



**COMMITTEE OF THE WHOLE MEETING  
MONDAY, OCTOBER 16, 2017  
NORTH AURORA VILLAGE HALL - 25 E. STATE ST.  
(Immediately following the Village Board Meeting)**

**AGENDA**

**CALL TO ORDER**

**ROLL CALL**

**AUDIENCE COMMENTS**

**TRUSTEE COMMENTS**

**DISCUSSION**

1. 2017 Property Tax Levy and Estimate
2. Overlook Gazebo Rentals
3. Community Sign Discussion
4. Verizon Lease Agreement
5. Snow and Ice Removal Proposals

**EXECUTIVE SESSION**

**ADJOURN**

Initials SB

# Village of North Aurora Memorandum



**To:** Village President and Board of Trustees

**From:** Bill Hannah, Finance Director

**CC:** Steven Bosco, Village Administrator

**Date:** October 4, 2017

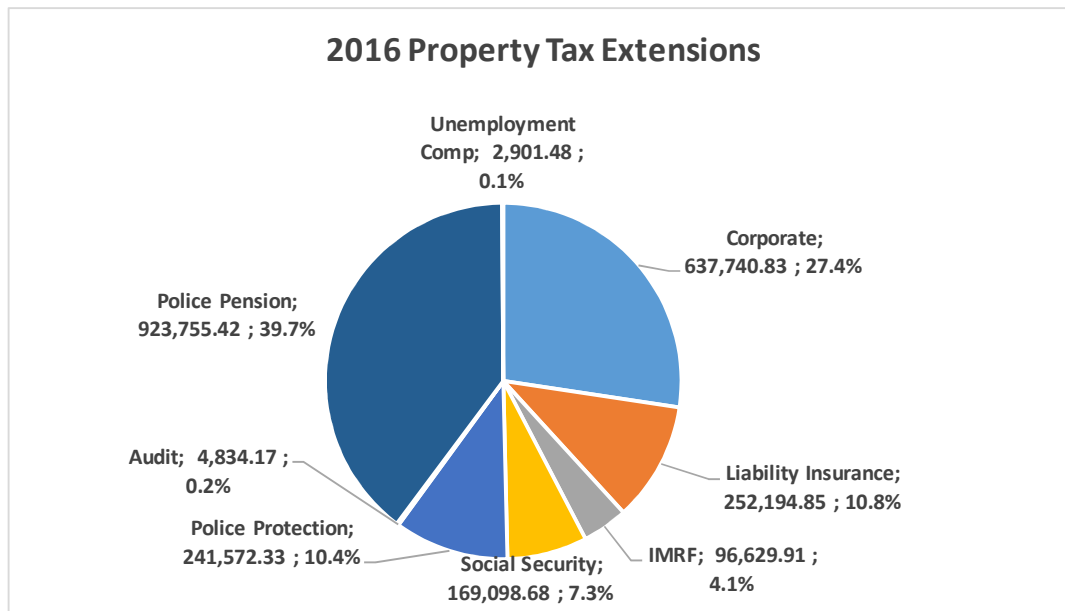
**RE:** Estimate of Tax Levy for Purposes of Truth in Taxation

Attached is a summary of information for discussion on the proposed property tax levy for 2017. Village Board approval of an estimate is required for the **November 6<sup>th</sup>** Village Board meeting. Actual Village Board approval of all regular and special service area tax levies is scheduled for **December 4<sup>th</sup>**.

## Summary

Property taxes represent about 19% of all General Fund revenues and are a key revenue source to fund Village services and pension obligations, especially given the fluctuations the Village has experienced in sales tax and income tax revenue and the increasing pension obligations the Village must fund. Current State law restricts any increases in total property taxes extended to the rate of inflation as described below. This inflation allowance can not be deferred to a future year.

To recap, the total 2016 property tax extensions received during calendar 2017 were \$2,289,398 (excluding debt). This was broken out by specific levies as follows:



The Village is a non-home rule municipality that is also subject to the Property Tax Extension Limitation Law (PTELL) as dictated by the State. The statutes limit the increase in the total amount of property taxes that can be extended (for capped funds) to the **annual change in the applicable Consumer Price Index which for this levy year is 2.1%**, or 5%, whichever is less.

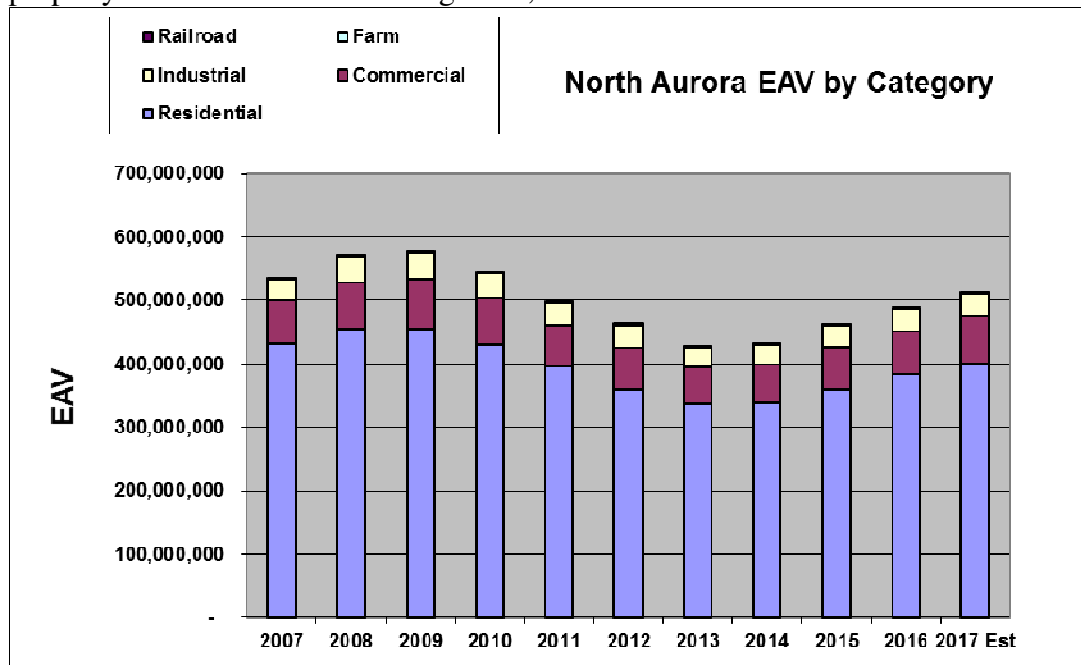
In addition, the Village is allowed to “capture” the increase in the equalized assessed valuation (EAV) of the Village that is attributable to new construction. In order to “capture” this new growth within its tax base, the Village has typically passed a levy higher than what is expected to be extended by the County (**through the CPI and new construction increases**) in order to ensure that the allowable increase due to new construction of residential, commercial and industrial growth are fully realized.

The following summarizes the estimated calculations for this year’s potential extensions for consideration by the Village:

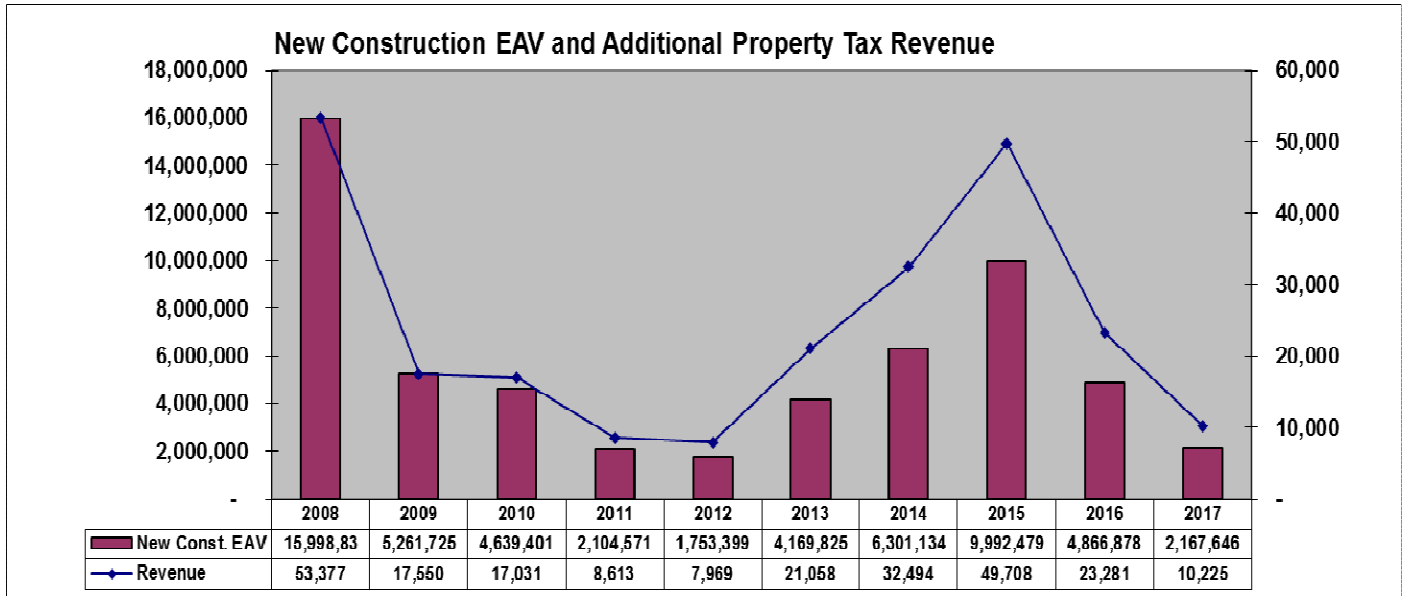
Last Year’s Total Property Tax Extensions:	\$2,328,728
Est. Increase Due to Inflation (2.1%)	\$ 48,903
Est. Increase Due to New Construction:	<u>\$ 10,225</u>
<b>Total Est. Available Extensions:</b>	<b>\$2,387,856</b>

#### **EAV Change and New Construction**

The 2017 taxable EAV is currently estimated to increase 3.98% to \$506,189,042. The 2017 estimate is based on preliminary data from the County Clerk’s office with an allowance for reductions based on future appeals. This number will change as final appeals and adjustments are made. The 2017 EAV numbers appear to show a strong increase in current property of about 3.5%. The 2017 estimated EAV is based on property sales that occurred during 2014, 2015 and 2016.

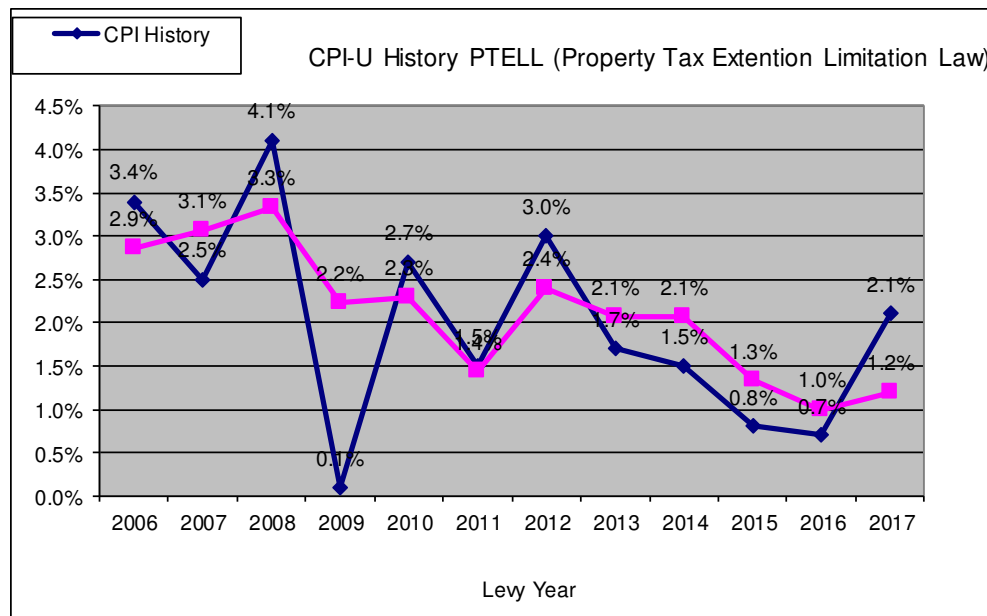


The 2017 estimated EAV includes an estimated \$2,167,646 in new construction EAV. The following chart shows the amount of new construction EAV over the last 10 years and the resulting additional property tax revenue available made available as a result.



### Application of Consumer Price Index

The index used to determine the increase is the CPI-U or the Consumer Price Index for All Urban Consumers. For the December 2017 levy payable in 2018 this increase is 2.1%. Section 18-185 of the Property Tax Code defines “extension limitation” as “...the lesser of 5% or the percentage increase in the Consumer Price Index during the 12-month calendar year preceding the levy year...” This change was measured from December 2015 to December 2016.



### **SSA's**

Last year the Village levied the following amounts for the various SSA's for the 2016 tax levy year.

1. Waterford Oaks	\$ 3,550 (Mowing)
2. Timber Oaks	\$ 2,575 (Mowing)
3. Pinecreek III	\$ 720 (Mowing)
4. Willow Lakes	\$ 465 (Mowing)
5. North Aurora Towne Center	\$15,000 (Wetland/Basin Maint)
6. Randall Highlands (SF)	\$ 711 (Common Area Maint)
7. Randall Highlands (MF)	\$ 969 (Common Area Maint)
8. Randall Highlands (CM)	\$ 820 (Common Area Maint)

Staff will be evaluating the SSA amounts necessary to levy over the next several weeks and bring more information to the Board for discussion. State law now requires that the Village hold a separate public hearing if an SSA levy is anticipated to increase more than 5% from last year, or if an inactive SSA is planned on being activated.

### **Police Pension Valuation**

We have also included for discussion a copy of the recently completed May 31, 2017 Police Pension Fund valuation. The valuation was completed by Foster and Foster. The valuation incorporates the new information required to be included and disclosed per the new GASB Statement 67 and 68 reporting standards including statement of changes in the net pension liability, changes in the discount rate affecting the total net pension liability, and other information.

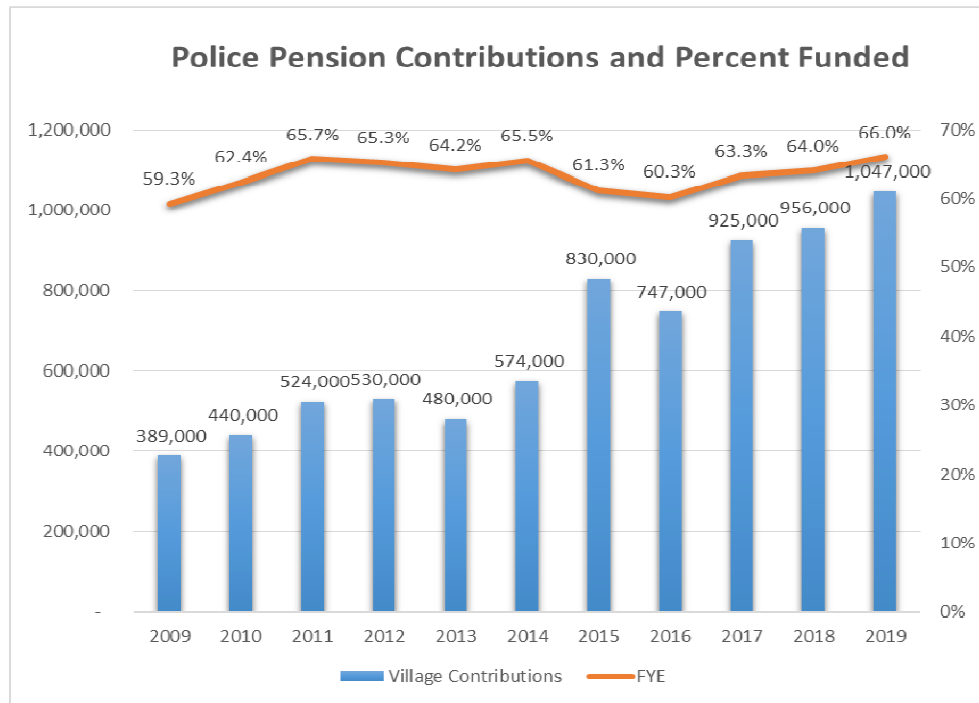
The attached valuation incorporates the recommendations of the Village's Finance Committee's discussion on July 10<sup>th</sup> to modify certain assumptions in the valuation. Those recommendations were to:

1. Lower the payroll growth rate assumption from 5.0% to 3.0%
2. Change the salary increase assumption from a flat 5.0% per year to a table of rates varying by service.

These changes were primarily the reason for the increase in the Village's contribution determination from \$955,822 to \$1,046,968 for the 2017 tax levy. During the last year investment experience for the fund was a positive 9.46% versus the assumption of 7.0% and salary increases were 2.05% versus the assumption of 5.0%. Due to the smoothing of gains and losses over a five-year period one-fifth of the investment gain is recognized in the current year. The actuarial investment return for the fund for the year was then calculated to be 6.66%.

The valuation continues the Board Pension Funding Policy (adopted in 2011) of a 100% funding goal with a remaining 25 year closed amortization period. This is higher than the State minimums which incorporate a 90% funding goal. The comparative State minimum for funding would have been \$909,490. The Net Position as a Percentage of the Total Pension Liability went from 58.48% to 63.05%. The total pension liability was \$24,230,524 and the Fiduciary net Position was \$15,908,889 creating a Net Pension Liability of \$9,321,635.

The following chart and table shows the total employer contributions made by the Village since 2009 as well as the additional contributions made over and above the required amounts over the last four years. The Village has made additional contributions to the Police Pension Fund over the last four fiscal years and will again evaluate the possibility of doing that again in the current fiscal year later in the year.



<b>FYE</b>	<b>Actuarial Determined Contributions</b>	<b>Additional Contributions</b>	<b>Total Contributions</b>	<b>Percent Funded</b>
2009	389,000	-	389,000	59.25%
2010	440,000	-	440,000	62.37%
2011	524,000	-	524,000	65.72%
2012	530,000	-	530,000	65.26%
2013	480,000	-	480,000	64.16%
2014	524,000	50,000	574,000	65.50%
2015	580,000	250,000	830,000	61.29%
2016	597,000	150,000	747,000	60.25%
2017	800,000	125,000	925,000	63.30%
2018	956,000	-	956,000	64.00%
2019	1,047,000	-	1,047,000	66.00%

### **Library**

The Messenger Library approved its levy amount earlier in the month. The amount of \$1,740,221 allows the Library to also realize all of the amounts provided by CPI and new construction for the upcoming year.

### **Summary**

If the Village adopts a levy which when extended by the County after complying with PTELL law realizes all of the allowances provided by CPI and new construction the following table would illustrate what the estimated property tax extensions ultimately received by each Fund would be:

	<b><u>2015 Extensions</u></b>	<b><u>2016 Extensions</u></b>	<b><u>2017 Est Extensions</u></b>	<b><u>Percent Change</u></b>
General Fund	1,261,601.25	1,149,875.92	1,101,337.86	-4.22
Police Pension Fund	779,366.43	923,755.42	1,020,443.14	10.47%
Insurance Fund	248,430.41	255,096.33	266,075.43	4.30%
Total	<b><u>2,289,398.09</u></b>	<b><u>2,328,767.67</u></b>	<b><u>2,387,856.43</u></b>	2.54%

As the above chart shows, the estimated total increase in property tax extensions that the Village can potentially realize next year is \$59,128. With the increased allocation necessary for police pensions, the net amount remaining in the General Fund to fund Village operations would decrease by \$48,538 in this scenario. Attached for this discussion are illustrative tables showing the impact of adopting a total levy of \$2,450,000 in order to ensure that all allowable increases are captured and along with any unanticipated new construction numbers that may come in.

