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This report summarizes valuation results for the Township of Bloomfield Retirement Income Plan based upon actuarial valuations as of January 1, 2010 and January 1, 2011.

	January 1, 2010	<u>January 1, 2011</u>
Contributions		
Recommended Employer Contribution	\$6,307,059	\$5,512,710
Expressed as a percentage of payroll	40.50%	35.51%
Estimated Employee Contribution	\$372,676	\$370,620
Pension Plan Asset Information		
Market Value of Assets	\$108,305,929	\$118,216,018
• Actuarial Value of Assets	\$115,269,769	\$119,693,077
Liability Information		
• Present Value of Projected Benefits	\$176,255,242	\$178,137,327
Present Value of Accrued Benefits	\$136,577,300	\$139,072,818
Projected Unit Credit Liability	\$146,532,941	\$148,403,066
Participant Information		
Active Participant Lifecount	225	223
Total Participant Lifecount	475	475
Total Covered Payroll	\$15,562,765	\$15,522,940

#### **Pension Plan**

No changes to the plan have been made since the 1/1/2010 valuation.

#### **Actuarial Assumptions**

The expense assumption has changed from a 2% load of liabilities to a flat dollar load to the Normal Cost of \$30,000.

#### Gain/Loss

Actuarial gains and losses are recognized with each valuation by routine application of the Actuarial Cost Method. Under your cost method, actuarial gains and losses are recognized with each valuation and amortized over 20 years.

#### **Funding Method**

The funding method has changed from the Aggregate Actuarial Cost Method to the Projected Unit Credit Level Dollar Funding Method using a 20-year amortization period.

#### **Demographics**

Total participant lifecount remained the same when compared with last year. Within the total group, active lifecount decreased 1%.

This report relies on the census data submitted to us by the plan sponsor, as summarized in "Participant Data", and the retirement plan as outlined in "Plan Provisions". It also relies on the plan asset information as described in "Statement of Net Assets Available for Benefits". Appropriate tests for consistency and reasonableness have been completed on the information relied on.

The liabilities and costs were determined using the method summarized in "Actuarial Cost Method" and the actuarial assumptions described in "Plan Assumptions". In our opinion, the actuarial assumptions used in this report are reasonable and reflect our best estimate of the anticipated future experience under the plan.

I am the Enrolled Actuary for this plan, and have no other relationship with the plan or the plan sponsor, which may impair or appear to impair the objectivity of my work.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Guidelines for Professional Conduct of the American Academy of Actuaries. The undersigned credentialed actuary meets the qualification standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein.

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### 1. Market Value of Assets:

Description	<u>January 1, 2010</u>	<u>January 1, 2011</u>
George J. Schwartz & Co., Inc.	12,372,943	9,110,253
Total Market Value	\$ 12,372,943	\$ 9,110,253

## 2. Guaranteed Account (GA)

		<u>January 1, 2010</u>	<u>January 1, 2011</u>
a.	Value as of Valuation Date	\$95,932,985	\$109,105,765
b.	Receivables i. Investment Income ii. Employer Contributions	0 0	0
c.	Payables	0	0
d.	Total Guaranteed Account $3(a) + 3(b) + 3(c)$	\$95,932,985	\$109,105,765
4.	Total Market Value of Assets	\$108,305,929	\$118,216,018
5.	Total Actuarial Value of Assets	\$115,269,769	\$119,693,077
6.	Rate of Return on Market Value of Assets during the preceding twelve month period	8.67%	10.81%

# Contributions for the Preceding Plan Year

<u>Date</u>	Employee	Employer
	<b>Contributions</b>	<b>Contributions</b>
August, 2009	\$0.00	\$2,500,000
December, 2009	0.00	2,600,000
January, 2010	41,812.90	
February, 2010	27,789.48	
March, 2010	55,476.21	
April, 2010	0.00	
May, 2010	27,628.98	794,595
June, 2010	27,509.38	
July, 2010	41,156.17	
August, 2010	27,415.93	
September, 2010	27,124.10	
October, 2010	27,510.49	
November, 2010	69,287.46	
December, 2010	<u>0.00</u>	
Totals	\$372,711.10	\$5,894,595

