,000-square-foot distribution hub in Wheeling, some businesses require land for truck fleets, outdoor storage, or other requirements difficult to satisfy in existing facilities. Such users may be willing and able to pay relatively more for land to satisfy their particular hard-to-fill requirements. Some such industrial users may generate sales tax and other sources of municipal revenue.

As the economy recovers more fully from the Great Recession and occupancy rates and rents increase in North Cook County locations as is already occurring in Northbrook, demand will shift to Wheeling and Prospect Heights locations.

We recommend that the City be prepared to support a property tax incentive Class 6B application with Cook County. Other incentives (such as industrial revenue bonds or Tax Increment Finance incentives) to the extent available may also be required to induce feasible development.

In addition, we recommend that the City obtain estimates for the demolition of the existing building improvements. If a Phase 1 environmental assessment has not been completed, completing the assessment would in conjunction with the demolition cost estimate and making a policy decision about the Class 6B would be a significant part of the information base that will give developers/users and their financing sources a leg up on due diligence.

Commercial Use

The city-owned property is unlikely to serve as a site for a traditional retail center because it is surrounded by a relatively complete supply of significant regional, community, and neighborhood space. The site, however, is not sufficiently close to the nodes of retail uses to benefit from the spillover such nodes generate for retailers within the nodes.

The Northwest Suburban market area of which the location of the city-owned property is a part has a relatively high retail vacancy rate of nearly 11 percent.

Some types of commercial uses may also be supported. For example, a potential commercial development opportunity could include attracting complementary and unique (1) sporting goods and recreational activities such as a trampoline park and indoor lacrosse and (2) specialty home improvement, and (3) service uses related to the Chicago Executive Airport such as a catering

The Market for Potentially Developable Land Use Options for City-Owned Property

facility that have the following characteristics: (1) benefit from the proximity to Milwaukee Avenue and visibility from Palatine Road but also have significant advertising programs and established franchise or reputational values to draw from a relatively wide trade area; (2) do not need to be in standard retail shopping centers; (3) wish to avoid the high rent associated with traditional retail centers; and (4) need a relatively large amount of space, including space for storage, assembly, or showroom.

To further test the hypotheses about potential commercial use and development opportunities, GG+A will attempt to interview users operating in locations in Buffalo Grove and Northbrook or other nearby locations to ask about their location and willingness to pay preferences and conduct additional interviews with brokers developers familiar with this use or product type.

Office Use

The Northwest Suburban office market of which the location of the city-owned property is a part has a very high office space vacancy rate of over 22 percent. Neither Prospect Heights nor adjoining Wheeling constitutes well-established locations for office uses. The area around the site currently lacks agglomerational advantages - those that relate to proximity to similar or complementary uses. Office space users, for example, tend to prefer to be close to other office space users as well as restaurants, banks, and retail goods and services. Accordingly, limited demand for speculative, multi-tenant office space demand exists or is likely to exist in the foreseeable future. Office space would need to be user-driven and is unlikely to be a primary or initial use developed on the city-owned property.

The Market for Potentially Developable Land Use Options for City-Owned Property

CHAPTER II

INDUSTRIAL USES

Our initial market reconnaissance included interviews and site inspections in order to identify the following:

- the primary area within which the city-owned property will compete for industrial businesses;
- the potential geographic origins of demand sources;
- the primary comparative advantages or strengths of the location of the city-owned property and
- the primary disadvantages or constraints on attracting industrial development.

We synthesized the results of this research to reach conclusions about the potential for industrial development and to identify priority actions that would facilitate beneficial development.

THE PRIMARY AREA WITHIN WHICH THE CITY-OWNED PROPERTY WILL COMPETE FOR INDUSTRIAL BUSINESSES

Our interviews and review of supply suggests that the primary market area within which the city-owned property will compete is North Cook County. Sources of competition include existing industrial space and limited land sites in Wheeling, Northbrook, Mount Prospect, and Buffalo Grove. Industrial parks in Lake County and Kenosha County also represent sources of potential competition.

ORIGINS OF DEMAND SOURCES

The interviews and review of supply suggest that most demand will come from businesses already operating in Wheeling, Northbrook, and other North Cook County locations. Cano Packaging, a confectionary contract packager, relocated from Arlington Heights to Wheeling in 2012 because it needed more space than its Arlington Heights facility could accommodate. Protect-A-Bed relocated from Northbrook to a larger Wheeling facility in 2011. While the Wheeling industrial area attracts local area users, some companies requiring larger amounts of space are moving further north to Lake County. For example, in 2011, Corpak MedSystems, a medical device developer and manufacturer reached a 10-year agreement to relocate its headquarters and manufacturing facility from 100 Chaddick Drive in Wheeling to a 74,024-square-foot facility at 1001 Asbury Drive in Buffalo Grove. The building on Chaddick Drive is currently on the market for sale or lease. Because owners and managers of businesses located in Northbrook tend to live in Northbrook, Deerfield, Highland Park, Glenview, and Wilmette, they tend to not frequently move west to Wheeling and Prospect Heights. An owner of three industrial buildings in Sky Harbor Industrial Park in Northbrook leased two vacant units totaling about 15,000 square feet in an approximately 77,000-square-foot industrial building to two tenants. One moved from an adjoining building and another came from another building within the Sky Harbor Industrial Park. Prospective tenants of the three buildings in Sky Harbor Industrial Park have considered locations in Wheeling but

The Market for Potentially Developable Land Use Options for City-Owned Property

have tended to opt for building space in Northbrook.

COMPARATIVE ADVANTAGES

Industrial developers and brokers concur that the important locational advantages include the following:

- An accessible location, in terms of both highways and proximity to Chicago O'Hare Airport, in addition to the adjoining Chicago Executive Airport (about one mile east of the site is a four-way interchange at Interstate 294 and Willow Road);
- Access to a diverse and skilled labor base;
- A well-established but no longer as dynamic industrial base from which potential businesses requiring new building space to replace obsolete facilities could originate; and
- One of a limited number of larger land sites available in the market area under single ownership.

CONSTRAINTS ON INDUSTRIAL DEVELOPMENT

The results of the interviews and site inspections suggest the primary constraint on nonresidential development is the location in Cook County and the associated high property taxes. High property taxes associated with existing building space has weakened the competitive position or appeal of the market area as a location for industrial firms. Firms seeking new industrial space consider locations in lower tax jurisdictions in Lake County or Kenosha County.

In an effort to mitigate the tax disadvantage, the Village of Wheeling has extensively used Cook County Class 6B tax incentives to retain and attract businesses. According to an August 2012 Village of Wheeling listing of properties receiving Class 6B property tax incentives, 80 properties totaling 3.8 million square feet of space receive Class 6B tax incentives. Cano Packaging, a confectionary contract packager, received a Class 6B tax incentives on its purchase of a 172,799-square-foot building bought in 2012 in Wheeling. Cano moved out of an 89,000-square-foot Arlington Heights facility due to its need to expand.¹ Piedmont Plastics leased 64,156 square feet of space at 301 West Holbrook in 2012 and the property owner had previously obtained Class 6B tax status in January 2011.

In addition, high property taxes have translated into low net rents for owners of buildings. As a result, less income is available to invest in remodeling and other property enhancements to maintain building quality. Consequently, the North Cook County market area contains a relatively large amount of competitively obsolete inventory.

¹http://www.journal-topics.com/business/article_0930be5e-9e2c-11e2-b1c1-0019bb30f31a.html?mode=print; an Arlington Heights vitamin supplement maker, Carlson Laboratories, is

planning to move into the vacant Cano Packaging plant in Arlington Heights and planning to expand its workforce from 135 jobs to add another 35 full-time jobs. The Village of Arlington Heights is assisting the company with the pursuit of a Cook County Class 6B property tax incentive.

The Market for Potentially Developable Land Use Options for City-Owned Property

OVERVIEW OF REAL ESTATE MARKET CONDITIONS

The interviews and review of real estate industrial market trends suggest the combination of the demand-reducing impacts of the Great Recession, in conjunction with limited supply additions before the advent of the Great Recession, has intensified the competition for space users and caused declines in building space rents.

INDUSTRIAL MARKET CONDITIONS

Primary Market Area Position Within Broader Industrial Market

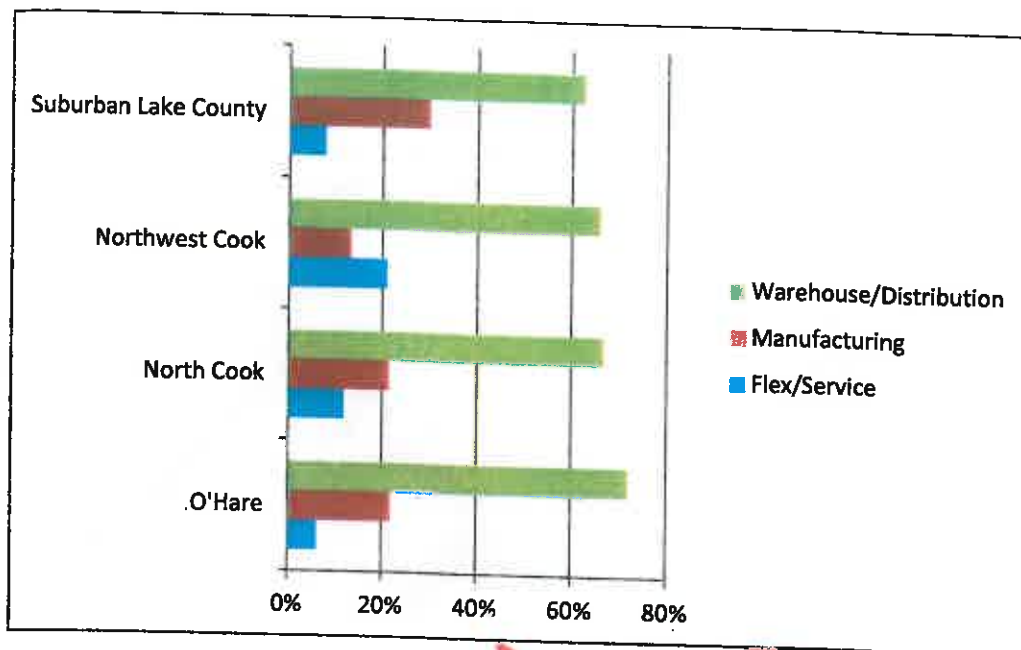
Table II-1 summarizes the amount of industrial space, vacant space, and rental rates for four major industrial submarkets in the Chicago metropolitan area. The city-owned property is located in the North Cook industrial submarket which includes the communities of Wheeling, Niles, Skokie, Northbrook, Morton Grove, and other northern Cook County suburbs. The North Cook submarket is located between two larger industrial submarkets- O'Hare and Lake County – which represent competitive industrial locations to the North Cook submarket for which medium- or larger-size users and tenants will lease or buy industrial space and land. The O'Hare submarket is the Chicago region's largest submarket in terms of inventory with more than half of the industrial inventory in this submarket located in Elk Grove Village and Des Plaines.

TABLE II-1				
Industrial Space Inventory by Submarket: 1 st Quarter 2013 ¹				
Submarket	Inventory # Square Feet	Vacant Space # Square Feet	Vacancy Rate %	Asking Rent \$ Per Square Foot
O'Hare	102,245,870	9,243,036	9.0	4.66
North Cook	53,177,428	3,829,259	7.2	4.91
Northwest Cook	32,166,293	3,305,019	10.3	4.68
Suburban Lake County	81,520,276	7,085,174	8.7	5.19
¹ Inventory includes multi-tenant, single-tenant, and owner-occupied buildings.				
Sources: Transwestern Chicago Industrial Outlook; Colliers Research & Forecast Report, Q1 2013, Chicago Industrial; Gruen Gruen + Associates.				

The North Cook industrial submarket comprises a relatively small share of the region's industrial base with the lowest vacancy rate and second highest rents of the four submarkets. The North Cook submarket contains the third smallest amount of industrial space within the broader region within which this submarket competes. Figure II-1 shows the type of industrial space by submarket.

The Market for Potentially Developable Land Use Options for City-Owned Property

Figure II-1: Industrial Space Characteristics of Select Submarkets



All four submarkets contain a majority of warehouse and distribution space. The Northwest Cook submarket contains the highest share of flex/service type space at nearly 20 percent of the submarket's space inventory. The Lake County submarket contains the highest share of manufacturing space at approximately 30 percent of the submarket's space inventory. Unlike the older 1960's and 1970's inventory in the North Cook submarket, much of the industrial space in Lake County has been built since 1985.

Table II-2 shows the absorption and construction trends of the four submarkets over the past several years.

TABLE II-2								
Industrial Space Net Absorption and New Supply of Space Trends by Submarket: 2008-2012								
	O'Hare		North Cook		Northwest Cook		Lake County	
Year	Absorption # Sq. Ft.	New Supply # Sq. Ft.	Absorption # Sq. Ft.	New Supply # Sq. Ft.	Absorption # Sq. Ft.	New Supply # Sq. Ft.	Absorption # Sq. Ft.	New Supply # Sq. Ft.
2008	-1,552,685	257,139	69,302	0	352,730	76,248	538,455	0
2009	-817,349	0	-561,052	0	-598,769	0	-1,431,293	0
2010	-1,117,936	0	-1,134,692	0	782,084	0	-324,864	0
2011	1,326,483	0	487,105	0	447,764	0	1,754,510	0
2012	1,677,494	0	59,348	0	387,927	0	850,591	0
2013 ²	720,509	0	107,122	0	47,837	0	504,256	180,280

¹ Figures are rounded. Net absorption refers to the change in occupied industrial space.
² Through first quarter 2013.

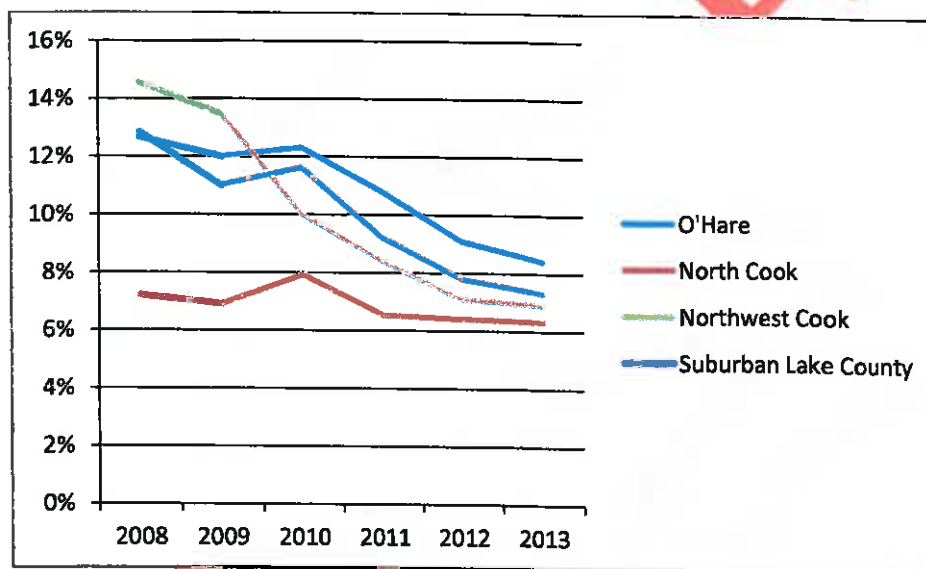
Sources: NAI Hiffman Industrial Statistics Year End; Gruen Gruen + Associates.

The Market for Potentially Developable Land Use Options for City-Owned Property

Between 2008 and 2010, annual net absorption of building space was negative in all four submarkets. No new supply of industrial space after 2008 was built and only recently has build-to-suit and facility expansions returned to the O'Hare and Lake County submarkets.² In 2012, several 100,000+ square-foot leases were signed in the O'Hare submarket and several leases over 20,000 square feet in size were signed in the Lake County submarket bringing down the vacancy levels in these two submarkets. Strong demand for leased space continues into 2013 with significant positive net absorption in the O'Hare and Lake County submarkets. A total of nearly 500,000 square feet of space is currently under construction in the O'Hare and Lake County submarkets.³

As shown on Figure II-2, with these new supply additions and positive net absorption in all four submarkets in 2011 and 2012, the vacancy rate which had stood at over 12 percent in the O'Hare, Lake County, and Northwest Cook has now dropped to vacancy levels of between seven and 10 percent in these submarkets.⁴ Note the North Cook submarket did not have as high a vacancy level as the other three submarkets during the Great Recession, primarily due to the fact that no new significant supply additions were built during this period and limited supply additions have occurred prior to the Great Recession in this mature, largely built-out submarket.

Figure II-2: Industrial Vacancy Rate of Select Submarkets



North Cook Industrial Submarket Trends

The North Cook submarket is characterized by many owner-user industrial businesses, some of which have maintained manufacturing, warehouse and/or wholesale operations within the primary

² A 229,841-square-foot build-to-suit facility for Yusen Logistics has recently been constructed in Elk Grove Village (O'Hare submarket) and several facility expansions are taking place in the Lake County submarket including Kubota Engine America and Peapod expanding in Lake Zurich facilities, Kanaflex Corporation expanding its Vernon Hills facility, Fed-Ex expanding its Grayslake facility, and Laser Precision expanding its Libertyville facility.

³ NAI Hiffman Metropolitan Chicago, Industrial Market Review, First Quarter 2013.

⁴ A significant amount of sublease space remains available in the submarkets. The available rate which includes space that is leased but not occupied and may be available for sublease is higher than the vacancy rate and for the first quarter of 2013 is between eight and 12 percent for the four submarkets.

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market area for extended periods of time. Within the North Cook submarket, Wheeling contains the largest amount of industrial space of nearly 13 million square feet or approximately 28 percent of the submarket inventory. Niles comprises an additional 20 percent of the inventory; Skokie another 17 percent of the inventory; and Northbrook an additional eight percent of the inventory.

The majority of industrial buildings in the North Cook submarket contain less than 50,000 square feet of space. Many of the lease transactions range from about 15,000 to 75,000 square feet in size including the Global Wholesale W&S of Illinois 15,235-square-foot lease in Wheeling earlier this year. According to one real estate broker active in the area, few spaces between 50,000 square feet and 100,000 square feet are available in the market area.

