VILLAGE OF LAKE BLUFF

FINANCE COMMITTEE

Monday, September 19, 2016
6:00 PM

VILLAGE HALL BOARD ROOM
40 E. CENTER AVE, LAKE BLUFF, IL

AGENDA

I. Call to Order – Roll Call
Trustee Steve Christensen, Chairman
Trustee Mark Dewart, Member
Trustee Barbara Ankenman, Member

II. Approval of Minutes – June 27, 2016

III. Non-Agenda Items and Visitors
The Finance Committee allocates fifteen (15) minutes at this time for those individuals who would like the opportunity to address the Committee on any matter not listed on the agenda.

IV. Business Items

1. Library Report Regarding Building Expansion Plans and Fundraising Campaign
2. Discussion Regarding Draft FY2016 Auditor Communications to the Board and Draft Comprehensive Annual Financial Report Informational Report
3. Discussion Regarding Automated Water Meter System Implementation and Water Project Financing
4. Discussion Regarding 2016 Property Tax Levy Estimates and Police Pension Actuarial Recommendation

V. Informational Items

VI. Adjournment

The Village of Lake Bluff is subject to the requirements of the Americans with Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the facilities, are requested to contact R. Drew Irvin at 847-234-0774 or TDD number 847-234-2153 promptly to allow the Village of Lake Bluff to make reasonable accommodations.

VILLAGE OF LAKE BLUFF - FINANCE COMMITTEE
MINUTES OF MEETING – **June 27, 2016**

I. Call to Order – Roll Call

The Finance Committee of the Village of Lake Bluff was called to order on Monday, June 27, 2016 at 6:00 PM in the Village Hall Conference Room, 40 E. Center Ave., Lake Bluff, Illinois.

Members Present: Trustee Steve Christensen, Chairman
Trustee Mark Dewart, Member
Trustee Barbara Ankenman, Member

Others Present: Kathleen O'Hara, Village Board President
Eric Grenier, Village Board Trustee
William Meyer, Village Board Trustee
John Josephitis, Village Board Trustee
Peter Friedman, Village Attorney
R. Drew Irvin, Village Administrator
Susan Griffin, Finance Director
Marlene Scheibl, Assistant Finance Director
Mike Croak, Building Code Supervisor

II. Approval of Minutes

Member Dewart made a motion to approve the minutes of the April 25, 2016 meeting as presented; seconded by Member Ankenman and approved unanimously on a voice vote.

III. Business Items

1. Discussion Regarding the Waiver of Building Fees for Other Governmental and Not-for-Profit Organizations

In February 2015 the Village passed Resolution 2015-7 approving a temporary easement agreement with Central Lake County Joint Action Water Agency (JAWA) for temporary staging activities for a period of up to 26 months from the commencement date at a cost of $25,000. The need for this easement agreement is specific to the JAWA ozone generation and ancillary projects. JAWA is now requesting a waiver of building permit fees of $196,620 for the $6.554 million ozone generation system conversion project. Also, JAWA is requesting fee waivers of $2,526 for two smaller projects: the replacement of an air conditioning system and the installation of new control valves in a boiler system. In the past the Village has approved requests from the Lake Bluff Park District, CLCJAWA, and the Union Church of Lake Bluff to waive building permit fees and, for the Park District, demolition taxes. During the discussion, questions were raised regarding the criteria and process to approve such requests (ad-hoc versus systematic approach). At the October 20, 2014 Finance Committee meeting the members discussed the options as: (i) grant a waiver, (ii) deny the waiver, or (iii) charge a reduced fee (a partial waiver). VA Irvin stated that the fees are meant to cover costs and Chairman Christensen commented that case-by-case decisions might be in the best interest of the Village by allowing the Board to take different factors into consideration. Member Rener had remarked the policy does not have to be a full waiver but could provide the option to grant a reduced fee which would still cover some of the costs involved. Trustee Grenier said there should be logic to the policy. The decision was made to continue to bring these requests to the Board for a decision on a case by case basis. At the April 21, 2016 Finance Committee meeting staff presented information from Glencoe, Highland Park,

Lake Forest and Northfield regarding their fee waiver policies. Glencoe does reduce fees for charitable institutions to .25% of the value of the construction but not less than $50. Highland Park does waive fees for nonprofits if a request is made. Lake Forest does waive the fees for city owned property such as Gorton and Ragdale and has only waived the fees once or twice in the past decade if requested for other nonprofits. Northfield has waived fees for the Park District twice in the past. The decision was made to continue to bring these requests to the Board for a determination on case by case basis and provide actual examples of direct costs of previously processed fee waivers. In regards to JAWA's request: 1).Staff estimated direct costs associated with these projects at approximately $3,000 noting the project is to replace some very expensive equipment with a relatively small amount of changes to the building. 2). The Committee may consider charging a flat rate of $6,550 which represents .1% of the project cost. 3). The Committee might consider a future effective date of any new policy that deviates from past practice of waiver of fees. Member Ankenman said the Village will not be the only entity to benefit from the waiver of fees. She asked why the Village would waive the fees for JAWA when the Village has the smallest population of all member of JAWA. Trustee Meyer added the Village would be subsidizing other entities if fees were waived. He asked about rationale for why the Village would waive fees and stated the rationale needs to be used consistently for charitable organizations so equal treatment is applied. Chairman Christensen responded that each case is unique and if each case is discussed then logic is being applied. He said the estimated direct costs of $3,000 should not be waived. Trustee Grenier stated since the project cost involved more equipment than building the Village costs related to the project were not as high. VA Irvin said most communities charge 1%. The Village increased fees years ago from 1%-3% for the purpose of using the extra 2% for the increased wear and tear of the roads. Member Dewart asked if the Village maintained a separate account/reserve of the extra 2% to use for the roads. President O'Hare inquired if the JAWA project will cause wear and tear on the roads. VA Irvin stated it will not since it will just be equipment being rolled in and not major construction. VA Irvin asked if the equipment and labor costs of the permit can be split out. Building Code Supervisor Croak said approximately $5.4 million is equipment. Chairman Christensen asked why a % would be chosen and not a direct cost. Member Ankenman responded if the direct costs are waived then the waiver is arbitrary and in this case, the waiver would benefit communities other than the Village. Trustee Meyer suggested the Village apply a formula such as Charge equals (Population Benefit-Population of Lake Bluff)/Population Benefit multiplied by Ordinary Charge. This would apply to an activity for those outside Lake Bluff. This would apply for most entities other than charitable. Member Dewart said a formula could be a guideline and then adjustments could be made if necessary. President O'Hara opined the Village should have a policy but this project should be exempt. Trustee Meyer agreed this project should be exempt but the policy should be based on a formula. President O'Hara said she would really prefer formula rather than case by case analysis. Chairman Christensen said the % should be more realistic since applying 3% in this case doesn't make sense. He questioned if the Village should charge JAWA the estimated direct costs of $3,000. VA Irvin stated the Village should charge any expenses the Village incurs in house or out of house up to a certain dollar amount stated as "not to exceed a specific amount". Chairman Christensen agreed.

2. Discussion Regarding Household Waste Collection Contract Renewal

The Village's contract with Groot Industries, Inc. ("Groot") for collection and disposal of solid waste, landscape waste collection, and collection of recyclable materials will expire on January 31, 2017. The contract provides for the possibility of extending the contract for another 5-year term with 120 day notice, current market conditions suggest the Village may be better off renegotiating the terms of the contract or putting the services out to bid in the marketplace. The purpose of the discussion is to provide the Finance Committee with an update regarding the Village's negotiations with Groot and get direction on possible service-level modifications.

On December 14, 2009 the Village Board approved a contract with the then Village's current recycling collection firm to provide all Village household waste services (collection and disposal of solid waste, landscape waste collection, and collection of recyclable materials). February 1, 2010 was the transition date. This transition to a privatized and modified household waste collections program saved the Village in excess of $325,000 annually. The Village's experience with Groot under the current contract has been very good with only minimal service issues from time to time. Groot has been responsive to the Village's increased needs for waste and recycling collection in the Central Business District, successfully completed the work defined by the existing contract, and made the transition to privatized service a smooth one for residents. Using the terms in the contract regarding removal of landscape waste, Groot was also able to assist the Village in the timely removal of storm debris following the July 11, 2011 storm. The Finance Committee should discuss whether to negotiate or bid the contract and possible changes in service levels. The Village has not placed these services out to bid since the recycling contract was last bid and awarded to Groot in 2007. The proposed rate and scope of services offered by Groot are highly competitive and would possibly place the Village as the only community in the entire state to offer year round food scrap services. Groot has proposed pricing for both a 5 year and 7 year contract. Several changes in service could be achieved by either negotiating with Groot or going out to bid. The Village Board should consider moving to a modified Pay-As-You-Throw (PAYT) arrangement where residents would pay extra for additional waste collected. This would move toward the Village's larger goals to meet SWALCO's 60% Recycling Task Force recommendations. Groot is offering electronic waste recycling at the curb as part of their current proposal. One TV per pickup is offered provided that one person can lift the TV. Groot is also offering to accept food scraps in the landscape waste bags or offer residents a third cart for this new service ($5/month).

VA Irvin stated the rates from Groot were very competitive but the Village has not put this contract out to bid in a long time. Groot would like to extend the contract 5-7 years. Member Dewart suggested if the Village puts the contract out to bid the Village may not receive the same service level with another vendor. Village Attorney Friedman said the lowest most qualified bid would be accepted.