Under the proposed levy above the average home would see their Village portion of their tax bill increase by \$4 for the year, not accounting for variations in a home's assessed value.

As a reminder, proposals have been made at the State level that would attempt to "freeze" property tax extensions for a certain number of years. It is unknown at this time if any of those proposals might be enacted into law in the future but the most commonly cited method would be to set the CPI factor at 0% for a certain number of years. The Village is also realizing a 10% decrease in income tax revenue for this year and it is possible that this decrease may be made permanent by the State in future years.

**Village of North Aurora**  
**Preliminary Calculations for 2017 Property Tax Levy**

<b><u>Taxable Rate Setting EAV Estimations</u></b>		<b><u>Percent Increase</u></b>
Total 2016 EAV	486,825,058.00	
Estimated 2017 New Construction	2,167,646.00	0.45%
Change in 2017 Current EAV/Other	<u>17,196,338.00</u>	3.53%
<b>Total 2017 Estimated Taxable EAV</b>	<b><u>506,189,042.00</u></b>	3.98%

	<b><u>Total Property Taxes Subject to Cap</u></b>	<b><u>Village Debt Service Not Subject to Cap</u></b>	<b><u>TOTAL VILLAGE</u></b>	<b><u>Messenger Public Library</u></b>	<b><u>TOTAL VILLAGE AND LIBRARY</u></b>
2016 Property Tax Extensions	2,328,727.67	539,718.60	<b>2,868,446.27</b>	1,689,209.24	<b>4,557,655.51</b>
Est. Increase Due to CPI of 2.10%	48,903.28	-	<b>48,903.28</b>	35,473.39	<b>84,376.68</b>
2016 Property Tax Extension After Applicable CPI Increase of 2.10%	2,377,630.95	542,307.38	<b>2,919,938.33</b>	1,724,682.63	<b>4,644,620.96</b>
Additional Est. Extensions Due to New Construction (Estimated)	10,225.48	-	<b>10,225.48</b>	7,417.34	<b>17,642.82</b>
<b>TOTAL 2017 Tax Extensions (Preliminary Estimate)</b>	<b>2,387,856.43</b>	<b>542,307.38</b>	<b>2,930,163.81</b>	<b>1,732,099.97</b>	<b>4,662,263.78</b>
2016 Property Tax Rate	0.478350	0.110865	<b>0.589215</b>	0.347020	<b>0.936235</b>
2017 Property Tax Rate (Estimated)	0.471732	0.107135	<b>0.578867</b>	0.342184	<b>0.921051</b>
Percent Change in Property Tax Rate	-1.38%	-3.36%	<b>-1.76%</b>	-1.39%	<b>-1.62%</b>
Proposed 2017 Property Tax Levy	2,450,000.00	536,938.00	<b>2,986,938.00</b>	1,740,221.00	<b>4,727,159.00</b>
Additional Levy "Buffer" to Ensure Capture of New Construction	2.60%			0.47%	
Percent Increase 2016 Proposed Levy Versus Last Year's 2015 Extensions	5.21%	-0.52%	<b>4.13%</b>	3.02%	<b>3.72%</b>



**Village of North Aurora**  
**Summary of Levy Amounts for 2017**

<b><u>Village and Library Levies</u></b>	<b><u>2016 Levy</u></b>	<b><u>2017 Levy</u></b>
Corporate	660,000.00	600,000.00
Liability Insurance	261,000.00	270,000.00
IMRF	100,000.00	100,000.00
Social Security	175,000.00	175,000.00
Police Protection	250,000.00	250,000.00
Audit	5,000.00	5,000.00
Police Pension	956,000.00	1,047,000.00
Unemployment Comp	3,000.00	3,000.00
<b>Total Village (Capped)</b>	<b><u>2,410,000.00</u></b>	<b><u>2,450,000.00</u></b>

Library Debt Service	534,375.00	536,938.00
<b>Total Village (Noncapped)</b>	<b><u>534,375.00</u></b>	<b><u>536,938.00</u></b>

Messenger Library	1,745,981.00	1,740,221.00
<b>Total Library (Capped)</b>	<b><u>1,745,981.00</u></b>	<b><u>1,740,221.00</u></b>

<b><u>Special Service Area Levies</u></b>	<b>All To Be Determined</b>	
	<b><u>2016 Levy</u></b>	<b><u>2017 Levy</u></b>
3 Silver Trails II	-	-
4 Waterford Oaks	3,550.00	-
5 Woodland Lakes	-	-
10 Hartfield	-	-
7 Oak Hill	-	-
8 Timber Oaks	2,575.00	-
9 Pinecreek (III)	720.00	-
12 Silver Trails III	-	-
11 Willow Lakes	465.00	-
13 Banbury Ridge Townhomes	-	-
14 Orchard Crossing	-	-
15 Chesterfield Townhomes	-	-
16 Chesterfield	-	-
17 Banbury Ridge	-	-
18 Orchard Estates	-	-
19 Banbury Grove	-	-
20 Miradoor	-	-
21 Tanner Trails	-	-
22 Remington Landings	-	-
23 Mooselake Estates	-	-
24 Mirador North	-	-
25 Randall Commons 1	-	-
26 Randall Commons 2	-	-
27 Orchard Commerce	-	-
28 Williard's Corner	-	-
29 Windstone Subdivision	-	-
30 Lake Run Estates	-	-
31 Oak Creek	-	-
32 North Aurora Towne (Retention)	15,000.00	-
33 Randall Highlands (S-F)	711.00	-
34 Randall Highlands (M-F)	969.00	-
35 Randall Highlands (CM)	820.00	-
36 North Aurora Towne (Parkway)	-	-
37 Riverwoods - Common Areas	-	-
38 Riverwoods - Railroad	-	-
39 Randall Square	-	-
40 Orchard Commons	-	-
41 Randall Road Commercial	-	-
	<b><u>22,310.00</u></b>	<b><u>-</u></b>

VILLAGE OF NORTH AURORA  
POLICE PENSION FUND

ACTUARIAL VALUATION  
AS OF JUNE 1, 2017

CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDING MAY 31, 2019

GASB 67/68 DISCLOSURE INFORMATION  
AS OF MAY 31, 2017

August 16, 2017

Village of North Aurora  
c/o Bill Hannah, Finance Director  
25 E. State St.  
North Aurora, IL 60542

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68) – Village of North Aurora Police Pension Fund

Dear Mr. Hannah:

We are pleased to present to the Village this report of the annual actuarial valuation of the Village of North Aurora Police Pension Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and produce significantly different results.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Article 4, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as approved by the City, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the Village, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in the GASB results are based on an actuarial valuation performed as of the valuation date.

Certain schedules should include a 10-year history of information. As provided for in GASB Statements No. 67 and No. 68, this historical information is only presented for the years in which the information was measured. This conforms to the requirements of GASB Statements No. 67 and No. 68.


The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Village of North Aurora, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Village of North Aurora Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By:   
Jason L. Franken  
Enrolled Actuary #17-6888

JLF/lke  
Enclosures

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## SUMMARY OF REPORT

The regular annual actuarial valuation of the Village of North Aurora Police Pension Fund, performed as of June 1, 2017, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended May 31, 2019.

The contribution requirements, compared with those set forth in the June 1, 2016 actuarial report, are as follows:

Valuation Date	6/1/2017	6/1/2016
Applicable to Fiscal Year Ending	<u>5/31/2019</u>	<u>5/31/2018</u>
Total Required Contribution	\$1,290,169	\$1,208,097
% of Projected Annual Payroll	52.7%	47.4%
Member Contributions (Est.)	243,201	252,275
% of Projected Annual Payroll	9.9%	9.9%
Village Required Contribution	1,046,968	955,822
% of Projected Annual Payroll	42.8%	37.5%


As you can see, the Total Required Contribution shows an increase when compared to the results determined in the June 1, 2016 actuarial valuation report. Reasons for the increase include a change of actuarial assumptions, an increase in the UAAL amortization payment due to the prior year's payroll growth assumption of 5.00% per year, and unfavorable experience realized by the plan during the year. A detailed breakdown of the reason for the increase in contribution requirement since the prior report can be found on page 16.

Unfavorable plan experience resulted from more retirement activity than expected, unfavorable turnover experience, no inactive deaths, and a 6.66% investment return (Actuarial Asset basis) which fell short of the 7.00% assumption. These losses were partially offset by the sole significant source of favorable experience, which was an average salary increase that was lower than assumed.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees in order to discuss the Report and answer any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By:   
\_\_\_\_\_  
Jason L. Franken, FSA, EA, MAAA

### Plan Changes Since Prior Valuation

No plan changes have occurred since the prior valuation.

### Actuarial Assumption/Method Changes Since Prior Valuation

The following assumption changes were made since the prior valuation:

1. The payroll growth rate assumption was reduced from 5.00% to 3.00%.
2. The salary increase assumption was changed from a flat rate of 5.00% per year to a table of rates varying by service.

There were no method changes since the prior valuation.



# COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>6/1/2017</u>	Old Assump <u>6/1/2017</u>	<u>6/1/2016</u>
A. Participant Data			
Number Included			
Actives	28	28	29
Service Retirees	12	12	11
Beneficiaries	1	1	1
Disability Retirees	0	0	0
Terminated Vested	<u>3</u>	<u>3</u>	<u>3</u>
Total	44	44	44
Total Annual Payroll	\$2,454,099	\$2,454,099	\$2,545,665
Payroll Under Assumed Ret. Age	2,454,099	2,454,099	2,545,665
Annual Rate of Payments to:			
Service Retirees	785,200	785,200	655,794
Beneficiaries	42,508	42,508	42,508
Disability Retirees	0	0	0
Terminated Vested	60,775	60,775	60,775
B. Assets			
Actuarial Value	16,216,475	16,216,475	14,761,153
Market Value	15,908,889	15,908,889	14,084,700
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	14,627,575	15,368,002	15,988,167
Disability Benefits	1,502,116	1,534,655	1,586,127
Death Benefits	291,487	299,780	313,695
Vested Benefits	1,845,099	1,872,468	1,894,990
Service Retirees	11,870,115	11,870,115	9,702,968
Beneficiaries	369,980	369,980	378,965
Disability Retirees	0	0	0
Terminated Vested	<u>776,717</u>	<u>776,717</u>	<u>724,927</u>
Total	31,283,089	32,091,717	30,589,839

C. Liabilities - (Continued)	New Assump <u>6/1/2017</u>	Old Assump <u>6/1/2017</u>	<u>6/1/2016</u>
Present Value of Future Salaries	24,936,629	24,892,237	25,970,117
Present Value of Future Member Contributions	2,471,220	2,466,821	2,573,639
Normal Cost (Retirement)	429,519	434,863	453,199
Normal Cost (Disability)	84,125	83,160	85,733
Normal Cost (Death)	12,564	12,331	12,894
Normal Cost (Vesting)	<u>85,049</u>	<u>83,237</u>	<u>85,284</u>
Total Normal Cost	611,257	613,591	637,110
Present Value of Future Normal Costs	5,666,565	5,752,308	6,090,267
Accrued Liability (Retirement)	10,455,570	11,088,145	11,470,127
Accrued Liability (Disability)	680,691	718,766	730,327
Accrued Liability (Death)	189,481	198,444	204,986
Accrued Liability (Vesting)	1,273,970	1,317,242	1,287,272
Accrued Liability (Inactives)	<u>13,016,812</u>	<u>13,016,812</u>	<u>10,806,860</u>
Total Actuarial Accrued Liability	25,616,524	26,339,409	24,499,572
Unfunded Actuarial Accrued Liability (UAAL)	9,400,049	10,122,934	9,738,419
Funded Ratio (AVA / AL)	63.3%	61.6%	60.3%

	New Assump <u>6/1/2017</u>	Old Assump <u>6/1/2017</u>	<u>6/1/2016</u>
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	13,016,812	13,016,812	10,806,860
Actives	2,292,633	2,292,633	2,901,820
Member Contributions	<u>2,453,705</u>	<u>2,453,705</u>	<u>2,396,635</u>
Total	17,763,150	17,763,150	16,105,315
Non-vested Accrued Benefits	<u>1,039,397</u>	<u>1,039,397</u>	<u>929,536</u>
Total Present Value Accrued Benefits	18,802,547	18,802,547	17,034,851
Funded Ratio (MVA / PVAB)	84.6%	84.6%	82.7%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	0	0	
New Accrued Benefits	0	1,314,296	
Benefits Paid	0	(714,048)	
Interest	0	1,167,448	
Other	<u>0</u>	<u>0</u>	
Total	0	1,767,696	

Valuation Date	New Assump 6/1/2017	Old Assump 6/1/2017	6/1/2016
Applicable to Fiscal Year Ending	<u>5/31/2019</u>	<u>5/31/2019</u>	<u>5/31/2018</u>

#### E. Pension Cost

Normal Cost (with interest)	\$654,045	\$656,542	\$681,708
% of Total Annual Payroll <sup>1</sup>	26.7	26.8	26.8
Administrative Expenses (with interest)	8,661	8,661	8,480
% of Total Annual Payroll <sup>1</sup>	0.4	0.4	0.3
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 24 years (as of 6/1/2017, with interest)	627,463	555,926	517,909
% of Total Annual Payroll <sup>1</sup>	25.6	22.7	20.3
Total Required Contribution	1,290,169	1,221,129	1,208,097
% of Total Annual Payroll <sup>1</sup>	52.7	49.9	47.4
Expected Member Contributions	243,201	243,201	252,275
% of Total Annual Payroll <sup>1</sup>	9.9	9.9	9.9
Expected Village Contribution	1,046,968	977,928	955,822
% of Total Annual Payroll <sup>1</sup>	42.8	40.0	37.5

#### F. Past Contributions

Plan Years Ending:	<u>5/31/2017</u>
Total Required Contribution	1,052,799
Village Requirement	799,095
Actual Contributions Made:	
Members (excluding buyback)	253,704
Village	<u>925,000</u>
Total	1,178,704

G. Net Actuarial (Gain)/Loss	240,225
------------------------------	---------

<sup>1</sup> Contributions developed as of 6/1/2017 are expressed as a percentage of total annual payroll at 6/1/2017 of \$2,454,099.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Accrued Liability</u>
2017	9,400,049
2018	9,430,589
2019	9,444,444
2025	9,069,866
2030	7,886,725
2036	4,771,139
2041	0

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases

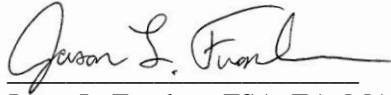
		<u>Actual</u>	<u>Assumed</u>
Year Ended	5/31/2017	2.05%	5.00%
Year Ended	5/31/2016	7.61%	5.00%
Year Ended	5/31/2015	3.70%	5.50%

(ii) 3 Year Comparison of Investment Return on Actuarial Value

		<u>Actual</u>	<u>Assumed</u>
Year Ended	5/31/2017	6.66%	7.00%
Year Ended	5/31/2016	5.77%	7.00%
Year Ended	5/31/2015	N/A	N/A

## STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of the Illinois Pension Code and adhere to the Actuarial Standards of Practice. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

A handwritten signature in black ink, reading "Jason L. Franken". The signature is fluid and cursive, with a horizontal line extending from the end of the name.

Jason L. Franken, FSA, EA, MAAA  
Enrolled Actuary #17-6888

# DEVELOPMENT OF JUNE 1, 2017 AMORTIZATION PAYMENT

(1) Unfunded Actuarial Accrued Liability as of June 1, 2016	\$9,738,419
(2) Sponsor Normal Cost developed as of June 1, 2016	384,835
(3) Expected administrative expenses for the year ended May 31, 2017	7,925
(4) Expected interest on (1), (2) and (3)	708,905
(5) Sponsor contributions to the System during the year ended May 31, 2017	925,000
(6) Expected interest on (5)	32,375
(7) Expected Unfunded Actuarial Accrued Liability as of May 31, 2017, (1)+(2)+(3)+(4)-(5)-(6)	9,882,709
(8) Change to UAAL due to Assumption Change	(722,885)
(9) Change to UAAL due to Actuarial (Gain)/Loss	240,225
(10) Unfunded Accrued Liability as of June 1, 2017	9,400,049
(11) UAAL Subject to Amortization (100% AAL less Actuarial Assets)	9,400,049

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>6/1/2017</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
6/1/2017	24	9,400,049	586,414

## DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of June 1, 2016	\$9,738,419
(2) Expected UAAL as of June 1, 2017	9,882,709
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	50,500
Salary Increases	(438,103)
Active Decrements	551,959
Inactive Mortality	83,744
Other	<u>(7,875)</u>
Increase in UAAL due to (Gain)/Loss	240,225
Assumption Changes	<u>(722,885)</u>
(4) Actual UAAL as of June 1, 2017	\$9,400,049



## RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of June 1, 2016	\$955,822
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	(25,166)
Change in Assumed Administrative Expense	181
Investment Return (Actuarial Asset Basis)	3,371
Salary Increases	(29,244)
Active Decrements	36,844
Inactive Mortality	5,590
Contributions (More) or Less than Required	(8,129)
Increase in Amortization Payment Due to Payroll Growth Assumption	24,201
Change in Expected Member Contributions	9,074
Assumption Change	69,040
Funding Lag	10,120
Other	<u>(4,736)</u>
Total Change in Contribution	91,146
(3) Contribution Determined as of June 1, 2017	\$1,046,968

## STATUTORY MINIMUM REQUIRED CONTRIBUTION

Contribution requirements shown on this page are calculated according to statutory minimum funding requirements of the Illinois Pension Code. We do not believe this method is sufficient to fund future benefits; as such, we recommend funding according to the contributions developed in Section E of this report.

	New Assump 6/1/2017	Old Assump 6/1/2017	6/1/2016
Valuation Date	<u>5/31/2019</u>	<u>5/31/2019</u>	<u>5/31/2018</u>
Applicable to Fiscal Year Ending			
Actuarial Accrued Liability (PUC)	24,212,657	24,670,203	22,822,824
Actuarial Value of Assets	<u>16,216,475</u>	<u>16,216,475</u>	<u>14,761,153</u>
Unfunded Actuarial Accrued Liability (UAAL)	7,996,182	8,453,728	8,061,671
UAAL Subject to Amortization	5,574,916	5,986,708	5,779,389
Normal Cost (with interest)	\$761,976	\$790,773	803,045
% of Total Annual Payroll <sup>1</sup>	31.0	32.2	31.6
Administrative Expenses (with interest)	8,661	8,661	8,480
% of Total Annual Payroll <sup>1</sup>	0.4	0.4	0.3
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 6/1/2017, with interest)	382,054	340,085	307,360
% of Total Annual Payroll <sup>1</sup>	15.6	13.9	12.1
Total Required Contribution	1,152,691	1,139,519	1,118,885
% of Total Annual Payroll <sup>1</sup>	47.0	46.5	44.0
Expected Member Contributions	243,201	243,201	252,275
% of Total Annual Payroll <sup>1</sup>	9.9	9.9	9.9
Expected Village Contribution	909,490	896,318	866,610
% of Total Annual Payroll <sup>1</sup>	37.1	36.6	34.1
Assumptions and Methods:			
Actuarial Cost Method	Projected Unit Credit		
Amortization Method	90% Funding by 2040		

All other assumptions and methods are as described in the Actuarial Assumptions and Methods section.