Much of the inventory of the primary market area was built in the 1960's and 1970's with lower ceiling heights and low parking ratios. Since 2006, almost no development has occurred primarily due to the built out nature of the area and limited land availability but also due to the higher Cook County taxes than alternative locations that limit the feasibility of new construction. Drawn from a different brokerage source (Transwestern) than the NAI Hiffman data referenced in the tables above, Table II-3 shows the space absorption and vacancy trends since 2010 in the North Cook submarket.

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TABLE II-3

Historical Vacancy and Absorption Trends: 2010-2013 in the North Cook Submarket¹

Year	Flex ²			Manufacturing			Warehouse			Total		
	Amount of Space # Sq. Ft.	Vacancy %	Absorption # Sq. Ft.	Amount of Space # Sq. Ft.	Vacancy %	Absorption # Sq. Ft.	Amount of Space # Sq. Ft.	Vacancy %	Absorption # Sq. Ft.	Amount of Space # Sq. Ft.	Vacancy %	Absorption # Sq. Ft.
2010		14.9	61,000		8.7	170,000		8.0	(1,133,000)		8.9	(902,000)
2011		13.8	61,000		7.7	114,000		7.0	474,000		7.9	649,000
2012		14.3	(28,000)		5.1	295,000		6.0	355,000		6.8	622,000
2013	6,299,982	13.7	38,000	11,331,621	6.1	(113,600)	35,545,825	6.4	(12,000)	53,177,428	7.2	(217,000)

¹ Net change in occupied space.
² A type of building designed to be versatile, which may be used in combination with office (corporate headquarters), research and development, quasi-retail sales, and including but not limited to industrial, warehouse, and distribution uses. A typical flex building will be one or even two stories with at least half of the rentable area being used as office space, have ceiling heights of 16 feet or less, and have some type of drive-in door.
³ First quarter 2013.

Sources: Transwestern Chicago Industrial Outlook; Gruen Gruen + Associates.

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While the absorption data varies from the NAI Hiffman figures, the data from Transwestern allows an identification of the vacancy rate and absorption trends by type of building space in the North Cook submarket. The total flex space inventory of 6.3 million square feet has persistently had the highest vacancy rates of over 14 to nearly 15 percent. The vacancy rates for manufacturing space (with a total inventory of 11.3 million square feet) and warehouse space (with a total inventory of 35.5 million square feet) have tended to be similar ranging from eight to nearly nine percent in 2010 to over six percent in 2013. Space absorption for both types of space has been negative in 2013.

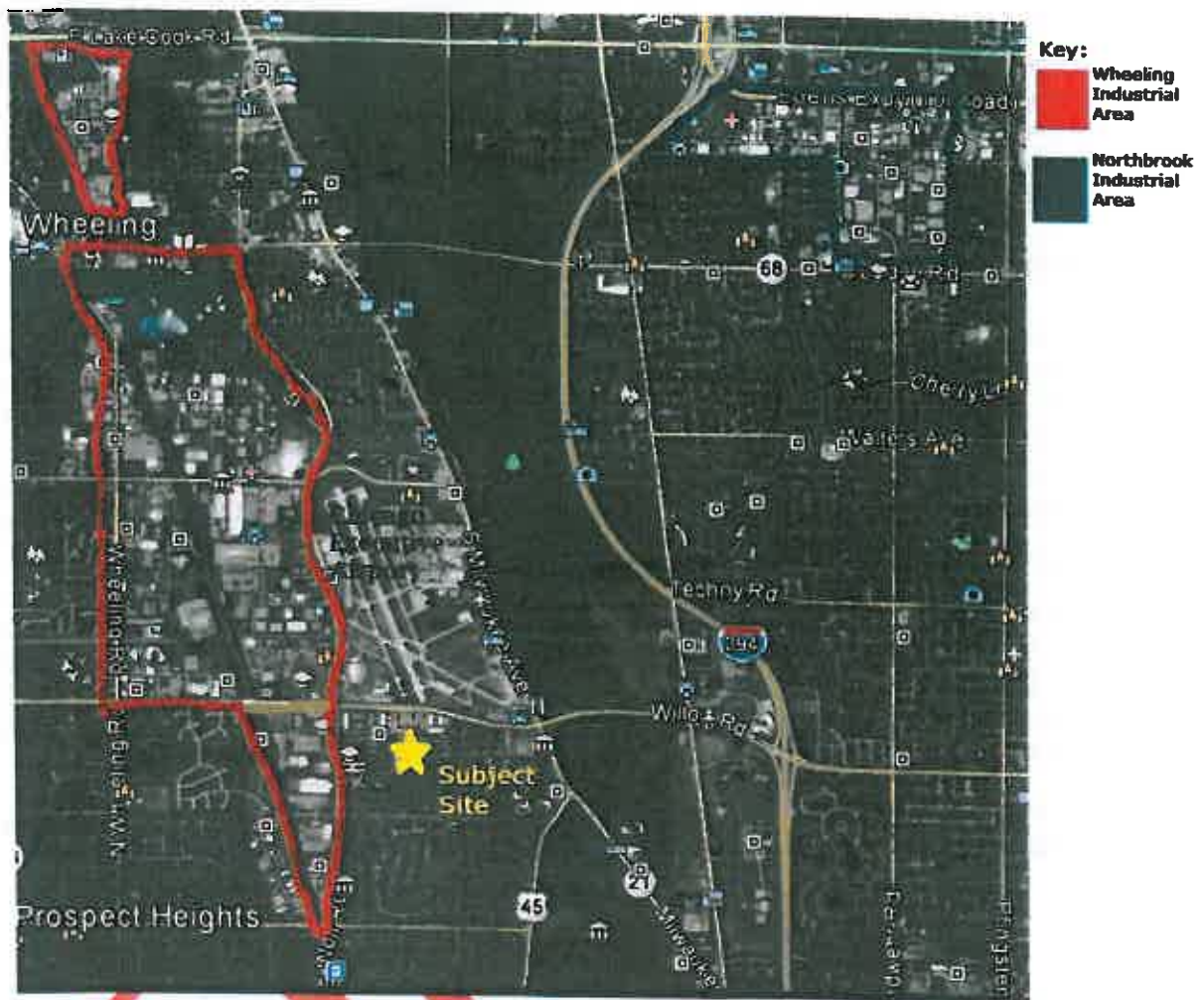
PROSPECT HEIGHTS AND WHEELING INDUSTRIAL AREAS

The area around the city-owned property has three flex type industrial buildings located north of Piper Lane on the south side of Palatine Road and just south of Chicago Executive Airport. The three buildings are located in Prospect Heights and collectively total 91,000 square feet of space. According to the property owner, the buildings are currently between 65 and 75 percent occupied. The occupancy rate has declined since the advent of the Great Recession. The 26,000-square-foot building at 4 East Piper Lane was completed in 2006 and has been challenging to lease and keep well occupied since its opening. The buildings have attracted light industrial users in the 2,500 to 5,000-square-foot range. Typically, tenants usually look at other properties in Glenview, Northbrook, and Wheeling and many also come from the same areas. Only one of the tenants was attracted due to the presence of the Chicago Executive Airport. The Chicago Executive Airport does not tend to stimulate the demand for building space near the Airport. Because of the high property taxes, low net rents approximate \$4 per square foot. The buildings do not have Class 6B tax status.

The majority of industrial space in the larger area around the site is located in Wheeling. Map II-1 highlights the industrial areas in both Wheeling and in nearby Northbrook.

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MAP II-1: Subject Site and Surrounding Area



The largest area is bounded by Palatine Road to the south, Wolf Road to the east, Wheeling Road to the west, and Hintz Road to the north. Another industrial area known as Palwaukee Business Center is located north of Hintz Road. West of the subject site along Wolf Road is a 112,000-square-foot Federal Express distribution hub which relocated from Northbrook when it built its facility on Wolf Road in 2003. South of the Federal Express facility is a 220,000-square-foot warehouse facility that CenterPoint Properties leased in 2011 to Protect-A-Bed, a manufacturer and supplier of protective bedding products for its headquarters facility. Protect-A-Bed relocated from a smaller facility in Northbrook.

The largest companies located in the Wheeling industrial areas include HLS which provides healthcare laundry services—representing more than 70 million pounds of clean linen annually—to approximately 770 acute-care hospitals and clinics in the greater Chicago area (442 employees), Protect-A-Bed (300 employees), Cano Packaging Corporation (290 employees), and Federal Express Ground Package Systems (263 employees).

A 35,000-square-foot industrial building in Wheeling across from Chicago Executive Airport consisting of seven 5,000-square-foot units has persistent high vacancy. Inquiries for the vacant

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space originate from users already located within about 1.5-miles of the property. With rents of approximately \$6.00 per square foot gross and property taxes of approximately \$3.50 per square foot, net rents are low at \$2.50 per square foot.

Two buildings near the Chicago Executive Airport in Wheeling built in 1976 and 1981 respectively with 18' ceiling heights totaling nearly 52,000 square feet of space have over 30,000 square feet of space available for lease. The asking gross annual rent is \$6.75 per square foot. The vacancy has persisted since a testing equipment and service company relocated to Rolling Meadows. The limited numbers of inquiries that have been made have tended to come from companies already located in the area near the property.

INDUSTRIAL MARKET RENTS

Table II-4 summarizes rental rates for a sample of industrial buildings in Prospect Heights, Wheeling, and Northbrook.

TABLE II-4			
Rental Rate of Industrial Buildings in Market Area			
Address	Square Feet Available/ Building Size # Square Feet	Rental Rate \$ Per Square Foot	Rate Type
15 E. Palatine Rd. Prospect Heights	4,270 40,575	9.50	Modified Gross
4 E. Piper Lane Prospect Heights	7,431 25,851	9.50	Modified Gross
290-292 Palatine Rd. Wheeling	25,000 90,833	7.00	Modified Net
1150 Willis Avenue Wheeling	34,830 34,830	3.50	Net
200 Marquardt Wheeling	10,000 20,000	6.75	Modified Gross
600-688 S. Wheeling Wheeling	20,445 135,000	8.00	Modified Gross
236 Egidio Dr. (Unit C) Wheeling	13,935 47,000	7.85	Modified Net
225 Larkin Dr. Wheeling	13,766 35,882	4.95	Net
466-488 Diens Dr. Wheeling	39,200 55,750	7.95	Modified Gross
305 Era Dr, Northbrook	18,072 27,549	5.50	Net
1850 Holste Rd. Northbrook	35,381 92,265	4.95	Gross
1808 Holste Rd. Northbrook	50,262 92,265	4.95	Gross
3184 MacArthur Northbrook	7,500 41,422	9.95	Modified Gross
Sources: Loopnet; Gruen Gruen + Associates.			

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The three flex buildings closest to the city-owned property have asking rents of \$9.50 per square foot on a modified net basis⁵. With real estate taxes of approximately \$4.00 per square foot, the landlord estimates it typically obtains net rents of \$4.00 per square foot because the obtainable gross rents are typically lower than asking rents. More traditional warehouse industrial buildings in the area are asking rents of \$3.50 to \$5.50 per square foot on a net basis, and approximately \$7.00 to \$8.00 per square foot on a modified gross or modified net basis.

While we will evaluate the real estate economics of industrial development in the next phase, without the Cook County Class 6B tax incentive, and/or other incentives, prevailing market net rents obtained by property owners are not likely high enough to amortize and provide a return on speculative multi-tenant development of industrial space in the North Cook County submarket. New building space will need to obtain higher rents than prevailing market rents for existing, frequently older space.

AVAILABLE LAND SUPPLY

Table II-5 shows the supply of available land currently being marketed for industrial uses in North Cook County and Lake County. The supply of land is very limited within the northern Cook County suburbs with only an estimated 70 acres of land available for development. Lake County has more available land of approximately 700 plus acres but it is concentrated in the north part of Lake County, primarily in three projects, the CenterPoint project in Wadsworth, a 105 acre site just west of the Liberty Point Corporate Center development in unincorporated Lake County and a Panattoni development in Zion. A large land holding in Lake County not included in this estimate because it is not currently being marketed. The 640 acre Alter Group Cornerstone development in Grayslake along Peterson Road between Illinois Routes 83 and 60 is planned for development of approximately 3.6 million square feet of office, light industrial, and research and development space.⁶ The project timeline is uncertain but the project developer is working on securing permits from the Illinois Department of Transportation and the Illinois Environmental Protection Agency.⁷

⁵ Modified net or modified gross may mean different things depending on the specific property but generally is generally understood to mean that the landlord is paying for some expenses, perhaps the real estate taxes, but the tenants may pay some share of operating expenses. A net lease means that the base rent being paid does not include property taxes, insurance, utilities, or other operating expenses.

⁶ In addition, the Cornerstone development will include 600,000 square feet of retail space and 801 residential units.

⁷ <http://grayslake.patch.com/articles/cornerstone-project-moving-forward-on-schedule#>

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TABLE II-5				
Available Land Supply for Industrial Uses in North Cook County and Lake County				
Address City	Land Available # Acres	Sales Price \$	Sales Price \$PSF	Other Information
<i>North Cook County</i>				
Northgate Parkway Wheeling	13.5	NA	8.00	Owned by Frito Lay
370 W. Dundee Road Wheeling	1.5	229,000	3.50	
1000 Executive Way Des Plaines	1.9	1,200,000	14.20	Within 1 mile of major expressways
65 Wille Road Des Plaines	1.5	1,475,000	22.13	
750-800 E. Northwest Hwy. Des Plaines	20	9,850,000	11.31	Build to suit development of 10,000-300,000 SF
Route 53 & Euclid Arlington Heights	2.5	1,633,500	15.00	
1625 S. Arlington Heights Rd. Arlington Heights	4.9	1,665,000	7.68	
2513 E. Higgins Road Elk Grove Village	10	NA		
1350 Estes Avenue Elk Grove Village	15.2	NA		
Total	70.9			
<i>Lake County</i>				
W. Peterson/N. Midlothian Road Unincorporated Lake County	105.25		1.95	4 miles from Rt. 137 and I-94 Interchange; divisible to 10 acres
29833 N. Skokie Hwy. Lake Bluff	4.50	650,000	3.32	Possible Rail Siding Truck and Trailer Parking Bus Parking Near Rt. 137 and I-94 Interchange
I-94 between Rt.120 and Rt. 132 Gurnee	11.4	3,660,000	7.34	Ideal for office, office/service, high end industrial, retail
CenterPoint Business Center Gurnee	26.5	NA		Access to I-94 Built to suit development of 25,000- 250,000 SF
CenterPoint Business Center Wadsworth	229	NA		Access to I-94 Built to suit development of 65,000-500,000 SF
1507 10 th Street Waukegan	2.8	375,000	3.05	
2326 Wadsworth Rd. Waukegan	10.0	1,600,000	3.67	
Trumpett Corporate Park Green Bay Rd. & 9 th St. Zion	250	NA		Panattoni Development
Antioch Corporate Center Antioch	100	NA		13.4 acres of land has been sold to Avison Young
Total	744.4			
Sources: Colliers, CBRE, NAI Hiffman, Newmark Knight & Frank, Loopnet, Gruen Gruen + Associates.				

The Market for Potentially Developable Land Use Options for City-Owned Property

Within the North Cook market area, few development sites remain available. The closest available site of approximately 13.5 acres in Wheeling has been on the market for the past five years.

According to the listing broker, the Northgate Parkway site in Wheeling is owned by a private corporation which had planned on using the site for trucking uses but could not obtain Village approval for its intended use. The current asking price of \$8.00 per square foot for the site is high but a couple of developers have reportedly expressed interest in the site but at land prices of less than \$3.00 per square foot.

CHARACTERISTICS OF THE LOCAL ECONOMIC BASE

Industrial Employment Base

The construction, manufacturing, wholesale trade, and transportation and warehousing employment sectors of the North Cook County submarket market area are estimated to include approximately 46,500 jobs. These sectors are most closely associated with the consumption and use of industrial land and building space. Manufacturing employment in the market area, with just under 20,000 jobs, represents the largest industrial sector. Table II 6 below presents an estimate of industrial employment by market area community for 2012.

The Market for Potentially Developable Land Use Options for City-Owned Property

TABLE II-6						
Construction, Manufacturing, Wholesale Trade, and Transportation and Warehousing Employment by North Cook County Community in 2012 ¹						
	Wheeling	Des Plaines	Arlington Heights	Mt. Prospect	Northbrook	Total
Construction	1,194	1,551	1,713	753	1,578	6,789
Manufacturing	7,779	6,081	2,153	1,509	2,085	19,607
Wholesale Trade	2,307	3,996	3,217	1,425	2,420	13,365
Transportation & Warehousing	937	2,638	414	306	2,420	6,715
Construction, Manufacturing, Wholesale Trade, Transportation & Warehousing Total	12,217	14,266	7,497	3,993	8,503	46,476
Percent of Total Submarket Employment	60.4%	37.0%	16.5%	27.1%	19.9%	28.7%
¹ Employment data is not reported individually for Prospect Heights.						
Sources: Illinois Department of Employment Security, Where Workers Work 2012; Gruen Gruen + Associates						

The employment base of Wheeling is heavily industrial in nature. Manufacturing alone represents nearly 40 percent of jobs located in Wheeling. Construction, wholesale trade and transportation and warehousing employment represent an additional 20 percent of the job base. To the south of the city-owned property, the community of Des Plaines contains approximately 14,300 industrial-type jobs representing approximately 37 percent of the community's employment base. Within the market area, Des Plaines contains the largest concentration of wholesale trade and transportation and warehousing employment. These industry sectors typically require warehouse and distribution space as opposed to light industrial or manufacturing assembly space. The higher concentration of warehousing and distribution activities to the south of the city-owned property in Des Plaines is not surprising given the community's proximity to O'Hare Airport and interstate highway accessibility. The employment base of nearby Mount Prospect is smaller with industrial sectors comprising approximately 27 percent of jobs.

Manufacturing Employment Trends

Table II-7 below summarizes the composition of manufacturing employment in Northwest Suburban Cook County⁸ and the Chicago Metro Area.

⁸ Northwest Suburban Cook County is larger than the primary market area definition, generally including all portions of Cook County west of Interstate 294, containing communities such as Arlington Heights, Mount Prospect, Des Plaines, Rolling Meadows, Elk Grove Village, Schaumburg, Palatine, Prospect Heights, Wheeling and Hoffman Estates. Detailed manufacturing employment data is unavailable for individual communities so the information is aggregated into a larger geographic area.