Consensus of the Committee is the contract should be put out to bid.

3. Informational Update on the Automated Water Meter System Implementation

Finance Director Griffin said the water project kickoff meeting was held. One resident has already called to inquire about opting-out of the meter conversion. It will need to be determined what options will be given for residents who do not want new meters. One option would be to charge those residents a slightly higher fee since their meters will need to be read manually. VA Irvin said the leak detections analysis has been completed. There were eleven leaks found, seven leaks were at hydrants and were tightened, three leaks were at private services, and one was at the main in Tangley Oaks. Sheridan Place is still on the schedule to be checked.

IV. Next Meeting

The next meeting is to be determined.

V. Adjournment

Member Dewart made a motion to adjourn the meeting at 6:56 PM; seconded by Member Ankenman and all members voted aye.

Respectfully submitted,

Marlene Scheibl
Assistant Director of Finance

Recommendation

The Lake Bluff Library Board is planning the construction of improved and expanded facilities in order to continue to meet the library's mission, "To act as a vibrant community center that provides materials and services to enhance individual knowledge, offer personal enjoyment, expand technological resources, and facilitate civic interaction." Growing facility usage, patron input, and a thorough space usage study support the need for this project.

Facility Usage: Growing facility usage recommends an expanded and improved space. In the last ten years:

- Patron visits have increased by 34.09%, from 53,664 visits (FY 06-07) to 71,956 visits (FY 15-16).
- Library program attendance has increased by 27.20%, from 8,667 (FY 06-07) to 11,024 (FY 15-16).
- The number of library programs offered has increased by 220.54%, from 112 programs (FY 06-07) to 359 programs (FY 15-16).
- Checkout of physical materials has increased by 33.09%, from 71,752 (FY 06-07) to 95,496 (FY 15-16).
- The library's Spruth Room is in use during 25.61% of library hours, and the Children's Activity Room is in use during 28.63%. When one room is in use, the other is also in use 19.04% of the time.
- In order to meet growing demand and new challenges, weekly staff hours have grown by 24.5%. Over the same time frame, staff work space has decreased by 17%. The industry standard minimum for work space is 60 inches; the average workspace at the library is 40 inches.

Patron Input: Patron feedback on the 2013 and 2016 Patron Satisfaction Surveys supports the recommendation:

- The number of survey respondents stating that the library needed more space to meet their needs rose from 20.22% to 30.53%.
- In 2016, a total of 50% of respondents indicated a desire for either increased space or requested services or improvements that cannot be accomplished in the existing building.
- Quiet reading rooms, expanded collections, comfortable seating, improved function, and improved aesthetics were identified as needs by patron respondents.

Space Usage Study: In 2014-2015, consultant Joe Huberty of Engberg Anderson conducted a Space Usage Study aimed at finding ways to more effectively meet patron needs with existing space in the library building. The study revealed the following:

- Existing space is too small and too fragmented in its layout to meet most of the needs identified as essential to the library's future.
- All areas of the building are too small for their current levels of use.

Scope and Cost of Project

The proposed expansion and improvement has an estimated cost of $5M, depending on changing construction costs, and will add 3,100 square feet of usable space. This would represent a 33% increase in library space. This includes the addition of group meeting rooms, space for teens, increased seating, a quiet reading area, improved accessibility, an improved staff workroom, better acoustics, and improved comfort and appearance.

Conclusion

The Library Board has moved carefully in its consideration of a potential building project. The Library Board and Library Staff have studied the building, resolving problems (such as the lack of a staff lunch room) when it has been possible to do so. The remaining challenges cannot be resolved within the current building footprint.

The care and responsibility that was brought to the consideration of the library's space needs, that continues to be brought to the handling of the library's finances, has been brought to bear on the question of how to fund a building project. The library has hired a professional fundraiser to assess the fundraising capabilities of the library. As all or most of the money will come from donations, this assessment is essential to deciding whether or not to move forward.

The Library wishes for the Village Board to be 'looped in' on our planning, and welcomes feedback and discussion.

VILLAGE OF LAKE BLUFF

MEMORANDUM

TO: Finance Committee Chairman and Members
Kathy O'Hara, Village President

FROM: Drew Irvin, Village Administrator
Susan M. Griffin, Director of Finance

CC: Jeff Hansen, Village Engineer
Jake Terlap, Public Works Superintendent

DATE: September 16, 2016

SUBJECT: Automated Water Meter Reading System Improvements

The Village's current budget includes $375,000 for the replacement of water meters and the installation of an automated water meter reading (AMR) system. In June Strand Associates was engaged by the Village to assist in evaluating water meter reading technology and meter types, designing a project scope and goals, and developing a request for proposals. Attached are two memorandums from Strand regarding the water meter system study. The first memo discusses water meter technology and provides details regarding the two automated systems; AMR which is a drive-by system and AMI which is a fixed collection system. The second memo reflects pricing from the two most prominent firms, Sensus and Mueller, for implementation of both of these systems. The Mueller system notes that the Village has use of the City of North Chicago's antenna and collector which the Village allowed the City to locate on the Village's water tower as a component of their AMI system installation.

The goals of this project are to: a) increase the accuracy of meter billings; b) obtain readings more efficiently and more frequently; and c) to improve our knowledge of the meter inventory and lead services in the community. These goals will help to align water consumption with water purchases to detect and mitigate unaccounted for water usage earlier and to reduce water fund operating costs by reducing the amount of time public works staff spend on meter reading and handling related issues. This time can be spent on other public works activities and needed hydrant/valve preventative maintenance.

Upon review of initial documentation from and meetings with Strand associates, the Village invited representatives from Mueller and Sensus to present their systems and answer questions about their products. The budget was prepared on the assumption that only the manually read meters would be replaced and that installation costs would be significantly less than Strand's estimates. However, preliminary pricing obtained by Strand significantly exceeded the Village's budget and, noting the 10-20 year consequence of this decision, staff felt it prudent to evaluate the cost of expanding the scope to replacing all of the meters and comparing both vendors' costs by the two reading methods (fixed or drive-by).

The engineering cost estimates for the drive-by (AMR) systems for Mueller and Sensus are $699,119 and $983,280, respectively. The cost estimates for the AMI system for Mueller and Sensus are $843,769 and $989,715, respectively. Sensus recommends that they host the AMI system because of the volume of data collected which costs $20,000 per year in addition to the initial costs of the system and installation. The Sensus AMR system is migratable to the Sensus AMI system, but Mueller transmission devices cannot be read by their AMI system (requiring replacement of all the MIU's to convert to an AMI system at a later date.) The Finance Director recommends financing this project over 10 years and potentially including the cost of the West Sheridan Place water main and transmission replacement project.

Staff will be at the meeting to present additional information and to answer questions regarding this project.

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July 28, 2016

Susan Griffin, Finance Director
Village of Lake Bluff, Illinois
40 East Center Avenue
Lake Bluff, IL 60044

Re: Automated Meter Reading System Study

Dear Susan,

This letter is intended to summarize the findings of our investigation into the Village of Lake Bluff's (Village) need for an automated meter reading (AMR) system. The system consists of the integration of radio frequency technology, meter reading software, replacement meters, and meter interface units (MIU). The goal of implementing this system is to improve accuracy and timeliness of water meter readings.

The investigation was performed with the assumption that the City of North Chicago (City) would allow the Village to use the City's existing fixed network collector (also known as advanced meter infrastructure or AMI), which is installed on the Village's elevated water tower. The existing collector is manufactured by MegaNet, who is now owned by Mueller Systems (previously KP Electronics).

1. Technology Overview

The following is a description of different types of water meter reading systems.

a. Manual Meter Reading

Manual meter reading occurs when a meter reader goes out to a water meter location and visually observes the reading and records it in a data collector. Manual meters are the most inexpensive to purchase, but the cost of labor to read the meters is high. Accessibility to the meter can be limited by physical factors such as rain, gaining access to a confined space vault, or setting up an appointment for a meter read in someone's residence. Errors can occur if the meter reader cannot read the meter correctly or records a reading wrong in the data collector. Manual reads can still be performed if the other types of meter reading systems are compromised.

b. Touch Reading

The touch reading system takes a meter reading when the outside reading device comes in contact with a handheld reading device. Each meter must be individually connected to a wired or wireless handheld device for a meter reading to be taken. Additional equipment needed to upgrade from a manual to touch read system is an encoder register to transmit the meter reading to a value within the data collector and an outside reading

device that allows the reading device to take a reading from contact. The touch reading system is considered a more reliable system than manual reading. However, there is no advantage to installing touch reading systems as an intermediate step to accomplishing AMR and eliminating the quarterly manual meter reads.

c. Drive-By Reading (AMR)

A Drive-By reading system allows a meter reader to walk or drive by a meter equipped with a radio frequency device to collect a meter reading. Additional equipment needed to upgrade from a manual read system typically includes a laptop computer connected to a specific radio frequency reading device and water meter encoders and interface units to generate and relay the radio signal to the laptop computer. The encoder meter register is typically self-powered by a battery. Radio frequency devices can take readings continuously with information traveling between the meter register to the reading device. They can also transmit a signal to the meter when a reading is required, allowing information to travel in two directions. The benefit of a two-way transmittal system is that the battery lasts approximately 20 years whereas the single-direction signal battery lasts approximately 10 years. Additional costs may include software licensing, maintenance of meter reading equipment, and FCC licensing if frequency is used. The benefit of a FCC licensed frequency is that it will not be subject to interference, as compared to unlicensed frequencies.

d. Fixed Network Reading (AMI)

The Fixed Network reading system builds upon and includes similar features to the Drive-By reading system except that automatic meter readings are collected by fixed infrastructure nodes or gateways located throughout the utility service area to transmit a regionalized group of meter readings to a central office location. Readings from individual meters can be sent to or polled by the utility's Fixed Network system on a 4 to 24 hour basis. Costs in addition to the Drive-By based system include the data collectors needed to capture meter readings that are typically located on the top of water towers, public buildings, and power poles. Specialized computer software is also needed to retrieve data from the collectors. Depending on how data is transmitted, FCC charges (radio) or cellular fees (cellular phone company) may also apply to initial costs, and software and licensing of collector software may be additional costs for a Fixed Network system. Communication between the collector and centralized utility can be one-way communication or two-way communication similar to the Drive-By collection method. One-way communication allows for continuous readings and two-way communication allows for a set interval between readings. Two-way communication systems offer the ability to check meter status almost immediately after meter replacement or repairs are made, compared to one-way communication systems that may require one to three days to repair and replace a meter and then confirm the meter is properly connected to the AMI system.