<sup>1</sup> Contributions developed as of 6/1/2017 are expressed as a percentage of total annual payroll at 6/1/2017 of \$2,454,099.

# PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2017	12,298	820,947	833,245
2018	22,869	843,902	866,771
2019	50,916	890,019	940,935
2020	97,599	906,847	1,004,446
2021	164,610	928,816	1,093,426
2022	271,284	944,828	1,216,112
2023	373,183	989,649	1,362,832
2024	492,863	1,003,458	1,496,321
2025	620,290	1,015,579	1,635,869
2026	733,131	1,025,877	1,759,008
2027	867,129	1,034,293	1,901,422
2028	1,020,635	1,040,731	2,061,366
2029	1,175,457	1,045,148	2,220,605
2030	1,347,136	1,047,547	2,394,683
2031	1,525,264	1,048,006	2,573,270
2032	1,703,592	1,046,595	2,750,187
2033	1,876,566	1,043,302	2,919,868
2034	2,034,587	1,038,194	3,072,781
2035	2,186,586	1,031,245	3,217,831
2036	2,328,842	1,022,319	3,351,161
2037	2,457,768	1,011,249	3,469,017
2038	2,568,987	997,975	3,566,962
2039	2,692,712	982,433	3,675,145
2040	2,810,551	964,459	3,775,010
2041	2,920,843	943,929	3,864,772
2042	3,028,199	920,827	3,949,026
2043	3,117,668	895,124	4,012,792
2044	3,219,083	866,803	4,085,886
2045	3,303,300	835,955	4,139,255
2046	3,385,428	802,667	4,188,095
2047	3,456,625	766,945	4,223,570
2048	3,508,940	728,837	4,237,777
2049	3,553,376	688,364	4,241,740
2050	3,590,238	645,521	4,235,759
2051	3,619,213	600,620	4,219,833
2052	3,639,819	553,897	4,193,716
2053	3,650,797	505,594	4,156,391
2054	3,650,875	456,306	4,107,181
2055	3,639,181	406,768	4,045,949
2056	3,614,632	357,638	3,972,270

## ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate	RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date with Scale BB.
Disabled Mortality Rate	RP-2000 Disabled Retiree Mortality, projected to the valuation date with Scale BB.  Based on studies of public safety pension plans, we believe this assumption sufficiently accommodates expected future mortality improvements.
Interest Rate	7.00% per year compounded annually, net of investment related expenses.
Retirement Age	See table on following page. This is based on an experience study performed in 2012.
Disability Rate	See table on following page. 70% of the disabilities are assumed to be in the line of duty. This is based on an experience study performed in 2012.
Termination Rate	See table on following page. This is based on an experience study performed in 2012.
Salary Increases	Graded schedule based on service. This is based on an experience study performed in 2012.

Service	Increase
0	11.00%
1	10.00%
2	9.00%
3	8.00%
4	8.00%
5	7.00%
6	6.00%
7	5.50%
8 - 14	5.00%
15 - 29	4.50%
30	4.00%

Payroll Growth	3.00% per year.
Inflation	2.50%.
Cost-of-Living Adjustment	<u>Tier 1</u> : 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.

Administrative Expenses	Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.
Marital Status	80% of Members are assumed to be married.
Spouse's Age	Males are assumed to be three years older than females.
Funding Method	Entry Age Normal Cost Method.
Actuarial Asset Method	Investment gains and losses are smoothed over a 5-year period.
Funding Policy Amortization Method	The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2041.

Decrement Tables

% Terminating During the Year		% Becoming Disabled During the Year		% Retiring During the Year	
Age	Rate	Age	Rate	Age	Rate
15 - 24	10.00%	20	0.05%	<=49	0%
25	7.50%	25	0.05%	50 - 54	20%
26 - 27	6.25%	30	0.22%	55 - 59	25%
28 - 31	5.00%	35	0.26%	60 - 62	33%
32 - 34	4.00%	40	0.40%	63 - 69	50%
35 - 37	3.00%	45	0.65%	>=70	100%
38 - 49	2.00%	50	0.95%		
>=50	3.50%	55	1.30%		
		60	1.65%		
		65	2.00%		

## GLOSSARY

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Accrued Liability is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service.

Total Required Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period ending in 2041. The required amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

(a) The normal cost accrual rate equals:

(i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by

(ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

(b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

(c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

(d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

STATEMENT OF FIDUCIARY NET POSITION  
May 31, 2017

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Money Market	261,872
Cash	5,952
Total Cash and Equivalents	267,824
Receivables:	
Accrued Past Due Interest	85,790
Total Receivable	85,790
Investments:	
U.S. Gov't and Agency Obligations	3,191,295
Stocks	1,803,992
Corporate Bonds	2,942,897
Municipal Obligations	625,401
Mutual Funds	6,991,975
Total Investments	15,555,560
Total Assets	15,909,174
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
Accounts Payable	285
Total Liabilities	285
Net Assets:	
Active and Retired Members' Equity	15,908,889
NET POSITION RESTRICTED FOR PENSIONS	15,908,889
TOTAL LIABILITIES AND NET ASSETS	15,909,174

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED May 31, 2017  
Market Value Basis

ADDITIONS

Contributions:

Member	253,704
Village	925,000

Total Contributions	1,178,704
---------------------	-----------

Investment Income:

Net Increase in Fair Value of Investments	928,417
Interest & Dividends	462,663
Less Investment Expense <sup>1</sup>	(23,453)

Net Investment Income	1,367,627
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Total Additions	2,546,331
-----------------	-----------

DEDUCTIONS

Total Distributions	714,048
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Administrative Expenses	8,094
-------------------------	-------

Total Deductions	722,142
------------------	---------

Net Increase in Net Position	1,824,189
------------------------------	-----------

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	14,084,700
-----------------------	------------

End of the Year	15,908,889
-----------------	------------

<sup>1</sup> Investment Related expenses include investment advisory, custodial and performance monitoring fees.



# ACTUARIAL ASSET VALUATION

May 31, 2017

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.

Plan Year Ending	Gain/(Loss)	Gains/(Losses) Not Yet Recognized				
		Amounts Not Yet Recognized by Valuation Year				
		2017	2018	2019	2020	2021
5/31/2014	310,162	62,032	0	0	0	0
5/31/2015	(181,629)	(72,652)	(36,326)	0	0	0
5/31/2016	(982,566)	(589,540)	(393,026)	(196,513)	0	0
5/31/2017	365,718	292,574	219,431	146,287	73,144	0
Total		(307,586)	(209,921)	(50,226)	73,144	0

## Development of Investment Gain/Loss

Market Value of Assets, 5/31/2016	14,084,700
Contributions Less Benefit Payments & Administrative Expenses	456,562
Expected Investment Earnings <sup>1</sup>	1,001,909
Actual Net Investment Earnings	1,367,627
2017 Actuarial Investment Gain/(Loss)	365,718

<sup>1</sup> Expected Investment Earnings = 7.00% x (14,084,700 + 0.5 x 456,562)

## Development of Actuarial Value of Assets

Market Value of Assets, 5/31/2017	15,908,889
(Gains)/Losses Not Yet Recognized	307,586
Actuarial Value of Assets, 5/31/2017	16,216,475
(A) 5/31/2016 Actuarial Assets:	14,761,153
(I) Net Investment Income:	
1. Interest and Dividends	462,663
2. Realized Gains (Losses)	928,417
3. Change in Actuarial Value	(368,867)
4. Investment Expenses	(23,453)
Total	998,760
(B) 5/31/2017 Actuarial Assets:	16,216,475
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	6.66%
Market Value of Assets Rate of Return:	9.56%
5/31/2017 Limited Actuarial Assets:	16,216,475
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(50,500)

# CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

May 31, 2017

Actuarial Asset Basis

## INCOME

### Contributions:

Member	253,704
Village	925,000

Total Contributions	1,178,704
---------------------	-----------

### Earnings from Investments

Interest & Dividends	462,663
Net Realized Gain (Loss)	928,417
Change in Actuarial Value	(368,867)

Total Earnings and Investment Gains	1,022,213
-------------------------------------	-----------

## EXPENSES

### Administrative Expenses:

Investment Related <sup>1</sup>	23,453
Other	8,094

Total Administrative Expenses	31,547
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Total Distributions	714,048
---------------------	---------

Change in Net Assets for the Year	1,455,322
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Net Assets Beginning of the Year	14,761,153
----------------------------------	------------

Net Assets End of the Year <sup>2</sup>	16,216,475
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<sup>1</sup> Investment Related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup> Net Assets may be limited for actuarial consideration.

# STATISTICAL DATA <sup>1</sup>

	<u>6/1/2014</u>	<u>6/1/2015</u>	<u>6/1/2016</u>	<u>6/1/2017</u>
<u>Actives - Tier 1</u>				
Number	N/A	26	24	23
Average Current Age	N/A	N/A	41.4	41.9
Average Age at Employment	N/A	N/A	26.3	26.4
Average Past Service	N/A	N/A	15.1	15.5
Average Annual Salary	N/A	N/A	\$92,976	\$92,365
<u>Actives - Tier 2</u>				
Number	N/A	2	5	5
Average Current Age	N/A	N/A	29.1	29.5
Average Age at Employment	N/A	N/A	28.1	27.7
Average Past Service	N/A	N/A	1.0	1.8
Average Annual Salary	N/A	N/A	\$62,847	\$65,939
<u>Service Retirees</u>				
Number	N/A	9	11	12
Average Current Age	N/A	66.8	65.1	65.1
Average Annual Benefit	N/A	\$59,130	\$59,618	\$65,433
<u>Beneficiaries</u>				
Number	N/A	1	1	1
Average Current Age	N/A	71.5	72.5	73.5
Average Annual Benefit	N/A	\$42,508	\$42,508	\$42,508
<u>Disability Retirees</u>				
Number	N/A	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
<u>Terminated Vested</u>				
Number	N/A	3	3	3
Average Current Age	N/A	53.4	54.4	55.4
Average Annual Benefit	N/A	\$20,258	\$20,258	\$20,258

<sup>1</sup> Foster & Foster does not have enough historical data to include complete data prior to 6/1/2016.  
We will add historical data going forward.

## AGE AND SERVICE DISTRIBUTION

### PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	1	2	0	1	0	0	0	0	0	0	0	4
30 - 34	0	0	0	0	0	1	0	0	0	0	0	1
35 - 39	0	0	0	0	0	0	7	1	0	0	0	8
40 - 44	0	0	0	0	1	0	1	4	1	0	0	7
45 - 49	0	0	0	0	0	0	0	4	2	1	0	7
50 - 54	0	0	0	0	0	0	0	0	0	0	0	0
55 - 59	0	0	0	0	0	0	0	1	0	0	0	1
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	0	1	1	1	8	10	3	1	0	28

## VALUATION PARTICIPANT RECONCILIATION

### 1. Active lives

a. Number in prior valuation 6/1/2016	29
b. Terminations	
i. Vested (partial or full) with deferred benefits	0
ii. Non-vested or full lump sum distribution received	(1)
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	<u>(1)</u>
f. Continuing participants	27
g. New entrants	<u>1</u>
h. Total active life participants in valuation	28

### 2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	11	1	0	3	15
Retired	1	0	0	0	1
Vested Deferred	0	0	0	0	0
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	0	0	0	0
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	0	0
b. Number current valuation	12	1	0	3	16

## SUMMARY OF CURRENT PLAN

### Article 3 Pension Fund

The Plan is established and administered as prescribed by “Article 3. Police Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

### Plan Administration

The Plan is administered by a Board of Trustees comprised of:

- a) Two members appointed by the Municipality,
- b) Two active Members of the Police Department elected by the Membership, and
- c) One retired Member of the Police Department elected by the Membership.

### Credited Service

Complete years of service as a sworn police officer employed by the Municipality.

### Normal Retirement

Date

**Tier 1:** Age 50 and 20 years of Credited Service.

**Tier 2:** Age 55 with 10 years of Credited Service.

Benefit

**Tier 1:** 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,000 per month.

**Tier 2:** 2.50% per year of service times the average salary for the eight consecutive years prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,000 per month.

Form of Benefit

**Tier 1:** For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member's benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.

**Tier 2:** Same as above, but with 66 2/3% of benefit continued to spouse.

### Early Retirement

Date

**Tier 1:** Age 60 and 8 years of Credited Service.

**Tier 2:** Age 50 with 10 years of Credited Service.

Benefit

**Tier 1:** Normal Retirement benefit with no minimum.

**Tier 2:** Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit.

Form of Benefit	Same as Normal Retirement.
<u>Disability Benefit</u>	
Eligibility	Total and permanent as determined by the Board of Trustees.
Benefit Amount	<p>A maximum of:</p> <ul style="list-style-type: none"> <li>a.) 65% of salary attached to the rank held by Member on last day of service, and;</li> <li>b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.</li> </ul> <p>For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.</p>
<u>Cost-of-Living Adjustment</u>	<p><b>Tier 1:</b></p> <p><i>Retirees:</i> An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.</p> <p><i>Disabled Retirees:</i> An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.</p> <p><b>Tier 2:</b> An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.</p>
<u>Pre-Retirement Death Benefit</u>	
Service Incurred	100% of salary attached to rank held by Member on last day of service.
Non-Service Incurred	<p>A maximum of:</p> <ul style="list-style-type: none"> <li>a.) 50% of salary attached to the rank held by Member on last day of service, and;</li> <li>b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.</li> </ul> <p>For non-service deaths with less than 10 years of service, a refund of member contributions is provided.</p>

### Vesting (Termination)

Vesting Service Requirement	<b>Tier 1:</b> 8 years.  <b>Tier 2:</b> 10 years.
Non-Vested Benefit	Refund of Member Contributions.
Vested Benefit	Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service.

### Contributions

Employee	9.91% of Salary.
Municipality	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.



## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended May 31, 2017)

## Plan Description

*Plan Administration*

The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:

- a.) Two members appointed by the Village,
- b.) Two active Members of the Police Department elected by the Membership, and
- c.) One retired Member of the Police Department elected by the Membership.

*Plan Membership as of June 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	13
Inactive Plan Members Entitled to but Not Yet Receiving Benefits	3
Active Plan Members	28
	<u>44</u>

*Benefits Provided*

The Plan provides retirement, termination, disability and death benefits.

Normal Retirement:

Date Tier 1: Age 50 and 20 years of Credited Service.

Date Tier 2: Age 55 with 10 years of Credited Service.

Benefit Tier 1: 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,000 per month.

Benefit Tier 2: 2.50% per year of service times the average salary for the eight consecutive years prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,000 per month.

Early Retirement:

Date Tier 1: Age 60 and 8 years of Credited Service.

Date Tier 2: Age 50 with 10 years of Credited Service.

Benefit Tier 1: Normal Retirement benefit with no minimum.

Benefit Tier 2: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit.

Disability:

Eligibility: Total and permanent as determined by the Board of Trustees.

Benefit Amount: A maximum of:

- a.) 65% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.

For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Cost-of-Living Adjustments:

Tier 1: Retirees - An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Tier 1: Disabled Retirees - An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

Tier 2: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit:

Service Incurred: 100% of salary attached to rank held by Member on last day of service.

Non-Service Incurred: A maximum of:

- a.) 50% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

Vesting (Termination):

Vesting Service Requirement: Tier 1: 8 years.

Vesting Service Requirement: Tier 2: 10 years.

Non-Vested Benefit: Refund of Member Contributions.

Vested Benefit: Either the termination benefit, payable upon reaching age 60, provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service.

*Contributions*

Employee: 9.91% of Salary.

Village: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

*Investments**Investment Policy:*

The following was the Board's adopted asset allocation policy as of May 31, 2017:

<u>Asset Class</u>	<u>Target Allocation</u>
US Treasuries	1.88%
US Agencies	19.94%
Taxable IL Municipal Bonds	3.95%
US Corporate Bonds	18.61%
US High Yield Bonds	1.72%
US Large Cap	33.83%
US Mid Cap	4.46%
US Small Cap	2.33%
International Stocks	7.15%
Emerging Market Stocks	2.95%
Real Estate	1.64%
Global Infrastructure	1.54%
<u>Total</u>	<u>100.00%</u>

*Concentrations:*

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

*Rate of Return:*

For the year ended May 31, 2017 the annual money-weighted rate of return on Pension Plan investments, net of pension plan investment expense, was 9.46 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

## NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the sponsor on May 31, 2017 were as follows:

Total Pension Liability	\$ 25,230,524
Plan Fiduciary Net Position	\$ (15,908,889)
Sponsor's Net Pension Liability	<u>\$ 9,321,635</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	63.05%

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of June 1, 2017 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.00%
Investment Rate of Return	7.00%

Mortality Rate: RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date using Scale BB.

Disability Mortality Rate: RP-2000 Disabled Retiree Mortality, projected to the valuation date using Scale BB.

Based on studies of public safety pension plans, we believe this assumption sufficiently accommodates expected future mortality improvements

The other significant demographic assumptions used in the June 1, 2017 valuation were based on the results of an actuarial experience study performed by the State of Illinois Department of Insurance dated September 26, 2012.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2017, the inflation rate assumption of the investment advisor was 2.50%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of May 31, 2017 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
US Treasuries	1.80%
US Agencies	2.00%
Taxable IL Municipal Bonds	2.00%
US Corporate Bonds	2.50%
US High Yield Bonds	3.50%
US Large Cap	5.00%
US Mid Cap	5.30%
US Small Cap	5.00%
International Stocks	5.30%
Emerging Market Stocks	8.20%
Real Estate	4.30%
Global Infrastructure	4.80%

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.00 percent. The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For purpose of this valuation, the expected rate of return on pension plan investments is 7.00 percent; the municipal bond rate is 3.69 percent (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the The Bond Buyer); and the resulting single discount rate is 7.00 percent.

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Sponsor's Net Pension Liability	\$ 13,405,323	\$ 9,321,635	\$ 6,015,596

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	05/31/2017	05/31/2016	05/31/2015 <sup>1</sup>
Total Pension Liability			
Service Cost	649,659	593,355	513,686
Interest	1,706,540	1,575,395	1,280,827
Changes of Benefit Terms	-	-	-
Differences Between Expected and Actual Experience	209,323	(562,619)	(112,998)
Changes of Assumptions	(707,460)	889,503	2,538,709
Benefit Payments, Including Refunds of Employee Contributions	(714,048)	(642,831)	(568,087)
Net Change in Total Pension Liability	1,144,014	1,852,803	3,652,137
Total Pension Liability - Beginning	24,086,510	22,233,707	18,581,570
Total Pension Liability - Ending (a)	<u>\$ 25,230,524</u>	<u>\$ 24,086,510</u>	<u>\$ 22,233,707</u>
Plan Fiduciary Net Position			
Contributions - Employer	925,000	747,000	830,000
Contributions - Employee	253,704	242,060	232,046
Net Investment Income	1,367,627	(7,923)	773,810
Benefit Payments, Including Refunds of Employee Contributions	(714,048)	(642,831)	(568,087)
Administrative Expense	(8,094)	(7,925)	(11,292)
Net Change in Plan Fiduciary Net Position	1,824,189	330,381	1,256,477
Plan Fiduciary Net Position - Beginning	14,084,700	13,754,319	12,497,842
Plan Fiduciary Net Position - Ending (b)	<u>\$ 15,908,889</u>	<u>\$ 14,084,700</u>	<u>\$ 13,754,319</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 9,321,635</u>	<u>\$ 10,001,810</u>	<u>\$ 8,479,388</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	63.05%	58.48%	61.86%
Covered Employee Payroll	\$ 2,454,099	\$ 2,545,665	\$ 2,353,959
Net Pension Liability as a Percentage of covered Employee Payroll	379.84%	392.90%	360.22%

**Notes to Schedule:**

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva (IL).