The Market for Potentially Developable Land Use Options for City-Owned Property

TABLE II-7

Composition of Northwest Suburban Cook County Manufacturing Base

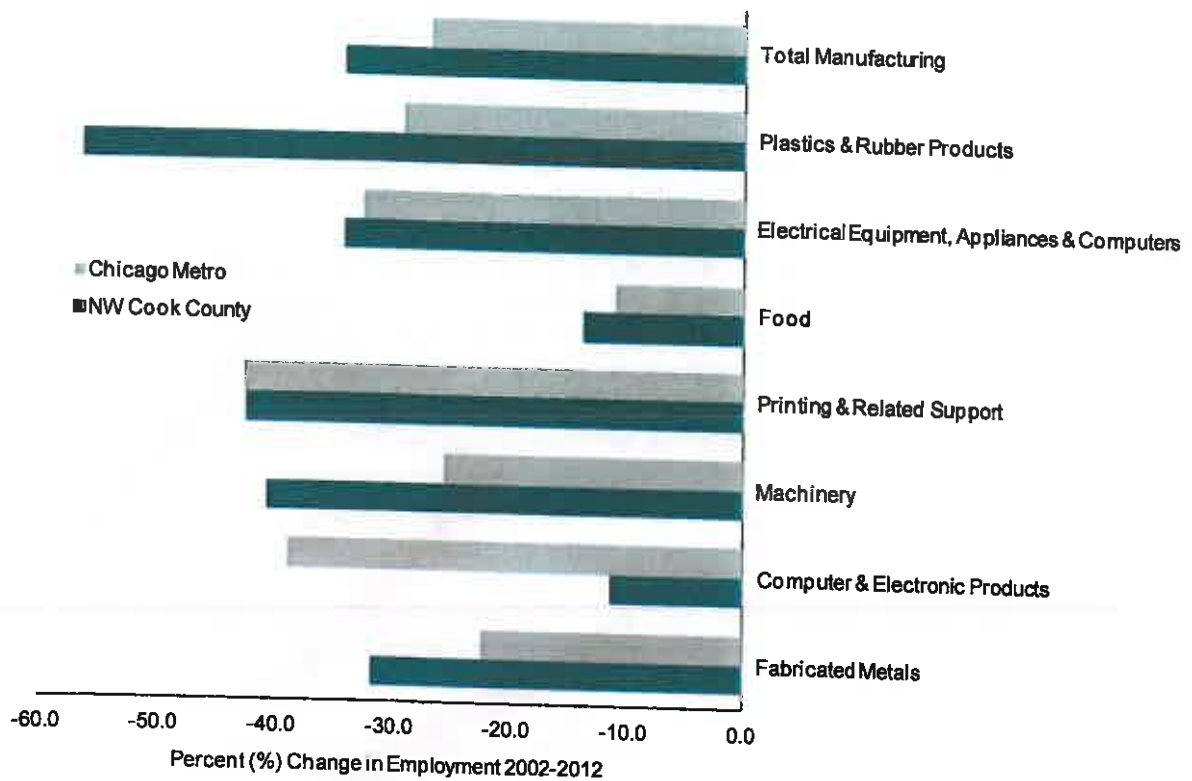
	Northwest Cook County % of Manufacturing Jobs	Chicago Metro Area % of Manufacturing Jobs
Fabricated Metals	22.0	17.0
Computer & Electronic Products	14.7	7.0
Machinery	10.4	9.7
Printing & Related Support	9.5	6.0
Food	8.1	12.4
Electrical Equipment, Appliances & Computers	7.6	5.2
Plastics & Rubber Products	5.1	7.5
All Other Subsectors	22.6	35.2
Sources: Illinois Department of Employment Security, Where Workers Work 2012; Gruen Gruen + Associates.		

The manufacturing base of Northwest Cook County is concentrated in fabricated metals, computers and electronics, machinery, and printing. Fabricated metals, computers and electronics, machinery, and printing comprise approximately 57 percent of the manufacturing job base of Northwest Cook County. By comparison, these sectors comprise approximately 40 percent of the total Chicago Metro Area manufacturing base. The local area does not contain the same base of nondurable goods manufacturing (food, plastics, and rubber, etc.) that are more prevalent throughout the Chicago Metro Area. Food, plastics and rubber product manufacturing comprise approximately 20 percent of regional employment but only 13 percent of employment in Northwest Cook County.

Figured II-3 below illustrates the percentage change in manufacturing employment from 2002 to 2012 for Northwest Suburban Cook County and the Chicago Metro Area.

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Figure II-3: Percentage Change in Manufacturing Employment 2002-2012



Between 2002 and 2012, total manufacturing employment in Northwest Suburban Cook County declined by 34 percent or 25,000 jobs. Manufacturing job losses have been less extreme but still significant throughout the entire Chicago Metro Area as a whole as employment declined by 26 percent over the same period. The local plastics and rubber, printing, and machinery sectors experienced particularly large employment declines - exceeding 40 percent - over the decade. The computer and electronic sector of the local manufacturing base, representing the second largest, appears to be one subsector that has maintained its agglomeration in Northwest Cook County. Employment declined by only 10 percent over the 2002-2012 decade (relative to a 38 percent decline throughout the Metro Area). Likewise, although not a major source of manufacturing activity in Northwest Cook County, food manufacturing experienced a much smaller decline than the base as a whole over the period.

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CONCLUSIONS AND RECOMMENDATIONS

Given the O'Hare submarket offers superior access to transportation linkages and Lake County locations offer a newer stock of inventory and lower tax rates, the city-owned property will need to be competitively priced relative to these alternative locations.

Sources of demand will include firms with multiple sites in the region or in obsolete space within the North Cook submarket which would experience productivity increases and efficiency gains by consolidating operations (including different functions) into a new facility. Smaller to midsize users in the food, electronics, plastics, and home improvement, and fulfillment sectors are examples of the types of firms which could be candidates for new space at the city-owned property. In addition, some types of businesses such as electrical contractors, which conduct significant business with or in Cook County, need to locate within Cook County. Moreover, as indicated by the expansion of FedEx Ground from Northbrook to a 107,000-square-foot distribution hub in Wheeling, some businesses require land for truck fleets, outdoor storage, or other requirements difficult to satisfy in existing facilities. Such users may be willing and able to pay relatively more for land to satisfy their particular hard-to-fill requirements. Some industrial users may generate sales tax and other sources of municipal revenue.

As the economy recovers more fully from the Great Recession and occupancy rates and rents increase in North Cook County locations as is already occurring in Northbrook, demand will shift to Wheeling and Prospect Heights locations.

We recommend that the City be prepared to support a property tax incentive Class 6B application with Cook County.

In addition, we recommend that the City obtain estimates for the demolition of the existing building improvements. If a Phase 1 environmental assessment has not been completed, completing the assessment would in conjunction with the demolition cost estimate and making a policy decision about the Class 6B would be a significant part of the information base that will give developers/users and their financing sources a leg up on due diligence.

CHAPTER III

RETAIL USES

NATURE OF POTENTIAL RETAIL MARKET SERVED

Retail demand at the site is not likely to be regional-serving in nature because of the following:

- a) Two super-regional malls are located within a 15-20 minute drive from the site, including the 1,000,000-square-foot Northbrook Court mall (located approximately five miles northeast of the site on Lake Cook Road) and the 2,174,000-square-foot Woodfield Mall (approximately eight miles southwest of the site), which also contains a significant amount of adjacent specialty retail space;
- b) the lack of a strong, significant mix of retailing and commercial uses in the immediate area; and
- c) physical constraints associated with the size and configuration of the site.

In addition, based on our site and area inspections, interviews and assessment of supply, the site is unlikely to serve larger neighborhood, community center, and "category-killer, big-box" retail stores. The neighborhood and community shopping locations and developments generally within two-to-four miles of the site include a relatively complete supply of the dominant tenancies for these types of developments. Several major neighborhood and community-serving retail nodes exist within approximately four miles of the site, including those located at:

- 1) *Lake Cook Road and Weiland Road*, approximately four miles northwest of the site, contains three large freestanding general merchandise retailers - Target, Walmart, and Sam's Club. The Walmart store was recently expanded by 40,000 square feet of space to become a Super Wal-Mart.
- 2) *Dundee Road and Buffalo Grove Road*, approximately 3.5 miles northwest of the site in Buffalo Grove. The intersection contains the 150,000-square-foot Dominick's-anchored Dundee Point Shopping Center and a freestanding Aldi store. An older center across the street from which Dominick's moved, Cambridge Commons, has been approved to receive \$1.1 million in economic incentives from Buffalo Grove for the center's redevelopment with a developer proposing to bring in Fresh Farms grocery store to the 30,000 square-foot anchor space which is occupied by Rogan's shoes but which will move to a smaller space in the center.⁹
- 3) *Palatine Road, Rand Road, and Arlington Heights Road*, approximately four miles west of the site in Arlington Heights. According to the City of Arlington Heights, the node contains approximately 1.6 million square feet of retail space in five primary shopping centers - the Town & Country Center, Northpoint, Southpoint, Annex of Arlington, and the Arlington Plaza. Anchor retailers include three grocery stores (Jewel-Osco, Dominick's, and Trade Joe's), Best Buy, Dick's Sporting Goods, Value City Furniture, The Roomplace, Burlington

⁹ <http://www.dailyherald.com/article/20130123/business/701239826/>

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Coat Factory, Jo-Ann Fabrics, and Marshall's. A variety of fast-casual restaurants such as Panera Bread and Chipotle are also located here. A freestanding Target store is also located approximately one-half mile south of the node along Rand Road. Prospect Crossing Shopping Center, a 176,000-square-foot center, is also in the vicinity and Ultra Foods is beginning to remodel a formerly vacant (since 2004) Dominick's 87,000-square-foot store.¹⁰

- 4) *Kensington Road, Rand Road and Elmhurst Road*, approximately two miles southwest of the site in Mount Prospect. Randhurst Village, a 750,000-square-foot redevelopment of the former Randhurst Mall, contains major big-box and category-killer retailers such as Costco, Sports Authority, Home Depot, PetSmart, Bed Bath & Beyond, TJ Maxx, and Old Navy. The project also contains a Jewel-Osco grocery store, a Carson Pirie Scott department store, and a 12-screen AMC cinema. The 107,000-square-foot Randhurst Commons shopping center is adjacent to the development.
- 5) *Willow Road and Pfingsten Road*, approximately 2.5 miles east of the site in Glenview on the east side of I-294. The 133,000-square-foot Plaza del Prado neighborhood shopping center is anchored by a 59,000-square-foot Jewel-Osco grocery store and contains a variety of smaller retailers and restaurants such as Einstein Bagels and Starbuck's.
- 6) *Dundee Road and Milwaukee Avenue*, approximately three miles north of the site in Wheeling. The Fresh Farms shopping center on the southwest corner has been redeveloped with Fresh Farms expanding its grocery store from 13,000 square feet to 31,000 square feet, and the addition of 32,000 square feet of retail space, and a 4,000-square-foot outlot building on Dundee Road.
- 7) *Palatine Road and Milwaukee Avenue*, approximately one mile east of site in Prospect Heights. Palwaukee Plaza, an approximately 100,000-square-foot shopping center, has recently added Sav a Lot grocers to the 17,000-square-foot former Irv's Men's Wear store.

As summarized below in Map III-1, the site is generally "betwixt and between" these larger existing neighborhood and community-serving retail nodes. The site does not possess the immediate proximity needed to capture spillover demands and activity; and is likely too close and small to establish a sufficiently large enough trade area for a standard shopping center use.

¹⁰ <http://www.dailyherald.com/article/20130129/news/701299690/print/>.

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MAP III-1: Nearby Concentrations of Neighborhood and Community/Big-Box Retail Space



Market Area Retail Inventory

According to CB Richard Ellis, the Northwest Suburban retail submarket of which the site is a part contains a total retail inventory of 14,911,000 square feet. More than 1.6 million square feet of the existing inventory is currently vacant for a vacancy rate of 10.8 percent.¹¹ The local retail vacancy rate of 10.8 percent is the second highest vacancy rate of any submarket in greater Chicagoland. Retail space vacancy rates in the adjoining North Suburban and West Suburban submarkets, for example, are 6.8 percent and 4.5 percent respectively. A five percent vacancy rate is usually considered "optimal" in a submarket because it is low enough to not cause financial problems, but high enough to permit mobility and the ability to accept new tenants. With more than 1.6 million square feet of space available throughout the broader area, the inventory has plenty of capacity to accommodate new retail tenants and demand growth without requiring new supply.

TYPE OF POTENTIAL COMMERCIAL DEVELOPMENT OPPORTUNITY

The initial interviews suggest a potential commercial development opportunity could include attracting complementary and unique (1) sporting goods and recreational activities such as a trampoline park and indoor lacrosse and (2) specialty home improvement and (3) service uses related to the Chicago Executive Airport such as a catering facility that have the following characteristics: (1) benefit from the proximity to Milwaukee Avenue and visibility from Palatine Road but also have significant advertising programs and established franchise or reputational values

¹¹ *Chicago Retail MarketView Q1 2013*, CBRE Global Research & Consulting

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to draw from a relatively wide trade area; (2) do not need to be in standard retail shopping centers; (3) wish to avoid the high rent associated with traditional retail centers; and (4) need a relatively large amount of space, including space for storage, assembly, or showroom.

Prototypical space for an industrial shopping center product could include a roll-up back and attractive "store type" fronts that can serve a variety of office, light assembly, distribution, design, sales, showroom, and services uses with a uniformity of building design, signage, and awnings. Recreational uses will need a high clear span.

CONCLUSIONS AND RECOMMENDATIONS

To further test the hypotheses about potential commercial use and development opportunities, GG+A will attempt to interview users operating in locations in Buffalo Grove and Northbrook or other nearby locations to ask about their location and willingness to pay preferences and conduct additional interviews with brokers developers familiar with this use or product type.

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CHAPTER IV

OFFICE USE

OFFICE MARKET CONDITIONS

The Northwest Suburban office submarket, in which Prospect Heights is located, comprises approximately one-third of suburban office space located throughout the Chicago metropolitan area. According to NAI Hiffman, this submarket includes an inventory of 33.7 million square feet of office space (the vast majority of it is located in the Schaumburg area). The overall vacancy rate is currently estimated at 22.4 percent. The vacancy rate for Class A space is 19 percent. The Class B vacancy rate approximates 27 percent. As summarized below, relative to the total suburban office market in Chicagoland, the Northwest Suburban vacancy rate is slightly higher than the rest of the region and average asking rents of approximately \$19 per square foot are slightly below the regional average of \$19.80 per square foot.

TABLE IV-1			
Current Office Submarket Conditions: First Quarter 2013			
	Total Rentable Building Area # Square Feet	Vacancy Rate %	Average Asking Rent \$ Per Square Foot
Northwest Suburban:			
Class A	16,635,158	19.00	21.31
Class B	14,096,648	26.71	17.89
Class C	3,015,025	21.38	15.36
Total	33,746,831	22.44	19.05
Suburban Total:			
Class A	63,723,529	18.24	21.63
Class B	49,881,718	23.63	18.56
Class C	12,588,060	17.34	16.69
Total	126,193,307	20.28	19.79
Source: NAI Hiffman, Office Market Review First Quarter 2013			

According to Colliers, the Northwest Suburban submarket was the "hardest hit" suburban submarket during the Great Recession due to its concentration of financial service and communications firms, many of which closed or consolidated. The submarket still currently includes nine contiguous blocks of office space containing more than 150,000 square feet of rentable space; six of which are Class A properties.

As summarized in Table IV-2, the Northwest Suburban submarket has not recovered as quickly as other suburban submarkets from the effects of the Great Recession. Analysis of historical NAI Hiffman market data indicates, for example, that since the first quarter of 2008, the total suburban office market has absorbed more than 2.2 million square feet of Class A office space. The Northwest Suburban submarket - which comprises about 30 percent of the region's Class A inventory - has absorbed less than 200,000 square feet. This represents only 8.5 percent of region

The Market for Potentially Developable Land Use Options for City-Owned Property

wide Class A absorption since early 2008.

TABLE IV-2		
Class A Office Space Absorption and Rent Trends		
	Net Absorption 2008-2013 # Square Feet	Change in Average Rents 2008-2013 %
Class A Office Space		
Northwest Suburban	188,294	-13.6
Suburban Total	2,204,585	-14.9
Sources: NAI Hiffman; Gruen Gruen + Associates.		

Although vacancy rates have begun to improve both locally and regionally, albeit modestly, Class A office space rents are still in decline. Current Class A asking rents are approximately 14 to 15 percent below early 2008 levels. Average Class A asking rents in the Northwest submarket of approximately \$21 per square foot are unlikely to support the development of new office space.

The market conditions suggest limited new speculative multi-tenant development potential in the foreseeable future.

PROSPECT HEIGHTS' PLACE IN THE MARKET

While part of the Northwest Suburban submarket, neither Prospect Heights nor adjoining Wheeling are well-established locations for office uses. A review of office space listings for Wheeling and Prospect Heights shows that most of the office space is characterized as non Class A older office space for small tenants or users. Some of the space is showroom, medical office, or flex type space in nature. Table IV-3 shows the office space in Prospect Heights and Wheeling.

The Market for Potentially Developable Land Use Options for City-Owned Property

TABLE IV-3

Inventory of Existing Office Space in Prospect Heights and Wheeling

Address	Inventory # Square Feet	Available # Square Feet	Annual Rental Rate \$ Per Sq. Foot	Other	Lease Type	Year Built
<i>Wheeling</i>						
1040 S. Milwaukee	25,227	3,500	12.00		Modified Gross	1990
300 Marquardt Dr.	12,400			Office showroom, flex space, office R&D		
700-728 S. Milwaukee	21,480	2,280	12.00		Modified Gross	
307 S. Milwaukee Ave.	15,000	2,435	13.00		Modified Gross	
1400 South Wolf Rd.	117,518	18,580	18.00	Two 58,759 SF single-story buildings	Modified gross	
380 Palatine Rd.	18,176	18,176	12.50		Modified gross	
401 S. Milwaukee	26,681	8,364	14.00-15.95		Modified Gross	
5110-6360 Capitol Dr.	60,845	9,412	15.95-16.00		Modified Gross	
251 E. Dundee Rd.	7,500	2,680	15.00		Modified Gross	
325 N. Milwaukee Rd.	10,000	2,330	11.73-19.50	Office Showroom Medical Office	Modified Gross	1990
275 12th St.	160,000	4,000	14.50			1975
<i>Prospect Heights</i>						
1098 S. Milwaukee Ave.	27,400	11,631	17.00		Modified Gross	
TOTAL	512,227	83,394				
Sources: www.loopnet.com ; Gruen Gruen + Associates.						