2. Product Overview

a. Mueller/MegaNet

MegaNet is a high-powered, two-way, long-range, fixed-network AMI system that uses a 2 watt licensed radio transmission. The MIUs, which contain a field-replaceable lithium battery pack, transmit meter usage and alarm data directly to a long-range collector and is sent to a Head-End unit. This data is then recorded and stored on an onsite server. A water utility can choose to completely manage its network without the need for vendor-managed services or it can purchase an annual maintenance contract for the vendor to assist with network monitoring.

For residential water metering, Mueller offers Series 400 Composite meters, which are a nutating disc style, composite-body positive displacement meter for 5/8- and 3/4-inch connections. These meters consist of three basic parts: main case, measuring chamber, and permanently sealed register. No batteries are required for positive displacement meters. Mueller also offers a tamper-proof solid state register (SSR), which is available on all Mueller positive displacement meters sizes 5/8-inch through 2-inch and contains no moving parts. The register provides granular data required for use in the latest AMR and AMI applications. This SSR provides battery strength when six months of effective life remains, presence and direction of water flow even at ultra-low flow rates, and billing units indicated by lines under and over digits in the display. The SSR is designed and manufactured to provide a 20-year service life. Register installation rings and lids area available as replacement components in the event of vandalism or the need for meter retrofits.

b. Sensus

Flexnet Network is also a high-powered, two-way, long-range, fixed-network AMI system that uses a 2 watt licensed radio transmission. The system consists of an M400 Tower Gateway Basestation (TGB), 510M/520M Single Port Smartpoint MIUs, and Logic software. The MIUs transmit meter information directly to the TGB and are sent immediately to the back-end software, which is recorded and stored. The software and servers are hosted by Sensus for an annual fee. Hosting eliminates the need for hardware and software updates and lowers the cost of annual TGB maintenance costs.

Sensus also offers a radio frequency transmitter available for Drive-By automatic meter reading (AMR) called RadioRead. Liked the Fixed-Network system option, the Drive-By option uses a licensed frequency. The system consists of a Model 4600 Vehicle Gateway Basestation (VGB) with laptop computer, Smartpoint MIUs, AutoVu software, 6501 handheld reading device, and CommandLink wireless interface that allows access to stored information. The Smartpoint MIUs are migrateable to the fixed-collection Flexnet Network.

For residential applications, Sensus offers iPERL meters, which are electromagnetic flow meters for 5/8-, 3/4-, and 1-inch connections. These meters contain no moving parts

and the pieces of the meter, such as the register and measuring device, are encased in an internal housing. Because of the integrated construction, the iPERL meter is considered tamperproof and offers low field and magnetic tamper alarms to prevent obtaining free water. The electromagnetic meters have a 20-year warranty, run on battery power, and do not need calibration. The battery is not field-replaceable.

As an alternative to the electromagnetic meter, Sensus offers SRII positive displacement oscillating piston meters in the same 5/8-, 3/4- and 1-inch sizes. The register includes a main case, measuring chamber, and sealed register. Each register comes equipped with a strainer and magnetic drive register. Initial meter accuracy is guaranteed for 5 years and repaired accuracy for 15 years. Meters larger than 1 inch include the residential OMNI R2 and commercial OMNI T2 turbine, OMNI C2 compound and AccuMAG electromagnetic flow meters with integral strainers. All meters have registers with LCD screens, are fully programmable, and have a 20-year warranty.

3. Compatibility of Water Meters with Existing Infrastructure

An important consideration in making an AMR investment is the compatibility of infrastructure and how each component will interface with each other. If the meter reading system, MIU, and meter are all made by the same manufacturer, communication and installation issues should be minimized. However, if the meter reading system is produced by a different manufacturer than the meter, this creates potential challenges in communicating proprietary formatted data. In this instance, if the Village chooses to use the City's MegaNet collector with Mueller MIUs, the amount of information available from a Sensus iPERL meter will be limited to a flow total, even if that meter has the capability of providing extended protocol information, such as leaks, reverse flow, and meter tampering.

Another consideration that applies to any AMR investment is compatibility with existing meter registers. Registers older than 15 years typically do not have the same accuracy as newer registers. In addition, some very old registers do not have an encoder chip available, which results in the MIU not being able to pull any information from the register. Because the meter is also likely to be the same age as the register, complete replacement is recommended for meters older than 15 years.

4. Coverage Area of Existing Collector

As part of the investigation, Mueller was asked to complete a preliminary propagation study using the location of the existing collector on the Village's elevated water tower. See attached for the preliminary propagation study from Mueller. The study indicates that the single existing collector should be able to read most of the water meters within the Village, assuming that the MIU is wall-mounted on the exterior of the house and at least three feet above ground level. For areas that have a lower signal strength, such as along the lake on the eastern part of the Village, additional infrastructure may be required. Because repeater base stations are not available in the MegaNet system, this could include mounting the MIU at a higher location. Alternatively, if the number of meters with low signal strength is small, those meters could remain as a manual read if mounting the MIU higher is not feasible.

Because the propagation study is considered preliminary, Mueller would conduct a more thorough propagation study if the AMI system is awarded to them. Mueller also reserves the right to modify equipment and infrastructure quantities based on a more thorough study following award of the equipment.

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September 14, 2016

Ms. Susan Griffin, Finance Director
Village of Lake Bluff
40 East Center Avenue
Lake Bluff, IL 60044

Re: Automated Meter Reading System Study Update

Dear Susan,

This letter is intended to provide the additional information requested by the Village of Lake Bluff (Village) regarding total package probable costs for a Mueller and Sensus-based automated meter reading (AMR) system. Each manufacturer has a total probable cost for two options: 1) a fixed-network system, and 2) a drive-by system. These system infrastructure and installation costs were analyzed over a 20-year cost of ownership period to provide a total present worth opinion of probable costs. Probable costs include a 10 percent contingency for design and construction and are based on third quarter 2016 dollars.

The enclosed Table 1 presents Sensus fixed-network and drive-by system probable costs.

The enclosed Table 2 presents Mueller fixed-network and drive-by system probable costs.

The Village desired to maintain an "apples to apples" comparison for meter replacement. Therefore, bronze-body positive displacement meters from each manufacturer were included in the probable costs and the cut-sheets for these meters are also enclosed. We also confirmed for the Village that the amount of information available for either an all-Mueller or all-Sensus based AMR system using positive displacement meters will be limited to register ID, hourly reading (total flow), and leak detection.

Please let us know if you have any questions or comments.

Sincerely,

C.®

Brian L. Hackman, P.E., P.H., BCEE

Justin R. Bilskemper

Enclosures

c/enc.: Jeff Hansen, Village Engineer, Village of Lake Bluff
Jake Terlap, Public Works Superintendent, Village of Lake Bluff
Drew Irvin, Village Administrator, Village of Lake Bluff

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Table 1 Sensus AMI and AMR Opinion of Probable Costs

Sensus Fixed-Network System (AMI) - FlexNet			
Item	**Unit Cost**	**Quantity**	**Total**
M400 Tower Gateway Basestation (Collector)	$ 55,000.00	1	$ 55,000
Project and Data Training	$ 6,350.00	1	$ 6,350
Hosted Software Implementation and Setup (5K Services)	$ 15,500.00	1	$ 15,500
5/8" Low Lead SRII Bronze-Body Meter	$ 103.00	950	$ 97,850
3/4" Low Lead SRII Bronze-Body Meter	$ 133.00	599	$ 79,667
1" Low Lead SRII Bronze-Body Meter	$ 177.00	404	$ 71,508
1 1/2" OMNI C2 Water Meter	$ 1,115.00	26	$ 28,990
510M Smartpoint Transmitter (MIU) with 25' of 3-Wire	$ 113.75	2,051	$ 233,301
Installation (Meter and MIU)	$ 125.00	1,979	$ 247,375
Installation (MIU Only)	$ 100.00	72	$ 7,200
Cash Allowance for Unique Meter Installation	$ 57,000.00	1	$ 57,000
		Subtotal	**$ 899,741**
10 Percent Design and Construction Contingency	--	--	$ 89,974
		Design and Construction Probable Cost	**$ 989,715**
Hosted Hardware/Software Maintenance (20 Years)	$ 20,000.00	20	$ 400,000
		Total Present Worth Opinion of Probable Cost	**$ 1,389,715**