*Changes of Assumptions:*

For measurement date 05/31/2017, amounts reported as changes of assumptions resulted from the following change:

- The salary increase assumption was changed from a flat rate of 5.00% per year to a table of rates varying by service.

For measurement date 05/31/2016, amounts reported as changes of assumptions resulted from updating the mortality assumptions to include a projection to the valuation date using Scale BB.

## SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

	05/31/2017	05/31/2016	05/31/2015 <sup>1</sup>
Actuarially Determined Contribution	799,095	596,578	579,311
Contributions in Relation to the			
Actuarially Determined Contribution	925,000	747,000	830,000
Contribution Deficiency (Excess)	<u>\$ (125,905)</u>	<u>\$ (150,422)</u>	<u>\$ (250,689)</u>
Covered Employee Payroll	\$ 2,454,099	\$ 2,545,665	\$ 2,353,959
Contributions as a Percentage of			
Covered Employee Payroll	37.69%	29.34%	35.26%

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva (IL).

Notes to Schedule:

Valuation Date: 06/01/2015

Actuarially Determined Contribution is calculated as of June 1, two years prior year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Funding Method:	Entry Age Normal Cost Method.
Amortization Method:	Level percentage of pay, closed.
Remaining Amortization Period:	26 years (as of valuation 05/01/2015).
Actuarial Asset Method:	5-year Average Market Value (PA 096-1495).
Investment Return:	7.00% net of investment expenses.
Salary Scale:	5.00%.
Mortality:	RP 2000 Mortality Table ( CHBCA). There is no margin for future mortality improvement beyond the valuation date.
Withdrawal:	Based on studies of the Fund and the Department of Insurance, Sample Rates below.
Disability:	Based on studies of the Fund and the Department of Insurance, Sample Rates below.
Retirement:	Based on studies of the Fund and the Department of Insurance, Sample Rates below (100% by age 70).
Marital Status:	80% Married, Female spouses 3 years younger.

Sample Annual Rates per 100	Age	Mortality	Withdrawal	Disability	Retirement
	20	0.03	10.00	0.05	
	25	0.04	7.50	0.05	
	30	0.07	5.00	0.22	
	35	0.11	3.00	0.26	
	40	0.14	2.00	0.40	
	45	0.18	2.00	0.65	
	50	0.24	3.50	0.95	20.00
	55	0.42	3.50	1.30	25.00
	60	0.83	3.50	1.65	33.00
	65	1.55	3.50	2.00	50.00
	70	2.68			100.00

## SCHEDULE OF INVESTMENT RETURNS

Last 10 Fiscal Years

	<u>05/31/2017</u>	<u>05/31/2016</u>	<u>05/31/2015</u>
Annual Money-Weighted Rate of Return			
Net of Investment Expense	9.46%	-0.05%	6.10%

## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended May 31, 2017)

## General Information about the Pension Plan

*Plan Administration*

The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:

- a.) Two members appointed by the Village,
- b.) Two active Members of the Police Department elected by the Membership, and
- c.) One retired Member of the Police Department elected by the Membership.

*Plan Membership as of June 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	13
Inactive Plan Members Entitled to but Not Yet Receiving Benefits	3
Active Plan Members	28
	<u>44</u>

*Benefits Provided*

The Plan provides retirement, termination, disability and death benefits.

Normal Retirement:

Date Tier 1: Age 50 and 20 years of Credited Service.

Date Tier 2: Age 55 with 10 years of Credited Service.

Benefit Tier 1: 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,000 per month.

Benefit Tier 2: 2.50% per year of service times the average salary for the eight consecutive years prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,000 per month.

Early Retirement:

Date Tier 1: Age 60 and 8 years of Credited Service.

Date Tier 2: Age 50 with 10 years of Credited Service.

Benefit Tier 1: Normal Retirement benefit with no minimum.

Benefit Tier 2: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit.

Disability:

Eligibility: Total and permanent as determined by the Board of Trustees.

Benefit Amount: A maximum of:

- a.) 65% of salary attached to the rank held by Member on last day of service, and;
  - b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.
- For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Cost-of-Living Adjustments:

Tier 1: Retirees - An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Tier 1: Disabled Retirees - An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

Tier 2: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit:

Service Incurred: 100% of salary attached to rank held by Member on last day of service.

Non-Service Incurred: A maximum of:

- a.) 50% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.



Vesting (Termination):

Vesting Service Requirement: Tier 1: 8 years.

Vesting Service Requirement: Tier 2: 10 years.

Non-Vested Benefit: Refund of Member Contributions.

Vested Benefit: Either the termination benefit, payable upon reaching age 60, provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service.

*Contributions*

Employee: 9.91% of Salary.

Village: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.

**Net Pension Liability**

The measurement date is May 31, 2017.

The measurement period for the pension expense was June 1, 2016 to May 31, 2017.

The reporting period is June 1, 2016 through May 31, 2017.

The Sponsor's Net Pension Liability was measured as of May 31, 2017.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of June 1, 2017 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.00%
Investment Rate of Return	7.00%

Mortality Rate: RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date using Scale BB.

Disability Mortality Rate: RP-2000 Disabled Retiree Mortality, projected to the valuation date using Scale BB.

Based on studies of public safety pension plans, we believe this assumption sufficiently accommodates expected future mortality improvements

The other significant demographic assumptions used in the June 1, 2017 valuation were based on the results of an actuarial experience study performed by the State of Illinois Department of Insurance dated September 26, 2012.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2017, the inflation rate assumption of the investment advisor was 2.50%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of May 31, 2017 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
US Treasuries	1.88%	1.80%
US Agencies	19.94%	2.00%
Taxable IL Municipal Bonds	3.95%	2.00%
US Corporate Bonds	18.61%	2.50%
US High Yield Bonds	1.72%	3.50%
US Large Cap	33.83%	5.00%
US Mid Cap	4.46%	5.30%
US Small Cap	2.33%	5.00%
International Stocks	7.15%	5.30%
Emerging Market Stocks	2.95%	8.20%
Real Estate	1.64%	4.30%
Global Infrastructure	1.54%	4.80%
Total	100.00%	

**Discount Rate:**

The Discount Rate used to measure the Total Pension Liability was 7.00 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For purpose of this valuation, the expected rate of return on pension plan investments is 7.00 percent; the municipal bond rate is 3.69 percent (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the The Bond Buyer); and the resulting single discount rate is 7.00 percent.

## CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Balances at May 31, 2016	\$ 24,086,510	\$ 14,084,700	\$ 10,001,810
Changes for a Year:			
Service Cost	649,659	-	649,659
Interest	1,706,540	-	1,706,540
Differences Between Expected and Actual Experience	209,323	-	209,323
Changes of Assumptions	(707,460)	-	(707,460)
Changes of Benefit Terms	-	-	-
Contributions - Employer	-	925,000	(925,000)
Contributions - Employee	-	253,704	(253,704)
Net Investment Income	-	1,367,627	(1,367,627)
Benefit Payments, Including Refunds of Employee Contributions	(714,048)	(714,048)	-
Administrative Expense	-	(8,094)	8,094
New Changes	1,144,014	1,824,189	(680,175)
Balances at May 31, 2017	\$ 25,230,524	\$ 15,908,889	\$ 9,321,635

*Sensitivity of the Net Pension Liability to changes in the Discount Rate.*

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.00%	7.00%	8.00%
Sponsor's Net Pension Liability	\$ 13,405,323	\$ 9,321,635	\$ 6,015,596

*Pension Plan Fiduciary Net Position.*

Detailed information about the Pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

## PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS

For the year ended May 31, 2017, the Sponsor will recognize a pension expense of \$1,201,752.

On May 31, 2017, the Sponsor reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
	<u>                    </u>	<u>                    </u>
Differences Between Expected and Actual Experience	179,418	421,963
Changes of Assumptions	667,128	606,396
Net Difference Between Projected and Actual Earnings on Pension Plan Investments	296,963	-
Total	<u><u>\$ 1,143,509</u></u>	<u><u>\$ 1,028,359</u></u>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended May 31:	
2018	\$ 93,066
2019	\$ 93,067
2020	\$ 93,067
2021	\$ (103,446)
2022	\$ (30,302)
Thereafter	\$ (30,302)

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	05/31/2017	05/31/2016	05/31/2015 <sup>1</sup>
Total Pension Liability			
Service Cost	649,659	593,355	513,686
Interest	1,706,540	1,575,395	1,280,827
Changes of Benefit Terms	-	-	-
Differences Between Expected and Actual Experience	209,323	(562,619)	(112,998)
Changes of Assumptions	(707,460)	889,503	2,538,709
Benefit Payments, Including Refunds of Employee Contributions	(714,048)	(642,831)	(568,087)
Net Change in Total Pension Liability	1,144,014	1,852,803	3,652,137
Total Pension Liability - Beginning	24,086,510	22,233,707	18,581,570
Total Pension Liability - Ending (a)	<u>\$ 25,230,524</u>	<u>\$ 24,086,510</u>	<u>\$ 22,233,707</u>
Plan Fiduciary Net Position			
Contributions - Employer	925,000	747,000	830,000
Contributions - Employee	253,704	242,060	232,046
Net Investment Income	1,367,627	(7,923)	773,810
Benefit Payments, Including Refunds of Employee Contributions	(714,048)	(642,831)	(568,087)
Administrative Expense	(8,094)	(7,925)	(11,292)
Net Change in Plan Fiduciary Net Position	1,824,189	330,381	1,256,477
Plan Fiduciary Net Position - Beginning	14,084,700	13,754,319	12,497,842
Plan Fiduciary Net Position - Ending (b)	<u>\$ 15,908,889</u>	<u>\$ 14,084,700</u>	<u>\$ 13,754,319</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 9,321,635</u>	<u>\$ 10,001,810</u>	<u>\$ 8,479,388</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	63.05%	58.48%	61.86%
Covered Employee Payroll	\$ 2,454,099	\$ 2,545,665	\$ 2,353,959
Net Pension Liability as a Percentage of covered Employee Payroll	379.84%	392.90%	360.22%

**Notes to Schedule:**

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva (IL).

*Changes of Assumptions:*

For measurement date 05/31/2017, amounts reported as changes of assumptions resulted from the following change:

- The salary increase assumption was changed from a flat rate of 5.00% per year to a table of rates varying by service.

For measurement date 05/31/2016, amounts reported as changes of assumptions resulted from updating the mortality assumptions to include a projection to the valuation date using Scale BB.

## SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

	05/31/2017	05/31/2016	05/31/2015 <sup>1</sup>
Actuarially Determined Contribution	799,095	596,578	579,311
Contributions in Relation to the			
Actuarially Determined Contributions	925,000	747,000	830,000
Contribution Deficiency (Excess)	<u>\$ (125,905)</u>	<u>\$ (150,422)</u>	<u>\$ (250,689)</u>
Covered Employee Payroll	\$ 2,454,099	\$ 2,545,665	\$ 2,353,959
Contributions as a Percentage of			
Covered Employee Payroll	37.69%	29.34%	35.26%

<sup>1</sup> The 2015 results were provided by the prior actuary, Timothy W. Sharpe, Actuary, Geneva (IL).

Notes to Schedule:

Valuation Date: 06/01/2015

Actuarially Determined Contribution is calculated as of June 1, two years prior year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Funding Method:	Entry Age Normal Cost Method.
Amortization Method:	Level percentage of pay, closed.
Remaining Amortization Period:	26 years (as of valuation 05/01/2015).
Actuarial Asset Method:	5-year Average Market Value (PA 096-1495).
Investment Return:	7.00% net of investment expenses.
Salary Scale:	5.00%.
Mortality:	RP 2000 Mortality Table ( CHBCA). There is no margin for future mortality improvement beyond the valuation date.
Withdrawal:	Based on studies of the Fund and the Department of Insurance, Sample Rates below.
Disability:	Based on studies of the Fund and the Department of Insurance, Sample Rates below.
Retirement:	Based on studies of the Fund and the Department of Insurance, Sample Rates below (100% by age 70).
Marital Status:	80% Married, Female spouses 3 years younger.
Sample Annual Rates per 100 Participants:	

Age	Mortality	Withdrawal	Disability	Retirement
20	0.03	10.00	0.05	
25	0.04	7.50	0.05	
30	0.07	5.00	0.22	
35	0.11	3.00	0.26	
40	0.14	2.00	0.40	
45	0.18	2.00	0.65	
50	0.24	3.50	0.95	20.00
55	0.42	3.50	1.30	25.00
60	0.83	3.50	1.65	33.00
65	1.55	3.50	2.00	50.00
70	2.68			100.00

**COMPONENTS OF PENSION EXPENSE**  
**FISCAL YEAR MAY 31, 2017**

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 10,001,810	\$ 492,291	\$ 1,564,368	
Total Pension Liability Factors:				
Service Cost	649,659	-	-	649,659
Interest	1,706,540	-	-	1,706,540
Changes in Benefit Terms	-	-	-	-
Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions	209,323	-	209,323	-
Current Year Amortization		(70,328)	(29,905)	(40,423)
Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs	(707,460)	707,460	-	-
Current Year Amortization	-	(101,064)	(111,188)	10,124
Benefit Payments	(714,048)	-	-	(714,048)
Net Change	1,144,014	536,068	68,230	1,611,852
Plan Fiduciary Net Position:				
Contributions - Employer	925,000	-	-	-
Contributions - Employee	253,704	-	-	(253,704)
Projected Net Investment Income	1,001,909	-	-	(1,001,909)
Difference Between Projected and Actual Earnings on Pension Plan Investments	365,718	365,718	-	
Current Year Amortization	-	(73,142)	(196,513)	123,371
Benefit Payments	(714,048)	-	-	714,048
Administrative Expenses	(8,094)	-	-	8,094
Net Change	1,824,189	292,576	(196,513)	(410,100)
Ending Balance	\$ 9,321,635	\$ 1,320,935	\$ 1,436,085	\$ 1,201,752

AMORTIZATION SCHEDULE - EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Year Base Established	Differences Between Expected and Actual Experience	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2017	\$ 209,323	7	\$ 29,905	\$ 29,903	\$ 29,903	\$ 29,903	\$ 29,903	\$ 29,903	\$ 29,903	\$ -	\$ -	\$ -
2016	\$ (562,619)	8	\$ (70,328)	\$ (70,328)	\$ (70,327)	\$ (70,327)	\$ (70,327)	\$ (70,327)	\$ (70,327)	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (40,423)	\$ (40,425)	\$ (40,424)	\$ (40,424)	\$ (40,424)	\$ (40,424)	\$ (40,424)	\$ -	\$ -	\$ -



AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

Year Base Established	Change of Assumptions	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions										
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2017	\$ (707,460)	7	\$ (101,064)	\$ (101,066)	\$ (101,066)	\$ (101,066)	\$ (101,066)	\$ (101,066)	\$ (101,066)	\$ -	\$ -	\$ -	\$ -
2016	\$ 889,503	8	\$ 111,188	\$ 111,188	\$ 111,188	\$ 111,188	\$ 111,188	\$ 111,188	\$ 111,188	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 10,124	\$ 10,122	\$ 10,122	\$ 10,122	\$ 10,122	\$ 10,122	\$ 10,122	\$ -	\$ -	\$ -	\$ -

## AMORTIZATION SCHEDULE - INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on Pension Plan Investments														
Year Base Established	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
2017	\$ (365,718)	5	\$ (73,142)	\$ (73,144)	\$ (73,144)	\$ (73,144)	\$ (73,144)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2016	\$ 982,566	5	\$ 196,513	\$ 196,513	\$ 196,513	\$ 196,513	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Net Increase (Decrease) in Pension Expense			\$ 123,371	\$ 123,369	\$ 123,369	\$ 123,369	\$ (73,144)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

# Memorandum



**To:** Steve Bosco, Village Administrator  
**From:** David Hansen, Administrative Intern  
**Date:** 10-11-17  
**Re:** Overlook Gazebo Rentals

---

The Village received North Aurora Riverfront Park from the Fox Valley Park District through a land transfer agreement and intergovernmental agreement (IGA) in the spring of 2016. As part of the land transfer and IGA, the Village now owns North Aurora Riverfront Park, which is defined as the property east of the bike path to Village Hall, and is responsible for maintaining the Overlook Gazebo and the garbage can that is located next to the Fox River Dam. The Park District is responsible for the bike path and the property west of the bike path along the Fox River shoreline.

The Village has received calls from residents and other individuals who would like to rent out or utilize the Overlook Gazebo for weddings (ceremonies and photos). Staff is seeking direction from the Village Board to determine if reservations at the Overlook Gazebo should be allowed. Staff's initial concern was that renting out the overlook gazebo limits the Village's ability to host public events in the park; however staff believes most events should be planned out well in advance and this shouldn't be a problem. Other problems that could persist include:

- Length of the event
- Residency Requirements
- Capacity in the Gazebo
- Parking Issues
- Alcoholic Beverages
- Public Accessibility in the Park
- Staff Time/Cost
- Trash Collection

The additional concerns listed above could be addressed as part of the rental permit requirement process.

This topic was discussed and reviewed at the September 18, 2017 Committee of the Whole meeting. Staff initially suggested to rent out the gazebo for weddings only, set a two-hour time limit, allow the Village Administrator or their designee to approve requests, and charge a deposit of \$100 for reservations to cover the costs of maintenance preparation and clean-up costs. Per discussion, the Village Board directed staff to change the deposit to a nonrefundable fee, increase the fee, and add a tiered structure for residents and nonresidents.

Since the land transfer agreement/IGA does not spell out ownership of the Overlook Gazebo specifically, a small tweak will need to be made to the agreement with the park district and brought to the Board in the future for approval, should the Village Board pursue allowing rentals at the gazebo.

Attached is a revised application for rentals of the Overlook Gazebo with the changes recommended by the Village Board.



## NORTH AURORA RIVERFRONT PARK OVERLOOK GAZEBO RENTAL APPLICATION

**OVERLOOK GAZEBO RENTAL LIMITED TO WEDDING CEREMONY / PHOTOGRAPHY ONLY**

Date of Application: \_\_\_\_\_ **Fee: Residents: \$150 Non-Residents: \$200**

Name of Applicant: \_\_\_\_\_

Address: \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Mobile Phone: \_\_\_\_\_

Email Address: \_\_\_\_\_

Date of Event: \_\_\_\_\_

Time of Event\* From: \_\_\_\_\_ to \_\_\_\_\_

\*Includes set-up time – please note there is a 2 hour time limit.

Number of People Expected: \_\_\_\_\_

The application must be submitted at least **30 days** prior to the event.

The Village reserves the right to approve, deny, or revoke any application at any time.

