

AGENDA
FINANCE COMMITTEE
Village of Hoffman Estates
February 22, 2016

7:00 p.m. – Board Room

Members:	Gary Pilafas, Chairperson	Karen Mills, Trustee
	Anna Newell, Vice Chairperson	Gary Stanton, Trustee
	Michael Gaeta, Trustee	Gayle Vandenberg, Trustee
		William McLeod, Mayor

I. Roll Call

II. Approval of Minutes – January 25, 2016

February 1, 2016 (Special Meeting)

NEW BUSINESS

1. Request approval of an Ordinance authorizing the issuance of not to exceed \$10,000,000 General Obligation Refunding Bonds, Series 2016 of the Village of Hoffman Estates, Cook and Kane Counties, Illinois, for the purpose of advance refunding certain outstanding bonds, authorizing the execution of a bond order and an escrow agreement in connection therewith, and providing for the levy and collection of a direct annual tax for the payment of the principal of and interest on said bonds.
2. Request approval of an ordinance amending Section 8-2-1, Fees, of the Hoffman Estates Municipal Code (video gaming).
3. Request approval of an ordinance amending Sections 13-5-2 and 13-5-6 of the Hoffman Estates Municipal Code (real estate transfer tax).
4. Request authorization to waive formal bidding and award a contract to Current Technologies Corporation Inc. for the replacement of the Information Systems Department Storage Area Network (SAN) in an amount not to exceed \$94,548.72.
5. Request acceptance of Finance Department Monthly Report.
6. Request acceptance of Information System Department Monthly Report.
7. Request acceptance of Sears Centre Monthly Report.

III. President's Report

IV. Other

V. Items in Review

VI. Adjournment

Village of Hoffman Estates

FINANCE COMMITTEE MEETING MINUTES

January 25, 2016

I. Roll call

Members in Attendance:

**Gary Pilafas, Chairperson
Trustee Anna Newell, Vice Chairperson
Trustee Michael Gaeta
Trustee Karen Mills
Trustee Gary Stanton
Trustee Gayle Vandenberg
Mayor William McLeod**

**Management Team Members
in Attendance:**

**Jim Norris, Village Manager
Art Janura, Corporation Counsel
Dan O'Malley, Deputy Village Manager
Mark Koplín, Asst. Vlg. Mgr.-Dev. Services
Alan Wenderski, Director of Engineering
Monica Saavedra, Dir. HHS
Jeff Jorian, Fire Chief
Ted Bos, Police Chief
Joseph Nebel, Dir. of Public Works
Rachel Musiala, Director of Finance
Bruce Anderson, CATV Coordinator
Fred Besenhoffer, Director of IS
Ashley Monroe, Asst. to Village Manager
Austin Pollack, Admin. Intern
Bev Romanoff, Clerk
Ben Gibbs, GM Sears Arena
Patti Cross, Asst. Corp Counsel**

The Finance Committee meeting was called to order at 7:07 p.m.

- I. Roll Call**
- II. Approval of Minutes – December 21, 2015**

Motion by Trustee Gaeta, seconded by Trustee Vandenberg, to approve the minutes from December 21, 2015. Voice vote taken. All ayes. Motion carried.

NEW BUSINESS

- 1. Request approval of:**
 - a. An amendment to the agreement with Levy to provide food and beverage service at the Sears Centre Arena, extending the agreement through April 30, 2018.**
 - b. Modifying certain terms of the agreement**

An item summary sheet by Mr. Koplín was presented to committee.

Motion by Trustee Gaeta, seconded by Trustee Stanton, to a.) Amend to the agreement with Levy to provide food and beverage service at the Sears Centre Arena, extending the agreement through April 30, 2018 and b.) Modify certain terms of the agreement. Voice vote taken. All ayes. Motion carried.

2. Request approval of a Business Solicitation Plan for the Fourth of July Commission for the 2016 Northwest Fourth Fest.

An item summary sheet by Jackie Green was presented to committee.

Motion by Trustee Gaeta, seconded by Trustee Mills, to approve a Business Solicitation Plan for the Fourth of July Commission for the 2016 Northwest Fourth Fest. Voice vote taken. All ayes. Motion carried.

3. Request authorization to waive all inspection fees and select license fees for the 2016 Northwest Fourth Fest.

An item summary sheet by Jackie Green was presented to committee.

Motion by Trustee Gaeta, seconded by Trustee Mills, to waive all inspection fees and select license fees for the 2016 Northwest Fourth Fest. Voice vote taken. All ayes. Motion carried.

4. Request authorization to award contract for stage, sound, lights and backline equipment for the 2016 Northwest Fourth Fest to SCS Productions, Inc., Roselle, IL in an amount not to exceed \$19,250.

An item summary sheet by Mr. Gibbs was presented to committee.

Trustee Vandenberg inquired if the sound equipment had been upgraded from last year. Mr. O'Malley indicated the proposal was the same as 2015.

Motion by Trustee Gaeta, seconded by Trustee Mills, to award contract for stage, sound, lights and backline equipment for the 2016 Northwest Fourth Fest to SCS Productions, Inc., Roselle, IL in an amount not to exceed \$19,250. Voice vote taken. All ayes. Motion carried.

5. Request authorization to go out to bid for electricity, select a supplier based on the recommendation of Energy Choices and allow the Village Manager to enter into contract with a third party supplier for the Sears Centre Arena.

An item summary sheet by Mrs. Musiala and Mr. Koplín was presented to committee.

Motion by Trustee Gaeta, seconded by Trustee Stanton, to bid for electricity, select a supplier based on the recommendation of Energy Choices and allow the Village Manager to enter into contract with a third party supplier for the Sears Centre Arena. Voice vote taken. All ayes. Motion carried.

6. Request acceptance of the Finance Department Monthly Report.

The Finance Department Monthly Report was presented to Committee.

Motion by Trustee Gaeta, seconded by Trustee Mills, to accept the Finance Department Monthly Report. Voice vote taken. All ayes. Motion carried.

7. Request acceptance of the Information System Department Monthly Report.

The Information System Department Monthly Report was presented to Committee.

Motion by Trustee Gaeta, seconded by Trustee Mills, to accept the Information System Department Monthly Report. Voice vote taken. All ayes. Motion carried.

8. Request acceptance of the Sears Centre Monthly Report.

The Sears Centre Monthly Report was presented to Committee.

Trustee Stanton inquired about a show titled "Live with Beth Moore." Mr. Gibbs stated this was a religious event. Mr. Gibbs provided a Sears Centre recap of 2015 and a preview of what to expect for 2016. Trustee Stanton asked if the Bulls are officially selling tickets. Mr. Gibbs said the team is not selling as of yet but are taking orders and will announce a team name soon. An open house is being planned. Mr. Gibbs provided an update on progress of annual suite sales. Trustee Vandenberg noted the uptick in mailed advertisements regarding the suite sales.

Motion by Trustee Gaeta, seconded by Trustee Vandenberg, to accept the Sears Centre Monthly Report. Voice vote taken. All ayes. Motion carried.

III. President's Report**IV. Other**

Mr. Dean Slater from Hoffman Estates Professional Firefighters Local #2061 inquired about the board meeting with the union to discuss a possible VSP (Voluntary Separation Program). Mayor McLeod indicated no interest in pursuing this meeting. Trustee Stanton inquired if it should go to a committee. Mr. Norris explained this was collective bargaining and should be handled through staff. Mr. Norris stated discussions could be had but no decisions would be made until the State budget issues and its impact on the Village is better understood.

V. Items in Review**VI. Adjournment**

Motion by Trustee Gaeta, seconded by Trustee Stanton, to adjourn the meeting at 7:19 p.m. Voice vote taken. All ayes. Motion carried.

Minutes submitted by:

Jennifer Djordjevic, Director of Operations
& Outreach / Office of the Mayor and Board

Date

Village of Hoffman Estates

SP. FINANCE COMMITTEE MEETING MINUTES

February 1, 2016

I. Roll call

Members in Attendance:

**Gary Pilafas, Chairperson
Trustee Anna Newell, Vice Chairperson
Trustee Michael Gaeta
Trustee Karen Mills
Trustee Gary Stanton
Trustee Gayle Vandenberg
Mayor William McLeod**

**Management Team Members
in Attendance:**

**Jim Norris, Village Manager
Art Janura, Corporation Counsel
Dan O'Malley, Deputy Village Manager
Patti Cross, Asst. Corp Counsel
Bruce Anderson, CATV Coordinator
Patrick Seger, Dir. HRM
Fred Besenhoffer, Director of IS
Joseph Nebel, Dir. of Public Works
Jeff Jorian, Fire Chief
Rachel Musiala, Director of Finance
Mark Koplun, Asst. Vlg. Mgr.-Dev. Services
Kevin Kramer, Dir. Of Economic Dev.
Monica Saavedra, Dir. HHS
Ted Bos, Police Chief
Ashley Monroe, Asst. to Village Manager
Austin Pollack, Admin. Intern
Bev Romanoff, Clerk
Ben Gibbs, GM Sears Arena**

Additional attendees: Mr. Anthony Miceli, Speer Financial

The Finance Committee meeting was called to order at 7:00 p.m.

I. Roll Call

NEW BUSINESS

- 1. Discussion regarding the issuance of Bank Qualified General Obligation Refunding Bonds to refund up to \$10,000,000 of the 2008A and 2009A General Obligation Bonds.**

Mr. Norris invited Mr. Anthony Miceli to provide comments on the refunding bonds.

Motion by Trustee Mills, seconded by Trustee Gaeta, to direct Village staff to proceed with the issuance of Bank Qualified General Obligation Refunding Bonds to refund up to \$10,000,000 of the 2008A and 2009A General Obligation Bonds and adding Robert W. Baird as the underwriter. Voice vote taken. All ayes. Motion carried.

II. Adjournment

Motion by Trustee Gaeta, seconded by Trustee Stanton, to adjourn the meeting at 7:14 p.m. Voice vote taken. All ayes. Motion carried.

Minutes submitted by:

Jennifer Djordjevic, Director of Operations
& Outreach / Office of the Mayor and Board

Date

**COMMITTEE AGENDA ITEM
VILLAGE OF HOFFMAN ESTATES**

SUBJECT: 2016 Bond Ordinance

MEETING DATE: February 22, 2016

COMMITTEE: Finance

FROM: James H. Norris, Village Manager
Rachel Musiala, Director of Finance

PURPOSE: Request approval of an Ordinance authorizing the issuance of not to exceed \$10,000,000 General Obligation Refunding Bonds, Series 2016 of the Village of Hoffman Estates, Cook and Kane Counties, Illinois, for the purpose of advance refunding certain outstanding bonds, authorizing the execution of a bond order and an escrow agreement in connection therewith, and providing for the levy and collection of a direct annual tax for the payment of the principal of and interest on said bonds.

BACKGROUND: At the February 1, 2016 Special Finance Committee meeting, the Finance Committee authorized staff and the Village's Municipal Advisors, Speer Financial, to move forward with the advance refunding of a portion of the Village's Series 2008A and 2009A bonds. The Village currently has \$26,645,000 of principal outstanding related to the Series 2008A General Obligation Bonds and \$26,625,000 of principal outstanding related to the Series 2009A General Obligation Bonds. These bonds were originally issued to fund the Village Hall remodeling, the construction of the new police station and fire station, and the construction of a new water tower. These bonds are subject to redemption on any date on or after December 1, 2018 and December 1, 2019 respectively. However, market conditions sometimes make it favorable to advanced refund outstanding bond issues or portions of those issues prior to redemption dates.

DISCUSSION: Speer Financial has been monitoring the current debt market. If conditions remain favorable, the attached ordinance would give us the authority to move forward with the issuance of these bonds.

The parameters being approved with the attached ordinance specify:

- No more than \$10,000,000 of bonds will be sold to advance refund a portion of the above mentioned debt.
- The interest rate on the bonds will not exceed 5.00%.
- The maturity dates of the bonds will not exceed December 1, 2038.

As written, this ordinance will allow for the issuance of bonds for the purposes specified above in 2016 without further formal action needed. This ordinance was written by Randall Kulat, Bond Counsel with Arnstein & Lehr, and has been reviewed by the Municipal Advisors, Underwriters (Robert W. Baird & Co.), and Village staff.

RECOMMENDATION: Request approval of an Ordinance authorizing the issuance of not to exceed \$10,000,000 General Obligation Refunding Bonds, Series 2016 of the Village of Hoffman Estates, Cook and Kane Counties, Illinois, for the purpose of advance refunding certain outstanding bonds, authorizing the execution of a bond order and an escrow agreement in connection therewith, and providing for the levy and collection of a direct annual tax for the payment of the principal of and interest on said bonds.

VILLAGE OF HOFFMAN ESTATES

**AN ORDINANCE AUTHORIZING THE ISSUANCE OF
NOT TO EXCEED \$10,000,000 GENERAL OBLIGATION REFUNDING BONDS,
SERIES 2016 OF THE VILLAGE OF HOFFMAN ESTATES, COOK AND KANE
COUNTIES, ILLINOIS, FOR THE PURPOSE OF ADVANCE REFUNDING CERTAIN
OUTSTANDING BONDS, AUTHORIZING THE EXECUTION OF A BOND ORDER
AND AN ESCROW AGREEMENT IN CONNECTION THEREWITH, AND
PROVIDING FOR THE LEVY AND COLLECTION OF A DIRECT ANNUAL TAX
FOR THE PAYMENT OF THE PRINCIPAL OF AND INTEREST ON SAID BONDS**

WHEREAS, the Village of Hoffman Estates, Cook and Kane Counties, Illinois (the "Village") has a population in excess of 25,000 as determined by the last official census, and pursuant to the provisions of Section 6 of Article VII of the Constitution of the State of Illinois (the "Constitution"), the Village is a home rule unit and may exercise any power or perform any function pertaining to its government and affairs including, but not limited to, the power to tax and to incur debt; and

WHEREAS, pursuant to the provisions of Sections 6(d) and 6(k) of Article VII of the Constitution, a home rule unit may incur debt payable from ad valorem property tax receipts maturing not more than 40 years from the time it is incurred and without referendum approval thereof; and

WHEREAS, the Village has previously issued its General Obligation Bonds, Series 2008A (the "2008A Bonds"), which 2008A Bonds are binding and subsisting legal obligations of the Village, and the 2008A Bonds are, by their terms, subject to optional redemption by the Village on any date on or after December 1, 2018, as provided in the ordinance of the Village authorizing the issuance of the 2008A Bonds (the "2008A Ordinance"); and

WHEREAS, the Village has previously issued its General Obligation Bonds, Series 2009A (the "2009A Bonds", and, together with the 2008A Bonds, the "Prior Bonds"), which 2009A Bonds are binding and subsisting legal obligations of the Village, and the 2009A Bonds are, by their terms, subject to optional redemption by the Village on any date on or after December 1, 2018, as provided in the ordinance of the Village authorizing the issuance of the 2009A Bonds (the "2009A Ordinance"); and

WHEREAS, the President and the Board of Trustees of the Village (collectively, the "Corporate Authorities") have determined that it is advisable, necessary and in the best interests of the Village to issue its general obligation refunding bonds in the total amount not to exceed \$10,000,000 (the "Bonds") to pay the cost of: (i) the advance refunding of a portion of the Prior Bonds, and (ii) the issuance of the Bonds; and

WHEREAS, the Corporate Authorities have received reports which indicate that a refunding of a portion of the Prior Bonds (the portion of the Prior Bonds to be refunded pursuant to this Ordinance is hereafter referred to as the "Refunded Bonds") will effect a benefit to the Village by achieving an overall debt service savings; and

WHEREAS, this Ordinance, adopted pursuant to Section 6 of Article VII of the Constitution and the Municipal Code of Hoffman Estates, provides authority for the Village acting by the President and the Corporate Authorities to issue the Bonds; and

WHEREAS, the Bonds shall be payable from a direct annual ad valorem tax levied against all taxable property in the Village, without limitation as to rate or amount (collectively, the “*Pledged Taxes*”); and

WHEREAS, the County Clerk of Cook County, Illinois and the County Clerk of Kane County, Illinois are herein authorized to extend and collect said tax so levied for the payment of the Bonds without limitation as to rate or amount;

NOW, THEREFORE, BE IT ORDAINED by the President and Board of Trustees of the Village of Hoffman Estates, Cook and Kane Counties, Illinois, as follows:

Section 1: *Incorporation of Preambles*. The Corporate Authorities hereby find that all of the recitals contained in the preambles to this Ordinance are true, correct and complete and do incorporate them into this Ordinance by this reference.

Section 2: *Determination to Issue Bonds*. It is necessary and in the best interests of the Village to advance refund the Refunded Bonds and to pay all related costs and expenses incidental thereto, and to issue the Bonds for such purposes. It is hereby found and determined that the issuance of the Bonds is for a proper public purpose or purposes and is in the public interest, and is authorized pursuant to the Constitution and the Local Government Debt Reform Act, 30 ILCS 3501, *et seq.*; and these findings and determinations shall be deemed conclusive. The Village hereby determines to advance refund the Refunded Bonds as shall be specified in the Bond Order (as hereinafter defined). The Village hereby elects to redeem such Refunded Bonds on December 1, 2018 at the redemption price of par and accrued interest.

Section 3: *Bond Details*. For the purpose of paying the costs of advance refunding the Refunded Bonds and the costs of issuance of the Bonds, there shall be issued and sold the Bonds in the aggregate principal amount of not to exceed \$10,000,000. The Bonds shall be designated “General Obligation Refunding Bonds, Series 2016” or such other designation and series identification as may be appropriate and as shall be provided in the Bond Order (the “*Bond Order*”) executed by any two of the President, the Village Manager and the Village Treasurer (collectively, the “*Designated Officials*”); shall be dated the date of delivery (the “*Dated Date*”); and shall also bear the date of authentication thereof. The Bonds shall be in fully registered book-entry form, shall be in denominations of \$5,000 or integral multiples thereof (but no single Bond shall represent principal maturing on more than one date), shall be numbered consecutively in such fashion as shall be determined by the Registrar (as hereinafter defined), and shall become due and payable (subject to right of prior redemption as hereinafter stated) on December 1 of the years and in the amounts and bearing interest at the rates percent per annum as shall be provided in the Bond Order *provided, however*, that no Bond (i) shall bear interest at a rate percent per annum which is in excess of five percent (5%), or (ii) have a final maturity which is later than December 1, 2038.

Each Bond shall bear interest from the later of its Dated Date as herein provided or from the most recent interest payment date to which interest has been paid or duly provided for, until the principal amount of such Bond is paid or duly provided for, such interest (computed upon the basis of a 360-day year of twelve 30-day months) being payable on June 1 and December 1 of each year, commencing on June 1, 2016 or as shall be otherwise provided in the Bond Order. Interest on each Bond shall be paid by check or draft of the Paying Agent (as hereinafter defined), payable

upon presentation thereof in lawful money of the United States of America, to the person in whose name such Bond is registered at the close of business on the 15th day of the month next preceding the interest payment date, and mailed to the registered owner of the Bond as shown in the register kept by the Registrar or at such other address furnished in writing by such registered owner, or as otherwise may be agreed with the Depository. The principal of the Bonds shall be payable in lawful money of the United States of America upon presentation thereof at the principal office maintained for the purpose by the Paying Agent.

Section 4: Registrar and Paying Agent. Amalgamated Bank of Chicago is hereby appointed to serve as Registrar and Paying Agent for the Bonds (the “Registrar” or “Paying Agent”). The Registrar is hereby charged with the responsibility of authenticating the Bonds.

The Bonds shall be payable at the principal office of the Paying Agent. If the payment date occurs on a date when financial institutions are not open for business, the payment shall be made on the next succeeding business day. The Paying Agent shall be instructed to wire transfer payments by 1:00 p.m. (New York City time) so such payments are received by the registered owner by 2:30 p.m. (New York City time). All payments on the Bonds shall be made in any coin or currency of the United States of America, which on the date of such payment shall be legal tender for the payment of public and private debts.

Each Bond shall be transferable or exchangeable only upon the books of the Village kept for that purpose at the principal office of the Registrar by the registered owner in person, or by its attorney duly authorized in writing, upon surrender of such Bond together with a written instrument of transfer or exchange satisfactory to the Registrar duly executed by the registered owner, or its attorney duly authorized in writing, and thereupon a new fully registered Bond or Bonds in an authorized aggregate principal amount and of the same maturity, shall be executed and delivered in the name of the transferee or transferees or the registered owner, as the case may be, in exchange therefor. The Registrar shall not be required to transfer or exchange any Bond during the fifteen (15) days prior to a principal payment date and ending on such principal payment date. The costs of such transfer or exchange shall be borne by the Village except for any tax or governmental charge required to be paid with respect to the transfer or exchange, which taxes or governmental charges are payable by the person requesting such transfer or exchange. The Village, Registrar and Paying Agent for the Bonds may treat and consider the person in whose name such Bonds are registered as the absolute owner thereof for all purposes including for the purpose of receiving payment of, or on account of, the principal thereof and interest due thereon.

The Registrar and Paying Agent may at any time resign as Registrar and Paying Agent upon giving 30 days’ notice in writing to the Village and by first class mail to each registered owner of the Bonds then outstanding, and such resignation will take effect at the end of such 30-day period or upon the earlier appointment of a successor registrar and paying agent by the Village. Any such notice to the Village may be served personally or sent by registered mail. The Registrar and Paying Agent may be removed at any time as Registrar and Paying Agent by the Village, in which event the Village may appoint a successor registrar and paying agent. The Village shall

notify each registered owner of the Bonds then outstanding by first class mail of the removal of the Registrar and Paying Agent. Notices to the registered owners of the Bonds shall be deemed to be given when mailed by first class mail to the addresses of such registered owners as they appear on the registration books kept by the Registrar.

Upon the appointment of any successor registrar and paying agent by the Village, the Village President or the Village Clerk are authorized and directed to enter into such agreements and understandings with such successor registrar and paying agent as will enable the institution to perform the services required of a registrar and paying agent for the Bonds. The Village President and Village Clerk are further authorized to pay such fees as the successor registrar and paying agent may charge for the services it provides as registrar and paying agent.

Any predecessor registrar and paying agent shall deliver all of the Bonds and any cash or investments in its possession with respect thereto, together with the registration books, to the successor registrar and paying agent.

The Registrar shall cause said Bonds to be printed in blank in such number as the Registrar shall determine to be necessary or customary; provided, however, that the Registrar shall not be required to have such Bonds printed until it shall have received from the Village indemnification for all costs and expenses associated with such printing.

In connection with any notice or other communication to be provided to bondholders by the Village or the Registrar with respect to any consent or other action to be taken by bondholders, the Village or the Registrar, as the case may be, shall establish a record date for such consent or other action and give the bondholders notice of such record date not less than fifteen (15) calendar days in advance of such record date to the extent possible.

The Village has determined that it may be beneficial to the Village to have the Bonds held by a central depository system pursuant to an agreement between the Village and The Depository Trust Company, New York, New York ("*Depository Trust Company*") and have transfers of the Bonds effected by book-entry on the books of the central depository system. The Bonds may be initially issued in the form of a separate single authenticated fully registered Bond for the aggregate principal amount of each separate maturity of the Bonds. In such case, upon initial issuance, the ownership of such Bonds shall be registered in the register kept by the Registrar in the name of Cede & Co., as nominee of the Depository Trust Company.

With respect to the Bonds registered in the register kept by the Registrar in the name of Cede & Co., as nominee of the Depository Trust Company, the Village and the Paying Agent shall have no responsibility or obligation to any other holders or owners (including any beneficial owner ("*Beneficial Owner*")) of the Bonds with respect to (i) the accuracy of the records of the Depository Trust Company, Cede & Co., or any Beneficial Owner with respect to ownership questions, (ii) the delivery to any bondholder (including any Beneficial Owner) or any other person, other than the Depository Trust Company, of any notice with respect to the Bonds including any notice of redemption, or (iii) the payment to any bondholder (including any Beneficial Owner) or any other person, other than the Depository Trust Company, of any amount with respect to the principal of, or premium, if any, or interest on the Bonds except as otherwise provided herein.

So long as the Bonds are registered in the name of CEDE & CO., as nominee of the Depository Trust Company, no person other than the Depository Trust Company shall receive an authenticated Bond evidencing an obligation of the Village to make payments of the principal of and premium, if any, and interest on the Bonds pursuant to this Ordinance. The Village and the Registrar and Paying Agent may treat as and deem the Depository Trust Company or Cede & Co. to be the absolute bondholder of each of the Bonds for the purpose of (i) payment of the principal of and premium, if any, and interest on such Bonds; (ii) giving notices of redemption and other notices permitted to be given to bondholders with respect to such Bonds; (iii) registering transfers with respect to such Bonds; (iv) obtaining any consent or other action required or permitted to be taken of or by bondholders; (v) voting; and (vi) for all other purposes whatsoever. The Paying Agent shall pay all principal of and premium, if any, and interest on the Bonds only to or upon the order of the Depository Trust Company, and all such payments shall be valid and effective fully to satisfy and discharge the Village's and the Paying Agent's obligations with respect to principal of and premium, if any, and interest on the Bonds to the extent of the sum or sums so paid. Upon delivery by the Depository Trust Company to the Village of written notice to the effect that the Depository Trust Company has determined to substitute a new nominee in place of Cede & Co., and subject to the provisions herein with respect to consents, the words "Cede & Co." in this Ordinance shall refer to such new nominee of the Depository Trust Company. Notwithstanding any other provision hereof to the contrary, so long as any Bond is registered in the name of Cede & Co., as nominee of the Depository Trust Company, all payments with respect to the principal of and premium, if any, and interest on such Bonds and all notices with respect to such Bonds shall be made and given, respectively, to the Depository Trust Company as provided in a representation letter from the Village to the Depository Trust Company.

Upon receipt by the Village of written notice from the Depository Trust Company to the effect that the Depository Trust Company is unable or unwilling to discharge its responsibilities and no substitute depository willing to undertake the functions of the Depository Trust Company hereunder can be found which is willing and able to undertake such functions upon reasonable and customary terms, then the Bonds shall no longer be restricted to being registered in the register of the Village kept by the Registrar in the name of Cede & Co., as nominee of the Depository Trust Company, but may be registered in whatever name or names the bondholders transferring or exchanging the Bonds shall designate, in accordance with the provisions of this Ordinance.

If the Village determines that it is in the best interest of the bondholders that they be able to obtain certificates for the fully registered Bonds, the Village may notify the Depository Trust Company and the Registrar, whereupon the Depository Trust Company will notify the Beneficial Owners of the availability through the Depository Trust Company of certificates for the Bonds. In such event, the Registrar shall prepare, authenticate, transfer and exchange certificates for the Bonds as requested by the Depository Trust Company and any Beneficial Owners in appropriate amounts, and whenever the Depository Trust Company requests the Village and the Registrar to

do so, the Registrar and the Village will cooperate with the Depository Trust Company by taking appropriate action after reasonable notice (i) to make available one or more separate certificates evidencing the fully registered Bonds of any Beneficial Owner's Depository Trust Company account or (ii) to arrange for another securities depository to maintain custody of certificates for and evidencing the Bonds.

If the Bonds shall no longer be restricted to being registered in the name of the Depository Trust Company, the Registrar shall cause said Bonds to be printed in blank in such number as the Registrar shall determine to be necessary or customary; provided, however, that the Registrar shall not be required to have such Bonds printed until it shall have received from the Village indemnification for all costs and expenses associated with such printing.

Section 5: Execution and Negotiability. The Bonds shall be executed on behalf of the Village by the manual or duly authorized facsimile signature of its President and attested by the manual or duly authorized facsimile signature of its Clerk, as they may determine, and shall have impressed or imprinted thereon the corporate seal or facsimile thereof of the Village. In case any such officer whose signature shall appear on any Bond shall cease to be such officer before the delivery of such Bond, such signature shall nevertheless be valid and sufficient for all purposes, the same as if such officer had remained in office until delivery. All Bonds shall have thereon a certificate of authentication, substantially in the form hereinafter set forth, duly executed by the Registrar as authenticating agent of the Village and showing the date of authentication. No Bond shall be valid or obligatory for any purpose or be entitled to any security or benefit under this Ordinance unless and until such certificate of authentication shall have been duly executed by the Registrar by manual signature, and such certificate of authentication upon any such Bond shall be conclusive evidence that such Bond has been authenticated and delivered under this Ordinance. The Bonds shall have all of the qualities and incidents of negotiable instruments under the laws of the State of Illinois, subject to the provisions for registration herein.

Section 6: Redemption.

(a) Optional Redemption. If so provided in the Bond Order, the Bonds shall be subject to redemption, in whole or in part, prior to maturity at the option of the Village, from any available moneys, in any order of their maturity as determined by the Village (less than all of the Bonds of a single maturity to be selected by the Registrar and within any maturity by lot), on the date of redemption provided in the Bond Order, and on any date thereafter, at the redemption price of par plus accrued interest to the redemption date.

(b) Mandatory Redemption. The Bonds maturing on the date or dates, if any, indicated in the Bond Order may be subject to mandatory redemption as set forth in the Bond Order.

(c) General. For any such redemptions, the Bonds shall be redeemed only in the principal amount of \$5,000 and integral multiples thereof. The Village shall, at least forty-five (45) days prior to a redemption date (unless a shorter time period shall be satisfactory to the Registrar) notify the Registrar of the designated Bonds, such redemption date and of the principal amount and maturity or maturities of Bonds to be redeemed. For purposes of any redemption of less than all of the outstanding Bonds of a single series or maturity, the particular Bonds or portions of Bonds to be redeemed shall be selected by lot not more than sixty (60) days prior to the redemption date.

by the Registrar for the Bonds of such series or maturity or maturities, by such method of lottery as the Registrar shall deem fair and appropriate; provided that such lottery shall provide for the selection for redemption of Bonds or portions thereof so that any \$5,000 portion of principal amount of a Bond shall be as likely to be called for redemption as any other such \$5,000 portion.

The Registrar shall promptly notify the Village in writing of the Bonds or portions of Bonds selected for redemption and, in the case of any Bond selected for partial redemption, the principal amount thereof to be redeemed.

Section 7: Redemption Procedure. For any such redemptions, unless waived by the registered owner of Bonds to be redeemed, official notice of the call for any such redemption shall be given by the Registrar on behalf of the Village by mailing the redemption notice by first class mail at least thirty (30) days and not more than sixty (60) days prior to the date fixed for redemption to the registered owner of the Bond or Bonds to be redeemed at the address as it appears on the registration books kept by the Registrar or at such other address as is furnished in writing by such registered owner to the Registrar.

All official notices of redemption shall state:

- (i) the redemption date,
- (ii) the redemption price,
- (iii) the identification by CUSIP numbers, if applicable, and maturity dates (and, in the case of partial redemption of Bonds within a maturity, the respective principal amounts) of the Bonds to be redeemed,
- (iv) a statement that on the redemption date the redemption price will become due and payable upon each such Bond or portion thereof called for redemption, and that interest thereon shall cease to accrue from and after said date,
- (v) the place where such Bonds are to be surrendered for payment of the redemption price, which place of payment shall be the principal corporate trust office of the Registrar, and
- (vi) such other information then required by custom, practice or industry standard.

Prior to any redemption date, the Village shall deposit with the Registrar an amount of money sufficient to pay the redemption price of all the Bonds or portions of Bonds which are to be redeemed on such redemption date.

Unless moneys sufficient to pay the redemption price of the Bonds to be redeemed shall have been received by the Registrar prior to the giving of such notice of redemption, such notice may, at the option of the Village, state that said redemption shall be conditioned upon the receipt of such moneys by the Registrar on or prior to the date fixed for redemption. If such moneys are not received, such notice shall be of no force and effect, the Village shall not redeem such Bonds, and the Registrar shall give notice, in the same manner in which the notice of redemption was given, that such moneys were not so received and that such Bonds will not be redeemed.

Official notice of redemption having been given as aforesaid, the Bonds or portions of Bonds so to be redeemed shall, on the redemption date, become due and payable at the redemption price therein specified, and from and after such date (unless the Village shall default in the payment of the redemption price) such Bonds or portions of Bonds shall cease to bear interest. Neither the failure to mail such redemption notice, nor any defect in any notice so mailed to any particular registered owner of a Bond, shall affect the sufficiency of such notice with respect to other registered owners to whom proper notice shall have been given. Notice having been properly given, failure of a registered owner of a Bond to receive such notice shall not be deemed to invalidate, limit or delay the effect of the notice or redemption action described in the notice. Such notice may be waived in writing by a registered owner of a Bond entitled to receive such notice either before or after the event, and such waiver shall be the equivalent of such notice. Waivers of notice by registered owners shall be filed with the Registrar, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver. Upon surrender of such Bonds for redemption in accordance with said notice, such Bonds shall be paid by the Registrar at the redemption price. The procedure for the payment of interest due as part of the redemption price shall be as herein provided for payment of interest otherwise due. Upon surrender for any partial redemption of any Bond, there shall be prepared for the registered owner a new Bond(s) of like tenor, of authorized denominations, of the same maturity, and bearing the same rate of interest in the amount of the unpaid principal amount.

If any Bond or portion of a Bond called for redemption shall not be so paid upon surrender thereof for redemption, the principal and premium, if any, shall, until paid or duly provided for, bear interest from the redemption date at the rate borne by the Bond or portion of a Bond so called for redemption. All Bonds which have been redeemed shall be canceled and destroyed by the Registrar and shall not be reissued.

In addition to the foregoing notice, further notice shall be given by the Registrar on behalf and at the expense of the Village as set out below, but no defect in said further notice nor any failure to give all or any portion of such further notice shall in any manner defeat the effectiveness of a call for redemption if notice thereof is given as above prescribed.

Each further notice of redemption given hereunder shall contain the information required above for an official notice of redemption plus (a) the CUSIP numbers of all Bonds being redeemed; (b) the date of issue of the Bonds as originally issued; (c) the rate of interest borne by each Bond being redeemed; (d) the maturity date of each Bond being redeemed; and (e) any other descriptive information needed to identify accurately the Bonds being redeemed.

Upon the payment of the redemption price of Bonds being redeemed, each check or other transfer of funds issued for such purpose shall bear the CUSIP number identifying, by issue and maturity, the Bonds being redeemed with the proceeds of such check or other transfer.

The Village agrees to provide such additional notice of redemption as it may deem advisable at such time as it determines to redeem Bonds, taking into account any requirements or guidance of the Securities and Exchange Commission, the Municipal Securities Rulemaking

Board, the Government Accounting Standards Board, or any other federal or state agency having jurisdiction or authority in such matters; *provided, however*, that such additional notice shall be (1) advisory in nature, (2) solely in the discretion of the Village (unless a separate agreement shall be made), (3) not be a condition precedent of a valid redemption or a part of the Bond contract, and (4) any failure or defect in such notice shall not delay or invalidate the redemption of Bonds for which proper official notice shall have been given. Reference is also made to the provisions of the Continuing Disclosure Undertaking of the Village with respect to the Bonds, which may contain other provisions relating to notice of redemption of Bonds.

As part of its duties hereunder, the Registrar shall prepare and forward to the Village a statement as to notices given with respect to each redemption together with copies of the notices as mailed.

The full faith and credit of the Village are hereby irrevocably pledged to the punctual payment when due of the Bonds, together with the interest and any premium thereon. The Bonds shall be direct and general obligations of the Village, and the Village shall be obligated to levy unlimited ad valorem taxes upon all the taxable property in the Village for the payment of the Bonds according to their terms, without limitation as to rate or amount, which levy and taxes are also pledged to the punctual payment, when due, of the Bonds, together with the interest and any premium thereon, to the bondholders. Moneys derived from Pledged Taxes and all other moneys deposited or to be deposited into the Bond Fund (as hereinafter defined) are pledged as security for the payment of the principal of and interest on the Bonds. The pledge is made pursuant to Section 13 of the Local Government Debt Reform Act and shall be valid and binding from the date of issuance of the Bonds. All such Pledged Taxes and the moneys held in the Bond Fund shall immediately be subject to the lien of such pledge without any physical delivery or further act and the lien of such pledge shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Village irrespective of whether such parties have notice thereof.

Section 8: *Form of Bond*. The Bonds shall be in substantially the form hereinafter set forth; *provided, however*, that if the text of the Bonds is to be printed in its entirety on the front side of the Bonds, then the second paragraph on the front side and the legend "See Reverse Side for Additional Provisions" shall be omitted and the text of paragraphs set forth for the reverse side shall be inserted immediately after the first paragraph.

[FORM OF BOND - FRONT SIDE]

REGISTERED
NO. _____

REGISTERED
\$ _____

UNITED STATES OF AMERICA
STATE OF ILLINOIS
COUNTIES OF COOK AND KANE
VILLAGE OF HOFFMAN ESTATES
GENERAL OBLIGATION REFUNDING BOND, SERIES 2016

See Reverse Side for
Additional Provisions.

Interest Maturity Dated
Rate: ____% Date: December 1, 20__ Date: _____, 2016 CUSIP: ____

Registered Owner: CEDE & Co.

Principal Amount: _____ DOLLARS

KNOW ALL PERSONS BY THESE PRESENTS that the Village of Hoffman Estates, Cook and Kane Counties, Illinois, a municipality, home rule unit, and political subdivision of the State of Illinois (the "Village"), hereby acknowledges itself to owe and for value received promises to pay to the Registered Owner identified above, or registered assigns as hereinafter provided, on the Maturity Date identified above (subject to right of prior redemption as hereinafter provided), the Principal Amount identified above and to pay interest (computed on the basis of a 360-day year of twelve 30-day months) on such Principal Amount from the later of the Dated Date of this Bond identified above or from the most recent Interest Payment Date to which interest has been paid or duly provided for, at the Interest Rate per annum identified above, such interest to be payable on June 1 and December 1 of each year, commencing June 1, 2016, until said Principal Amount is paid or duly provided for. The principal of this Bond is payable in lawful money of the United States of America upon presentation hereof at the office maintained for the purpose by Amalgamated Bank of Chicago, in Chicago, Illinois, as paying agent and bond registrar (the "Bond Registrar"). Payment of interest shall be made to the Registered Owner hereof as shown on the registration books of the Village maintained by the Bond Registrar, at the close of business on the applicable Record Date (the "Record Date"). The Record Date shall be the 15th day of the month next preceding any regularly scheduled Interest Payment Date occurring on the first day of a month and 15 days preceding any Interest Payment Date occasioned by a redemption of Bond on other than a regularly scheduled Interest Payment Date. Interest shall be paid by check or draft of the Bond Registrar, payable upon presentation in lawful money of the United States of America, mailed to the address of such Registered Owner as it appears on such registration books, or at such other address furnished in writing by such Registered Owner to the Bond Registrar, or as otherwise agreed by the Village and the Bond Registrar for so long as this Bond is held by The Depository Trust Company, New York, New York, the Depository, or nominee, in book-entry only form as provided for same.

Reference is hereby made to the further provisions of this Bond set forth on the reverse hereof, and such further provisions shall for all purposes have the same effect as if set forth at this place.

It is hereby certified and recited that all conditions, acts and things required by the Constitution and Laws of the State of Illinois to exist or to be done precedent to and in the issuance of this Bond, have existed and have been properly done, happened and been performed in regular and due form and time as required by law; that the indebtedness of the Village, represented by the Bonds, and including all other indebtedness of the Village, howsoever evidenced or incurred, does not exceed any constitutional or statutory or other lawful limitation; and that provision has been made for the collection of a direct annual tax, in addition to all other taxes, on all of the taxable property in the Village sufficient to pay the interest hereon as the same falls due and also to pay and discharge the principal hereof at maturity.

This Bond shall not be valid or become obligatory for any purpose until the certificate of authentication hereon shall have been manually signed by the Bond Registrar.

IN WITNESS WHEREOF, the Village of Hoffman Estates, Cook and Kane Counties, Illinois, by its President and Board of Trustees, has caused this Bond to be executed by the manual or duly authorized facsimile signature of its President and attested by the manual or duly authorized facsimile signature of its Village Clerk and its corporate seal or a facsimile thereof to be impressed or reproduced hereon, all as appearing hereon and as of the Dated Date identified above.

President, Village of Hoffman
Estates, _ Cook and Kane Counties,
Illinois

ATTEST:

Village Clerk, Village of Hoffman Estates,
Cook and Kane Counties, Illinois

[SEAL]

Date of Authentication: _____, ____

CERTIFICATE OF AUTHENTICATION

This Bond is one of the Bonds described in the within-mentioned Ordinance and is one of the General Obligation Refunding Bonds, Series 2016, having a Dated Date of [_____] 2016, of the Village of Hoffman Estates, Cook and Kane Counties, Illinois.