Sensus Drive-By System (AMR)			
Item	**Unit Cost**	**Quantity**	**Total**
Model 4600 Vehicle Gateway Basestation with Laptop, Software, Setup, and Training	$ 25,000.00	1	$ 25,000
Model 6501 Handheld Unit Commandlink with GPS	$ 6,000.00	1	$ 6,000
5/8" Low Lead SRII Bronze-Body Meter	$ 103.00	950	$ 97,850
3/4" Low Lead SRII Bronze-Body Meter	$ 133.00	599	$ 79,667
1" Low Lead SRII Bronze-Body Meter	$ 177.00	404	$ 71,508
1 1/2" OMNI C2 Water Meter	$ 1,115.00	26	$ 28,990
510M Smartpoint Transmitter (MIU) with 25' of 3-Wire	$ 113.75	2,051	$ 233,301
Installation (Meter and MIU)	$ 125.00	1,979	$ 247,375
Installation (MIU Only)	$ 100.00	72	$ 7,200
Cash Allowance for Unique Meter Installation	$ 57,000.00	1	$ 57,000
		Subtotal	**$ 853,891**
10 Percent Design and Construction Contingency	--	--	$ 85,389
		Design and Construction Total Cost	**$ 939,280**
Software Maintenance (20 Years)	$ 2,200.00	20	$ 44,000
		Total Present Worth Opinion of Probable Cost	**$ 983,280**

Table 2 Mueller AMI and AMR Opinion of Probable Costs

Mueller Fixed-Network System (AMI) - MegaNet			
Item	**Unit Cost**	**Quantity**	**Total**
Collector Equipment and Installation	$ 15,000.00	1	$ 15,000
Base Station, External Radio, Software, and Server	$ 23,950.00	1	$ 23,950
5/8" x 3/4" or 1/2" 420 Series Bronze-Body PD Meter	$ 87.00	950	$ 82,650
3/4" 435 Series Bronze-Body PD Meter	$ 103.00	599	$ 61,697
1" 452 Series Magnetic Drive Bronze-Body PD Meter	$ 147.50	404	$ 59,590
1 1/2" 500 Series Magnetic Drive Bronze-Body PD Meter	$ 288.50	26	$ 7,501
Wall-Mounted MIU with 25' of 3-Wire	$ 100.00	2,051	$ 205,100
Installation (Meter and MIU)	$ 125.00	1,979	$ 247,375
Installation (MIU Only)	$ 100.00	72	$ 7,200
Cash Allowance for Unique Meter Installation	$ 57,000.00	1	$ 57,000
Collector Deduct (Use existing North Chicago collector)	$ (15,000.00)	1	$ (15,000)
		Subtotal	**$ 767,063**
10 Percent Design and Construction Contingency	--	--	$ 76,706
		Design and Construction Probable Cost	**$ 843,769**
Optional Collector Maintenance (20 Years)	$ 600.00	20	$ 12,000
Optional Software Maintenance (20 Years)	$ 3,250.00	20	$ 65,000
		Total Present Worth Opinion of Probable Cost	**$ 920,769**

Mueller Drive-By System (AMR)*			
Item	**Unit Cost**	**Quantity**	**Total**
Drive-By Laptop, Software, Reading Device with Antenna, Handheld Unit, and Training	$ 10,000.00	1	$ 10,000
5/8" x 3/4" Bronze-Body Meter	$ 87.00	950	$ 82,650
3/4" Bronze-Body Meter	$ 103.00	599	$ 61,697
1" Bronze-Body Meter	$ 147.50	404	$ 59,590
1 1/2" Water Meter	$ 288.50	26	$ 7,501
Drive-By System Radio Transmitter (MIU)	$ 50.00	2,051	$ 102,550
Installation (Meter and MIU)	$ 125.00	1,979	$ 247,375
Installation (MIU Only)	$ 100.00	72	$ 7,200
Cash Allowance for Unique Meter Installation	$ 57,000.00	1	$ 57,000
		Subtotal	**$ 635,563**
10 Percent Design and Construction Contingency	--	--	$ 63,556
		Total Present Worth Opinion of Probable Cost	**$ 699,119**

*Mueller AMR system radios (MIUs) are not migratable to MegaNet AMI system!

VILLAGE OF LAKE BLUFF

16-Sep-16

2016 PROPERTY TAX LEVY PRELIMINARY LEVY

I. Calculation of 2016 Estimated EAV & Historical Data

	2011	2012	2013	2014	2015	2016 **Estimate**
Village EAV	527,046,786	484,191,545	463,295,419	458,754,118	500,638,069	$525,669,972
Sanctuary EAV	24,208,168	22,308,618	20,968,093	20,764,619	21,193,805	$22,253,495
Total Village EAV	$551,254,954	$506,500,163	$484,263,512	$479,518,737	$521,831,874	$547,923,468
Shield's Township EAV	$2,060,162,776	$1,926,914,557	$1,781,099,584	$1,690,026,662	$1,733,267,357	$1,819,930,725
Village % of Township	26.76%	26.29%	27.19%	28.37%	30.11%	30.11%
Village New Construction	$3,106,704	$967,961	$2,877,031	$1,378,812	$2,937,369	$3,000,000
Township New Construct					$6,154,906	
Property Tax Extension	$3,573,377	$3,694,381	$3,789,757	$3,862,737	$3,926,394	
Sanctuary Extension	$150,333	$156,160	$157,470	$160,876	$153,095	
Total Village Extension	$3,723,710	$3,850,542	$3,947,227	$4,023,613	$4,079,489	$0
Tax Rate	0.678	0.763	0.818	0.842	0.784	0.000
Sanctuary Rate	0.621	0.700	0.751	0.775	0.722	0.000

II. Calculation of Maximum Tax Levy

A. Tax Cap Calculation - PTELL MAXIMUM — **YEAR 2016 ESTIMATE**

CPI Factor 0.7% — 0.70%

STEP 1: Prior year Extension less debt * CPI factor

2015 Extension ***$4,079,489*** **$4,108,045**

STEP 2: Tax Rate Maximum=New Extension (less debt) Divided by Estimated EAV less New Construction — $544,923,468

STEP 3: Maximum Tax Rate with CPI (Step 1 divided by Step 2) — **0.7539 PTELL Limiting Rate**

STEP 4: Rate * Total EAV = Total levy (less debt)

$4,130,662 **MAXIMUM** 1.254% % Increase

STEP 5: Total Maximum Levy — $4,130,662 — 1.254% % Increase

STEP 6: Add G.O. Debt Payments **ABATED** — $0

STEP 7: Total Maximum Levy & Tax Rate — **$4,130,662** — **0.7539**

III. Comparison 2015 & 2016 Levy - VILLAGE

A. PTELL Maximum	2015 Tax Ext	**2016 Tax Max**	2016 Estimate	$ Change	% Change
Levy w/o Police Pension	$2,543,336	**$2,561,182**	$2,561,182	$17,846	0.702%
Police Pension Levy	$650,103	**$672,315**	$672,315	$22,212	3.417%
Total Village Levy	$3,193,439	**$3,233,497**	$3,233,497	$40,058	1.254%

VILLAGE OF LAKE BLUFF 16-Sep-16

2016 PROPERTY TAX LEVY PRELIMINARY LEVY

IV. Library Levy Estimates					
	2015 Extension	2016 Max Tax	2016 Estimate	$ Increase	% Change
Amount Allowed per Tax Cap	$886,050	**$897,165**	$897,165	$11,115	1.254%
TOTAL LEVY	**$4,079,489**	**$4,130,662**	**$4,130,662**	**$51,173**	**1.254%**

VILLAGE OF LAKE BLUFF

MEMORANDUM

TO: Finance Committee Members
Kathy O'Hara, Village President
Drew Irvin, Village Administrator

FROM: Susan Griffin, Finance Director

DATE: September 16, 2016

SUBJECT: 2016 Police Pension Actuarial Valuation & Historical Information

Each year the Pension Fund is required to submit a tax levy recommendation to the Village Board based on either an independent actuarial valuation or the State of Illinois plan valuation. In the past the Village has engaged an actuary to provide a report showing the required contribution based on the statutorily required cost methodology, Projected Unit Credit, and based on the Village's determined funding methodology, Entry Age Normal Cost. Last year the Village engaged Kathleen Manning and Daniel Colby of MWM Consulting Group for a three year period.

On May 9th the Police Pension Fund held a joint meeting with the Village Committee of the Whole to discuss the current funding methodology and discuss any potential changes to the tables, assumed rates and load factors. At that meeting Ms. Manning recommended reducing the 50% load on the mortality table to 25% with the goal of ultimately eliminating the load. She also suggested gradually increasing the rates of duty disability from the current 15%. These were percentages used by the prior actuary. She noted that the 7% interest rate assumption is appropriate at this time as the measurement period is 40 plus years and she concurred with using the EANC method.

The total tax levy calculated under the Village's current funding policy with a reduction in the blue collar mortality load from 50% to 20% and an increase in the duty disability from 15% to 50% is $672,314 or 51.2% of payroll.

The Police Pension Fund recommends a 2016 property tax levy of $672,315 which increases the tax levy 3.4% from the prior year. The funded ratio increases slightly as of April 30, 2016 to 57.80% from 57.60% in the prior year even as the actuarial accrued liability increases from $15.378 million to $16.052 million.