*I have read the regulations on the back page and agree to comply with them.*

Signature of Applicant \_\_\_\_\_

---

Date Approved: \_\_\_\_\_

Fee Paid: \_\_\_\_\_

Village Administrator or Designee Signature: \_\_\_\_\_



## Policy and Guidelines

1. Residency - Either the bride or groom, or parents of either the bride or groom, must be North Aurora residents to be considered a resident. All other requests will be marked non-residents.
2. Length of Ceremony - Wedding and Picture Taking is limited to 2 hours, including set up and take down.
3. Hold Harmless - Must be submitted with the application.
4. Damage - The applicant is responsible for any damage to the gazebo property by any of the guests/participants.
5. Receptions - Receptions will not be allowed at the Overlook Gazebo.
6. Chairs - The party must provide the chairs if they would like use them in the Overlook Gazebo. No chairs are allowed outside the Overlook Gazebo.
7. Public Access - Village parks are open to the public at all times, regardless of any permits held for special events, including weddings. Overlook Gazebo is the only part of the park that is allowed to be roped off.
8. Bike Path Access - The event must not spillover over and block the bike path.
9. Alcohol - **NO** alcoholic beverages are allowed in the Overlook Gazebo or Riverfront Park.
10. Parking - The Village cannot guarantee that parking will be available for your ceremony. Parking is available at most sites, but cannot be reserved. Vehicles are subject to all parking rules. Ticketing will commence for improperly parked vehicles.
11. Decorations - Decorations are only permitted on and in the Gazebo and must be removed at the end of the event.
12. Confetti - Confetti, rice, or birdseed is not allowed. Flower petals may be thrown as an alternative.
13. Trash - Permit holders are responsible for placing trash in garbage cans and leaving the area clean at the end of the event.
14. Sound - Amplified sound will not be allowed in the Overlook Gazebo.
15. Rehearsals - Rehearsals may be conducted at the reserved site at the permit holder's convenience. The Overlook Gazebo will not be roped off for rehearsals and will be open to the public. However, to ensure that a ceremony has not been scheduled at the same time, permit holders should check with the Village in advance.
16. Additional Services - The Village cannot provide wedding planning services, make special arrangements within the park for a wedding ceremony (i.e., providing/moving existing picnic benches or tables, chairs, backdrops or flowers), or conduct any alterations or extra maintenance to existing landscaping.

### NONREFUNDABLE FEE

*Applicants will be held liable for any additional damage beyond the fee. Applicants are asked to take a photo after the event has been completed to verify no damage has occurred.*



## **HOLD HARMLESS RELEASE**

The Village of North Aurora is not responsible for any accidents or damages to persons or property resulting from the rental of the Overlook Gazebo for a wedding ceremony or picture taking; the event coordinator for the wedding or picture taking is responsible for ensuring that the event participants and spectators abide by the policy and all guidelines, conditions, ordinances, village codes and requirements.

The applicant agrees that it will indemnify, hold harmless and defend the Village of North Aurora, its agents, officials, and employees, for and against all injuries, deaths, losses, damages, claims, suits, liabilities, judgments, costs and expenses, including reasonable attorney fees, arising from or in any way related to the applicant's event.

I agree to inform the Village of North Aurora of any changes in the application at least 10 days prior to the event. I agree to the terms and conditions listed above.

---

Name of Applicant (please print)

---

Signature of Applicant

---

Date

# Memorandum



**To:** Steve Bosco, Village Administrator  
**From:** David Hansen, Administrative Intern  
**Date:** 10-12-17  
**Re:** Community Sign Designs

---

At the April 3<sup>rd</sup> Village Board meeting, the Village Board approved a contract with Western Remac to build a community sign at the intersection of Route 31 and Route 56 which would replace the existing sign that was donated by the Lions Club nearly 30 years ago. The contract with Western Remac is not to exceed \$70,000 for the design, construction, and installation of the community sign.

After the contract was awarded, Western Remac hired a landscape architect firm, Greenberg Farrow, to design three concepts for the community sign. Western Remac presented the three concepts to the mayor and staff. All three of the sign concepts maxed out at a height of nine feet and were within \$10,000 of one another. Per contract, the total number of concepts were whittled from three concepts down to two after they were reviewed by staff, the mayor, and members of the public facilities and development committees. The final two concepts were brought to the September 18, 2017 Committee of the Whole meeting. Per discussion, the Village Board selected concept A as the final concept. Since the sign is at a height of nine feet, the Village Board would need to approve a variance or include it within the parameters of a community sign program since the maximum allowable sign height is six feet along Route 31.

As staff met with Western Remac to discuss the materials to be used to construct the sign, staff was informed that due to the concept and size of the sign selected, the sign is not entirely movable. Staff's intention was to have this sign made to be movable in the future; however, the size of the sign requires an internal structure strong enough to support the weight of the brick being proposed. With the currently proposed materials, the LED boards, logo and lettering, which make up approximately 40-50% of the cost of the sign, would be movable; however, the foundation and sign structure would have to be rebuilt if the sign needs to be relocated. A thinner brick veneer is available; however the weight would still be too much for an internal structure system to support it on its own if moved under the current design. In addition, the brick veneer is a composite material that would not have the expected longevity of a stone masonry sign as proposed.

In further conversation with Western Remac regarding the ability to move the sign in the future while using the currently proposed brick, staff learned that there is a way to engineer the foundation to be on a large one-piece slab that can be built to be moved by crane in the future if necessary. Western Remac is estimating that the cost to engineer this slab would

be an additional cost of \$3,000-\$5,000 putting the total cost of the sign project between an estimated \$73,000-\$75,000. Essentially, this would be a change order to the contract if chosen and it would exceed the not-to-exceed contract amount of \$70,000 for the project. Staff considered reducing the size of the sign; however, staff does not believe that option is viable as the size would have to be reduced significantly to be easily movable from a standard foundation to another foundation. Proportionally, the LED board would have to be significantly smaller, thus much less visible to passing traffic. Another option would be to create new designs; however, that would also have an additional cost as it is beyond the initial scope of the contract.

It is important to note that no matter what sign is built, there will always be an additional cost for the sign to be relocated if needed. Staff estimates the cost of relocation to be between \$5,000-\$10,000. Staff also believes that the sign can be incorporated into a future development of the adjacent properties.

Based on the conversations with Western Remac, staff believes there are two viable options based on the current design:

- 1) Build the sign as designed for a cost of approximately \$70,000, knowing that the LED boards, logo and lettering would most likely be the only movable elements of the sign.
- 2) Authorize Western Remac to engineer a slab for an additional \$3,000-\$5,000 cost that would allow the Village to move the sign as a whole in the future.

Staff is looking for direction from the Village Board on how to proceed. Please find attached the final concept that was designed by Greenberg Farrow and presented by Western Remac.





21 South Evergreen Avenue  
 Suite 200  
 Arlington Heights, IL 60005  
 t: 847 788 9200 f: 847 788 9536

**ENTRY MONUMENT SIGN**  
 NORTH AURORA, ILLINOIS  
 Village of North Aurora  
 20170571.0

**CONCEPT A**

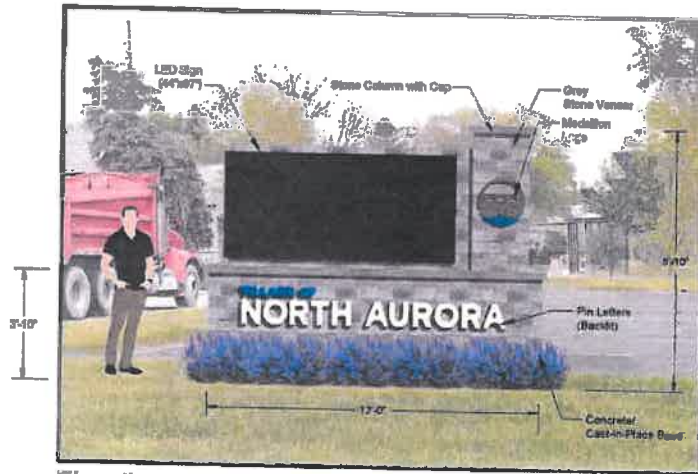
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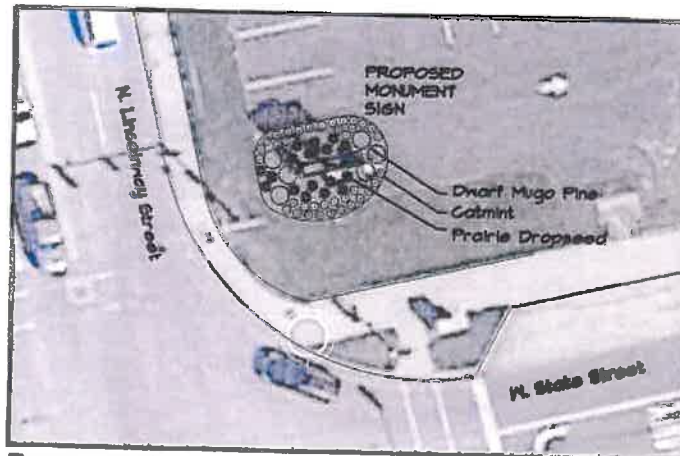
SEPTEMBER 12, 2017



# North Aurora - Entry Monument Sign



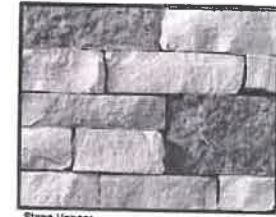
Elevation



Representative Landscape Plan



Stone Veneer



Stone Veneer



Sign Foam Medallion - Logo



Existing Village Monument Sign



Backlit Letters



Prairie Dropseed



Mugo Pine



Catmint



GreenbergFarrow

September 18, 2017

Concept Design A

# Memorandum



To: Dale Berman, Village President & Board of Trustees  
Cc: Steven Bosco, Village Administrator  
From: John Laskowski, Public Works Director  
Date: October 12, 2017  
Re: Second Amendment to Verizon Lease Agreement

---

This summer the Village of North Aurora painted the Automall Water Tower on Orchard Gateway. In order to complete the project all of the telecommunications equipment had to be removed. Verizon had erected a temporary pole adjacent to the tower during the tower painting. Now that the Village's project is complete, Verizon can remove their temporary tower and assemble their equipment back on the water tower. Verizon has requested to install additional equipment on the tower. Since space is limited on the tower, the Village charges additional rent for the installation of additional equipment. Under the lease agreement the Village would receive an additional \$600 per month.

The reason this amendment is before the board is because Verizon has requested a change in the term of the agreement. Currently the agreement indicates they are in the second year of a five year agreement. However in order to recover the return on their investment they are requesting the lease term be extended an additional five years. The Village Attorney, staff, and consulting engineer reviewed the proposed equipment addition and agreement and approve the amendment. Therefore staff is recommending the approval of this amendment as the modification is mutually beneficial to Verizon and the Village. The Village will receive the additional rent at the agreed terms of the lease and Verizon will be able to utilize additional equipment for the benefit of its customers.

## **SECOND AMENDMENT TO LEASE AGREEMENT**

This Second Amendment to Lease Agreement ("Second Amendment") being made this \_\_\_\_\_ day of \_\_\_\_\_, 201\_\_\_\_, by and between The Village of North Aurora, with its principal offices located at 25 East State Street, North Aurora, Illinois 60542 ("LANDLORD"), and Chicago SMSA Limited Partnership, d/b/a Verizon Wireless, with its principal offices at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920 ("TENANT").

WHEREAS, LANDLORD and TENANT entered into a Lease Agreement dated November 5, 2015 ("Lease") as amended on August 9, 2016, with respect to certain space on the LANDLORD's premises and water tower ("Leased Premises"), located in the Village of North Aurora, Kane County, Illinois, off of Orchard Gateway; and

WHEREAS, LANDLORD and TENANT desire to amend the Agreement to allow for additional equipment at the Leased Premises and to extend the Lease term by one (1) additional five (5) year term as well as other considerations.

NOW, THEREFORE, in consideration of the promises hereinafter made and other good and valuable consideration and intending to be legally bound hereby, LANDLORD and TENANT agree to the following changes and modifications to the Lease:

1. The Parties agree that Exhibit D of the Lease shall hereby be deleted in its entirety and replaced with D-1, attached hereto, to reflect the change in equipment and antenna facilities.
2. Paragraph 2 of the Lease is hereby deleted in its entirety and replaced with the following thereby adding one (1) additional term of five (5) years:

This Lease has been executed this 5th day of November, 2015, (hereinafter referred to as "The Execution Date", but TENANT shall be obligated to commence payment of the Rent due hereunder (as described in Section 3) on the earlier of (a) commencement of construction on the site; or (b) upon receipt of building permit ("Commencement Date"); and the term of this Lease shall end on midnight on the last day of the month in which the fifth (5th) anniversary of the Commencement Date occurs (hereinafter referred to as "The Initial Term"). TENANT may extend the Lease, on the same terms, for four (4) "additional terms" of five (5) years each, (hereinafter "Extended Terms") automatically, unless TENANT gives LANDLORD written notice within ninety (90) days of the end of the Initial Term or any Extended Terms stating TENANT will not extend further.

3. Pursuant to Section 3c of the Lease, the monthly rent shall be increased by an additional Six Hundred and No/ Dollars (\$600.00) per month ("Additional Rent") on the first day of the month following the commencement of installation of the

ancillary equipment (“Additional Rent Commencement Date”). LANDLORD and TENANT acknowledge and agree that the first payment of the Additional Rent amount shall be due and payable within thirty (30) days after the full execution of a written acknowledgement confirming the Additional Rent Commencement Date. The Additional Rent shall increase annually under the same terms provided in the Lease.

4. All capitalized terms herein shall have the meaning ascribed to them in this Second Amendment or the Lease, as applicable.
5. In the event of any inconsistency between this Second Amendment and Lease, this Second Amendment shall control.

[Remainder of page intentionally left blank]

5. Except as modified by this Second Amendment, all other terms and conditions of the Lease shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have set their hands and affixed their respective seals the day and year first above written.

**LANDLORD:**

**Village of North Aurora**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Its President  
Date: \_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Its Clerk  
Date: \_\_\_\_\_

**TENANT:**

**Chicago SMSA Limited Partnership,  
d/b/a Verizon Wireless,  
By Cellco Partnership, Its General  
Partner**

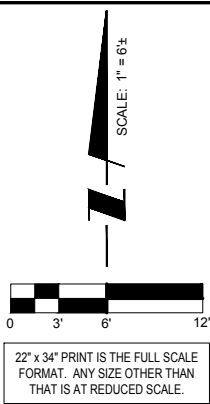
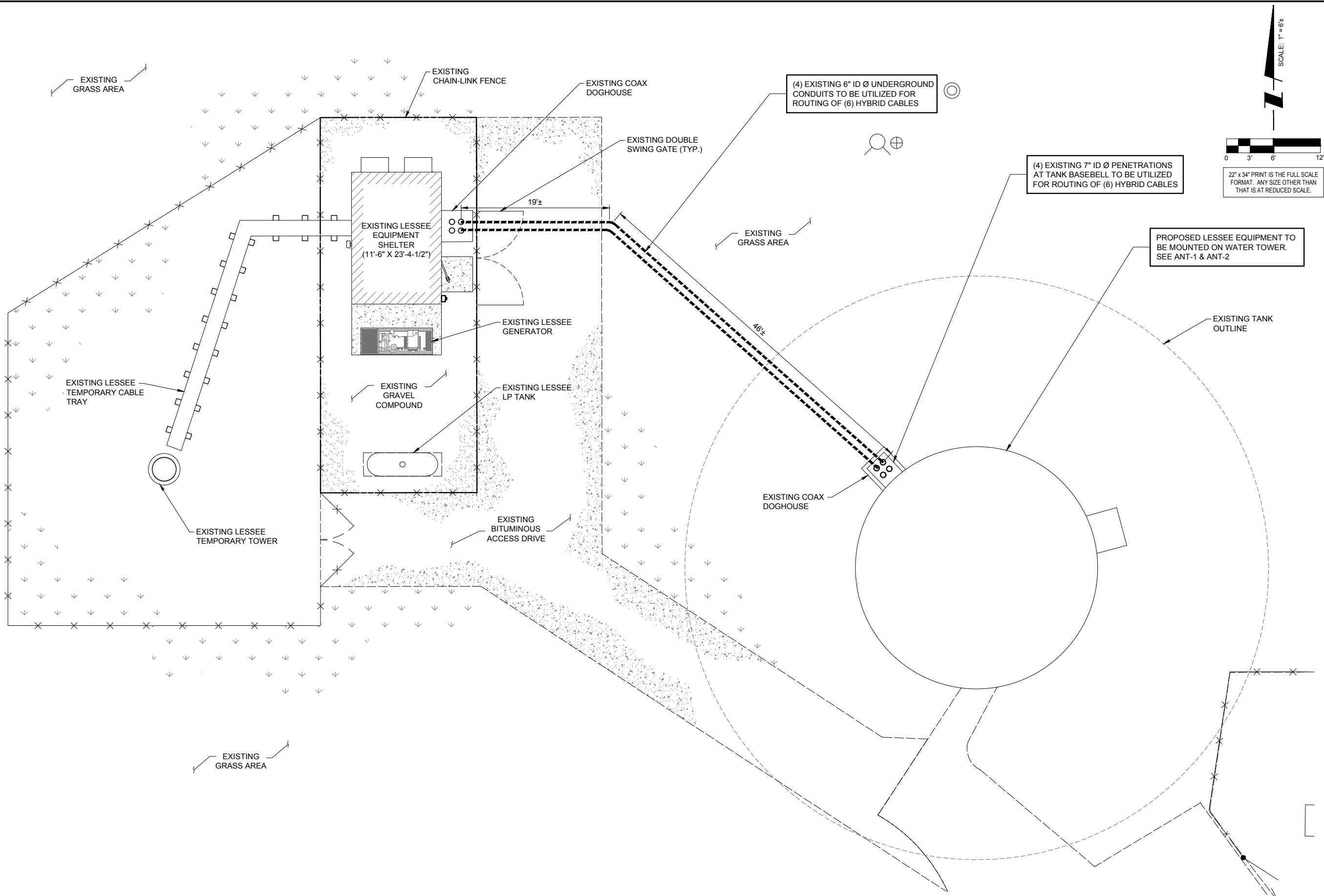
By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Lessee Site Name: W. Mooseheart Rd.  
Attorney/ Date: JAC/ 9-27-17

**Exhibit D-1**







THIS SITE PLAN WAS CREATED OFF OF  
FIELD MEASUREMENTS BY THE DESIGNER,  
AS BOUNDARY SURVEY WAS NOT SUPPLIED  
FOR PURPOSES OF SITE LAYOUT.