AMALGAMATED BANK OF CHICAGO,
Chicago, Illinois, as Bond Registrar

By: _____
Authorized Officer

[Form of Bond - Reverse Side]

This bond is one of a Series of bonds (the "Bonds") in the aggregate principal amount of \$____,____,000 issued by the Village for the purpose of paying costs of advance refunding certain outstanding bonds of the Village and of paying expenses incidental thereto, all as described and defined in the ordinance authorizing the Bonds (as supplemented by a Bond Order, the "Ordinance"), pursuant to and in all respects in compliance with the applicable provisions of the

Illinois Municipal Code, as amended, and as supplemented by the Local Government Debt Reform Act, as amended, and as further supplemented and, where necessary, superseded, by the powers of the Village as a home rule unit under the provisions of Section 6 of Article VII of the Illinois Constitution of 1970, and with the Ordinance, which has been duly passed by the President and Board of Trustees of the Village, approved by the President, and published, in all respects as by law required.

This Bond is subject to provisions relating to registration, transfer and exchange; and such other terms and provisions relating to security and payment as are set forth in the Ordinance, to which reference is hereby expressly made, and to all the terms of which the Registered Owner hereof is hereby notified and shall be subject.

[The Bonds coming due on and after December 1, 20__, are subject to redemption prior to maturity at the option of the Village on _____ 1, 20__, and any date thereafter, from any lawfully available monies, in whole or in part, and if in part, in such principal amounts and from such maturities as the Village shall determine, and within any maturity by lot, at a redemption price of [par] plus accrued interest, upon the terms and conditions and as otherwise provided in the Bond Ordinance.]

The Village and the Bond Registrar may deem and treat the Registered Owner hereof as the absolute owner hereof for the purpose of receiving payment of or on account of principal hereof and interest due hereon and for all other purposes, and neither the Village nor the Bond Registrar shall be affected by any notice to the contrary.

The Village represents:

- (i) the Bonds are not private activity bonds as defined in Section 141 of the Internal Revenue Code of 1986, as amended (the "Code"); and
- (ii) the Village is authorized to designate the Bonds as qualified tax-exempt obligations for purposes of Section 265(b) of the Code pursuant to the Bond Order provided that for calendar year 2016 the reasonably anticipated amount of qualified tax-exempt obligations (including 501(c)(3) obligations and tax-exempt leases but excluding other private activity bonds) which will be issued by the Village and all entities subordinate to the Village during such year does not exceed \$10,000,000 (or such higher amount as authorized pursuant to the Code in existence at the time of issuance).

ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

Here insert Social Security Number, Employer Identification Number or other Identifying Number

(Name and Address of Assignee)

the within Bond and does hereby irrevocably constitute and appoint

as attorney to transfer the said Bond on the books kept for registration thereof with full power of substitution in the premises.

Dated: _____

Signature guaranteed: _____

NOTICE: The signature to this transfer and assignment must correspond with the name of the Registered Owner as it appears upon the face of the within Bond in every particular, without alteration or enlargement or any change whatever.

[END OF BOND FORM]

Section 9: *Tax Levy; Abatement.* For the purpose of providing funds required to pay the principal of and interest on the Bonds, there be and there is hereby levied upon all the taxable property within the Village, in addition to all other taxes, in the years for which any of the Bonds are outstanding, direct annual taxes not to exceed \$4,050,031.26 per year, each year the Bonds are outstanding. Said taxes will be set forth and levied in the Bond Order.

The Village covenants and agrees with the purchasers and registered owners of the Bonds that so long as any of the Bonds remain outstanding, the Village will take no action or fail to take any action which in any way would adversely affect the ability of the Village to levy and collect the foregoing tax levy. The Village and its officers will comply with all present and future applicable laws in order to assure that the foregoing taxes will be levied, extended and collected as provided herein and deposited into the Bond Fund.

The funds derived from the tax levy be and the same are hereby appropriated and set aside for the sole and only purpose of paying the principal and interest of said Bonds, if applicable, when and as the same become due, and are hereby pledged to the purchasers and registered owners of the Bonds for the payment of the principal and interest of said Bonds, if applicable, when and as the same become due. The funds from the sale of said Bonds be and they are hereby appropriated and set aside for the advance refunding of the Refunded Bonds and payment of costs of issuance.

In the event that funds from any lawful source may be made available for the purpose of paying any principal of or interest on the Bonds so as to enable the abatement of the Pledged Taxes, the Corporate Authorities shall, by proper proceedings, direct the deposit of such other funds into the Bond Fund, and further shall direct the abatement of the taxes by the amount so deposited. A certified copy or other notification of any such proceedings abating taxes may then be filed with the County Clerk of The County of Cook, Illinois, and the County Clerk of The County of Kane, Illinois (collectively, the "*County Clerks*") in a timely manner to effect such abatement.

Section 10: *Filing with County Clerks.* Promptly, as soon as this Ordinance becomes effective, a copy of this Ordinance, certified by the Village Clerk of the Village, shall be filed with the County Clerks. Forthwith upon the Bond Order becoming effective, the Village Clerk is hereby directed to file a certified copy of the Bond Order with the County Clerks. It shall be the duty of the County Clerks to annually, in and for each of the levy years as provided in the Bond Order, ascertain the rate necessary to produce the tax herein and therein levied, and to extend the same for collection on the tax books against all of the taxable property within the Village in connection with other taxes levied in each of said years for general corporate purposes, in order to raise the respective amounts aforesaid and in each of said years such annual tax shall be computed, extended and collected in the same manner as now hereafter provided by law for the computation, extension and collection of taxes for general corporate purposes of the Village, and when collected, the taxes hereby levied shall be placed to the credit of the Bond Fund created pursuant to Section 15 of this Ordinance.

Section 11: *Sale of Bonds; Bond Order and Documents.* The Village Treasurer is hereby authorized and directed to have the Bonds prepared, and the Village President and the Village Clerk are hereby authorized and directed to execute and attest the Bonds in the form and manner provided herein. The Village Treasurer is hereby authorized and directed to deliver the Bonds to

Robert W. Baird and Company, as the underwriter thereof (the "*Underwriter*"), upon receipt of the purchase price of the Bonds as set forth in the Bond Order, the same being the principal amount of the Bonds, minus applicable underwriter discount and any original issue discount, plus initial offering premium, plus accrued interest, if any, pursuant to the terms of a bond purchase agreement with the Underwriter; *provided, however*, that the Village Treasurer shall not sell the Bonds to the Underwriter at a purchase price of less than 98% of par. Any one of the Designated Officials is authorized to execute a bond purchase agreement with the Underwriter with terms consistent with this Ordinance and the Bond Order. The bond purchase agreement shall be substantially in the form of purchase agreements commonly used in transactions similar to that described in this Ordinance, with such changes as necessary to reflect the terms and provisions of the Bonds, this Ordinance and such other changes as the Village President or Village Treasurer shall determine are necessary or desirable in connection with the sale of the Bonds, including whether to purchase bond insurance and the related terms.

It is hereby found and determined that no person holding any office of the Village either by election or appointment, is in any manner interested, either directly or indirectly, in his or her own name or in the name of any other person, association, trust, company or corporation, in said purchase of the Bonds.

As an additional limitation on the sale of the Bonds, the Village must be provided with a certificate delivered at the closing of the Bonds that the advance refunding of the Refunded Bonds will provide to the Village present value debt service savings equal to five percent (5%) or more of the principal amount of the Refunded Bonds. For this purpose, present value debt service savings shall be determined by using the yield on the Bonds as the discount rate.

Amalgamated Bank of Chicago (the "*Escrow Agent*"), having a corporate trust office in Chicago, Illinois, is hereby authorized and appointed to serve as escrow agent for the Refunded Bonds in accordance with the terms of an escrow agreement to be entered into between the Village and the Escrow Agent (the "*Escrow Agreement*"). The Village President is authorized to execute the Escrow Agreement, which shall be substantially in the form of escrow agreements commonly used in transactions similar to that described in this Ordinance, with such changes as necessary to reflect the terms and provisions of the Bond Order, this Ordinance and such other changes as the Village President or Village Treasurer shall determine are necessary or desirable in connection with the advance refunding of the Refunded Bonds.

The Bonds when fully paid for and delivered to the Underwriter, shall be the binding general obligations of the Village. The proper officers of the Village are hereby directed to (i) sell the Bonds to the Underwriter, (ii) approve or execute, or both, such other documents, as provided in the Bond Order, as may be necessary for the issuance of the Bonds, including, without limitation, various closing documents, and (iii) do whatever acts and things which may be necessary to carry out the provisions of this Ordinance.

The execution, by either the Village President or the Underwriter, of a subscription for either (i) United States Treasury Obligations -- State and Local Government Series, or (ii) open market United States Treasury Obligations, for investment of proceeds of the Bonds which may be held under the Escrow Agreement in a manner consistent with this Ordinance and the Bond Order, is hereby approved.

Distribution of the Preliminary Official Statement on the Bonds (the "*Preliminary Official Statement*") and of a final Official Statement prepared by the Financial Advisor, on behalf of the Village, is hereby approved, and the President is hereby authorized and directed to execute the Official Statement on behalf of the Village in a form consistent with this Ordinance. The President is hereby authorized to "deem final" the Preliminary Official Statement for purposes of Rule 15c2-12 promulgated by the Securities and Exchange Commission.

The President is hereby given the full authority to execute and deliver the Bond Order for and on behalf of the Village as herein provided. The Village Clerk is directed to make available to the Board of Trustees a copy of the executed Bond Order at the first regularly scheduled meeting of the Board of Trustees following the execution of the same, but such action shall be for information purposes only, and the Board shall have no right or authority at such time to approve or reject such sale as evidenced in the Bond Order. The Bond Order shall be made a part of the transcript of the proceedings related to the issuance of the Bonds.

Nothing in this Section shall require the Village President and Village Treasurer to sell the Bonds if in their judgment the conditions in the bond markets shall have markedly deteriorated from the time of adoption hereof, but the Village President and Village Treasurer shall have the authority to sell the Bonds in any event so long as the limitations set forth in this Ordinance and the conditions set forth herein and in the Bond Order shall have been met.

Section 12: *Continuing Disclosure Undertaking.* The Village President and the Village Clerk are hereby authorized to execute and deliver the Continuing Disclosure Undertaking, in customary form as approved by Bond Counsel and approved by the Village Attorney, to effect compliance with Rule 15c2-12 adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended. When such Continuing Disclosure Undertaking is executed and delivered on behalf of the Village, it will be binding on the Village and the officers, agents, and employees of the Village, and the same are hereby authorized and directed to do all such acts and things and to execute all such documents as may be necessary to carry out and comply with the provisions of such Continuing Disclosure Undertaking as executed and delivered. Notwithstanding any other provisions hereof, the sole remedies for failure to comply with such Continuing Disclosure Undertaking shall be the ability of the beneficial owner of any Bond to seek mandamus or specific performance by court order, to cause to the Village to comply with its obligations thereunder, and the failure of the Village to comply with the Continuing Disclosure Undertaking shall not be considered an event of default under the Bonds or this Ordinance.

Section 13: *Refunding of the Refunded Bonds and Costs of Issuance.* Concurrently with the delivery of the Bonds, the Village shall deposit a portion of the proceeds of the Bonds to be used, together with certain cash on hand, if any, as set forth in the Escrow Agreement, to refund and legally defease the Refunded Bonds, all as set forth in the Escrow Agreement. In order to

refund the Refunded Bonds, the Village Treasurer shall deposit certain cash with the Escrow Agent under the Escrow Agreement in an amount sufficient to provide moneys for the payment of redemption, interest and redemption premium, if any, on the Refunded Bonds, which are to be called for redemption on December 1, 2018.

Costs of issuance of the Bonds not otherwise paid shall be paid from the remaining Bond proceeds by the Village which have been deposited into the Expense Fund (as hereinafter defined). When all the costs of issuance of the Bonds have been paid, the Village shall then transfer any amount then remaining from the proceeds of the Bonds to the Bond Fund as herein provided.

The Village shall obtain a verification of an accountant as to the sufficiency of the funds deposited in the Escrow Fund under the Escrow Agreement to accomplish the refunding and defeasance of the Refunded Bonds.

In accordance with the redemption provisions of the 2008A Ordinance and the 2009A Ordinance, the Village does hereby make provision for the payment of and does call (subject only to the delivery of the Bonds) for redemption and payment the Refunded Bonds which are to be called for redemption prior to maturity as set forth in the Escrow Agreement.

Section 14: Creation of Funds.

A. *Bond Fund.* There is hereby created the "General Obligation Refunding Bonds 2016 Bond Fund" (the "Bond Fund"), which shall be the fund for the payment of principal of and interest on the Bonds at maturity or on redemption. Accrued interest, if any, received upon delivery of the Bonds shall be deposited into the Bond Fund and be applied to pay first interest coming due on the Bonds. Any collection of taxes to be levied shall be deposited into the Bond Fund and used solely and only for paying the principal of and interest on the Bonds when due (including any redemption). The taxes shall be set aside as collected and be deposited in the Bond Fund, which is a trust fund established for the purpose of carrying out the covenants, terms and conditions imposed upon the Village by this Ordinance. The Bonds are secured by a pledge of all moneys on deposit in the Bond Fund, and such pledge is irrevocable until the Bonds have been paid in full or until the obligations of the Village are discharged under this Ordinance.

B. *Escrow Fund.* There is hereby established a special fund of the Village known as the "Escrow Fund" to be held by the Escrow Agent pursuant to the Escrow Agreement. There shall be deposited into the Escrow Fund proceeds of the Bonds which, together with cash on hand, are sufficient to refund the Refunded Bonds and all accrued interest thereon. The Escrow Fund shall be maintained separate and apart from all other accounts of the Village and shall be used to pay the costs of refunding the Refunded Bonds. Upon the refunding of the Refunded Bonds, the Village President, Village Clerk and Village Treasurer be and the same are hereby directed to prepare and file with the respective County Clerks, a Certificate of Reduction of Taxes Heretofore Levied for the Payment of Bonds showing the Refunded Bonds and directing the abatement of the taxes heretofore levied to pay the Refunded Bonds.

C. *Expense Fund.* The amount necessary from the proceeds of the Bonds shall be disbursed directly upon the issuance of the Bonds or shall be deposited into a separate fund, hereby created, designated the "Expense Fund" (the "Expense Fund") to be used to pay expenses of issuance of the Bonds. Disbursements from such fund shall be made from time to time by the

Village Treasurer as needed to pay costs of issuance of the Bonds or shall be made upon the delivery of the Bonds by the Underwriter at the direction of the Treasurer. Any excess in the Expense Fund shall be transferred after six (6) months to the Bond Fund.

Section 15: Rights and Duties of Registrar and Paying Agent. If requested by the Registrar or the Paying Agent, or both, any officer of the Village is authorized to execute standard forms of agreements between the Village and the Registrar or Paying Agent with respect to the obligations and duties of the Registrar or Paying Agent hereunder. In addition to the terms of such agreements and subject to modification thereby, the Registrar and Paying Agent by acceptance of duties hereunder agree:

- (a) to act as bond registrar, paying agent, authenticating agent, and transfer agent as provided herein;
- (b) as to the Registrar, to maintain a list of Bondholders as set forth herein and to furnish such list to the Village upon request, but otherwise to keep such list confidential to the extent permitted by law;
- (c) as to the Registrar, to give notice of redemption of any Bonds;
- (d) as to the Registrar, to cancel and/or destroy Bonds which have been paid at maturity or submitted for exchange or transfer;
- (e) as to the Bond Registrar, to furnish the Village at least annually a certificate with respect to Bonds canceled and/or destroyed; and
- (f) to furnish the Village at least annually an audit confirmation of Bonds paid, Bonds outstanding and payments made with respect to interest on the Bonds.

The Village Clerk is hereby directed to file a certified copy of this Ordinance with the Registrar and the Paying Agent.

Section 16: Defeasance. If, when the Bonds or a portion thereof shall have become due and payable in accordance with their terms or shall have been duly called for redemption or irrevocable instructions to call the Bonds or a portion thereof for redemption shall have been given, and the whole amount of the principal of and interest due and the premium, if any, so due and payable upon all of the Bonds or a portion thereof then outstanding shall be paid; or (i) sufficient moneys or (ii) direct obligations of the United States of America (including obligations issued or held in book entry form on the books of the Department of the Treasury), the principal of and the interest on which when due will provide sufficient moneys for such purpose, shall be held in trust for such purpose, and provision shall also be made for paying all fees and expenses for the redemption, then and in that case the Bonds or any designated portion thereof issued hereunder shall no longer be deemed outstanding or entitled to any pledge of the taxes pledged hereunder.

Section 17: Tax Covenants. In order to preserve the exclusion of interest on the Bonds from gross income for federal tax purposes under Section 103 of the Code and as an inducement to purchasers of the Bonds, the Corporate Authorities represent, covenant and agree that:

- (a) The facilities financed with the proceeds of the Prior Bonds are available for use by members of the general public. Use by a member of the general public means use by natural persons not engaged in a trade or business. No person or entity, other than the Village or another

state or local governmental unit, will use more than ten percent (10%) of the proceeds of the Prior Bonds or property financed by the Refunded Bond proceeds other than as a member of the general public. No person or entity other than the Village or another state or local governmental unit own property financed by Prior Bond proceeds or have actual or beneficial use of such property pursuant to a lease, a management or incentive payment contract, an arrangement such as a take-or-pay or output contract or any other type of arrangement that conveys other special legal entitlements and differentiates that person's or entity's use of such property from the use by the general public, unless such uses in the aggregate relate to no more than ten percent (10%) of the proceeds of the Bonds.

(b) No more than ten percent (10%) of the payment of the Bonds will be (under the terms of the Bonds, this Ordinance or any underlying arrangement), directly or indirectly, (i) secured by any interest in property used or to be used for a private business use or payments in respect of such property, or (ii) derived from payments (whether or not to the Village) in respect of such property or borrowed money used or to be used for a private business use.

(c) None of the Bond proceeds will be loaned to any entity or person other than a state or local governmental unit. None of the Bond proceeds will be transferred, directly or indirectly, or deemed transferred to a nongovernmental person in any manner that would in substance constitute a loan of the Bond proceeds.

(d) The Village reasonably expects, as of the date hereof, that it will comply with the covenants described in paragraph (a), (b) and (c) above during the entire term of the Bonds.

(e) None of the proceeds of the Bonds will be attributable to private business use as described in (a) and private security or payments described in (b) above attributable to unrelated or disproportionate private business use. For this purpose, the private business use test is applied by taking into account only use that is not related to any government use of proceeds of the issue and use that is related but disproportionate to any governmental use of those proceeds.

(f) The Village will not take any action nor fail to take any action with respect to the Bonds that would result in the loss of the exclusion from gross income for federal tax purposes of interest on the Bonds pursuant to Section 103 of the Code, nor will the Village act in any other manner which would adversely affect such exclusion, and it will not make any investment or do any other act or thing during the period that the Bonds are outstanding which would cause the Bonds to be "arbitrage bonds" within the meaning of Section 148 of the Code.

(g) It shall be not an event of default under this Ordinance if the interest on any Bonds is not excludable from gross income for federal tax purposes or otherwise pursuant to any provision of the Code which is not currently in effect and in existence on the date of issuance of the Bonds.

(h) These covenants are based solely on current law in effect and in existence of the date of delivery of the Bonds. The Village hereby designates the Bonds as qualified tax-exempt obligations for purposes of Section 265(b) of the Code.

The Village hereby authorizes the officials of the Village responsible for issuing the Bonds, the same being the President and the Village Clerk, to make such further covenants and certifications as may be necessary to assure that the use thereof will not cause the Bonds to be arbitrage bonds and to assure that the interest on the Bonds will be excludable from gross income

for federal income tax purposes. In connection therewith, the Village further agrees: (a) through its officers, to make such further specific covenants, representations as shall be truthful, and assurances as may be necessary or advisable, including, without limitation, a Tax Compliance Agreement; (b) to consult with counsel approving the Bonds and to comply with such advice as may be given; (c) to pay to the United States, as necessary, such sums of money representing required rebates of excess arbitrage profits relating to the Bonds as required pursuant to Section 148 of the Code and the regulations promulgated thereunder; (d) to file such forms, statements, and supporting documents as may be required and in a timely manner; and (e) if deemed necessary or advisable by their officers, to employ and pay fiscal agents, financial advisors, attorneys, and other persons to assist the Village in such compliance.

Section 18: Noncompliance with Tax Covenants. Notwithstanding any other provisions of this Ordinance, the covenants and authorizations contained in this Ordinance (the “*Tax Sections*”) which are designed to preserve the exclusion of interest on the Bonds from gross income under federal law (the “*Tax Exemption*”), need not be complied with if the Village receives an opinion of nationally recognized bond counsel that any Tax Section is unnecessary to preserve the Tax Exemption.

Section 19: Registered Form. The Village recognizes that Section 149(a) of the Code requires the Bonds to be issued and to remain in fully registered form in order that interest thereon is exempt from federal income taxation under laws in force at the time the Bonds are delivered. In this connection, the Village agrees that it will not take any action to permit the Bonds to be issued in, or converted into, bearer or coupon form.

Section 20: Bank Qualified Representations. The Village represents:

- (i) The Bonds are not private activity bonds as defined in Section 141 of the Code; and
- (ii) The Village is authorized to designate the Bonds as qualified tax-exempt obligations for purposes of Section 265(b) of the Code provided that for calendar year 2016 the reasonably anticipated amount of qualified tax-exempt obligations (including 501(c)(3) obligations and tax-exempt leases but excluding other private activity bonds) which will be issued by the Village and all entities subordinate to the Village during such year does not exceed \$10,000,000 (or such higher amount as authorized pursuant to the Code in existence at the time of issuance).

Section 21: Publication of Ordinance. A full, true and complete copy of this Ordinance shall be published within ten days after passage in pamphlet form by authority of the Corporate Authorities.

Section 22: *Superseder and Effective Date*. All ordinances, resolutions and orders, or parts thereof, in conflict herewith, are to the extent of such conflict hereby superseded; and this Ordinance shall be in full force and effect immediately upon its passage and approval.

PASSED THIS _____ day of _____, 2016

VOTE	AYE	NAY	ABSENT	ABSTAIN
Trustee Karen V. Mills	_____	_____	_____	_____
Trustee Anna Newell	_____	_____	_____	_____
Trustee Gary J. Pilafas	_____	_____	_____	_____
Trustee Gary G. Stanton	_____	_____	_____	_____
Trustee Michael Gaeta	_____	_____	_____	_____
Trustee Gayle Vandenberg	_____	_____	_____	_____
Mayor William D. McLeod	_____	_____	_____	_____

APPROVED THIS _____ DAY OF _____, 2016

Village President

ATTEST:

Village Clerk

Published in pamphlet form this _____ day of _____, 2016.

COMMITTEE AGENDA ITEM

VILLAGE OF HOFFMAN ESTATES

SUBJECT: Request approval of an ordinance updating Video Gaming Terminal and Terminal Operator fees

MEETING DATE: February 22, 2016

COMMITTEE: Finance

FROM: Bev Romanoff

PURPOSE: Request approval of an ordinance updating Video Gaming Terminal and Terminal Operator fees.

BACKGROUND: In 2012 the Village passed Ordinance No. 4318-2012 amending Chapter 8 of the Municipal Code (Fees, Amusement Devices, Amusements) and Chapter 9 (Definitions) regarding Video Gaming Terminals and Terminal Operators. At the time there was no history to compare fees being charged as one of the Village's restaurants was a test case for the state, we set our fees at Terminal Operator - \$500 and Video Gaming Terminal - \$100.

DISCUSSION: The Village currently has twenty restaurants that are licensed for video gaming, with a total of 98 video gaming terminals in those locations. There are eight terminal operators servicing those twenty locations, half of which are in multiple sites. In 2015 the Village's 5% share of video gaming revenue was \$272,950.44.

Although not our usual comparables, attached is a comparison of the fees charged by other home rule municipalities in the Chicago area. Non-home rule municipalities were excluded because by statute (230 ILCS 40/65) they are allowed to only impose a \$25 per year for the operation of a video gaming terminal.

Consistent with the Ordinance, it is recommended that the following fees be increased.

1. Terminal Operator - \$1,000 per operator
2. Video Gaming Terminal - \$400 per terminal

RECOMMENDATION: Request approval of an ordinance updating the video gaming terminal and terminal operator fees.

Municipality	Fee Per Terminal	Additional Fee	Additional Info	# of Terminals
Addison	\$250			62
Bartlett	\$25			42
Bloomington	\$500		Their fee goes thru as a supplemental liquor license fee	28
Carol Stream	\$550		Their fee goes thru as a supplemental liquor license fee	47
Carpentersville	\$250-1st, \$50 additional			54
Elmwood Park	\$1,000	\$1,000 license fee		53
Elk Grove Village		\$1,000 license fee	\$500 application fee	63
Glendale Heights	\$500			35
Lake in the Hills	\$100			31
Schiller Park	\$1,000			40
Streamwood	\$150			35
West Dundee	\$135	\$35 license fee		29
Hoffman Estates	\$100	\$500 supplier fee		98

VILLAGE OF HOFFMAN ESTATES

AN ORDINANCE AMENDING SECTION 8-2-1, FEES,
OF THE HOFFMAN ESTATES MUNICIPAL CODE

Section 1: That Section 8-2-1, FEES, of Article 8-2, LICENSE FEES, of the Hoffman Estates Municipal Code be and the same is hereby amended to read as follows:

Section 8-2-1. FEES

For licenses to operate the following businesses, unless otherwise indicated, the fees listed opposite the named business shall apply PER YEAR:

A. Business Licenses.

Video Gaming Terminal (per terminal).....\$400.00

Terminal Operator.....\$1,000.00

Section 2: The Village Clerk is hereby authorized to publish this ordinance in pamphlet form.

Section 3: This Ordinance shall be in full force and effect immediately from and after its passage and approval.

PASSED THIS _____ day of _____, 2016

VOTE	AYE	NAY	ABSENT	ABSTAIN
Trustee Karen V. Mills	_____	_____	_____	_____
Trustee Anna Newell	_____	_____	_____	_____
Trustee Gary J. Pilafas	_____	_____	_____	_____
Trustee Gary G. Stanton	_____	_____	_____	_____
Trustee Michael Gaeta	_____	_____	_____	_____
Trustee Gayle Vandenberg	_____	_____	_____	_____
Mayor William D. McLeod	_____	_____	_____	_____

APPROVED THIS _____ DAY OF _____, 2016

Village President

ATTEST:

Village Clerk

Published in pamphlet form this _____ day of _____, 2016.

COMMITTEE AGENDA ITEM

VILLAGE OF HOFFMAN ESTATES

SUBJECT: Approval of an ordinance amending Sections 13-5-2 and 13-5-6 of the Hoffman Estates Municipal Code (Real Estate Transfer Tax)

MEETING DATE: February 22, 2016

COMMITTEE: Finance Committee

FROM: Arthur L. Janura, Jr., Corporation Counsel

PURPOSE: To consider an amendment to Sections 13-5-2, and 13-5-6 of the Hoffman Estates Municipal Code (real estate transfer tax).

BACKGROUND: The Village's Real Estate Transfer Tax has been in effect for many years and places a tax on the privilege of transferring title to real property. The tax rate is 0.3% of the value of the transfer.

DISCUSSION: The attached draft ordinance amends the Village's real estate transfer tax by reducing the number of transactions that are exempt from the Village's tax on the owners' transfer of real estate in the Village. Income from the real estate transfer tax is sensitive to general economic conditions and often varies because of large transactions. In recent years, the income has ranges from \$700,000 to \$900,000 per year.

It can be expected that the proposed amendments will result in an increase in transfer tax revenue.

RECOMMENDATION: Recommend approval of an ordinance amending Sections 13-5-2 and 13-5-6 of the Hoffman Estates Municipal Code.

AN ORDINANCE AMENDING SECTION 13-5-2
AND SECTION 13-5-6 OF
ARTICLE 5, REAL ESTATE TRANSFER TAX, OF THE
HOFFMAN ESTATES MUNICIPAL CODE

Section 1: That Section 13-5-2, TAX IMPOSED, of Article 5, REAL ESTATE TRANSFER TAX, of the Hoffman Estates Municipal Code shall be amended to read as follows:

Section 13-5-2. TAX IMPOSED

A. A tax is imposed on the privilege of transferring title to real estate located within the corporate limits of the Village as evidenced by the recordation of a deed by any person and a tax is imposed on the privilege of transferring the beneficial interest in real estate located within the corporate limits of the Village at the rate of Three Dollars per One Thousand Dollars of value for each transfer. The tax herein levied shall be in addition to any and all other taxes.

B. Within 60 days of the transaction, Grantor or Grantee shall report to the Village that a transfer has occurred and pay to the Village any Real Estate Transfer taxes owed hereunder or a \$10 processing fee in the event the transaction is exempt.

Section 2: That Section 13-5-6, EXEMPTIONS, of Article 5, REAL ESTATE TRANSFER TAX, of the Hoffman Estates Municipal Code shall be amended to read as follows:

Sec. 13-5-6. EXEMPTIONS

- A. The tax imposed by this Article shall not apply to the following transactions:
- ~~1.~~ ~~Transactions involving property acquired by or from any governmental body or by any corporation, society, association, foundation or institution organized and operating exclusively for charitable, religious or educational purposes.~~
 12. Transactions which secure debt or other obligation.
 23. Transactions in which deeds, without additional consideration, confirm, correct, modify or supplement deeds previously recorded.
 34. Transactions in which the actual consideration is less than \$100.00.
 45. Transactions in which the deeds are tax deeds.
 56. Transactions which are releases of property which is security for a debt or other obligation.
 67. Transactions ~~of involving court-ordered~~ partitions.
 78. Transactions made pursuant to mergers, consolidations or transfers or sales of substantially all of the assets of a corporation pursuant to court-ordered plans of reorganization.
 89. Transactions between subsidiary corporations and their parents for transfer of real estate for no consideration other than the cancellation or surrender of the subsidiary corporation's stock.
 - ~~10.~~ ~~Transactions wherein there is an actual exchange of real property except that the money difference or money's worth paid from one to the other shall not be exempt from the tax.~~

~~911~~. Transactions representing transfers subject to the imposition of a documentary stamp tax imposed by the government of the United States.

~~1012~~. Transactions wherein one of the grantors has continuously resided upon the property for the past one year and has evidence of a contract for sale as a purchaser for a residence within the Village, such contract having closed within six months of the exempt transaction or to close by contract within six months after the exempt transaction.

B. Every deed or other instrument which is tax exempt pursuant to this Section 13-5-6 shall be presented to the Finance Department so as to be appropriately marked by said Department as an exempt ~~deed or instrument transaction~~ eligible for recordation without the payment of tax. At such time as a deed or instrument is presented to the Department, a certificate setting forth the facts which justify exemption shall be presented.

C. A processing fee in the amount of \$10.00 shall be collected by the Director of Finance for Real Estate Transfer stamps issued for transactions determined to be exempt as provided for in the above Section A. Upon payment of the fee, the revenue stamp so issued shall be marked "EXEMPT" and shall be affixed to the deed or other instrument of conveyance.

Section 3: The Village Clerk is hereby authorized to publish this ordinance in pamphlet form.

Section 4: This Ordinance shall be in full force and effect immediately from and after its passage and approval.

PASSED THIS _____ day of _____, 2016

VOTE	AYE	NAY	ABSENT	ABSTAIN
Trustee Karen V. Mills	_____	_____	_____	_____
Trustee Anna Newell	_____	_____	_____	_____
Trustee Gary J. Pilafas	_____	_____	_____	_____
Trustee Gary G. Stanton	_____	_____	_____	_____
Trustee Michael Gaeta	_____	_____	_____	_____
Trustee Gayle Vandenberg	_____	_____	_____	_____
Mayor William D. McLeod	_____	_____	_____	_____

APPROVED THIS _____ DAY OF _____, 2016

Village President

ATTEST:

Village Clerk

Published in pamphlet form this _____ day of _____, 2016.

COMMITTEE AGENDA ITEM VILLAGE OF HOFFMAN ESTATES

SUBJECT: Request authorization to waive formal bidding and award contract to Current Technologies Corporation Inc. for the replacement of the Information Systems Department Storage Area Network (SAN) in an amount not to exceed \$94,548.72.

MEETING DATE: February 22, 2016

COMMITTEE: Finance Committee

FROM: Fred Besenhoffer, Director of Information Systems

PURPOSE: The objective in acquiring a pair of replacement SANs is to provide the Village with a centralized storage environment that lowers the total cost of ownership of both physical and virtual server data storage in a high-speed, shared storage environment. One that offers flexible storage capacity and performance, robust fault tolerance, is compatible with existing virtualization technologies from Microsoft, VMware and offers intuitive administration.

BACKGROUND

The Information Systems Department began moving away from purchasing servers with large amounts of internal disk space back in 2005 when the original SAN was installed and then again in 2007 when a second was installed.

A number of significant benefits resulted from this move. The first was better disk utilization. Rather than purchasing servers with large amounts of disk space, space that would often go unused on one server while another server would fill to capacity, the SAN tied all of the storage together through a centralized storage network and we gained the ability to manage everything as a single entity. This gave us the ability to segment the central pool of storage resources at the network level and assign that storage more intelligently to the servers that need it.

The second was back up and disaster recovery. Critical systems and applications could now have a "snapshot" taken, stored and used in the event of a critical failure. Additionally, in the event that one SAN failed the second would continue to function until the first could be brought back online.

The Village of Hoffman Estates is currently operating two Hewlett Packard (HP) Lefthand NSM 2060 Storage Area Network devices. The primary device is located in the Village Hall's data center; the secondary unit is located in the data center within the Hoffman Estates Police Department. The SAN in the Village Hall is connected

directly to an HP Procurve 2900-24G via Ethernet (1Gbps). The SAN at the Police Department is connected to an HP Procurve 2900-24G via Ethernet (1Gbps). Both HP Procurve are connected to each other via single mode fiber (10Gbps).

The SANs are configured to automatically replicate volume data across the discrete network in real time. We currently use HP Fail over Manager (FOM) to manage the replication, failover and failback of the devices should one of the device fail or lose connection.

DISCUSSION

The need for increased storage capacity is the result of a number of factors. Critical public safety applications like Firehouse and IDNetworks and daily day to day storage for documents, spreadsheets and pictures continue to increase in volume. Additional factors weighing on the need for increased storage capacity include:

- The Fire Department has new training software that allows them to create "simulation" videos. These videos are stored on the network and available to all Fire personnel.
- Increased GIS usage.
- The Public Works Department is video documenting the sewer lines and plans to embed the video into GIS for mapping purposes.
- The Police Department is converting their microfiche from film to digital.
- The Police Department is archiving their report records (Pre 2007) and training records (99 year hold requirement).
- The Clerk's office is also interested in converting microfiche from film to digital.

In December of 2015 the Information Systems Department solicited a Request For Proposal (RFP) to replace the pair of existing Storage Area Network (SAN) devices as a result of a need for increased storage. The Village received responses from five qualified vendors (original RFP is attached).

I have included the breakdown of pricing per vendor in the chart below as well as a quick explanation for the vendors who chose to submit multiple options.

	Nimble (CDW)	Hitachi (VION)	Dell (CTC)	NetApp (SHI)	IBM (BITS)
Option 1	\$83,848.77	\$117,250	\$75,617.24	\$92,770	\$90,146
Option 2	N/A	N/A	\$95,548.72	\$94,322	N/A

Quote #1 from CTC replaces the HP Procurve 2900 at the Village Hall and the Police Department. These are replaced with four (4) Dell Networking N3024. Two (2) will be installed and configured in the Village Hall and two (2) at the Police department.

Quote #2 from CTC replaces the HP Procurve 2900 at the Village Hall and the Police Department. These are replaced with four (4) Dell Networking N4032. Two (2) will be installed and configured in the Village Hall and two (2) at the Police department.

Quote #1 from SHI (NetApp) is for a SAN 1GB connector.

Quote #2 from SHI (NetApp) is for a SAN 10GB connector.

While there were differences between all of the systems; their architecture (data access, provisioning etc.), the choice of drives used and a few other things, all respondents met the requirements set for the in the RFP.

CTC however stood out in that both of the quotes they submitted included replacing/upgrading our “backbone” equipment (the hardware that lets the storage system communicate between VH and PD). The solution CTC proposes also offers us a redundant connection between the two locations. No other vendor did this, choosing to use the equipment we currently have in place. I did not stipulate this equipment needed to be replaced in the RFP, however given its current age and lack of support it was the first item on my 2017 “to budget for” list.

FINANCIAL IMPACT

Funding for this replacement were carried over from the 2015 Annual Operating Budget under account #47008625-4602 in the amount of \$65,000. The remaining \$29,548.72 will be absorbed through savings in in Capital projects or from the Information Systems Fund Balance.

RECOMMENDATION

Request authorization to waive formal bidding and award contract to Current Technologies Corporation Inc. for the replacement of the Information Systems Department Storage Area Network (SAN) in an amount not to exceed \$94,548.72.



Current Technologies Corporation

Submitting to

Village of Hoffman Estates

Storage Area Network (SAN) Replacement

Request for Proposals

December 16, 2015 – 4:45 p.m.

Submitted by:

Frank Shoemaker
CTC Vice President – Sales
1423 Centre Circle
Downers Grove, IL 60515
fshoemaker@currenttech.net

An eye on the future of technology

1423 Centre Circle, Downers Grove, IL 60515 • 630.388.0240 • fax: 630.388.0241 • currenttech.net



Mr. Fred Besenhoffer
Information Systems Director
Village of Hoffman Estates
1900 Hassell Road
Hoffman Estates, IL 60169

Dear Mr. Besenhoffer,

Current Technologies is very pleased to have the opportunity to be included in this RFP process. We are an eighteen (18) year old IT Infrastructure and video surveillance company located in Downers Grove, IL. Our proven track record of exceeding our clients' expectations will set us apart from the competition.

Depth of Information Technology Experience:

- ⦿ 40+ Municipalities
- ⦿ 15+ Schools and Libraries
- ⦿ 100+ Private/Commercial entities

When faced with making the decision, we are confident that our integrity, depth of experience, and extensive product knowledge will ensure the success of this project. I know my team will assure you top notch service and support. Should you need any additional information please feel free to contact Frank Shoemaker, Vice President - Sales. He can be reached by phone at (630)317-5656, by email at FShoemaker@currenttech.net, or by mail at 1423 Centre Circle, Downers Grove, IL 60515. You may also contact Mark Rhodes, Vice President - IT Operations. He may be reached by phone at (630)317-5660, by email at MRhodes@currenttech.net, or by mail at 1423 Centre Circle, Downers Grove, IL 60515. We look forward to hearing from you.

Sincerely,

Steven Daugherty
President
Current Technologies Corporation
1423 Centre Circle
Downers Grove, IL 60515
(630)317-5669
SDaugherty@currenttech.net

An eye on the future of technology

1423 Centre Circle, Downers Grove, IL 60515 • 630.388.0240 • fax: 630.388.0241 • currenttech.net



Table of Contents

Proposal Summary.....	1-36
Fee Schedule.....	37-40
General Vendor Information.....	41-45
Project Staff & Key Project Staff Background.....	46-51
Customer References.....	52-53
Appendix.....	54-56



Proposal Summary

Current Technologies Corporation (CTC) is proposing the deployment of two Dell Equallogic SAN's to satisfy the storage needs spelled out in the Village's SAN RFP. The accompanying product literature from Dell outlines the hardware and software specifications. CTC has provided an answer or narrative for each point in the Scope of Work section of the RFP. Our pricing details a full bill-of-material of products and installation/integration services.



Proposal Summary

1. Design

a. Standard rack mount solution.

Yes

b. System is not a backup solution and is intended to be the primary storage system used by host servers.

Yes

c. A minimum of 24TB of usable storage per device.

i. Define the total disk space of your proposed solution.

37.8TB RAW Capacity, 27.6TB Approximate Usable Capacity using RAID 6

ii. Define the disk size, rotational speed, access times, and quantity of each type of drives used, their capacity, and MTBF.

Qty 42x 900GB 10K RPM SAS 2.5" Drives MTBF Data is not published by Dell for the individual drives however MTBF for the storage array is shown as 1,780,000 hours.

1. Explain your proposed solution's use of cache and SSDs.

Dual controllers with 32GB non-volatile memory per controller. SSD's are not used in the proposed array but SSD arrays are available.

iii. Describe your solution's use of controllers.

Dual controllers function in an active/standby manner. Cache (non-volatile memory) between controllers is in sync so that if a controller failure occurs, the new active controller takes over with no data lost during the transition process.

iv. Define the total number of IOPS for the proposed solution.

3,201 IOPS

v. Describe the number of spare drives included in your solution and how they can be brought online in the event of a drive failure.

2 Spare Drives, they are automatically placed into service by the storage array if a drive failure or predictive drive failure occurs.

vi. Detail the RAID levels or other technology that your proposed solution uses.

RAID 6 and RAID 10 are available RAID options on this array

d. Describe anything that pertains to the physical characteristics of your solution not included above that differentiates it from that of others.