### **Lifecount and Data Reconciliation:**

		Vested				
Description	<u>Actives</u>	<u>Terms</u>	<u>Inactives</u>	<b>Disableds</b>	<u>Retireds</u>	<u>Total</u>
Participants on						
<b>January 1, 2010</b>	225	9	2	0	239	475
	_			_		
New Participants	3	0	0	0	1	4
Transfers in Status	0	0	0	0	0	0
Vested Term	0	0	0	0	N/A	0
Non-vested Term	0	0	0	0	N/A	0
Inactive	(1)	0	1	0	0	0
Disabled	0	0	0	0	0	0
Retired	(3)	0	0	0	3	0
Cash Out	(1)	(1)	0	0	0	(2)
Death	0	0	0	0	(2)	(2)
<b>Expired Payments</b>	N/A	N/A	N/A	0	0	0
Data Correction	0	0	0	0	0	0
Participants on						
January 1, 2011	223	8	3	0	241	475

AVERAGE AGES for active eligible lives	<u>January 1, 2010</u>	<u>January 1, 2011</u>
Average attained age	42.69	43.43
Average service	13.16	14.02
PAYROLL for active eligible lives	\$15,562,765	\$15,522,940
Average annual earnings	\$69,168	\$69,610
RETIRED PARTICIPANTS		
Average attained age	67.32	67.11
Average annual benefit	\$32,432	\$32,638

Present Value of Projected Plan Benefits: (at 7.0% for the preceding year and 7.0% for the current year)

Actives	<u>January 1, 2010</u>	<u>January 1, 2011</u>
Retirement Benefits	76,401,043	80,462,224
Withdrawal	1,018,050	960,618
Pre-retirement Spouse	1,327,185	1,338,264
Disability	3,160,830	3,155,304
Other	33,319	29,247
Subtotal for Actives	\$81,940,427	\$85,945,657
Inactives		
Retired Lives	\$93,143,997	\$91,022,248
Vested Terminated Participants	1,170,818	1,169,422
Disabled	0	0
Inactive Lives	<u>0</u>	0
Subtotal for Inactives	\$94,314,815	\$92,191,670
<b>Total Present Value of Benefits</b>	\$176,255,242	\$178,137,327

Present Value of Actuarial Accrued Liabilities: (at 7.0% for the preceding and current years)

Actives	<u>January 1, 2010</u>	<u>January 1, 2011</u>
Retirement Benefits	38,570,466	51,758,758
Withdrawal	591,457	643,328
Pre-retirement Spouse	715,348	864,945
Disability	2,359,322	2,921,763
Other	25,891	22,602
Subtotal for Actives	\$42,262,484	\$56,211,396
Inactives		
Retired Lives	\$93,143,997	\$91,022,248
Vested Terminated Participants	1,170,818	1,169,422
Disabled	0	0
Inactive Lives	<u>0</u>	0
Subtotal for Inactives	\$94,314,815	\$92,191,670
<b>Total Present Value of Benefits</b>	\$136,577,299	\$148,403,066

# **Determination of Normal Cost as of January 1, 2010**

	<u>January 1, 2010</u>
1. Present Value of Future Benefits	\$176,255,242
2. Actuarial Value of Pension Fund Assets	\$115,269,769
3. Present Value of Future Employee Contributions	<u>\$3,179,995</u>
4. Present Value of Future Employer Normal Costs (1-2-3)	57,805,478
5. Present Value of Future Salaries	\$146,884, 237
6. Total Current Salaries (Employees under assumed retirement age)	\$14,977,845
7. Employer Normal Costs (4/(5/6))	\$5,894,448
PENSION CONTRIBUTION FOR THE PLAN YEAR BEGINNING JANUARY 1, 2010	
Normal Cost	\$5,894,448
Interest to the end of the Plan Year	\$412,611
Total Recommended Employer Contribution at end of year	\$6,307,059

## Determination of Unfunded Liability Amortization for the plan year beginning January 1, 2011

	January 1, 2011
1. Projected Unit Credit Liability	\$148,403,066
2. Actuarial Value of Pension Fund Assets	\$119,693,077
3. Unfunded Liability (1-2)	\$28,709,989
4. Interest Rate	7.00%
5. Amortization Period	20 Years
6. Amortization of Unfunded Actuarial Accrued Liability (level dollar amortization)	\$2,532,729
PENSION CONTRIBUTION FOR THE PLAN YEAR BEGINNING JANUARY 1, 2011	
Employer Normal Cost     Net of Employee Contributions	\$2,589,337
2. Amortization of Unfunded Actuarial Accrued Liability (level dollar amortization)	\$2,532,729
3. Expenses	\$30,000
4. Recommended Employer Contribution at beginning of year (1+2+3)	\$5,152,066
5. Interest to the end of the Plan Year	<u>\$360,645</u>
6. Total Recommended Employer Contribution at end of year (4+5)	\$5,512,710

## DIVISIONAL ALLOCATION OF CONTRIBUTIONS

The following percentages may be used to allocate contributions to each division. These percentages are based on the ratio of the liabilities for employees of each division to the liabilities for all divisions.