1 SITE LAYOUT

**CHICAGO**  
**SMSA**

limited partnership  
d/b/a VERIZON WIRELESS

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

REVISIONS		NO.	DESCRIPTION	DATE	BY
	ISSUED FOR REVIEW			08/09/17	AU

LOC. # 313798

W MOOSEHEART RD

1901 ORCHARD GATEWAY BLVD  
NORTH AURORA, IL 60542

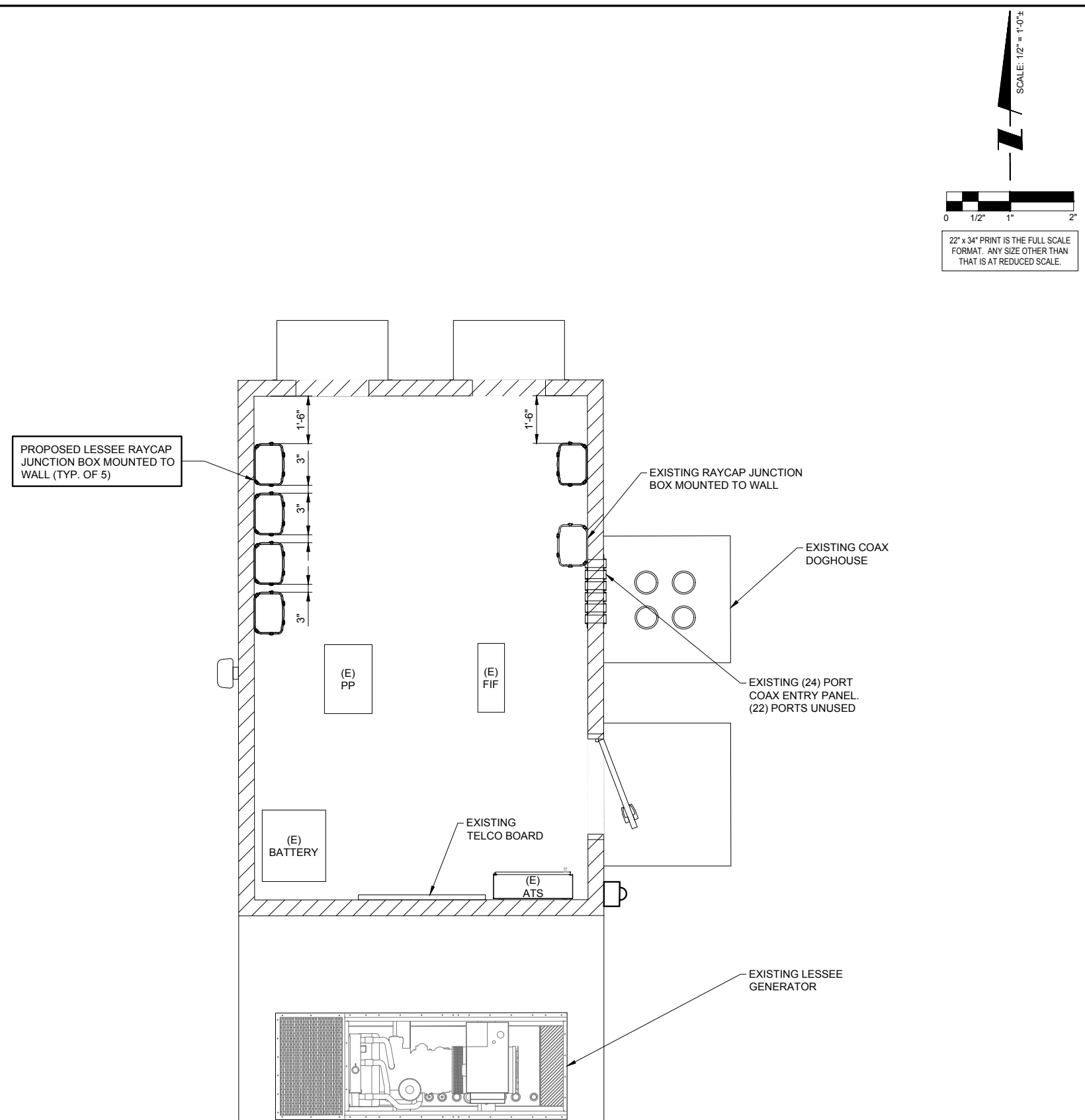
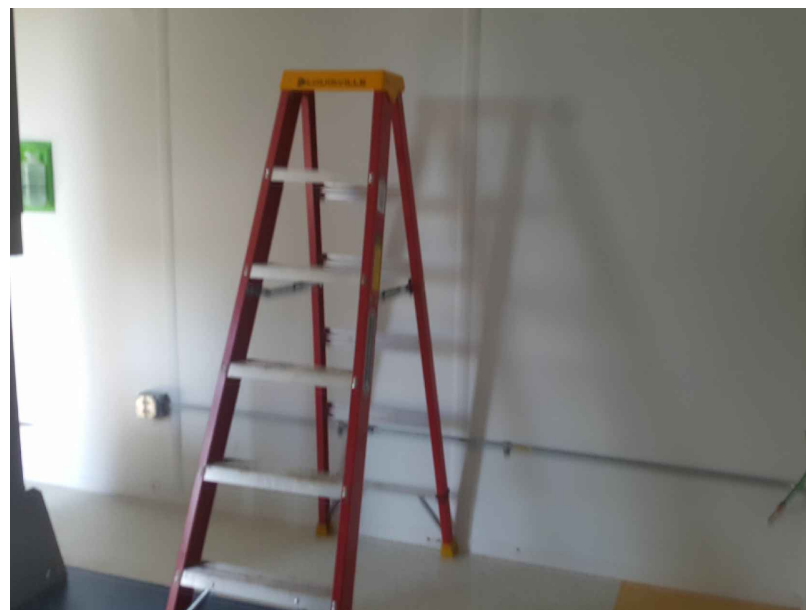
DRAWN BY:	AU
CHECKED BY:	RYU
DATE:	07/31/17
PROJECT #:	33-2596

SHEET TITLE

SITE LAYOUT

SHEET NUMBER

C-1

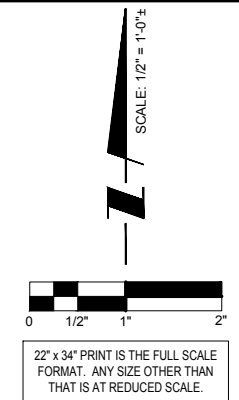


NOTES:

G.C. TO FIELD VERIFY PRIOR TO INSTALLATION THAT THE RAYCAP JUNCTION BOX WILL HAVE 24" OF VERTICAL CLEARANCE TO ALLOW FOR THE COVER TO SLIDE OFF.

MAXIMUM CABLE LENGTH OF 30' BETWEEN LTE CABINET  
AND RAYCAP JUNCTION BOX.

G.C. TO GROUND ALL NEW COMPONENTS TO EXISTING  
GROUND BAR.



**CHICAGO  
SMSA**  
*limited partnership*  
d/b/a VERIZON WIRELESS

[illegible]

LOC. # 313798

W MOOSEHEART  
RD

1901 ORCHARD GATEWAY  
BLVD  
NORTH AURORA, IL 60542

DRAWN BY:	AU
CHECKED BY:	RYU
DATE:	07/31/17
PROJECT #:	33-2596

SHEET TITLE

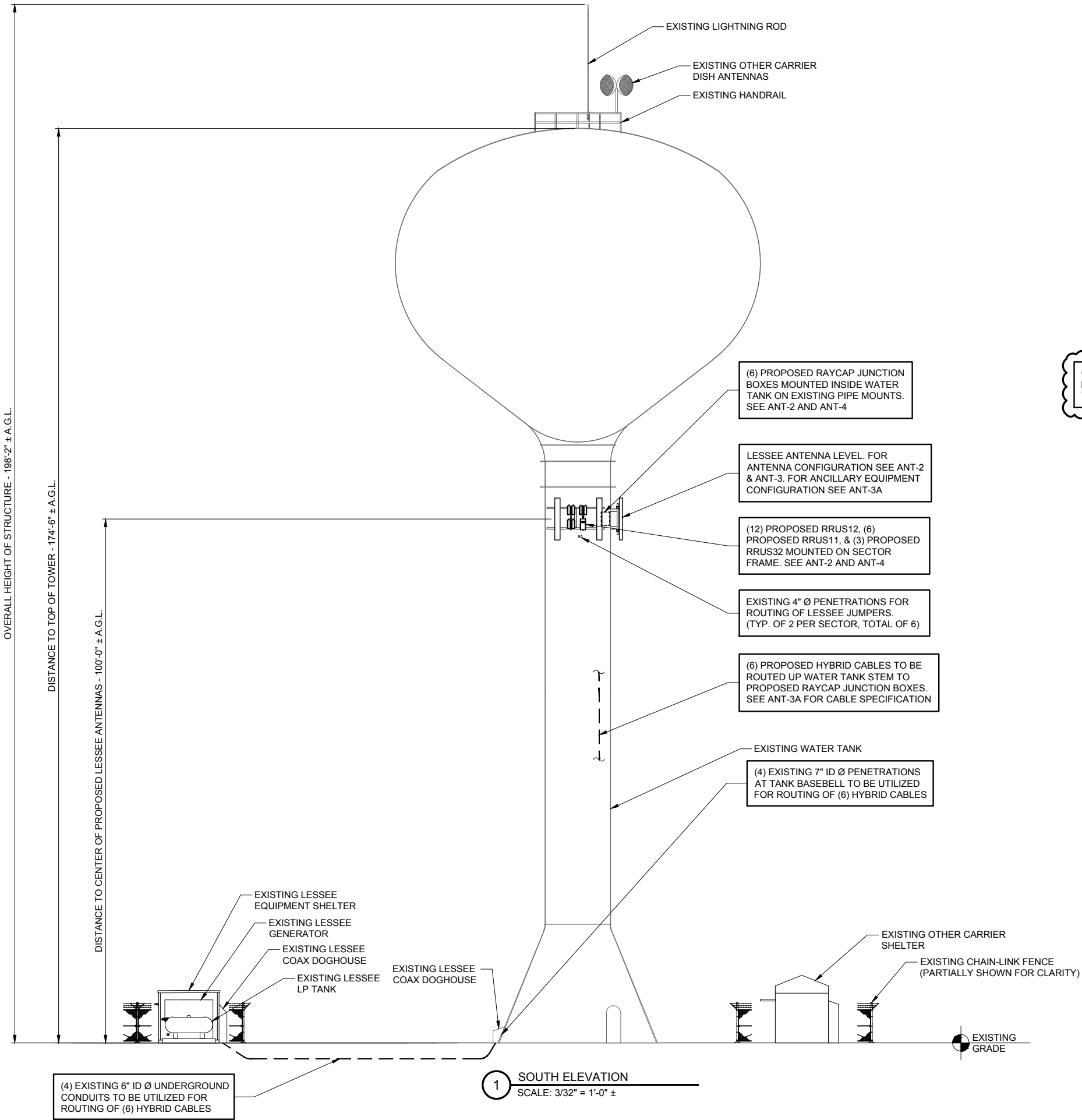
SHELTER LAYOUT

SHEET NUMBER

**A-1**

NOTE:  
THIS DRAWING IS FOR EXHIBIT AND  
LAYOUT PURPOSES ONLY.

FINAL EXHIBIT PENDING STRUCTURAL  
ANALYSIS BY OTHERS.



**CHICAGO**  
**SMSA**  
limited partnership  
d/b/a VERIZON WIRELESS

**TERRA**  
CONSULTING GROUP, LTD.  
600 BUSSE HIGHWAY  
PARK RIDGE, IL 60068  
PH: 847-698-6400  
FAX: 847-698-6401

REVISIONS		NO.	DESCRIPTION	DATE	BY
			ISSUED FOR REVIEW	08/09/17	AU

LOC. # 313798

W MOOSEHEART  
RD

1901 ORCHARD GATEWAY  
BLVD  
NORTH AURORA, IL 60542

DRAWN BY:	AU
CHECKED BY:	RYU
DATE:	07/31/17
PROJECT #:	33-2596

SHEET TITLE  
SITE  
ELEVATION

SHEET NUMBER

**ANT-1**

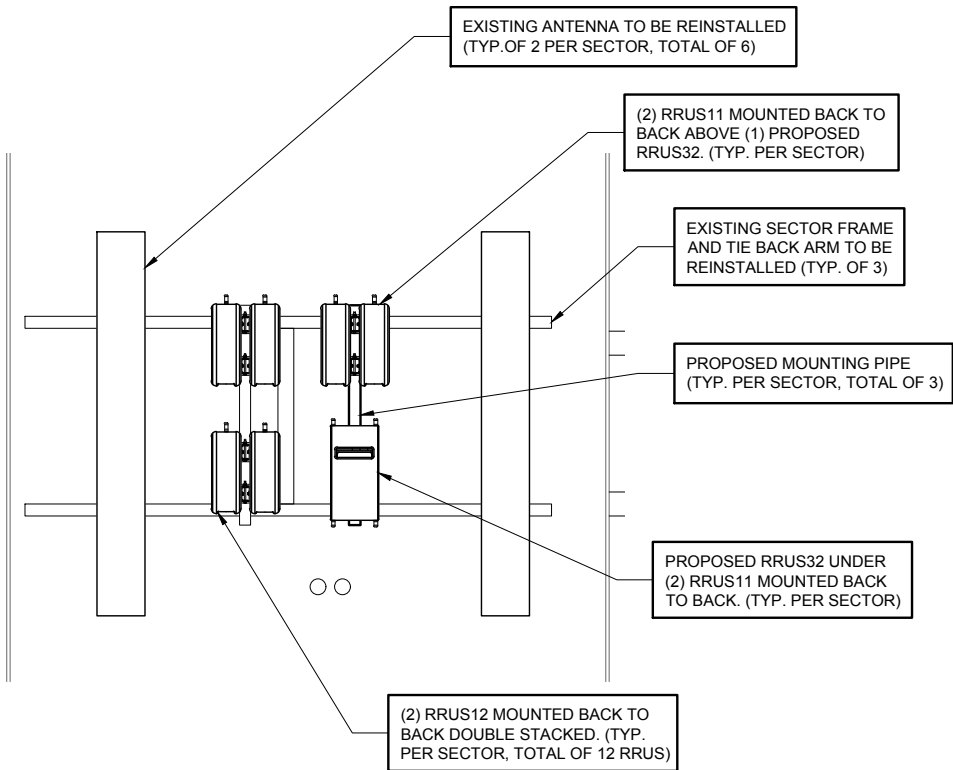
FULL SCALE PRINT IS ON 22"x34" MEDIA  
HALF SCALE PRINT IS ON 11"x17" MEDIA

NOTES:  
THIS DRAWING IS FOR EXHIBIT AND LAYOUT PURPOSES ONLY.

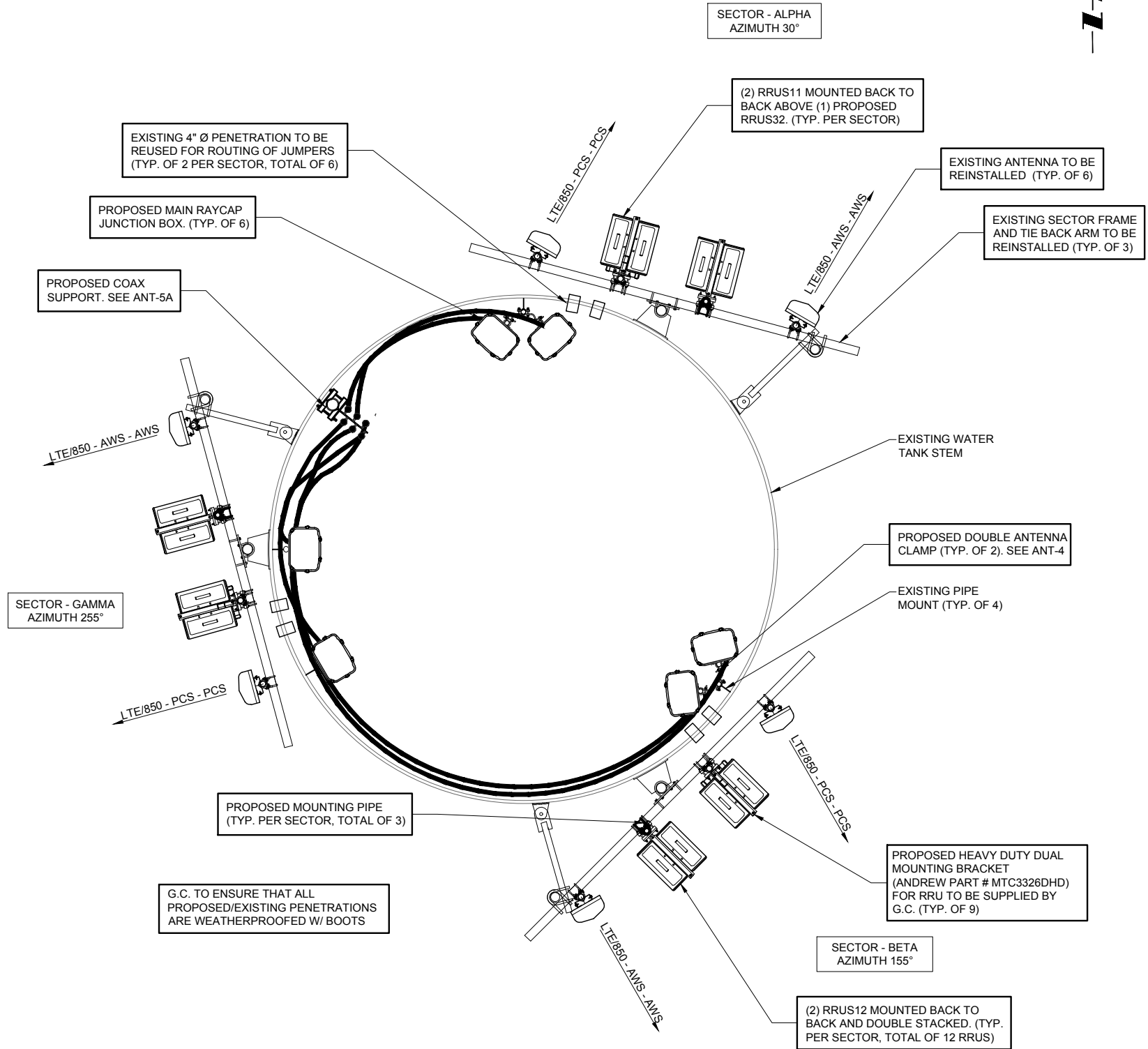
PLEASE REFER TO STRUCTURAL REPORT PREPARED BY XXXXX FOR ANALYSIS AND STRUCTURAL REQUIREMENTS.

G.C. TO GROUND ALL COMPONENTS TO EXISTING COAX GROUND BAR.

ALL TMAS AND DIPLEXERS/TRIPLEXERS TO BE MOUNTED DIRECTLY BEHIND ANTENNAS. REFER TO MOUNT ANALYSIS FOR ADDITIONAL REQUIREMENTS



1 ENLARGED ELEVATION VIEW  
N.T.S.



2 PROPOSED ANTENNA LAYOUT  
N.T.S.

**CHICAGO  
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SHEET TITLE  
**ANTENNA  
LAYOUT**

SHEET NUMBER

**ANT-2**



## DATE OF REPORT: \_\_\_\_\_

1 EXISTING ANTENNA CONFIGURATION  
N.T.S.

FIELD VERIFY HYBRID CABLE ROUTE AND LENGTH PRIOR TO ORDERING HYBRID CABLE.

