



City Council
COMMITTEE OF THE WHOLE
City of Belvidere, Illinois

Alderman Clayton Stevens,	1 st Ward	Public Works Vice Chairman
Alderman Tom Porter,	1 st Ward	F&P Vice Chairman, City-County
Alderman Daniel Snow,	2 nd Ward	BPZ Chairman, City-County Chairman
Alderman Michael Borowicz,	2 nd Ward	Public Safety Vice Chairman, City-County
Alderman Wendy Frank,	3 rd Ward	City-County Vice Co Chairman
Alderman Thomas Ratcliffe,	3 rd Ward	F&P Chairman
Alderman Ronald Brooks,	4 th Ward	Public Works Chairman
Alderman George Crawford,	4 th Ward	Public Safety Chairman
Alderman Mark Sanderson	5 th Ward	BPZ Vice Chairman
Alderman Marsha Freeman,	5 th Ward	City-County Coordinating Committee

AGENDA

October 9, 2017

6:00 p.m.

**City Council Chambers
401 Whitney Boulevard
Belvidere, Illinois**

Call to Order: Mayor Chamberlain

Roll Call: Present: Absent:

Public Comment:

Public Forum:

Reports of Officers, Boards, and Special Committees:

1. Building, Planning & Zoning, Unfinished Business: None.

2. Building, Planning & Zoning, New Business: None.
3. Public Works, Unfinished Business: None.
4. Public Works, New Business:
 - (A) Newburg Road Corridor Traffic Signal Warranty Study.
 - (B) Water & Sewer Utility Cut Repairs.
 - (C) Storm Water Projects – Update.
 - (D) One Side of the street parking – Whitman Apartments.
5. Other:
 - (A) IMRF – Resolution Section 125 Plans.
 - (B) Police Department Donation.
 - (C) Ordinance Prohibiting Minor Possession of Tobacco.
6. Adjournment:

City of Belvidere



Newburg Road Corridor Traffic Signal Warrant Study

Prepared By:

**Arc Design Resources, Inc.
5291 Zenith Parkway
Loves Park, IL 61111
(815) 484-4300
Jeffrey S. Linkenheld, P.E.**

September 13, 2017

Introduction

The Belvidere assembly plant, the major employer in Boone County, has recently shifted production to the Jeep Cherokee, a very popular SUV model. This has prompted the factory to operate on multiple shifts. In addition, the retooling to this new vehicle has created an influx of new support factories to service the plant. Some of this growth has occurred near Landmark Industrial Park on the west end of the City of Belvidere. In response to perceived increased traffic along Newburg Road near the western City limits, the City of Belvidere commissioned Arc Design Resources to perform a traffic signal warrant study at three locations and develop summary recommendations for the potential installation of new traffic signals if needed. This study looked at the need for traffic signals at three locations along the Newburg Road corridor; Logistics Drive, Landmark Drive, and Irene Road.

Executive Summary

Within the text of this report, the reader will find the analysis and results that support the following recommendations:

- Installation of left and right turn lanes along Newburg Road at Irene Road with right turn lane addition on Irene Road approaching Newburg.
- Consideration of traffic signal installation at Newburg/Irene intersection in the near future.
- No improvements needed at Newburg Road and Landmark Drive intersection.
- Installation of right turn lanes along Newburg Road at Logistics Drive and development of dedicated left turn lanes along Logistics approaching Newburg.
- No signal installation at Newburg/Logistics at this time.

Please read further within the details of the report for additional information leading to the conclusions presented in this executive summary and a more comprehensive summary of recommendations at the end of this report.

Design Methodology

Traffic signal warrants are published by the Manual on Uniform Traffic Control Devices (MUTCD), which defines the standards of practice for roadway management in the United States. The MUTCD is issued and maintained by the Federal Highway Administration as the minimum standard of application for roadway controls throughout the United States. Part 4 of the Manual deals specifically with traffic signals. MUTCD has developed a series of guidelines to investigate the need for traffic signals. These guidelines are called warrants by the MUTCD. MUTCD defines

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a warrant as a *threshold condition based upon average or normal conditions that, if found to be satisfied as part of an engineering study, shall result in analysis of other traffic conditions or factors to determine whether a traffic control device or other improvement is justified.* Warrants are not the definitive judgement on a traffic signal installation, but the satisfaction of several warrants will tend to justify the installation of a signal at a given location.

