THE ANNE ARUNDEL COUNTY EMPLOYEES' RETIREMENT PLAN

ACTUARIAL VALUATION AS OF JANUARY 1, 2012

Bolton Partners, Inc.
100 Light Street, 9th Floor
Baltimore, MD 21202

TABLE OF CONTENTS

BOLTON PARTNERS

April 2, 2012

PERSONAL & CONFIDENTIAL
Andrea Fulton
Personnel Officer
Anne Arundel County Government
P.O. Box 6675
Annapolis, MD 21401

Re: Employees' Retirement Plan Valuation

Dear Andrea:

The following report sets forth the actuarial valuation as of January 1, 2012 of the Anne Arundel County Employees' Retirement Plan, for the plan year beginning on that date. The valuation is based on participant data submitted by the personnel department of Anne Arundel County, Aetna and Prudential and unaudited asset data submitted by the County.

INVESTMENT PERFORMANCE

The market value of plan assets as of December 31, 2011 was $472,580,960. The average investment return for the fund on a market basis for the year ended December 31, 2011 was 2.2% and 0.6% on an actuarial basis.

The plan utilizes an actuarial averaging method to smooth out swings in investment performance and thus in asset values from year to year. Under the method, investment gains or losses above or below the 8% actuarial assumption are phased in over a five year period. As of December 31, 2011, the actuarial value of assets was $516,070,401. Details of the development of the actuarial value of assets are set forth later in this report.

PRINCIPAL RESULTS

The principal purpose of the valuation is to set forth the County's contributions for the fiscal year ending June 30, 2013. In addition, the report sets forth the information on the plan for the County's financial statements and for the plan's own financial statements.

The total recommended employer contribution for the plan year and fiscal year ending June 30, 2012 increased from $18,882,680 to $20,764,948. This is in addition to employee contributions of 4% of pay from the employees in Tier 1. The increase can be broken down to the following factors:

January 1, 2011 valuation	15.3%
Investment Loss	1.9%
Pay Increases	(0.2%)
New Entrants/Change in Normal Cost	(0.1%)
COLA	0.0%
Expenses	0.0%
Demographics and Other Changes	0.3%
January 1, 2012 valuation	17.2%

The overall funded ratio for the plan based on the actuarial value of assets decreased from 83.2% to 79.0%.

The Normal Cost was adjusted upward to reflect Bill 74-09 which increased the FY10 pensionable pay and has a temporary effect. Pay amounts shown in this report (and employer contributions as a percentage of payroll) are based on cash payroll amounts that exclude the extra pay used for pension purposes.

There are changes in pension accounting rules that are expected to be published in June 2012. These changes are not expected to impact this report or the County's FY13 accounting expense. However, we should discuss the likely changes and related discussions.

There are also proposed changes in actuarial standards that may impact future valuations. These changes focus largely on increased disclosure including more disclosure about risk. We should also discuss the likely changes in actuarial standards.

There have been no changes in the plan provisions since the last valuation. The only assumption update is a one year change in the mortality table that we have been doing every year. The assumption change is not material.

The balance of this report sets forth details of changes in participation in the plan and the results of the valuation. A statement of funding progress under GASB 25 is also included.

Sincerely,

BOLTON PARTNERS, INC.

Thomas B. Lowman, FSA

David W. Ballard, CEBS

TBL/DWB/mmg

Trust Fund Asset Statement

TRUST FUND ASSET STATEMENT FOR YEAR ENDED DECEMBER 31, 2011

Original Market Value 1/1/2011	$469,576,006
Audit Adjustment	$ 0
Market Value 1/1/2011	$469,576,006
Receipts:	
Employer Contributions	$ 18,070,355
Employee Contributions	4,570,532
Interest and Dividends	9,841,430
Realized and Unrealized Gain/(Loss)	1,927,516
Other	984,220
Total Receipts:	$ 35,394,053
Disbursements:	
Benefit Payments	$ 31,480,080
Administrative Expenses	490,418
Investment Expenses	2,499,966
Total Disbursements	$ 34,470,464
Net Increase/(Decrease)	$ 923,589
Preliminary Ending Value 12/31/2011	$470,499,595
Contribution Receivable	$ 2,081,365
Ending Value 12/31/2011	$472,580,960