Attachments:

A. May 1, 2016 Actuarial Valuation Report
B. Police Pension Fund Statistical Data

LAKE BLUFF POLICE PENSION FUND 10/15/2015
HISTORICAL DATA

Fiscal Year[1]	Property Tax Year[2]	Total Covered Payroll	Employee Contributions	Property Tax Receipts	IL Personal Property Replacement Tax	Investment Income	Appreciation/ Depreciation of Assets	# of Covered Active Emplees[3]	Total Net Assets @ MV	# of Annuitants	Service Pensions	Spouse Pensions	Duty Disability Pensions	Non-Duty Disability Pensions	Total Benefit Payments	# of Deferred Annuitant
2018	*2016*	*1,469,250*	*145,603*	*675,000*	*5,000*	*150,000*	*250,000*	*15*	*9,298,900*	*13*	*556,183*	*-*	*201,971*	*26,375*	*784,529*	*1*
2017	*2015*	*1,314,800*	*130,297*	*650,000*	*5,500*	*150,000*	*250,000*	*14*	*9,690,700*	13	*541,380*	*-*	*201,971*	*26,375*	*769,726*	*1*
2016	2014	1,303,776	129,205	639,685	5,695	(8,983)	(67,936)	14	8,813,537	13	527,008	14,539	201,971	26,375	769,893	1
2015	2013	1,273,602	126,214	603,833	6,395	176,292	284,549	14	8,934,449	14	521,632	21,631	201,971	26,375	771,609	1
2014	2012	1,168,174	115,766	566,409	6,554	546,821	424,089	14	8,558,313	14	516,985	21,631	201,971	26,375	766,962	2
2013	2011	1,181,110	117,048	548,421	5,727	118,624	457,427	14	7,697,491	14	453,159	21,631	157,103	26,375	658,268	1
2012	2010	1,139,596	112,934	490,353	5,777	172,238	(97,448)	12	7,167,985	12	414,671	21,631	125,946	26,375	588,623	1
2011	2009	1,128,732	111,857	433,811	6,403	190,680	451,189	13	7,112,050	11	402,594	21,631	88,096	26,375	538,696	1
2010	2008	1,239,733	122,857	417,876	5,761	120,337	864,103	14	6,503,557	11	390,868	21,631	50,114	26,375	488,988	1
2009	2007	1,226,060	121,503	375,468	6,508	322,988	(1,222,440)	16	5,507,275	10	379,483	21,631	37,453	26,375	464,942	1
2008	2006	1,193,158	118,243	337,305	7,108	391,510	(214,794)	16	6,503,242	10	368,431	21,631	37,453	26,375	453,890	1
2007	2005	1,092,306	108,302	280,004	6,511	411,393	150,947	15	6,326,813	10	354,227	21,631	37,453	26,375	439,686	1
2006	2004	1,037,395	102,806	253,971	6,101	206,522	436,877	15	5,816,571	10	340,207	21,631	37,453	26,375	425,666	0
2005	2003	958,477	94,985	240,279	3,839	141,980	78,595	15	5,242,060	10	331,943	21,631	37,453	26,375	417,402	0
2004	2002	921,734	91,343	163,077	2,234	(163,374)	760,850	15	5,106,273	10	320,915	21,631	37,453	26,375	406,374	0
2003	2001	800,590	79,198	152,068	2,011	101,503	(189,962)	14	4,665,883	10	310,878	21,631	37,453	26,375	396,337	0

[1]FY2017 and FY2018 amounts are projections.
[2]2016 Property Tax Year is the levy being considered.
[3]Chief Gallagher hired in 2001 and retired in 2014 was not part of the Pension Fund. In FY2015 new Deputy Chief is not part of the fund.

PERCENTAGE CHANGE FROM YEAR TO YEAR

Fiscal Year[1]	Property Tax Year	Total Covered Payroll	Employee Contributions	Property Tax Receipts	IL Personal Property Replacement Tax	Investment Income	Appreciation/ Depreciation of Assets	Total Net Assets @ MV	Service Pensions	Spouse Pensions	Duty Disability Pensions	Non-Duty Disability Pensions	Total Benefit Payments
2018	2016	11.7%	11.7%	3.8%	-9.1%	0.0%	0.0%	-4.0%	2.7%	----	0.0%	0.0%	1.9%
2017	2015	0.8%	0.8%	1.6%	-3.4%	-1769.8%	-468.0%	10.0%	2.7%	-100.0%	0.0%	0.0%	0.0%
2016	2014	2.4%	2.4%	5.9%	-10.9%	-105.1%	-123.9%	-1.4%	1.0%	-32.8%	0.0%	0.0%	-0.2%
2015	2013	9.0%	9.0%	6.6%	-2.4%	-67.8%	-32.9%	4.4%	0.9%	0.0%	0.0%	0.0%	0.6%
2014	2012	-1.1%	-1.1%	3.3%	14.4%	361.0%	-7.3%	11.2%	14.1%	0.0%	28.6%	0.0%	16.5%
2013	2011	3.6%	3.6%	11.8%	-0.9%	-31.1%	-569.4%	7.4%	9.3%	0.0%	24.7%	0.0%	11.8%
2012	2010	1.0%	1.0%	13.0%	-9.8%	-9.7%	-121.6%	0.8%	3.0%	0.0%	43.0%	0.0%	9.3%
2011	2009	-9.0%	-9.0%	3.8%	11.1%	58.5%	-47.8%	9.4%	3.0%	0.0%	75.8%	0.0%	10.2%
2010	2008	1.1%	1.1%	11.3%	-11.5%	-62.7%	-170.7%	18.1%	3.0%	0.0%	33.8%	0.0%	5.2%
2009	2007	2.8%	2.8%	11.3%	-8.4%	-17.5%	469.1%	-15.3%	3.0%	0.0%	0.0%	0.0%	2.4%
2008	2006	9.2%	9.2%	20.5%	9.2%	-4.8%	-242.3%	2.8%	4.0%	0.0%	0.0%	0.0%	3.2%
2007	2005	5.3%	5.3%	10.3%	6.7%	99.2%	-65.4%	8.8%	4.1%	0.0%	0.0%	0.0%	3.3%
2006	2004	8.2%	8.2%	5.7%	58.9%	45.5%	455.9%	11.0%	2.5%	0.0%	0.0%	0.0%	2.0%
2005	2003	4.0%	4.0%	47.3%	71.8%	-186.9%	-89.7%	2.7%	3.4%	0.0%	0.0%	0.0%	2.7%
2004	2002	15.1%	15.3%	7.2%	11.1%	-261.0%	-500.5%	9.4%	3.2%	0.0%	0.0%	0.0%	2.5%

Actuarial Valuation

Village of Lake Bluff
Lake Bluff Police Pension Fund

As of May 1, 2016
For the Year Ending April 30, 2017

Table of Contents

Section 1: Summary of Principal Valuation Results

MWM Consulting Group was retained to prepare an actuarial valuation as of May 1, 2016 for the Lake Bluff Police Pension Fund. The purpose of the actuarial valuation was to determine the financial position and the annual actuarial requirements of the pension fund under Illinois statute 40 ILCS 5/3, Section 125, and to develop a recommended minimum contribution amount.

For quick reference, some of the key results of the valuation, along with selected financial and demographic information for the year ending April 30, 2017 are summarized in this overview section along with (for comparison) the results from the prior year.

CONTRIBUTIONS

The plan sponsor must contribute at least the statutorily required minimum contribution under Illinois statutes equal to the normal cost plus the amount necessary to amortize the unfunded accrued liability such that by 2040, the liabilities will be 90% funded.

Item	Current Valuation as of 5/1/2016	Prior Year Valuation as of 5/1/2015
Actuarially Determined Funding Policy Contribution	$672,314 (51.2%)	$650,024 (51.9%)
Statutory Minimum Contribution per 40 ILCS 5/3 Section 125	$590,082 (45.0%)	$455,599 (36.4%)

() amounts expressed as a percentage of payroll

STATUTORY MINIMUM FUNDING COST ELEMENTS

Illinois statutes require employers to contribute at least the amount necessary such that assets will equal at least 90% of the accrued liability by 2040. The minimum amount is determined under the Projected Unit Credit funding method, with smoothed assets, and is equal to the normal cost plus the amortization amount.

Item	Current Valuation as of 5/1/2016	Prior Year Valuation as of 5/1/2015
Accrued Liability	$ 15,491,196	$ 14,943,673
Market Value of Assets	$ 8,813,537	$ 8,934,449
Actuarial (Smoothed) Value of Assets	$ 9,276,905	$ 8,857,854
Normal Cost	$ 162,826	$ 138,166
Amortization Amount	$ 380,142	$ 253,001
Statutory Minimum Contribution	$ 590,082	$ 455,599

FUNDING POLICY CONTRIBUTION COST ELEMENTS

The funding policy contribution amount is determined under the Entry Age Normal funding method, with smoothed assets, and is equal to the normal cost plus the amortization amount. The unfunded liability is amortized as a level percentage of pay over 25 years on a closed basis.

Item	Current Valuation as of 5/1/2016	Prior Year Valuation as of 5/1/2015
Accrued Liability	$ 16,052,409	$ 15,377,823
Market Value of Assets	$ 8,813,537	$ 8,934,449
Actuarial (Smoothed) Value of Assets	$ 9,276,905	$ 8,857,854
Normal Cost	$ 133,119	$ 138,166
Amortization Amount	$ 486,701	$ 461,218
Actuarially Determined Funding Policy Contribution	$ 672,314	$ 650,024

FINANCIAL THUMBNAIL RATIOS

This chart summarizes traditional financial ratios as applied to the pension plan. This liquidity ratio relates the cash flow position of the Fund by comparing the investment income plus employer and employee contributions to the annual benefit payments. Maintaining a ratio well above 100% prevents the liquidation of assets to cover benefit payments. The increase in benefits paid over the years is generally a result of the maturing of the pension plan.