The MUTCD Warrants are the basis of our analysis and findings. There are nine discreet warrants listed in the MUTCD. They are listed below with a summary of each warrant's key function:

- Warrant 1, Eight-Hour Vehicular Volume – used where large volume of side street traffic intersects heavy traffic on main street for several hours of a day. Or where moderate side street traffic intersects a very busy main street for several hours.
- Warrant 2, Four-Hour Vehicular Volume – used where the volume of side street traffic is the main reason to consider a signal due to several hours of high traffic on the side street.
- Warrant 3, Peak Hour – used where a minor street suffers undue delay during one particular hour of the day due to heavy main street traffic.
- Warrant 4, Pedestrian Volume – used if significant numbers of pedestrians have difficulty crossing the street due to the amount of traffic.
- Warrant 5, School Crossing – used if significant numbers of school children on a school route have difficulty crossing the street due to the amount of traffic.
- Warrant 6, Coordinated Signal System – used in certain instances where it might make the overall corridor operate better if a signal was introduced to regulate traffic flow.
- Warrant 7, Crash Experience – used to justify a traffic signal based on an analysis of accidents that might be solved if a signal was installed.
- Warrant 8, Roadway Network – used to encourage concentration and organization of traffic flow on a roadway network.
- Warrant 9, Intersection Near a Grade Crossing – used in near proximity to railroad crossings where other criteria might not be met but the overall safety of the railroad crossing would justify a signal installation.

For this analysis, there was no identified incident of accident issues and so crash data was not collected for any of the three locations. Also the number of pedestrians counted was only a couple at one location. The following warrants were not analyzed: 4, 5, 6, 7, or 9. Warrant 8 was analyzed for Newburg and Irene Roads. Results follow below.

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The counts were taken on consecutive days of July 11, 12, and 13 and counted hours of 5:30-9:00am, and 2:30-7:00pm. Peak hours of travel were found to be 5:30-6:30am and 4:30-5:30pm.

Traffic count data was used as the basis for a signal warrant study at each location. There is a gap in the physical count between 9:00am and 2:30pm. In our analysis, the way the peak counts break out on the half hour, we lose one full analysis hour out of the eight. Therefore, we have assumed that the midday gap produces at least one hour of traffic greater than the lowest hour counted. This is a conservative estimate that assumes one unstudied hour is greater than our eighth highest hour.

Signal Warrant Study Results

We have summarized the warrant study results at each of the three locations:

Newburg Road at Irene Road

Newburg and Irene would be the "main" intersection of the three that were studied and counts here were slightly higher than the other two locations. Volumes on Newburg Road were similar to the other two locations but volumes on Irene Road were higher for a couple of more hours. Even so, traffic dropped off significantly after four hours such that warrant 1 (8 hr warrant) is not met. However, warrant 2 (4 hr warrant) is met along with Warrant 3 (Peak hour) and Warrant 8 (roadway network). The roadway network warrant is met because of the volume of traffic on each road and their significance to the overall roadway network on the west side of Belvidere.

Newburg Road at Landmark Drive

Newburg and Landmark intersection is the middle of the three. The traffic volumes coming off of Landmark are the lowest of the three locations and no signal warrants were satisfied based on our count data and analysis.

Newburg Road at Logistics Drive

Newburg and Logistics is the easternmost intersection studied. This location had enough traffic to satisfy the peak hour warrant with 896 vehicles on Newburg and 150 on Logistics. The warrant is satisfied by considering the speed limit of 45 mph (over 40) that allows use of lower volumes as a threshold. If the speed limit on Newburg was reduced to 40 mph at Logistics Drive, the warrant would NOT be satisfied. No other warrants (8 hour, 4 hour) were met.