(Note: There may be dollar rounding differences)

Development of Actuarial Value of Assets

ACTUARIAL VALUE OF ASSETS

	2010	2011
1. MVA Beginning of Year	**$417,595,479**	**$469,576,006**
2. Contributions	21,881,356	20,666,982
3. Benefit Payments	29,527,746	31,480,080
4. Administrative Expenses	491,325	490,418
5. Expected 8% Return	33,082,130	37,113,940
6. Expected Asset Value (1. + 2. – 3. – 4. + 5.)	**$442,539,894**	**$495,386,431**
7. Market Value End of Year	$469,576,006	$470,499,595
8. Asset Gain/(Loss) (7. – 6.)	**$27,036,112**	**($24,886,836)**
9. 80% of 2010 Gain/(Loss) of $27,036,112	$21,628,889	
10. 60% of 2009 Gain/(Loss) of ($7,654,192)	($4,592,515)	
11. 40% of 2008 Gain/(Loss) of ($183,699,815)	($73,479,926)	
12. 20% of 2007 Gain/(Loss) of $29,141,591	$5,828,318	
13. Initial Actuarial Value of Assets 1/1/2011	**$520,191,240**	
14. Contribution Receivable	$1,973,905	
15. Audit Adjustment	$0	
16. Final Actuarial Value of Assets 1/1/2011	**$522,165,145**	
17. 80% of 2011 Gain/(Loss) of ($24,886,836)		($19,909,468)
18. 60% of 2010 Gain/(Loss) of $27,036,112		$16,221,667
19. 40% of 2009 Gain/(Loss) of ($7,654,192)		($3,061,677)
20. 20% of 2008 Gain/(Loss) of ($183,699,815)		($36,739,963)
21. Initial Actuarial Value of Assets 1/1/2012		**$513,989,036**
22. Contribution Receivable		$2,081,365
23. Audit Adjustment		$0
24. Final Actuarial Value of Assets 1/1/2012		**$516,070,401**
Rate of Return on Actuarial Value of Assets *(net of investment expenses)*	**1.9%**	**0.6%**

Participant Summary

PARTICIPANT SUMMARY

		Inactive Participants		
	Active Participants	With Deferred Benefits	Receiving Benefits	Total
Participants as of January 1, 2011	2,239	257	1,325	3,821
Retired	(61)	(16)	77	0
Terminated Vested	(22)	22	0	0
Terminated Non-Vested/Paid Lump Sum	(56)	(3)	0	(59)
Disabled	0	0	0	0
Deceased/Payments Expired	0	0	(39)	(39)
New Beneficiary	0	0	16	16
Benefit Unfrozen	0	0	3	3
New QDRO	0	0	7	7
Transfers In	0	0	0	0
Transfers Out	(1)	0	0	(1)
New Hires	102	0	0	102
Data Adjustment	8	0	4	12
Net Change	(30)	3	68	41
Participants as of January 1, 2012	2,209	260	1,393	3,862