The Market for Potentially Developable Land Use Options for City-Owned Property

Approximately 512,000 square feet of office space comprises the inventory of space in Prospect Heights and Wheeling. With the exception of three buildings, the remaining buildings are each less than 30,000 square feet in size. Approximately 85,000 square feet of space or about 17 percent of the inventory is currently available for lease. As described in Chapter II, the flex industrial-office space adjoining the city-owned properties has experienced persistently high vacancy rates and low net rents that would not support new construction.

The area around the site currently lacks agglomerational advantages - those that relate to proximity to similar or complementary uses. Office space users, for example, tend to prefer to be close to other office space users as well as restaurants, banks, and retail goods and services.

CONCLUSIONS AND RECOMMENDATIONS

Given the indications of limited market demand, the current absence of agglomerational advantages, and high property taxes, speculative office space development is unlikely to occur. Office building development will need to be user driven and not likely to be a near term candidate for the use of the available land.

Gruen Gruen + Associates (GG+A) is a firm of economists, sociologists, statisticians and market, financial and fiscal analysts. Developers, public agencies, attorneys and others involved in real estate asset management utilize GG+A research and consulting to make and implement investment, marketing, product, pricing and legal support decisions. The firm's staff has extensive experience and special training in the use of demographic analysis, survey research, econometrics, psychometrics and financial analysis to describe and forecast markets for a wide variety of real estate projects and economic activities.

Since its founding in 1970, GG+A has pioneered the integration of behavioral research and econometric analysis to provide a sound foundation for successful land use policy and economic development actions. GG+A has also pioneered the use of economic, social and fiscal impact analysis. GG+A impact studies accurately and comprehensively portray the effects of public and private real estate developments, land use plans, regulations, annexations and assessments on the affected treasuries, taxpayers, consumers, other residents and property owners.

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APPLYING KNOWLEDGE, CREATING RESULTS, ADDING VALUE

E



To: Mayor Nicholas J. Helmer, City of Prospect Heights City Council

From: Anne Marrin, City Administrator

Date: July 8, 2013

Re: Discussion of Refuse Contract/Republic/RFP

Issue The current Refuse contract expires on July 1, 2015 with Republic Services. The City of Prospect Heights conducted a request for proposals on February 28, 2011, and the contract was awarded to Republic Services. The contract ends in less than one year as of July 1st.

Rick Bulthuis, our Republic representative, presented a contract extension at the March Workshop. The Council directed Rick to bring back a formal proposal with pricing and numbers as to the rate adjustments (CPI as compared to the Transportation Index). In addition, the Council directed staff to complete a comparable spreadsheet to look at pricing over the past several years. A Spreadsheet is attached with pricing from 2011 to present.

Please note that SWANCC pricing is included with the final numbers.

As a reminder Republic is proposing the following:

If we renew our contract with Republic, we have the option of extending the contract as is-- with some additional language. They are willing to take out the adjustment language that states each July there will be an increase in rates with a three per-cent (3%) minimum. They are willing to allow for a CPI adjustment but not lower than zero (0). The contract would extend for 5 years. **We had no fuel surcharge fee in the previous contract and would like to extend that.**

In addition, Republic is willing to open up anything else in the contract including:

- Recycling for multi-family housing-carts for recycling.
- SWANCC-they are willing to absorb the costs of our membership.
SWANCC would be directed to send the SWANCC bill to Republic and add a clause in the contract that they would lower their cost of the City opts out of SWANCC.

All other elements of the contract would remain in place for the five-year period. This includes:

- Franchise Fee \$50,000
- Unlimited garbage pick-up
- Unlimited landscape pick-up
- No change in the senior rates
- Townhomes included in the senior rate
- Recycling Program "as is" with an emphasis on multi-family housing.

The Mayor has requested that the Council pass a "must recycle" ordinance as it will aid our program. The more residents and businesses that recycle, the more we get back. Because of this, the Mayor has requested that the Council pass a "must recycle" ordinance as it will aid our program.

Throughout the length of the contract staff has noted that we have had few issues with Republic. They have been very good to work with especially through some of our emergencies such as snow or flooding and have been accommodating throughout the Road Program with rerouting their trucks due to repaving. They have very responsive customer service personnel and are always available to staff if needed.

Rick Bulthuis will be at the Council Workshop to review and answer any questions the council may have.

Staff is seeking direction on the Councils decision to extend the contract or go out for an RFP for Refuse Services.

Attachments: Republic Proposal/Spreadsheet



PROPOSAL

Program Enhancements / Contract Extension

June 11, 2013





June 11, 2013

Anne Marrin, City Administrator
City of Prospect Heights
8 North Elmhurst Road
Prospect Heights, Illinois 60070-1567

Dear Ms. Marrin:

Republic Services appreciates the opportunity to respond with this proposal to extend the continuing relationship between the City of Prospect Heights and Republic Services (ARC Disposal).

Attached are several documents that (1) provide an overall side-by-side comparison of the proposed changes to our Agreement, (2) provide a 10yr assessment of the Consumer Price Index (CPI) versus Transportation Index (TI); and, (3) provide current residential prices and price matrices for the commercial and industrial customers (July 2013 through June 2014).

Our proposal is based on the following terms and conditions and is designed to allow for a simple extension of the existing contract with a single addendum referencing the agreed upon changes. In either event, Republic Services is prepared to have all of the elements of our proposal in place on September 1, 2013.

Curbside Single Family Collection

- The implementation of Republic Services' Sharps Mail Back Program. An environmentally-responsible and convenient solution to managing home-generated medical waste.
- The removal of current yard waste cart rental fees and the introduction of carts for all yard waste customers at no additional cost.
- The option for residents to select a larger 95g recycling cart at no additional cost.

Containerized Multi-Family Collection

- The implementation of Republic Services' Sharps Mail Back Program. An environmentally-responsible and convenient solution to managing home-generated medical waste.
- The introduction of a proactive approach to providing recyclables collection services to the multi-family units. This would include the placement of 95g recycling carts at each multi-family property and a collaborative information dissemination campaign to all of the property owners, managers, and residents.

Contract Terms and Conditions

- The contract will be extended for a five year term effective July 1, 2014 and will retain all of the original terms and conditions including those addressed in the first amendment.

- The Consumer Price Index (CPI) with 3%-min and 5%-max protections will be replaced by a trailing 10-year average of the Transportation Index (TI) with 0%-min and 5%-max protections, as a means of calculating the annual adjustment (see attachments for more information).
- The Franchise Fee paid to the Village will begin to be adjusted annually by the same percentage adjustment applied to the rates. The first adjustment will take place on July 1, 2014.

Republic Services will be investing roughly \$100,000 in new recycling carts and yard waste carts to upgrade recycling collection services to the multi-family units and enhance our yard waste collection services to the single family units; and, to extend our long-term relationship with the City of Prospect Heights.

Thank you, in advance, for your consideration of our proposal and your willingness to offer constructive feedback to our earlier discussions and to provide insight into the City's desires for a quality and comprehensive solid waste program.

Very truly yours,

Richard Bulthuis
Municipal Services Manager



SIDE-BY-SIDE PROGRAM COMPARISON

ITEM	CURRENT PROGRAM	PROPOSED PROGRAM
Annual Adjustment	Tied to the Consumer Price Index (CPI) year-over-year change with 3%-min and 5%-max protections. (A)	Tied to a trailing 10yr average of the Transportation Index (TI) with 0%-min and 5%-max protections. (A)
Sharps Mail Back Program (B)	Not available	Available to all residents via phone or on-line at www.republicsharps.com . (An environmentally-responsible solution to managing home-generated medical waste.)
Multi-Family Recycling Program	Reactive: When a multi-family property calls we respond.	Proactive: We will place 95g recycling carts at each multi-family property. We will collaborate with the City to produce and distribute a brochure specifically designed to encourage multi-family recycling and we will meet with complex owners and managers as often as needed to support these efforts.
Yard Waste Carts (elimination of rental fee)	Currently available for a \$4.64 per month rental charge.	Yard waste carts will be made available upon request at <u>no charge</u> .
Recycling Carts (availability of larger 95g carts)	Currently available in 65g capacity only.	Larger 95g recycling carts will be made available to residents, upon request, at no additional cost.
Franchise Fee	Fixed at \$50,000 annually.	Would adjust annually utilizing the same index employed to adjust the rates.

(A) See following page for 10yr CPI versus TI comparison.

(B) The Republic Sharps Mail Back Disposal Service is a simple, cost-effective, confidential way of disposing of used sharps and needles.



UNITED STATES DEPARTMENT OF LABOR - Index Comparisons

Annual Percent Change

Series Id: CUURA207SA0
Not Seasonally Adjusted
Area: Chicago-Gary-Kenosha, IL-IN-WI
Item: All items
Base Period: 1982-84=100
Years: 2003 to 2012

Series Id: CUUR0000SAT
Not Seasonally Adjusted
Area: U.S. city average
Item: Transportation
Base Period: 1982-84=100
Years: 2003 to 2012

3%-Min and 5%-Max Protections		# of Years
Year	Adjustment	
2003	3.0%	1
2004	3.0%	2
2005	3.0%	3
2006	3.0%	4
2007	3.3%	5
2008	3.8%	6
2009	3.0%	7
2010	3.0%	8
2011	3.0%	9
2012	3.0%	10

Average = 3.1%

0%-Min and 5%-Max Protections		# of Years
Year	Adjustment	
2003	2.0%	1
2004	2.0%	2
2005	2.3%	3
2006	2.4%	4
2007	2.5%	5
2008	3.3%	6
2009	2.3%	7
2010	2.5%	8
2011	3.4%	9
2012	3.7%	10

Average = 2.6%



PROSPECT HEIGHTS - Residential, Commercial and Industrial Pricing Matrices

PROSPECT HEIGHTS RESIDENTIAL PRICING (single family, townhomes and multi-family)

Single Family Homes (B)	\$ 17.27	includes trash, recyclables and yard waste
Townhomes (B)	\$ 10.33	includes trash and recyclables
Multi-Family Homes	\$ 8.46	includes trash and recyclables

Monthly Rates
Container Size
95 Gallon Cart
1 Yard Container
2 Yard Container
3 Yard Container
4 Yard Container
6 Yard Container
8 Yard Container
10 Yard Container
4 Yard Compactor Container
6 Yard Compactor Container

PROSPECT HEIGHTS COMMERCIAL REFUSE PRICING MATRIX						
Frequency of Pickups per Week						
1	2	3	4	5	6	
\$ 34	\$ 59	\$ 83	\$ 108	\$ 126	\$ 145	
\$ 62	\$ 111	\$ 161	\$ 212	\$ 244	\$ 303	
\$ 71	\$ 130	\$ 190	\$ 249	\$ 291	\$ 356	
\$ 82	\$ 152	\$ 221	\$ 290	\$ 352	\$ 417	
\$ 94	\$ 174	\$ 251	\$ 331	\$ 411	\$ 479	
\$ 117	\$ 215	\$ 315	\$ 412	\$ 510	\$ 620	
\$ 141	\$ 260	\$ 376	\$ 494	\$ 611	\$ 740	
\$ 163	\$ 300	\$ 438	\$ 573	\$ 713	\$ 858	
\$ 183	\$ 316	\$ 512	\$ 680	\$ 846	\$ 999	
\$ 244	\$ 471	\$ 694	\$ 921	\$ 1,146	\$ 1,382	

Monthly Rates
Container Size
95 Gallon Cart
1 Yard Container
2 Yard Container
3 Yard Container
4 Yard Container
6 Yard Container
8 Yard Container
10 Yard Container
4 Yard Compactor Container
6 Yard Compactor Container

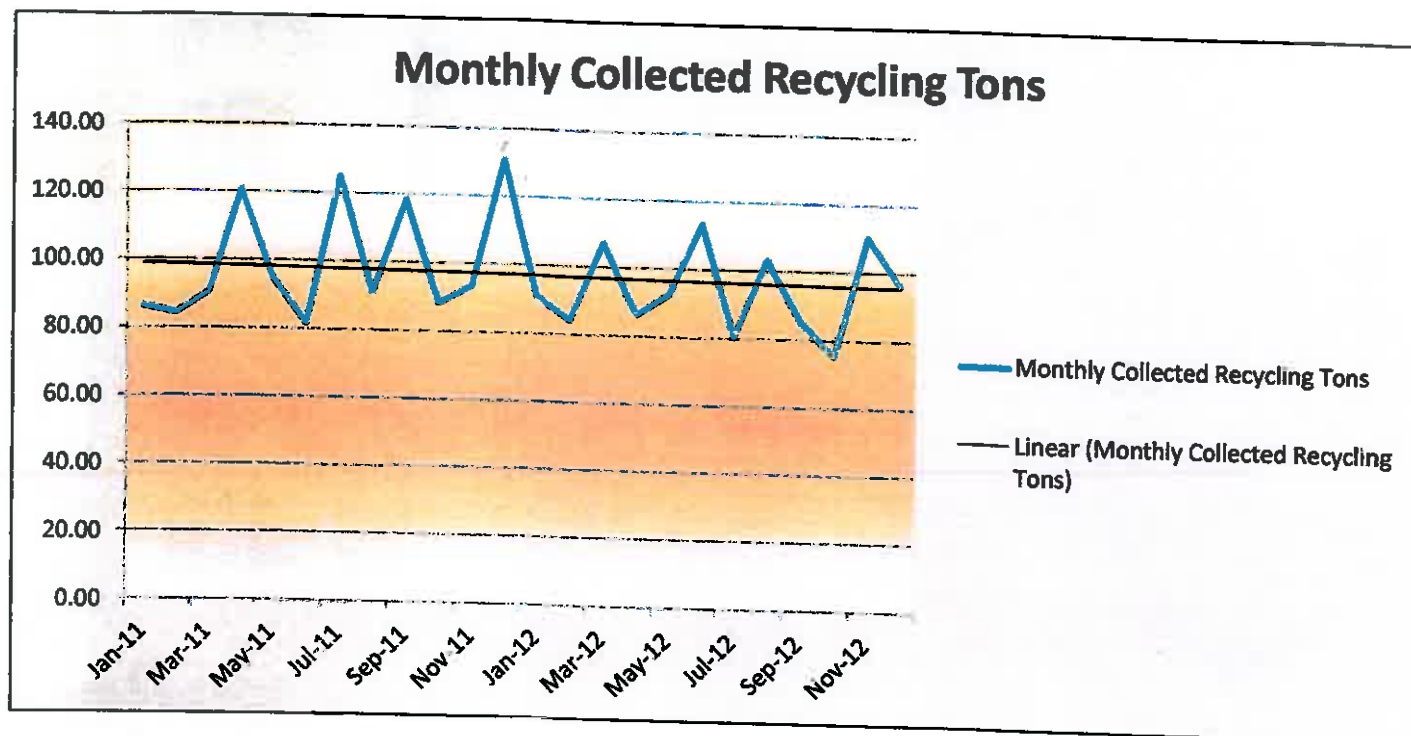
PROSPECT HEIGHTS COMMERCIAL RECYCLING PRICING MATRIX						
Frequency of Pickups per Week						
1	2	3	4	5	6	
\$ 27	\$ 43	\$ 64	\$ 80	\$ 94	\$ 108	
\$ 43	\$ 73	\$ 102	\$ 128	\$ 155	\$ 193	
\$ 48	\$ 78	\$ 109	\$ 138	\$ 168	\$ 205	
\$ 55	\$ 85	\$ 117	\$ 148	\$ 180	\$ 219	
\$ 58	\$ 91	\$ 123	\$ 156	\$ 188	\$ 229	
\$ 67	\$ 103	\$ 138	\$ 175	\$ 211	\$ 253	
\$ 76	\$ 115	\$ 153	\$ 193	\$ 233	\$ 277	
\$ 83	\$ 126	\$ 169	\$ 211	\$ 251	\$ 302	
\$ 123	\$ 170	\$ 283	\$ 365	\$ 447	\$ 514	
\$ 155	\$ 254	\$ 351	\$ 450	\$ 547	\$ 656	

INDUSTRIAL (Roll-Off Containers)

Hauling Charge per Pull	\$ 177.00
Disposal Charge per Ton	\$ 47.00

(A) The rates above represent the actual rates for the period July 2013 through June 2014 (rates, beginning, July 1, 2014, may vary slightly based upon the chosen adjustment index).

(B) There is a 25% senior discount available with these two rate categories.

PROSPECT HEIGHTS - Two Year Recyclables Collection Totals (2011 and 2012)

Republic Pricing

2013 Proposal

							<u>With</u> <u>July 1</u> <u>Increase</u>				<u>Proposed</u> <u>2013</u> <u>Pricing</u>		
	<u>2011</u>	<u>SWANCC</u>	<u>Total</u>	<u>2012</u>	<u>SWANCC</u>	<u>Total</u>	<u>2013</u>	<u>SWANCC</u>	<u>Total</u>			<u>SWANCC</u>	<u>Total</u>
Single Family	16.76	9.52	\$26.28	17.25	9.52	\$26.77	17.75	9.52	\$27.27		17.27	9.52	\$26.79
Multi-Family	8.24	5.73	\$13.97	8.48	5.73	\$14.21	8.73	5.73	\$14.46		8.46	5.73	\$14.19
Townhome	10.01	5.73	\$15.74	10.30	5.73	\$16.03	10.60	5.73	\$16.33		10.33	5.73	\$16.06
Commercial		5.00yd			6.00 yd			6.00yd				6.00yd	

SWANCC Fees have remained the same since 2010.



To: Mayor Nicholas J. Helmer, City of Prospect Heights City Council

From: Anne Marrin, City Administrator

Date: July 8, 2013

Re: Draft Water Study-Baxter Woodman

The Council approved a study that will assist in moving forward with water in either Special Service areas or the entire City of Prospect Heights. Baxter Woodman was commissioned to conduct a study that encompassed 3 levels of review. Steve Verseman of Baxter Woodman will be presenting the study and answering any questions you may have.