The active/standby controller with sync'd cache mentioned above is a unique feature to ensure data protection. Not all vendors use this architecture.



Proposal Summary

2. Operation

a. Manager can set limitations of number of hosts that can utilize the storage system, number LUNs that can be assigned to a single host, or number of hosts that can connect to a single LUN much be disclosed.

Host access permissions to LUNS is fully configurable to meet the above needs.

b. Mirrored copies of LUNs, or replicated copies of LUNs can be added to the system dynamically without interruption of service to the LUN's host, allowing a non-mirrored LUN to be mirrored transparently to the host.

Yes

c. Ability to extend the size of an existing assigned LUN while the connected host is running without affecting the availability of the LUN.

Yes

d. Supports storage optimization technologies, such as block-level or file-level.

Storage snapshots are optimized at the block-level.

e. System must allow for duplication of existing LUNs to separate copies that can then be allocated to another host, commonly called snapshots.

i. Describe your solution's ability to take snapshots.

Included at no additional cost is the ability to take snapshots, up to 512 per volume / up to 10,000 total per group. Snapshots can be scheduled or performed manually.

ii. Detail your solution's ability to point to and recover a snapshot.

A snapshot can be brought online and presented to a host without disruption.

iii. Describe anything that pertains to snapshots not included above that differentiates your solution from that of others.

Snapshots are space-efficient and only store the deltas between itself and the parent/source volume.

f. System must stay on-line and fully functional while storage system updates are performed, as well as when storage capacity is scaled.

System updates as well as the addition of storage capacity are all performed without disruption.

g. Ability to add additional disks to the system to increase storage capacity while the system is in operation without affecting the availability of the system, and the new disks can be incorporated with the existing storage pools seamlessly.

Proposal Summary



- i. Explain how non-disruptive maintenance is achieved.

Software updates affect one controller followed by the other. During the reboot/software load process the controllers trade positions from standby to active thereby providing no noticeable disruption of service to the connected servers.

- ii. Explain how your solution addresses the addition of disks, shelves, and controllers.

Dell EqualLogic Arrays are composed of a factory configured array of disks, chassis and controllers making the architecture completely modular. When adding a new array to an environment this ensures that performance also scales up when adding capacity.

- h. Describe anything that pertains to the operation of the device not included above that differentiates your solution from that of others.

The simplicity of adding/removing members from a group for expansion or retirement of hardware is best in class and reduces or eliminates the need for professional services for these tasks.

3. Redundancy

- a. Redundant hardware, such as power supplies, fans, disks, and cache batteries, hard drives etc. can fail and be individually replaced without causing an interruption in service or downtime to the system as a whole.

- i. Describe all redundant features of your proposed solution. Include a description of the elimination of all single points of failure.

Due to the redundant disks, power supplies/fans, and controllers, no single component will cause an interruption to service.

- ii. Describe the solution's ability to recover from hardware failures of various components in your solution.

Non disruptive failover occurs and the customer will be alerted of the failure. The failed component can then be 'hot plugged' for replacement.

4. Replication and Failover

- a. Active/Active configuration

- i. System operates in an "active/active" configuration in that failed units, whether LUNs or hardware components are up-to-date and failover to the redundant unit is instantaneous enough to not affect the connected hosts under most foreseeable circumstances. Indicate any limitations of the proposed system.

Proposal Summary



The EqualLogic SyncRep features allows LUNS to be replicated real time from one array to another in realtime. If a host cannot reach the primary production volume it can reach the replicated volume instead. If synchronous replication is not desired, point in time replication can also be performed.

ii. Replication and mirror happens at the storage system level, meaning the data on a given redundant LUN is replicated or mirrored without any host interaction.

Yes, replication and mirror happens at the storage system controller level without any host interaction.

b. Agentless operation for the replication and failover of LUNs and hardware devices.

Yes, replication and failover is agentless.

c. Support for graceful "failback" after an error event, meaning, after the failed unit or LUN comes back online, it is automatically brought current again and is incorporated back into the redundant system.

Yes, failback is performed gracefully.

d. Describe the manner of replication used in your proposed solution.

Both Synchronous and Asynchronous replication are available to choose from at no additional cost.

Synchronous replication replicates all data real time, while Asynchronous replication allows you to choose a replication interval such as 15 minutes, 1 hour, etc..

e. Describe the process of failing over to the Secondary Site in the event of an outage at the Primary Site.

The process is automated if using Synchronous replication or manual if using Asynchronous replication.

f. Describe the process of failing back to the Primary Site after the Primary Site is again available.

The process is automated if using Synchronous replication or manual if using Asynchronous replication.

g. Describe anything that pertains to replication not included above that differentiates your solution from that of others.

The Dell EqualLogic architecture controller based replication requires no additional hardware or software to perform replication.

5. Management and Monitoring

a. Management interface is web-based. If not web-based, and software required for monitoring or management of the system, must be able to run on HP ProLiant G8 and new generation models and on a vSphere virtual machine, either of which would be running Windows Server 2008 R2, Windows Servers 2012 R2.

Management is done through a web based interface



Proposal Summary

b. Support for email and SNMP notifications of key system events.

The system supports email and SNMP notifications

c. Mobile Device Support for notifications, alarms, alerts, configuration, monitoring of systems.

The system supports notifications, configuration and monitoring via mobile device via the web based interface.

d. Functionality to monitor the logical and physical storage units, replication of data, and I/O utilization.

i. Reporting includes trending reports as well as real-time statistics. Interfaces provided must include an intuitive, "user friendly" GUI displaying statistics in either graph or tabular form.

ii. Exporting of statistics to CSV, PDF or other common format, and monitoring of performance counters using SNMP version 2c or version 3.

e. Explain the reporting features of your proposed solution. Include sample reports about usage, capacity, errors, and logs.

f. Describe anything that pertains to management or any other key features not included above that differentiates your solution from that of others.

SAN Headquarters software provided by Dell at no cost can provide the above functionality. More details are provided in the supporting documentation from Dell included with this proposal.

6. Connectivity and Compatibility

a. Support VMware vSphere 5.x and newer or higher, VMware vSphere Enterprise and newer versions, Windows Server 2008, and Windows Server 2008 R2, Windows Server 2012 R2 as well as future releases from both VMware and Microsoft.

All of the above OS environments are supported and future support is planned.

b. Hardware, Firmware, Software support: Host hardware, OS version, HBA, driver versions, and firmware version provided must be supported. If hardware or software in current environment is not supported, manufacture must indicate as such and provide a solution.

Support is provided

c. Support SAN protocols such as Fibre Channel, iSCSI, CIFS, NFS etc.

iSCSI protocol is supported. We've specifically proposed an iSCSI system as opposed to Fibre Channel due to the lower cost and complexity of an iSCSI environment. CIFS and NFS are client/server communication protocols and may be used by servers to communicate with clients.



Proposal Summary

d. Detail all connectivity options including 10Gb Ethernet redundancy and aggregation methods.

The Dell EqualLogic Storage array has 10GB capable controllers with dual ports per controller for redundancy.

e. Describe anything that pertains to connectivity not included above that differentiates your solution from that of others.

7. Support

a. Support during business hours

i. Proposer must be able to provide telephone and or onsite support during normal business hours, 6am to 6pm CST, Monday through Friday.

ii. Ability to open trouble tickets or make service requests online.

b. After hours support

i. Proposer must be able to provide support outside the normal business hours for planned and unplanned system events.

c. Ideally the Village would like to contract for a 3 year or 5 year support agreement.

d. Detail the SLA (Service Level Agreement) included in your proposed solution. Include the time for replacement parts to arrive and be installed.

e. Define your level of support detailing items covered and the process for contacting support.

f. Describe anything that pertains to support not included above that differentiates your solution from that of others.

Current Technologies provides business hours and after hours support in compliance with the above requested terms. The proposed SAN solution includes 3 years of support and can be extended out to 5 years for an extra fee. Service level agreement from Dell with the SAN 24x7 availability with 4 hour response to ensure that parts and onsite technical labor from Dell arrive within 4 hours.

8. Warranty

a. Explain the levels of the warranty proposed. Include software and hardware that is covered.

b. Explain which updates and upgrades are included, how notifications about updates are made, and the process of applying updates to your proposed solution.

c. Detail your proposed solution's hardware warranty.

d. Describe anything that pertains to Warranty/Maintenance not included above that differentiates your solution from that of others.

Current Technologies provides business hours and after hours support in compliance with the above requested terms. The proposed SAN solution includes 3 years of support and can be extended out to 5 years for an extra fee. Service level agreement from Dell with the SAN 24x7 availability with 4 hour response to ensure that parts and onsite technical labor from Dell arrive within 4 hours.



Proposal Summary

9. Deployment

- a. Proposer will provide technical and functional support during the implementation cycle through Final Acceptance and productive use of all system modules. This will include an on site technician certified by the manufacturer to assist during Acceptance Testing and/or on-call technical support.
- b. Vendor will provide on-site services necessary to gather information related to setting up the new SAN system.
- c. Vendor will finalize the project timeline and implementation schedule.
- d. Proposer installs all the new hardware into the Village's existing rack system including all power connections, network connections and Ethernet configuration assistance from Village staff.
- e. Vendor will provide the Village with at least bi-weekly project status reports. These reports must include a detailed schedule of tasks to be completed in the next period, who is assigned to them (both Village and Vendor resources), what was completed in the prior period, and what delays, problems, or other issues might be outstanding. This must also provide for an issues database reporting system in which Village staff can report problems that can be tracked and queried at any time as they are being addressed.
- f. Vendor will provide support and technicians for the migration of data from current local data store to the new SAN system as well as assist with repointing host to the new SAN migrated data.
- g. Diagrams, in Microsoft Visio version 2010 or 2013 format, of the proposed solution including connectivity diagrams must be included, as well as "asbuilts" showing the final connection layout of the system including connection points and any addressing that was done provided in digital format.
- h. All "other" related documentation pertaining to hardware, software, licensing and configurations etc. will be turned over to the Village.

All of the above items will be performed and are additionally outlined in our scope of work.

11. Training

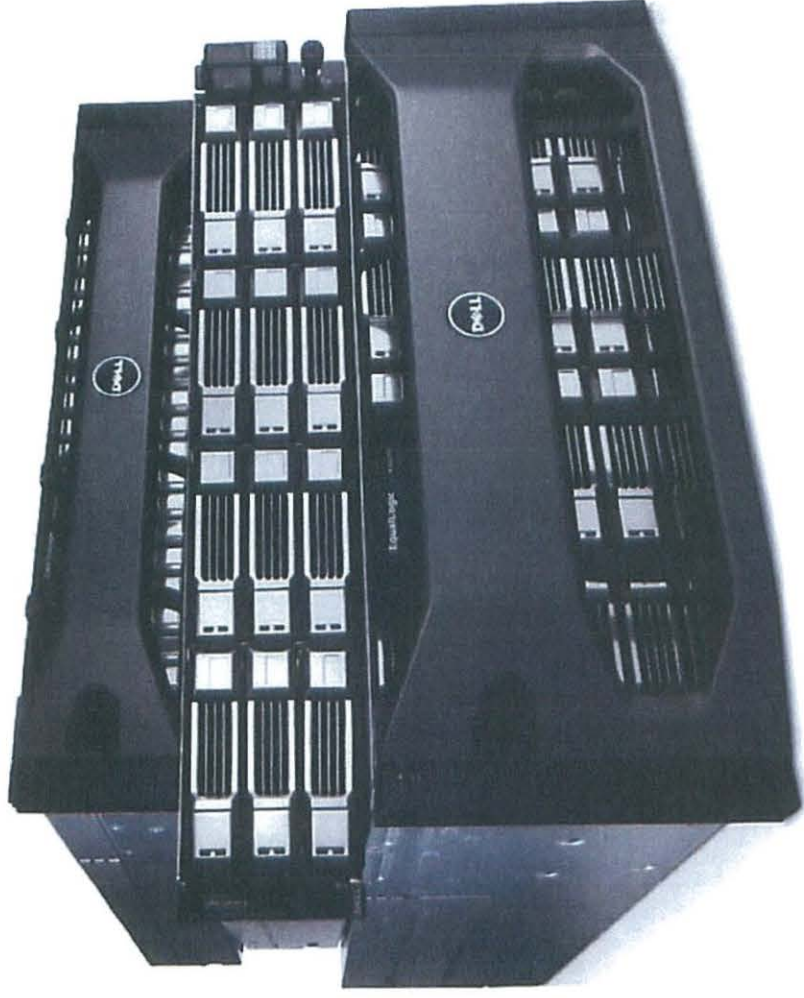
- a. On Site technician training on the use of the system, including maintenance procedures, storage provisioning, host configuration requirements, health monitoring, performance monitoring and or industry "best practices".
 - i. Include the training required for a minimum two persons to manage, maintain, and upgrade the proposed storage system.

All of the above items will be performed and are additionally outlined in our scope of work.



Enterprise power
with everyday
simplicity

Dell Storage PS Series



The Dell difference

Ease of use

- Integrated tools for centralized monitoring and management
- Scale-out capacity and performance with automated tiering and workload balancing
- Strategic integration with the VMware¹, Microsoft² and Linux³ products you use most.

Investment protection

- Industry-leading TCO savings for midrange storage¹
- All-inclusive software model
- Continuous feature enhancements extend the life of your investment for no additional charge

Storage for virtual environments

- Virtualized storage for virtualized servers
- Simplified VDI deployments
- Tight integration with industry-leading hypervisor
- Integration and management of multiple storage groups from a central, single VMware vCenter console

Performance and efficiency simplified for the real world

Simplified, unified, virtualized Dell Storage PS Series, the #1 iSCSI worldwide vendor,² is ideal for companies and organizations with growing data and performance needs. The PS Series features the advanced capabilities of the EqualLogic line with a frameless, IP-based peer storage architecture that enables live, non-disruptive firmware upgrades and maintenance, as well as linear scaling of capacity and performance with each array added to the group. Streamline operations, optimize resources, and protect data through advanced integration with leading operating system, hypervisor and application platforms.



A groundbreaking, all-inclusive software model allows access to the latest product features, and enables multiple generations of EqualLogic PS Series arrays and FluidFS NAS appliances to work seamlessly to provide file and block data services from a single, virtualized pool.

¹ Source: ESG Lab Report, "Dell EqualLogic PS Series Storage and TCO Analysis - Delivering Lasting Value with Streamlined Management and Improved Performance Scalability," a January 2014 report sponsored by Dell. For the full report see http://en.community.dell.com/techcenter/extras/ml/white_papers/20438150/download.aspx

² #1 iSCSI storage vendor worldwide in 28 out of 30 quarters by revenue and market share based on information from the IDC Worldwide Quarterly Disk Storage Systems Tracker Q2 2015 (2008Q1-2015Q2)



Scale-out virtualized storage

Exceptional ease of management

Dell Storage PS Series is designed to provide rapid deployment, simple management and seamless expansion. All PS Series storage products include host integration tools to simplify host configuration and administrative tasks in Microsoft Windows®, Linux and VMware environments. A browser-based Group Manager interface helps streamline management, while application-layer integration helps simplify storage operations supporting industry-leading virtualization, operating system and application platforms. An in-depth reporting, performance and event monitoring system lets you automatically transmit diagnostic data to Dell Support.

Enterprise-class performance

A breakthrough, scale-out architecture gives the PS Series storage performance and scalability once reserved for top-tier data centers, enabling best-practice storage for every size organization. PS Series' hybrid-flash arrays provide automated storage tiering and migrate data automatically across storage tiers to optimize performance, while sophisticated load balancing optimizes performance across storage pools.

Unified, virtualized storage

With a unified, virtualized architecture, the PS and FS Series enable organizations to manage both block- and file-based storage in a group — through a single GUI instance — that can seamlessly grow to up to 509TB in file capacity and over 8PB in block or total capacity, providing flexibility and operational ease for any mix of structured application data and unstructured file data. The EqualLogic FS7600 and FS7610 NAS appliances support Fluid File System v4, which includes data management enhancements such as automated home shares, directory quotas and enhanced protocol support for SMB 3.0, NFS v4.1 and NFS v4 ACLs.

"Our engineers spend less time dealing with maintenance and managing the network because the EqualLogic storage arrays deliver excellent I/O performance."

— Ryohei Nago, Cloud Services Engineer, Cloud Service Division, TOSYS Corporation

Exceptional lifecycle economics

PS Series solutions represent an evolution in storage economics — from purchase to operation and upgrades. A cornerstone of Dell Storage solutions, the PS Series gives you the power to do more by helping you get the most from your data across its entire lifecycle. The innovative implementation of a virtualized, scale-out storage architecture enables both extensive virtualization and excellent return on investment. PS Series storage scales easily, on-demand and online, enabling storage growth without costly application disruptions, lengthy service engagements, or forklift upgrades. The all-inclusive PS Series software package lets organizations of all sizes reap the benefits of enterprise functionality, and enables multiple generations of hardware to run the latest firmware in a single storage pool. As a result, PS Series storage provides exceptional flexibility at a low total cost of ownership.



PS Series arrays

	PS arrays	Description	Drive types	Drive capacities	Array capacity	
Mainstream arrays	10GbE	PS6210S	High performance and low latency for critical applications	24 x 2.5" SSD	400GB, 800GB SSD	Up to 19.2TB
		PS6210XS	Speed of flash with automated tiering for demanding applications	7 x 2.5" SSD + 17 x 2.5" 10K SAS	400GB, 800GB SSD; 600GB, 1.2TB SAS	Up to 26TB
		PS6210XV	Highest-performance HDD system in the PS6210 Series	24 x 2.5" 15K SAS	300GB, 600GB ² SAS	Up to 14.4TB
		PS6210X	Great balance of cost, performance and capacity	24 x 2.5" 10K SAS	600GB, 900GB, 1.2TB ² SAS	Up to 28.8TB
		PS6210E	High-capacity configuration for data-intensive applications	24 x 3.5" 7.2K NL-SAS	2TB, 3TB, 4TB, ² 6TB NL-SAS	Up to 144TB
	1GbE	PS6100S	All-flash array with high performance and low latency	24 x 2.5" SSD	400GB, 800GB SSD	Up to 19.2TB
		PS6100XS	Speed of flash with automated data tiering for demanding applications	7 x 2.5" SSD + 17 x 2.5" 10K SAS	400GB, 800GB SSD; 600GB, 1.2TB SAS	Up to 26TB
		PS6100XV	High-performance system for critical applications	24 x 2.5" 15K SAS	300GB, 600GB ² SAS	Up to 14.4TB
		PS6100X	Great balance of cost, performance and capacity	24 x 2.5" 10K SAS	600GB, 900GB, 1.2TB ² SAS	Up to 28.8TB
		PS6100E	High-capacity configuration for highly consolidated environments	24 x 3.5" 7.2K NL-SAS	1TB, 2TB, 3TB, 4TB ² NL-SAS	Up to 96TB
Dense arrays	10GbE	PS6610ES	Hybrid-flash with high performance and high capacity in one array	14 x 2.5" SSD + 70 x 3.5" 7.2K NL-SAS	400GB, 800GB SSD, 2TB, 4TB NL-SAS	Up to 291.2TB
		PS6610X	Balances performance and high capacity for consolidating mixed workloads	42 or 84 2.5" 10K SAS	600GB, 900GB, 1.2TB ² SAS ¹	Up to 100.8TB
		PS6610E	Cost-efficient dense array with the highest capacity in the PS Series	42 or 84 3.5" 7.2K NL-SAS	2TB, 4TB, ² 6TB NL-SAS ¹	Up to 504TB
		PS4210XS	SSD speed and HDD capacity within one array	7 x 2.5" SSD + 17 x 2.5" 10K SAS	400GB SSD; 600GB SAS	Up to 13TB
Entry-/mid-range arrays	10GbE	PS4210XV	Highest performance HDD within the PS4210 Series	24 x 2.5" 15K SAS	300GB ² , 600GB SAS	Up to 14.4TB
		PS4210X	Great balance of cost, performance and capacity	24 x 2.5" 10K SAS	600GB, 900GB, 1.2TB SAS	Up to 28.8TB
		PS4210E	Entry-level configurations for affordable capacity	12 x 3.5" 7.2K NL-SAS	2TB, 3TB, 4TB, 6TB NL-SAS	Up to 72TB
		PS4100XV ¹	Exceptional IOPS performance for remote office consolidation	24 x 2.5" 15K SAS	300GB SAS	Up to 7.2TB
Blade arrays	10GbE	PS4100X ¹	Balance of cost, performance and capacity for remote/branch offices	24 x 2.5" 10K SAS	600GB, 900GB SAS	Up to 21.6TB
		PS4100E	High-capacity array for efficiency and cost-effectiveness	12 x 3.5" 7.2K NL-SAS	1TB, 2TB, 3TB, 4TB NL-SAS	Up to 48TB
		PS-M4110XS	Hybrid configuration with SSD speed and HDD capacity	9 x 2.5" 10K SAS + 5 x 2.5" SSDs	400GB, 800GB SSD, 600GB, 1.2TB SAS	Up to 14.8TB
		PS-M4110XV	High-performance for business-critical applications in a blade chassis	14 x 2.5" 15K SAS	300GB, 600GB ² SAS	Up to 8.4TB
		PS-M4110X	Best balance of capacity and performance for storage blade array	14 x 2.5" 10K SAS	600GB, 900GB, 1.2TB ² SAS	Up to 16.8TB
		PS-M4110E	SAN capacity in a blade chassis at an affordable price	14 x 2.5" 7.2K NL-SAS	1TB NL-SAS ²	Up to 14TB

¹ Limited availability in certain regions

² Also available in SED

³ Drive availability varies by configuration



FS76X0 NAS appliance features

File protocol support
<ul style="list-style-type: none"> NFSv4.x, NFSv4 ACLs, SMB 3.0 (for implementation detail, please refer to the FluidFS support matrix)
Storage arrays supported
<ul style="list-style-type: none"> Any EqualLogic group running version 8.1 or later firmware
Cluster capability
<ul style="list-style-type: none"> Up to two FS7600/FS7610 appliances (four controllers) in a single NAS cluster
Management
<ul style="list-style-type: none"> EqualLogic Group Manager
1GbE configuration options
<ul style="list-style-type: none"> Two Intel 1GbE four-port NICs per controller Client connectivity over Ethernet, SAN connectivity over iSCSI (Ethernet switch is required, direct connect to the SAN is not supported)
10GbE configuration options
<ul style="list-style-type: none"> Two Intel 10GbE dual-port NICs per controller, copper or optical, SFP+ or 10GBASE-T standards Client connectivity over Ethernet, SAN connectivity over iSCSI (Ethernet switch is required, direct connect to the SAN is not supported)
Key features
<ul style="list-style-type: none"> Redirect-on-write snapshots; max number of snapshots per container/cluster 1,024/10,000 Policy based deduplication and compression Asynchronous file replication NAS container thin provisioning NAS container shrinking NAS container cloning Access based enumeration Encryption of NFS traffic Automatic SMB Home Shares Directory Quotas

Array software features

Management
<ul style="list-style-type: none"> Browser-based client, or CLI Group Manager user interface Roles-based management LDAP and Microsoft Active Directory integration Powerful, flexible PowerShell scripting (also Perl, Python, CLI) Smart Tags that allow users to 'tag' volumes with descriptive metadata labels
Data protection
<ul style="list-style-type: none"> Space-efficient snapshots Point-in-time replication Synchronous Replication Clones and template-based thin clones Consistency groups Default daily snapshot Space borrowing with replication Multiple delegated spaces for a single replication partner
Storage virtualization
<ul style="list-style-type: none"> Online SAN expansion and array retirement Expand and shrink storage resources online Thin provisioning Auto-load balancing and tiering Storage UNMAP SAN Data Copy Offload Port virtualization Storage pools Compression of snapshots and replicas
Maintenance
<ul style="list-style-type: none"> Email home/email alerting Detailed audit logging Enclosure monitoring system Integration with Dell SupportAssist via EqualLogic SAN HQ or OpenManage Essentials
Software upgrades
<ul style="list-style-type: none"> Dell Storage Update Manager simplifies the process of updating the firmware for EqualLogic PS Series, FS Series and disk drives with guided update management

Host software features

Microsoft integration
<ul style="list-style-type: none"> Application-consistent data protection and quick recovery with Auto-Snapshot Manager for Microsoft (Hyper-V®, Exchange, SQL Server®, SharePoint®, and NTFS, ReFS and CSV File Systems) Multipathing I/O (MPIO) Device Specific Module (DSM) Easy setup of multiple storage arrays with Remote Setup Wizard Windows Server storage management <ul style="list-style-type: none"> PowerShell Tools Storage Management Provider Storage management with System Center Virtual Machine Manager Storage integration with VSS, VDS, HPC and SMP providers
VMware integration
<ul style="list-style-type: none"> Virtual Storage Manager (VSM) for VMware ESX MPIO Multipathing Extension Module (MEM) for VMware vSphere® Storage Replication Adapter for VMware vCenter Site Recovery Manager (SRA) EqualLogic Adapter for vRealize Operations Manager™ Advanced integration with vSphere Virtual Volumes creates a VM-aware solution for faster VM deployments and snapshot restore Global search of snapshots and replicas Scheduling templates that can be used for both snapshots and replication
Linux integration
<ul style="list-style-type: none"> Auto-Snapshot Manager/Linux Edition Host Performance and Configuration Tuning Suite Enhanced MPIO Remote Setup Wizard Command Line Interface On-Demand Volume Re-thinning Facility Log Gathering Facility
SAN Headquarters
<ul style="list-style-type: none"> Utilization and performance monitoring Multi-site, multi-group monitoring Events and alerts Formatted reports, graphs and archives SupportAssist proactive, automated services integration for automated case creation, diagnostic data collection and case viewing Model RAID policy choice and RAID protection reliability Estimate maximum I/O Offline analysis capability

Global services and support

Reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. You can count on Dell for end-to-end solutions to maximize your performance and uptime. A proven leader in Servers, Storage and Networking, Dell Enterprise Solutions and Services deliver innovation at any scale. And if you're looking to preserve cash or increase operational efficiency, Dell Financial Services has a wide range of options to make technology acquisition easy and affordable. Dell ProSupport Plus for critical systems or Dell ProSupport for premium hardware and software support are recommended to provide you the right support services for your PS Series solution. Contact your Dell representative today for more information.

¹ Availability and terms of Dell Services vary by region. Dell Basic Service is included standard with EqualLogic units. For more information, visit Dell.com/servicesdescriptions.

Simplify Your Storage at Dell.com/EqualLogic.

© 2015 Dell Inc. All Rights Reserved
 FY16Q2_388_DS606_EqualLogic_Family_Brochure_Global_100515





Dell EqualLogic Software

All-inclusive software for enterprise power with everyday simplicity

Built on award winning peer scaling architecture, the Dell™ EqualLogic™ PS Series iSCSI storage arrays offer high performance, reliability, intelligent automation and seamless virtualization of storage to enable simplified enterprise storage management and data protection. For scalable, unified storage solutions, combine EqualLogic PS Series block storage arrays with EqualLogic FS Series network-attached storage (NAS) appliances.

The Dell difference

- All-inclusive software: New EqualLogic software releases will run on existing PS systems under active Dell service agreements, allowing you to bring new enterprise-class SAN features into your existing environment without additional licensing costs.
- Multi-generational storage: As your storage and business requirements grow, your existing EqualLogic hardware resources receive continuous advancements in capabilities from software releases and can be pooled with newer PS arrays.
- With advanced integration with vSphere Virtual Volumes, the EqualLogic PS Series provides support for both a datastore or volume centric model and a per virtual machine model for faster VM deployments and snapshot restores.
- Monitoring and analysis: SAN Headquarters helps you analyze and optimize storage performance and resource allocation, and offers SupportAssist for proactive monitoring designed to expedite resolution of issues with Dell ProSupport services.
- Host Integration Tools: Advanced integration with Microsoft, VMware and Linux platforms and applications for integrated protection and simplified management.
- Tiering and load balancing to unlock the power of flash: All-flash arrays take advantage of EqualLogic's load-balancing algorithms and peer scaling to grow SSD performance and capacity predictably. Hybrid-flash arrays are ideal for VDI deployments, important databases, and other mixed workloads thanks to auto-tiering for hot data.

The power behind EqualLogic

Dell EqualLogic all-inclusive software gives you the power to do more with both new and existing EqualLogic PS Series arrays and FS Series NAS appliances. With the advanced functionality of the EqualLogic Array Software, the monitoring and analysis tools of SAN Headquarters, and the Host Integration Tools for VMware, Microsoft, and Linux environments, EqualLogic equips you with an innovative storage solution that provides exceptional investment and data protection, ease of use, and virtualization capabilities.

Inspired by you, Dell innovates with each release to give you more of what you need to scale capacity and performance seamlessly, integrate and grow strategically, and maximize your return on investment — both in effort and cost. Whether you are running a data center, deploying a virtual desktop environment, or have a remote or branch office, EqualLogic PS Series is an effective storage solution to support both your physical and virtual servers.

A strong foundation — Array Software

EqualLogic Array Software provides you with advanced functions that enable virtualized storage and data protection. With the tools for a sound data protection strategy, and automatic virtualization and optimization of resources within the SAN, EqualLogic PS Series delivers consistent application performance with the availability your organization requires.

EqualLogic Firmware is a full-function SAN operating system integrated across the entire family of EqualLogic PS Series storage arrays to virtualize SAN resources. An essential component of the software is the capability to automatically adjust system resources — optimizing performance and capacity and reducing IT administrative effort. Array Software 8.0 adds a number of new benefits that make the PS Series easy to manage and easy to integrate into virtual and physical environments, all while bringing lasting value with multi-generational features for backward compatibility and future proofing including:

- Space savings through compression of snapshots and replicas provided on a per-pool basis with PS6210 and PS6610 arrays running 8.0 or greater
- Multiple delegated spaces for a single replication partner
- Space borrowing for replication
- Automatic daily data protection of unprotected volumes via a default daily snapshot
- Improved storage management with Smart Tags that allow users to "tag" volumes with descriptive metadata labels
- Advanced Virtual Volumes integration, a feature of VMware vSphere, provides policy-based data services and data placement at the VM level to offer cost-efficiency and to streamline management, monitoring, and data protection

FluidFS v3

Powered by Dell Fluid File System (FluidFS), the FS7600 and FS7610 NAS appliances bring scale-out file storage capability to EqualLogic SANs, providing a single, unified storage solution. FluidFS v3 provides thin provisioning, as well as deduplication and compression, to reduce capacity required to store data that is no longer needed by up to 48%. With its highly scalable architecture, FluidFS enables up to 509TB of usable capacity within a single file namespace. Multiple smaller file systems, or NAS volumes (containers), can be consolidated into a single solution, simplifying administration and improving file storage utilization.

Unlike many unified storage solutions that only scale in capacity, the EqualLogic FS7600 and FS7610 NAS appliances and PS Series arrays can transparently scale both capacity and performance for file and/or block requirements as needed. As your needs grow over time, block and file storage capacity can be added without disrupting existing applications and storage systems. Additionally, included data protection features such as snapshots, replication, access-based enumeration, NFS access (with Kerberos and SASL support for encryption), secured LDAP, NDMP backup and antivirus provide robust tools to protect and recover file data.

Reliable infrastructure management

EqualLogic Group Manager is a management tool integrated with the EqualLogic PS and FS Series Firmware that provides you with detailed information on your block and file storage configuration, and gives you an easy-to-use tool for storage provisioning, data protection and array management. EqualLogic Group Manager is available as a CLI or GUI with search functionality, accessible through web browsers with a connection to the EqualLogic SAN.

EqualLogic Manual Transfer Utility is a host-based tool that enables the replication of large amounts of block storage data using removable media. Integrated with the native replication function of the EqualLogic Array Firmware, EqualLogic Manual Transfer Utility helps your organization eliminate network congestion, minimize downtime and accelerate replication setup.

Dell Storage Update Manager provides guided update management to simplify the process of updating the firmware for your EqualLogic platform. Storage Update Manager works with PS Series, FS Series and disk drive firmware. Using a single tool, you are able to facilitate both single-member and multi-member group updates so you can easily take advantage of the latest firmware features.

Knowledge is power — SAN Headquarters

EqualLogic SAN Headquarters (SAN HQ) gives you in-depth reporting and analysis, consolidated performance and robust event monitoring across multiple EqualLogic groups to provide a well-tuned EqualLogic SAN that surpasses your business requirements. With SAN HQ, you can:

- Improve performance by identifying performance bottlenecks
- Better allocate group resources by identifying under-utilized assets within the SAN
- Improve availability by proactively identifying potential issues within your EqualLogic environment
- Speed up resolution of issues with SupportAssist integration with Dell Services to automate the creation of Dell ProSupport cases
- Identify requirements for storage growth for more accurate planning
- Set up email alerts for around-the-clock monitoring

- Evaluate storage reliability based on current RAID levels and forecast reliability improvements from potential RAID policy changes

From a single GUI, you can see information on all of the monitored PS Series groups at a glance — including configuration and performance of pools, members, disks and volumes, as well as any alerts. If action is required, you can launch the EqualLogic Group Manager directly from SAN HQ so you can quickly adjust storage systems to meet business needs. With SAN HQ you can also estimate how close a group, pool or array is to its full capabilities with analytics to help plan for storage growth. In addition, the latest SAN HQ 3.1 release allows you to integrate SAN HQ with third-party SNMP event management consoles, enables monitoring for performance and capacity metrics, and allows you to easily launch Storage Update Manager directly from the SAN HQ Group list. You can also monitor events and performance in relation to vSphere Virtual Volumes objects for more consistent reporting.

With a new compression feature, Array Software 8.0 can reduce replica and snapshot size up to 50% in a pool that contains at least one PS6210 or PS6610 array²

SAN HQ provides proactive support capability with SupportAssist for EqualLogic. When enabled, system log and diagnostic data are transmitted to Dell Support to help accelerate issue detection and streamline resolution. Support cases are opened automatically by Dell Support and a new case tracker allows you to view your open EqualLogic cases, delivering a more automated support process to help improve productivity and accuracy.

Collaboration counts — Host Integration Tools

The EqualLogic Host Integration Tools allow EqualLogic platforms to communicate and coordinate functions with hosts and applications, delivering advanced data protection, high availability and performance, and simplified management of application data and virtual machines for Microsoft, VMware and Linux environments.

Dell helps simplify and automate protection and recovery tasks customized to user applications and environments with Auto-Snapshot Manager software that enhances the efficiency and performance of data-protection tasks for Microsoft SQL Server®, SharePoint®, Exchange, Hyper-V®, NTFS and ReFS file systems, as well as Red Hat® and SUSE® Linux environments. Dell Virtual Storage Manager (VSM, part of the Host Integration Tools for VMware) offers high-performance, space-efficient data protection of VMware VMs and datastores within folders and clusters. Advanced vSphere Virtual Volumes can make operations like single VM snapshot-restores nearly instantaneous. Virtual Volumes integration transforms the Dell PS Series from a LUN-centric to a VM-aware storage solution by providing data services and data placement at the VM level. Coupled with the PS Series dynamic page balancing, it provides a highly optimized cost/performance/capacity solution. Storage Recovery Replicas provide a simplified storage recovery solution across single and multisite vCenter™ installations, managing multiple EqualLogic groups.

EqualLogic multipath I/O (MPIO) enables Microsoft, VMware and Linux platforms to intelligently leverage the EqualLogic SAN architecture for optimized performance in your environment. For Linux systems, the Host Performance and Configuration Tuning Suite (eqltune) enhances performance and usability by verifying and proactively correcting your Linux system parameters for optimal setup of iSCSI configuration.

EqualLogic Host Integration Tools automate end-to-end operations from the hosts to the array, helping streamline data management and enabling simplified configuration. With the EqualLogic Remote Setup Wizard (RSW) for Windows and Linux,

traditionally tedious discovery and setup tasks are simplified using an intuitive, step-by-step user interface. EqualLogic PowerShell tools help manage and automate routine EqualLogic management tasks in a Microsoft environment. Storage Management integration with System Center Virtual Machine Manager further extends your management capabilities for virtual Microsoft environments. VSM and Host Integration Tools for Microsoft offer centralized data protection and management features to simplify administration of multiple hosts and EqualLogic SAN groups in your infrastructure.