Coverage of the Accrued Liabilities by the Assets is the Coverage Ratio and is one indication of the long term funding progress of the plan.

Tests	5/1/2016 Valuation	5/1/2015 Valuation
Liquidity Ratio (based upon year ended)	85%	146%
Coverage Ratio (Market Value Assets)	54.90%	58.10%
Annual Benefit Payments (expected)	$ 768,429	$ 776,845
Annual Contributions (expected)		
Members	$ 130,091	$ 124,073
City	$ 672,314	$ 650,024

PARTICIPANT DATA SUMMARY

The Actuarial Valuation takes into account demographic and benefit information for active employees, vested former employees, and retired pensioners and beneficiaries. The statistics for the past two years are compared in the chart.

Item	Current Year Valuation as of 5/1/2016			Prior Year Valuation as of 5/1/2015		
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total
Active Members						
Vested	10	0	10	9	1	10
Non-Vested	0	4	4	4	0	4
Total Active	10	4	14	13	1	14
Terminated entitled to future benefits	1	0	1	1	0	1
Retired	8	0	8	8	0	8
Surviving Spouse	0	0	0	1	0	1
Disabled	5	0	5	5	0	5
Total	24	4	28	28	1	29

SECTION 2: VALUATION RESULTS

Significant Events and Issues Influencing Valuation Results

Actuarial valuations are snapshot calculations which incorporate and reflect the experience and events of the past year such as changes in the demographics of the plan participants, gains and losses in the plan assets, changes in actuarial assumptions about future experience and outside influences such as legislation. Some of the more significant issues affecting the Plan's contribution level are described here.

Asset Performance for yearend 4/30/2016

The approximate -0.86% return (not time weighted) on net assets was below the actuarial assumption of 7.00% in effect for the 2015/2016 year.

Change in Assumptions

The mortality table was changed to the RP2000 table projected to 2015 with Blue Collar adjustment, 20% load. In addition the retirement age assumption for ages 65 and over was changed to 100%. Duty related disabilities are assumed to be 50% of disabilities and disabled life mortality was assumed to follow RP2000 Disabled table projected to 2015, no collar adjustments and no load.

Employer Contributions

The employer contribution is expected to be paid according to the funding policy, and is expected to exceed the required statutory minimum amount.

ACTUARIAL CERTIFICATION

This is to certify that MWM Consulting Group has prepared an Actuarial Valuation of the Plan as of May 1, 2016 for the purposes of determining statutory contribution requirements for the Fund in accordance with the requirements of 40 ILCS 5/3, Section 125, of determining the funding policy contribution amount (the Actuarially Determined Contribution). The contributions determined are net of contributions made by active member police officers during the year.

The results shown in this report have been calculated under the supervisions of a qualified Actuary as defined in appropriate State statutes. All results are based upon demographic data submitted by the Fund / Village, financial data submitted by the Fund, applications of actuarial assumptions, and generally accepted actuarial methods.

This valuation report has been prepared at the request of Village of Lake Bluff to assist in administering the Plan and meeting specified financial and accounting requirements. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Fund sponsor and may only be provided to other parties in its entirety. The information and valuation results shown in this report are prepared with reliance upon information and data provided to us, which we believe to the best of our knowledge to be complete and accurate and include:

- Employee census data submitted by the Village of Lake Bluff. This data was not audited by us but appears to be consistent with prior information, and sufficient and reliable for purposes of this report.
- Financial data submitted by the Lake Bluff Police Pension Fund.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Actuarial valuations involve calculations that require assumptions about future events. Certain of the assumptions or methods are mandated for specific purposes. Future actuarial measurements may differ significantly from the current measurements presented in the report due to such factors as experience that deviates from the assumptions, changes in assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contributions based on the Plan's funded status) and changes in plan provisions or applicable law. This report does not include an analysis of the potential range of such future measurements.

We believe the assumptions and methods used are within the range of possible assumptions that are reasonable and appropriate for the purposes for which they have been used. In our opinion, all methods, assumptions and calculations are in accordance with requirements and the procedures followed and presentation of results are in conformity with generally accepted actuarial principles and practices. The undersigned actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. There is no relationship between the Village of Roselle and MWM Consulting Group that impacts our objectivity. I certify that the results presented in this report are accurate and correct to the best of my knowledge.

MWM CONSULTING GROUP

Kathleen E Manning, FSA Managing Principal & Consulting Actuary MWM Consulting Group	Daniel W. Colby, FSA Consulting Actuary MWM Consulting Group	8/11/2016 Date

SECTION 3 - FINANCIAL AND ACTUARIAL EXHIBITS

Exhibit 1 - Statement of Market Value of Assets

Item	Plan Year Ending 4/30/2016	Plan Year Ending 4/30/2015
1. Investments at Fair Value:		
a. Cash and Cash equivalents	$ 0	$ 0
b. Money Market Mutual Funds	694,502	585,850
c. Municipal Bonds	2,086,818	2,019,323
d. Certificates of Deposit	0	0
e. US Government and Agency Bonds	2,194,362	2,417,827
f. Common and Preferred Stocks	1,303,754	2,158,003
g. Insurance Contracts (at contract value):	0	0
h. Mutual Funds	2,513,803	1,730,277
i. Accrued Interest and receivables	24,847	25,448
j. Other	0	0
k. Subtotal Assets (a + b + c +d + e + f + g+ h+ i +j)	$ 8,818,086	$ 8,936,728
2. Liabilities:		
a. Expenses Payable	$ 3,765	$ 2,279
b. Liability for benefits due and unpaid	0	0
c. Other Liabilities	784	0
d. Total Liabilities	$ 4,549	$ 2,279
3. Net Market Value of Assets Available for Benefits: (1k – 2d)	$ 8,813,537	$ 8,934,449

Exhibit 2 - Statement of Change in Net Assets

Item	Plan Year Ending	
	5/1/2016	5/1/2015
Additions		
Contributions		
Employer	$ 645,381	$ 610,228
Plan Member	129,205	126,214
Other	0	0
Total Contributions	$ 774,586	$ 736,442
Investment Income		
Realized and Unrealized Gains/(Losses)	$ (280,835)	$ 269,498
Interest	91,452	97,642
Dividends	112,567	93,589
Other Income	0	0
Investment Expenses	0	109
Net Investment Income	(76,816)	460,838
Total additions	$ 697,770	$ 1,197,280
Deductions		
Benefits	$ 769,893	$ 771,609
Refunds	0	0
Administrative and Investment Expenses	48,789	49,538
Total deductions	$ 818,682	$ 821,147
Total increase (decrease)	$ (120,912)	$ 376,133
Net Market Value of Assets Available for Benefits:		
Beginning of year	$ 8,934,449	$ 8,558,316
End of year	$ 8,813,537	$ 8,934,449

Exhibit 3 – Actuarial Value of Assets

Under 40 ILCS 5/3, the statutory minimum required contribution is to be determined based upon **Actuarial Value of Assets**, which are asset values which have been smoothed over a five-year period, beginning with the year 2011. The **Actuarial Value of Assets** has been calculated below based upon the market value of assets at May 1, 2016 with adjustments for the preceding year's gains/losses, which are reflected at the rate of 20% per year.

1. Expected Return on Assets	
a. Market Value of Assets as of Beginning of Year	$ 8,934,449
b. Income and Disbursements During the year	
i. Contributions Received (weighted 50%)	$ 387,293
ii. Benefit Payments and Expenses (weighted 50%)	409,341
iii. Weighted net income (other than investment income) (i) – (ii)	(22,048)
c. Market Value adjusted for income and disbursements	$ 8,912,401
d. Expected Return on Assets at assumed rate of 7.00%	**$ 623,868**
2. Actual Return on Assets for year	
a. Market Value of Assets (Beginning of Year)	$ 8,934,449
b. Income (less investment income)	774,586
c. Disbursements	818,682
d. Market Value of Assets (End of Year)	8,813,537
e. Actual Return on Assets (d) – (a) – (b) + (c)	(76,816)
f. Investment Gain/(Loss) for year 2(e) - 1(d)	**$ (700,684)**
3. **Actuarial Value of Assets**	
a. Market Value of Assets as of End of Year	$ 8,813,537
b. Deferred Investment gains/(losses)	
i. 80% of 2015 loss of $(700,684)	560,547
ii. 60% of 2014 loss of ($135,278)	81,167
iii. 40% of 2013 gain of $416,724	(166,690)
iv. 20% of 2012 gain of $58,278	(11,656)
v. Total	463,368
c. Actuarial Value of Assets for statutory funding 3(a) + 3(b)(iv)	**$ 9,276,905**

Exhibit 4- Determination of the Statutory Minimum Required Contribution

Under 40 ILCS 5/3, the statutory minimum required contribution is to be determined based upon the Projected Unit Credit actuarial funding method, where the unfunded liability is amortized such that 90% of the liability will be funded as of 2040. Under the statute, 90% of the unfunded liability is to be amortized as a level percentage of payroll over the period through 2040. The mandated funding method, the Projected **Unit Credit funding method, requires** the annual cost of the plan to be developed in two parts: that attributable to benefits allocated to the current year (the normal cost); and that allocated to benefits attributable to prior service (the accrued liability).