City of Prospect Heights, Illinois
2013 Water System Study

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- B Opinion of Probable Construction Cost for Water Supply Improvements for any Expansion of the Water System and for the entire Planning Area
- C Opinion of Probable Construction Cost for Water Storage Facility Improvements for any Expansion of the Water System and for the entire Planning Area
- D Opinion of Probable Construction Cost for Water Distribution System Improvements for an Expansion Area approximately equal to proposed SSA 9 (400 users)
- E Opinion of Probable Construction Cost for Water Distribution System Improvements for the entire Expansion Area

EXHIBIT

Exhibit

- 1 Planning Area and Expansion Area

EXECUTIVE SUMMARY

This Executive Summary provides highlights of the findings, conclusions and recommendations of this 2013 Water System Study.

1. The City of Prospect Heights retained Baxter & Woodman, Inc. to complete the 2013 Water System Study for an expansion of the City's existing water system to provide Lake Michigan water to the areas of the City currently served by private water wells or other Lake Michigan water providers.
2. The City of Prospect Heights owns and operates two supply connections with the Illinois-American Water Company; two ground storage reservoirs and a pumping station with re-chlorination equipment; and a water distribution system in the Rob Roy development, along Camp McDonald Road, Wheeling Road, and Casa Court, and in the Lake Claire subdivision. The City's existing water system has approximately 1,080 service connections serving about 2,700 people.
3. The City is considering a Special Service Area 9 (SSA 9) project to install water mains west of Wheeling Road, which will increase the size of the existing water distribution system.
4. The City has adequate water supply and treatment facilities to meet existing and future demands.
5. The City will need additional storage facilities to serve Special Service Area 9 and future expansion of the system.
6. The City is considering a future expansion of the water system to include all areas of the City currently served by private water wells. There are approximately 2,140 residences (6,500 people) and commercial and institutional development to be served with an expansion of the existing system.
7. A water distribution system map and computer model was previously created to determine water main locations, sizes and capabilities to meet the ultimate goal of a Lake Michigan water supply for the Planning Area. The computer model was used to size water mains to provide adequate water volumes, flow rates and pressure for normal daily demands and fire protection. The expansion of the distribution system would include 12-inch and 8-inch water mains, valves, fire hydrants and service connections.
8. Additional water storage facilities consisting of two 750,000 gallon elevated water storage tanks would provide the City with adequate reserve storage capacity for emergencies and temporary supply interruptions. Several potential elevated storage tank locations have been identified and final site selection would be based on land availability and property acquisition.

9. Cost estimates were developed for improvements to expand the existing water supply, storage and distribution system for five sizes or phases of expansion. The sizes consisted of 300, 400, 500, 1,000 and 2,200 users. For the sake of space in this Executive Summary, the following is a summary of the opinions of probable cost for the 400 user (SSA 9) size and the 2,200 user (Ultimate Expansion) size:

Description	400 Users	2,200 Users
Water Supply Improvements	\$ 375,000	\$ 375,000
Water Storage Facility Improvements	\$ 1,900,000	\$ 3,665,000
Water Distribution System Improvements	<u>\$ 9,077,000</u>	<u>\$ 54,313,000</u>
Construction Cost Subtotal	\$ 11,352,000	\$ 58,353,000
Contingency	<u>\$ 2,306,000</u>	<u>\$ 11,671,000</u>
Opinion of Probable Construction Cost	\$ 13,658,000	\$ 70,024,000
Engineering	\$ 2,583,000	\$ 10,504,000
Legal and Administrative	<u>\$ 121,000</u>	<u>\$ 351,000</u>
Opinion of Probable Total Project Cost	\$ 16,362,000	\$ 80,879,000

The opinions of probable cost for the other three sizes/phases of water system expansion can be found in Appendix A of this report.

10. We recommend the City of Prospect Heights use this report for the planning, design and construction of water system facilities in Special Service Area 9 and future expansions to serve all areas within the City currently served by private wells and neighboring municipal water supplies.

INTRODUCTION

1.1 Study Purpose and Scope

The purposes of this Water System Study were to:

- Review the City's Water System Master Plan, Water Rate Study, Special Service Area 9 (SSA 9) Feasibility Study, operation and maintenance records and information, and other relevant City water system documents;
- Evaluate the City of Prospect Heights' existing water supply, treatment, storage and distribution system to meet existing and future demands; and
- Identify and recommend improvements to expand the City's water system.

Evaluation of the expansion of the City's water system was to include a Sensitivity Analysis based on adding 300, 400, 500, 1,000, and 2,200 users to the system. The Evaluations are discussed in the following sections and the Sensitivity Analysis is included as Appendix A of this report.

This Study report can be used as a planning tool for the City of Prospect Heights, and provides sizes and general locations of water mains and water storage facilities required for expansion of the City's water system into areas currently served by private wells.

1.2 Planning Area

1.2.1 Boundaries - The Planning Area includes all areas within the City west of the railroad tracks and the small area south of Old Willow Road, from Wolf Road to the eastern City limits currently served by, or potentially served by an expansion of, the City's water system. The Planning Area includes 1) the Existing Area already served by the City of Prospect Heights' water system; specifically a) the Rob Roy and neighboring developments, b) the residential development along Casa Court and c) Special Service Area 6 (Lake Claire); and 2) the Expansion Area; specifically a) the small, isolated commercial and governmental services area served with Village of Mount Prospect water, b) the schools, commercial and

other properties served by neighboring municipalities, but within City limits, and c) all properties currently served by private wells. Exhibit 1 enclosed in the back of this report is a map of the Planning Area showing the areas served by the existing water system and the Expansion Area of the water distribution system.

1.2.2 Land Use - Land use within the Planning Area currently includes single family, and some low density multi-family, residential development; commercial development near Rand Road and Willow Road; City Hall, Police Station, Prospect Heights Fire Protection District (PHFD) building and Walgreens at Elmhurst Road and Camp McDonald Road; and churches and schools. In addition, there may be some minor infill commercial development at the intersections of some of the major roads within the City. The City of Prospect Heights is almost completely developed, except for some isolated vacant lots and unincorporated parcels located within or adjacent to existing City limits.

1.3 Water Distribution System Model

Baxter & Woodman previously developed a WaterCAD® water distribution system computer model of the City's water distribution system. The WaterCAD® model was used to determine recommended water main sizes to provide residential fire flow rates of 1,500 gallons per minute (gpm) and commercial area fire flow rates of 3,500 gpm, as well as normal daily water usage throughout the City's existing and future water system.

1.4 Population versus Population Equivalent

This Water System Study uses population equivalents (PE) to calculate existing and future capacity requirements. In general terms, a PE is a measure of water use applicable to both residential and non-residential use. For residential use, a flow of 100 gallons per capita

per day (gpcpd) is used for sizing of water system facilities. In the case of non-residential use, a PE value is determined based on typical water usage for commercial or institutional customers. Because of the types of non-residential uses in the City of Prospect Heights and the lack of specific non-residential water use, a value of 10 PE per acre was used for non-residential development and a value of 20 gallons per student/staff per day was used for schools. These values are based on typical average non-residential water use seen in other municipal water systems.

EXISTING CONDITIONS

2.1 Population

The City of Prospect Heights is essentially fully developed, except for some isolated parcels throughout the City. The small increase in population and water demand attributable to any future development or annexation is negligible in sizing the water system facilities. The 2010 population of the City was approximately 16,300; with approximately 10,000 residents, and a few non-residential buildings at Elmhurst Road and Camp McDonald Road, are already served with Lake Michigan water.

The portion of the Planning Area population to be served by a new, expansion of the City's water system is estimated to be approximately 6,500 people living in approximately 2,140 single family houses. This population and number of houses are based on the previous 2000 population of 17,081 and the number of existing homes determined in the 2007 Water System Master Plan. In addition there are approximately 60 acres of commercial development near the intersection of Rand Road and Willow Road and another 20 acres of non-residential development/potential development interspersed throughout the rest of the Planning Area.

2.2 Existing Water Supply

The City of Prospect Heights receives Lake Michigan water from the Illinois-American Water Company (IAWC) through a 12-inch connection on Camp McDonald Road and a 6-inch connection on Euclid Avenue. Water flows into the City's water system at the two ground storage reservoirs at the pumping station on Camp McDonald Road.

Water is pumped out of the ground storage reservoirs using one or more of the four existing pumps at the pumping station. The four pumps have the following capacities:

Pump No. 1 (Variable speed)	150 gallons per minute
Pump No. 2 (Variable speed)	350 gallons per minute
Pump No. 3 (Constant speed)	2,000 gallons per minute
Pump No. 4 (Constant speed)	2,000 gallons per minute

When water pressure in the City's distribution system falls below approximately 50 pounds per square inch (psi) due to increased water usage; one of the variable speed pumps operates to increase water pressure. Operation of the pumps at the pumping station may or may not close the IAWC supply connections depending on the pressure and flow rate of the pumps, but during the time any of the pumps operate, the ground storage reservoirs are not being filled.

There are times when the pumps operate to draw water out of the reservoirs and when the pumps are shut off to allow the reservoirs to fill. This circulation of water in and out of the reservoirs eliminates stagnation of the water in the reservoirs, thereby providing higher quality water to the City's water customers.

The City's supply of water through the two connections is approximately 1,850 gpm. This supply flow rate is less than the 2,500 to 3,000 gpm fire flow rate suggested by the PHFD for the multi-family residences within the Rob Roy development. Therefore, the pumping station must be used to provide adequate flow rates for firefighting.

City residents and businesses not currently served with Lake Michigan water obtain their water from private water wells on each individual property. Fire protection is provided by the PHFD with pumper/tank trucks obtaining water from the nearest public water supply or ponds/lakes in the area.

2.3 Existing Water Usage

A water system's total water usage includes not only the quantity of water actually metered and billed to customers; but also water used at the treatment plant, water main and service line leakage, water not registered on individual meters, and water used for water and sewerage system maintenance, fire protection and construction. The City's Public Works Water Department provided us with an average daily total water usage of 142,700 gallons per day (gpd) for 2012.

2.4 Existing Water Treatment

The City monitors chlorine levels in the water leaving the pumping station, and if required, re-chlorinates the water to meet Illinois Environmental Protection Agency (IEPA) standards. The re-chlorination system is automatic, and consists of a chlorine analyzer to determine the chlorine concentration in the water and chlorine supply equipment to add chlorine to the water as required.

Lake Michigan water supplied by the Village of Mount Prospect at the intersection of Elmhurst Road and Camp McDonald Road is previously treated water and does not require any additional treatment due to its immediate use by the various commercial and governmental buildings at this intersection.

Any treatment of private well water is done on an individual basis as determined by the property owner or water user.

2.5 Existing Water Storage

The City of Prospect Heights has two ground storage reservoirs located on Camp McDonald Road at the northeast corner of the Rob Roy development. The east tank has a

300,000 gallon capacity, while the west tank has a 250,000 gallon capacity for a combined capacity of 550,000 gallons. These two tanks can be operated individually to allow maintenance of one tank while the other tank provides water storage capabilities.

2.6 Existing Water Distribution System

A water distribution system has two main functions: (1) to convey water at adequate pressure and flow rates to meet daily demands; and (2) to convey water to meet required fire suppression flow rates while maintaining minimum water pressure. To meet these two needs, water mains must be sized to meet fire suppression flow rates. The computer model of the City's existing and proposed water distribution systems was previously used to determine the sizes of the water mains. A map of the City's water distribution system and the water distribution system for the Expansion Area is shown in Exhibit 1.

In addition to adequate sizing of water mains, the distribution system must operate with a hydraulic grade line (pressure) adequate to provide desired system pressure, without excessive pressure. The static hydraulic grade line of a water system would be equal to the elevation of the water surface in an elevated water storage tank, if an elevated tank was present in the system.

The water pressure at any point in the distribution system is the difference between the operating "hydraulic grade" and the ground elevation at that point. The hydraulic grade in the Prospect Heights existing system is established by the water pressure of the IAWC supply connections or by the pump(s) at the pumping station. The hydraulic grade/pressure established by the pumping station is controlled by a system which increases or decreases the speed of the variable speed pump(s) to meet changes in demand.

2.7 Water Rates

As part of this Study, we reviewed the City's 2012 Water Rate Study. We agree with the methodology of the Water Rate Study and with the recommendations made in the Water Rate Study. Water rates need to provide funding for operation expenses and several reserve accounts, and the City should be moving toward annual reviews and increases in water rates as required and based on those reviews.

As discussed in the Water Rate Study, the largest portion of water rates is related to the cost of water purchased from the IAWC. A clear summary of the various items which make up a monthly water bill allow customers to understand approximately half of their water bill is a pass-through cost from IAWC, which is not under the control of the City.

The Water Rate Study stated there were no planned expansions to the City's water system through 2017. This statement may or may not be true depending on the process and progress of the SSA 9 project. This Study's work and this report may be used to facilitate the implementation of SSA 9 and its construction.

FUTURE CONDITIONS

3.1 Study Area

Descriptions of the Planning Area and Expansion Area limits, land use, population and non-residential PE used in this Water System Study report are contained in Sections 1 and 2 above.

3.2 Residential Population

The population of the City of Prospect Heights is currently listed as 16,300. As discussed previously, the population of Prospect Heights could increase from the current population to a population similar to that of the 2000 Census, or about 17,100 or slightly higher. The Planning Area population to be served by a new, expanded water system is estimated to be approximately 6,500 people living in approximately 2,140 single family houses.

3.3 Non-Residential Development

As with the residential population, the non-residential PE is expected to remain fairly constant for existing and future conditions. There are approximately 60 acres of commercial development around the intersection of Rand Road and Willow Road and another 20 acres spread throughout the rest of the Planning Area.

3.4 Future Water Usage

3.4.1 Residential Water Usage - The population to be served by the expanded water system was estimated by the City in 2007 to be approximately 6,500 people. Using an average water usage of 100 gpcpd, the Average Daily Demand (ADD) for residential customers would be approximately 650,000 gallons.

3.4.2 Non-residential Water Usage - As discussed previously, there are approximately 80 acres of commercial development and 4 schools in the City of Prospect Heights. The commercial development is estimated to have a PE of 10 PE per acre for a total ADD of 800 PE, or 80,000 gpd. The schools have an estimated student and staff population of approximately 1,600 people (1,490 students and 105 teachers). Water usage for schools with cafeterias, gymnasiums and showers is estimated at 20 gpcpd for a total ADD for the schools of 32,000 gpd (320 PE). Although the schools have existing Lake Michigan water supplies from various Lake Michigan water providers other than the City of Prospect Heights, it is prudent to include the schools as future customers and users of the City's water system. Therefore, the total non-residential water usage for the future water system expansion is estimated to be approximately 112,000 gpd, or 1,120 PE.

3.4.3 Total Water Usage and Demands - The total ADD for the water system expansion in the Planning Area is estimated to be approximately 952,000 gpd (144,000 gpd existing + 650,000 gpd residential + 112,000 gpd non-residential = 906,000 gpd), or 0.906 million gallons per day (MGD). These water usage and demand values are shown in the column for the Ultimate Expansion (2,200 users) in Appendix A of this report.

EVALUATION OF WATER SYSTEM FACILITIES

4.1 General Evaluation Criteria

The City's water system was analyzed for ADD, maximum daily demand (MDD) and peak hourly demand (PHD). In addition, flow rates and volumes for fire fighting purposes were also used to evaluate the water system.

The ADD for the City's ultimate expansion is 906,000 gpd, or 0.906 MGD.

The national average ratio of MDD to ADD is approximately 1.75. For smaller water systems such as Prospect Heights' system, the ratio should be increased because of increased variation in flow rates in a smaller system. For purposes of this Study, a ratio of 2.0 was used to analyze the system for future conditions. Therefore, the future MDD will be approximately 1,812,000 gpd, or 1.812 MGD.

Experience with other communities indicates PHDs are approximately 2.75 to 3.25 times ADD, and we have used a ratio of 3.0 for this Study. Therefore, the PHD for the expanded water system in the Planning Area is 2,718,000 gpd, or 113,300 gallons per hour (gph).

The values for ADD, MDD, and PHD are shown in Lines 11, 12, and 13 of Appendix A for each of the five sizes of expansion (300, 400, 500, 1,000, and 2,200 users) to be analyzed, evaluated and included in the Sensitivity Analysis.

4.2 Lake Michigan Water Allocation

The IAWC and the City have an existing Water Supply Agreement with terms through the year 2020. IAWC is obligated to provide the quantity of water listed in the Agreement and as shown below:

**City of Prospect Heights, Illinois
2013 Water System Study**

TABLE 1

**City of Prospect Heights/Illinois-American Water Company
Water Supply Agreement Water Demands**

Accounting Period	Average Day Water Quantity (MGD)	Maximum Day Water Demand (MGD)
October 2006 – September 2007	0.57	1.14
October 2007 – September 2008	0.57	1.14
October 2008 – September 2009	0.57	1.14
October 2009 – September 2010	0.57	1.14
October 2010 – September 2020	0.94	1.88

As stated in the City/IAWC Agreement, the quantity of Lake Michigan water taken by the City in any one accounting period may be up to 15 percent more than the Average Day Water Quantity for the corresponding accounting period. Also, in any given day IAWC may transmit more than the Maximum Day Water Demand, although IAWC is not obligated to supply more than one day of Maximum Day Water Demand during any one accounting period.

The ADD and MDD for the expanded water system are 0.906 MGD and 1.812 MGD, respectively. Even without the additional 15 percent increase in the Average Day Water Quantity; the available 0.94 MGD water supply and Lake Michigan Water Allocation is more than adequate for the 0.906 MGD ADD. As shown in the above table, the 1.88 MGD on any given maximum day is more than adequate for the MDD of 1.812 MGD. These values are also shown in Appendix A in Lines 14A and 14B, along with notes to indicate the IAWC water supply is adequate for the ultimate expansion of the City's water system.

4.3 Lake Michigan Water Supply

As discussed above, the Lake Michigan Water Allocation is adequate for the City's normal water consumption, but the actual supply/connection capacities need to be evaluated. A comparison of supply capacities and daily demands is included in Appendix A as Line 15C, with notes to indicate the adequacy or deficiency of the City's water supply system. As shown in Appendix A, the City's supply connections will not provide enough water to meet future demands with the largest (the 12-inch water main along Camp McDonald Road) supply out of service. In that case, the City would need to implement emergency water restrictions to minimize water use, or rely on additional storage facilities to provide water needed for MDDs.