EqualLogic Array Software		
EqualLogic PS Series Firmware and Group Manager		
Performance	64-bit kernel for newer generation PS Series arrays (PS4100, PS4210, PS6100, PS6210, PS6610), volume unmap (re-thinning), enhanced load balancing, intelligent tiering on hybrid arrays (SSD and HDD), SAN copy offload, Offloaded Data Transfers (ODX), UNMAP, block zeroing and scalable hardware assisted locking for VMware, and data center bridging (with 10GbE arrays)	
Data protection, availability and recovery	Snapshots (point-in-time, schedulable, writeable, multi-volume snaps that can be coordinated across volume consistency sets), Default Daily Snapshot: replication (point-in-time, schedulable auto-replication and continuous synchronous replication); volume cloning; volume undelete, IPSEC, self-encrypting drives (SED), active-standby controller failover, automatic RAID placement	
Storage virtualization	Complete SAN virtualization, peer storage architecture, storage pooling and tiering, hybrid-flash array tiering, non-disruptive array addition and removal (evacuation), thin provisioning, thin clones and integration with VMware APIs (VAAI), vSphere Virtual Volumes support, and VMware thin provisioning awareness	
Operations, maintenance and management	Access Control Policies, Single Sign-on, Group Manager, host scripting tools, role-based administration, Microsoft Active Directory Integration, Audit Logging, Non-disruptive Firmware Upgrade, SupportAssist, E-Mail Home, Auto-Stat Disk Monitoring System, Enclosure Monitoring System, detailed historical performance monitoring, Smart Tags, Compression, Space Borrowing, Multiple Delegated Spaces	
Supported host environments	Microsoft Windows Server® including Hyper-V, VMware vSphere ESXi™, Red Hat Enterprise Linux® (RHEL), SUSE Enterprise Linux® (SLES), Oracle® Linux, Citrix® XenServer® For a complete list of supported OS versions including software initiators, NICs/CNAs, and HBAs, please see the EqualLogic Compatibility Matrix .	
Delivery	Firmware is pre-loaded on the arrays; updates are also available for download from EQLSupport.Dell.com website for all systems under a valid support agreement at no additional cost. ¹	
User interface	EqualLogic Group Manager provides CLI and a GUI compatible with Microsoft Internet Explorer®, Mozilla® Firefox®, Apple® Safari® or Google Chrome® web browsers	
SAN group maximums	EqualLogic Array Software can support up to 16 arrays in one group enabling maximum SAN resources of up to 8.06PB ⁴ , 1344 drives, 32 storage controllers, 1024GB ⁴ of total system memory	
Configuration	PS6xxxx-only or mixed groups	PS4xxxx-only groups
Maximum members in a pool/group	8/16	2/2
Max volume connections per pool/group	1024/4096	512/1024
Max volumes per group	1024	512
Snapshots/Replicas per volume	512/512	128/128
Max snapshots per group	10,000	2048
Replication partners per group	16	16
Replication partners per volume	1	1
Volumes enabled for point-in-time replication	256	32
Volumes enabled for synchronous replication	32	4
EqualLogic Manual Transfer Utility		
Target uses	Initial replication of large volumes, replication of volumes after significant changes, failback of large volumes	
Key features	Data encryption, password protection, transfer status updates, replication and failback, transfer continuation after interrupt	
Operating platforms	Microsoft Windows Vista®, Windows® XP, Windows 7; Microsoft Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2; RHEL and SLES	
User interface	EqualLogic Group Manager	

Dell EqualLogic SAN Headquarters	
Monitoring and analytics	<p>Comprehensive information on EqualLogic PS Series: groups, pools, members, disks, volumes and volume collections:</p> <ul style="list-style-type: none"> • Status • Configuration • Capacity • I/O performance • Network performance <p>Multi-group monitoring, multi-site support, RAID evaluator, experimental analysis SupportAssist—diagnostic data collection and transmission to Dell Support enabling automatic creation of certain support cases now with a case tracker so you can easily view and track cases</p>
Reporting and views	<p>Graphs, dashboards, tables displaying detailed and summarized historical and point-in-time data; Live View for near real-time monitoring; formatted reports for diagnostics, performance and configuration</p>
Events and alerts	<p>Performance-related alerts, hardware alarms and syslog events, built-in email alerts and alerts ranging from basic hardware health status to more sophisticated analysis on volume, I/O, network or capacity threshold</p>
Ease of use	<p>Ability for multiple users to access and monitor simultaneously; Single Sign-on for launching EqualLogic Group Manager; Timeline Navigation</p>
Operating platforms	<p>Microsoft Windows 8, 8.1 and 10, Microsoft Windows 7 SP1, Microsoft Windows Server 2008 SP2, Microsoft Windows Server 2008 R2 SP1, Microsoft Windows Server 2012, Microsoft Windows Server 2012 R2</p>
Dell Storage Update Manager	
Streamline management and operations	<p>The Dell Storage Update Manager application can help you analyze your current Dell EqualLogic storage configurations to determine which components, if any, can or need to be updated. With an intuitive workflow design, Storage Update Manager guides you to help simplify the update process and also tracks the status of your updates. It provides an outline of all components that require updating and the estimated time to complete the process. Deployed as a standalone Java application, Storage Update Manager runs independently of Group Manager and SAN Headquarters, but offers a similar interface and help features. Storage Update Manager targets PS Series groups running PS Series firmware version 5.0.x and higher, or FS Series Firmware version 3.x.x or higher, and updates the following components:</p> <ul style="list-style-type: none"> • PS Series array firmware • FS Series controller firmware • PS Series disk drive firmware (excluding SED disk drives and FS Series disk drives)
Host Integration Tools for VMware	
Protect business-critical data	<p>Dell Virtual Storage Manager (VSM), Storage Recovery Replicas, Storage Replication Adapter for VMware Site Recovery Manager (SRA SRM)</p>
Optimize storage performance	<p>MPIO</p>
Streamline storage management and operations	<p>VSM provides datastore management that allows you to create, manage, and monitor datastores on Dell EqualLogic PS Series and FS Series arrays from within a single VSM table. With Virtual Volumes integration, VSM also provides support for a per VM data services model. Dell EqualLogic Adapter for vRealize Operations Manager™ provides comprehensive insights on capacity, performance and health of EqualLogic storage arrays through alerts and metrics.</p>
Operating platforms	<p>Virtual Storage Manager (VSM) for VMware 4.5 with vSphere Virtual Volumes support</p> <ul style="list-style-type: none"> • VMware vCenter Server™ 5, 6.0 • VMware ESXi Server™ 5.1, 5.5, 6.0 <p>Storage Recovery Adapter (SRA) 2.2.1</p> <ul style="list-style-type: none"> • VMware vCenter Site Recovery Manager (SRM) 5.1, 5.5, 5.8 <p>Dell EqualLogic Multipathing Extension Module v1.3</p> <ul style="list-style-type: none"> • VMware ESXi Server 5.1, 5.5, 6.0
Software delivery	<p>HIT/VMware is delivered as four packages: EqualLogic Virtual Storage Manager (VSM) integrates natively into VMware vSphere Web Client 5.5 and 6.0 with functionality role-based access controls (RBAC), VM-centric data protection, template-based scheduling and data protection workflows; includes EqualLogic vSphere Storage APIs (VASA) Provider</p> <ul style="list-style-type: none"> • Storage Replication Adapter for VMware Site Recovery Manager • Multipath I/O, also called multipathing extension module (MEM) • EqualLogic Adapter for vRealize Operations Manager <p>Advanced Virtual Volumes support for VM-aware functionality requires vSphere 6.0 and Array Software 8.0</p>

Host Integration Tools for Microsoft	
Protect business-critical data	Auto-Snapshot Manager/Microsoft Edition (ASM/ME) for Microsoft SharePoint, Exchange, SQL Server, Hyper-V, NTFS and ReFS
Optimize storage performance	MPIO DSM
Management and operations	Storage Management integration with Microsoft System Center Virtual Machine Manager® (SCVMM), Storage Management Provider (SMP), PowerShell Tools, Remote Setup Wizard, VSS Provider, VDS Provider, and HPC iSCSI Provider, remote HIT installation and remote server management capabilities with ASM/ME HIT Groups
Operating platforms	Microsoft Windows Server 2012 R2, Microsoft Windows Server 2012, Windows 8.1, Windows 8, Windows 7 SP1.
Host Integration Tools for Linux	
Protect business-critical data	Auto-Snapshot Manager/Linux edition (ASM/LE) — Linux file system
Optimize storage performance	MPIO, Host Performance and Configuration Tuning Suite (eqltune)
Streamline storage management and operations	Remote Setup Wizard CLI, EqualLogic Volume Re-thinning Facility (eqlvolume)
Operating platforms	Red Hat Enterprise Linux 6.x, 7.x SUSE Linux Enterprise Server 11 SP2, SP3 and 12 Oracle Linux 6.7 (UEK2 and UEK3) and 7.0 (UEK3)
EqualLogic FS Series	
File protocol support	NFS v3, NFS v4, SMB 1.0, SMB 2.0 and SMB 2.1 (for implementation details, see the FluidFS support matrix)
Storage arrays supported	EqualLogic PS Series running version 7.0 or later firmware
Cluster capability	Up to two FS7600/FS7610 appliances (four controllers) in a single NAS cluster
Management	EqualLogic Group Manager
1GbE configuration options	Two Intel 1GbE four-port NICs per controller Client connectivity over Ethernet, SAN connectivity over iSCSI Ethernet switch is required; direct connect to the SAN is not supported
10GbE configuration options	Two Intel 10GbE dual-port NICs per controller, copper or optical, SFP+ or 10GBASE-T standards Client connectivity over Ethernet, SAN connectivity over iSCSI Ethernet switch is required; direct connect to the SAN is not supported
Data protection	<ul style="list-style-type: none"> • Redirect-on-write snapshots; max number of snapshots per container/cluster: 1,024/10,000 • Policy based deduplication and compression • Asynchronous file replication

Global services and support

Reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. You can count on Dell for end-to-end solutions to maximize your performance and uptime. A proven leader in Servers, Storage and Networking, Dell Enterprise Solutions and Services deliver innovation at any scale. And if you're looking to preserve cash or increase operational efficiency, Dell Financial Services has a wide range of options to make technology acquisition easy and affordable. Dell ProSupport Plus for critical systems or Dell ProSupport for premium hardware and software support are recommended to provide you the right support services for your EqualLogic solution.⁵ Contact your Dell representative today for more information.

Download EqualLogic Software at EQLSupport.Dell.com.

⁴Based on May 2013 internal Dell analysis of the FluidFS with Fluid Data Reduction, using real-world home share environment comprised of Office files (21%), GZ (19%) and .flite (19%) files, among others.

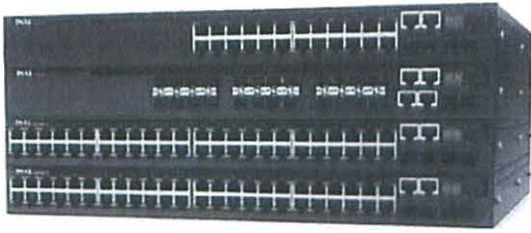
⁵Based on September 2014 internal Dell analysis of the EqualLogic Array Software 8.0 compression feature with PS6210 arrays, using real-world home share environment comprised of snapshots and replicas. Requires a PS6210 or PS6610 in the environment. Results will vary based on configuration, data types and usage.

³All software updates are available for download on EQLSupport.Dell.com. All EqualLogic software is included in the cost of the EqualLogic platform. Customers with a valid Dell support agreement can download software updates without paying additional license fees.

⁴GB means 1 billion bytes, TB equals 1 trillion bytes and PB equals 1 quadrillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

⁵Availability and terms of Dell Services vary by region. Dell Basic Service is included standard with EqualLogic units. For more information, visit Dell.com/servicedescriptions.





Dell Networking N3000 series

Dell Networking N3000 is a series of energy-efficient and cost-effective 1GbE switches designed for modernizing and scaling network infrastructure. N3000 switches utilize a comprehensive enterprise-class Layer 3 Advanced feature set, deliver consistent, simplified management and offer high-availability device and network design.

The N3000 switch series offers a power-efficient and resilient Gigabit Ethernet (GbE) switching solution with integrated 10GbE uplinks for advanced Layer 3 distribution for offices and campus networks. The N3000 switch series has high-performance capabilities and wire-speed performance utilizing a non-blocking architecture to easily handle unexpected traffic loads. Use dual internal hot-swappable 80PLUS-certified power supplies for high availability and power efficiency. The switches offer simple management and scalability via an 84Gbps (full-duplex) high-availability stacking architecture that allows management of up to 12 switches from a single IP address.

Modernize campus network architectures

Modernize campus network architectures with a power-efficient and resilient 1/10GbE switching solution with dense Power over Ethernet Plus (PoE+). Select N3000 models offer 24 or 48 ports of PoE+ to deliver clean power to network devices such as wireless access points (APs), Voice-over-IP (VoIP) handsets, video conferencing systems and security cameras. For greater interoperability in multivendor networks, N3000 series switches offer the latest open-standard protocols and include technology to interface with Cisco protocol RPVST+ and devices using CDP.

Achieve high availability and full bandwidth utilization with Multi-chassis Link Aggregation (MLAG). N3000 series switches support MLAG to create active/active loop-free redundancy without spanning tree. Server rooms can deliver reliable server and storage connectivity with features to help save time and avoid configuration errors. N3000 supports VRF-lite, allowing it to be partitioned into multiple virtual routers with isolated control and data planes on the same physical switch. The N3000 series is also fully tested and validated to work with Dell EqualLogic™ PS-Series storage arrays.*

Leverage familiar tools and practices

All N-Series switches include Dell Networking OS 6 designed for easier deployment, greater interoperability and a lower learning curve for network administrators. One common command line interface (CLI) and graphic user interface (GUI) using a well-known command language gets skilled network administrators productive quickly. This allows network administrators to maintain consistent configurations by running one OS release across all N-Series products. With USB auto-configuration, network administrators can rapidly deploy mirrored configurations to numerous devices by simply inserting a USB key.

Deploy with confidence at any scale

N3000 series switches help create performance assurance with a data rate up to 260Gbps (full duplex) and a forwarding rate up to 193Mpps. Scale easily with built-in rear stacking ports. Switch stacks of up to 624 1GbE ports can be managed from a single screen using the highly-available stacking architecture for high-density aggregation with seamless redundant availability. N-Series switches help provide certainty with a lifetime warranty that covers software upgrades, hardware repair or replacement, and optics and cables purchased with the switch. Details at Dell.com/LifetimeWarranty.**

*Contact your Dell representative for a full list of validated storage arrays.

**Select Networking products carry a Lifetime Limited Warranty with Basic Hardware Service (repair or replacement) for life. Repair or replacement does not include troubleshooting, configuration, or other advanced service provided by Dell ProSupport.

Hardware, performance and efficiency

- Up to 48 line-rate GbE ports of copper or fiber, two combo ports for fiber/copper flexibility, and two integrated 10GbE SFP+ ports.
- Up to 48 ports of PoE+ in 1RU without an external power supply.
- Up to 624 1GbE ports in a 12-unit stack for high-density, high-availability aggregation and distribution in wiring closets/MDFs. Non-stop forwarding and fast failover in stack configurations.
- Hot swappable expansion module supporting dual-port SFP+ or dual-port 10GBaseT.
- Available with dual 80PLUS-certified hot swappable power supplies. Variable speed fan operation helps decrease cooling and power costs.
- Energy-Efficient Ethernet and lower power PHYs reduce power to inactive ports and idle links, providing energy savings from the power cord to the port.
- Dell Fresh Air compliance for operation in environments up to 113°F (45°C) helps reduce cooling costs in temperature constrained deployments.

Deploying, configuring and managing

- Tool-less ReadyRails™ significantly reduces rack installation time.
- USB auto-configuration rapidly deploys the switch without setting up complex TFTP configurations or sending technical staff to remote offices.
- Plug-and-Play configuration with Dell EqualLogic iSCSI storage arrays* and one-command iSCSI setup alleviates multiple step configuration and potential configuration errors.
- Management via an intuitive and familiar CLI, embedded web server (GUI), SNMP-based management console application (including Dell OpenManage Network Manager), Telnet or serial connection.
- Private VLAN extensions and Private VLAN Edge support.
- AAA authorization, TACACS+ accounting and RADIUS support for comprehensive secure access support.
- Authentication tiering allows network administrators to tier port authentication methods such as 802.1x, MAC Authentication Bypass and Captive Portal in priority order so that a single port can provide flexible access and security.
- Achieve high availability and full bandwidth utilization with MLAG and support firmware upgrades without taking the network offline.
- Interfaces with RPVST+ protocol for greater flexibility and interoperability in Cisco networks.
- Advanced Layer 3 IPv4 and IPv6 functionality.
- Flexible routing options with policy-based routing to route packets based on assigned criteria beyond destination address.
- Remote Switch Port Analyzer (RSPAN) monitors ports across a Layer 2 domain without costly dedicated network taps.
- OpenFlow 1.3 provides the ability to separate the control plane from the forwarding plane for more sophisticated traffic management.

Specifications: Dell Networking N3000 series

Dell SKU description

- N3024:** 24x RJ45 10/100/1000Mb auto-sensing ports, 2x SFP+ ports, 2x GbE combo media ports, 1x hot swap expansion module bay, 1x 200W PSU included
- N3024F:** 24x 1000-SX (up to 500m distance) or 1000-LX (up to 10km distance) SFP GbE ports, 2x SFP+ ports, 2x GbE combo media ports, 1x hot swap expansion module bay, 1x 200W PSU included
- N3024P:** 24x RJ45 10/100/1000Mb PoE+ (up to 30.6W) auto-sensing ports, 2x SFP+ ports, 2x GbE combo media ports, 1x hot swap expansion module bay, 1x 715W PSU included*
- N3048:** 48x RJ45 10/100/1000 Mb auto-sensing ports, 2x SFP+ ports, 2x GbE combo media ports, 1x hot swap expansion module bay, 1x 200W PSU included
- N3048P:** 48x RJ45 10/100/1000 Mb PoE+ (up to 30.6W) auto-sensing ports, 2x SFP+ ports, 2x GbE combo media ports, 1x hot swap expansion module bay, 1x 1100W PSU included*

Power cords

- C13 to NEMA 5-15, 3M
C13 to C14, 2M
C15 to NEMA 5-15, 2M (C15 for POE N-Series only)

Modules (optional)

- 2-port 10 Gigabit BASE-T RJ-45 hot swappable uplink module
2-port 10 Gigabit SFP+ hot swappable uplink module

Power supplies (optional)

- 200W AC hot swappable with V-Lock, adds redundancy to non-PoE switches (N3024, N3024F and N3048 only)
715W AC hot swappable, adds redundancy to N3024P (N3024P only)
1100W AC hot swappable, adds redundancy to N3048P or upgrade N3024P for additional PoE+ power (N3024P and N3048P only)

Optics (optional)

- Transceiver, SFP, 100BASE-FX, 1310nm wavelength, up to 2km reach
Transceiver, SFP, 100BASE-T
Transceiver, SFP, 100BASE-SX, 850nm wavelength, up to 550m reach
Transceiver, SFP, 100BASE-LX, 1310nm wavelength, up to 10km reach
Transceiver, SFP, 100BASE-ZX, 1550nm wavelength, up to 80km reach
Transceiver, SFP+, 10GbE, LRM, 1310nm wavelength, up to 220m reach
Transceiver, SFP+, 10GbE, SR, 850nm wavelength, up to 300m reach
Transceiver, SFP+, 10GbE, LR, 1310nm wavelength, up to 10km reach
Transceiver, SFP+, 10GbE, ER, 1550nm wavelength, up to 40km reach

Cables (optional)

- Stacking cable 0.25m, 1m and 3m
Dell Networking cable, SFP+ to SFP+, 10GbE, copper twinax direct attach cable, 0.5m, 1m, 3m, 5m and 7m

* Requires C15 plug

Physical

- 2 rear stacking ports (21Gbps) supporting up to 84Gbps (full-duplex)
2 integrated front 10GbE SFP+ dedicated ports
Out-of-band management port (10/100/1000BASE-T)
USB (Type A) port for configuration via USB flash drive
Auto-negotiation for speed and flow control
Auto-MDI/MDIX, port mirroring
Flow-based port mirroring
Broadcast storm control
Energy-Efficient Ethernet per port settings
Redundant variable speed fans
Air flow: I/O to power supply
RJ45 console/management port with RS232 signaling (RJ-45 to female DB-9 connector cable included)
Dual firmware images on-board
Switching engine model: Store and forward

Chassis

- Size (1RU): 1.7126 in x 17.0866 in x 16.0236 in (43.5 mm x 434.0 mm x 407.0 mm) (H x W x D)
Approximate weight: 13.2277lbs/6kg (N3024 and N3024F), 14.5505lbs/6.6kg (N3024P), 13.8891lbs/6.3kg (N3048), 15.2119lbs/6.9kg (N3048P)
ReadyRailz rack mounting system, no tools required

Environmental

- Power supply: 200W (N3024, N3024F and N3048), 715W or 1100W (N3024P), 1100W (N3048P)
Power supply efficiency: 80% or better in all operating modes
Max. thermal output (BTU/hr): 151.4 (N3024), 204.6 (N3024F), 4.467.1 (N3024P), 220.97 (N3048), 3.113.33 (N3048P)
Power consumption max (watts): 52.8 (N3024), 67.1 (N3024F), 1.287 (N3024P), 74.8 (N3048), 2.145 (N3048P)
Operating temperature: 32° to 113°F (0° to 45°C)
Operating relative humidity: 95%
Storage temperature: -40° to 149°F (-40° to 65°C)
Storage relative humidity: 85%

Performance

- MAC addresses: 32K
Static routes: 1,024 (IPv4)/1,024 (IPv6)
Dynamic routes: 8,160 (IPv4)/4,096 (IPv6)
Switch fabric capacity: 212Gbps (N3024, N3024F and N3024P) (full duplex)
260Gbps (N3048 and N3048P)
Forwarding rate: 158Mpps (N3024, N3024F and N3024P)
193Mpps (N3048 and N3048P)
Link aggregation: 128 LAG groups, 144 dynamic ports per stack, 8 member ports per LAG

- Priority queues per port: 8
Line-rate Layer 2 switching: All (non-blocking)
Line-rate Layer 3 routing: All (non-blocking)
Flash memory: 256MB
Packet buffer memory: 4MB
CPU memory: 1GB
OSPF routing interfaces: 8,160
RIP routing interfaces: 512
ECMP next hops per route: 4
ECMP groups: 64
VLAN routing interfaces: 128
VLANs supported: 4,094
Protocol-based VLANs: Supported
Multicast forwarding entries: 1,536 (IPv4), 512 (IPv6)
ARP entries: 6,144
NDP entries: 400
Access control lists (ACL): Supported
MAC and IP-based ACLs: Supported
Time-controlled ACLs: Supported
Max number of ACLs: 100
Max ACL rules system-wide: 4,096
Max rules per ACL: 1,023
Max ACL rules per interface (IPv4): 3,072 (ingress), 1,024 (egress)
Max ACL rules per interface (IPv6): 1,021 (ingress), 512 (egress)
Max VLAN interfaces with ACLs applied: 24

IEEE compliance

- 802.1AB LLDP
Dell Voice VLAN
Dell ISDP (inter-operates with devices running CDP)
802.1D Bridging, Spanning Tree
802.1p Ethernet Priority (User Provisioning and Mapping)
Dell Adjustable WRR and Strict Queue Scheduling
802.1Q VLAN Tagging, Double VLAN Tagging, GVRP
802.1s Multiple Spanning Tree (MSTP)
802.1v Protocol-based VLANs
802.1W Rapid Spanning Tree (RSTP)
Dell RSTP-Per VLAN (compatible with Cisco's RPVST+)
Dell Spanning tree optional features: STP root guard, BPDU guard, BPDU filtering
802.1X Network Access Control, Auto VLAN
802.2 Logical Link Control
802.3 10BASE-T
802.3ab Gigabit Ethernet (1000BASE-T)
802.3ac Frame Extensions for VLAN Tagging
802.3ad Link Aggregation with LACP
802.3ae 10 Gigabit Ethernet (10GBASE-X)
802.3at PoE+ (N3024P and N3048P)
802.3AX LAG Load Balancing
Dell Multi-Chassis LAG (MLAG)
Dell Policy Based Forwarding
802.3z Energy Efficient Ethernet (EEE)
802.3u Fast Ethernet (100BASE-TX) on management ports
802.3x Flow Control
802.3z Gigabit Ethernet (1000BASE-X)
ANSI LLDP-MED (TIA-1057)
Dell EqualLogic iSCSI Auto-configuration
MTU 9,216 bytes

RFC compliance and additional features

General Internet protocols

General Internet protocols are supported. For a detailed list, please contact your Dell representative.

General IPv4 protocols

General IPv4 protocols are supported. For a detailed list, please contact your Dell representative.

General IPv6 protocols

General IPv6 protocols are supported. For a detailed list, please contact your Dell representative.

Layer 3 functionality

- | | | | |
|------|----------------------|------|-------------------------|
| 1058 | RIPv1 | 2453 | RIPv2 |
| 1724 | RIPv2 MIB Extension | 2740 | OSPFv3 |
| 1765 | OSPF DB overflow | 2787 | RRRP MIB |
| 1850 | OSPF MIB | 3101 | NSSA |
| 2082 | RIP-2 MD5 Auth | 3137 | OSPF Stub Router Advert |
| 2328 | OSPFv2 | 3623 | Graceful Restart |
| 2338 | RRRP | 3768 | RRRP |
| 2370 | Opaque LSA Option | 4271 | BGP |
| Dell | Policy Based Routing | 5187 | OSPFv3 Graceful Restart |

Multicast

- | | | | |
|------|-----------------------|------|----------------------|
| 1112 | IGMPv1 | 3810 | MLDv2 |
| 2236 | IGMPv2 | 3973 | PIM-DM |
| 2365 | Admin scoped IP Mcast | 4541 | IGMP v1/v2/v3 |
| 2710 | MLDv1 | | Snooping and Querier |
| 2932 | IPv4 MIB | 4601 | PIM-SM |
| 2933 | IGMP MIB | 5060 | PIM MIB |
| 3376 | IGMPv3 | Dell | Static IP Multicast |
- Draft-ietf-pim-sm-bsr-05
Draft-ietf-idmr-dvmrp-v3-10 DVMRP
Draft-ietf-magma-igmp-proxy-06.txt IGMP/MLD Proxying
Draft-ietf-magma-igmpv3-and-routing-05.txt
draft-ietf-idmr-dvmrp-mib-11
draft-ietf-magma-mgmd-mib-05
draft-ietf-pim-bsr-mib-06
IEEE 802.1ag draft 8.1 - Connectivity Fault Management (CFM)
IEEE 802.1p GMRP Dynamic L2 Multicast Registration

Quality of service

- | | | | |
|------|--|------|---------------------------|
| 2474 | DiffServ Field | 2637 | srTCM |
| 2475 | DiffServ Architecture | 4115 | trTCM |
| 2597 | Assured Fwd PHB | Dell | L4 Trusted Mode (TCP/UDP) |
| Dell | Port Based QoS Services Mode | | |
| Dell | Flow Based QoS Services Mode (IPv4/IPv6) | | |

Network management and security

- | | | | |
|------|---|------|---|
| 1155 | SMIPv1 | 2856 | Text Conv. For High Capacity Data Types |
| 1157 | SNMPv1 | | Interfaces MIB |
| 1212 | Concise MIB Definitions | 2863 | RADIUS |
| 1213 | MIB-II | 2865 | RADIUS Accounting |
| 1215 | SNMP Traps | 2866 | RADIUS Attributes for Tunnel Prot. |
| 1286 | Bridge MIB | 2868 | RADIUS Extensions |
| 1442 | SMIPv2 | | Internet Standard Mgmt. Framework |
| 1451 | Manager-to-Manager MIB | 3410 | SNMP Management Framework |
| 1492 | TACACS+ | | Message Processing and Dispatching |
| 1493 | Managed objects for Bridges MIB | 3411 | SNMP Applications |
| 1573 | Evolution of Interfaces | 3412 | User-based security model |
| 1612 | DNS Resolver MIB Extensions | 3413 | View-based control model |
| 1643 | Ethernet-like MIB | 3414 | SNMPv2 |
| 1757 | RMON MIB | | Transport Mappings |
| 1867 | HTML/2.0 Forms with file upload extensions | 3416 | SNMP MIB |
| 1901 | Community-based SNMPv2 | 3417 | RMON MIB |
| 1907 | SNMPv2 MIB | 3418 | Registry of RMON MIB |
| 1908 | Coexistence between SNMPv1/v2 | 3577 | UDF MIB |
| 2011 | IP MIB | 3580 | Requirements |
| 2012 | TCP MIB | 3737 | HTTP/1.1 |
| 2013 | UDP MIB | 4086 | IP Forwarding Table MIB |
| 2068 | HTTP/1.1 | | Interfaces Group using SMIPv2 |
| 2096 | IP Forwarding Table MIB | 4113 | SSHv2 Protocol |
| 2233 | Spanning tree optional features: STP root guard, BPDU guard, BPDU filtering | 4251 | SSHv2 Authentication |
| 2246 | TLS v1 | 4252 | SSHv2 Transport |
| 2271 | SNMP Framework MIB | 4254 | SSHv2 Connection Protocol |
| 2295 | Transport Content Negotiation | 4419 | SSHv2 Transport Layer Protocol |
| 2296 | Remote Variant Selection | 4521 | LDAP Extensions |
| 2346 | AES Ciphersuites for TLS | 4716 | SECSH Public Key File Format |
| 2576 | Coexistence between SNMPv1/v2/v3 | 6101 | SSL |
| 2578 | SMIPv2 | 6398 | IP Router Alert |
| 2579 | Textual Conventions for SMIPv2 | Dell | Enterprise MIB |
| 2580 | Conformance Statements for SMIPv2 | | supporting routing features draft-ietf-hubmb-etherif-mib-v3-00.txt (Obsoletes RFC 2665) |
| 2613 | RMON MIB | Dell | LAG MIB Support for 802.3ad functionality sflow version 1.3 draft 5 |
| 2618 | RADIUS Authentication MIB | Dell | |
| 2620 | RADIUS Accounting MIB | | |
| 2665 | Ethernet-like Interfaces MIB | | |
| 2666 | Identification of Ethernet chipsets | | |
| 2674 | Extended Bridge MIB | | |
| 2737 | ENTITY MIB | | |
| 2818 | HTTP over TLS | | |
| 2819 | RMON MIB (groups 1, 2, 3, 9) | | |

Regulatory, environment and other compliance

Safety and emissions

- Australia/New Zealand: ACMA RCA Class A
Canada: ICES Class A, eUL
China: CCC Class A; NAL
Europe: CE Class A
Japan: VCCI Class A
USA: FCC Class A; NRTL UL
Eurasia Customs Union: EAC
Germany: GS mark
Product meets EMC and safety standards in many countries inclusive of USA, Canada, EU, Japan, China.
For more country-specific regulatory information, and approvals, please see your Dell representative.

RoHS

- Product meets RoHS compliance standards in many countries inclusive of USA, EU, China, and India. For more country-specific RoHS compliance information, please see your Dell representative.
EU WEEE
EU Battery Directive
REACH

Energy

Japan: JEL

Certifications (available or coming soon)

- Available with US Trade Agreements Act (TAA) compliance.
N-Series products have the necessary features to support a PCI compliant network topology.

© 2015 Dell Inc. All rights reserved. Dell, the DELL logo and the DELL badge are trademarks of Dell Inc. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims proprietary interest in the marks and names of others. This document is for informational purposes only. Dell reserves the right to make changes without further notice to the products herein. The content provided is as-is and without expressed or implied warranties of any kind. Additional features may be supported and not listed. For a detailed list, please contact your Dell representative.

Learn More at Dell.com/Networking

May 2015 | Version 1.5

Dell_Networking_N3000_Series_Spec_sheet






Dell EqualLogic SAN Headquarters

Version 3.1

Quick Start Guide



Notes, Cautions, and Warnings

-  **NOTE:** A NOTE indicates important information that helps you make better use of your computer.
-  **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.
-  **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

Copyright © 2015 Dell Inc. All rights reserved. This product is protected by U.S. and international copyright and intellectual property laws. Dell™ and the Dell logo are trademarks of Dell Inc. in the United States and/or other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.

2015 – 06

Rev. 110-6212-EN-R1

Contents


1 Before You Begin.....	4
2 Installation Procedure.....	5
Full Installation – Client and Server.....	5
Add a Group and Configure SupportAssist.....	5
3 Basic SAN HQ Client GUI Features.....	11
4 SAN Headquarters Settings.....	15

Before You Begin

This guide provides steps for quickly installing SAN Headquarters (SAN HQ) the first time, adding a new group, and enabling SupportAssist diagnostic data collection. It also presents basic GUI navigation and settings information to help you get started using SAN HQ. For complete information, see the *Dell EqualLogic SAN Headquarters Installation and User's Guide*.

Before you begin, identify the following:

- IP addresses of the groups you want to monitor
- Login credentials for the group (grpadmin password)
- Group SNMP read-only community name

 **NOTE:** You must configure an SNMP community name on the group. Dell recommends using a dedicated SNMP community name for SAN HQ. (You can specify up to five community names in a group.) See the *Dell EqualLogic Group Manager Administrator's Guide* for information on configuring SNMP access to a group.

Installation Procedure

1. Double-click the SAN HQ executable file, **SANHQSetup32And64.exe**.
The welcome screen appears. Click **Next**.
2. Accept the EULA.
3. Accept the default directory for the application files. Click **Next**.
4. Choose to install the SAN HQ Server and Client.

Full Installation — Client and Server

1. Specify the directory for the log files and optional network share name.
2. Enable TCP/IP communication. SAN HQ has advanced features that operate through TCP/IP (for example, SupportAssist and Live View).
 - a. Check the box and type or accept the default host name/IP address. Dell recommends using a static IP address.
 - b. Accept the default TCP/IP port for SAN HQ, which you can change later from **Settings → Server → Connection Settings for Client**. (This option is available only after performing a full installation. It is not available from a client-only installation.)
3. (Optional) If the computer running the SAN HQ Server is behind a firewall, the installation asks if you want to add firewall rules to enable TCP/IP communication for the required processes. Click **Yes**.
4. An installation dialog box displays as the application is installed. When complete, click **Finish**. By default, **Launch SAN Headquarters** is selected.
5. Enter the login credentials for remote SAN HQ server login.
6. When the SAN HQ GUI launches, the Add Group wizard starts automatically. Click **Next** to continue.

Add a Group and Configure SupportAssist

You can configure SupportAssist as you add new groups to SAN HQ for monitoring. Make sure that your SAN HQ Server is fully functional and not in a degraded state.

To add a new group:

1. Click **SAN HQ → Add New Group** to open the Add Group wizard.
2. Click **Next** to open the PS Series Group Information dialog box
3. In the dialog box:
 - Type the Group IP address or DNS name.
 - Type the Group Community SNMP name.

- Check the **Enable SupportAssist functionality** box (see [Figure 1. Add Group Wizard – Group Information Dialog Box](#)). (You must accept the license in step 4. Depending on whether the TCP/IP initialization is complete, the box might already be checked.)

Add Group

PS Series Group Information
Enter the PS Series Group information for configuration with SAN HQ server.

Group Connection Information

Group IP address or DNS name 10.127.127.200
Enter the IP address or DNS name of the group that you want to monitor. If the group has a dedicated management network, enter the management network address.

Group SNMP community name cwsnmp
Enter the SNMP community name that is configured in the group.

SupportAssist Functionality

Enable SupportAssist functionality (Requires EULA Acceptance)

Single Sign-On Functionality

Enable Disable

Account name **Password**

< Back Next > Cancel

Figure 1. Add Group Wizard – Group Information Dialog Box

4. Click **Next** to open the SupportAssist License Agreement dialog box and accept the license terms.
5. Click **Next**. A message dialog box shows that SAN HQ is polling the group and loading group information. When SAN HQ contacts the group, it opens the PS Series Group Login Credential and Syslog Selection dialog box (see [Figure 2. Result of Adding Group Login Credentials and Syslog Server Selection](#)).
6. Enter the following information:
 - a. The user name and password as the group admin credentials.
 - b. A user name for the SupportAssist read-only account. You can accept the default **autopilot-ro** account name or enter your own custom account name. User names follow the same conventions as the PS Series firmware local account and can contain up to 16 alphanumeric ASCII characters, including period, hyphen, and underscore. The first character must be a letter or number and the last character cannot be a period.
 - c. A password for the SupportAssist read-only account. Passwords must contain a minimum of 3 and a maximum of 16 alphanumeric characters, which are case-sensitive. Dell recommends a minimum of 6 characters for improved security.
7. Click **Test** to validate the credentials. If you entered valid credentials, SAN HQ enables the Group Syslog Servers panel. Note the IP address for Current Syslog Configuration.

8. Scroll through the list and Select SAN HQ Server IP address for Group Syslog Notification registration. Dell recommends using a static IP address.

The screenshot shows a dialog box titled "Add Group" with the following sections:

- PS Series Group Login Credentials and Syslog Server Selection**
Enter the group administrative credentials for the PS Series Group and select a syslog server address.
- Group Admin Credentials**
Username: grpadmin
Password: [Redacted]
Note: Credentials will not be saved to disk.
- SupportAssist Read-Only Account Creation**
Username: autopilot-ro
New Password: ***
Verify Password: ***
Note: This will be reused by SAN HQ
- Credentials Validation Succeeded** (with a green checkmark icon) and a **Test** button.
- Group Syslog Servers**
Current Syslog Configuration: 10.124.124.113
Select SAN HQ Server IP address for Group Syslog Notification registration
List of IP addresses:
 - fc00::c80e:e4fe:ef46:3dfe
 - 10.124.124.113 (highlighted)
 - 10.127.223.226
 - 192.123.123.1
 - 192.168.100.1
- Navigation buttons: **< Back**, **Next >**, and **Cancel**.

Figure 2. Result of Adding Group Login Credentials and Syslog Server Selection

9. Click **Next** and type information in the Customer Contact Information dialog box ([Figure 3. SupportAssist Customer Contact Information](#)).

Add Group

Customer Contact Information
Supply customer contact information for use with the SupportAssist feature.

Enter customer contact information below for SupportAssist feature. [What is this?](#)

Contact Name: Andrew Rusico

E-mail Address: A_Rusico@xyz.com

Work Phone: 603-234-1234 Cell Phone: (optional)

City: Nashua State: NH

Country: United States Timezone: (UTC-05:00) Eastern...

Language: English (United States)

Company: XYZ Widgets, Inc.

Contact Times: (optional) Daytime 8am to 5 pm

< Back Next > Cancel

Figure 3. SupportAssist Customer Contact Information

10. Click **Next** and enter your preferred data-collection and upload settings (see [Figure 4. SupportAssist Data Collection and Upload Settings Screen](#)):
 - a. Check the box to enable weekly data collection and set the day, time, retry interval, and the total number of attempts, which includes the initial attempt.
 - b. Check the box to collect diagnostics data when critical events are detected in addition to scheduled activity.
 - c. Check the box to allow automatic transmission of diagnostic data to Dell Support for review.

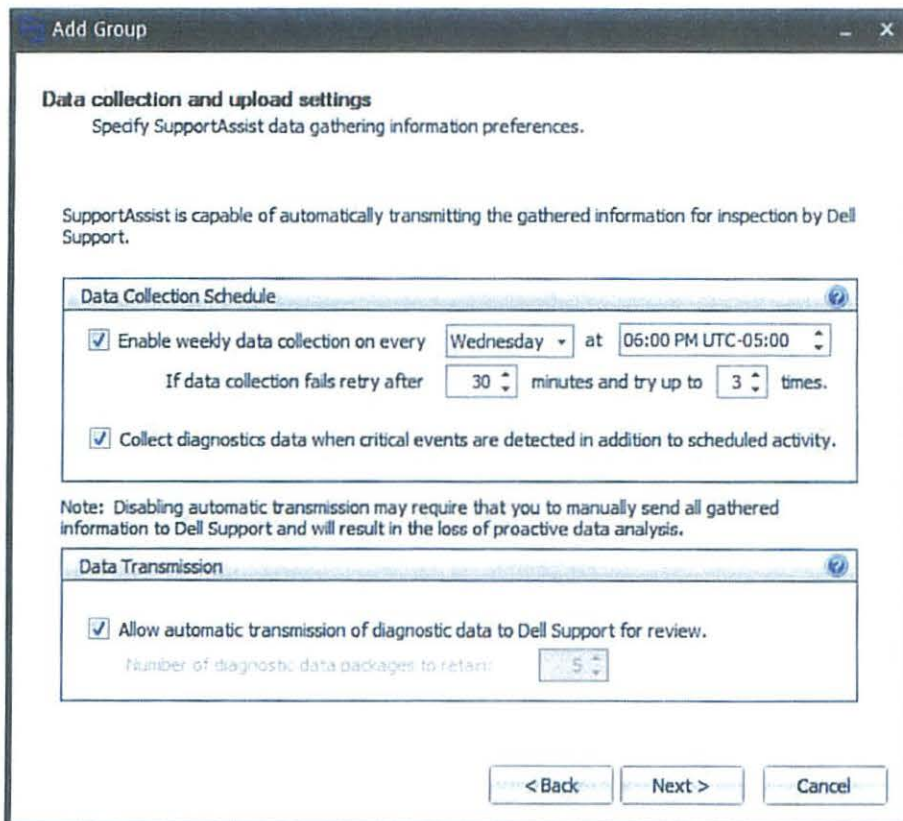


Figure 4. SupportAssist Data Collection and Upload Settings Screen

11. Click **Next** and, optionally, enter the settings for email notification.
12. Click **Next** and use the sliders to specify your preferences for the size of log files and of event and audit log files.
13. Click **Next** and review your configuration settings in the Completing the Wizard dialog box ([Figure 5. Successfully Added Group with SupportAssist Enabled](#))

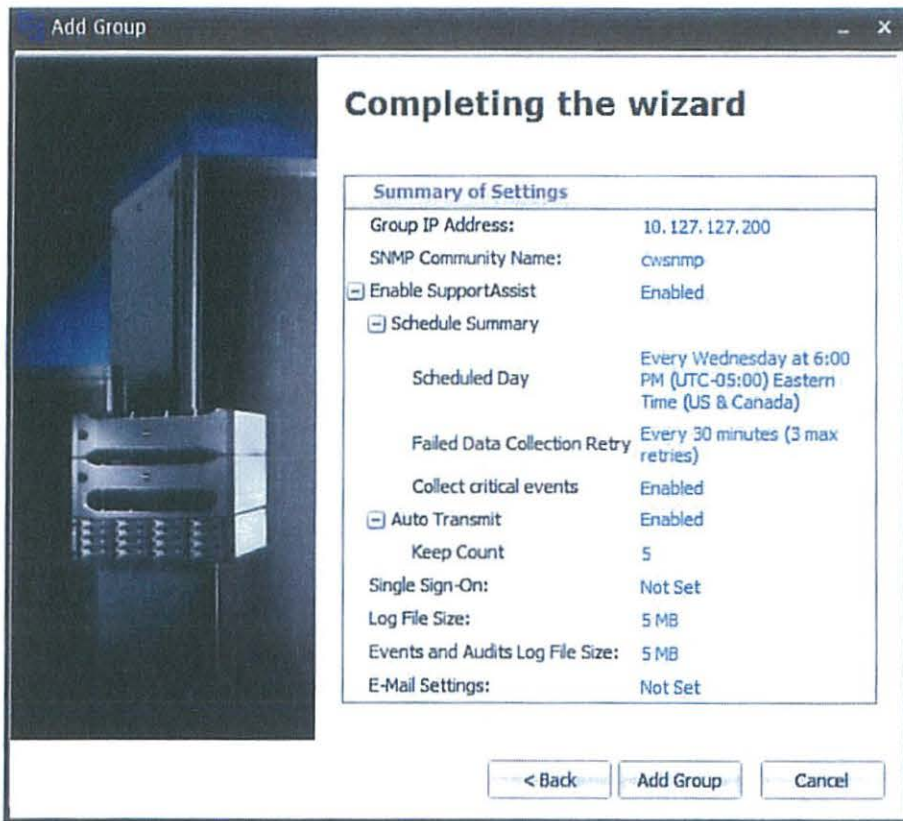


Figure 5. Successfully Added Group with SupportAssist Enabled

14. Click **Add Group**.

SAN HQ connects to the group and starts to poll the group for data. Depending on the group size, this operation can take several minutes. You can continue to add more groups or perform other monitoring operations.

Basic SAN HQ Client GUI Features

The Summary of Group window displays an overview of group status, capacity, I/O performance, and network performance. You can navigate through the SAN HQ GUI windows in several ways and display increasingly more detailed group data in different contexts.

To display detailed information about a group in the SAN HQ GUI, select the group name in the Servers and Groups tree in the far-left panel.