Turn Lane Guidelines

Since traffic at Irene and Newburg satisfied several warrants, it is prudent to also check turn lane guideline recommendations from IDOT for possible geometric improvements. We note that left turn lanes already exist at Landmark and Logistics Drives. Based on a combination of the posted speed and volumes on Newburg Road, a left turn lane is recommended for installation even if traffic signals are not pursued. Right turn lanes were also looked at based on IDOT guidelines. The intersection of Landmark Drive would not require turn lanes. Irene Road and Logistics Drive would satisfy the need for right turn lanes along Newburg Road.

We checked the overall intersection delay for Irene Road with and without the installation of left and right turn lanes. The overall performance of the intersection improved from an average approach delay on Irene Road of 64 seconds, to an approach delay of 39 seconds. We also checked the overall intersection performance of Newburg and Logistics with the addition of the right turn lanes. Northbound movements on Logistics saw the most improvement with a reduction in delay from 50 seconds per vehicle down to 40 seconds. The analysis for each assumes that approach traffic on the side streets would also have left and right turn lanes approaching Newburg Road.

Summary Recommendations

Arc Design Resources was hired by the City of Belvidere to perform a signal warrant analysis of three intersections near the western limits of the City. In our findings we found that the intersection of Newburg Road and Irene Road satisfied three traffic signal warrants and we would also recommend the installation of left and right turn lanes on Newburg Road to improve traffic flow along the corridor. Widening Irene Road to split left and right turn traffic helps to minimize overall intersection delay. In fact, since these turn lane improvements would be needed with any signal installation, the geometric upgrade would be recommended as an important first step for improving the overall capacity of the intersection.

The intersection of Newburg Road and Landmark Drive was found to not meet any traffic signal warrants and is in no further need of any geometric improvements.

We did find that Newburg Road and Logistics Drive does satisfy the peak hour traffic warrant. However, as traffic engineers, we find that the singular satisfaction of the peak hour warrant to be a dubious justification for the installation and maintenance costs of a signal. Some further guidance on the satisfaction of warrants is taken from MUTCD:

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Warrants are usually expressed in the form of numerical requirements such as the volume of vehicular or pedestrian traffic. A warrant normally carries with it a means of assigning priorities among several alternative choices. There are two fundamental concepts involved in this determination:

(a) The most effective traffic control device is the least restrictive while still accomplishing the intended purpose. For instance, geometric changes alone may negate the need for a traffic signal.

(b) Driver response to the influences of a traffic control device has been previously identified by observation, field experience, and laboratory tests under a variety of traffic and driver conditions.

Warrants should be viewed as guidelines, not as absolute values. Satisfaction of a warrant is not a guarantee that the device is needed. The warrant analysis process is just one of the tools to be used in determining if a traffic signal is needed.

Engineering judgment should be exercised in making the final determination. The application of warrants is effective only when combined with knowledgeable engineering judgment considering all pertinent facts as noted in Section 1A.09 of the MUTCD. In all cases, at least one or more warrants must be fully met before a traffic signal installation is considered.

Given that the peak hour warrant would not be met if the speed limit were lowered by 5 mph, and knowing that no other warrants were met, namely the satisfaction of 4 hour or 8 hour warrants, we would not recommend a traffic signal at this time. We do note that right turn lanes are justified by IDOT methods and we would recommend the installation of right turn lanes along Newburg Road at Logistics Drive, along with upgrading the side street to provide left turn lanes approaching Newburg Road. This will help improve the traffic flow along Newburg Road and will give drivers on Logistics some additional opportunities to enter the traffic stream by taking right turn movements out of the mainline traffic flow.

Further development of the Logistics Drive area as an employment center may drive the need to revisit this condition in the not too distant future, but the turn lane approach is recommended as a measured first step at the present time.

End of Report.