If the supply from Mount Prospect is included in the City's water supply, which it should be with the SSA 9 expansion to Elmhurst Road and Camp McDonald Road; additional water would be available to meet daily demands. As shown in Line 16D of Appendix A, the ADD for ultimate expansion could be met even with the proposed 12-inch supply connection out of service, but the MDD still could not be provided. Therefore, the supply connection with Mount Prospect should be reconfigured as a secondary/redundant supply of Lake Michigan water as part of the expansion of the City's water system. Normally, all Lake Michigan water would be provided by IAWC, and the Mount Prospect connection would remain closed. The Mount Prospect supply connection would be used only in the event of a supply interruption from IAWC or other supply emergency, and upon notification from the City to the Village as established in an Intergovernmental Agreement.

Many communities with Lake Michigan water do not have adequately sized redundant water supplies and establish interconnections with neighboring communities for secondary/emergency water supplies. The ultimate expansion of the water system could, and should, include interconnections to neighboring municipal water systems to provide a reliable water supply for the City's water system.

We also evaluated the existing pumping station and pump capacity relative to PHD and fire flows. As shown in Line 17E of Appendix A, the existing pumps will be deficient in providing adequate fire flows for the expansion of the water system. Recommendations to increase the water supply for fire protection include replacing the pumps and motors and/or construct an elevated tank(s), and will be discussed in the next section of this report.

4.4 Treatment Facilities

Water treatment for the future water system would continue to consist of re-chlorination facilities at the pumping station. The capacity of the equipment would need to be increased, but the scheme of analyzing the water being pumped from the ground storage reservoirs and adding chlorine as required would remain the same.

It is anticipated elevated water storage tanks would be constructed as part of the expanded water system. Operation of the pumping station, water system and elevated tanks would include regular and consistent drawdown of the ground storage reservoirs and elevated tank(s) during the day, and filling of the reservoirs and elevated tank(s) during the night to ensure a constant turnover of water in the storage facilities.

Future water system operation would determine the amount of re-chlorination needed in the system, but it is anticipated the volume of water in the elevated water storage tanks and

in the water distribution system would result in a need for re-chlorination. Re-chlorination facilities should be included as part of any elevated water storage tank construction.

4.5 Storage Facilities

Water storage facilities provide the following: (1) Water to meet PHDs, (2) Water for fire protection, (3) Water as reserve capacity for consumption during peak flow events and/or emergencies, and (4) Water during periods when the supply is interrupted for an extended period of time. The volumes of water to be stored for the first three purposes are cumulative as their need may occur simultaneously. The volume required for the supply interruptions is often significant and it would be combined with the maximum volume required for any one of the first three purposes to provide a volume of water to meet any anticipated demand or emergency situation.

4.5.1 Peak Hourly Demand

Storage facilities should be capable of providing the difference between the water supply rate and the PHD for a specific length of time. We recommend storage facility volume be sufficient to provide the difference in the water supply rate and the PHD rate for a period of at least eight hours. The volumes of water to provide the PHD for the various sizes of water system expansion are shown in Appendix A, Line 19A.

4.5.2 Fire Flow Demand

The storage volume required for fire protection is dependent on the fire flow rate and the duration of the firefighting efforts. The maximum fire flow rate as established by the Insurance Services Office (ISO) is 3,500 gpm in commercial areas for a duration of 3 hours. In addition to ISO criteria, the PHFD has stated they are looking for a water system capable

of delivering 3,500 gpm to commercial, institutional (schools), and other non-residential development. Therefore, the maximum volume of water recommended for fire protection is 630,000 gallons ($3,500 \text{ gpm} \times 60 \text{ minutes/hour} \times 3 \text{ hours} = 630,000 \text{ gallons}$). The volumes of water needed for fire protection in the existing and water system expansions are shown in Appendix A in Line 19C.

4.5.3 Reserve Capacity - The third concurrent purpose of storage is to provide a reserve supply of water to meet the consumption demands during emergencies. Normally, about 20 percent of the total storage capacity is reserved for this purpose. Mathematically, the reserve capacity would be equal to 25% of the volume required for PHD and fire protection. The volumes of water needed for reserve capacity in the existing and water system expansions are shown in Appendix A, Line 19D.

4.5.4 Cumulative Storage

As mentioned above, volumes of water to be stored for the three purposes of PHD, fire protection, and a reserve capacity are cumulative as their need may occur simultaneously. As shown in Appendix A, the Sensitivity Analysis, Line 19E existing storage facilities are deficient for any expansion of the water system. Therefore, additional storage facilities will be required, and will be discussed in Section 5 of this report.

4.5.5 Supply Interruption

A water system's storage facilities should also provide an adequate volume of water to provide water to the system in the event of an interruption to the water supply. Current regulations of the State of Illinois require a minimum of one day of ADD to be in storage. However, many communities, water providers and consulting engineers consider it prudent

to have at least two days of ADD in storage. We recommend the City have at least two days of ADD, plus the volume required to meet the maximum of the first three purposes of storage facilities discussed above. This volume can be reduced with a reliable source of water being available for the two day interruption of the normal supply of water.

As discussed previously, future expansion of the City's water system should include the reconfiguration of the Mount Prospect connection as an emergency water supply for the City. This would provide a secondary, reliable water supply because it would be highly unlikely that both the IAWC and Mount Prospect supplies would be interrupted at the same time as these two Lake Michigan water providers obtain their water from two separate sources.

A reasonable estimate of the capacity of the 8-inch Mount Prospect connection is approximately 450 gpm, or a volume of approximately 1,296,000 gallons over a two day period. This emergency supply of water would reduce the total required volume of water storage to be provided for supply interruptions in the expansion of the water system.

The volumes of water to be in storage for a supply interruption, in addition to the largest volume for PHD, fire protection or reserve capacity, are shown in Appendix A, Line 20B. These values are the total volume of storage required if the IAWC supply connections were out of service at the same time, but with the Mount Prospect emergency connection in operation.

4.5.6 Required Storage

As shown in Line 19E of Appendix A, even the existing ground storage reservoirs are marginally deficient for existing needs. Therefore, any expansion to the City's water system

needs to include at least one additional storage facility as discussed below. The ultimate expansion of the water system would require 1,208,000 gallons of total storage volume with the largest storage facility out of service as shown in Line 20B of Appendix A.

The City currently has two ground storage reservoirs at the Camp McDonald Road pumping station with a combined volume of 550,000 gallons. The ultimate expansion of the City's water system would require a total volume of 1,208,000 gallons, leaving a future requirement of approximately 658,000 gallons of additional storage (1,208,000 gallons – 550,000 gallons = 658,000 gallons).

As shown in the Line 17E of Appendix A, the existing pumps at the pumping station are inadequately sized to provide fire flow rates for future expansion of the water system. A new water storage facility should either be provided with higher capacity pumps, or the new storage facility should be an elevated tank. An elevated tank provides adequate fire flows and pressures immediately upon demand because of the availability of a large volume of water held above the water distribution system.

Storage facilities are normally sized in increments of 100,000 gallons for small facilities up to approximately 500,000 gallons, and in increments of 250,000 gallons for larger structures. Therefore, the City's future water system should have an additional 750,000 gallons of water storage to provide the 658,000 gallons of additional storage.

At times, water storage reservoirs and elevated tanks must be taken out of service for repair or repainting, which can keep a reservoir or tank out of service for up to 4 or 6 months. In communities similar to Prospect Heights, it is often advisable to have sufficient storage to meet the storage requirements with the largest tank out of service. Consequently, it is

desirable to eventually have two new storage facilities, each with a capacity of 750,000 gallons. Communities with similar size and population of Prospect Heights, and even smaller communities, often have at least two elevated storage tanks as part of their water system.

Although it would be preferable to have the two future elevated tanks designed and constructed as one project, this is rarely economically feasible. It appears the second elevated tank should be considered near the time that approximately one half of the expansion area is provided with water mains. The location of the two elevated tanks and their connecting water mains, and the size of future expansion phases, would be determining factors as to when the second tank would be constructed.

4.6 Distribution System

Water distribution systems are designed to supply both domestic and fire suppression needs of a community. The sizes (diameters) of the pipes in the system are determined by the fire suppression flow rates because those rates are significantly higher than domestic needs. However, overly large distribution system mains can contribute to water quality problems if the water is allowed to stagnate in the pipes. Consequently, care must be taken to adequately size the mains to meet demands while maintaining a sufficient flow of water through the mains to maintain water quality.

4.6.1 Existing Distribution System Improvements

The existing water distribution system in the Rob Roy development; along Camp McDonald Road, Wheeling Road and Casa Court; and in the Lake Claire subdivision are

adequately sized to meet existing and future domestic and fire protection needs and no improvements to the existing system are necessary.

4.6.2 Future Distribution System for Expansion Area

The future water distribution system is shown schematically in Exhibit 1, as are the City's existing water mains. The locations of the water mains were previously discussed with City staff and the sizes were established with the City's WaterCAD® water system computer model. The layout of the water mains was meant to provide water main looping of larger diameter mains along the main roads and in commercial areas, and to provide smaller water mains to serve development along the City's local streets and throughout the neighborhoods.

DISCUSSION OF IMPROVEMENTS

5.1 General

Following are brief discussions of the improvements necessary for future expansions of the City's water system and for the entire Planning Area. More detailed discussions and descriptions were included in the 2007 Water System Master Plan.

5.2 Water Supply

Currently, the City usually uses IAWC water pressure as the hydraulic grade line for its distribution system. With continued expansion of the water system, the existing IAWC system pressure will not be adequate due to planned increased water pressure in the water distribution system. Two alternatives were considered to increase the water pressure; and a brief economic analysis of energy cost savings versus costs to remodel the pumping station as a booster pumping station, abandon the existing reservoirs, and increase the size of new storage facilities; was completed. That analysis showed the improvement costs of a booster pumping station exceeded the anticipated energy savings of the booster pumping station. The conclusion of the analysis was the existing pumping station and ground storage reservoirs should continue to be used as part of the City's water supply system.

The continued use of the existing pumping station with the higher pressure and increased pumping rates for the future water system would require modifications consisting of replacement pumps and motors, piping/plumbing changes, an upgraded electrical and motor drive system, and improvements to the supervisory control and data acquisition (SCADA) system. In addition, the existing IAWC water supply connection on Euclid

Avenue and the connection to Mount Prospect's water system should include provisions for temporary pumping equipment.

5.3 Water Treatment

As discussed above, Lake Michigan water received from IAWC is treated prior to delivery to the City, and the only treatment anticipated for the future water system would be re-chlorination facilities at the existing pumping station site. The operation of the expanded future water system may require re-chlorination facilities at the additional water storage facilities, but the need for such facilities could be determined after there is some operating history. The design and construction of future storage facilities should include provisions for treatment facilities consisting of re-chlorination equipment and piping.

5.4 Water Storage

To meet PHD and fire suppression demands throughout the City's water system, additional storage is required. As discussed previously, the recommended water system expansion includes two new storage facilities. The future water system should include elevated storage tanks to allow the system to "float" on the pressure provided by the elevated tanks.

The storage volume required for the future water system was determined to be 750,000 gallons provided by each one of two elevated water storage tanks for redundancy in the water storage facilities. The existing pumping station and ground storage reservoirs would continue to be used and would be controlled by the water level in one or both of the elevated tanks.

One of the challenges to locating elevated storage tanks is balancing the aesthetic and operational needs of the community. During a Water System Master Plan meeting with City staff, and another meeting with staff for this project, eight locations were selected as potential locations for elevated tanks. These potential locations are shown in Exhibit 1. The most advantageous site for an elevated tank was determined to be in the commercial development near the intersection of Rand Road and Willow Road. If possible, the second elevated tank should be located at one of the various sites along or near Palatine Road. Discussions with property owners and neighbors would dictate which sites could be acquired for siting of the elevated tanks.

5.5 Water Distribution System

The water distribution system expansion was developed and sized to provide adequate fire flow rates and domestic water supply with adequate pressure to all portions of the City. The distribution system is shown in Exhibit 1 and provides fire flow rates of 1,500 gpm for residential development and 3,500 gpm for commercial/institutional development at a minimum 20 psi residual pressure in the system during a large fire flow. Normal minimum pressure in the system would be 35 psi, with a maximum normal operating pressure of 75 psi.

The ultimate expansion of the water distribution system would consist of approximately 61,000 feet of 12-inch and 176,000 feet of 8-inch water main pipe; approximately 470 main line valves; approximately 770 fire hydrants, and the installation of approximately 2,200 water service lines and connections to the new water mains.

As shown in Exhibit 1, some portions of the water mains would be constructed outside City limits, through other municipal or unincorporated Cook County rights-of-way.

Following completion of the 2007 Water System Master Plan, concern has been expressed about dead-end water mains in cul-de-sacs. We have included additional 8-inch pipe to provide a looped water main in each cul-de-sac. The length of some of these looped water mains could be reduced at the time of final design by the acquisition of easements in various locations.

Approximately one half of the water mains are anticipated to be installed in open cut trenches, with the other half benefiting from trenchless technologies such as horizontal directional drilling and boring and jacking of casing pipes. Actual installation methods would be based on the results of soil borings, wetland delineations, and final alignment/location of the water mains. The design and construction of the distribution system would include site specific construction such as creek crossings, tree tunneling, sanitary and storm sewer replacement, and complete surface restoration.

5.6 Water System Operation and Permitting

The operation of the expanded water system would be similar to the existing system, although the addition of an elevated storage tank would require some changes. However, these changes would be mostly limited to the initial start-up of new pumps, pump control systems, and SCADA. Once operational, an elevated tank has minimal operation and maintenance requirements other than inspections and painting/coating. The new pumps, motors, and controls would function much as they do now. The additional water mains would function like existing water mains.

The engineer doing the design of the expanded system would work with the City's staff to determine the City's wishes and needs, and would design the system to meet those

conditions. There would be some startup time and effort, and most likely be some trial and error, in determining the pressures/tank levels used to control the pumps and re-chlorination system. The City's SCADA system would be expanded, and would most likely be used to control the system on a day-to-day basis.

Permitting of the project would include the usual IEPA – Division of Public Water Supplies permit(s) and Cook County highway permits. Depending on the size, location and pipe installation method of the project; Corps of Engineers, Illinois Department of Natural Resources, IEPA, IEPA-NOI and SWPPP permits might be required. In addition, in those locations where the water mains would be installed through other municipalities or in unincorporated Cook County, additional permitting would be necessary.

The City already has a water system, and the expansion of the system would not result in any additional or changed regulatory requirements. Once constructed, the expanded system would operate under an IEPA Operating Permit as currently operated. The additional facilities might increase reporting requirements, but there would be no undue or extraordinary regulatory impacts to the City or its Public Works Department.

ENGINEER'S OPINIONS OF PROBABLE COST

6.1 General

The opinions of probable cost presented in this report are based on 2013 costs. We recommend costs be reviewed and updated prior to the design and construction of each phase of water system expansion improvements.

Unit prices for water main construction were based on bids received for the City's SSA 6 project and were averaged and rounded to provide the unit prices in the Opinions of Probable Construction Cost. We then updated and increased costs using two sources of a Construction Cost Index.

The unit costs include mobilization and demobilization, general conditions, and overhead and profit. The bidding documents could include separate line items for these three items of work. If these items are included as line items in the bids, payment of these items should be based on the percentage of total project completed rather than an up-front payment when the Contractor begins construction.

6.2 Construction and Project Cost Summary

The supply, storage and water distribution facilities necessary to provide Lake Michigan water for the five sizes of water system expansion were discussed in various previous sections of this report. Detailed, itemized opinions of probable construction cost for these improvements are included as Appendices B, C, D and E.

Costs of improvements to the City's supply facilities are presented in Appendix B, and are included for each of the five sizes of system expansion in Appendix A of this report.

As shown in Appendix A, the supply improvements are the same for any and all sizes of the water system expansion.

Storage improvement costs are included in Appendix C. We have shown the cost to construct both elevated tanks as one project, and also a cost to construct one elevated tank as part of the first expansion of the water system. It is unlikely funding would be available to construct both elevated tanks and the connecting water mains between the tanks and the expanded water system. Therefore, the second tank has been considered to a portion of the ultimate expansion of the system; to be constructed once approximately 1,000 users have been added to the City's existing water system.

Construction costs for an expansion to serve 400 users and to serve 2,200 users are included in Appendix D and E, respectively. Pay item quantities were developed for the 400 and 2,200 user sizes of water system expansion because the former is approximately equal to the number of users in proposed SSA 9, while the latter is the ultimate expansion of water system. We also developed a detailed pay item list for the 300 user size, in addition to the 400 user list in Appendix D, because the general area of these two sizes of expansion were better defined than the 500 and 1,000 user sizes. As with the supply and storage improvements, Appendix A includes costs for the five various sizes of system expansion.

Appendix A includes costs for construction; contingency; engineering, including survey, design, permitting, construction administration, and observations of construction; and legal and administration for each of the five sizes of water system expansion. Table 2 is a summary of the construction and total project costs for the five sizes of expansion of the City's water system.

**City of Prospect Heights, Illinois
2013 Water System Study**

TABLE 2

Opinions of Probable Project Cost

<u>Description</u>	<u>300 Users</u>	<u>400 Users</u>	<u>500 Users</u>	<u>1,000 Users</u>	<u>2,200 Users</u>
Water Supply Improvements	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000
Water Storage Facility Improvements	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000	\$ 3,665,000
Water Distribution System Improvements	\$ 6,648,000	\$ 9,077,000	\$ 11,600,000	\$ 24,160,000	\$ 54,313,000
Construction Cost Subtotal	\$ 8,923,000	\$ 11,352,000	\$ 13,875,000	\$ 26,435,000	\$ 58,353,000
Contingency	\$ 1,785,000	\$ 2,306,000	\$ 2,826,000	\$ 5,428,000	\$ 11,671,000
Opinion of Probable Construction Cost	\$ 10,708,000	\$ 13,658,000	\$ 16,701,000	\$ 31,863,000	\$ 70,024,000
Engineering	\$ 2,142,000	\$ 2,583,000	\$ 3,023,000	\$ 5,223,000	\$ 10,504,000
Legal and Administrative	\$ 108,000	\$ 121,000	\$ 134,000	\$ 198,000	\$ 351,000
Opinion of Probable Total Project Cost	\$ 12,958,000	\$ 16,362,000	\$ 19,858,000	\$ 37,284,000	\$ 80,879,000

* The costs for the water storage facilities shown above do not include the cost of land acquisition. The locations of the tanks are unknown at this time; as is the zoning, land use or cooperation of the land owners of the potential sites. The land area needed to operate and maintain each of the two elevated tanks is approximately ¼ to ½ acre, while the total area temporarily needed for construction of each tank is between ¾ and 1-acre. The cost of the land acquisition could vary from high costs for commercial property to no cost for land donated to the City.