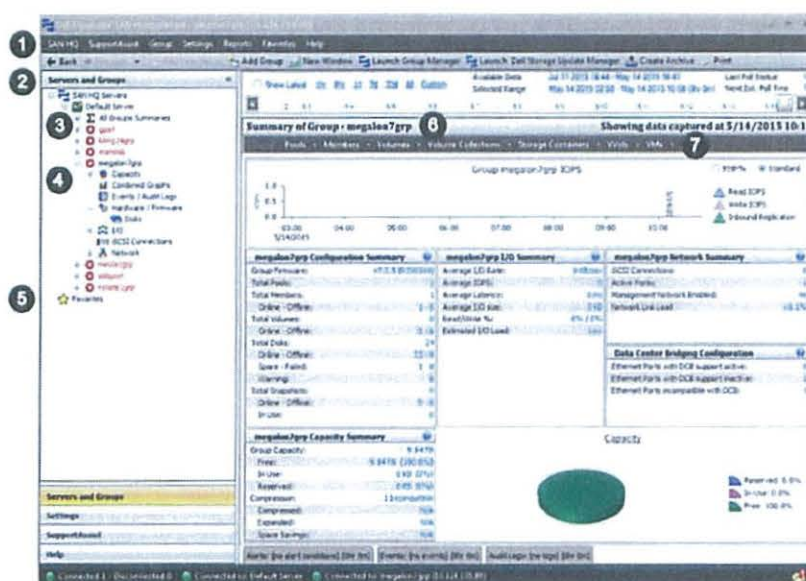


Figure 6. SAN HQ Client GUI Navigation

Callout 1— Menu Bar Items and Tool Bar Buttons

The menu bar contains the options listed in the following table.

Menu Item	Options
SAN HQ	<ul style="list-style-type: none"> Add New Group Add New Server Create Archive Open Archive Export All Group Data Exit
SupportAssist	<ul style="list-style-type: none"> Configuration Wizard Run Now

Menu Item	Options
	<ul style="list-style-type: none"> • SupportAssist Settings • Activity Log • Customer Support Cases • Decrypt Local Data Packages
Group	<ul style="list-style-type: none"> • Launch Group Manager • Export Group Data • Stop Monitoring • Start Monitoring • Increase Log File Size • Remove from Monitoring List • Hide Group Information
Settings	<ul style="list-style-type: none"> • General Settings • Email Settings • Group Settings • Hidden Group Settings • Favorite Settings • Server Settings • SNMP Notification Settings
Reports	<ul style="list-style-type: none"> • Configuration Report • Capacity Report • Thin-Provisioned Volumes Report • Replication Report • Replication Report Across Groups Report • Performance Report • Host Connections Report • Hardware and Firmware Report • Top 10 Report • Top 10 Report Across Groups Report • Alerts Report • Group Diagnostics Report • SyncRep Report • Snapshot Schedules Report • Volumes Performance Report • VVol Report • VVol Connections by VM Report
Favorites	<ul style="list-style-type: none"> • Add to Favorites • Manage Favorites • Make This Home Page

Menu Item	Options
	<ul style="list-style-type: none"> • Default Home Page
Help	<ul style="list-style-type: none"> • About • Navigation Help • User Guide • Release Notes • Check for Updates

Under the menu bar, the tool bar buttons perform the following actions:

- **Back or Forward** — Returns to a previously visited window or moves forward to a previously visited window. You can also click the down arrow next to the Forward button to display the navigation history.
- **Add New Server** — Adds an additional server to monitor groups on that server. Similar to selecting SAN HQ from the menu bar, then Add New Server.
- **Add Group** — Adds a new group to monitor. Similar to selecting SAN HQ from the menu bar, then Add New Group.
- **New Window** — Produces a new window displaying the current view. When you exit from the new window, the original window remains open.
- **Launch Group Manager** — When you select a group from the Servers and Groups tree, the Launch Group Manager button appears, letting you start the Group Manager GUI for the group. Similar to selecting Group from the menu bar, then Launch Group Manager.
- **Launch Dell Storage Update Manager** — Launches the Dell Storage Update Manager tool that analyzes your current Dell EqualLogic storage configuration and guides you through the PS and FS Series firmware update process.
- **Create Archive** — Saves group data to a compressed archive (.grpx) file. Similar to selecting SAN HQ from the menu bar, then Create Archive.
- **Print** — Prints the current window.

Callout 2 — Servers and Groups Tree

A single SAN HQ Client can monitor multiple servers. The Servers and Groups tree shows all servers that have been configured and their associated groups. For multiple servers, one server is designated as the default server and cannot be removed. Additional servers are secondary servers that can be added and removed.

Callout 3 — Summary Views

Summary information for all groups is available at the top of the Servers and Groups tree. This view presents comprehensive information, across all groups, allowing you to make quick comparisons and analysis of your infrastructure. Links are provided on the summary pages to take you to specific information for a group.

Callout 4 — Information Categories

Select the group name in the Servers and Groups tree to display a summary of capacity, status, I/O performance, and network performance for the group, pools, members, volumes, volume collections, and optionally, storage containers, VVoIs, and VMs.

You can obtain more detailed information by expanding the group in the Servers and Groups tree and selecting a subcategory: capacity, combined graphs, event/audit logs, hardware/firmware, I/O,

iSCSI connections, and network. You can further refine the information by expanding the tree. For example, to see data for all disks for a member, select **Hardware/Firmware → Disks**.

Callout 5 — Favorites

Lists views saved as favorites that you added from Favorites on the menu bar. Right-click a saved favorite to make it your home page, to delete it, or rename it.

Callout 6 — Window Title

You can identify the category and object for which the GUI is displaying data by examining the window title. In most cases, the title includes the group name, category, and object. For example: Capacity of All Pools on Group - group06.

Callout 7 — Context Link Bar Objects

Within each information category, you can view group-wide data (Group) or data that is restricted to a specific group object: Pools, Members, Volumes, Volume Collections, and optionally, Storage Containers, VVols, and VMs.

SAN Headquarters Settings

The **Settings** link below the Servers and Groups tree on the main page lets you navigate to the SAN Headquarters Settings page, from which you can view or modify the SAN HQ settings.

The SAN HQ settings are as follows:

- **General Settings** (displayed by default when you navigate to the SAN Headquarters Settings page):
 - GUI Appearance — Select the overall theme and choose graph colors.
 - Installation Settings — View the type of installation, the location of the installation directory and log file directory, and optionally change the log file directory.
 - Client Startup Settings — Determine whether SAN HQ checks that Microsoft firewall rules are enabled and that the proper rules allow TCP/IP communication to the local SAN HQ Server; Change the default time range for displayed data.
 - Tooltip Settings — Choose to display tooltip information for data points in graphs and in graph legends.
 - Chart Display Settings — Select Standard view, which shows all data points including spikes, or 95th percentile, which factors out the data spikes for a more accurate view of your environment.
 - Temperature Display Settings — Choose Fahrenheit or Celsius.
 - Alert Display Settings — Choose to hide or display disabled email alerts.
- **E-Mail Settings** — View and modify the settings for configured email notification of alerts for a group. Optionally, disable notification. From the Notifications tab, change the level of notification (informational, caution, warning, or critical) for which you will be notified. For applicable alerts, set threshold criteria for an alert.
- **Group Settings** — Enable or disable single sign-on, which lets you run Group Manager as a standalone application from the current domain account and computer, and modify the session timeout for single sign-on. View all groups monitored by the server and per group, launch the Dell Storage Update Manager, modify or delete single sign-on functionality, and change the amount of disk space used by the group for storing log data.
- **Hidden Group Settings** — View groups that SAN HQ is monitoring but are not displayed in the GUI. You can choose to set a group to be unhidden.
- **Favorite Settings** — Display all views that have been added to the favorites list, navigate to the view, or delete a view.
- **Server Settings** — View and modify the parameters used by the SAN HQ Server. This option is available only for a full client-server installation.
 - Startup Settings — Choose to start the Windows service used by SAN HQ using either the Local Service account or by providing credentials for a specific user account. (Requires administrative privileges.)
 - Connection Settings for Client — Change the communication settings for advanced features.
 - Server E-Mail Notification Frequency — Adjust the time that email notifications are sent for alerts that are active on the group.
 - PS Group Connectivity Test Setting — Before SAN HQ initiates a new cycle of data collection, it verifies the connection using ICMP ping requests. You can specify the ping timeout in seconds and the number of times to retry if the ping request fails.

- **Client Support Case Refresh Time** -- Update the refresh time interval for collecting customer support case data for SupportAssist.
- **Dell Storage Update Manager** -- Update the local copy of the Dell Storage Update Manager. **Last Updated** shows the most recently saved copy.
- **SNMP Notifications Settings** -- Configure SAN HQ to send SNMP notifications to an SNMP management console.

The **SupportAssist** link below the Servers and Groups tree on the main page lets you navigate to the SupportAssist Configuration Settings page, from which you can view and enable SupportAssist for your groups, view an activity log for groups monitored by SupportAssist, and view Dell Support customer cases created for your groups and reported back to SupportAssist. Use the navigation links in the upper-left pane to access these views.

The **Help** link shows the current versions of the SAN HQ Client and Server, links to the Dell EqualLogic support site, and provides the SAN HQ user guide and release notes PDF documentation from the software kit.

Date 01/21/16
 Quote # CTCQ15608
 Quoted By MRhodes

Current Technologies
 1423 Centre Circle
 Downers Grove, IL 60515
 630.388.0240
 fax: 630.388.0241
 currenttech.net



Quote | Order Form

Sold To:

Hoffman Estates, Village of
 Fred Besenhoffer
 1900 Hassell Road
 Hoffman Estates, IL 60169
 United States
 Phone: (847) 882-9100
 Fax: (847) 843-4889
 fred.besenhoffer@hoffmanestates.org

Ship To:

Hoffman Estates, Village of
 Fred Besenhoffer
 1900 Hassell Road
 Hoffman Estates, IL 60169
 United States
 Phone: (847) 882-9100
 Fax: (847) 843-4889
 fred.besenhoffer@hoffmanestates.org

1GB SAN Switches with 10GB Long Range Optics

Line #	Description	Qty	Unit Price	Ext. Price
1	Village Hall SAN - 37.8TB RAW Capacity, 27.6TB Approximate Usable Capacity using RAID 6			
2	Dell EqualLogic PS6610X, Mainstream Performance 10K SAS 2.5" Drives Dual Controllers, 10Gb, High Availability with Failover 42x 900GB 10K SAS 2.5" 37.8TB Capacity Static Rails for 4-Post Racks Power Supply Regulatory Label, 700W, AC Redundant Power Supplies, 2800W, AC Documentation and Shipping for 5U Arrays (2) C19 to C20, PDU Style, 16 AMP, Power Cord Dell Hardware Limited Warranty Extended Year Dell Hardware Limited Warranty Initial Year EqualLogic Advanced Software Warranty and Service, 7x24 Access, 3 Years ProSupport Plus: 7x24 HW/SW Tech Support and Assistance, 3 Years ProSupport Plus: Mission Critical 4-Hour 7x24 On-Site Service with Emergency Dispatch, 2 Years Extended ProSupport Plus: Mission Critical 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year	1	\$27,595.92	\$27,595.92
3	Dell Networking N3024, L3, 24x1GbE, 2xCombo, 2x10GbE SFP+ fixed ports, Stacking, IO to PSU airflow, 1x AC PSU Dell Hardware Limited Warranty Initial Year Dell Hardware Limited Warranty Extended Year(s) Lifetime Limited Hardware Warranty with Basic Hardware Service Next Business Day Parts Only on Your Network Switch Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, 2 Year Extended ProSupport: 7x24 HW / SW Tech Support and Assistance, 3 Year MISSION CRITICAL PACKAGE: Enhanced Services, 3 Year Power Cord, 125V, 15A, 10 Feet, NEMA 5-15/C13 Dell Networking, Transceiver, SFP+, 10GbE, LR, 1310nm Wavelength, 10km Reach	2	\$2,737.93	\$5,475.86

Line #	Description	Qty	Unit Price	Ext. Price
4				
5	Police Department SAN - 37.8TB RAW Capacity, 27.6TB Approximate Usable Capacity using RAID 6			
6	Dell EqualLogic PS6610X, Mainstream Performance 10K SAS 2.5" Drives	1	\$27,595.92	\$27,595.92
	Dual Controllers, 10Gb, High Availability with Failover 42x 900GB 10K SAS 2.5" 37.8TB Capacity Static Rails for 4-Post Racks Power Supply Regulatory Label, 700W, AC Redundant Power Supplies, 2800W, AC Documentation and Shipping for 5U Arrays (2) C19 to C20, PDU Style, 16 AMP, Power Cord Dell Hardware Limited Warranty Extended Year Dell Hardware Limited Warranty Initial Year EqualLogic Advanced Software Warranty and Service, 7x24 Access, 3 Years ProSupport Plus: 7x24 HW/SW Tech Support and Assistance, 3 Years ProSupport Plus: Mission Critical 4-Hour 7x24 On-Site Service with Emergency Dispatch, 2 Years Extended ProSupport Plus: Mission Critical 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year			
7	Dell Networking N3024, L3 ,24x1GbE, 2xCombo, 2x10GbE SFP+ fixed ports, Stacking, IO to PSU airflow, 1x AC PSU	2	\$2,737.93	\$5,475.86
	Dell Hardware Limited Warranty Initial Year Dell Hardware Limited Warranty Extended Year(s) Lifetime Limited Hardware Warranty with Basic Hardware Service Next Business Day Parts Only on Your Network Switch Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, 2 Year Extended ProSupport: 7x24 HW / SW Tech Support and Assistance, 3 Year MISSION CRITICAL PACKAGE: Enhanced Services, 3 Year Power Cord, 125V, 15A, 10 Feet, NEMA 5-15/C13 Dell Networking, Transceiver, SFP+, 10GbE, LR, 1310nm Wavelength, 10km Reach			
8				
9	Fixed Fee Labor	1	\$9,473.68	\$9,473.68
	Project Schedule / Work Plan Note - the work below will begin within 7 days of receipt of the equipment. Typical equipment lead time is 14 days or less. The project work will take place over the course of approximately 10-14 days. Labor - Deployment a. Technical and functional support during the implementation cycle through Final Acceptance and productive use of all system modules. This will include an on site technician certified by the manufacturer to assist during Acceptance Testing and/or on-call technical support. b. On-site services necessary to gather information related to setting up			

Line #	Description	Qty	Unit Price	Ext. Price
	<p>the new SAN system.</p> <p>c. Finalize the project timeline and implementation schedule.</p> <p>d. Install all the new hardware into the Village's existing rack system including all power connections, network connections and Ethernet configuration assistance from Village staff.</p> <p>e. Provide the Village with at least bi-weekly project status reports. These reports must include a detailed schedule of tasks to be completed in the next period, who is assigned to them (both Village and Vendor resources), what was completed in the prior period, and what delays, problems, or other issues might be outstanding. Also provide for an issues database reporting system in which Village staff can report problems that can be tracked and queried at any time as they are being addressed.</p> <p>f. Provide support and technicians for the migration of data from current local data store to the new SAN system as well as assist with repointing host to the new SAN migrated data.</p> <p>g. Diagrams, in Microsoft Visio version 2010 or 2013 format, of the proposed solution including connectivity diagrams included, as well as "asbuilts" showing the final connection layout of the system including connection points and any addressing that was done provided in digital format.</p> <p>h. All other related documentation pertaining to hardware, software, licensing and configurations etc. will be turned over to the Village.</p> <p>Labor - Training</p> <p>a. On Site technician training on the use of the system, including maintenance procedures, storage provisioning, host configuration requirements, health monitoring, performance monitoring and or industry best practices. Training provided for a minimum two persons to manage, maintain, and upgrade the proposed storage system. Training session up to 4 Hours.</p>			
			Total	\$75,617.24

Any lease payments shown are estimates only and final figures will be provided by third party lender subject to credit approval. The purchase of products and/or services from Current Technologies are subject to the standard terms and conditions located at the following URL: <http://www.currenttech.net/terms.pdf> By signing this Quote/Order Form you are agreeing that you have read and agreed to the terms and conditions.

All software renewals require prepayment. Hardware/Software orders over \$2,500 require 50% payment up front, 50% due within 15 days of receipt. Pricing valid for 30 days from date of quotation. Labor not included unless explicitly stated in writing.

Shipping/Handling & applicable sales tax are not included in this quote and will be Invoiced.

Quote # CTCQ15608

Agreed and Accepted:

Hoffman Estates, Village of	Date	PO #
-----------------------------	------	------

Ordering Instructions: Email to: orders@currenttech.net or Fax to: 630-388-0241

Date 01/21/16
 Quote # CTCQ15609
 Quoted By MRhodes

Current Technologies
 1423 Centre Circle
 Downers Grove, IL 60515
 630.388.0240
 fax: 630.388.0241
 currenttech.net



Quote | Order Form

Sold To:
 Hoffman Estates, Village of
 Fred Besenhoffer
 1900 Hassell Road
 Hoffman Estates, IL 60169
 United States
 Phone: (847) 882-9100
 Fax: (847) 843-4889
 fred.besenhoffer@hoffmanestates.org

Ship To:
 Hoffman Estates, Village of
 Fred Besenhoffer
 1900 Hassell Road
 Hoffman Estates, IL 60169
 United States
 Phone: (847) 882-9100
 Fax: (847) 843-4889
 fred.besenhoffer@hoffmanestates.org

10GB SAN Switches with 10GB Long Range Optics

Line #	Description	Qty	Unit Price	Ext. Price
1	Village Hall SAN - 37.8TB RAW Capacity, 27.6TB Approximate Usable Capacity using RAID 6			
2	Dell EqualLogic PS6610X, Mainstream Performance 10K SAS 2.5" Drives Dual Controllers, 10Gb, High Availability with Failover 42x 900GB 10K SAS 2.5" 37.8TB Capacity Static Rails for 4-Post Racks Power Supply Regulatory Label, 700W, AC Redundant Power Supplies, 2800W, AC Documentation and Shipping for 5U Arrays (2) C19 to C20, PDU Style, 16 AMP, Power Cord Dell Hardware Limited Warranty Extended Year Dell Hardware Limited Warranty Initial Year EqualLogic Advanced Software Warranty and Service, 7x24 Access, 3 Years ProSupport Plus: 7x24 HW/SW Tech Support and Assistance, 3 Years ProSupport Plus: Mission Critical 4-Hour 7x24 On-Site Service with Emergency Dispatch, 2 Years Extended ProSupport Plus: Mission Critical 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year	1	\$27,595.92	\$27,595.92
3	Dell Networking N4032, 24x 10GBASE-T Ports, 1x Modular Bay, 2x AC PSU, IO to PSU Airflow Dell Hardware Limited Warranty Initial Year Dell Hardware Limited Warranty Extended Year(s) Lifetime Limited Hardware Warranty with Basic Hardware Service Next Business Day Parts Only on Your Network Switch Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, 2 Year Extended ProSupport: 7x24 HW / SW Tech Support and Assistance, 3 Year MISSION CRITICAL PACKAGE: Enhanced Services, 3 Year Power Cord, 125V, 15A, 10 Feet, NEMA 5-15/C13 SFP+ 10GbE Module, 4 port, Hot Swappable, 4x SFP+ ports (optics or direct attach cables required)	2	\$7,470.80	\$14,941.60

Line #	Description	Qty	Unit Price	Ext. Price
4	Dell Networking, Transceiver, SFP+, 10GbE, LR, 1310nm Wavelength, 10km Reach			
5	Police Department SAN - 37.8TB RAW Capacity, 27.6TB Approximate Usable Capacity using RAID 6			
6	Dell EqualLogic PS6610X, Mainstream Performance 10K SAS 2.5" Drives	1	\$27,595.92	\$27,595.92
	Dual Controllers, 10Gb, High Availability with Failover 42x 900GB 10K SAS 2.5" 37.8TB Capacity Static Rails for 4-Post Racks Power Supply Regulatory Label, 700W, AC Redundant Power Supplies, 2800W, AC Documentation and Shipping for 5U Arrays (2) C19 to C20, PDU Style, 16 AMP, Power Cord Dell Hardware Limited Warranty Extended Year Dell Hardware Limited Warranty Initial Year EqualLogic Advanced Software Warranty and Service, 7x24 Access, 3 Years ProSupport Plus: 7x24 HW/SW Tech Support and Assistance, 3 Years ProSupport Plus: Mission Critical 4-Hour 7x24 On-Site Service with Emergency Dispatch, 2 Years Extended ProSupport Plus: Mission Critical 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year			
7	Dell Networking N4032, 24x 10GBASE-T Ports, 1x Modular Bay, 2x AC PSU, IO to PSU Airflow	2	\$7,470.80	\$14,941.60
	Dell Hardware Limited Warranty Initial Year Dell Hardware Limited Warranty Extended Year(s) Lifetime Limited Hardware Warranty with Basic Hardware Service Next Business Day Parts Only on Your Network Switch Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, Initial Year Mission Critical Package: 4-Hour 7x24 On-Site Service with Emergency Dispatch, 2 Year Extended ProSupport: 7x24 HW / SW Tech Support and Assistance, 3 Year MISSION CRITICAL PACKAGE: Enhanced Services, 3 Year Power Cord, 125V, 15A, 10 Feet, NEMA 5-15/C13 SFP+ 10GbE Module, 4 port, Hot Swappable, 4x SFP+ ports (optics or direct attach cables required) Dell Networking, Transceiver, SFP+, 10GbE, LR, 1310nm Wavelength, 10km Reach			
8				
9	Fixed Fee Labor	1	\$9,473.68	\$9,473.68
	Project Schedule / Work Plan			
	Note - the work below will begin within 7 days of receipt of the equipment. Typical equipment lead time is 14 days or less. The project work will take place over the course of approximately 10-14 days.			
	Labor - Deployment			
	a. Technical and functional support during the implementation cycle through Final Acceptance and productive use of all system modules. This			

Line #	Description	Qty	Unit Price	Ext. Price
	<p>will include an on site technician certified by the manufacturer to assist during Acceptance Testing and/or on-call technical support.</p> <p>b. On-site services necessary to gather information related to setting up the new SAN system.</p> <p>c. Finalize the project timeline and implementation schedule.</p> <p>d. Install all the new hardware into the Village's existing rack system including all power connections, network connections and Ethernet configuration assistance from Village staff.</p> <p>e. Provide the Village with at least bi-weekly project status reports. These reports must include a detailed schedule of tasks to be completed in the next period, who is assigned to them (both Village and Vendor resources), what was completed in the prior period, and what delays, problems, or other issues might be outstanding. Also provide for an issues database reporting system in which Village staff can report problems that can be tracked and queried at any time as they are being addressed.</p> <p>f. Provide support and technicians for the migration of data from current local data store to the new SAN system as well as assist with repointing host to the new SAN migrated data.</p> <p>g. Diagrams, in Microsoft Visio version 2010 or 2013 format, of the proposed solution including connectivity diagrams included, as well as "asbuilts" showing the final connection layout of the system including connection points and any addressing that was done provided in digital format.</p> <p>h. All other related documentation pertaining to hardware, software, licensing and configurations etc. will be turned over to the Village.</p> <p>Labor - Training</p> <p>a. On Site technician training on the use of the system, including maintenance procedures, storage provisioning, host configuration requirements, health monitoring, performance monitoring and or industry best practices. Training provided for a minimum two persons to manage, maintain, and upgrade the proposed storage system. Training session up to 4 Hours.</p>			
			Total	\$94,548.72

Any lease payments shown are estimates only and final figures will be provided by third party lender subject to credit approval. The purchase of products and/or services from Current Technologies are subject to the standard terms and conditions located at the following URL: <http://www.currenttech.net/terms.pdf> By signing this Quote/Order Form you are agreeing that you have read and agreed to the terms and conditions.

All software renewals require prepayment. Hardware/Software orders over \$2,500 require 50% payment up front, 50% due within 15 days of receipt. Pricing valid for 30 days from date of quotation. Labor not included unless explicitly stated in writing.

Shipping/Handling & applicable sales tax are not included in this quote and will be Invoiced.

Quote # CTCQ15609

Agreed and Accepted:

Hoffman Estates, Village of

Date

PO #

Ordering Instructions: Email to: orders@currenttech.net or Fax to: 630-388-0241

General Vendor Information



Current Technologies Corporation (CTC) is a thirty person independent information technology, systems integration and consulting firm with our office based in Downers Grove, IL. CTC was incorporated in Illinois on February 28th, 1997 through the strategic combination of two independent firms with a combined experience of over fifty years in information systems and technologies.

CTC takes great pride in its independence so that the firm can design the best overall solution for its clients based on their particular needs and objectives. CTC provides services that encompass the entire spectrum of Information Technology from system design through implementation and integration. Additionally, CTC provides network management, administration, remote monitoring and support services for multiple platforms and environments.

Current Technologies is comprised of two divisions, the **IT Solutions Group** and the **Custom Safety Group**. Combined, these groups utilize a virtual team concept to perform the following services for our clients:

- **Information Technology Strategic Plans**
- **Network Design and Needs Analysis**
- **Infrastructure Design and Evaluation**
- **WAN/LAN Design and Connectivity Plans**
- **Emergency Disaster Recovery Plans**
- **Network Security Design**
- **IT Implementation Plan Project Management**
- **System Integration and Conversion Plans**
- **Virtual Private Network (VPN) Design**
- **Client / Server Network Design**

The Custom Safety Group is composed of highly trained consultants that perform network technical services for our clients including, but not limited to, the following examples:

- **Network Implementation**
- **On-Site Network Management and Administration**
- **IT Staff Augmentation**
- **System Performance Monitoring**
- **LAN/WAN/Connectivity Implementation and Monitoring**
- **Email Content Filtering Implementation and Administration**
- **Video Surveillance Solutions**
- **Point-to-Point and Point-to-Multipoint Wireless Solutions**



General Vendor Information

The Solutions Group and the Custom Safety Group boast a wide range of expertise to service the broad requirements of today's network environments and platforms. Certifications achieved by our staff include:

- Cisco Certified Network Professional (CCNP)
- Cisco Certified Network Associate (CCNA)
- Cisco Certified Internetworking Engineer (CCIE)
- Microsoft Certified System Engineer (MCSE)
- Microsoft Certified Professional/ Exchange (MCP)
- VMware Certified Professional (VCP)
- Certified Novell Engineer (CNE)
- Citrix Certified Administrator (CCA)
- Milestone Advanced Certification
- Exacq Certified Technician

As our name implies, Current Technologies Corporation works in conjunction with its business partners in the research, development, and integration of the newest technologies used for today's networks and business solutions to enhance our clients' networking capabilities including, but not limited to, the following:

- Wireless Networking
- Voice Over IP Network Solutions (VOIP)
- Virtualization
- WAN Bandwidth Optimization

CTC is on the forefront of Web and Internet Based solutions for enhancing our clients' remote access networking capabilities through the design, implementation, and management of the following technologies:

- Virtual Private Networks (VPN and SSL VPN)
- SharePoint Collaboration
- Mobile Devices



General Vendor Information

Current Technologies Corporation combines “Best of Breed” companies and associated technologies to provide the full range of Information Technology services to our clients. From simple network LANs to custom design-build integrations and WANs, CTC provides the complete services required for today’s business Information Technology solutions so that our clients can enhance or maintain their competitive edge.

Network, Server and Desktop Administration

CTC qualifications and experience include:

- Network Analysis & Design.
- Configuration changes and configuration control and management.
- Installation of patches and upgrades using manual and automated methods.
- Maintenance of LAN and WAN networks.
- Setup of manual and/or automated alerting to designated municipal contacts.
- Software vendor research, analysis and selection.
- Providing supporting hardware and software specifications and recommendations.
- Preparation of budget figures for implementation of a particular system and for comparison / cost of ownership studies.
- Verifying system integration with existing hardware and software systems.
- Technical implementation of software systems.
- Ongoing support of software systems.
- Acting as a support liaison or to facilitate discussions with software vendors to provide bug fixes, or additional feature requests for the client.
- Deploying software systems in desktop as well as thin client, terminal server environments.

Network Security

CTC qualifications and experience include:

- Network security analysis.
- Maintenance of virus and spyware detection software on file servers, email servers, & PC’s.
- Enabling secure remote access for authorized remote users.
- Maintenance of Internet connection and firewall.
- Installation, configuration and maintenance of Internet content filtering & reporting systems.
- Backup & disaster recovery solutions design, implementation and testing.



General Vendor Information

Reporting

CTC qualifications and experience include:

- Monitoring status of network services.
- Prepare and review status reports with Library staff.
- Detailed reports outlining work performed, network availability, help desk ticket summary, security issues and concerns, and planning.
- Review meetings to discuss service delivery and planning.

Strategic Planning

CTC qualifications and experience include:

- Engineering, planning, and design services for system enhancements, new installations or upgrades of new or existing systems.
- Server Migration and Upgrade planning.
- Virtualization strategy planning.
- Backup and Disaster Recovery planning.
- Desktop Operating System and Application upgrade and rollout planning.
- Provide technical leadership for server technology issues.
- Technology lifecycle planning assistance to ensure proper budget is allocated for future equipment replacement and technology needs.

On-Site Project Manager

CTC qualifications and experience include:

- Hands on Technical Project Management expertise provided by Senior Consultant with onsite weekly presence.
- Senior Consultant / Project Manager serves as principal point of contact to the Library.
- Project Management Office of Current Technologies is headed by VP of IT Services holding PMP Project Management certification and Master of Science in Project Management.



General Vendor Information

Document Imaging/ Management systems

CTC qualifications and experience include:

- Document Imaging/Management vendor research, analysis and selection.
- Providing supporting hardware and software specifications and recommendations.
- Preparation of budget figures for implementation of a particular system and for comparison / cost of ownership studies.
- Verifying system integration with existing hardware and software systems.
- Technical implementation of Document Imaging systems.
- Ongoing support of Document Imaging systems.
- Acting as a support liaison or to facilitate discussions with software vendors to provide bug fixes, or additional feature requests for the client.

Network infrastructure design and implementation including LANs and WANs

CTC qualifications and experience include:

- Network Analysis and Design.
- Implementation, migration, and support of Microsoft and Novell server environments.
- Cisco Certified CCIE on staff for network design, troubleshooting, and planning.
- CTC is a Cisco Certified Partner.
- Installation, mapping and testing of network cabling.
- Installation, configuration, and tuning of wireless network links.
- Implementation, upgrade, troubleshooting, and replacement of network switching equipment.
- Installation and configuration of routers for leased line point to point connectivity.
- Installation and configuration of firewalls for network security, Virtual Private Network (VPN) links to remote sites, and remote connectivity for workers.
- Server Room design and analysis including power, backup power, and cooling requirements.

Surveillance camera hardware and video management software (VMS)

CTC qualifications and experience include:

- VMS vendor research, analysis and selection.
- Providing supporting hardware and software specifications and recommendations.
- Preparation of budget figures for implementation of a particular system and for comparison / cost of ownership studies.
- Verifying system integration with existing hardware and software systems.
- Technical implementation of VMS systems.
- Ongoing support of VMS systems.
- Acting as a support liaison or to facilitate discussions with software vendors to provide bug fixes, or additional feature requests for the client.
- Specific system experience includes: Exacq and Milestone Systems.

Project Staff & Key Project Staff Background



Virtual CIO

Summary of Experience

Leads the IT Consulting Services group consisting of over a dozen professionals in the Chicago metropolitan area. Over the past ten years, he has served in the capacity of Senior Project Manager and IT Consulting Services Manager at Current Technologies.

During his tenure with the firm he has been involved in the design, planning, and supervision of major technology infrastructure initiatives for clients across a variety of industries including financial services, manufacturing, government, education, and healthcare.

Representative Experience

- ❖ Extensive management as well as technical expertise in a wide variety of client environments.
- ❖ Needs analysis and planning
 - Manages and performs technical assessments of existing IT environments and provides findings and recommendations covering infrastructure areas such as servers, security, network and communications.
- ❖ System evaluation and selection
 - Involved in numerous software and system selection engagements in various industries including manufacturing, government, and education. Experience includes baseline analysis of existing systems, determination of functional and technical requirements, RFP creation, vendor interviews and analysis, and contract negotiation.
- ❖ Infrastructure virtualization
 - Performed virtualization assessments and virtual infrastructure planning, design, and implementation management of virtual infrastructure projects. Focuses includes server consolidation, high availability, and disaster recovery.

Professional Affiliations

- ❖ Project Management Institute, Chicagoland Chapter
- ❖ MSP Alliance

Project Staff & Key Project Staff Background



Professional & Technical Certifications

- ❖ Project Management Professional (PMP)
- ❖ ITIL Foundation v3
- ❖ VMware Certified Professional (VCP)
- ❖ Microsoft Certified IT Professional (MCITP)

Education

- ❖ Keller Graduate School of Management, Master of Project Management
- ❖ DeVry Institute of Technology, Bachelor of Science in Telecommunications Management

Project Staff & Key Project Staff Background



Project Manager

Summary of Experience

Manages the IT Consulting Services team consisting of field engineers and personnel providing remote technical support services in the Chicago metropolitan area. During the past six years, has served in the capacity of Senior Support Engineer and IT Consulting Services Manager.

During tenure with the firm he has been involved in the development, implementation and management of the technical field and remote support services provided by Current Technologies for clients across a variety of industries including government, financial services, manufacturing, education, and healthcare.

Representative Experience

- ❖ Extensive management and technical expertise in a wide variety of technologies and client environments.
- ❖ Broad background in various technologies ranging from local and wide area networks, mobile and telecommunications.

- ❖ Project Management
 - Financial, time and quality management of infrastructure implementations and upgrades of client networks. Ensures projects are completed within budget and time requirements while ensuring technical capabilities are implemented according to design specifications.

- ❖ Technical Services
 - Integrally involved in the delivery of technical services to clients via onsite and remote support services. Ensuring appropriate technical services are provided in a timely and efficient manor with a commitment to excellence.

- ❖ Network Monitoring
 - Remote 24x7 monitoring of client networks to ensure proper operation. Responds to critical and non-critical issues to ensure prompt resolution.

Project Staff & Key Project Staff Background



Technical Certifications

- ❖ Microsoft Windows 7 (MCTS)
- ❖ Symantec Technical Specialist – Backup Exec 2012
- ❖ VMware Technical Sales Professional
- ❖ IBM Certified System Administrator – Lotus Notes and Domino

Education

- ❖ DeVry University, Bachelor of Science in Telecommunications Management
- ❖ DeVry University, Associate of Applied Sciences in Electronics

Product and Technical Training

- ❖ Microsoft
- ❖ VMware
- ❖ Dell
- ❖ Barracuda
- ❖ Symantec

Project Staff & Key Project Staff Background



Senior IT Consultant / Project Manager

Summary of Experience

Extensive network design and installation experience including server and desktop infrastructure, structured cabling, wireless, network security, switching and routing.. Successfully implemented and maintained Cisco, Dell and HP Network equipment including switches, routers, firewalls, and wireless devices in diverse customer environments. Setup extensive network and bandwidth monitoring using industry leading monitoring products. Directed and performed the installation and support of large Microsoft Windows Active Directory networks. Effectively designed and deployed terminal server solutions to overcome bandwidth usage, or application deployment obstacles.

During his tenure with the firm this consultant has been involved in the design, planning, implementation and supervision of major technology infrastructure initiatives for clients across a variety of industries including financial services, manufacturing, government, education, and healthcare.

Representative Experience

This consultant has extensive technical expertise in a wide variety of client environments.

❖ Northwest Suburban Municipal Clients

- Perform project implementations and day to day support activities for all departments. Researched, recommended and implemented security solutions for web filtering and email security. Provide long range technology lifecycle planning and budgeting with regard to software and hardware enhancements and replacement to ensure a stable environment. Performed project management of new implementations and lead technical staff assigned to account to ensure customer satisfaction. Responsible for system uptime, monitoring usage and bandwidth of internet, scheduling and implementation of updates, patches and fixes to the OS and Applications. Monitoring and verifying successful backups, and the coordination of offsite storage for disaster recovery. Involvement in selection process and implementation of new systems such as financial software and municipal management software.

❖ Large Privately Held Grain Broker

- For over two years reported directly to CIO, and coordinated all activities within the organization's IT department. Responsible for onsite and remote system monitoring of over 20 NT Servers and several UNIX servers on a daily basis, performing all reporting functions and delivering key information to the CIO. Scheduled all backups, verified and certified operations of backup servers and software, and coordinated all offsite procedures. Scheduled, coordinated, and performed all OS and Application upgrades and patches on a regular basis, keeping impeccable logs of service on each server. Performed all security evaluations on a regular basis, and scheduled any needed fixes on the firewall as priority allowed.

Project Staff & Key Project Staff Background



Upon completion of assignment (2 Years) received high recommendations from CIO, as a well-regarded team player whose track record showed zero unplanned downtime of servers in a 2 year period.

❖ Large Commercial Builder

- The client has contracted CTC to perform all duties of System Administration, and network planning on their behalf. Responsible for System Uptime, monitoring usage and bandwidth of internet, scheduling and implementation of updates, patches and fixes to the OS and Applications. Monitoring and verifying successful backups, and the coordination of offsite storage. Implemented a Citrix Nfuse solution provide connectivity to the trailers of the jobsites via a telephone connection. Manage the IIS server that Nfuse runs on, and tune and tweak performance on a ongoing basis.

Certifications/Achievements

- ❖ MCSE - Microsoft Certified Systems Engineer
- ❖ CCNA - Cisco Certified Network Associate
- ❖ MCPS - Microsoft Certified Product Specialist
- ❖ Citrix Certified Metaframe Administrator

Specialties

- ❖ Cisco Routers, Switches, & Firewalls
- ❖ Microsoft Windows Server & Exchange Server
- ❖ Symantec Backup Exec
- ❖ VMWare Infrastructure Installations
- ❖ Disaster recovery Center installations
- ❖ Websense Content Management
- ❖ Barracuda Web Filter, Spam Firewall, and Message Archiver
- ❖ All Aspects of Wide area networking
- ❖ Network Monitoring and Reporting Tools

Product & Technology Training

- ❖ Microsoft
- ❖ Cisco
- ❖ VMware
- ❖ HP
- ❖ Barracuda
- ❖ Citrix
- ❖ Vizioncore

FIRM NAME: Current Technologies

REFERENCES

NOTE: Firm shall provide as many references as possible for work/equipment **IDENTICAL** to that which has been proposed within this proposal.

MANDATORY INFORMATION

BUSINESS: Village of Hinsdale
ADDRESS: 19 East Chicago Avenue, Hinsdale, IL 60521
CONTACT PERSON: Amy Pisciotto
PHONE NUMBER: 630-789-7026
APPROXIMATE DATE: April, 2014

BUSINESS: Kendall County
ADDRESS: 811 West John Street, Yorkville, IL 60560
CONTACT PERSON: Darryl Kollins
PHONE NUMBER: 630-553-8888
APPROXIMATE DATE: Ongoing – September, 2015; March, 2015; September, 2014; March, 2014; February, 2013; October, 2012

BUSINESS: Village of Minooka
ADDRESS: 121 East McEvilly Road, Minooka, IL 60447
CONTACT PERSON: John Harrington
PHONENUMBER: 815-828-3175
APPROXIMATE DATE: November, 2014; August, 2013

BUSINESS: Marmion Academy
ADDRESS: 1000 Butterfield Road, Aurora, IL 60502
CONTACT PERSON: Dr. Victor Pinks
PHONE NUMBER: 630-897-6936
APPROXIMATE DATE: August, 2013

FIRM NAME: Current Technologies

REFERENCES

NOTE: Firm shall provide as many references as possible for work/equipment **IDENTICAL** to that which has been proposed within this proposal.

MANDATORY INFORMATION

BUSINESS: Village of Hinsdale
ADDRESS: 19 East Chicago Avenue, Hinsdale, IL 60521
CONTACT PERSON: Amy Pisciotto
PHONE NUMBER: 630-789-7026
APPROXIMATE DATE: April, 2014

BUSINESS: Kendall County
ADDRESS: 811 West John Street, Yorkville, IL 60560
CONTACT PERSON: Darryl Kollins
PHONE NUMBER: 630-553-8888
APPROXIMATE DATE: Ongoing – September, 2015; March, 2015; September, 2014; March, 2014; February, 2013; October, 2012

BUSINESS: Village of Minooka
ADDRESS: 121 East McEvilly Road, Minooka, IL 60447
CONTACT PERSON: John Harrington
PHONENUMBER: 815-828-3175
APPROXIMATE DATE: November, 2014; August, 2013

BUSINESS: Marmion Academy
ADDRESS: 1000 Butterfield Road, Aurora, IL 60502
CONTACT PERSON: Dr. Victor Pinks
PHONE NUMBER: 630-897-6936
APPROXIMATE DATE: August, 2013

Maintaining All Records and Documents

Consultant agrees to maintain all records and documents for projects of the Village in compliance with the Freedom of Information Act, 5 ILCS 140/1 *et seq.* In addition, Consultant shall produce records which are responsive to a request received by the Village under the Freedom of Information Act so that the Village may provide records to those requesting them within the time frames required. If additional time is necessary to compile records in response to a request, then Consultant shall so notify the Village and if possible, the Village shall request an extension so as to comply with the Act. In the event that the Village is found to have not complied with the Freedom of Information Act due to Consultant's failure to produce documents or otherwise appropriately respond to a request under the Act, then Consultant shall indemnify and hold the Village harmless, and pay all amounts determined to be due including but not limited to fines, costs, attorney's fees and penalties.