	Division	Percentage
000	Administration & Miscellaneous	32.61%
001	Library	3.28%
002	Fire Department – Bargaining Unit Members	15.03%
003	Police Department – Civilian	7.70%
004	Police Department – Command Officer	11.43%
005	Police Department – Bargaining Unit	16.45%
006	Village Police	0.23%
007	Fire Department – Command Officers	13.27%

#### I. ACTUARIAL COST METHOD

Costs have been computed in accordance with the Projected Unit Credit Level Dollar Funding Method using a 20-year amortization period and reflect the actuarial assumptions described in "Plan Assumptions" of this report.

#### NORMAL COST

The Normal Cost is the cost of benefits expected to accrue during the coming year for all Participants who are eligible for funding as of the valuation date.

#### ACTUARIAL ACCRUED LIABILITY

As of January 1, 2011, an Actuarial Accrued Liability is established which represents the value of accrued benefits. This Actuarial Accrued Liability is offset by assets, if any, and the remainder, the Unfunded Actuarial Accrued Liability, is amortized over a fixed number of years from the effective date.

Subsequent changes due to plan amendment or revised actuarial assumptions create increments of Actuarial Accrued Liability which will be amortized over a similar fixed period of years from their effective dates. Actuarial gains and losses will be recognized with each valuation and amortized over a 20-year period.

#### II. ASSET VALUATION METHOD

Assets have been valued in accordance with generally accepted procedures as described below.

All funds invested are valued in the following manner:

#### Definitions

i	assumed growth rate, set equal to the expected return on assets
C(t)	sum of contributions and other additions to the fund from all sources other than investment transactions in Plan Year t
W(t)	sum of all withdrawals and other decreases to the fund from all sources other than investment transactions in Plan Year t
AV(t)	Actuarial Value of Assets as of Plan Year t
MV(t)	Market Value of Assets as of Plan Year t
EV(t)	Expected Value of Assets as of Plan Year t
G/L(t)	Gain or Loss for Plan Year t

#### Method

Deferred Recognition Method, with no gain or loss recognition prior to January 1, 2002. On January 1, 2002, let AV(t) = MV(t). For subsequent years, AV(t) is determined as follows:

$$EV(t) = MV(t-1) * (1+i) + [C(t-1) - W(t-1)] * (1+i*m)$$

where m represents a proportionate yield consistent with the portion of the year for which C and W are invested.

$$G/L(t\text{-}1) = EV(t) - MV(t)$$

$$AV(t) = MV(t) + 4/5 * G/L(t-1) + 3/5 * G/L(t-2) + 2/5 * G/L(t-3) + 1/5 * G/L(t-4)$$

#### **Corridor Limits**

The resulting Actuarial Value of Assets may not be less than 80% or more than 120% of the current market value of plan assets as of the applicable valuation date [ as required by IRC Section 1.412(c)(2)(1) ].

#### Determination of Actuarial Value

Market Value of Assets on 01/01/2011: \$ 118,216,018

Plan Year	(Gain)/Loss	% Deferred	Deferred Recognition
2010	\$ 3,934,275	80.00%	\$ 3,147,420
2009	\$ 1,011,631	60.00%	\$ 606,978
2008	\$ (12,209,207)	40.00%	\$ (4,883,683)
2007	\$ (1,738,874)	20.00%	\$ (347,775)
			\$ (1,477,059)

Market Value plus Deferred Recognition: \$119,693,077

Corridor for Actuarial Value

80% of Market Value: \$ 94,572, 815 120% of Market Value: \$141,859,222

Actuarial Value after Corridor: \$ 119,693,077

Assumptions have been chosen to anticipate the long-range experience of the Plan. Consistency among assumptions is important as each interacts with the others; equally important is the recognition of inflationary trends in the economy.