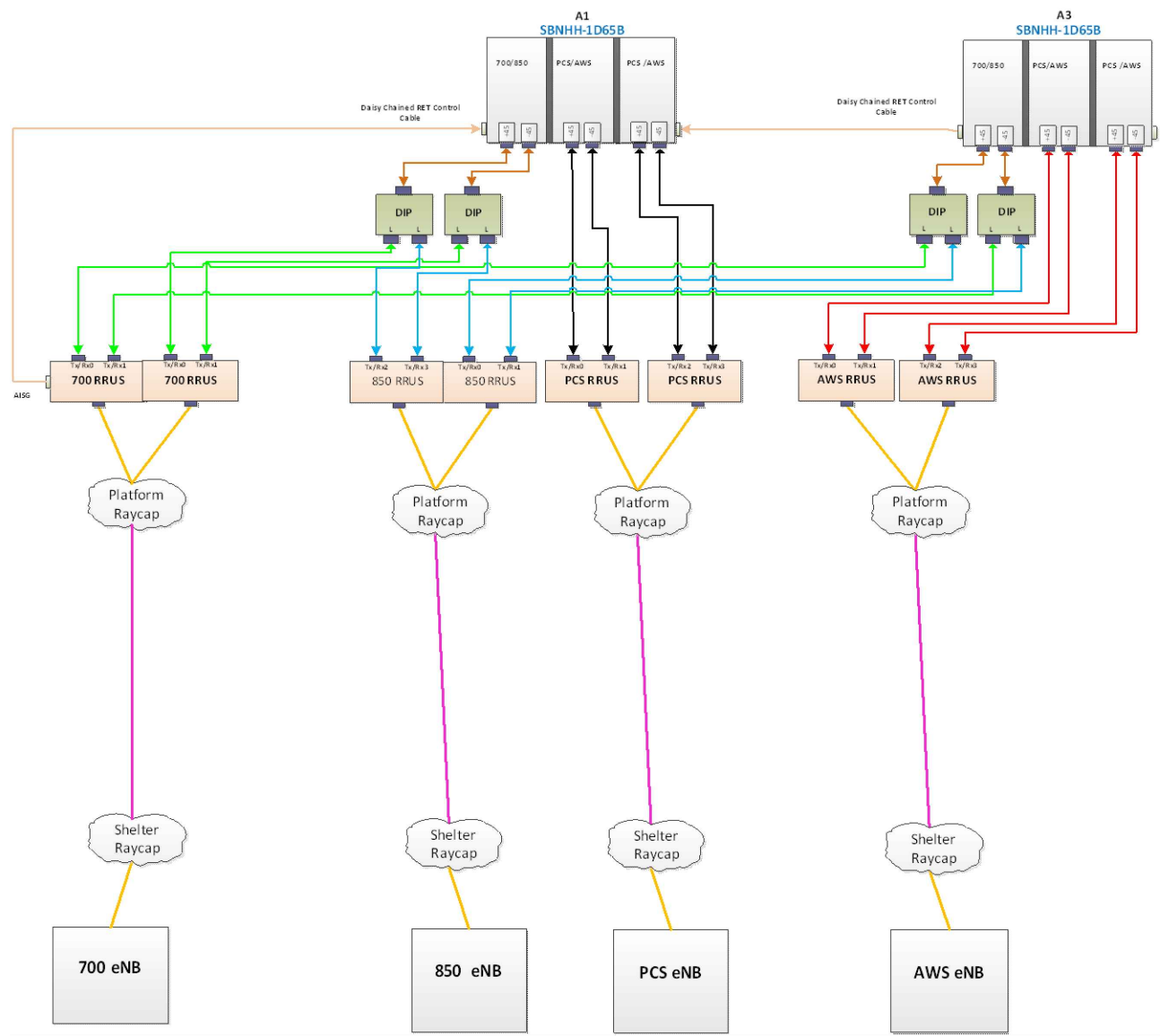
**Proposed**

Coax	Sector	Coax Manufacturer	Type	Size	Count	Action
	Alpha					
	Beta					
	Gamma					
	AWS	Andrew	HFT1206-24S26-XXX	1 5/8	6	Final Count

### Comments

[illegible]

# ANT-3



1 CABLE DIAGRAM  
N.T.S.

**CHICAGO  
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d/b/a VERIZON WIRELESS

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REVISIONS			
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SHEET TITLE  
CABLE DIAGRAM

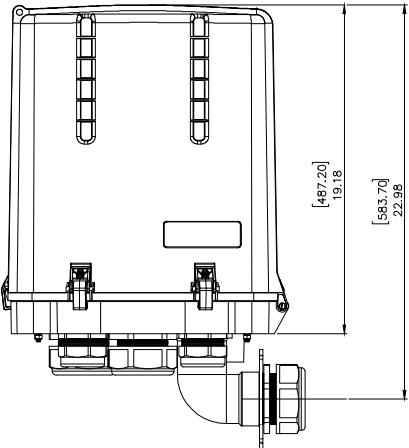
SHEET NUMBER  
**ANT-3A**

SPECIFICATIONS	DC SURGE PROTECTION FOR RRU/INTEGRATED ANTENNA RADIO HEAD
APPLICATION:	TOWER / BASE / ROOFTOP / ROOFTOP DISTRIBUTION MODELS
WEIGHT:	32LBS (14.51 KG)

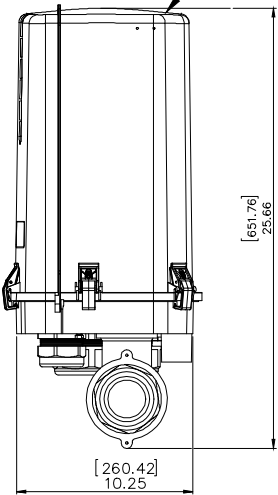
[mm]  
INCHES

PROPOSED RAYCAP JUNCTION BOX  
MODEL# RCMD-3315-PF-48

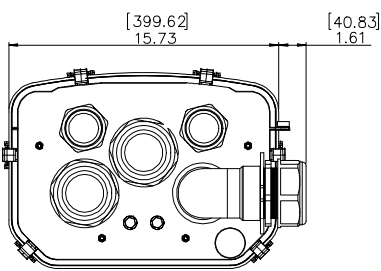
FRONT VIEW



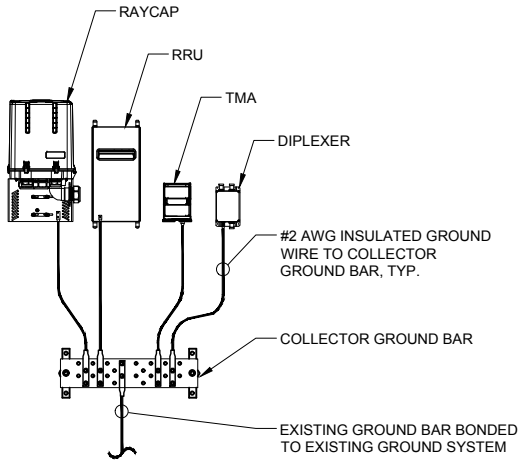
SIDE VIEW



BOTTOM VIEW



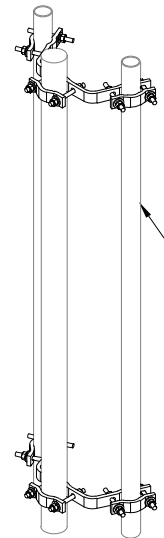
1 RAYCAP JUNCTION BOX DETAIL  
N.T.S.



NOTES:

1. DETAIL IS CONCEPTUAL ONLY. PLEASE SEE ECR AND LAYOUT SHEETS FOR ACTUAL EQUIPMENT CONFIGURATION.
2. GROUND CONNECTIONS MUST BE DOUBLE HOLE CONNECTION. SPECIAL EXCEPTION ONLY TO EQUIPMENT THAT WILL NOT ALLOW FOR A DOUBLE HOLE CONNECTION.

2 TYPICAL APPURTENANCE GROUNDING  
SCALE: N.T.S.

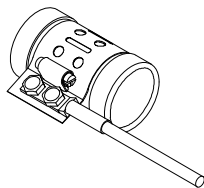


DOUBLE ANTENNA CLAMP  
ASSEMBLY, VALMONT  
SITEPRO # DAC OR  
APPROVED EQUAL.  
CONTRACTOR TO CUT  
PIPE TO 36" IN LENGTH.

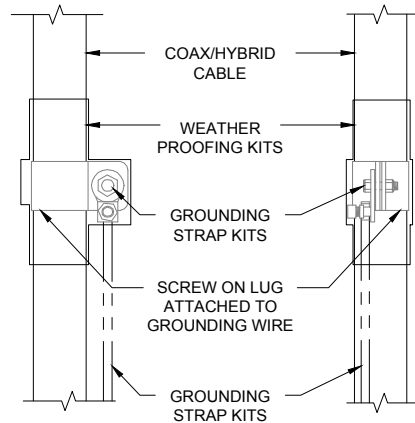
3 DOUBLE ANTENNA CLAMP  
SCALE: N.T.S.

NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. THIS DETAIL IS TYPICAL FOR EACH COAX CABLE WHERE IT IS SPECIFIED TO BE GROUNDED
3. CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING SHELTER ENTRY PANEL.
4. CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE IF APPLICABLE.
5. USE ONLY TIN PLATED GROUNDING KITS.



4 COAX / HYBRID CABLE GROUND KIT DETAIL  
SCALE: N.T.S.



**CHICAGO  
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W MOOSEHEART  
RD

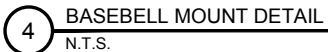
1901 ORCHARD GATEWAY  
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SHEET TITLE  
DETAILS

SHEET NUMBER

**ANT-4**



PROPOSED HYBRID CABLES  
ATTACHED TO T-BRACKET  
USING SNAP-IN HANGERS &  
BARREL CUSHIONS  
RECOMMENDED BY CABLE  
MANUFACTURER

[illegible]

DRAWN BY:	AU
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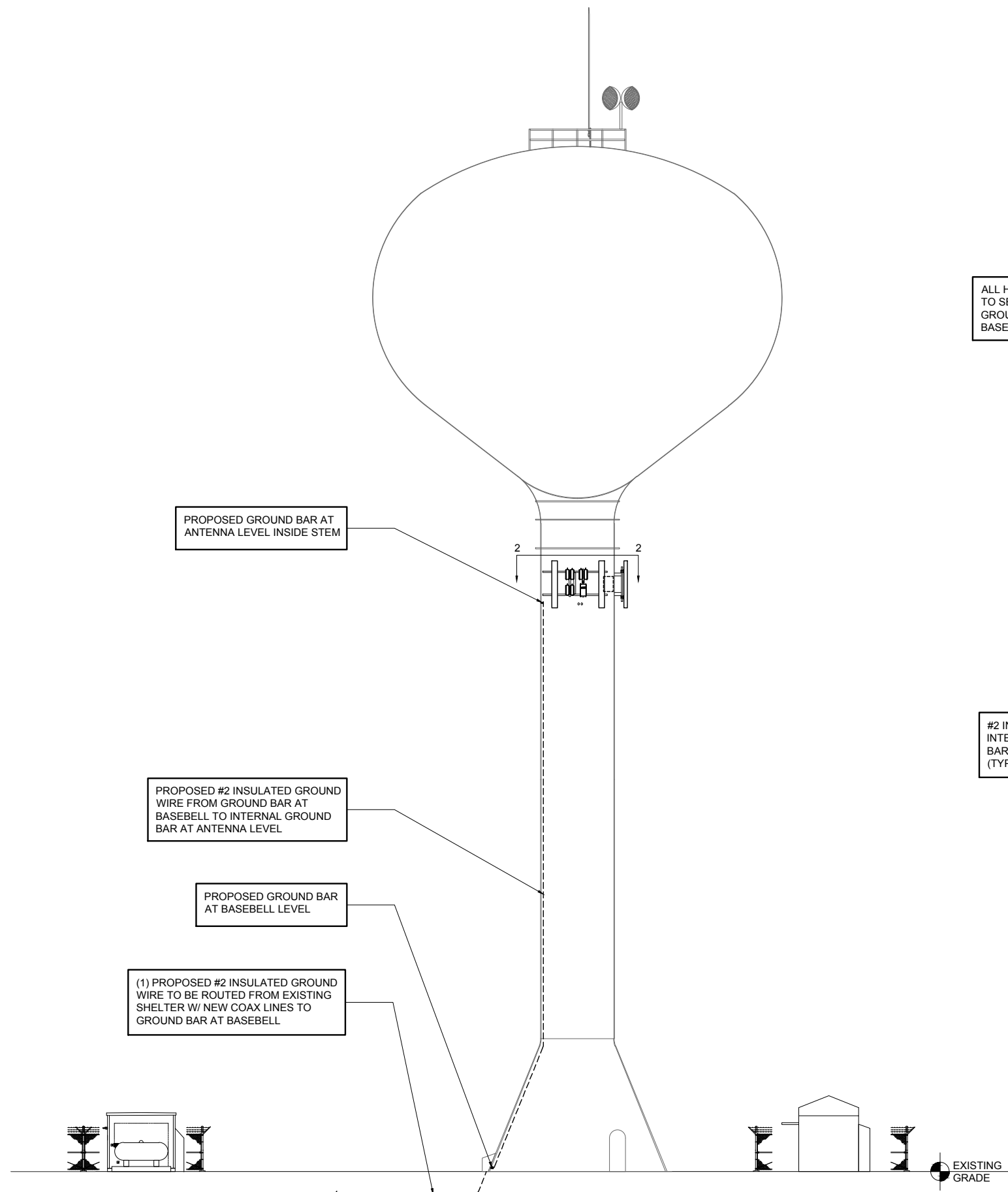
SHEET NUMBER

# ANT-5

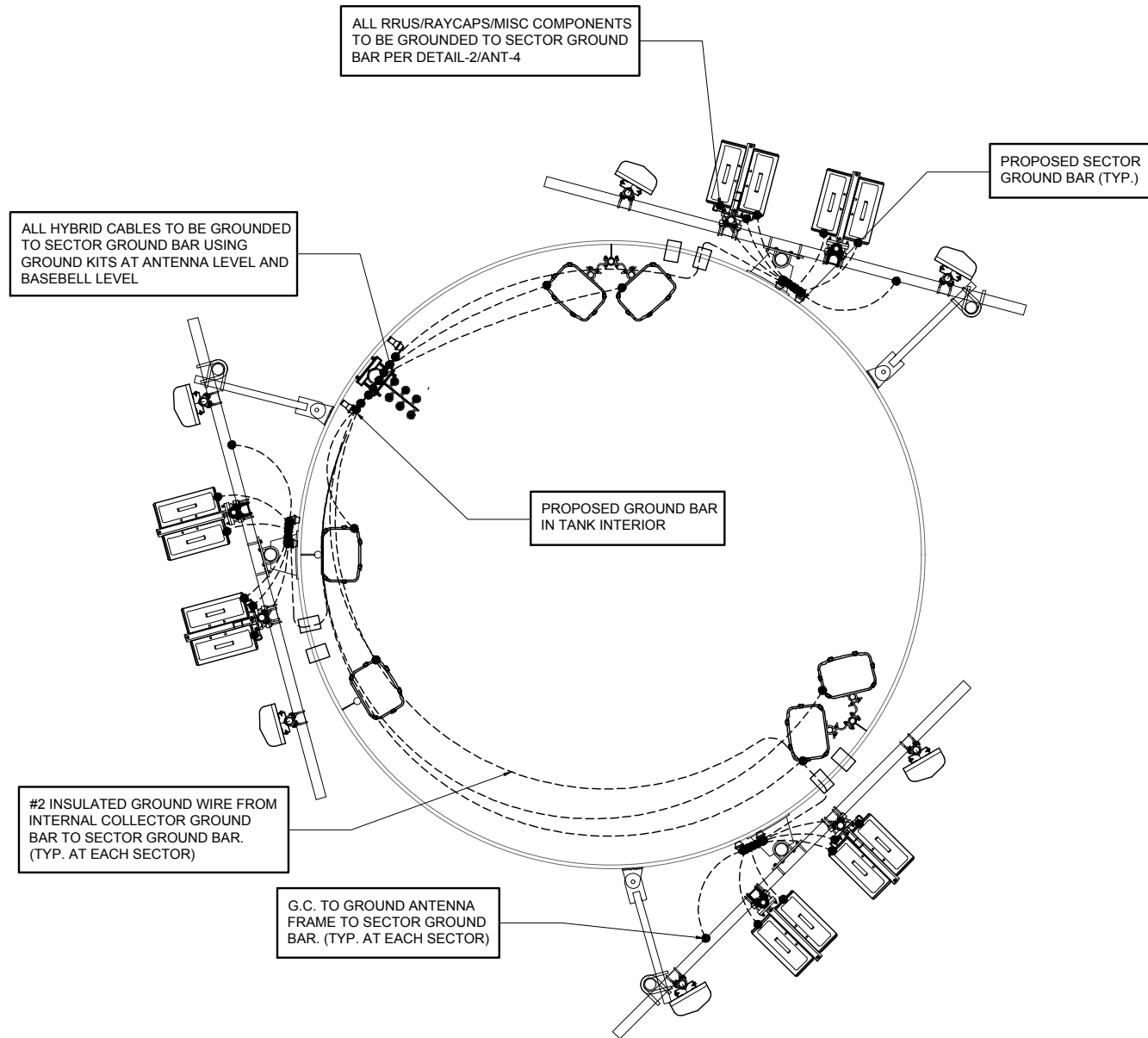
**CHICAGO  
SMA**  
*limited partnership*  
d/b/a VERIZON WIRELESS







1 GROUNDING ELEVATION PLAN  
SCALE: 3/32" = 1'-0" ±



2 ANTENNA GROUNDING PLAN  
SCALE: 1" = 2'-0" ±

FULL SCALE PRINT IS ON 22"x34" MEDIA  
HALF SCALE PRINT IS ON 11"x17" MEDIA

**CHICAGO  
SMSA**  
limited partnership  
d/b/a VERIZON WIRELESS

**TERRA**  
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RD

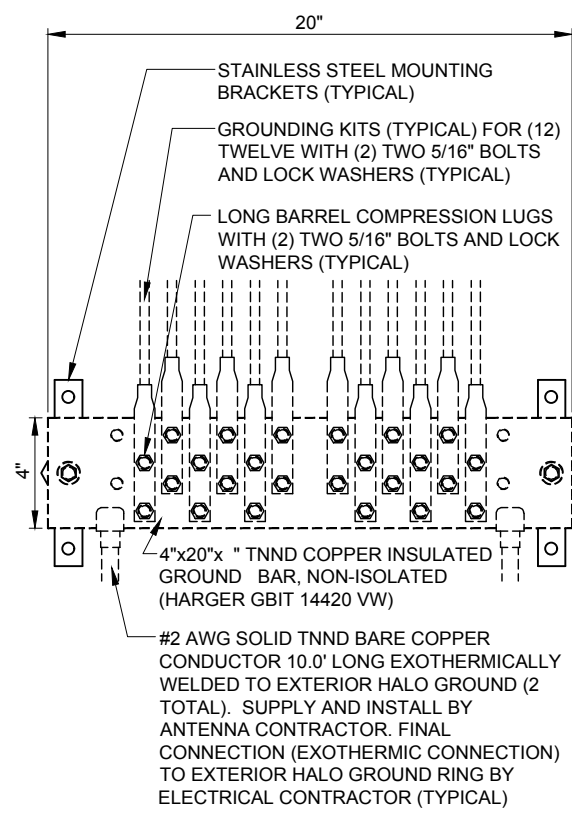
1901 ORCHARD GATEWAY  
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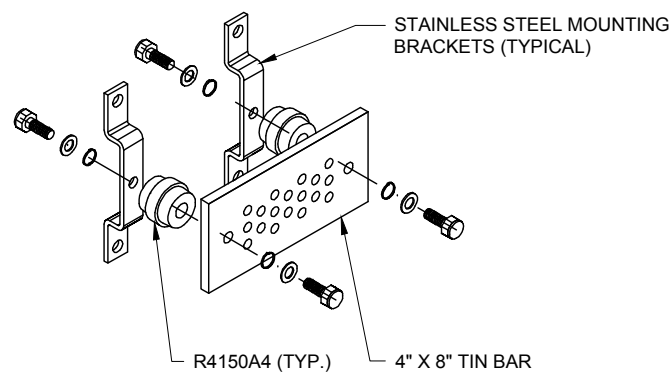
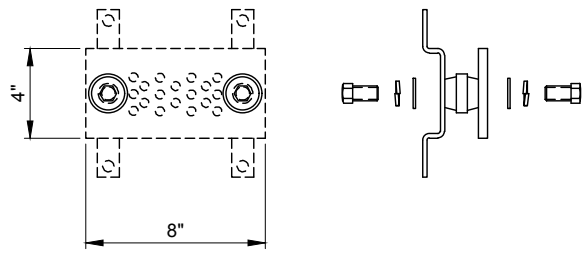
SHEET TITLE  
ANTENNA  
GROUNDING

SHEET NUMBER

**G-1**



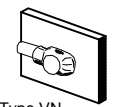
1 EXTERIOR GROUND BAR DETAIL



2 SECTOR GROUND BAR  
N.T.S.



Type GT  
THROUGH CABLE TO  
TOP OF GROUND ROD.