"Prevailing rates of wages are revised by the Illinois Department of Labor and are available on the Department's official website."

Return with Proposal

Substance Abuse

SUBSTANCE ABUSE PREVENTION PROGRAM

CERTIFICATE

The undersigned, upon being first duly sworn, hereby certifies to the (Client) Village of Hoffman Estates that Current Technologies Corp. (Contractor) has in place a written Substance Abuse Prevention Program that meets or exceeds the requirements of the State of Illinois P.A. 095-0635, or has a collective bargaining agreement in effect dealing with the subject matter of P.A. 095-0635. The Contractor and Subcontractors will file a copy of the Substance Abuse Prevention Program, or collective bargaining agreement, with the Client prior to any work being conducted on the project.

By: [Signature]
(Name of Contractor)

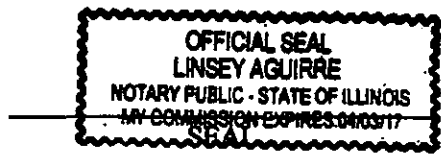
President
(Title)

Subscribed and sworn to before me

this 15th day of December, 2015

My Commission Expires: 4/3/17

[Signature]
Notary Public



Return with Proposal



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
3/5/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Assurance Agency, Ltd. One Century Centre 1750 E. Golf Road Schaumburg IL 60173-	CONTACT NAME: Specialty Commercial PHONE (A/C No. Ext): (847) 797-5700 FAX (A/C No.): 847-440-9133 EMAIL: spacality@assuranceagency.com
	INSURER(S) AFFORDING COVERAGE
INSURED CURRTEC-01 Current Technologies Corporation 1423 Centre Circle Downers Grove IL 60515	INSURER A: St. Paul Travelers 25674
	INSURER B: Travelers 25674
	INSURER C:
	INSURER D:
	INSURER E:
	INSURER F:

COVERAGES

CERTIFICATE NUMBER: 90167168

REVISION NUMBER:

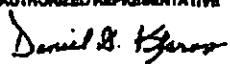
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

PROD LTR	TYPE OF INSURANCE	ADDITIONAL INSURER (N/A)	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC		ZPL15N407841415	3/8/2015	3/8/2016	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (EA occurrence) \$300,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS		BA0D27858713TEC	3/8/2015	3/8/2016	COMBINED SINGLE LIMIT (EA accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000		ZLP15N407861415	3/8/2015	3/8/2016	EACH OCCURRENCE \$2,000,000 AGGREGATE \$2,000,000 \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	HKUB0D20248A14	3/8/2015	3/8/2016	WC STATUTORY LIMITS <input type="checkbox"/> OTHER <input type="checkbox"/> E.L. EACH ACCIDENT \$500,000 E.L. DISEASE - EA EMPLOYEE \$500,000 E.L. DISEASE - POLICY LIMIT \$500,000
B	CRIME Errors & Omissions		ZPL15N408391415	3/8/2015	3/8/2016	\$10,000 \$1,000 \$1,000,000 Agg. \$1,000,000 Occur.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Workers Compensation and Employers' Liability: Any Proprietor/Partner/Executive Officer/Member, as listed on the policy, are excluded: Steve Daugherty Kurt Griesheim Proof of Insurance Only.

CERTIFICATE HOLDER**CANCELLATION**

Current Technologies Corporation 1423 Centre Circle Downers Grove IL 60515	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
--	---

© 1988-2010 ACORD CORPORATION. All rights reserved.



HOFFMAN ESTATES

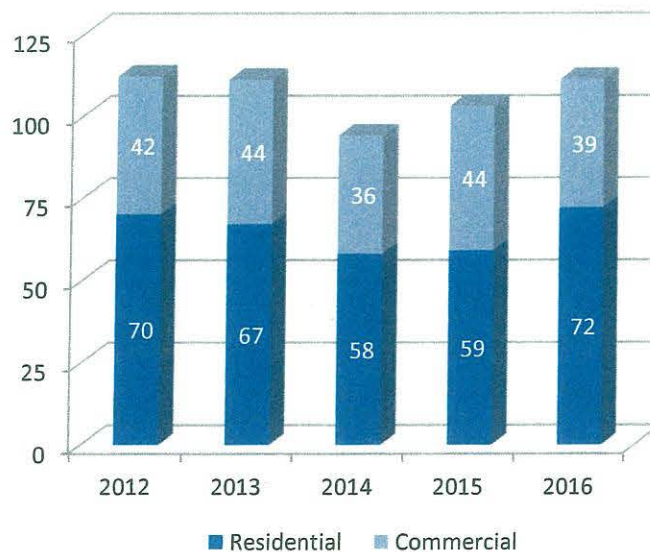
GROWING TO GREATNESS

DEPARTMENT OF FINANCE MONTHLY REPORT JANUARY 2016

Water Billing

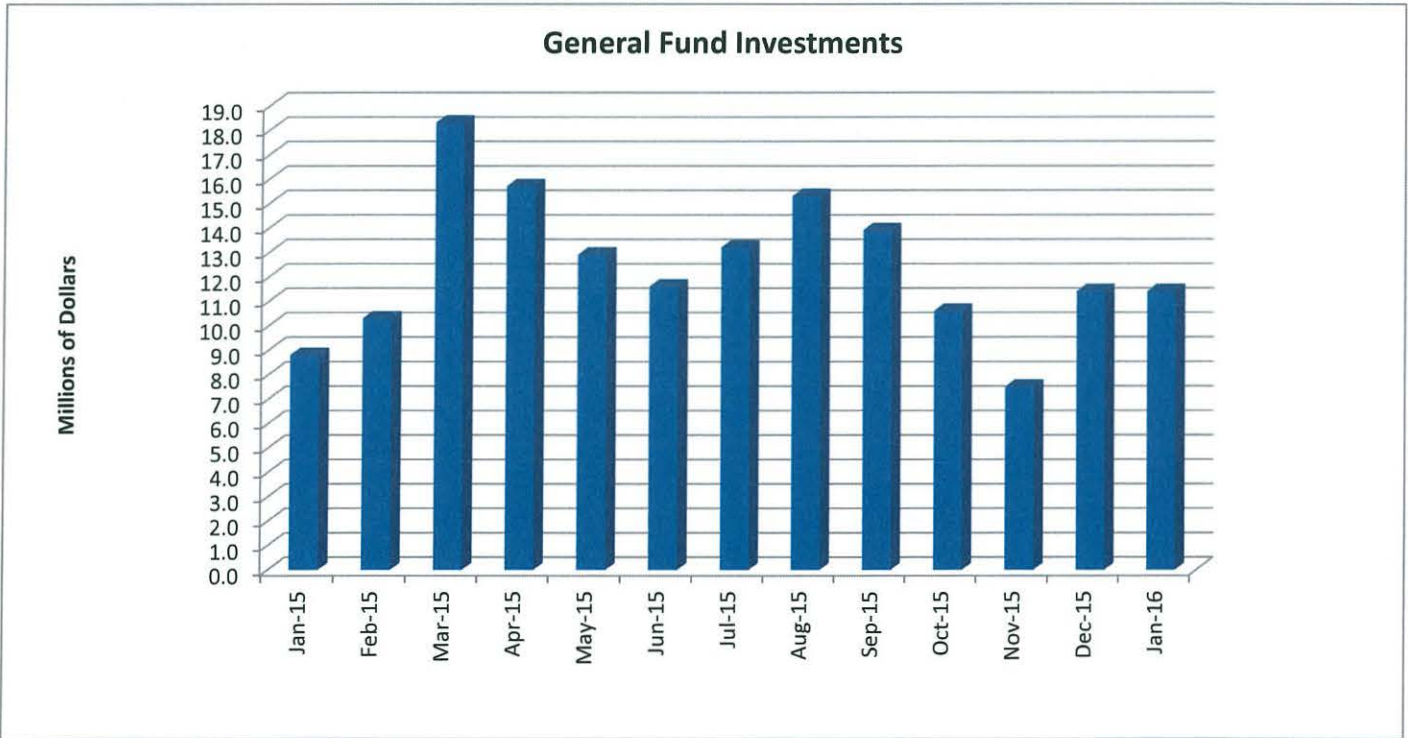
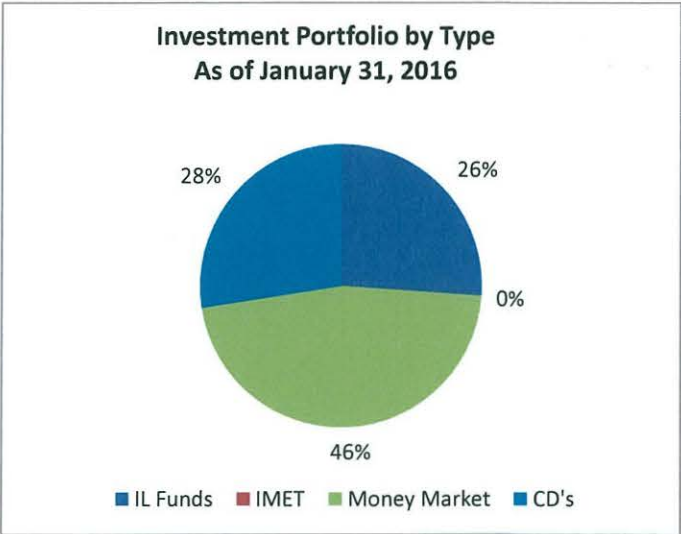
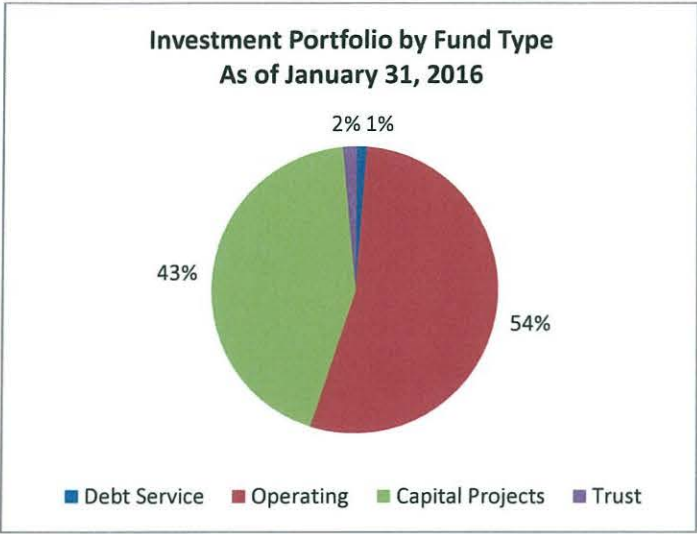
A total of 14,599 residential water bills were mailed on January 1st for November's water consumption. Average consumption was 4,916 gallons, resulting in an average residential water bill of \$57.39. Total consumption for all customers was 111 million gallons, with 72 million gallons attributable to residential consumption. When compared to the January 2015 billing, residential consumption increased by 22.0%.

**Total Water Consumption
Month of January**



Village Investments

As of January 31, 2016, the Village's investment portfolio (not including pension trust funds) totaled \$29.9 million. Of this amount, \$16.1 million pertained to the various operating funds. As can be seen in the following graphs, the remaining \$13.8 million is related to debt service, capital projects and trust funds.



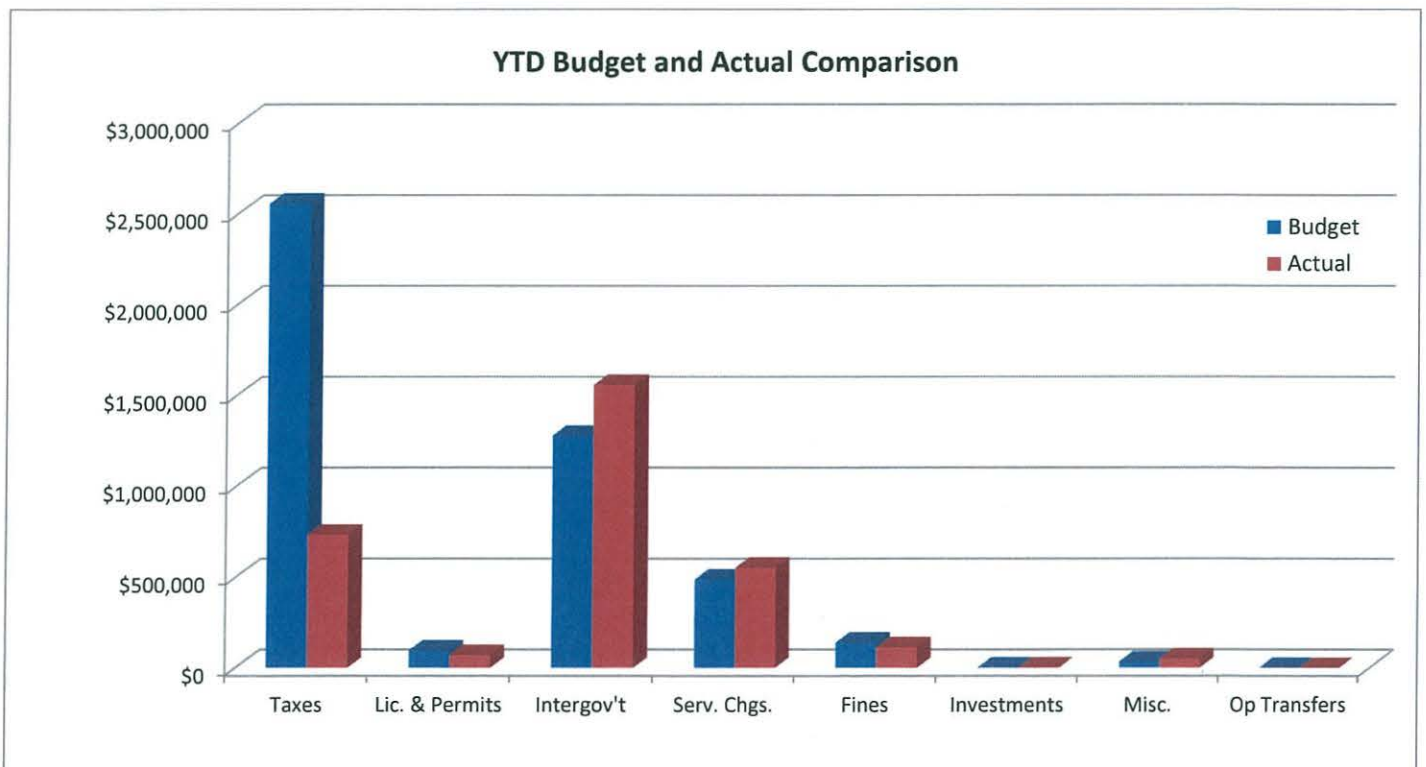
Operating Funds

General Fund

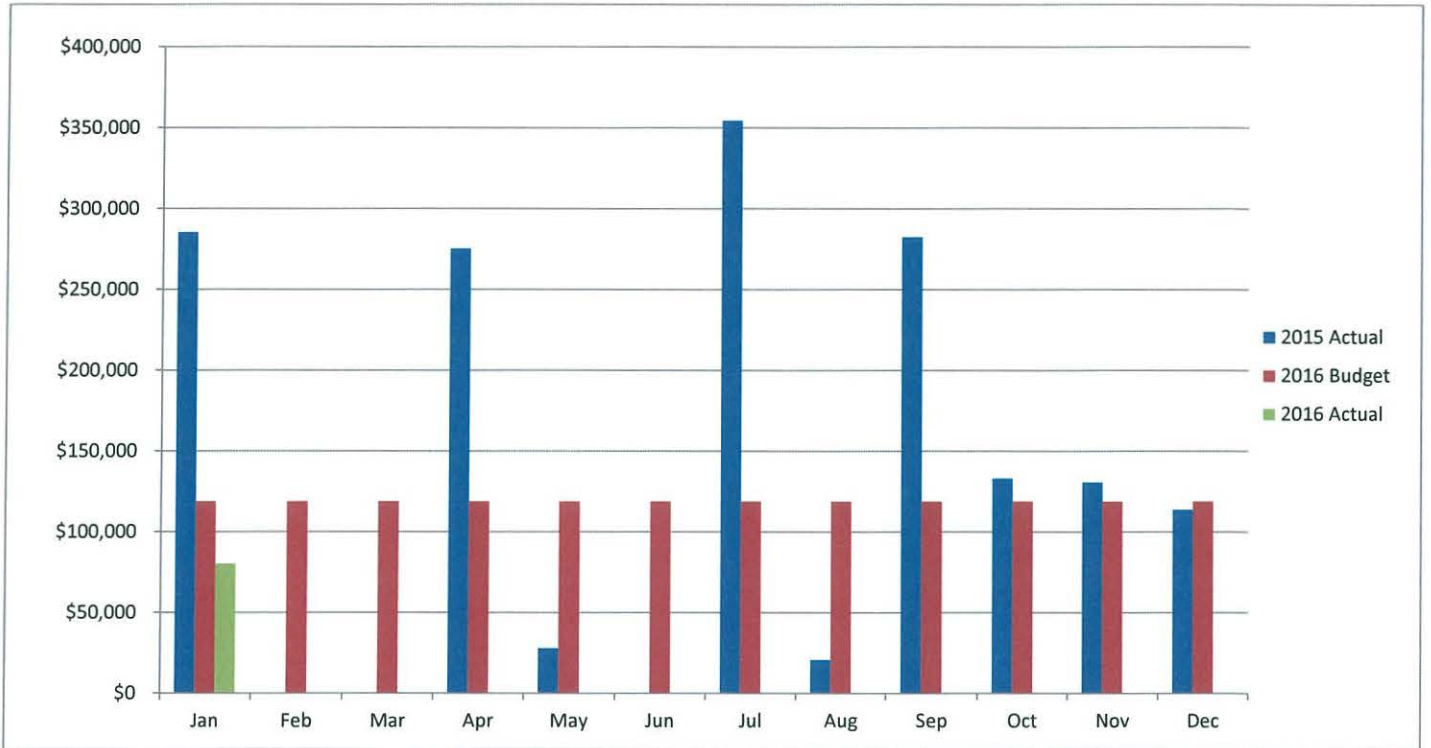
For the month of January, General Fund revenues totaled \$3,079,125 and expenditures totaled \$3,173,385 resulting in a deficit of \$94,260.

Revenues: January year-to-date figures are detailed in the table below. Operating transfers do not occur until the underlying expense is realized. Property taxes are due in March and August every year. Most miscellaneous revenues are not received on a monthly basis.

REVENUES	YEAR-TO-DATE	YEAR-TO-DATE	VARIANCE
	BUDGET	ACTUAL	
Taxes	\$ 2,553,196	\$ 732,970	-71.3%
Licenses & Permits	95,083	71,177	-25.1%
Intergovernmental	1,275,657	1,556,478	22.0%
Charges for Services	486,200	551,805	13.5%
Fines & Forfeits	139,417	113,441	-18.6%
Investments	2,500	2,311	-7.6%
Miscellaneous	33,430	50,943	52.4%
Operating Transfers	-	-	0.0%
TOTAL	\$ 4,585,483	\$ 3,079,125	-32.9%

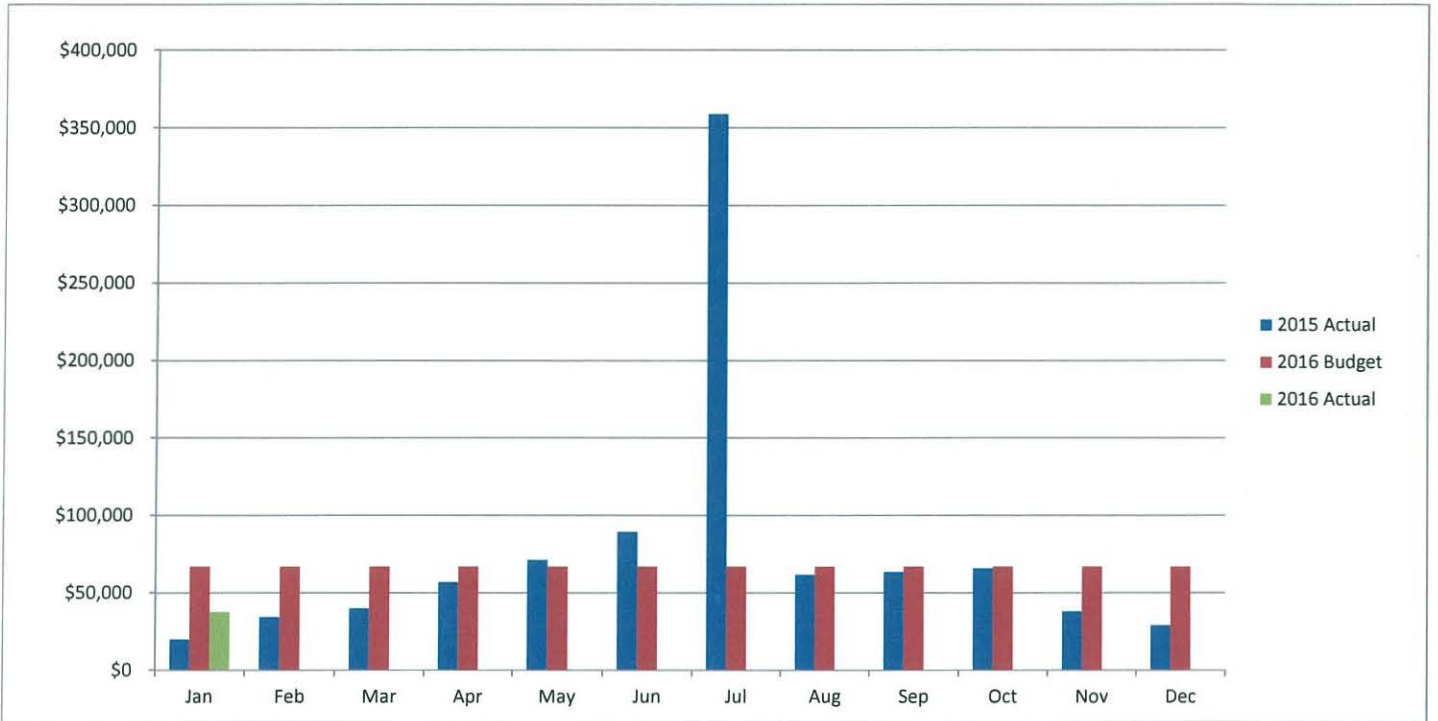


Hotel Tax



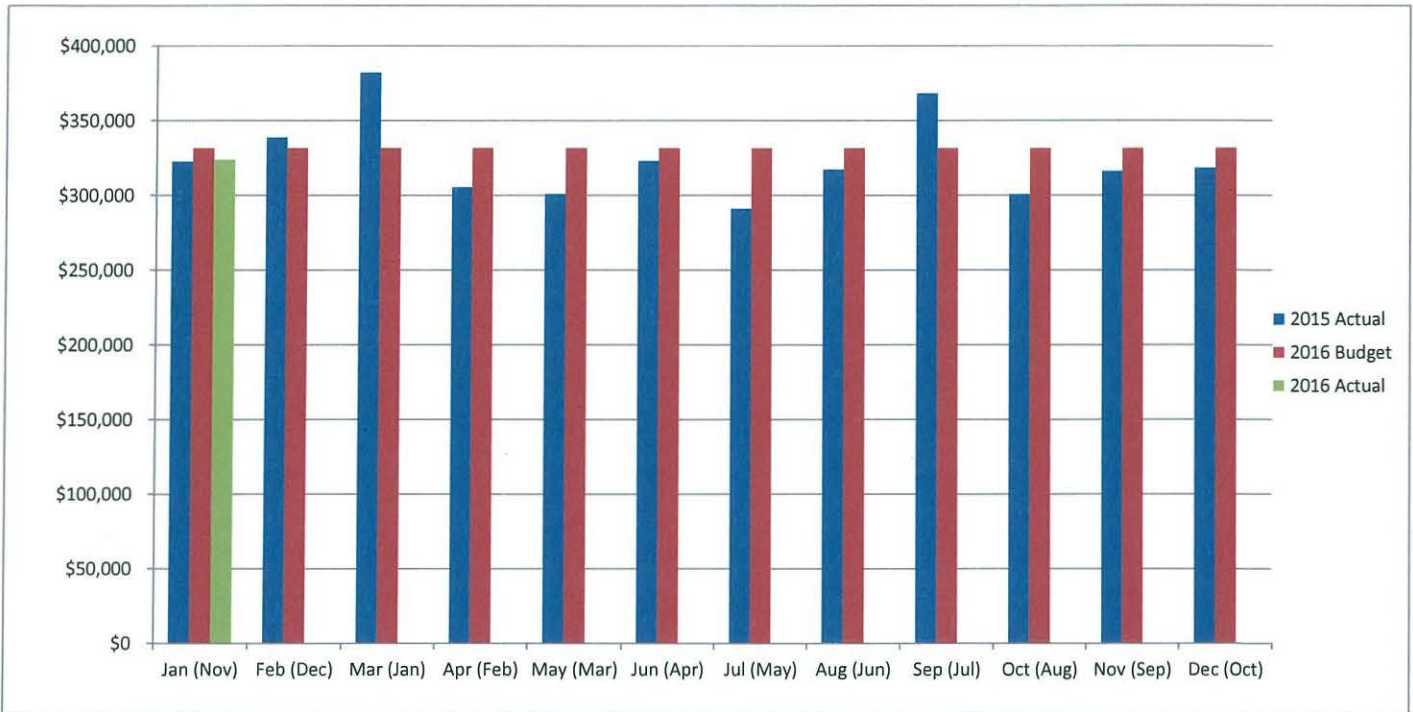
<u>Month Received</u>	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2016 Actual</u>	<u>Cumulative Variance 2015 Actual vs. Budget</u>
Jan	\$ 285,231	\$ 118,750	\$ 80,232	\$ (38,518)
Feb	-	\$ 118,750		
Mar	-	\$ 118,750		
Apr	275,235	\$ 118,750		
May	27,837	\$ 118,750		
Jun	-	\$ 118,750		
Jul	354,252	\$ 118,750		
Aug	20,579	\$ 118,750		
Sep	282,325	\$ 118,750		
Oct	132,948	\$ 118,750		
Nov	130,508	\$ 118,750		
Dec	113,697	\$ 118,750		
YTD Totals	<u>\$ 1,622,611</u>	<u>\$ 1,425,000</u>	<u>\$ 80,232</u>	

Real Estate Transfer Tax



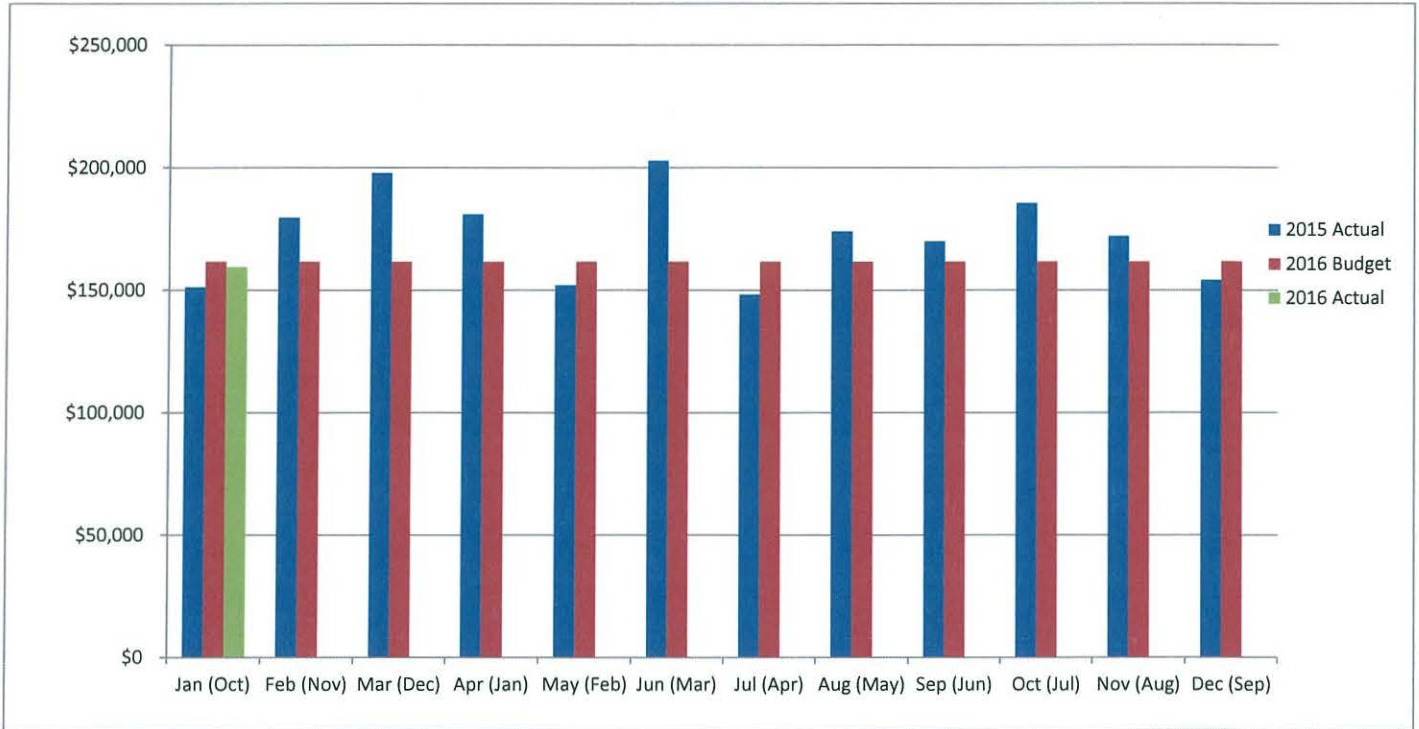
<u>Month Received</u>	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2016 Actual</u>	<u>Cumulative Variance 2015 Actual vs. Budget</u>
Jan	\$ 19,551	\$ 66,667	\$ 37,674	\$ (28,993)
Feb	34,172	66,667		
Mar	39,643	66,667		
Apr	56,623	66,667		
May	70,889	66,667		
Jun	89,044	66,667		
Jul	358,525	66,667		
Aug	61,377	66,667		
Sep	63,270	66,667		
Oct	65,550	66,667		
Nov	37,796	66,667		
Dec	28,666	66,667		
YTD Totals	<u>\$ 925,106</u>	<u>\$ 800,000</u>	<u>\$ 37,674</u>	

Home Rule Sales Tax



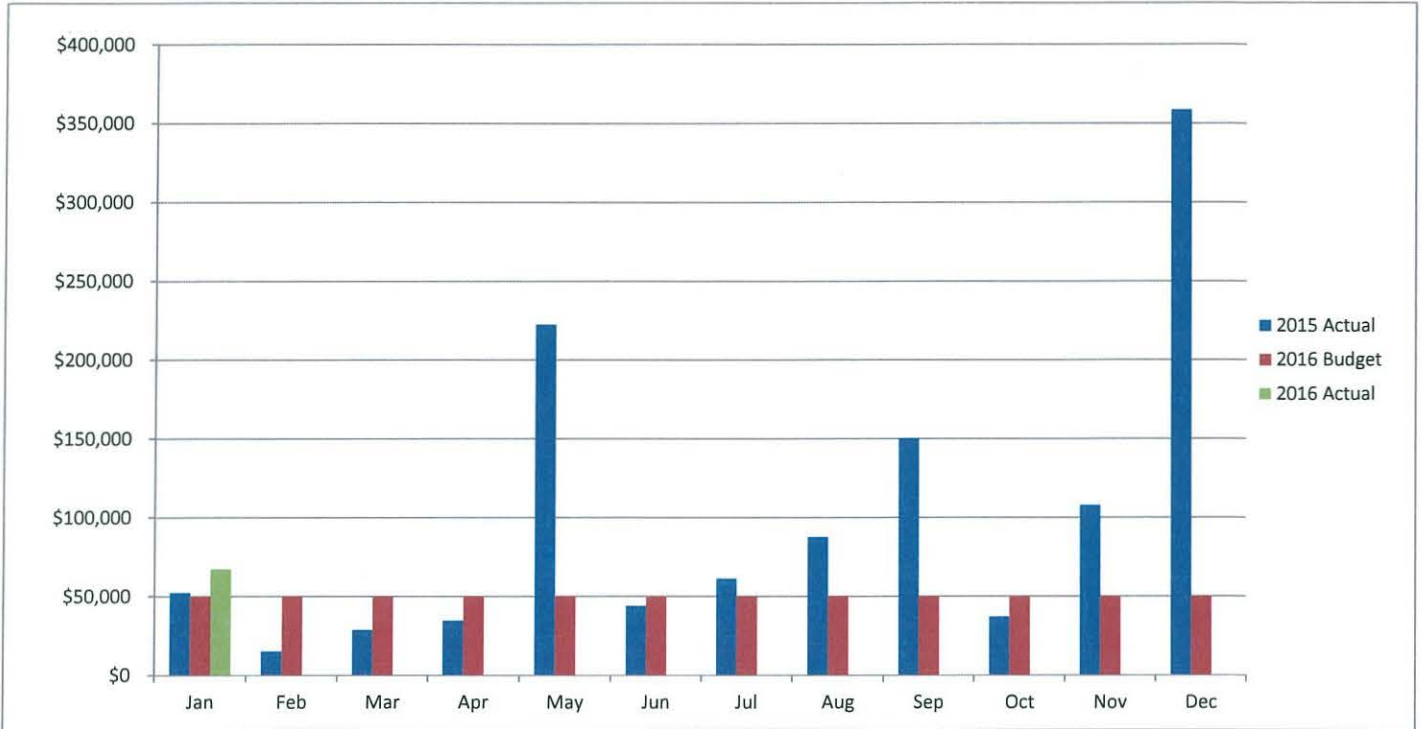
Month Received (Liability Period)	2015 Actual	2016 Budget	2016 Actual	Cumulative Variance 2015 Actual vs. Budget
Jan (Nov)	\$ 322,359	\$ 331,500	\$ 323,979	\$ (7,521)
Feb (Dec)	338,435	331,500		
Mar (Jan)	381,857	331,500		
Apr (Feb)	305,139	331,500		
May (Mar)	300,617	331,500		
Jun (Apr)	322,770	331,500		
Jul (May)	290,790	331,500		
Aug (Jun)	317,104	331,500		
Sep (Jul)	367,835	331,500		
Oct (Aug)	300,462	331,500		
Nov (Sep)	315,938	331,500		
Dec (Oct)	318,073	331,500		
YTD Totals	\$ 3,881,378	\$ 3,978,000	\$ 323,979	

Telecommunications Tax



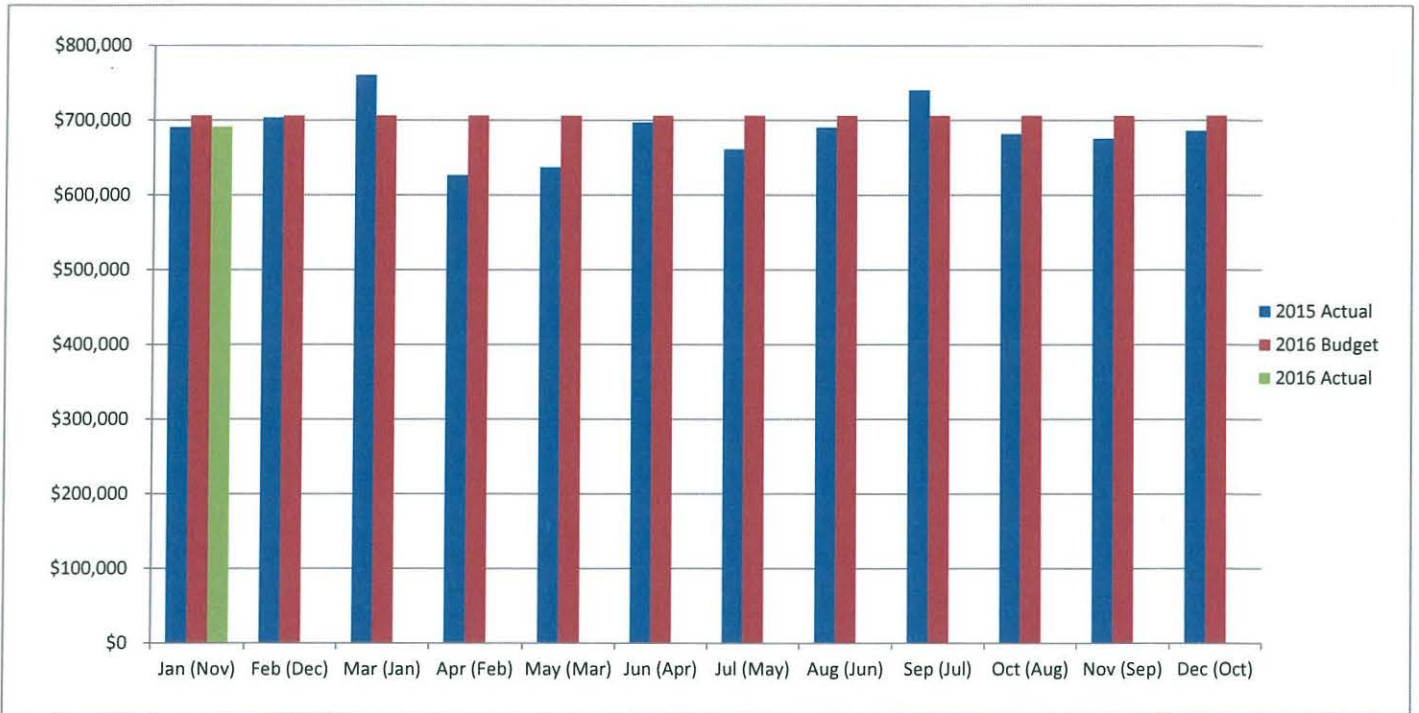
Month Received (Liability Period)	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2016 Actual</u>	Cumulative Variance 2015 Actual vs. Budget
Jan (Oct)	\$ 151,174	\$ 161,667	\$ 159,475	\$ (2,192)
Feb (Nov)	179,510	161,667		
Mar (Dec)	197,794	161,667		
Apr (Jan)	180,871	161,667		
May (Feb)	151,902	161,667		
Jun (Mar)	202,762	161,667		
Jul (Apr)	148,153	161,667		
Aug (May)	173,922	161,667		
Sep (Jun)	169,902	161,667		
Oct (Jul)	185,463	161,667		
Nov (Aug)	171,987	161,667		
Dec (Sep)	154,067	161,667		
YTD Totals	<u>\$ 2,067,506</u>	<u>\$ 1,940,000</u>	<u>\$ 159,475</u>	

Building Permits



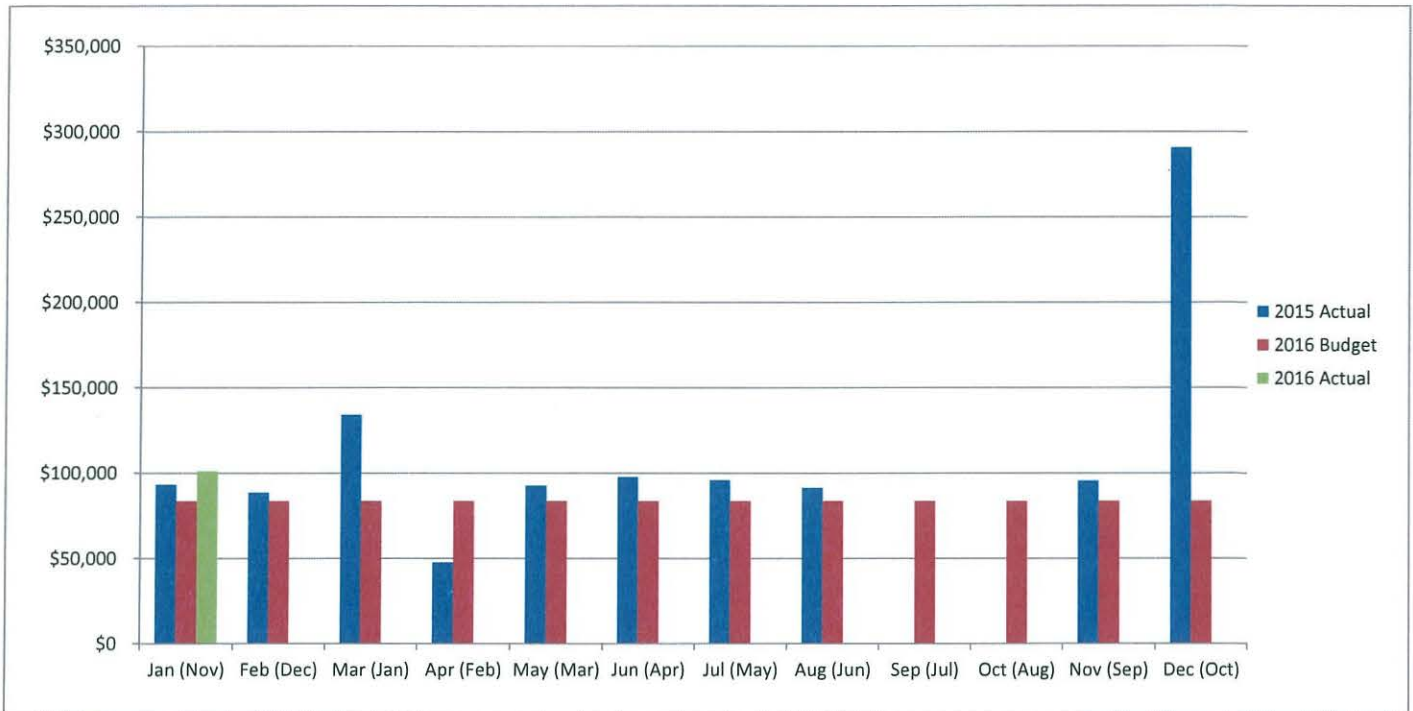
<u>Month Received</u>	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2016 Actual</u>	<u>Cumulative Variance 2015 Actual vs. Budget</u>
Jan	\$ 52,379	\$ 50,000	\$ 67,462	\$ 17,462
Feb	15,057	50,000		
Mar	28,634	50,000		
Apr	34,707	50,000		
May	222,499	50,000		
Jun	43,889	50,000		
Jul	61,332	50,000		
Aug	87,653	50,000		
Sep	150,295	50,000		
Oct	37,126	50,000		
Nov	107,773	50,000		
Dec	358,351	50,000		
YTD Totals	<u>\$ 1,199,696</u>	<u>\$ 600,000</u>	<u>\$ 67,462</u>	