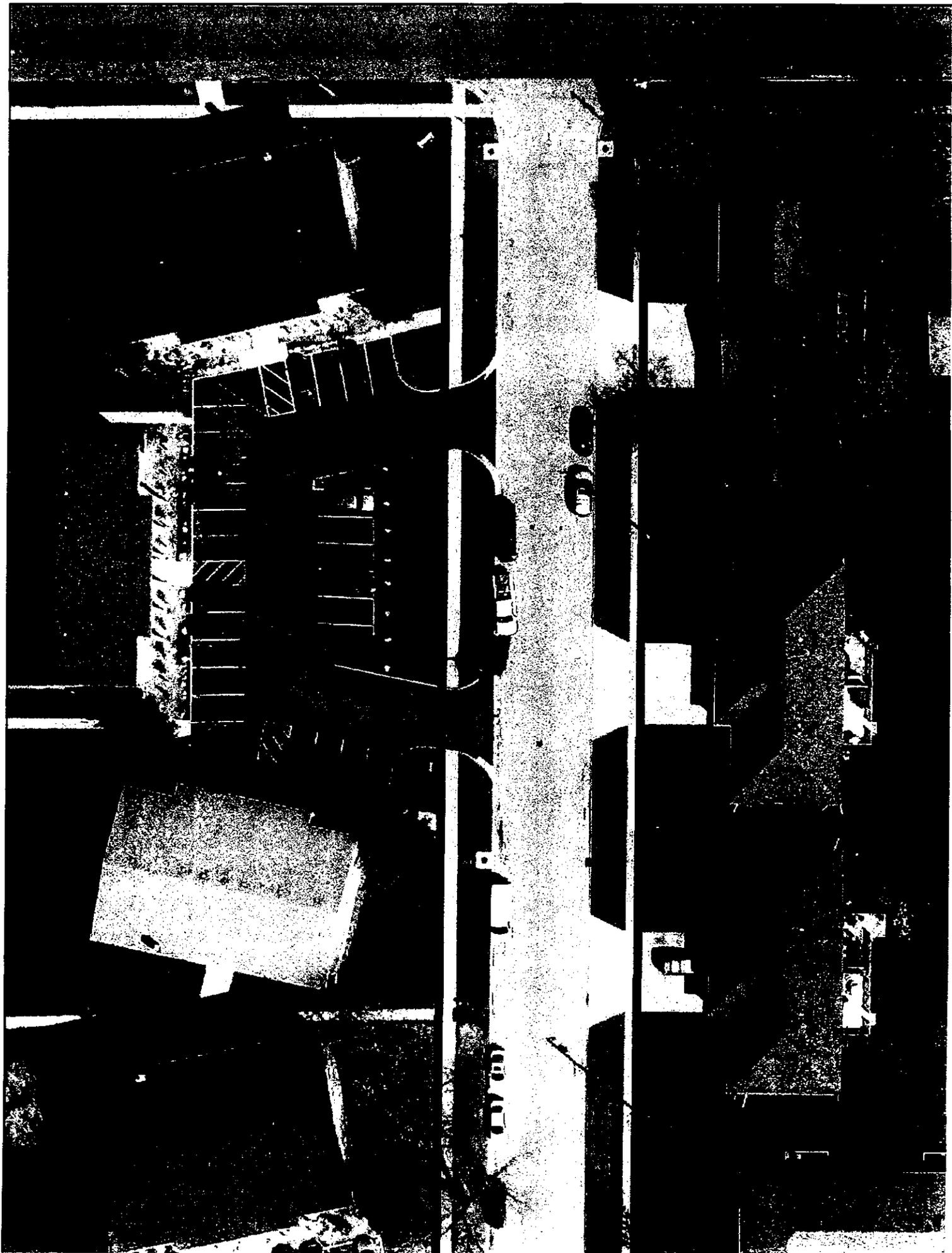
MEMO

To: Mayor and City Council
From: Brent Anderson, Director of Public Works
Subject: Bid Tabulation - Pavement Restoration of Utility Cuts
Date: October 4, 2017

The following bids were received for the pavement restoration of utility cuts for the Water & Sewer Department:

	<u>Unit Price</u>	<u>Total</u>
1. Bel-Rock Asphalt Paving, Inc. 130 South State Street, Suite 205 Belvidere, Illinois 61008	\$56.00/SY	\$82,152.00
2. Stenstrom Excavation & Blacktop Group 2422 Center Street Rockford, Illinois 61108	\$57.20/SY	\$83,912.40
3. William Charles Construction Co 5290 Nimitz Road Loves Park, Illinois 61111	\$91.70/SY	\$134,523.90

I would recommend approval of the low bid from Bel-Rock Asphalt Paving in the amount of \$82,152.00, for the pavement restoration of utility cuts. The unit price for this work is \$56.00/SY. This work will be paid for from Line Items #61-5-810-6040 and #61-5-830-6000.