The actuarial assumptions used to compute Plan costs are:

**Mortality:** The RP-2000 Mortality Table projected to 2010.

**Termination:** 50% of Prudential Scale 1/2A

The probabilities that Participants at the ages indicated will terminate before reaching the assumed retirement age are:

Age	<u>Male</u>	<u>Female</u>
20	28.5%	35.8%
25	22.4%	29.7%
30	15.0%	20.9%
35	8.6%	13.2%
40	4.0%	6.5%
45	1.1%	1.9%
50 & Over	0.0%	0.0%

**Retirement Age:** Age 55 with 25 years of Service or Age 62. Participants at or

beyond this age are assumed to retire immediately. Non-active,

non-retired participants are assumed to retire at Normal

Retirement Age.

**Investment Return:** 7.0% per annum.

**Estimated Expenses:** \$30,000 per annum.

**Annual Cost of Living** 

**Adjustment:** 

All retirees and participants eligible to retire immediately receive

a 1% annual cost of living adjustment for life.

**Salary Scale:** 

Salaries are assumed to increase at an annual rate of 3.0%.

The salary at age 55 bears the following relationship to the current earnings of a Participant at the indicated age, except that for Participants with a later normal or assumed retirement date, salaries are assumed to increase to that date.

<u>Age</u>	Ratio
20 & under	2.81
25	2.43
30	2.09
35	1.81
40	1.56
45	1.34
50	1.16
55	1.00

**Spouse's Benefit:** 

It is assumed that husbands are 3 years older than wives and that 80% of Participants who are or will become eligible for coverage under the Spouse's Benefit will be survived by an eligible spouse.

**Disability:** 

Table C-4 of the Society of Actuaries Transactions Volume XXXIX, 100% of the 6-month rates. The probabilities the Participants at the ages indicated will terminate within the next year are:

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.080%	0.100%
25	0.085%	0.110%
30	0.099%	0.140%
35	0.124%	0.201%
40	0.176 %	0.276%
45	0.294%	0.400%
50	0.540%	0.622%
55	0.977%	0.932%
60	1.477%	1.179%
62	1.671%	1.253%

Maximum Benefit and Maximum Compensation Limits:

Assumed to increase 3% per year.

**Rate of Earnings:** Basic compensation including longevity adjustments but excluding

overtime, commissions, bonuses and any other additional compensation.

**Final Earnings:** Divisions 000, 003 and 004:

> Average Rate of Earnings as of the highest three consecutive May 1's during the last 10 years before Retirement Date. If Service ceases more than three years before Retirement Date, Final Earnings is average Rate

of Earnings as of the last three May 1's before Service ceases.

Divisions 002, 005 and 007:

Average Rate of Earnings as of the highest three May 1's.

Divisions 001 and 006:

Average Rate of Earnings as of the highest five consecutive May 1's during the last 10 years before Retirement Date. If Service ceases more than five years before Retirement Date, Final Earnings is the average Rate of Earnings as of the last five May 1's before Service ceases.

Service: All years of Service with the Employer from date of employment to the

earlier of retirement, termination of employment or death (without

regard to hours worked).

**Credited Service:** All years of Service with the Employer from date of employment to the

> earlier of retirement, termination of employment or death, counted in whole years and full months. Service prior to August 1, 1961 is excluded if the Employee was not a plan Participant at that time. Service while the Participant was eligible to make contributions but did not is also excluded. Service while the Participant is disabled is

excluded.

Modified Cash Refund with a 50% Spouse Continuation. Participants who Form of Annuity:

are not married receive an actuarially increased benefit.

**Normal Retirement Date:** Divisions 000 and 003:

> The first day of the month coinciding with or next following the Participant's 52<sup>nd</sup> birthday and the completion of 8 years of Service,

or the completion of 30 years of Service.

Division 001:

The first day of the month coinciding with or next following the

Participant's 55<sup>th</sup> birthday and the completion of 8 Years of

Service.

#### Division 002 and 007:

The first day of the month coinciding with or next following the Participant's  $52^{nd}$  birthday and the completion of 8 Years of Service.

#### Division 004 and 005:

The first day of the month coinciding with or next following the Participant's 50<sup>th</sup> birthday and the completion of 25 years of service or the Participant's 52<sup>nd</sup> birthday and the completion of 10 years of Service, if later.

#### Division 006:

The first day of the month coinciding with or next following the earlier of (a) the Participant's 55<sup>th</sup> birthday and the completion of 10 years of Service or (b) the Participant's 60<sup>th</sup> birthday and the completion of 8 years of Service.