Funding Elements for 40 ILCS 5/3

	Present Value of Benefits as of 5/1/2016	Projected Unit Credit (PUC) Normal Cost as of 5/1/2016	PUC Actuarial Accrued Liability as of 5/1/2016
1. Active Officers			
a) Normal & Early Retirement	$ 6,535,660	$ 233,027	$ 3,526,033
b) Vested Withdrawal	334,732	18,713	216,712
c) Pre-Retirement Death	189,533	8,324	112,987
d) Disability	721,435	32,853	405,380
e) Total Active Police Officers	$ 7,781,360	$ 292,917	$ 4,261,112
2. Inactive Police Officers and Survivors:			
a) Normal Retirees	$ 7,262,897		$ 7,262,897
b) Widows (survivors)	0		0
c) Deferred Vested	207,055		207,055
d) Disabled	3,760,132		3,760,132
e) Total - Nonactive	$ 11,230,084		$ 11,230,084
3. Total – All	$ 19,011,444		$ 15,491,196

Minimum Statutory Contribution under 40 ILCS 5/3

Item	Amount
1. Annual Payroll	$ 1,312,723
2. Normal Cost (net of employee/member contributions)	162,826
3. Employee Contributions (expected)	130,091
4. Funding Actuarial Liability	15,491,196
5. 90% of Funding Actuarial Liability	13,942,076
6. Actuarial Value of Assets (Exhibit 3)	9,276,905
7. Unfunded Actuarial Balance	4,665,171
8. Amortization of Unfunded Balance over 25 years as a level percentage of payroll	380,142
9. Interest on (2), (3) and (8)	47,114
10. Minimum statutory tax levy contribution per 40 ILCS 5/3 – (2) + (8) + (9)	**$590,082 (45.0%)**

*() amount as a percent of payroll

Exhibit 5- Determination of the Funding Policy Contribution

The Tax Levy has been based upon the funding policy actuarially determined contribution, rather than the amount determined as the minimum under 40 ILCS 5/3. The funding policy contribution is developed below, based upon the Entry Age Normal Funding Method, with the unfunded accrued liability amortized as a level percentage of payroll amount over the 25 years through 2040. The contribution is then the sum of the Normal Cost (developed under the entry age method, but where the total normal cost is not less than 17.5%) plus the amortization payment.

Funding Elements for Funding Policy Contribution

	Present Value of Benefits as of 5/1/2016	Entry Age Normal Cost as of 5/1/2016	Entry Age Accrued Liability as of 5/1/2016
1. Active Officers			
a) Normal & Early Retirement	$ 6,535,660	$ 199,272	$ 4,314,833
b) Vested Withdrawal	334,732	22,740	70,580
c) Pre-Retirement Death	189,533	8,154	97,429
d) Disability	721,435	33,044	339,483
e) Total Active Police Officers	$ 7,781,360	$ 263,210	$ 4,822,325
2. Inactive Police Officers and Survivors:			
a) Normal Retirees	$ 7,262,897		$ 7,262,897
b) Widows (survivors)	0		0
c) Deferred Vested	207,055		207,055
d) Disabled	3,760,132		3,760,132
e) Total - Nonactive	$ 11,230,084		$ 11,230,084
3. Total – All	$ 19,011,444		$ 16,052,409

Actuarially Determined Funding Policy Contribution for Tax Levy

Item	Amount
1. Normal Cost (net of employee/member contributions)	$ 133,119
2. Employee Contributions (expected)	130,091
3. Funding Actuarial Liability	16,052,409
4. 95% of Funding Actuarial Liability	15,249,789
5. Actuarial Value of Assets (Exhibit 3)	9,276,905
6. Unfunded Actuarial Balance	5,972,884
7. Amortization of Unfunded Balance over 25 years as a level percentage of payroll	486,701
8. Interest on (1), (2) and (7)	52,494
9. Actuarially Determined Funding Policy Contribution for Tax Levy (1) + (7) + (8)	**$672,314 (51.2%)**

Exhibit 6 – Summary of Participant Data as of May 1, 2016

Participant Data

Item	As of 5/1/2016		
	Tier 1	Tier 2	Total
Active Members			
Vested	10	0	10
Non-Vested	0	4	4
Total Actives	10	4	14
Terminated Members entitled to future benefits	1	0	1
Retired Members	8	0	8
Surviving Spouses	0	0	0
Disabled Participants	5	0	5
Total	24	4	28

AGE AND SERVICE DISTRIBUTION AS OF MAY 1, 2016

Active Employee Participants

Age Group	Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	
Under 20										0
20 - 24	1									1
25 - 29	3									3
30 - 34			1							1
35 - 39		1	3	1						5
40 - 44				2						2
45 - 49			1			1				2
50 - 54										0
55 - 59										0
60 - 64										0
65 & Over										0
Total	**4**	**1**	**5**	**3**	**0**	**1**	**0**	**0**	**0**	**14**

Average Age: 36.6 years
Average Length of Service: 11.7 years

SECTION 4 - SUMMARY OF PRINCIPAL PLAN PROVISIONS

This summary provides a general description of the major eligibility and benefit provisions of the pension fund upon which this valuation has been based. It is not intended to be, nor should it be interpreted as, a complete statement of all provisions

Definitions

Tier 1 – For Police Officers first entering Article 3 prior to January 1, 2011

Tier 2 – For Police Officers first entering Article 3 after December 31, 2010

Police Officer (3-106): Any person appointed to the police force and sworn and commissioned to perform police duties.

Persons excluded from Fund (3-109): Part-time officers, special police officer, night watchmen, traffic guards, clerks and civilian employees of the department. Also, police officers who fail to pay the required fund contributions or who elect the Self-Managed Plan option.

Creditable Service (3-110): Time served by a police officer, excluding furloughs in excess of 30 days, but including leaves of absences for illness or accident and periods of disability where no disability pension payments have been received and also including up to 3 years during which disability payments have been received provided contributions are made.

Pension (3-111)

Normal Pension Age

Tier 1 - Age 50 with 20 or more years of creditable service.

Tier 2 - Age 55 with 10 or more years of creditable service.

Normal Pension Amount

Tier 1 - 50% of the greater of the annual salary held in the year preceding retirement or the annual salary held on the last day of service, plus 2½% of such annual salary for service from 20 to 30 year (maximum

Tier 2 - 2½% of Final Average salary for each year of service. Final Average Salary is the highest salary based on the highest consecutive 96 months of the final 120 months of service

Early Retirement at age 50 with 10 or more years of service but with a penalty of ½% for each month prior

Annual Salary capped at $106,800 increased yearly by the lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3%. Salary for valuations beginning in 2013 is $109,971.43.

Minimum Monthly Benefit: $1,000

Maximum Benefit Percentage: 75% of salary

Termination Retirement Pension Date

Separation of service after completion of between 8 and 20 years of creditable service.

Termination Pension Amount

Commencing at age 60, 2½% of annual salary held in the year preceding termination times years of creditable service or refund of contributions, or for persons terminating on or after July 1, 1987, 2½% of annual salary held on the last day of service times years of credible service, whichever is greater.

Pension Increase Non-Disabled

Tier 1 - 3% increase of the original pension amount after attainment of age 55 for each year elapsed since retirement, followed by an additional 3% of the original pension amount on each May 1 thereafter. Effective July 1, 1993, 3% of the amount of pension payable at the time of the increase including increases previously granted, rather than 3% of the originally granted pension amount.

Tier 2 - The lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3% increase of the original pension amount after attainment of age 60, followed by an additional 3% of the original pension amount on each

Disabled

3% increase of the original pension amount after attainment of age 60 for each year he or she received pension payments, followed by an additional 3% of the original pension amount in each May 1 thereafter.

Pension to Survivors (3-112)

Death of Retired Member

Tier 1 - 100% of pension amount to surviving spouse (or dependent children).

Tier 2 – 66 2/3% of pension amount to surviving spouse (or dependent children), subject to the following increase: the lesser of ½ of the Consumer Price Index- Urban (CPI-U) or 3% increase of the original pension amount after attainment of age 60, followed by an additional 3% of the original pension amount on each

Death While in Service (Not in line of duty)

With 20 years of creditable service, the pension amount earned as of the date of death.

With between 10 and 20 years of creditable service, 50% of the salary attached to the rank for the year prior to the date of death.

Death in Line of Duty

100% of the salary attached to the rank for the last day of service year prior to date of death.

Minimum Survivor Pension

$1,000 per month to all surviving spouses.

Disability Pension - Line of Duty (3-114.1)

Eligibility

Suspension or retirement from police service due to sickness, accident or injury while on duty.

Pension

Greater of 65% of salary attached to rank at date of suspension or retirement and the retirement pension available. Minimum $1,000 per month.

Disability Pension - Not on Duty (3-114.2)

Eligibility

Suspension or retirement from police service for any cause other than while on duty.

Pension

50% of salary attached to rank at date of suspension or retirement. Minimum $1,000 per month.

Other Provisions

Marriage after Retirement (3-120)

No surviving spouse benefit available.

Refund (3-124)

At death prior to completion of 10 years of service, contributions are returned without interest to widow. At termination with less than 20 years of service, contributions are refunded upon request.

Contributions by Police Officers (3-125.1)

Beginning May 1, 2001, 9.91% of salary including longevity, but excluding overtime pay, holiday pay, bonus pay, merit pay or other cash benefit.