Memo

To: Mayor and City Council
From: Mike Drella
CC:
Date: 10/03/2017
Re: IMRF Resolution Relating to Health Insurance Premiums

IMRF is in the process of conducting audits of participating municipalities to ensure accuracy of their paperwork. You will recall that last April, IMRF asked the City to re-verify which elected officials actually work more than 1000 hours per year through adoption of a resolution.

Now IMRF wishes the City to re-certify that the employee portion of health insurance premiums are deducted from their pay on a pre-tax basis pursuant to Section 125 of the Internal Revenue Code. We have handled premiums on a pre-tax basis for several years. In essence, IMRF wants to verify that each IMRF employee's pensionable income really is the gross pay approved by the City Council each year. IMRF and the City have processed gross pay as pensionable income since the time the City began deducting health insurance premiums on a pre-tax basis. Approval of the IMRF requested resolution maintains the status quo.

RECOMMENDATION:

Staff recommends approval of the Resolution electing to continue treating the employee paid portion of health insurance premiums as pensionable gross income.



Suggested resolution to include compensation paid under an Internal Revenue Code Section 125 Plan as IMRF earnings

IMRF Form 6.72 (Rev. 08/03)

PLEASE ENTER Employer IMRF I.D. Number

RESOLUTION

Number _____

WHEREAS, standard member earnings reportable to the Illinois Municipal Retirement Fund do not include compensation paid under an Internal Revenue Code section 125 plan or compensation directed into a premium conversion plan or flexible spending account; and

WHEREAS, an IMRF participating unit of government may elect to include in IMRF earnings compensation paid under an I.R.C. section 125 plan or compensation directed into a premium conversion plan or flexible spending account by action of the governing body; and

WHEREAS, the _____ of the
BOARD, COUNCIL, etc.

_____ is authorized to include
EMPLOYER NAME
section 125 plan and premium conversion and flexible spending account compensation as earnings reportable to IMRF and it is desirable that it do so.

NOW THEREFORE BE IT RESOLVED that the _____ of the
BOARD, COUNCIL, etc.

_____ does hereby elect to
EMPLOYER NAME
include as earnings reportable to IMRF compensation paid under an I.R.C. section 125 plan and/or compensation directed into a premium conversion plan or flexible spending account effective _____
EFFECTIVE DATE

BE IT FURTHER RESOLVED that the _____ is authorized and directed
CLERK OR SECRETARY OF THE BOARD
to file a duly certified copy of this resolution with the Illinois Municipal Retirement Fund.

CERTIFICATION

I, _____, the _____
NAME CLERK OR SECRETARY
of the _____ of the County of _____,
EMPLOYER NAME COUNTY
State of Illinois, do hereby certify that I am keeper of its books and records and that the foregoing is a true and correct copy of a resolution duly adopted by its _____ at a meeting duly convened
GOVERNING BODY
and held on the _____ day of _____, 20 _____.

SEAL

CLERK OR SECRETARY OF THE BOARD

Illinois Municipal Retirement Fund

Suite 500, 2211 York Road, Oak Brook Illinois 60523-2337 www.imrf.org
Member Services Representatives 800/ASK-IMRF (1-800-275-4673)

Belvidere Police Department

Jan W. Noble - Chief of Police

Shane Woody - Deputy Chief, Operations

Matthew Wallace - Deputy Chief, Administration



615 N. Main Street • Belvidere, IL 61008 • Phone 815-544-9626 • Fax 815-544-9603 • www.ci.belvidere.il.us

TO: MAYOR CHAMBERLAIN AND CITY COUNCIL
FROM: CHIEF JAN W. NOBLE *J.W.N.*
DATE: OCTOBER 2, 2017
RE: MOTION TO ACCEPT DONATION FROM DIANE HENDRICKS

Please be advised that the Belvidere Police Department has received a donation in the amount of \$1000.00 (check #2342) from Diane Hendricks. Mrs. Hendricks has asked that the money be used on behalf of the officers and families of the Belvidere Police Department.