A Participant who continues in employment after reaching Normal Retirement is considered to be in postponed Retirement status.

#### PENSION BENEFIT:

Benefit Formula:

Divisions 001 and 006:

2.1% of Final Earnings multiplied by years of Credited Service.

Divisions 002 and 007:

2.75% of Final Earnings multiplied by years of Credited Service.

Divisions 000, 003:

2.85% of Final Earnings multiplied by years of Credited Service.

Divisions 004, 005:

3.00% of Final Earnings multiplied by years of Credited Service.

Divisions 000 and 003:

On and after June 1, 2005, the maximum benefit at retirement shall not exceed 90% of Final Earnings for any Participant with 36 or fewer Years of Credited Service on April 1, 1996.

Division 002:

On and after July 8, 1996, the maximum benefit at retirement shall not exceed 80% of Final Earnings.

Division 004:

On and after April 27, 2000, the maximum benefit at retirement shall not exceed 90% of Final Earnings.

Division 005:

On and after April 1, 1999, the maximum benefit at retirement shall not exceed 85% of Final Earnings.

Division 007:

On and after December 18, 1996, the maximum benefit at retirement shall not exceed 80% of Final Earnings.

Cost of Living: 1% increase each January 1.

Division 000 - Retirement Date on or before March 31, 2009 Division 001 - Retirement Date on or before March 31, 2009 Division 002 - Retirement Date on or before December 31, 2007 Division 003 - Retirement Date on or before March 31, 2009 Division 004 - Retirement Date on or before March 31, 2009 Division 005 - Retirement Date on or before March 31, 2009 Division 006 - Retirement Date on or before March 31, 2009 Division 007 - Retirement Date on or before December 31, 2007

Early Retirement:

Eligibility: Age 50 with a Vesting Percentage of 100%

Benefit Formula: Normal retirement benefit accrued to early retirement, reduced by .5%

for each month Annuity Commencement Date precedes Normal

Retirement Date.

Vesting:

Eligibility: Divisions 000, 001, 002, 003, 006 and 007

Eight years of Service or attainment of Normal Retirement

Date equals 100% vesting.

Divisions 004 and 005:

Ten years of Service or attainment of Normal Retirement Age equals

100% vesting.

Benefit Formula: Benefit accrued to date of termination adjusted by the appropriate

vesting percentage.

# SUPPLEMENTAL BENEFITS:

Preretirement Death Benefit:

Divisions 000, 002, 003, 004, 005 and 007:

Eligibility:

Active Employee who is eligible for vesting

Benefit Formula:

50% of the pension benefit accrued to date of death. If eligible for early retirement at time of death, 100% of the pension benefit accrued to date of death.

Preretirement Spouse

Benefit:

Divisions 001 and 006

Eligibility:

Active employee eligible for early retirement and married

Benefit Formula:

50% of the pension benefit accrued to date of death. If eligible for early retirement at time of death, 100% of the pension benefit accrued to date of death.

Disability Benefit:

Only applies to Divisions 002, 004, 005 and 007.

Eligibility:

Participants are eligible immediately.

Benefit Formula:

• Duty Disability

2.75% (3.0% for Divisions 004 & 005) of Final Earnings equal to the rate of earnings immediately prior to disablement adjusted by increases negotiated for job classification between date of disablement and the earlier of the date the Participant is no longer disabled, or the Normal Retirement Date, multiplied by years of Credited Service. Credited Service is defined from employment date to the earlier of the date the Participant is no longer considered disabled or Normal Retirement Date. Final Earnings equals the Rate of Earnings immediately prior to disablement adjusted by increases negotiated for that job classification between the date of disablement and the earlier of the date the Participant is no longer disabled or Normal Retirement Date.

Non-Duty Disability

2.75% (3.0% for Divisions 004 & 005) of Final Earnings multiplied by years of Credited Service. Final Earnings and Credited Service are as of date of disablement.

# EMPLOYEE CONTRIBUTIONS

Amount: Divisions 002 and 007: 1% of earnings

Divisions 004 and 005: 3.5% of earnings Divisions 000 and 003: 2% of earnings Divisions 001 and 006: 5% of earnings

Interest Credits: 5% per annum

Death or Termination Refund:

Preretirement: Refund of Employee Contributions with interest to date of termination or

date of death

Postretirement: Refund of Employee Contributions with interest over annuity

payments made, unless the form of annuity elected is other than

the normal form of annuity.