Actuarial Accrued Liability

See ***Entry Age Normal Cost*** *Method and* ***Projected Unit Credit Cost*** *Method.*

Actuarial Assumptions

The economic and demographic predictions used to estimate the present value of the plan's future obligations. They include estimates of investment earnings, salary increases, mortality, withdrawal and other related items. The *Actuarial Assumptions* are used in connection with the *Actuarial Cost Method* to allocate plan costs over the working lifetimes of plan participants.

Actuarial Cost Method

The method used to allocate the projected obligations of the plan over the working lifetimes of the plan participants. Also referred to as an *Actuarial Funding Method.*

Actuarial Funding Method

See *Actuarial Cost Method*

Actuarial Gain (Loss)

The excess of the actual *Unfunded Actuarial Accrued Liability* over the expected *Unfunded Actuarial Accrued Liability* represents an *Actuarial Loss.* If the expected *Unfunded Actuarial Accrued Liability* is greater, an *Actuarial Gain* has occurred.

Actuarial Present Value

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of *Actuarial Assumptions* .

Actuarial Value of Assets

The asset value derived by using the plan's *Asset Valuation Method.*

Asset Valuation Method

A valuation method designed to smooth random fluctuations in asset values. The objective underlying the use of an asset valuation method is to provide for the long-term stability of employer contributions.

Employee Retirement Income Security Act of 1974 (ERISA)

The primary federal legislative act establishing funding, participation, vesting, benefit accrual, reporting, and disclosure standards for pension and welfare plans.

Entry Age Normal Cost Method

One of the standard actuarial funding methods in which the *Present Value of Projected Plan Benefits* of each individual included in the *Actuarial Valuation* is allocated on a level basis over the earnings of the individual between entry age and assumed exit age(s). The portion of this *Actuarial Present Value* allocated to a valuation year is called the *Normal Cost* . The portion of this *Actuarial Present Value* not provided for at a valuation date by the *Actuarial Present Value* of future *Normal Costs* is called the

Normal Cost

The portion of the *Present Value of Projected Plan Benefits* that is allocated to a particular plan year by the *Actuarial Cost Method* . See *Entry Age Normal Cost Method* for a description of the Normal Cost under the *Entry Age Normal Cost Method.* See *Projected Unit Credit Cost Method* for a description of the Normal Cost under the *Projected Unit Credit Cost Method.*

Present Value of Future Normal Costs

The present value of future normal costs determined based on the *Actuarial Cost Method* for the plan. Under the *Entry Age Normal Cost Method* , this amount is equal to the excess of the *Present Value of Projected Plan Benefits* over the sum of the *Actuarial Value of Assets* and *Unfunded Actuarial Accrued*

Present Value of Projected Plan Benefits

The present value of future plan benefits reflecting projected credited service and salaries. The present value is determined based on the plan's actuarial assumptions.

Projected Unit Credit Cost Method

One of the standard actuarial funding methods in which the *Present Value of Projected Plan Benefits* of each individual included in the *Actuarial Valuation* is allocated by a consistent formula to valuation years. The *Actuarial Present Value* allocated to a valuation year is called the *Normal Cost* . The *Actuarial Present Value* of benefits allocated to all periods prior to a valuation year is called the *Actuarial Accrued Liability* .

Unfunded Actuarial Accrued Liability

The excess of the *Actuarial Accrued Liability* over the *Actuarial Value of Assets.*

SECTION 5 - SUMMARY OF ACTUARIAL ASSUMPTIONS AND COST METHODS

Nature of Actuarial Calculations

The results documented in this report are estimates based on data that may be imperfect and on assumptions about future events, some of which are mandated assumptions. Certain provisions may be approximated or deemed immaterial and therefore are not valued. Assumptions may be made about participant data or other factors. A range of results, different from those presented in this report could be considered reasonable. The numbers are not rounded, but this is for convenience and should not imply precisions, which is not inherent in actuarial calculations.

Actuarial Assumption Item	Annual Actuarial Valuation Statutory Minimum	Annual Actuarial Valuation Funding Policy Amount for Tax Levy
Interest	7.00% per annum	7.00% per annum
Mortality	RP2000 Mortality Table projected to 2015 with Blue Collar Adjustments, 20% Load For disabled participants the RP2000 Disability Mortality Table projected to 2015 with no collar adjustments and no load.	RP2000 Mortality Table projected to 2015 with Blue Collar Adjustments, 20% Load For disabled participants the RP2000 Disability Mortality Table projected to 2015 with no collar adjustments and no load.
Retirement	Rates of retirement for all ages are: Age 50 14.00%; 51 14.00%; 52 14.00%; 53 14.00%; 54 20.00%; 55 20.00%; 56 20.00%; 57 20.00%; 58 20.00%; 59 20.00%; 60 25.00% Age 61 25.00%; 62 25.00%; 63 33.00%; 64 33.00%; 65 100%; 66 100%; 67 100%; 68 100%; 69 100%; 70 100%	Rates of retirement for all ages are: Age 50 14.00%; 51 14.00%; 52 14.00%; 53 14.00%; 54 20.00%; 55 20.00%; 56 20.00%; 57 20.00%; 58 20.00%; 59 20.00%; 60 25.00% Age 61 25.00%; 62 25.00%; 63 33.00%; 64 33.00%; 65 100%; 66 100%; 67 100%; 68 100%; 69 100%; 70 100%
Withdrawal	Rates of termination are based upon age only. Sample rates for selected ages are: Age 25 7.34%; 40 1.19%; 50 0.00%; 55 0.00%	Rates of termination are based upon age only. Sample rates for selected ages are: Age 25 7.34%; 40 1.19%; 50 0.00%; 55 0.00%
Percentage Married	85% are married, females are assumed to be 3 years younger	85% are married, females are assumed to be 3 years younger

Actuarial Assumption Item	Annual Actuarial Valuation Statutory Minimum	Annual Actuarial Valuation Funding Policy Amount for Tax Levy
Disability	Rates of disability are based upon age only. 50% of disabilities are assumed to be Duty related. Sample rates for selected ages are: Age 25 0.05% 40 0.40% 50 0.95% 55 0.13%	Rates of disability are based upon age only. 50% of disabilities are assumed to be Duty related. Sample rates for selected ages are: Age 25 0.05% 40 0.40% 50 0.95% 55 0.13%
Salary Increase	Rates of salary increases are based upon age only. An additional 2.5% reflecting inflationary increases, was added in addition to the rates illustrated below. Sample rates for selected ages are: Age 25 4.86% 40 1.52% 50 1.18% 55 1.12%	Rates of salary increases are based upon age only. An additional 2.5% reflecting inflationary increases, was added in addition to the rates illustrated below. Sample rates for selected ages are: Age 25 4.86% 40 1.52% 50 1.18% 55 1.12%
Payroll Growth	Total payroll is assumed to increase at 4.0% per year	Total payroll is assumed to increase at 4.0% per year
Asset Valuation Method	Assets are valued at fair market value and smoothed over five years, reflecting gains and losses at 20% per year.	Assets are valued at fair market value and smoothed over five years, reflecting gains and losses at 20% per year.
Actuarial Cost Methods	Projected Unit Credit Cost Method This is the mandated actuarial method to be used in determining the statutory contribution requirements and under PA 096-1495. This method determines the present value of projected benefits and prorates the projected benefit by service to date to determine the accrued liability. Amounts attributable to past service are amortized as a level percentage of pay with the goal of reaching 90% of the accrued liability by 2040.	Entry Age Normal Cost Method This method projects benefits from entry age to retirement age and attributes costs over total service, as a level percentage of pay. Amounts attributable to past service have been amortized over 24 years on a closed basis as a level dollar amount.

VILLAGE OF LAKE BLUFF

MEMORANDUM

TO: Finance Committee Members
Kathy O'Hara, Village President
Drew Irvin, Village Administrator

FROM: Susan Griffin, Finance Director

DATE: September 16, 2016

SUBJECT: 2016 Police Pension Actuarial Valuation & Historical Information

Each year the Pension Fund is required to submit a tax levy recommendation to the Village Board based on either an independent actuarial valuation or the State of Illinois plan valuation. In the past the Village has engaged an actuary to provide a report showing the required contribution based on the statutorily required cost methodology, Projected Unit Credit, and based on the Village's determined funding methodology, Entry Age Normal Cost. Last year the Village engaged Kathleen Manning and Daniel Colby of MWM Consulting Group for a three year period.

On May 9th the Police Pension Fund held a joint meeting with the Village Committee of the Whole to discuss the current funding methodology and discuss any potential changes to the tables, assumed rates and load factors. At that meeting Ms. Manning recommended reducing the 50% load on the mortality table to 25% with the goal of ultimately eliminating the load. She also suggested gradually increasing the rates of duty disability from the current 15%. These were percentages used by the prior actuary. She noted that the 7% interest rate assumption is appropriate at this time as the measurement period is 40 plus years and she concurred with using the EANC method.

The total tax levy calculated under the Village's current funding policy with a reduction in the blue collar mortality load from 50% to 20% and an increase in the duty disability from 15% to 50% is $672,314 or 51.2% of payroll.

The Police Pension Fund recommends a 2016 property tax levy of $672,315 which increases the tax levy 3.4% from the prior year. The funded ratio increases slightly as of April 30, 2016 to 57.80% from 57.60% in the prior year even as the actuarial accrued liability increases from $15.378 million to $16.052 million.

Attachments:

A. May 1, 2016 Actuarial Valuation Report
B. Police Pension Fund Statistical Data