Service - Age Distribution

AGE, SERVICE AND AVERAGE SALARY DISTRIBUTION

Age as of 1/1/2012	Under 1	01-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40 +	Total
Under 25	7	27	5	0	0	0	0	0	0	0	39
	31,028	33,852	41,180	0	0	0	0	0	0	0	34,285
25-29	17	65	29	3	0	0	0	0	0	0	114
	38,309	36,722	40,783	41,233	0	0	0	0	0	0	38,110
30-34	12	66	64	24	0	0	0	0	0	0	166
	40,439	41,341	44,808	40,525	0	0	0	0	0	0	42,494
35-39	9	46	64	53	12	1	0	0	0	0	185
	50,124	49,056	51,208	52,157	54,379	55,800	0	0	0	0	51,123
40-44	5	55	77	55	32	29	1	0	0	0	254
	37,361	37,338	50,829	51,368	60,230	57,678	51,871	0	0	0	49,730
45-49	12	55	75	85	41	68	36	6	0	0	378
	46,952	44,630	51,518	57,529	63,205	64,204	58,842	59,398	0	0	56,095
50-54	12	65	80	72	50	83	45	24	4	0	435
	43,812	46,294	48,642	58,170	61,536	67,904	65,411	66,096	68,374	0	57,771
55-59	7	37	52	58	40	55	41	30	31	0	351
	52,642	42,164	50,251	59,370	61,939	66,982	69,791	66,232	66,261	0	59,969
60-64	1	24	42	49	25	36	21	7	7	4	216
	72,051	54,465	67,439	59,812	71,048	61,746	66,978	90,046	70,015	74,026	64,651
65-69	0	8	10	10	8	5	5	3	3	2	54
	0	60,582	58,919	60,503	62,703	66,068	82,301	63,554	88,875	66,109	65,034
70 & Up	0	4	3	6	3	1	0	0	0	0	17
	0	18,192	71,510	51,662	41,522	7,185	0	0	0	0	42,884
Total	82	452	501	415	211	278	149	70	45	6	2,209
	42,943	42,540	50,802	55,550	62,218	64,657	65,726	67,866	68,540	71,387	54,511

Average Age: 48.24

Average Service: 12.83

Average Salary: $54,511

Actuarial Costs

ACTUARIAL COSTS

	As of 01/01/2011	As of 01/01/2012
Participants		
Active	2,239	2,209
Terminated Vested	257	260
Disabled	80	79
Retirees	1,167	1,222
Beneficiaries	78	92
Total	3,821	3,862
Active Payroll (Rate at January 1st)	$123,498,129	$120,415,534
1. Actuarial Liability		
Active Participants	$266,638,920	$270,093,704
Terminated Vested Participants	19,284,154	17,049,234
Participants Receiving Benefits	341,346,513	366,510,120
Total	$627,269,587	$653,653,058
2. Actuarial Value of Assets	$522,165,145	$516,070,401
3. Unfunded Actuarial Liability (1-2)	$105,104,442	$137,582,657
4. County's Normal Cost	$ 10,645,732	$ 10,370,286
5. Amortization Payment	$ 6,356,231	$ 8,365,518
6. Estimated Expenses	$ 482,000	$ 491,000
7. Total Recommended Contributions as of January 1st (4 + 5 + 6)	$ 17,483,963	$ 19,226,804
8. Total Recommended Contribution as of December 31st (7 x 1.08)	$ 18,882,680	$ 20,764,948
9. Contribution as a % of total payroll	15.3%	17.2%

UNFUNDED LIABILITY AMORTIZATION SCHEDULE

Charge	Amortization Period Date Created	Amortization Period Initial Years	Amortization Period Years Left	Balances Initial	Balances Outstanding	2012 Payment
Actuarial Loss	01/01/2005	30	23	$ 9,888,883	$10,892,373	$ 727,012
Actuarial Loss	01/01/2006	30	24	$ 7,157,528	$ 7,808,270	$ 508,414
Actuarial Loss	01/01/2007	30	25	$ 8,028,164	$ 8,660,286	$ 550,974
Assumption Change	01/01/2008	30	26	$13,407,985	$14,281,395	$ 889,073
Actuarial Loss	01/01/2009	30	27	$45,836,717	$48,142,699	$2,936,615
Asset Method Change	01/01/2011	30	29	$28,621,055	$29,124,574	$1,711,742
Actuarial Loss	01/01/2012	30	30	$30,934,590	$30,934,590	$1,787,544
Credit						
Unfunded Accrued Liability	01/01/2004	30	22	$ 215,150	$ 241,334	$ 16,541
Actuarial Gain	01/01/2008	30	26	$ 5,585,598	$ 5,949,448	$ 370,377
Actuarial Gain	01/01/2010	30	28	$ 1,937,140	$ 2,003,793	$ 119,910
Actuarial Gain	01/01/2011	30	29	$ 3,996,644	$ 4,066,955	$ 239,028
Net Total					$137,582,657	$8,365,518

Note: Bases are amortized as an equal percent of payroll each year. Total payroll is assumed to increase 3.5% annually.