Though the scope of this Study did not include a determination or discussion of the cost of the project per user, we believe a brief discussion of cost per user trends in the Sensitivity Analysis is in order. The construction cost of water system improvements per user went up as the project size increased, which would usually not be expected. The ultimate expansion of the water system includes numerous water mains located along the City limits, with services on only one side of the water main. This makes the per user cost of the water mains up to twice as expensive as a typical water main located along a local, interior street with development on both sides of the street. These relatively expensive water mains for the ultimate expansion also increased the costs of the 500 and 1,000 user estimates because the costs for water distribution system improvements were interpolated between the 400 and 2,200 user costs.

The water distribution system improvement costs per user for the 300 user size of expansion were also less than the 400 user size. A review of the anticipated location of the additional 100 users indicated the additional length of water mains was not offset by a typical number of services. In addition, the relative percentage increase in HDD installed water mains combined with a limited number of service connections on one side of the water mains (water mains along Hillcrest Lake) all combined to increase the per user cost between the 400 user and 300 user sizes of expansion.

However, as expected, the opinion of probable construction cost per user went down as the size of the project increased. This was due to costs for the supply and storage facility

improvements being added to the water distribution system improvements. In addition, we accounted for reduced percentages for contingencies as the sizes of the projects increased.

As shown in Appendix A, we also reduced engineering and legal and administrative percentages as the size of the projects increased. This also reduced the costs per user as the project increased in size. Reducing percentages for these "soft" costs is common practice, and is based on costs being fixed regardless of the size of the project. For example, the cost to produce a set of specifications or detail sheets for a project is basically the same whether 100 feet of pipe or 10,000 feet of pipe is to be installed.

The costs presented in this report and appendices do not include any interest, bond, or consulting costs or fees to establish and administer a Special Services Area. The costs present herein are meant to provide a basis for any bonds or other funding of City of Prospect Heights water system expansions.

RECOMMENDATIONS

The following are our recommendations for the City of Prospect Heights:

1. Use this Study report for planning, design and construction of water system expansion facilities if the City decides to serve portions or all of the Expansion Area with Lake Michigan water. Exhibit 1 should be used to establish required water main sizes and locations for future Special Service Areas or other expansions of the water system.
2. At the time the next water system expansion design is imminent, and when construction would soon follow:
 - a. Enter into an Intergovernmental Agreement with Mount Prospect for the secondary (emergency) water system interconnection, if the expansion will include the intersection of Elmhurst Road and Camp McDonald Road.
 - b. File a notification with the Federal Aviation Administration during the planning/design phase of elevated tank project.
3. Determine if the Water Department budget can include future improvements consisting of flushing stations and sampling stations to minimize water quality problems, and to verify water quality, on dead-end mains. Consider an option to construct a second water main parallel to existing water mains along cul-de-sacs to loop dead-end water mains in cul-de-sacs.
4. Whether or not future water system expansions are constructed, adjust water user fees annually in accordance with recommendations in the City's 2012 Water Rate Study.

**City of Prospect Heights, Illinois
2013 Water System Study
Sensitivity Analysis**

1	Number of Water Users	Existing Water System 1,080	Water System Expansion Area (Number of Additional Users)									
			300		400		500		1,000		2,200	
			(Approx. equal to SSA 9)		(Approx. equal to SSA 9)		(Approx. equal to SSA 9)		(Approx. equal to SSA 9)		(Ultimate ⁵ Expansion)	
			Residential	Commercial and Institutional	Residential	Commercial and Institutional	Residential	Commercial and Institutional	Residential	Commercial and Institutional	Residential	Commercial and Institutional
2	Estimated Number of Residential Users	1,076	283		380		476		859		2,140	
3	Estimated Non-Residential Acreage	4		17		20		24		41		80
4	Estimated number of School students and staff	0		0		0		0		0		1,600
5	Residential PE	2,700	800		1,200		1,500		2,900		5,500	
6	Non-Residential PE	10		40		80		120		320		800
7	School PE (Upon completion of expansion)	0		0		0		0		0		320
8	PE for Existing City System based on Actual Average Daily Demand (ADD) for 2012	1,437	300		400		500		1,000		2,200	
9	PE for Expansion Area based on Ultimate PE total from 2007 Water Master Plan	0	940		1,280		1,620		3,220		7,620	
10	Total PE for Existing City and Expansion Area Water System	1,437	2,377		2,717		3,057		4,857		9,057	
11A	Average Daily Demand (ADD - gpd ¹)	144,000	238,000		272,000		306,000		488,000		906,000	
11B	Average Daily Demand (ADD - MGD ²)	0.144	0.238		0.272		0.306		0.488		0.906	
11C	Average Daily Demand (ADD - gpm ³)	100	170		190		220		330		630	
12A	Maximum Daily Demand (MDD - gpd)	288,000	476,000		544,000		612,000		932,000		1,812,000	
12B	Maximum Daily Demand (MDD - MGD)	0.288	0.476		0.544		0.612		0.932		1.812	
12C	Maximum Daily Demand (MDD - gpm)	200	340		380		430		650		1,280	
13A	Peak Hourly Demand (PHD - gph ⁴)	18,000	29,800		34,000		38,300		58,300		113,300	
13B	Peak Hourly Demand (PHD - gpm)	300	500		570		640		980		1,890	
Evaluation and Analyses:												
Illinois-American Water Company Supply												
14A	Lake Michigan Water Allocation - Average Day Compare to Line 14A to Line 11A - ADD	940,000	Adequate		Adequate		Adequate		Adequate		Adequate	
14B	Lake Michigan Water Allocation - Maximum Day Compare Line 14B to Line 12A - MDD	1,880,000	Adequate		Adequate		Adequate		Adequate		Adequate	
City Water Supply												
Existing Supply												
15A	IAWC - Camp McDonald Road 12" - gpm	1,400										
15B	IAWC - Euclid Avenue (Standby) 8" - gpm	450										
15C	Capacity of Existing Supply, with largest supply out of service - gpm	450										
	Compare Line 15C to Line 11C - ADD	Adequate	Adequate		Adequate		Adequate		Adequate		Deficient	
	Compare Line 15C to Line 12C - MDD	Adequate	Adequate		Adequate		Adequate		Deficient		Deficient	
Future Supply after water system expansion to the intersection of Elmhurst Road and Camp McDonald Road												
16A	IAWC - Camp McDonald Road 12" - gpm	1,400										
16B	IAWC - Euclid Avenue (Standby) 8" - gpm	450										
16C	Mount Prospect - Elmhurst Road - 8" - gpm	450										
16D	Capacity of Existing / Emergency Supply after expansion of water system, with largest supply out of service - gpm	800										
	Compare Line 16D to Line 11C - ADD	-	Adequate		Adequate		Adequate		Adequate		Adequate	
	Compare Line 16D to Line 12C - MDD	-	Adequate		Adequate		Adequate		Adequate		Deficient	

Footnotes:

- 1 gpd = gallons per day (volume)
- 2 MGD = Million Gallons per Day (volume)
- 3 gpm = gallons per minute (flow rate)
- 4 gph = gallons per hour (flow rate)
- 5 Does not include the area within the City of Prospect Heights served by the Illinois American Water Company

**City of Prospect Heights, Illinois
2013 Water System Study
Sensitivity Analysis**

		Existing Water System	Water System Expansion Area (Number of Additional Users)				
1	Number of Water Users	1,080	300	400 (Approx. equal to SSA 9)	500	1,000	2,200 (Ultimate ⁵ Expansion)
Evaluation and Analyses (continued):							
City Water Supply (Continued)							
Flow Rates for PHD and Fire Protection compared to City's existing pumping station (only one of Pump Nos. 3 or 4 operates at a time)							
17A	Pump No. 1 (Variable speed)	150					
17B	Pump No. 2 (Variable speed)	350					
17C	Pump No. 3 (Constant speed)	2,000					
17D	Pump No. 4 (Constant speed)	2,000					
17E	Capacity of Existing Supply Pumps with largest pump out of service - gpm	2,500					
Compare Line 17E to Line 13B - PHD		Adequate	Adequate	Adequate	Adequate	Adequate	Adequate
Compare Line 17E to Line 14 - MFFR		Adequate	Adequate *	Deficient	Deficient	Deficient	Deficient
* Adequate if expansion does not include any commercial or institutional users.							
City Water Storage							
18	Capacity of Existing Water Storage - gallons	550,000					
Storage to meet PHDs							
19A	8 hours of PHD less the supply rate - gallons	N.A.	24,000	58,000	92,000	255,000	692,000
Storage for Fire Protection							
19B	Maximum Fire Flow Rate (MFFR - gpm)	2,600	3,500	3,500	3,500	3,500	3,500
19C	Three Hours of MFFR - gallons	450,000	630,000	630,000	630,000	630,000	630,000
Storage for Reserve Capacity							
19D	20% of total storage capacity = 25% of the water storage for PHD and fire protection	113,000	164,000	172,000	181,000	222,000	331,000
Storage for PHD, Fire Protection, and Reserve							
19E	Total Storage Volume for PHD, fire protection and reserve capacity	563,000	818,000	860,000	903,000	1,107,000	1,653,000
Compare Line 19E to Line 18		Marginal	Deficient	Deficient	Deficient	Deficient	Deficient
Storage for Supply Interruption							
20A	2 days of ADD	288,000	478,000	544,000	612,000	832,000	1,812,000
20B	Total Storage Volume needed for 2 days of ADD less reliable supply, plus the largest volume of water for PHD, fire protection or reserve capacity	738,000	Supply exceeds storage needed	Supply exceeds storage needed	Supply exceeds storage needed	286,000	1,208,000
Compare Line 20B to Line 18		Deficient	Adequate	Adequate	Adequate	Adequate	Deficient
Opinions of Probable Project Cost							
Construction:							
Water Supply Improvements		-	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000
Water Storage Facility Improvements		-	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000	\$ 1,900,000	\$ 3,865,000
Water Distribution System Improvements		-	\$ 6,648,000	\$ 9,077,000	\$ 11,600,000	\$ 24,160,000	\$ 64,313,000
Construction Cost Subtotal		-	\$ 8,923,000	\$ 11,362,000	\$ 13,875,000	\$ 26,435,000	\$ 58,353,000
Contingency (20% down to 15%) ⁶		-	\$ 1,785,000	\$ 2,308,000	\$ 2,826,000	\$ 5,428,000	\$ 11,671,000
Opinion of Probable Construction Cost			\$ 10,708,000	\$ 13,688,000	\$ 16,701,000	\$ 31,863,000	\$ 70,024,000
Engineering - Survey, Geotechnical, SUE		-	\$ 2,142,000	\$ 2,583,000	\$ 3,023,000	\$ 6,223,000	\$ 10,504,000
Locates, Design, Permitting and Construction (20% down to 15%) ⁶							
Legal and Administrative (1% down to 0.5%) ⁴		-	\$ 108,000	\$ 121,000	\$ 134,000	\$ 188,000	\$ 351,000
Opinion of Probable Total Project Cost		-	\$ 12,958,000	\$ 16,362,000	\$ 19,858,000	\$ 37,284,000	\$ 80,679,000
The Opinions of Probable Total Project Cost do not include easement acquisition, land purchase, or utility relocations.							

Footnotes:

- ⁵ Does not include the area within the City of Prospect Heights served by the Illinois American Water Company
- ⁶ Varying percentages of contingency were used based on the size of the project because the majority of the construction cost subtotal is based on the detailed Water Distribution System Expansion costs shown in Appendices D and E, which reduce the number and costs of unknown items of work. 20% was used for the smaller project of a 300 user phase, while 15% was used for the large project of a 2,200 user ultimate expansion.

**City of Prospect Heights, Illinois
2013 Water System Study**

APPENDIX B

**Opinion of Probable Construction Cost for Water Supply Improvements
for any Expansion of the Water System and for the entire Planning Area**

Item No.	Description	Quantity	Unit	Unit Price	Amount
Pumping Station with higher capacity/pressure pumps:					
1.	Upgrade/Replace Pumps and Motors 700 gpm at 200 feet TDH	4	each	\$ 30,000	\$ 120,000
2.	Upgrade Electrical System, with motor drives, wiring, etc.			Lump Sum	\$ 70,000
3.	Upgrade/Replace Controls			Lump Sum	\$ 15,000
4.	Provide and Install SCADA system between elevated tanks and ground storage tanks			Lump Sum	\$ 50,000
5.	Emergency Power is provided by dual feed from ComEd and is already in place				\$ -
	Subtotal for Improvements to Pumping Station				\$ 255,000
IAWC supply connection at Euclid Avenue for emergency supply:					
1.	Cut existing supply main and install bends with thrust blocks, elbows with restraint structure, valves, and quick connect fittings			Lump Sum	\$ 25,000
2.	Modify existing site, install concrete pad, driveway, landscaping, controlled environment enclosure, and security with SCADA connection			Lump Sum	\$ 40,000
	Subtotal for Euclid Avenue Emergency Supply Connection				\$ 65,000
Mount Prospect connection at Camp McDonald Road/Elmhurst Road for emergency supply:					
1.	Cut supply main and install bends with thrust blocks, elbows with restraint structure, valves, and quick connect fittings			Lump Sum	\$ 25,000
2.	Install concrete pad, driveway, landscaping, controlled environment enclosure, and security with SCADA connection			Lump Sum	\$ 30,000
	Subtotal for Mount Prospect Emergency Supply Connection				\$ 55,000
OPINION OF PROBABLE CONSTRUCTION COST FOR SUPPLY IMPROVEMENTS					\$ 375,000

**City of Prospect Heights, Illinois
2013 Water System Study**

APPENDIX C

**Opinion of Probable Construction Cost for Water Storage Facility Improvements
for any Expansion of the Water System and for the entire Planning Area**

Item No.	Description	Quantity	Unit	Unit Price	Amount
1.	Elevated Water Storage Tanks: 750,000 gallon, single pedestal waterspheroid, 140' TCL. Seismic design, shop priming and paint, and spread footing foundation based on 4,000 psf soils	2	each	\$ 1,490,000	\$ 2,980,000
2.	Pile / Pier Foundation 50' ring, 6' wide, 3' thick	120	cu.yd.	\$ 750	\$ 90,000
	Piles	60	each	\$ 1,800	\$ 108,000
	Contingency for differing sites (20% for one of two)			\$ 20,000	\$ 20,000
3.	Internal piping modifications for flow circulation pump	2	each	\$ 15,000	\$ 30,000
4.	Electrical - Service and panels, wiring and SCADA	2	each	\$ 40,000	\$ 80,000
5.	Lighting, security, access drive and landscaping	2	each	\$ 30,000	\$ 60,000
	Contingency for differing sites (25% for one of two)			\$ 7,500	\$ 7,500
6.	16-inch water main, from tank to distribution system, including restoration				
	200 lin ft. at each site @ \$250 per foot	2	each	\$ 50,000	\$ 100,000
	Hydrant, valves, vaults at each site	2	each	\$ 24,000	\$ 48,000
	Contingency for differing sites (25% for one of two)			\$ 19,000	\$ 19,000
7.	Altitude Control Valve at tank closest to pumping station	1	each	\$ 50,000	\$ 50,000
8.	Rechlorination facilities	2	each	\$ 10,000	\$ 20,000
9.	Contingencies (Logo, permitting, etc.)	2	each	\$ 25,000	\$ 50,000
					\$ 3,662,500
OPINION OF PROBABLE CONSTRUCTION COST FOR STORAGE IMPROVEMENTS (TWO ELEVATED TANKS FOR PLANNING AREA)					\$ 3,665,000

The cost of a project to construct one elevated tank for an expansion of the water system would be approximately 5% greater than the cost of one-half of the two tank project (less the cost of the Altitude Control Valve which would only be needed when the second tank is constructed)

**OPINION OF PROBABLE CONSTRUCTION COST FOR STORAGE IMPROVEMENTS
(ONE ELEVATED TANK FOR INITIAL EXPANSION OF WATER SYSTEM) \$ 1,900,000**

**City of Prospect Heights, Illinois
2013 Water System Study**

APPENDIX D

**Opinion of Probable Construction Cost for Water Distribution System Improvements
for an Expansion Area approximately equal to proposed SSA 9 (400 users)**

Item No.	Description	Quantity	Unit	Unit Price	Amount
1.	Water Main (Open Cut)				
	12-inch	4,290	lin.ft.	\$ 95	\$ 407,550
	12-inch restrained joint	2,180	lin.ft.	\$ 115	\$ 250,700
	8-inch	5,920	lin.ft.	\$ 75	\$ 444,000
	8-inch restrained joint	3,180	lin.ft.	\$ 90	\$ 286,200
	6-inch restrained joint	170	lin.ft.	\$ 85	\$ 14,450
2.	Water Main (In Casing - Open Cut)				
	12-inch R.JT. in 24-inch Casing	230	lin.ft.	\$ 220	\$ 50,600
	8-inch R.JT. in 18-inch Casing	140	lin.ft.	\$ 200	\$ 28,000
3.	Water Main (Directionally Drilled)				
	12-inch	8,300	lin.ft.	\$ 180	\$ 1,494,000
	8-inch	12,500	lin.ft.	\$ 130	\$ 1,625,000
	Mobilization/Demobilization	50	each	\$ 3,000	\$ 150,000
4.	Water Main (In Jacked Casing)				
	12-inch R.JT. in 36" Steel Casing	400	lin.ft.	\$ 625	\$ 250,000
	8-inch R.JT. in 36" Steel Casing	500	lin.ft.	\$ 575	\$ 287,500
	Mobilization/Demobilization	9	each	\$ 5,000	\$ 45,000
5.	Water Main Fittings - Restrained Joint Type				
	12-inch x 12-inch Cross	3	each	\$ 1,125	\$ 3,375
	12-inch x 12-inch Tee	6	each	\$ 950	\$ 5,700
	12-inch x 8-inch Tee	12	each	\$ 875	\$ 10,500
	12-inch x 6-inch Tee	42	each	\$ 825	\$ 34,650
	12-inch x 8-inch Reducer	0	each	\$ 575	\$ -
	12-inch Bends	9	each	\$ 750	\$ 6,750
	12-inch Plug	1	each	\$ 375	\$ 375
	12-inch Cutting-In Sleeve	2	each	\$ 400	\$ 800
	8-inch x 8-inch Cross	1	each	\$ 775	\$ 775
	8-inch x 8-inch Tee	6	each	\$ 675	\$ 4,050
	8-inch x 6-inch Tee	57	each	\$ 625	\$ 35,625
	8-inch x 6-inch Hydrant Tee	3	each	\$ 1,000	\$ 3,000
	8-inch x 6-inch Reducer	2	each	\$ 425	\$ 850
	8-inch Bends	28	each	\$ 625	\$ 17,500
	8-inch Plug	1	each	\$ 325	\$ 325
	8-inch Cutting-In Sleeve	1	each	\$ 350	\$ 350
6.	Connection to Existing Water Main (Pressure)				
	12-inch x 12-inch	0	each	\$ 12,500	\$ -
	12-inch x 8-inch	0	each	\$ 10,000	\$ -