State Sales Tax



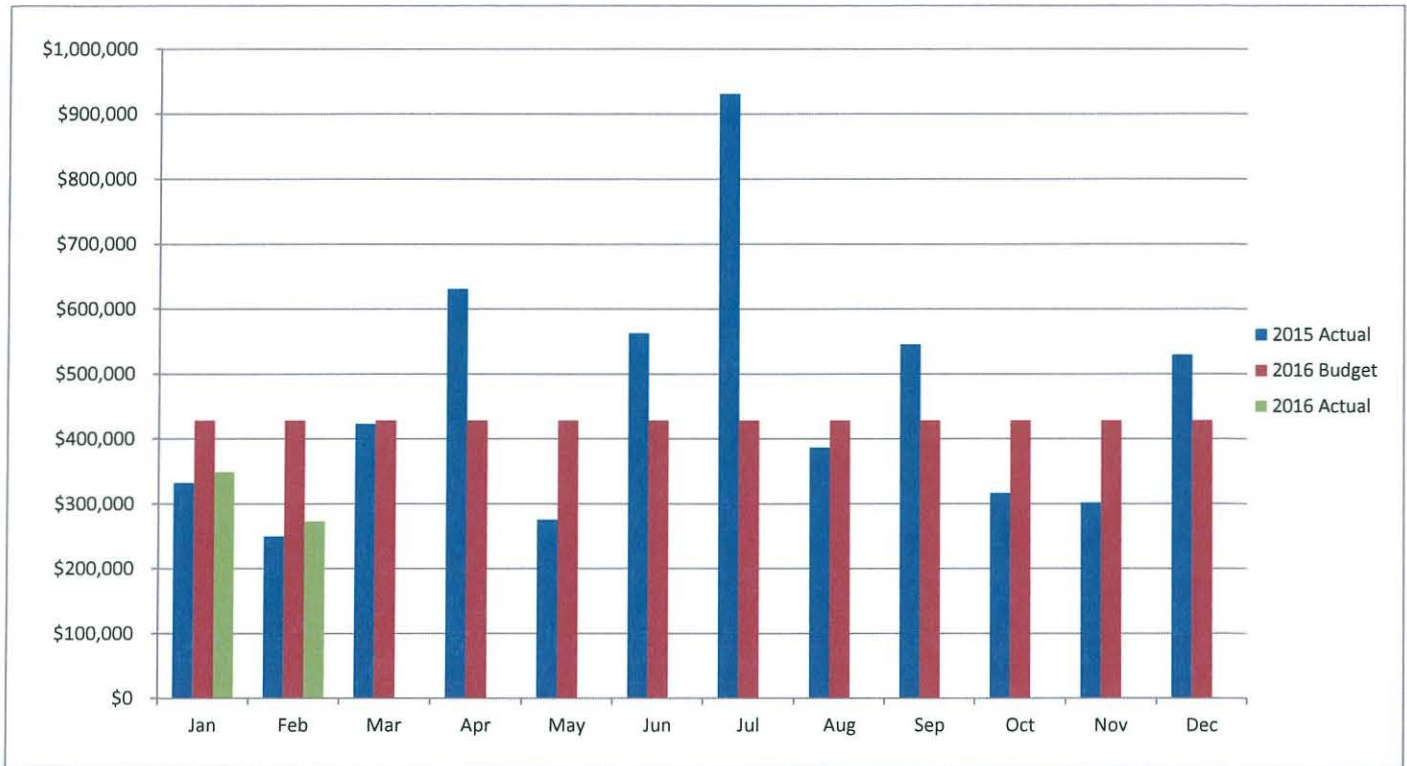
<u>Month Received (Liability Period)</u>	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2016 Actual</u>	<u>Cumulative Variance 2015 Actual vs. Budget</u>
Jan (Nov)	\$ 690,471	\$ 705,833	\$ 691,093	\$ (14,740)
Feb (Dec)	703,305	705,833		
Mar (Jan)	759,870	705,833		
Apr (Feb)	625,945	705,833		
May (Mar)	636,692	705,833		
Jun (Apr)	696,765	705,833		
Jul (May)	660,897	705,833		
Aug (Jun)	689,914	705,833		
Sep (Jul)	739,532	705,833		
Oct (Aug)	681,218	705,833		
Nov (Sep)	675,132	705,833		
Dec (Oct)	685,641	705,833		
YTD Totals	\$ 8,245,379	\$ 8,470,000	\$ 691,091	

Local Use Tax



Month Received (Liability Period)	2015 Actual	2016 Budget	2016 Actual	Cumulative Variance 2015 Actual vs. Budget
Jan (Nov)	\$ 93,103	\$ 83,333	\$ 101,060	\$ 17,727
Feb (Dec)	88,514	83,333		
Mar (Jan)	134,166	83,333		
Apr (Feb)	47,468	83,333		
May (Mar)	92,649	83,333		
Jun (Apr)	97,684	83,333		
Jul (May)	95,885	83,333		
Aug (Jun)	91,333	83,333		
Sep (Jul)	-	83,333		
Oct (Aug)	-	83,333		
Nov (Sep)	95,513	83,333		
Dec (Oct)	290,643	83,333		
YTD Totals	\$ 1,126,955	\$ 1,000,000	\$ 101,061	

Income Tax

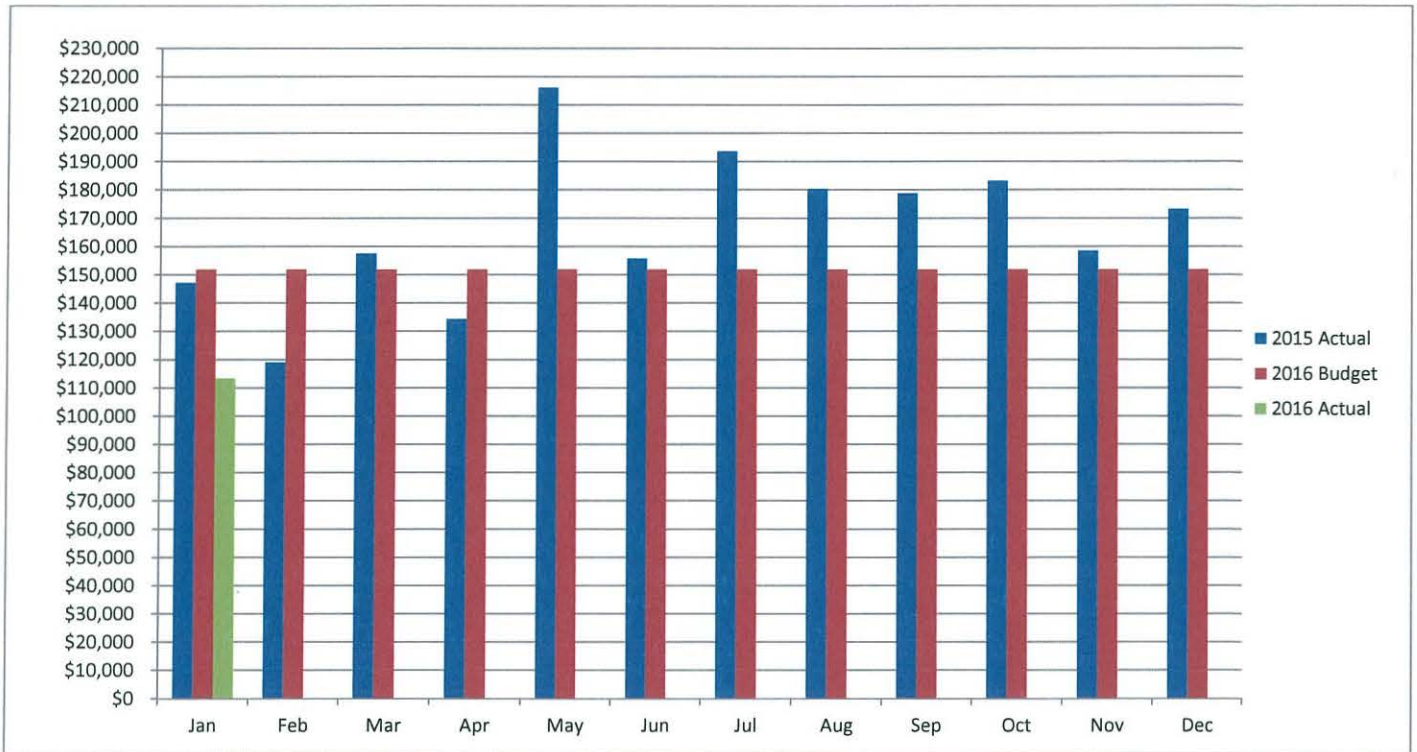


2014-2015		
Month		
<u>Received</u>	<u>Liab Pd</u>	<u>2015 Actual</u>
Jan	Oct-14	\$ 331,813
Feb	Nov-14	249,502
Mar	Dec-14	422,739
Apr	Jan-15	630,730
May	Feb-15	275,154
Jun	Mar-15	562,284
Jul	Apr-15	930,248
Aug	May-15	386,317
Sep	Jun-15	545,070
Oct	Jul-15	316,314
Nov	Aug-15	301,271
Dec	Sep-15	529,497
YTD Totals		<u>\$ 5,480,938</u>

2015-2016			
Month			
<u>Received</u>	<u>2016 Budget</u>	<u>Liab Pd</u>	<u>2016 Actual</u>
Jan	\$ 428,133	Oct-15	\$ 349,128
Feb	428,133	Nov-15	273,041
Mar	428,133	Dec-15	
Apr	428,133	Jan-16	
May	428,133	Feb-16	
Jun	428,133	Mar-16	
Jul	428,133	Apr-16	
Aug	428,133	May-16	
Sep	428,133	Jun-16	
Oct	428,133	Jul-16	
Nov	428,133	Aug-16	
Dec	428,133	Sep-16	
	<u>\$ 5,137,600</u>		<u>\$ 622,170</u>

**Cumulative
Variance
2015 Actual
vs. Budget**
\$ (79,005)
\$ (155,092)

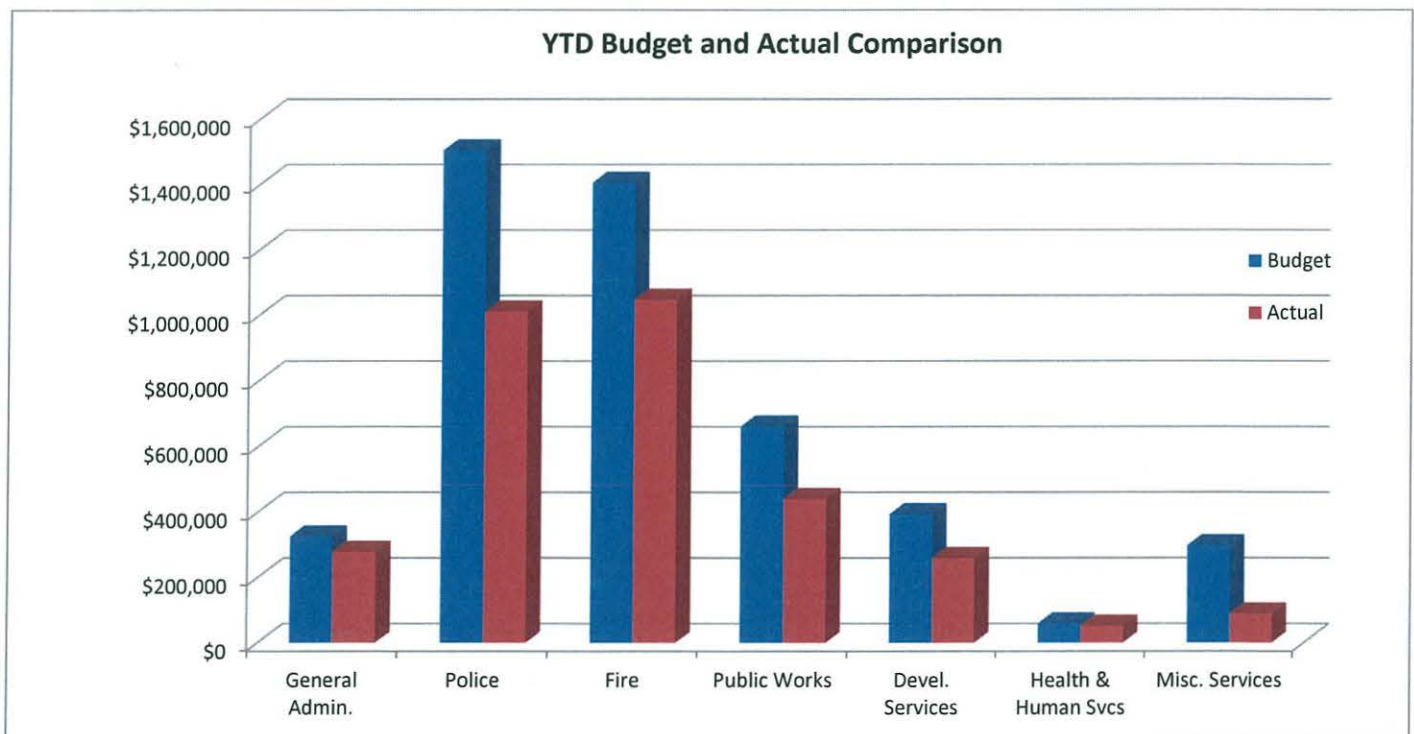
Fines



<u>Month Received</u>	<u>2015 Actual</u>	<u>2016 Budget</u>	<u>2016 Actual</u>	<u>Cumulative Variance 2015 Actual vs. Budget</u>
Jan	\$ 147,164	\$ 151,917	\$ 113,441	\$ (38,476)
Feb	119,030	151,917		
Mar	157,442	151,917		
Apr	134,391	151,917		
May	216,003	151,917		
Jun	155,813	151,917		
Jul	193,717	151,917		
Aug	180,388	151,917		
Sep	178,846	151,917		
Oct	183,246	151,917		
Nov	158,462	151,917		
Dec	173,279	151,917		
YTD Totals	<u>\$ 1,997,781</u>	<u>\$ 1,823,000</u>	<u>\$ 113,441</u>	

Expenditures: General Fund expenditures in January were \$1,466,939 below the budgeted figure of \$4,640,324. The summary of year-to-date actuals versus budgeted expenditures shown reflect mostly positive variances for the Village departments for the year.

EXPENDITURES	YEAR-TO-DATE	YEAR-TO-DATE	VARIANCE
	BUDGET	ACTUAL	
Legislative	\$ 30,666	\$ 24,861	18.9%
Administration	58,754	58,538	0.4%
Legal	45,017	17,091	62.0%
Finance	95,825	95,703	0.1%
Village Clerk	16,585	16,036	3.3%
HRM	45,412	42,058	7.4%
Communications	18,808	12,940	31.2%
Cable TV	13,922	10,597	23.9%
Police	1,502,427	1,010,032	32.8%
Fire	1,403,967	1,047,145	25.4%
Public Works	660,412	438,569	33.6%
Development Services	392,592	258,595	34.1%
H&HS	59,118	51,811	12.4%
Miscellaneous	296,821	89,408	69.9%
TOTAL	\$ 4,640,324	\$ 3,173,385	31.6%



Department News

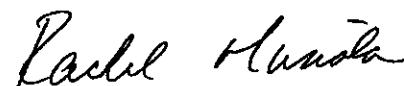
During the month of January, the following training session was attended by Finance Staff:

- Attended a Fraud Awareness Seminar offered by the Chicago Metro Chapter of the IGFOA (Assistant Finance Director). Topics discussed were the psychological mentality of someone who commits fraud, what happened at the City of Dixon and how they are recovering now, and how to implement a new fraud awareness program in a municipality.

Also during the month of January, Finance staff participated in the following events and planning meetings:

- Attended the quarterly Fire Pension Board meeting (Finance Director).
- Attended the quarterly Police Pension Board meeting (Finance Director).
- Attended the 4th of July Commission monthly planning meeting (Finance Director).
- Attended two IGFOA Professional Education Committee planning meetings (Finance Director), as well as, the IGFOA Volunteer Recognition Luncheon (Finance Director and Assistant Finance Director).
- Staff worked hard on the final 2016 Budget document for the GFOA Budget Award submittal, as well as, 2015 audit preparations. Audit fieldwork begins February 29th.

Respectfully Submitted,



Rachel Musiala
Director of Finance

MONTHLY REPORT STATISTICS

January-16

	<u>Jan-16</u>	<u>YTD Jan-16</u>	<u>Jan-15</u>	<u>YTD Jan-15</u>	<u>% Inc / Dec</u>	
					<u>Month</u>	<u>Year</u>
Credit Card Transactions						
Finance and Code Front Counter						
Number	625	625	567	567	10.2%	10.2%
Amount	\$ 85,006	85,006	\$ 91,818	91,818	-7.4%	-7.4%
Internet Sales						
Number	2,039	2,039	2,087	2,087	-2.3%	-2.3%
Amount	\$ 203,340	203,340	\$ 159,278	159,278	27.7%	27.7%
Total						
Number	2,664	2,664	2,654	2,654	0.4%	0.4%
Amount	\$ 288,346	288,346	\$ 251,095	251,095	14.8%	14.8%
Credit Card Company Fees						
General Fund	\$ 1,351	1,351	\$ 1,941	1,941	-30.4%	-30.4%
Municipal Waste Fund	-	-	-	-	N/A	N/A
Water Fund	7,173	7,173	3,132	3,132	129.0%	129.0%
Total Fees	\$ 8,523	\$ 8,523	\$ 5,073	\$ 5,073	68.0%	68.0%
Accounts Receivable						
Invoices Mailed						
Number	179	179	48	48	272.9%	272.9%
Amount	\$ 482,199	482,199	\$ 101,276	101,276	376.1%	376.1%
Invoices Paid						
Number	51	51	57	57	-10.5%	-10.5%
Amount	\$ 83,585	83,585	\$ 99,342	99,342	-15.9%	-15.9%
Reminders Sent						
Number	-	-	8	8	-100.0%	-100.0%
Amount	\$ -	-	\$ 3,558	3,558	-100.0%	-100.0%
Accounts Payable						
Checks Issued						
Number	338	338	387	387	-12.7%	-12.7%
Amount	\$ 11,375,256	11,375,256	\$ 10,992,698	10,992,698	3.5%	3.5%
Manual Checks Issued						
Number	64	64	69	69	-7.2%	-7.2%
As % of Total Checks	18.93%	18.93%	17.83%	17.83%	6.2%	6.2%
Amount	\$ 9,975,884	9,975,884	\$ 9,814,972	9,814,972	1.6%	1.6%
As % of Total Checks	87.70%	87.70%	89.29%	89.29%	-1.8%	-1.8%
Utility Billing						
New Utility Accounts	111	111	79	79	40.5%	40.5%
Bills Mailed / Active Accounts	15,506	15,506	15,478	15,478	0.2%	0.2%
Final Bills Mailed	111	111	79	79	40.5%	40.5%
Shut-Off Notices	1,402	1,402	1,462	1,462	-4.1%	-4.1%
Actual Shut-Offs	102	102	82	82	24.4%	24.4%
Total Billings	\$ 1,664,394	1,664,394	\$ 1,370,248	1,370,248	21.5%	21.5%
Direct Debit (ACH) Program						
New Accounts	37	37	21	21	76.2%	76.2%
Closed Accounts	38	38	9	9	322.2%	322.2%
Total Accounts	2,670	2,670	2,320	2,320	15.1%	15.1%
As % of Active Accounts	17.22%	17.22%	14.99%	14.99%	2.2%	14.9%
Water Payments Received in Current Month						
Total Bills Mailed	15,506	15,506	15,478	15,478	0.2%	0.2%
ACH Payments	2,668	2,668	2,320	2,320	15.0%	15.0%
ACH Payments-% of Total Bills	17.21%	17.21%	14.99%	14.99%	14.8%	14.8%
On-line Payments (Internet Sales)	2,039	2,039	1,818	1,818	12.2%	12.2%
On-line Payments-% of Total Bills	13.15%	13.15%	11.75%	11.75%	12.0%	12.0%
Mail-in Payments	12,289	12,289	12,017	12,017	2.3%	2.3%
Mail-in Payments-% of Total Bills	79.25%	79.25%	77.64%	77.64%	2.1%	2.1%

WATER BILLING ANALYSIS
January 31, 2016

Residential Billings
Average Monthly Consumption/Customer

<u>Month Billed</u>	<u>2013-2014</u>	<u>2014-2015</u>	<u>2015-2016</u>
January	5,047	5,047	5,288
February	4,772	4,137	4,347
March	4,057	4,293	4,126
April	4,736	4,485	4,327
May	4,502	4,283	4,601
June	5,567	4,283	4,434
July	4,832	5,138	4,597
August	5,801	4,873	5,376
September	6,270	5,497	5,073
October	4,655	4,595	4,643
November	4,706	4,818	4,590
December	4,636	3,978	4,036
January	5,047	5,288	4,916
13 Month Average -	4,971	4,670	4,643
% Change -	-11.3%	-6.1%	-0.6%

Total Water Customers

<u>Customer Type</u>	<u>Jan-15</u>	<u>Jan-16</u>	<u>% Change</u>
Residential	14,573	14,599	0.2%
Commercial	906	907	0.1%
Total	15,479	15,506	0.2%

Average Bill

<u>Customer Type</u>	<u>Jan-15</u>	<u>Jan-16</u>	<u>% Change</u>
Residential	\$ 49.85	\$ 57.39	15.1%

Total Consumption - All Customers (000,000's)

	<u>Month-To-Date</u>			<u>Year-To-Date</u>		
	<u>Jan-15</u>	<u>Jan-16</u>	<u>% Change</u>	<u>Jan-15</u>	<u>Jan-16</u>	<u>% Change</u>
Residential	77	72	-6.5%	77	72	-6.5%
Commercial	47	39	-17.0%	47	39	-17.0%
	124	111	-10.5%	124	111	-10.5%

STATEMENT OF INVESTMENTS-VILLAGE
As of January 31, 2016

Fund	Investment Date	Maturity Date	Book Value	Market Value	Maturity Value	Rate of Interest
<u>General Fund</u>						
Illinois Funds - General	09/30/86		4,319,537.31			0.012
Illinois Funds - Veterans Memorial	05/01/92		294.38			0.012
IMET Convenience Fund	10/20/05		2,697.93			0.430
HE Community Bank-MaxSafe	07/13/04		763,772.51			0.100
Virginia Heritage Bank	11/07/08		4,778,025.53			0.100
CD with PMA	08/22/13		1,490,882.01	1,490,513.39	1,503,740.47	0.375
			<u>11,355,209.67</u>			
<u>Motor Fuel Tax</u>						
Illinois Funds	09/30/86		312,546.58			0.012
Virginia Heritage Bank	11/07/08		14,323.63			0.100
CD with PMA	08/22/13		94,312.26	94,180.79	95,016.57	0.375
			<u>421,182.47</u>			
<u>EDA Administration</u>						
Illinois Funds	01/02/91		273.40			0.012
Virginia Heritage Bank	11/07/08		467,805.15			0.100
			<u>468,078.55</u>			
<u>E-911</u>						
Illinois Funds	07/01/00		11,701.07			0.012
Virginia Heritage Bank	11/07/08		52,456.63			0.100
			<u>64,157.70</u>			
<u>Asset Seizure - Federal</u>						
Illinois Funds	06/09/99		4,490.72			0.012
<u>Asset Seizure - State</u>						
Illinois Funds	11/30/98		52,761.43			0.012
<u>Asset Seizure - BATTLE</u>						
Illinois Funds	07/10/08		57,797.36			0.012
<u>Municipal Waste System</u>						
Illinois Funds	08/31/98		3,693.59			0.012
<u>2005A G.O. Debt Serv.</u>						
Illinois Funds	11/30/04		292,061.22			0.012
<u>2009 G.O. Debt Serv.</u>						
Illinois Funds	04/01/09		18,843.38			0.012
<u>Central Road Corridor Improv.</u>						
Illinois Funds	12/15/88		14,045.31			0.012
Virginia Heritage Bank	11/07/08		233,393.81			0.100
			<u>247,439.12</u>			
<u>Hoffman Blvd Bridge Maintenance</u>						
Illinois Funds	07/01/98		10,548.79			0.012
CD with PMA	08/22/13		90,634.13	90,458.23	91,260.97	0.375
Virginia Heritage Bank	02/10/11		232,531.75		-	0.100
			<u>333,714.67</u>			

STATEMENT OF INVESTMENTS-VILLAGE
As of January 31, 2016

Fund	Investment Date	Maturity Date	Book Value	Market Value	Maturity Value	Rate of Interest
<u>Western Corridor</u>						
Illinois Funds	06/30/01		36,157.40			0.012
CD with PMA	08/22/13		803,351.81	802,956.39	810,081.97	
Virginia Heritage Bank	01/07/09		<u>1,730,694.13</u>			0.100
			2,570,203.34			
<u>Traffic Improvement</u>						
Illinois Funds	03/24/89		13,598.99			0.012
Virginia Heritage Bank	01/07/09		<u>284,895.50</u>			0.012
			298,494.49			
<u>EDA Series 1991 Project</u>						
Illinois Funds	08/22/91		1,158,786.90			0.012
Virginia Heritage Bank	02/10/11		<u>1,441,910.96</u>		-	-
			2,600,697.86			
<u>Road Improvement</u>						
Illinois Funds	01/01/15		392,783.19			
Virginia Heritage Bank			<u>104,415.11</u>			0.430
			497,198.30			
<u>Western Area Traffic Improvement</u>						
Illinois Funds	11/01/92		12,291.02			0.012
Virginia Heritage Bank	01/07/09		<u>128,886.52</u>			0.100
			141,177.54			
<u>Western Area Rd Impr Impact Fees</u>						
Illinois Funds	08/01/98		13,953.56			0.012
Virginia Heritage Bank	01/07/09		<u>133,233.56</u>			0.100
			147,187.12			
<u>Capital Improvements</u>						
Illinois Funds	12/31/96		71.36			0.012
Virginia Heritage Bank	01/07/09		<u>14,834.89</u>		-	0.100
			14,906.25			
<u>Capital Vehicle & Equipment</u>						
Illinois Funds	12/31/96		9,183.49			0.012
Virginia Heritage Bank	01/07/09		<u>95,553.65</u>			0.100
			104,737.14			
<u>Capital Replacement</u>						
Illinois Funds	02/01/98		3,107.05			0.012
HE Community Bank-MaxSafe	07/13/04		382,928.70			0.100
Virginia Heritage Bank	11/07/08		230,843.22			0.100
CD with PMA	08/22/13		<u>482,069.56</u>	481,699.38	485,974.07	0.375
			1,098,948.53			
<u>2015 Capital Project</u>						
Citibank Savings Deposit Account	08/12/15		-			-
CD with PMA	08/12/15		<u>54,774.71</u>	3,734,216.88	3,738,578.82	
			54,774.71			

STATEMENT OF INVESTMENTS-VILLAGE
As of January 31, 2016

Fund	Investment Date	Maturity Date	Book Value	Market Value	Maturity Value	Rate of Interest
<u>Water and Sewer</u>						
Illinois Funds	09/30/86		7,801.88			0.012
Virginia Heritage Bank	11/07/08		44,218.91			0.100
			<u>52,020.79</u>			
<u>Water and Sewer-Capital Projects</u>						
Virginia Heritage Bank	03/20/08		-			0.012
<u>Water and Sewer-2015 Bond Projects</u>						
Citibank Savings Deposit Account	08/12/15		1,206.87			0.100
CD with PMA	08/12/15		4,395,494.64	749,100.00	749,841.30	
			<u>4,396,701.51</u>			
<u>Stormwater</u>						
CD with PMA	08/12/15		36,599.02			
Citibank Savings Deposit Account	08/12/15		467,069.80			0.100
			<u>503,668.82</u>			
<u>Sears Centre</u>						
Illinois Funds			0.00			0.012
<u>Insurance</u>						
Illinois Funds	11/10/87		352,895.70			0.012
Virginia Heritage Bank	11/07/08		1,366,232.59			0.100
CD with PMA	08/22/13		667,517.57	667,082.92	673,002.73	0.375
			<u>2,386,645.86</u>			
<u>Information Systems</u>						
Illinois Funds	02/01/98		173,420.22			0.012
Virginia Heritage Bank	11/07/08		712,136.65			
			<u>885,556.87</u>			
<u>EDA Special Tax Alloc.</u>						
Illinois Funds	05/15/92		0.00			0.012
Virginia Heritage Bank	11/07/08		374.27			
			<u>374.27</u>			
<u>Roselle Road TIF</u>						
Illinois Funds	09/30/03		57,106.90			0.012
CD with PMA	08/22/13		95,743.22	95,669.82	96,518.81	0.375
Virginia Heritage Bank	11/07/08		194,172.01			0.100
			<u>347,022.13</u>			
<u>Barr./Higgins TIF</u>						
Illinois Funds	08/26/91		450,403.95			0.012
<u>2005 EDA TIF Bond & Int.</u>						
Illinois Funds	11/07/02		35,397.55			0.012
Total Investments			<u>\$ 29,905,546.91</u>			

STATEMENT OF INVESTMENTS-VILLAGE
As of January 31, 2016

Fund	Investment Date	Maturity Date	Book Value	Market Value	Maturity Value	Rate of Interest
Total Invested Per Institution				Percent Invested		
Illinois Funds			7,815,553.70	26.13		
IMET Convenience Fund			2,697.93	0.01		
CD with PMA			8,211,378.93	27.46		
HE Community Bank-MaxSafe			1,146,701.21	3.83		
Bank of New York Money Market			0.00	-		
Virginia Heritage Bank/Citibank with PMA			12,729,215.14	42.56		
			\$29,905,546.91	100.00		
Total Invested Per Institution Excluding all Trust and EDA Funds				Percent Invested		
Illinois Funds			6,170,691.90	23.42		
IMET			2,697.93	0.01		
HE Community Bank-MaxSafe			1,146,701.21	4.35		
CD with PMA			8,211,378.93	31.16		
Virginia Heritage Bank/Citibank with PMA			10,819,124.76	41.06		
			\$26,350,594.73	100.00		
Total Invested Per Fund						
Total Investments - Operating Funds				\$16,098,617.14		
Total Investments - Debt Service Funds				\$346,302.15		
Total Investments - Trust Funds				\$450,778.22		
Total Investments - Capital Projects Funds				\$13,009,849.40		
Total Investments - All Funds				\$29,905,546.91		

OPERATING REPORT SUMMARY

REVENUES

January 31, 2016

	<u>CURRENT MONTH</u>		<u>YEAR-TO-DATE</u>		<u>ANNUAL BUDGET</u>	<u>% ACTUAL TO BUDGET</u>	<u>BENCH-MARK</u>
	<u>BUDGET</u>	<u>ACTUAL</u>	<u>BUDGET</u>	<u>ACTUAL</u>			
General Fund							
Property Taxes	1,362,876	85,776	1,362,876	85,776	16,354,510	0.5%	
Hotel Tax	118,750	80,232	118,750	80,232	1,425,000	5.6%	
Real Estate Transfer Tax	66,667	37,674	66,667	37,674	800,000	4.7%	
Home Rule Sales Tax	331,500	323,979	331,500	323,979	3,978,000	8.1%	
Telecommunications Tax	161,667	159,475	161,667	159,475	1,940,000	8.2%	
Property Tax - Fire	234,667	22,670	234,667	22,670	2,816,000	0.8%	
Property Tax - Police	264,570	23,165	264,570	23,165	3,174,840	0.7%	
Other Taxes	12,500	-	12,500	-	150,000	0.0%	
Total Taxes	2,553,196	732,970	2,553,196	732,970	30,638,350	2.4%	
Business Licenses	23,333	2,175	23,333	2,175	280,000	0.8%	
Liquor Licenses	20,000	30	20,000	30	240,000	0.0%	
Building Permits	50,000	67,462	50,000	67,462	600,000	11.2%	
Other Licenses & Permits	1,750	1,510	1,750	1,510	21,000	7.2%	
Total Licenses & Permits	95,083	71,177	95,083	71,177	1,141,000	6.2%	
Sales Tax	705,833	691,093	705,833	691,093	8,470,000	8.2%	
Local Use Tax	83,333	201,408	83,333	201,408	1,000,000	20.1%	
State Income Tax	428,133	622,170	428,133	622,170	5,137,600	12.1%	
Replacement Tax	23,067	39,666	23,067	39,666	276,800	14.3%	
Other Intergovernmental	35,290	2,142	35,290	2,142	423,480	0.5%	
Total Intergovernmental	1,275,657	1,556,478	1,275,657	1,556,478	15,307,880	10.2%	
Engineering Fees	5,208	-	5,208	-	62,500	0.0%	
Ambulance Fees	100,000	83,188	100,000	83,188	1,200,000	6.9%	
Police Hireback	33,333	45,118	33,333	45,118	400,000	11.3%	
Lease Payments	71,667	71,045	71,667	71,045	860,000	8.3%	
Cable TV Fees	67,167	-	67,167	-	806,000	0.0%	
4th of July Proceeds	4,325	4,325	4,325	4,325	135,860	3.2%	
Employee Payments	90,667	110,876	90,667	110,876	1,088,000	10.2%	
Hireback - Arena	13,333	-	13,333	-	160,000	0.0%	
Rental Inspection Fees	23,333	160,200	23,333	160,200	280,000	57.2%	
Other Charges for Services	77,167	77,053	77,167	77,053	926,000	8.3%	
Total Charges for Services	486,200	551,805	486,200	551,805	5,918,360	9.3%	
Court Fines-County	18,333	-	18,333	-	220,000	0.0%	
Ticket Fines-Village	54,167	31,666	54,167	31,666	650,000	4.9%	
Overweight Truck Fines	250	1,100	250	1,100	3,000	36.7%	
Red Light Camera Revenue	66,667	78,393	66,667	78,393	800,000	9.8%	
Local Debt Recovery	12,500	2,282	12,500	2,282	150,000	1.5%	
Total Fines & Forfeits	139,417	113,441	139,417	113,441	1,823,000	6.2%	
Total Investment Earnings	2,500	2,311	2,500	2,311	30,000	7.7%	
Reimburse/Recoveries	8,333	1,658	8,333	1,658	100,000	1.7%	
S.Barrington Fuel Reimbursement	2,500	2,208	2,500	2,208	30,000	7.4%	
Tollway Payments	1,854	3,750	1,854	3,750	22,250	16.9%	
Benefit Fund	8,333	41,666	8,333	41,666	100,000	41.7%	
Other Miscellaneous	12,409	1,662	12,409	1,662	148,910	1.1%	
Total Miscellaneous	33,430	50,943	33,430	50,943	401,160	12.7%	
Total General Fund	4,585,484	3,079,125	4,585,483	3,079,125	55,259,750	5.6%	8.3%

OPERATING REPORT SUMMARY

REVENUES

January 31, 2016

	<u>CURRENT MONTH</u>		<u>YEAR-TO-DATE</u>		<u>ANNUAL BUDGET</u>	<u>% ACTUAL TO BUDGET</u>	<u>BENCH-MARK</u>
	<u>BUDGET</u>	<u>ACTUAL</u>	<u>BUDGET</u>	<u>ACTUAL</u>			
Water & Sewer Fund							
Water Sales	1,418,475	1,424,575	1,418,475	1,424,575	17,021,700	8.4%	
Connection Fees	167	5,520	167	5,520	2,000	276.0%	
Cross Connection Fees	3,104	3,182	3,104	3,182	37,250	8.5%	
Penalties	5,000	7,743	5,000	7,743	60,000	12.9%	
Investment Earnings	5	1,870	5	1,870	60	3116.5%	
Other Revenue Sources	31,518	31,855	31,518	31,855	378,210	8.4%	
Bond Proceeds	-	-	-	-	849,130	0.0%	
Total Water Fund	1,458,268	1,474,744	1,458,268	1,474,744	18,348,350	8.0%	8.3%
Motor Fuel Tax Fund	102,208	117,237	102,208	117,237	1,226,500	9.6%	
Community Dev. Block Grant Fund	30,333	-	30,333	-	364,000	0.0%	
EDA Administration Fund	125	66	125	66	1,500	0.0%	
E-911 Surcharge	-	1,695	-	1,695	-	0.0%	
Asset Seizure Fund	29,779	9	29,779	9	357,350	0.0%	
Municipal Waste System Fund	243,899	234,830	243,899	234,830	2,926,790	8.0%	
Sears Centre Operating Fund	269,861	189,137	269,861	189,137	3,238,330	5.8%	
Sears Centre Activity Fund	206,656	-	206,656	-	2,479,870	0.0%	
Stormwater Management	43,008	43,157	43,008	43,157	516,100	8.4%	
Insurance Fund	120,338	122,884	120,338	122,884	1,444,060	8.5%	
Roselle Road TIF	-	3,319	-	3,319	-	0.0%	
Information Systems	114,067	112,750	114,067	112,750	1,368,800	8.2%	
Total Spec Rev. & Int. Svc. Fund	1,160,275	825,084	1,160,275	825,084	13,923,300	5.9%	
TOTAL OPERATING FUNDS	7,204,027	5,378,953	7,204,026	5,378,953	87,531,400	6.1%	8.3%
2015A & C G.O. Debt Service	51	51	51	51	2,783,170	0.0%	
2015B G.O. Debt Service	10,066	-	10,066	-	120,790	0.0%	
2008 G.O.D.S. Fund	83,266	-	83,266	-	999,190	0.0%	
2009 G.O.D.S. Fund	215,882	83,451	215,882	83,451	2,590,580	3.2%	
TOTAL DEBT SERV. FUNDS	309,264	83,501	309,264	83,501	6,493,730	1.3%	8.3%
Central Rd. Corridor Fund	58	32	58	32	700	4.6%	
Hoffman Blvd Bridge Maintenance	67	79	67	79	800	9.9%	
Western Corridor Fund	667	647	667	647	8,000	8.1%	
Traffic Improvement Fund	-	39	-	39	-	0.0%	
EDA Series 1991 Project	125	384	125	384	1,500	25.6%	
Central Area Rd. Impr. Imp. Fee	-	-	-	-	-	0.0%	
Western Area Traffic Impr.	17	19	17	19	200	9.3%	
Western Area Traffic Impr. Impact Fee	8	19	8	19	100	0.0%	
Capital Improvements Fund	190,800	182,659	190,800	182,659	2,289,600	8.0%	
Capital Vehicle & Equipment Fund	75,073	75,087	75,073	75,087	900,870	8.3%	
Capital Replacement Fund	250	315	250	315	3,000	10.5%	
2015 Project Fund	50	128	50	128	600	21.3%	
Road Improvement Fund	522,073	793,241	522,073	793,241	6,264,870	12.7%	
TOTAL CAP. PROJECT FUNDS	789,187	1,052,649	789,187	1,052,649	9,470,240	11.1%	8.3%
Police Pension Fund	446,012	100,148	446,012	100,148	5,352,140	1.9%	
Fire Pension Fund	414,021	92,939	414,021	92,939	4,968,250	1.9%	
TOTAL TRUST FUNDS	860,033	193,087	860,033	193,087	10,320,390	1.9%	8.3%
TOTAL ALL FUNDS	9,162,510	6,708,190	9,162,509	6,708,190	113,815,760	5.9%	8.3%