Motion: To approve the expenditure of \$1,000.00 of donated money to fund the annual Fall Banquet at the Belvidere Police Department range.

JWN/sd

Memo

To: Mayor and City Council
From: Mike Drella
CC:
Date: 10/03/2017
Re: Ordinance Prohibiting Minor Possession of Tobacco

State statute prohibits a person under 18 from possessing or using tobacco products. Recent changes to the statute classified multiple violations of the statute a criminal offense as opposed to a fine only offense. This has caused difficulty in prosecuting these offenses. Historically, we would prosecute them through the City's ordinance court call and handle any offenses with a fine or public service work. Now the Circuit Clerk's computer system prevents them from placing them on an ordinance violation court call. Instead they must be processed through the juvenile court system and prosecuted by a state's attorney which makes prosecution much more cumbersome and results in multiple court appearances for the juvenile. It may also result in a reference to a "criminal conviction" on their record when in fact it is a simple fine for non-repeat offenders.

Attached is an ordinance adopting the state statute as a local ordinance. It adds one additional exception to the prohibition of juveniles possessing tobacco where it is possessed or used as part of a religious or tribal ceremony. It also establishes a fine of \$50.00 for a first offender. This is lower than the typical City of Belvidere fine (\$100.00 minimum). However, it matches the state statute.

Adopting the ordinance will allow continued enforcement of the smoking laws. They will be processed through an ordinance violation court as opposed to misdemeanor courtroom allowing for fewer court appearances by the juvenile, quicker resolution to a case and will prevent any possibility of the charge showing up as a criminal charge.

RECOMMENDATION: I recommend adopting the new code section 22-258 as a part of the City of Belvidere Municipal Code.

74-258. Minor Possession or Use of Tobacco

- a) No minor under 18 years of age shall buy any tobacco product. No minor under 18 years of age shall possess any cigar, cigarette, smokeless tobacco, or tobacco in any of its forms. A person under 18 years of age shall not possess an alternative nicotine product as defined in section 1.5 of the Prevention of Tobacco Use by Minors and Sale and Distribution of Tobacco Products Act (720 ILCS 675/1.5).
- b) It is not a violation of this Section for a person under 18 years of age to purchase or possess a cigar, cigarette, smokeless tobacco or tobacco in any of its forms if the person under the age of 18 purchases or is given the cigar, cigarette, smokeless tobacco or tobacco in any of its forms from a retail seller of tobacco products or an employee of the retail seller pursuant to a plan or action to investigate, patrol, or otherwise conduct a "sting operation" or enforcement action against a retail seller of tobacco products or a person employed by the retail seller of tobacco products or on any premises authorized to sell tobacco products to determine if tobacco products are being sold or given to persons under 18 years of age if the "sting operation" or enforcement action is approved by, conducted by, or conducted on behalf of the Department of State Police, the county sheriff, a municipal police department, the Department of Revenue, the Department of Public Health, or a local health department. It is also not a violation of this section for a minor, under the age of 18, to possess any tobacco product where such use takes place under the direct supervision and approval of the minor's parent or legal guardian **and** such use takes place in the privacy of a private residence or established place of worship or tribal meeting place. In the event such use takes place in a place of worship or tribal meeting place, tobacco may be possessed by a minor under 18 only where its use is a part of a religious or tribal ceremony.
- c) A minor who violates any provision of this Section shall be fined not less than \$50.00 or sentenced to not less than 20 hours of community service or both for a first offense. The minimum fine a subsequent offense shall be in accordance with Section 1-9 of the City of Belvidere Municipal Code and the Court may sentence the minor to not less than 30 hours of community service in addition to or in lieu of such fine.