**City of Prospect Heights, Illinois
2013 Water System Study**

APPENDIX D

**Opinion of Probable Construction Cost for Water Distribution System Improvements
for an Expansion Area approximately equal to proposed SSA 9 (400 users)**

Item No.	Description	Quantity	Unit	Unit Price	Amount
7.	Connection to Existing Water Main (Non-Pressure)				
	12-inch	2	each	\$ 5,000	\$ 10,000
	8-inch	3	each	\$ 4,000	\$ 12,000
8.	Gate Valve and Valve Box				
	12-inch	22	each	\$ 2,750	\$ 60,500
	8-inch	32	each	\$ 2,000	\$ 64,000
9.	Gate Valve and Valve Vault				
	12-inch in 5 foot diameter vault	5	each	\$ 5,625	\$ 28,125
	8-inch in 4 foot diameter vault	7	each	\$ 4,375	\$ 30,625
10.	Fire Hydrant	102	each	\$ 4,500	\$ 459,000
11.	Fire Hydrant Barrel Extension	30	vert.ft.	\$ 625	\$ 18,750
12.	Water Service Pipe				
	1-1/2 inch - Same side of street	184	each	\$ 1,900	\$ 349,600
	1-1/2 inch - Opposite side of street	184	each	\$ 3,450	\$ 634,800
	1-1/2 inch - Opposite side of highway	32	each	\$ 4,700	\$ 150,400
13.	Sanitary Sewer Replacement				
	8-inch pipe	320	lin.ft.	\$ 95	\$ 30,400
	6-inch pipe	880	lin.ft.	\$ 90	\$ 79,200
	Connection to existing manhole	8	each	\$ 1,500	\$ 12,000
	Connection to existing pipe	24	each	\$ 750	\$ 18,000
	8-inch x 6-inch service connection	5	each	\$ 1,250	\$ 6,250
14.	Storm Sewer Replacement				
	24-inch pipe	320	lin.ft.	\$ 125	\$ 40,000
	18-inch pipe	440	lin.ft.	\$ 110	\$ 48,400
	16-inch pipe	480	lin.ft.	\$ 100	\$ 48,000
	12-inch pipe	640	lin.ft.	\$ 90	\$ 57,600
	Connection to existing structure/pipe	100	each	\$ 950	\$ 95,000
15.	Tree Removal	100	in.dia.	\$ 60	\$ 6,000
16.	Tree Replacement	9	each	\$ 800	\$ 7,200
17.	Removal and Replacement of Unsuitable Material	850	cu.yd.	\$ 100	\$ 85,000
18.	Sanitary Sewer Service Line Repair	50	each	\$ 625	\$ 31,250
19.	Replacement of Drain Tiles				
	8-inch	50	lin.ft.	\$ 50	\$ 2,500

**City of Prospect Heights, Illinois
2013 Water System Study**

APPENDIX D

**Opinion of Probable Construction Cost for Water Distribution System Improvements
for an Expansion Area approximately equal to proposed SSA 9 (400 users)**

Item No.	Description	Quantity	Unit	Unit Price	Amount
	6-inch	90	lin.ft.	\$ 45	\$ 4,050
20.	Stream/Creek Crossings	5	each	\$ 5,000	\$ 25,000
21.	Granular Backfill Material	6,560	lin.ft.	\$ 40	\$ 262,400
22.	Backfilling with Controlled Low Strength Flowable Fill Mixture	170	cu.yd.	\$ 150	\$ 25,500
23.	Pavement Restoration				
	Bituminous Street - 4"	800	sq.yd.	\$ 55	\$ 44,000
	Concrete Curb and Gutter	320	lin.ft.	\$ 35	\$ 11,200
	Bituminous Driveway - 2-1/2"	1,780	sq.yd.	\$ 50	\$ 89,000
	Concrete Driveway	870	sq.yd.	\$ 95	\$ 82,650
	Gravel shoulders	320	lin.ft.	\$ 10	\$ 3,200
	Sidewalk	1,600	sq.ft.	\$ 12	\$ 19,200
24.	Driveway Culvert Headwalls				
	Bituminous	31	each	\$ 750	\$ 23,250
	Concrete	15	each	\$ 1,250	\$ 18,750
	Railroad Tie or Landscaping Timbers	45	each	\$ 825	\$ 37,125
25.	Restoration of Lawns and Parkways				
	Topsoil and Seed	15,330	lin.ft.	\$ 12	\$ 183,960
	Topsoil and Sod	1,720	lin.ft.	\$ 20	\$ 34,400
26.	Culvert Removal and Replacement				
	12-inch CMP pipe	80	lin.ft.	\$ 95	\$ 7,600
	12-inch CMP flared end sections	8	each	\$ 325	\$ 2,600
27.	Preconstruction Video Recording			Lump Sum	\$ 20,000
28.	Traffic Control and Protection			Lump Sum	\$ 120,000
29.	Erosion and Sedimentation Control			Lump Sum	\$ 50,000
30.	Cash Allowance			Lump Sum	\$ 110,000
31.	Warranty Period Leak Detection/Location			Lump Sum	\$ 60,000
OPINION OF PROBABLE CONSTRUCTION COST FOR WATER MAINS					\$ 9,076,110
					\$ 9,077,000

**City of Prospect Heights, Illinois
2013 Water System Study**

APPENDIX E

**Opinion of Probable Construction Cost for Water Distribution System Improvements
for the entire Expansion Area**

Item No.	Description	Quantity	Unit	Unit Price	Amount
1.	Water Main (Open Cut)				
	12-inch	16,110	lin. ft.	\$ 95	\$ 1,530,450
	12-inch restrained joint	10,400	lin. ft.	\$ 115	\$ 1,196,000
	8-inch	57,110	lin. ft.	\$ 75	\$ 4,283,250
	8-inch restrained joint	25,170	lin. ft.	\$ 90	\$ 2,265,300
	6-inch restrained joint	1,290	lin. ft.	\$ 85	\$ 109,650
2.	Water Main (In Casing - Open Cut)				
	12-inch R.JT. in 24-inch Casing	900	lin. ft.	\$ 220	\$ 198,000
	8-inch R.JT. in 18-inch Casing	1,100	lin. ft.	\$ 200	\$ 220,000
3.	Water Main (Directionally Drilled)				
	12-inch	31,850	lin. ft.	\$ 180	\$ 5,733,000
	8-inch	88,800	lin. ft.	\$ 130	\$ 11,544,000
	Mobilization/Demobilization	410	each	\$ 3,000	\$ 1,230,000
4.	Water Main (In Jacked Casing)				
	12-inch R.JT. in 36" Steel Casing	1,600	lin. ft.	\$ 625	\$ 1,000,000
	8-inch R.JT. in 36" Steel Casing	3,600	lin. ft.	\$ 575	\$ 2,070,000
	Mobilization/Demobilization	52	each	\$ 5,000	\$ 260,000
5.	Water Main Fittings - Restrained Joint Type				
	12-inch x 12-inch Cross	6	each	\$ 1,125	\$ 6,750
	12-inch x 12-inch Tee	6	each	\$ 950	\$ 5,700
	12-inch x 8-inch Tee	84	each	\$ 875	\$ 73,500
	12-inch x 6-inch Tee	222	each	\$ 825	\$ 183,150
	12-inch x 8-inch Reducer	4	each	\$ 575	\$ 2,300
	12-inch Bends	28	each	\$ 750	\$ 21,000
	12-inch Plug	2	each	\$ 375	\$ 750
	12-inch Cutting-In Sleeve	2	each	\$ 400	\$ 800
	8-inch x 8-inch Cross	18	each	\$ 775	\$ 13,950
	8-inch x 8-inch Tee	91	each	\$ 675	\$ 61,425
	8-inch x 6-inch Tee	522	each	\$ 625	\$ 326,250
	8-inch x 6-inch Hydrant Tee	20	each	\$ 1,000	\$ 20,000
	8-inch x 6-inch Reducer	4	each	\$ 425	\$ 1,700
	8-inch Bends	130	each	\$ 625	\$ 81,250
	8-inch Plug	4	each	\$ 325	\$ 1,300
	8-inch Cutting-In Sleeve	4	each	\$ 350	\$ 1,400
6.	Connection to Existing Water Main (Pressure)				
	12-inch x 12-inch	2	each	\$ 12,500	\$ 25,000
	12-inch x 8-inch	3	each	\$ 10,000	\$ 30,000

**City of Prospect Heights, Illinois
2013 Water System Study**

APPENDIX E

**Opinion of Probable Construction Cost for Water Distribution System Improvements
for the entire Expansion Area**

Item No.	Description	Quantity	Unit	Unit Price	Amount
7.	Connection to Existing Water Main (Non-Pressure)				
	12-inch	2	each	\$ 5,000	\$ 10,000
	8-inch	3	each	\$ 4,000	\$ 12,000
8.	Gate Valve and Valve Box				
	12-inch	88	each	\$ 2,750	\$ 242,000
	8-inch	286	each	\$ 2,000	\$ 572,000
9.	Gate Valve and Valve Vault				
	12-inch in 5 foot diameter vault	22	each	\$ 5,625	\$ 123,750
	8-inch in 4 foot diameter vault	71	each	\$ 4,375	\$ 310,625
10.	Fire Hydrant	770	each	\$ 4,500	\$ 3,465,000
11.	Fire Hydrant Barrel Extension	200	vert.ft.	\$ 625	\$ 125,000
12.	Water Service Connection and Pipe				
	1-1/2 inch - Same side of street	1,040	each	\$ 1,900	\$ 1,976,000
	1-1/2 inch - Opposite side of street	1,040	each	\$ 3,450	\$ 3,588,000
	1-1/2 inch - Opposite side of highway	120	each	\$ 4,700	\$ 564,000
13.	Sanitary Sewer Replacement				
	8-inch pipe	2,000	lin.ft.	\$ 95	\$ 190,000
	6-inch pipe	5,500	lin.ft.	\$ 90	\$ 495,000
	Connection to existing manhole	50	each	\$ 1,500	\$ 75,000
	Connection to existing pipe	150	each	\$ 750	\$ 112,500
	8-inch x 6-inch service connection	30	each	\$ 1,250	\$ 37,500
14.	Storm Sewer Replacement				
	24-inch pipe	2,000	lin.ft.	\$ 125	\$ 250,000
	18-inch pipe	2,700	lin.ft.	\$ 110	\$ 297,000
	16-inch pipe	3,000	lin.ft.	\$ 100	\$ 300,000
	12-inch pipe	4,000	lin.ft.	\$ 90	\$ 360,000
	Connection to existing structure/pipe	590	each	\$ 950	\$ 560,500
15.	Tree Removal	600	in.dia.	\$ 60	\$ 36,000
16.	Tree Replacement	50	each	\$ 800	\$ 40,000
17.	Removal and Replacement of Unsuitable Material	5,300	cu.yd.	\$ 100	\$ 530,000
18.	Sanitary Sewer Service Line Repair	280	each	\$ 625	\$ 175,000
19.	Replacement of Drain Tiles				
	8-inch	270	lin.ft.	\$ 50	\$ 13,500

**City of Prospect Heights, Illinois
2013 Water System Study**

APPENDIX E

**Opinion of Probable Construction Cost for Water Distribution System Improvements
for the entire Expansion Area**

Item No.	Description	Quantity	Unit	Unit Price	Amount
	6-inch	540	lin. ft.	\$ 45	\$ 24,300
20.	Stream/Creek Crossings	15	each	\$ 5,000	\$ 75,000
21.	Granular Backfill Material	41,000	lin. ft.	\$ 40	\$ 1,640,000
22.	Backfilling with Controlled Low Strength Flowable Fill Mixture	1,100	cu. yd.	\$ 150	\$ 165,000
23.	Pavement Restoration				
	Bituminous Street - 4"	5,000	sq. yd.	\$ 55	\$ 275,000
	Concrete Curb and Gutter	2,000	lin. ft.	\$ 35	\$ 70,000
	Bituminous Driveway - 2-1/2"	11,100	sq. yd.	\$ 50	\$ 555,000
	Concrete Driveway	5,400	sq. yd.	\$ 95	\$ 513,000
	Gravel shoulders	2,000	lin. ft.	\$ 10	\$ 20,000
	Sidewalk	10,000	sq. ft.	\$ 12	\$ 120,000
24.	Driveway Culvert Headwalls				
	Bituminous	190	each	\$ 750	\$ 142,500
	Concrete	90	each	\$ 1,250	\$ 112,500
	Railroad Tie or Landscaping Timbers	275	each	\$ 825	\$ 226,875
25.	Restoration of Lawns and Parkways				
	Topsoil and Seed	95,800	lin. ft.	\$ 12	\$ 1,149,600
	Topsoil and Sod	10,700	lin. ft.	\$ 20	\$ 214,000
26.	Culvert Removal and Replacement				
	12-inch CMP pipe	500	lin. ft.	\$ 95	\$ 47,500
	12-inch CMP flared end sections	50	each	\$ 325	\$ 16,250
27.	Preconstruction Video Recording			Lump Sum	\$ 80,000
28.	Traffic Control and Protection			Lump Sum	\$ 710,000
29.	Erosion and Sedimentation Control			Lump Sum	\$ 300,000
30.	Cash Allowance			Lump Sum	\$ 600,000
31.	Warranty Period Leak Detection/Location			Lump Sum	\$ 300,000
					\$ 54,312,775
OPINION OF PROBABLE CONSTRUCTION COST FOR WATER MAINS					\$ 54,313,000

Exhibit 1





To: Mayor Nicholas J. Helmer, City of Prospect Heights City Council
From: Anne Marrin, City Administrator
Date: July 8, 2013
Re: Resolution Establishing a Sales Tax Incentive Program for New or Expanded Business

Issue: Mayor Helmer has requested that the resolution which expired in November of 2012, be renewed and extended for a five year term.

Analysis: This economic development tool has been utilized by several businesses, the largest one being Ultra Foods and the smallest being Village CycleSport. Although Village Cycle has not yet received any incentive, they did inquire before they moved their location.

Recommendation: Staff seeks direction to move this forward and place it on the July 22nd agenda for approval.

RESOLUTION NO. R-11-28

**A Resolution Establishing a Sales Tax Incentive Program
for New or Expanded Businesses**

WHEREAS, the Mayor and City Council find that the promotion of retail sales and the expansion of the commercial tax base is in the best interest of the residents of the City of Prospect Heights;

WHEREAS, in order to promote retail businesses, the Mayor and City Council find it is necessary, convenient and in the public interest to make it of record that they support the rebate of sales taxes to new retail businesses or existing businesses which invest in their Prospect Heights business and substantially expand operations here;

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF PROSPECT HEIGHTS, ILLINOIS as follows:

Section 1: **Findings.** The City Council hereby finds and determines that the facts set forth in the preamble hereto are true and correct and hereby adopts same as part of this Resolution.

Section 2: **Sales Tax Incentive Program.** That there is hereby established the Prospect Heights Sales Tax Incentive Program. The program shall commence December 1, 2011 and continue until November 30, 2012.

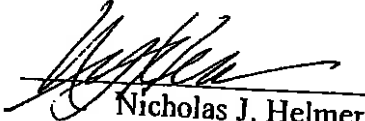
Section 3: **Eligibility.** The program is available to all new businesses desiring to open within the City of Prospect Heights during the program term. The program is also available to existing businesses desiring to expand by a factor of two either the size of their physical store or their sales operations as measured in dollars of sales per calendar year.

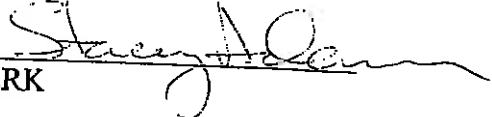
Section 4: **Application.** Businesses desiring to participate in the program must complete an application on a form prepared by the City Administrator's office. In the application, the applicant must (a) describe the nature of the business and whether it is a new or existing business; (b) explain in detail the amount of the rebate requested and the proposed use of the rebated funds; (c) certify that applicant can comply with all applicable law including the Prevailing Wage Act, as applicable; (d) if applicant is an existing business, applicant shall explain in detail the nature of the expansion and whether it is a physical or an operational expansion; (e) if the expansion is a physical expansion, provide the existing size of the retail store and the proposed size; (f) if the expansion is an operational expansion, provide (i) the amount of current annual retail sales, (ii) the forecasted amount of annual retail sales resulting from the expansion, (iii) the method of accomplishing the expansion whether by addition of employees or the investment in new sales systems or otherwise.

Section 5: Action on Applications. The Mayor and City administrator shall review all applications for compliance with the above criteria. They shall work with the applicant to reach a proposed sales tax incentive agreement subject to approval by the City Council. Upon recommendation by the Mayor, the City Council may approve an application and sales tax incentive agreement as it determines compliance with the above criteria in its sole discretion.

Section 6: Compliance with this Resolution. Any deviation from the terms of this resolution shall not affect the validity of any sales tax incentive agreement now existing or which may be entered into in the future. Nothing in this resolution shall require the City to enter into a sales tax incentive agreement with any person or firm.

PASSED AND APPROVED this 24th day of October, 2011.


Nicholas J. Helmer,
MAYOR

ATTEST: 
CITY CLERK

AYES: Aldermen Higgins, Ludvigsen, Mendez, Styler, Williamson

NAYS: None

ABSENT: None