OPERATING REPORT SUMMARY

EXPENDITURES

January 31, 2016

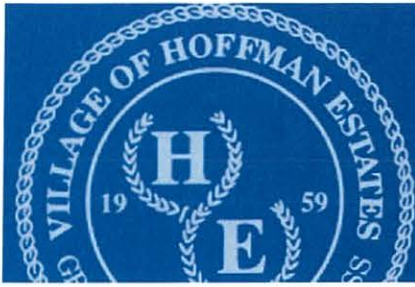
	<u>CURRENT MONTH</u>		<u>YEAR-TO-DATE</u>		<u>ANNUAL BUDGET</u>	<u>%</u>	<u>BENCH-MARK</u>
	<u>BUDGET</u>	<u>ACTUAL</u>	<u>BUDGET</u>	<u>ACTUAL</u>			
General Fund							
General Admin.							
Legislative	30,666	24,861	30,666	24,861	367,990	6.8%	
Administration	58,754	58,538	58,754	58,538	705,050	8.3%	
Legal	45,017	17,091	45,017	17,091	540,200	3.2%	
Finance	95,825	95,703	95,825	95,703	1,149,900	8.3%	
Village Clerk	16,585	16,036	16,585	16,036	199,020	8.1%	
Human Resource Mgmt.	45,412	42,058	45,412	42,058	544,940	7.7%	
Communications	18,808	12,940	18,808	12,940	225,700	5.7%	
Cable TV	13,922	10,597	13,922	10,597	167,060	6.3%	
Total General Admin.	324,988	277,824	324,988	277,824	3,899,860	7.1%	8.3%
Police Department							
Administration	110,319	89,588	110,319	89,588	1,323,830	6.8%	
Juvenile Investigations	44,628	32,388	44,628	32,388	535,530	6.0%	
Tactical	64,278	41,051	64,278	41,051	771,330	5.3%	
Patrol and Response	845,162	599,552	845,162	599,552	10,141,940	5.9%	
Traffic	140,996	73,670	140,996	73,670	1,691,950	4.4%	
Investigations	108,920	77,731	108,920	77,731	1,307,040	5.9%	
Community Relations	1,204	-	1,204	-	14,450	0.0%	
Communications	63,569	-	63,569	-	762,830	0.0%	
Canine	14,252	9,833	14,252	9,833	171,020	5.7%	
Special Services	15,243	7,458	15,243	7,458	182,910	4.1%	
Records	25,418	21,960	25,418	21,960	305,010	7.2%	
Administrative Services	61,084	54,079	61,084	54,079	733,010	7.4%	
Emergency Operations	7,356	2,723	7,356	2,723	88,270	3.1%	
Total Police	1,502,427	1,010,032	1,502,427	1,010,032	18,029,120	5.6%	8.3%
Fire Department							
Administration	64,254	53,146	64,254	53,146	771,050	6.9%	
Public Education	3,112	2,044	3,112	2,044	37,340	5.5%	
Suppression	684,778	515,810	684,778	515,810	8,217,340	6.3%	
Emer. Med. Serv.	603,348	460,829	603,348	460,829	7,240,170	6.4%	
Prevention	46,117	15,165	46,117	15,165	553,400	2.7%	
Fire Stations	2,358	152	2,358	152	28,300	0.5%	
Total Fire	1,403,967	1,047,145	1,403,967	1,047,145	16,847,600	6.2%	8.3%
Public Works Department							
Administration	23,795	33,610	23,795	33,610	285,540	11.8%	
Snow/Ice Control	152,333	158,494	152,333	158,494	1,827,990	8.7%	
Pavement Maintenance	33,558	26,655	33,558	26,655	402,690	6.6%	
Forestry	147,293	60,712	147,293	60,712	1,767,520	3.4%	
Facilities	90,512	48,046	90,512	48,046	1,086,140	4.4%	
Fleet Services	111,348	60,781	111,348	60,781	1,336,180	4.5%	
F.A.S.T.	26,173	10,543	26,173	10,543	314,080	3.4%	
Storm Sewers	17,882	8,425	17,882	8,425	214,580	3.9%	
Traffic Control	57,518	31,303	57,518	31,303	690,220	4.5%	
Total Public Works	660,412	438,569	660,412	438,569	7,924,940	5.5%	8.3%

OPERATING REPORT SUMMARY
EXPENDITURES
January 31, 2016

	CURRENT MONTH		YEAR-TO-DATE		ANNUAL BUDGET	%	BENCH-MARK
	BUDGET	ACTUAL	BUDGET	ACTUAL			
Development Services							
Administration	32,369	28,400	32,369	28,400	388,430	7.3%	
Planning	42,929	41,891	42,929	41,891	515,150	8.1%	
Code Enforcement	101,626	83,602	101,626	83,602	1,219,510	6.9%	
Transportation & Engineering	103,770	84,371	103,770	84,371	1,245,240	6.8%	
Economic Development	111,898	20,331	111,898	20,331	1,342,770	1.5%	
Total Development Services	392,592	258,595	392,592	258,595	4,711,100	5.5%	8.3%
Health & Human Services	59,118	51,811	59,118	51,811	709,420	7.3%	8.3%
Miscellaneous							
4th of July	-	-	-	-	167,950	0.0%	
Police & Fire Comm.	9,191	-	9,191	-	110,290	0.0%	
Misc. Boards & Comm.	16,568	7,444	16,568	7,444	198,820	3.7%	
Misc. Public Improvements	271,062	81,965	271,062	81,965	3,252,740	2.5%	
Total Miscellaneous	296,821	89,408	296,821	89,408	3,729,800	2.4%	8.3%
Total General Fund	4,640,324	3,173,385	4,640,324	3,173,385	55,851,840	5.7%	8.3%
Water & Sewer Fund							
Water Department	1,128,758	885,619	1,128,758	885,619	13,545,090	6.5%	
Sewer Department	180,341	109,827	180,341	109,827	2,164,090	5.1%	
Billing Division	55,613	22,761	55,613	22,761	667,360	3.4%	
Debt Service Division	-	-	-	-	537,690	0.0%	
Capital Projects Division	-	-	-	-	1,596,480	0.0%	
2015 Bond Capital Projects	-	-	-	-	2,403,750	0.0%	
Total Water & Sewer	1,364,712	1,018,208	1,364,712	1,018,208	20,914,460	4.9%	8.3%
Motor Fuel Tax	96,667	96,667	96,667	96,667	1,261,000	7.7%	
Community Dev. Block Grant Fund	-	-	-	-	364,000	0.0%	
EDA Administration Fund	29,299	27,176	29,299	27,176	351,590	7.7%	
Asset Seizure Fund	31,496	19,452	31,496	19,452	377,950	5.1%	
Municipal Waste System	241,734	241,850	241,734	241,850	2,900,810	8.3%	
Sears Centre Operating Fund	280,233	28	280,233	28	3,362,800	0.0%	
Sears Centre Activity Fund	206,656	-	206,656	-	2,479,870	0.0%	
Stormwater Management	14,319	-	14,319	-	171,830	0.0%	
Insurance	124,380	526,123	124,380	526,123	1,492,560	35.2%	
Information Systems	139,067	64,494	139,067	64,494	1,668,800	3.9%	
Roselle Road TIF	1,064	-	1,064	-	12,770	0.0%	
Higgins/Hassell TIF	293	-	293	-	3,520	0.0%	
TOTAL OPERATING FUNDS	7,170,245	5,167,383	7,170,245	5,167,383	91,213,800	5.7%	8.3%
2015A G.O. Debt Service	-	-	-	-	3,753,280	0.0%	
2015 G.O. Debt Service	-	-	-	-	120,790	0.0%	
2008 G.O.D.S. Fund	83,308	-	83,308	-	999,690	0.0%	
2009 G.O.D.S. Fund	226,516	-	226,516	-	2,718,190	0.0%	
TOTAL DEBT SERV. FUNDS	309,823	-	309,823	-	7,591,950	0.0%	8.3%

OPERATING REPORT SUMMARY
EXPENDITURES
January 31, 2016

	<u>CURRENT MONTH</u>		<u>YEAR-TO-DATE</u>		<u>ANNUAL BUDGET</u>	<u>%</u>	<u>BENCH-MARK</u>
	<u>BUDGET</u>	<u>ACTUAL</u>	<u>BUDGET</u>	<u>ACTUAL</u>			
Hoffman Blvd Bridge Maintenance	8,333	-	8,333	-	100,000	0.0%	
EDA Series 1991 Project	157,154	102,988	157,154	102,988	1,885,850	5.5%	
Capital Improvements Fund	188,806	120,389	188,806	120,389	2,265,670	5.3%	
Capital Vehicle & Equipment Fund	75,073	15,657	75,073	15,657	900,870	1.7%	
Capital Replacement Fund	9,602	-	9,602	-	115,220	0.0%	
2015 Project Fund	100,000	-	100,000	-	1,200,000	0.0%	
Road Improvement Fund	549,556	-	549,556	-	6,594,670	0.0%	
TOTAL CAP. PROJECT FUNDS	1,088,523	239,034	1,088,523	239,034	13,062,280	1.8%	8.3%
Police Pension Fund	384,148	420,832	384,148	420,832	4,609,780	9.1%	
Fire Pension Fund	351,619	329,644	351,619	329,644	4,219,430	7.8%	
TOTAL TRUST FUNDS	735,768	750,476	735,768	750,476	8,829,210	8.5%	8.3%
TOTAL ALL FUNDS	9,304,359	6,156,893	9,304,359	6,156,893	120,697,240	5.1%	8.3%



Village of Hoffman Estates **Information Systems** Department

2016 JANUARY MONTHLY REPORT

Contents

SPS/GovQA Monthly Review	2
Technical Support, Hardware & Software Review	4
Project Activities	4
Total Work Orders by Priority by Month	6
Savings on Printer Repairs	9
System and Data Functions	9
Email Spam Report.....	10

SPS/GovQA Monthly Review

GovQA Mobile App Refresh

- Each year, we have the opportunity to update our GovQA mobile app to take advantage of all the programming improvements WebQA has produced in the previous year. Working with WebQA, presented the new features and the options available to General Government staff for evaluation and input. First, we determined how the mobile app could be modified to take advantage of the new features. Then we all worked together to test and tweak the changes were being implemented. Several issues had to be worked through and once we were satisfied with how it was working and the look of the app, it was push out to both stores at the last week in January. Each app store sent notifications of the availability of a new app version to anyone with the app already installed.

GovQA Citizen Support Portal Web Page Refresh

- WebQA has redesigned the web browser presentation of the Citizen Support Center. Worked with our WebQA Account Manager to review the new look and then coordinated the implementation of the new Citizen Support Center. It was necessary to update the VOHE website with new links for this update, and I worked with General Government to provide them the links and test them. The new Citizen Support Center went live at the end of January. This is a much cleaner and easy to navigate interface to their software.

PW GovQA Requests

- Continued development of new citizen-facing Public Works-related requests that are to be made available through the GovQA Citizen Support Center and mobile app. The first two are for dead animals on public property and for wood chip delivery requests. Completed work on these two request types, and they became available to the public on February 1, 2016.

FP 5.1/CP 9.1 Upgrade

- Kick-off meeting was held to lay the groundwork and responsibilities for the upgrade. At this time, we should have the new software installed for us by the beginning of March. At that time, testing will begin and training dates can be determined.

Cognos 10 Upgrade

- In the coming months, we will be transitioning from Cognos 8 to Cognos 10 for report writing from the SunGard databases. Cognos 10 was installed in our ASP environment the second week of January to enable us to test our existing reports with the newer version. There were some issues initially that had to be resolved before we could run any of our reports. Once these issues were resolved, we were able to begin testing reports against Cognos 10.

Other Projects and End User Support

- Created new reference table entries for 2016 for each Business Tax Type. Created 2016 Tax Returns for 147 businesses, resulting in 2064 new Tax Return records. These records are required for recording each month's Business Taxes.
- We had issues with our ASP connection several times during January. Worked with ASP support to identify and resolve each issue.
- Two printing issues surfaced in January that appear to be related to the ASP environment. Worked with ASP support to determine the cause and these issues recurred throughout the month and are not yet resolved.
- Created several new Cognos reports; two requested by Finance for Vendor transactions and for

employee attendance, and one requested by HR for Employee's Driver's License data.

- Developed a new GovQA report for the Village Clerk's Office, which they will use to evaluate the prior month's FOIA requests.
- Due to the changes to the WebQA Citizen Support Center, changes to the eGov web pages were needed for the new links to GovQA requests
- Discovered a programming issue with the Business License Penalty Process that prevented penalties from posting to past-due businesses. Worked with SunGard to determine the cause. In the meantime, a created a SQL script to post the penalties manually. We continue to research the issue that is causing the problem.
- SQL scripts were created and given to SPS to run to update data for RRL business license records to insert deadline dates and correct data.
- Participated in a WebQA New Release Webinar.
- In January, I was responsible for 61 new Track-It tickets, and all but 61 were resolved by months' end.

Technical Support, Hardware & Software Review

Project Activities

Project – Network Attached Storage

Installed and configured a new Network Attached Storage device to store back-ups of the Arbitrator 360 storage. The system that we replaced no longer met the storage requirements needed for current backup duties.

Project – Public Safety (Fire)

Began to test the viability of activating the WiFi capabilities on the Sierra devices installed in the Fire rigs and configuring the EMS tablets to utilize the connection for communication back to the Village's network.

Project – Public Safety (Police)

Awarded replacement of the core components of the Police Department building security system Current Technology Corporation Inc. (CTC). CTC will replace the server and storage components of the system as well as upgrade the current ONSSI client software with the MileStone software. We bridged the network to give Police staff the ability to view and burn the video footage from the desktops as opposed to a limited number of viewing stations. The replacement, testing and training of the system is expected to be completed in February.

Project – Scanning to Secure Department Folders at Village Hall

Scanning to Department folders was implemented on the first Color copier in January. This will provide a more secure method of scanning allowing only authorized users of Department folders to view scanned documents.

Technical Support, Hardware & Software Activities

- Completed reconfiguring and re-wiring of the server room.
- Set up iLo on all server for out of band access.
- Add and remove user accounts from Active Directory, Exchange and the telephone systems as needed.
- Setup, configuration and removal of equipment as needed.
- Applied necessary software updates as needed.
- Assisted Police and Fire personnel with device connectivity issues.
- Opened 224 help desk tickets.
- Closed 212 help desk tickets.
- Self Service Password Resets or Account Unlocks: 6
- Email passwords reset: 1
- SunGard passwords reset: 4
- Voicemail passwords reset: 1
- User accounts unlocked: 5
- Active Directory Password Resets: 1

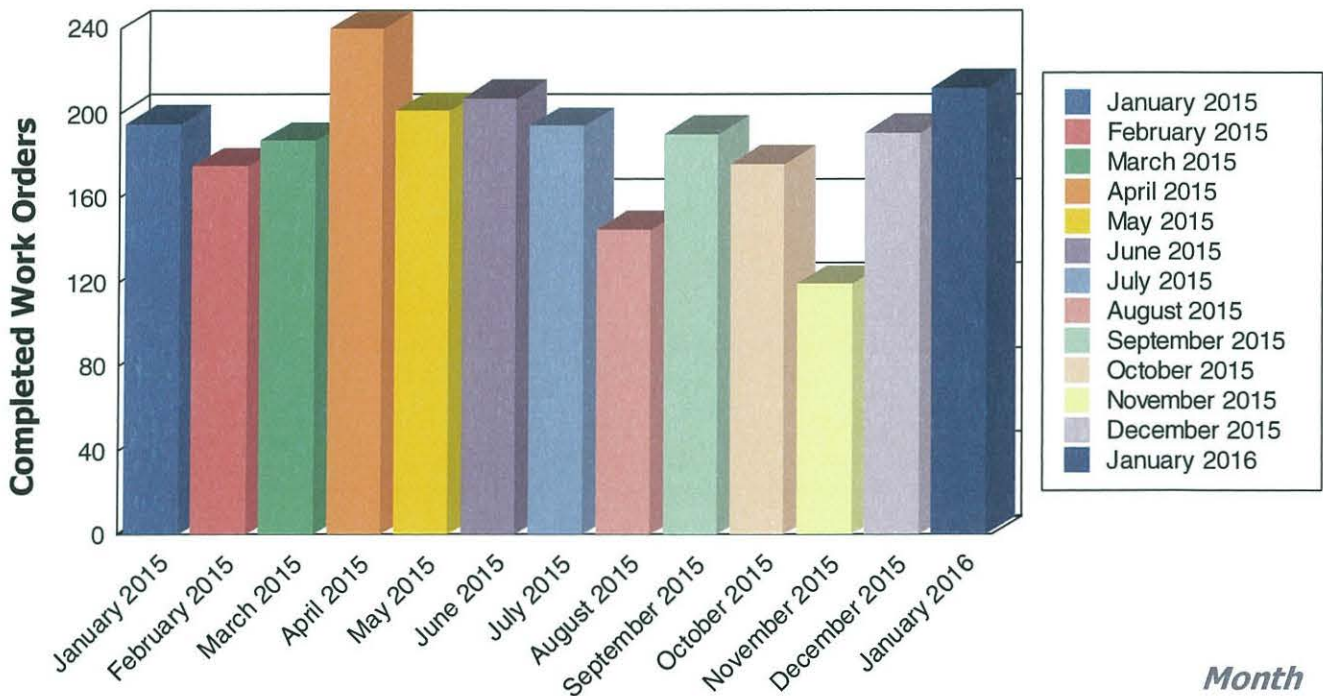
Miscellany

- Conducted interviews for the open GIS Administrator position
- We welcome Jake Houswerth to the ISDEPT team as the new P/T Technical Support Specialist.

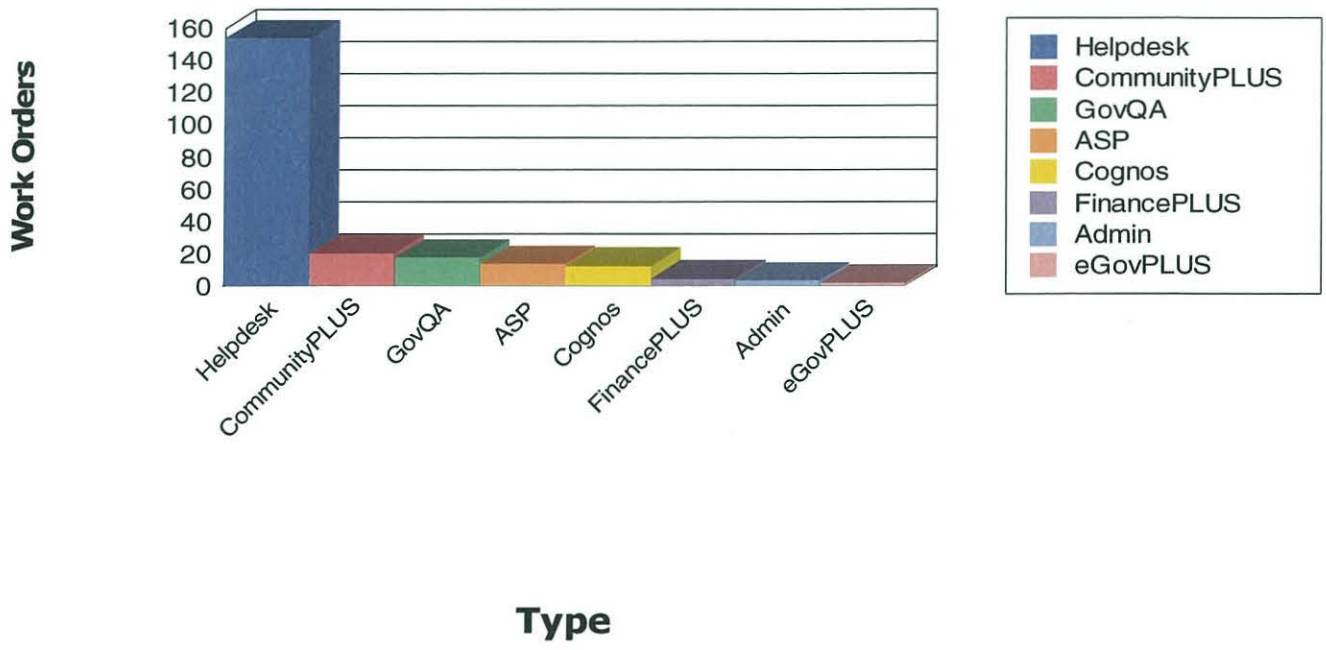
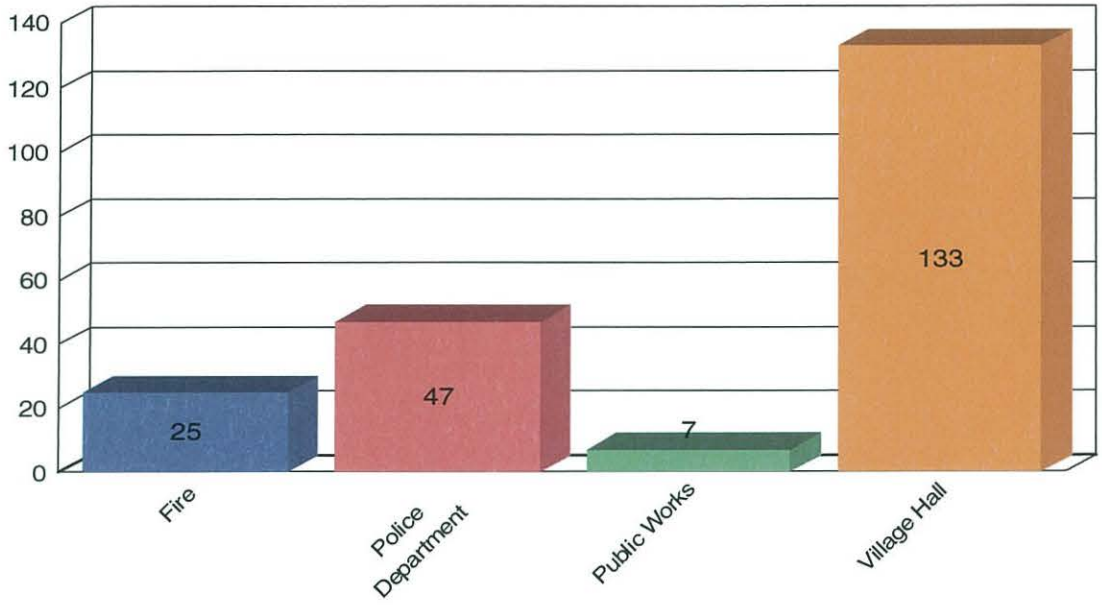
Total Work Orders by Priority by Month

Total Work Orders by Priority by Month

Month	1/2016
1 - Urgent	1
2 - High	5
3 - Medium	1
4 - Normal	188
Project	2
Scheduled Event	9
Vendor intervention required	18
Total for Month	224

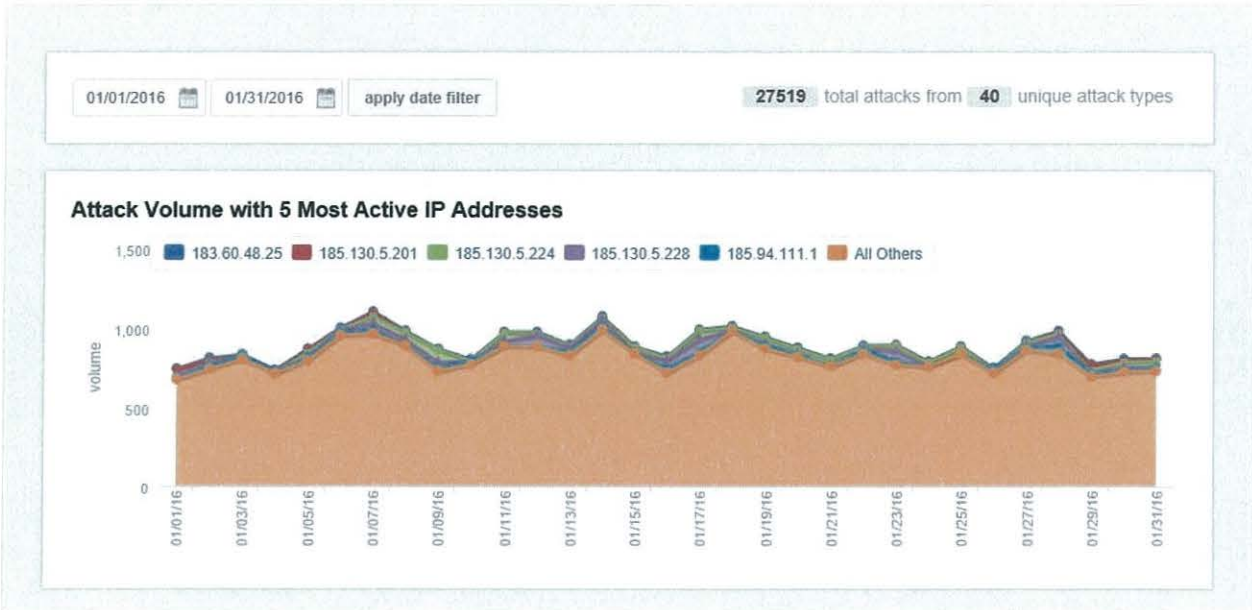


Completed Work Orders by Location



External parties attacked the Village network 27,519 times during the month of January.

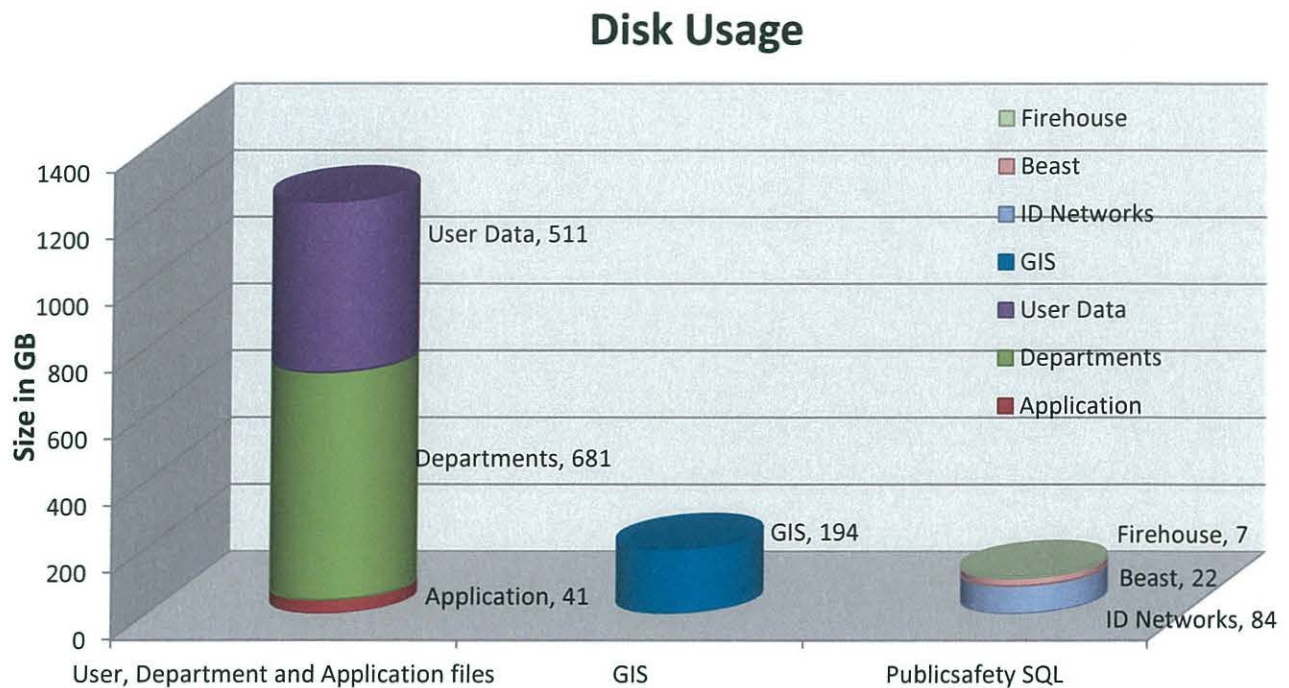
Activity Summary Reporting



Savings on Printer Repairs

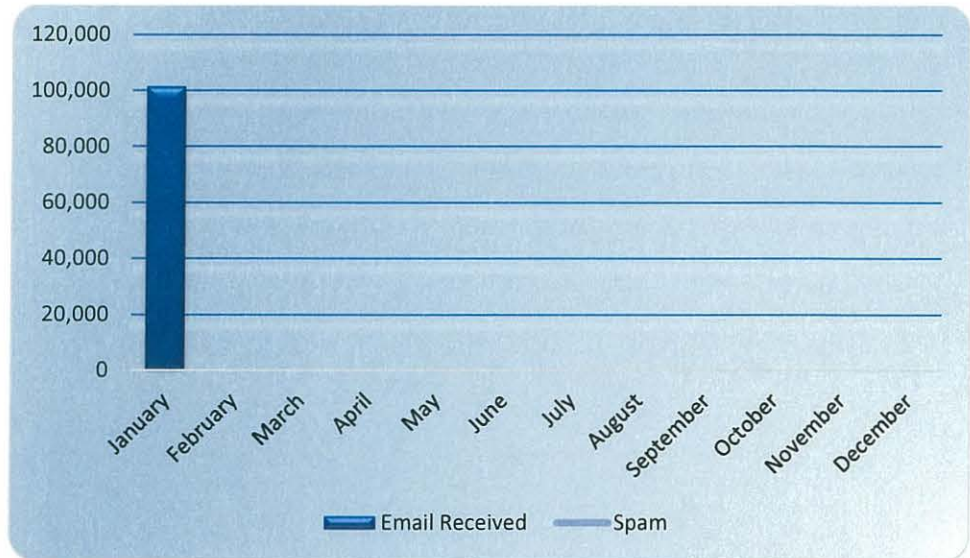
Since the beginning of the year Village of Hoffman Estates is enrolled in DID's Printer Sense program. One of the advantages of the program is included maintenance for our printers. In the month of January, we asked for two printer repairs and the cost associated with this repair totaled \$302.50 including parts and labor.

System and Data Functions



Email Spam Report

Month	Email Received	Spam	Percent Spam
January	101,437	30,719	30%
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			
Total	101,437	30,719	30%



Fred Besenhoffer, Director of Information Systems

VILLAGE OF HOFFMAN ESTATES

Memo

TO: Finance Committee
FROM: Mark Koplin, Assistant Village Manager-Development Services
RE: **OWNER'S REPRESENTATIVE MONTHLY REPORT - FEBRUARY 2016**
DATE: February 19, 2016

1. The December 2015 Financial Statement from the SCA showed that two of the department budgets had Actual Expenditures that exceeded the budgeted amounts. Article 7.3 of the Management Agreement allows Department Budgets to exceed by 10% so long as the overall budget is maintained (which it was).
 - ◆ The "Operations" Department exceeded budget by \$17,845 (2%) primarily due to utility costs.
 - ◆ Also, "Tech Services" Department exceeded budget, but only by \$4,666 (0.4%) due to scoreboard/ribbon board maintenance.
2. Extension of Levy agreement regarding food and beverage sales at the SCA was extended at the January 25, Village Board meeting.
3. Continued discussions related to the Naming Rights contract that expires in 2016.
4. Met with Public Works-Facilities and SCA staff to review any building related items and ongoing preventative maintenance efforts.
5. Obtained approval to declare old football turf as surplus and sell.
6. Review of monthly financial reports and staffing/operational costs.
7. Conducted weekly meetings with Ben Gibbs to discuss bookings, holds, and operational items.



Mark Koplin
Assistant Village Manager
Department of Development Services

Attachments

MAK/kr

cc: J. Norris
Ben Gibbs (Spectra Venue Management)

Sears Centre Arena
General Manager Update
 February 2016

Event Highlights	Notes
Feb 5-6: PCB Bull Riding Feb 12-14: Circus Feb 15: Mustangs Feb 24: Mayor's Breakfast Feb 26: Glory Kickboxing	
Finance Department	
General	Arena finished January financials. Arena is ahead of budget by \$19,747
Monthly Financial Statement	Building Event Revenue YTD: \$37,836
	Building Sponsor/Other Revenue YTD: \$14,833
	Building Expenses YTD: \$145,393
	Building Income YTD: (\$92,725) vs. YTD Budget (\$112,471)
Operations Department	
General	Working with United Center on purchasing half house drape, roof repair bids and various R&M items including PA system, exit alarm installation and foundation repair
Positions to Fill	N/A
Third Party Providers	Compiling bids for roof repair and foundation settlement repairs and reviewing with Village
Village Support	Roof and foundation issues
Events Department	
General	n/a
Positions to Fill	Event Manager
Marketing Department	
General	Handling marketing for Monster Truck, Bull Riding, Sesame Street Live, Chris Tomlin and Celtic Fest
Positions to Fill	Marketing Director to remain open.
Group Sales Department	
General	Group sales will be handled by a third party company.
Box Office Department	
General	N/A
Food & Beverage Department	
General	Upgraded Quest server (POS system) and looking at purchase of new POS tills
Premium Seating Department	
General	Initiated premium seating campaign and deploying sponsorship sales campaign to coincide with Chicago Bulls D League open house.
Positions to Fill	N/A
Sponsorship Department	
General	Concentrating on unsold categories including insurance, hospitals and liquor
Monthly Financial Statement	Corporate Sales: \$10,625
	Suites Sales: \$5,250
	Loge Sales: \$1,875
	Club Seat Sales: \$667
General	
Capital Improvements/Repairs	Consulting with engineer regarding foundation settling. Reviewing bids for new scoreboard.



2016 Event Announcement

What: D120 – Mundelein High School Graduation 2016

When:

Date	Start (incl. Load In)	End (incl. Load Out)	Event Space Description	Event Start Time(s)
05/15/16 (Sunday)	12:00PM	11:59PM	Arena	Faculty Arrive: 1:30PM DOORS: 2:00PM EVENT START: 3:00PM EVENT ENDS: 4:30PM BUILDING CLEAR: 6:00PM

Where: Sears Centre Arena

Tickets: Non-Ticketed

On Sale: NA

Marketing: Intra-District plus SCA Website & Marquee

Parking: NA

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Peggy Billittier
Administrative Assistant to Principal
PH: 847-949-2200x1230
E: pbillittier@d120.org

Notes: Comp: NA



2016 Event Announcement

What: D300 High School Graduations 2016

When:

Date	Start (incl. Load In)	End (incl. Load Out)	Event Space Description	Event Start Time(s)
5/21/16 (Saturday)	6:00AM	8:15PM	Arena	Faculty Arrives: 6:00AM DOORS – HAMPSHIRE : 9:00AM EVENT START: 10:00AM EVENT ENDS: 11:45AM BUILDING CLEAR: 12:15PM <hr/> DOORS – JACOBS : 1:00PM EVENT START: 2:00PM EVENT ENDS: 3:45PM BUILDING CLEAR: 4:15PM <hr/> DOORS- DUNDEE CROWN : 5:00PM EVENT START: 6:00PM EVENT END: 7:15PM BUILDING CLEAR: 8:15PM

Where: Sears Centre Arena

Tickets: Non-Ticketed

On Sale: NA

Marketing: Intra-District; SCA website & marquee

Parking: NA

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Diane Stearns
 Exec Asst to Associate Superintendent
 PH: 847-551-8310
 E: diane.stearns@d300.org

Notes: Comp: NA



2016 Event Announcement

What: D108- Lake Park High School Graduation 2016

When:

Date	Start (incl. Load In)	End (incl. Load Out)	Event Space Description	Event Start Time(s)
5/26/16 (Thursday)	4:30PM	9:00PM	Arena	Faculty Arrive: 4:30 PM Student Rehearsal: 5:00PM DOORS: 6:15PM EVENT START:7:00PM EVENT ENDS: 8:30PM Building Clear: 8:45PM Load Out Done: 9:00PM

Where: Sears Centre Arena

Tickets: Non-Ticketed

On Sale: NA

Marketing: Intra-District and SCA Website & Marquee

Parking: NA

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Jeff O'Connell
PH: (630)295-5430
E: joconnell@lphs.org

Notes: Comp: NA
(12)Lower Level Suites used by school



2016 Event Announcement

What: U- 46 High School Graduations 2016

When:

EVENT SPACE				
Date	Start (incl. Load In)	End (incl. Load Out)	Event Space Description	Event Start Time(s)
5/28/16 (Sat)	6:00AM	10:00PM	Arena	Streamwood: 8:00am S Elgin: 11:00am Elgin: 2:00pm Bartlett: 5:00pm Larkin: 8:00pm

Where: Sears Centre Arena

Tickets: Non-Ticketed

On Sale: NA

Marketing: Intra-District and SCA Website & Marquee

Parking: NA

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Janet Greshock
Secretary to Assistant Superintendent,
Secondary Education
P: 847-888-5000 x6071
E: JanetGreshock@u-46.org

Notes: Comp: NA
Lower Level Suite Package NOT available



2016 Event Announcement

What: D303 High School Graduations 2016

When:

Date	Start (incl. Load In)	End (incl. Load Out)	Event Space Description	Event Start Time(s)
05/29/16	8:00AM	8:00PM	Arena	Staff Arrives: Doors 1: 10:30 AM North Ceremony 12:00Noon Event Ends:1:30PM Building Clear:2:00 PM Doors 2:2:00PM East Ceremony 3:30PM Event Ends: 5:00PM Building Clear: 5:30pm

Where: Sears Centre Arena

Tickets: Non-Ticketed

On Sale: NA

Marketing: Intra-District and SCA Website & Marquee

Parking: NA

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Jean Cabel, East High School

P: 331.228.6638

E: jean.cabel@d303.org

John Peters, North High School

E: john.peters@d303.org

Notes: Comp: NA

Lower Level Suite Package NOT available



2016 Event Announcement

What: D125 (Adlai Stevenson) High School Graduation 2016

When:

Date	Start (incl. Load In)	End (incl. Load Out)	Event Space Description	Event Start Time(s)
6/02/16 (Thursday)	12:00PM	11:59PM	Arena	Faculty Arrive: 12:00PM DOORS: 5:30PM EVENT START:7:00PM EVENT ENDS: 9:30PM Building Clear: 10:00PM Load Out Done: 11:59P

Where: Sears Centre Arena

Tickets: Non-Ticketed

On Sale: NA

Marketing: Intra-District and SCA Website &Marquee

Parking: NA

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Ted Goergen
Adlai Stevenson High School
PH: 847-415-4461
Email: tgoergen@d125.org

Notes: Comp: NA
Lower Level Suite Package NOT available



2016 Event Announcement

What: D128 (Libertyville) High School Graduation 2016

When:

EVENT SPACE				
Date	Start (incl. Load In)	End (incl. Load Out)	Event Space Description	Event Start Time(s)
6/03/16 (Friday)	12:00PM	11:59PM	Arena	Faculty Arrive: 12:00PM DOORS: 6:00PM EVENT START: 7:00PM EVENT ENDS: 9:30PM

Where: Sears Centre Arena

Tickets: Non-Ticketed

On Sale: NA

Marketing: Intra-District and SCA Website & Marquee

Parking: NA

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Sandra Kruckman
Principal's Secretary
PH: 847-327-7002
E: sandra.kruckman@d128.org

Notes: Comp: NA
Lower Level Suite Package NOT available



2016 Event Announcement

What: D211 High School Graduations 2016

When:

Date	Start (incl. Load In)	End (incl. Load Out)	Event Space Description	Event Start Time(s)
06/05/16 (Sunday)	8:00AM	9:00PM	Arena	Fremd HS 11:00AM Schaumburg HS 2:30PM Conant HS 6:00PM

Where: Sears Centre Arena

Tickets: Non-Ticketed

On Sale: NA

Marketing: Intra-District and SCA Website & Marquee

Parking: NA

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Augustino Fontanetta, Director of Athletics
D211
PH: 847-755-6770
E: afontanetta@d211.org

Notes: Comp: NA
Lower Level Suite Package NOT available



Event Announcement

What: YANNI

When:

Date	Start	Event Start Time(s)
Saturday 7/30/16		DOORS: 6:30PM EVENT START: 7:30PM EVENT END: 10:00PM

Where: Sears Centre Arena

Tickets: Ticketed:
Prices - TBA

On Sale: *TBA*

Marketing: Website & Marquee

Parking: \$20

Levy: Concessions

SCA Event Mgr: Erin Sweeney

Event Contact: Andrew Kaplan – JAM Productions

Comps: Yes

Notes: Tickets prices and on sale date and time to be announced later, per tour/promoter.

ACCOUNTING USE ONLY: Royalties Calculation E-time Coding Event Coding Sheet