Type VN  
HORIZONTAL CABLE TAP TO  
VERTICAL STEEL SURFACE OR  
THE SIDE OF HORIZONTAL PIPE



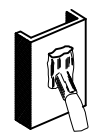
Type GR  
CABLE TAP TO TOP OF GROUND  
ROD



Type HS  
HORIZONTAL CABLE TAP TO  
HORIZONTAL STEEL SURFACE  
OR PIPE. CABLE OFF SURFACE.



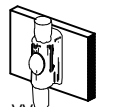
Type TA  
TEE OF HORIZONTAL RUN  
AND TAP CABLES.



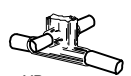
Type VS  
CABLE TAP DOWN AT 45° TO  
VERTICAL STEEL SURFACE OR SIDE  
OF HORIZONTAL OR VERTICAL PIPE.



Type GY  
THROUGH CABLE TO SIDE  
OF GROUND ROD



Type VV  
THROUGH VERTICAL CABLE TO  
VERTICAL STEEL SURFACE OR  
TO THE SIDE OF EITHER  
HORIZONTAL OR VERTICAL  
PIPE



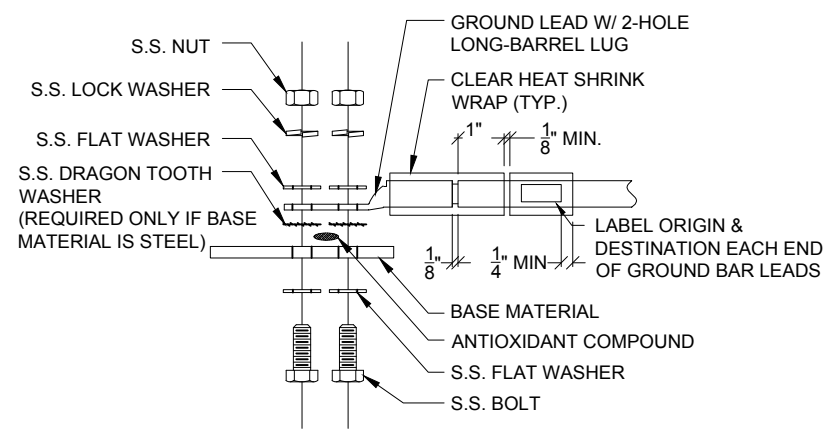
Type XB  
CROSS OF HORIZONTAL  
CABLES. LAPPED AND NOT  
CUT



Type NC  
THROUGH AND TAP CABLES  
TO GROUND ROD

3 EXOTHERMIC WELD DETAILS  
EXOTHERMIC AND HARGER ULTRAWELD OR APPROVED EQUAL

- NOTES:
1. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
  2. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.
  3. GROUND BARS, INSTALL BOLT HEAD TOWARD WALL
  4. ENCLOSURES, INSTALL BOLT HEAD ON OUTSIDE OF ENCLOSURE



4 GROUND LUG INSTALLATION DETAIL  
N.T.S.

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REVISIONS		NO.	DESCRIPTION	DATE	BY
	ISSUED FOR REVIEW			08/09/17	AU

LOC. # 313798

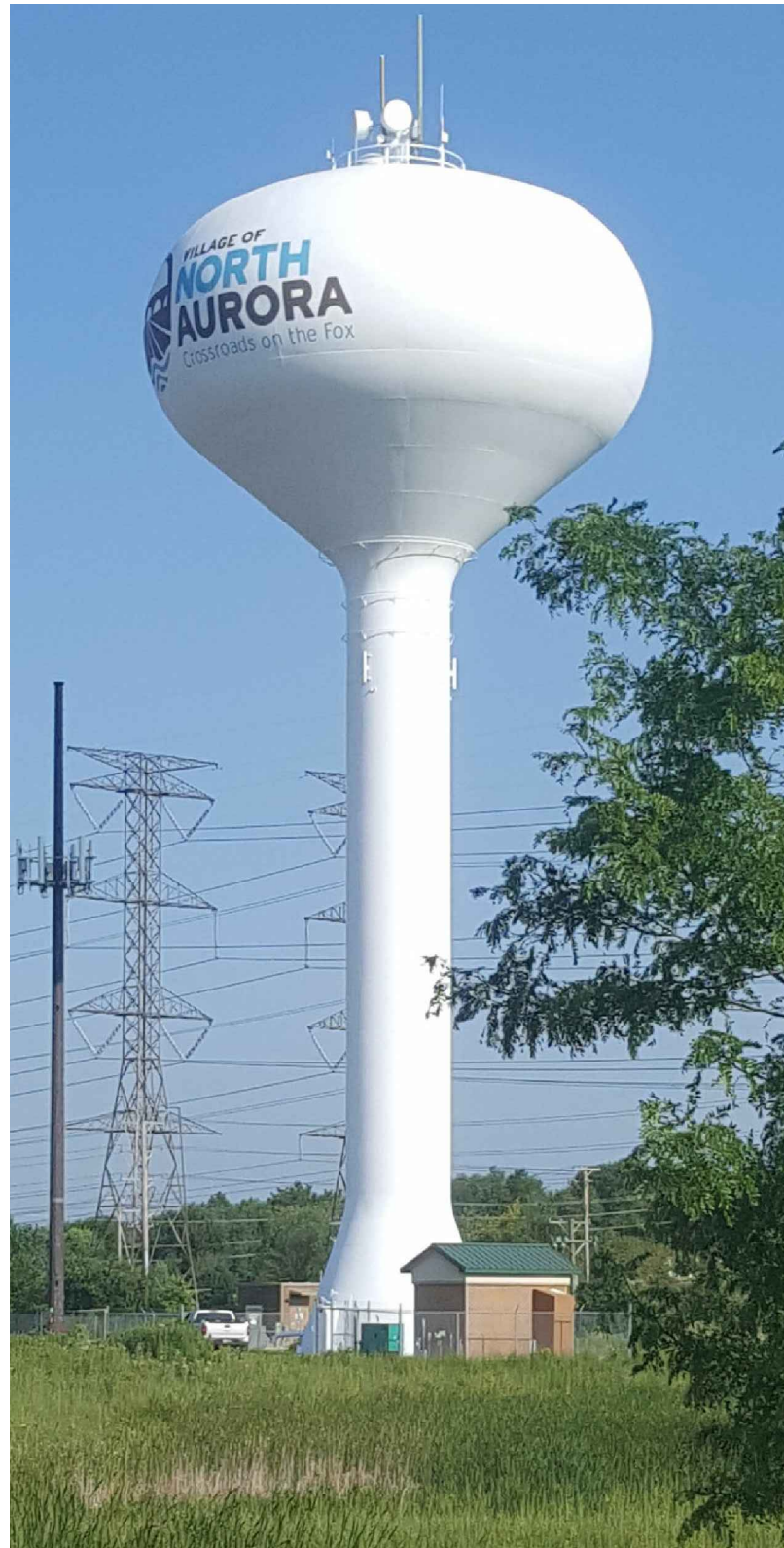
W MOOSEHEART  
RD

1901 ORCHARD GATEWAY  
BLVD  
NORTH AURORA, IL 60542

DRAWN BY:	AU
CHECKED BY:	RYU
DATE:	07/31/17
PROJECT #:	33-2596

SHEET TITLE  
GROUNDING  
DETAILS

SHEET NUMBER  
**G-2**



**CHICAGO  
SMSA**  
*limited partnership*  
d/b/a VERIZON WIRELESS

[illegible]

LOC. # 313798

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SHEET TITLE

PHOTO EXHIBIT

SHEET NUMBER

# EX-1



# Memorandum



To: Dale Berman, Village President & Board of Trustees  
Cc: Steven Bosco, Village Administrator  
From: John Laskowski, Public Works Director  
Date: October 11, 2017  
Re: Proposals for Snow and Ice Removal

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The contract for Snow and Ice Removal services ends on December 1, 2017. In order to continue to guarantee service, a new contract must be in place prior to this date.

Staff developed a proposal for snow and ice removal services and advertised it in the local newspaper, on the Village website, and contacted firms that provide these services. Four firms attended the mandatory informational meeting held to answer questions prior to the submission deadline. Two of the firms who attended supplied proposals, Langton Group and Tri-County Excavating.

This proposal is for a three year contract with the option of either party to terminate with a written notice of 30 days. The firm was asked to provide costs for each of the three contract years for the vehicles and equipment requested by the Village. Table 1 on the following page illustrate the prices offered by each firm. Tri-County provided unit costs that increase each year by 3%. Langton Group provided unit costs that remain the same the first two years and increase in the third year by a percentage that varies by equipment.

**Table 1. Hourly Rates****Tri County Excavating**

		Winter 2017- 2018 Rate [\$ / Hr]	Winter 2018- 2019 Rate [\$ / Hr]	Winter 2019- 2020 Rate [\$ / Hr]
<b>Vehicles</b>				
1	6-Wheeler with an 11-12 ft. Plow & Salter	150	155	160
2	6-Wheeler with an 11-12 ft. Plow & Salter with a Wing Plow	170	175	180
3	6-Wheeler Haul Off (if necessary)	90	93	96
4	5-Yard Truck 11 ft. Plow & Salter	140	144	148
5	5-Yard Truck 11 ft. Plow & Salter with a wing plow	160	165	170
6	1-Ton Truck 9-10 ft. Plow & Salter	125	129	133
7	Pick-up Truck 8.5 ft. Plow	115	118	122
8	Skid Steer with Bucket	120	124	128
9	Skid Steer with Plow	120	124	128
10	Wheel Loader with Bucket	200	206	212
11	Wheel Loader with Plow	220	227	234
<b>Equipment</b>				
1	Snow Blowers	105	108	111
2	4 Wheeler with Plows	125	129	133

**Langton Group**

		Winter 2017- 2018 Rate [\$ / Hr]	Winter 2018- 2019 Rate [\$ / Hr]	Winter 2019- 2020 Rate [\$ / Hr]
<b>Vehicles</b>				
1	6-Wheeler with an 11-12 ft. Plow & Salter	125	125	130
2	6-Wheeler with an 11-12 ft. Plow & Salter with a Wing Plow	175	175	180
3	6-Wheeler Haul Off (if necessary)	125	125	130
4	5-Yard Truck 11 ft. Plow & Salter	120	120	125
5	5-Yard Truck 11 ft. Plow & Salter with a wing plow			
6	1-Ton Truck 9-10 ft. Plow & Salter	110	110	115
7	Pick-up Truck 8.5 ft. Plow	110	110	115
8	Skid Steer with Bucket	110	110	115
9	Skid Steer with Plow	110	110	115
10	Wheel Loader with Bucket	175	175	175
11	Wheel Loader with Plow	175	175	175

Equipment				
1	Snow Blowers	90	90	90
2	4 Wheeler with Plows	100	100	100

The table below illustrates the difference in prices offered by the two firms. The first three columns are the difference between the two prices in dollars per hour. The second three columns show the difference in percentage. The figures shown in bold with an “L” next to them indicate that Langton Group provided a higher unit price. Otherwise Tri-County has the higher prices.

An example on how to read the below table would be to look at the **Vehicles**, row 1, “6-Wheeler with an 11-12 ft. plow & salter”. In the first winter season of 2017-2018 there is a \$25/hr difference. This indicates a 20% higher price. If we look at under **Vehicles**, row 3 for the “6-Wheeler Haul Off (if necessary)” under Winter 2017-2018 we see that the Langton Group is \$35/hr which is 39% higher than Tri-County.

**Table 2. Hourly Rate Comparison**

		Winter 2017- 2018 Rate [\$ / Hr]	Winter 2018- 2019 Rate [\$ / Hr]	Winter 2019- 2020 Rate [\$ / Hr]	Winter 2017- 2018 Rate [%]	Winter 2018- 2019 Rate [%]	Winter 2019- 2020 Rate [%]
<b>Vehicles</b>							
1	6-Wheeler with an 11-12 ft. Plow & Salter	25	30	30	20%	24%	23%
2	6-Wheeler with an 11-12 ft. Plow & Salter with a Wing Plow	<b>5 L</b>	0	0	<b>3% L</b>	0%	0%
3	6-Wheeler Haul Off (if necessary)	<b>35 L</b>	<b>32 L</b>	<b>34 L</b>	<b>39% L</b>	<b>34% L</b>	<b>35% L</b>
4	5-Yard Truck 11 ft. Plow & Salter	20	24	23	17%	20%	18%
5	5-Yard Truck 11 ft. Plow & Salter with a wing plow	N/A	N/A	N/A	N/A	N/A	N/A
6	1-Ton Truck 9-10 ft. Plow & Salter	15	19	18	14%	17%	16%
7	Pick-up Truck 8.5 ft. Plow	5	8	7	5%	7%	6%
8	Skid Steer with Bucket	10	14	13	9%	13%	11%
9	Skid Steer with Plow	10	14	13	9%	13%	11%
10	Wheel Loader with Bucket	25	31	37	14%	18%	21%
11	Wheel Loader with Plow	45	52	59	26%	30%	34%
<b>Equipment</b>		[\$ / Hr]	[\$ / Hr]	[\$ / Hr]	[%]	[%]	[%]
1	Snow Blowers	15	18	21	17%	20%	23%
2	4 Wheeler with Plows	25	29	33	25%	29%	33%

The above table provides information that compares the prices of the two companies. At this point the observation can be made that the unit prices offered

by Tri-County are generally higher than those supplied by Langton Group. However it does not necessarily mean that the overall cost of snow and ice removal is higher. The results of the simulation are summarized in the Table 3 below. This simulation demonstrates that for the 2015-2016 winter snow season the Langton Group provides lower rates by \$5,162.50 and in the 2016-2017 winter snow season the cost is lower by \$3,775.00.

**Table 3. Simulation Results**

Firm Name	Total Cost 2015-2016 Snow Season	Total Cost 2016-2017 Snow Season
Tri-County Excavation & Construction	\$81,000.00	\$66,492.50
Langton Group	\$75,837.50	\$62,717.50
Difference	<b>\$5,162.50</b>	<b>\$3,775.00</b>

While the cost analysis is useful to provide the a quantitative look at each firm the reason that the Village requested proposals was because there are other factors that must be considered besides prices.

These criteria include: references, equipment, response time, subcontractors, flexibility to respond to varying snowfall events, and hourly rates. Below is a summary of the staff evaluation of each firm with respect to the criteria.

### References

Tri-County has worked for the past 12 years providing snow and ice removal services for the Village of North Aurora. To evaluate Tri-County's references staff is choosing to utilize its experience with the firm. Staff believes that Tri-County has performed effectively in the past because they have become familiar with the routes that the Village has assigned to them. They understand the subdivision layouts and know the locations to pile snow in cul-de-sacs. They are reliable and have never had a problem arriving on time. They are conscientious and communicate well with staff. If issues arises where a mailbox is struck, staff has been contacted quickly to address the problem. During long snow storms Tri-County has been able to work independently with little supervision while Village employees are taking mandated rest period.

Langton Group has provided references from other clients including Village of Glenview. Langton currently provides service for town center area, business district parking lots, and municipal facilities including parking lots and sidewalks. The reference shared that they have limited experience plowing actual routes and were excluded from this past contract which would have provided services for this coming snow season. Google Maps indicates that Glenview is approximately one hour and twenty five minutes from Woodstock, the location of Langton Groups yard. The

reference indicated they had an hour and half response time. Initially there were issues providing service within that time frame. At times drivers were deployed at the direction of Langton Group instead of the Public Works Department in order to anticipate storm events. Under the North Aurora contract if the contractor chose to do this, he would not be compensated for this time. During the longer duration storms they experienced difficulty providing the desired level of service. The point of contact was not necessarily clearly defined leading to communication issues. The reference was hesitant to say that they would be able to provide the service we are seeking.

The Village of Oswego was contacted to get additional references but has not responded at this time.

#### Equipment

Both firms provided vehicle and equipment inventories. Staff has determined that both firms have the ability to provide the necessary equipment to the Village to effectively complete the snow and ice removal operations. Prior to the award of the contract Village staff will visit the selected company's firm to evaluate its fleet.

#### Response Time

The response time required by this proposal is one hour.

Tri-County is located in Aurora, their response time is as low as 15 minutes.

Langton Group is located in Woodstock, IL. The driving time from Woodstock to the Village of North Aurora is just over one hour according to Google Maps. Langton Group indicates they have a meteorological service in place that contacts their managers two hours in advance of a storm. This provides adequate lead time to their drivers to begin deploying services. In addition drivers that live near North Aurora would be directed to take their vehicles home with them to shorten the response time. Langton Group indicated that they hold other accounts with commercial entities in and around the Fox Valley area and would be able to pull these individuals off to meet the service needs of North Aurora.

#### Subcontractors

The Village was interested in knowing if each firm would use subcontractors because we were concerned it could impact response time or impact the ability of staff to manage the contractors.

Tri-County has listed four firms they will use to support their operations in large snow events. They have provided the equipment owned by these companies as well.



Langton Group has not listed any subcontractors.

#### Flexibility

This criteria was included to determine if the selected contractor had the ability to provide snow and ice removal services under all size of snow storms. Based on the equipment lists it appears that both firms possess the necessary equipment to perform the work. Tri-County has been observed to perform well in a variety snow events. Glenview indicated that Langton Group had difficulty at times responding to very large storm events.

#### Hourly Rates (Cost of Operation)

The storm event simulation performed above indicated that the cost difference for service for the winter 2015-2016 was \$5,162.00 (6% ) and for 2016-2017 snow season was \$3,775.00 (6%).

In consideration of the evaluation of the proposals against the defined criteria, two observations can be made. The first is simply that Langton Group can provide the snow removal services at a lower cost. The second is more qualitative in nature and relies on the references provided by Langton Group. The references indicated that Langton Group had not performed snow removal services on actual snow routes, rather parking lots and sidewalks. The reference indicated he was concerned with their ability to provide route service and did not award a contract as a result of this concern.

Overall staff believes that snow and ice removal is a critical service for the Village of North Aurora. This service maintains access to the road network for residents, business owners, visitors and emergency services. At this point the staff believes the minimal difference in simulated cost is outweighed by reliable snow and ice removal service provision. Staff is seeking to have a conversation with the Village Board to understand its view on cost and service provision of snow and ice removal services.