Assumptions and Methods

ASSUMPTIONS AND METHODS

Funding Method: Projected Unit Credit Actuarial Cost Method. The contribution equals the sum of the normal cost and the amount necessary to amortize the frozen unfunded actuarial liabilities and any actuarial gains or losses over a period of years. Amortization payments increase 3.5%.

Asset Method: Asset smoothing method. Spreading the investment gains or losses in excess of the assumed return over a 5-year period. Actuarial Value of Assets recognizes adjustments resulting from an audit.

Interest: 8% compounded annually.

COLA Increases: Benefits accrued before Bill 88-96 are assumed to increase by 3.0% of the original benefit each year from retirement.

Benefits accrued after Bill 88-96 are assumed to increase by 2.1% of the current benefit each year from retirement.

Salary Increases: The following graded schedule is used:

Attained Age	% Increase at Attained Age
20	7.0%
25	6.5%
30	6.0%
35	5.5%
40	5.0%
45	4.5%
50	4.0%
55	4.0%

Mortality: *Healthy:* RP-2000 Blue Collar Mortality table for males and females projected to 2012 using scale AA. Pre-Termination mortality uses 70% of these rates.

Disabled: RP-2000 Blue Collar Mortality table for males and females set forward nine years and then projected to 2012 using scale AA.

ASSUMPTIONS AND METHODS

(continued)

100% of pre-retirement deaths are assumed to be non-duty-related.

The mortality rates are as of the measurement date without adjustment for future mortality improvements.

Disability:

Sample rates are:

Age	Rate
30	.0264%
35	.0396%
40	.0809%
45	.1337%
50	.2162%
55	.3548%
60	.5297%
64	.7211%

10% of disablement is assumed to be duty-related.

Turnover[1]:

Sample rates are:

	Rate	
Age	Males	Females
20	12.47%	21.57%
25	9.97%	18.12%
30	6.78%	13.34%
35	4.37%	9.05%
40	3.48%	7.48%
45	2.40%	5.95%
50	0.45%	1.11%

Retirement[2]:

Sample Rates

	Service		
Age	20	30	31
50	5%	40%	40%
55	7%	30%	5%
60	20%	20%	20%
65	50%	50%	50%
68	100%	100%	100%

[1] Tier 1 terminations prior to age 40 are assumed to elect a refund of employee contributions with interest

[2] 100% at age 68

ASSUMPTIONS AND METHODS
(continued)

Disability Leave:	Active liabilities (which depend on credited service) are loaded by 1.5% to account for future crediting of disability service.
Military Service:	Active liabilities (which depend on credited service) are loaded by 1% to account for future crediting of military service.
Marriage:	It is assumed that 70% of employees are married.
Other Methods and Assumptions:	Administrative Expenses are \$491,000 for FY2013 and \$482,000 for FY2012 (average of actual expenses for the two years preceding the valuation date). Males are assumed to be four years older than their spouses. The Tier 1 service cap of 60% is valued as 62% to account for Disability and Military service credit not being limited by the 30-year cap on service. Actual military service information for actives is not available. Members are assumed to stay in their current tier.

Plan Provisions

PLAN PROVISIONS

(for Members in Tier 1)

Normal Retirement Age:	Age 60, or if earlier, when the participant has reached 30 years of service.
Early Retirement Age:	Age 50 and the completion of 20 years of service.
Normal Form of Benefit:	Monthly life annuity with modified cash refund.
Cost of Living Increase (simple, for benefits accrued as of 1/31/97):	Retiree benefits are adjusted each year. The revised benefit amount is the lesser of: a. Prior year benefit plus base benefit multiplied by increase in the current March CPI from March CPI for prior year, or b. Benefit increased by 3% of original benefit.
Cost of Living Increase (compound, for benefits accrued after1/31/97):	Retiree benefits are adjusted each year. The revised benefit amount is the lesser of: a. Prior year benefit multiplied by 60% of the increase in the current March CPI from March CPI for prior year, or b. Benefit increased by 2.5%.
Employee Contributions:	4% of compensation.
Compensation:	Regular annual rate of pay, exclusive of extra compensation of any kind such as overtime pay, bonuses, and commissions.
Final Earnings:	The average of the highest 3 years of the last 5 annual basic pays.
Normal Retirement Benefit Formula:	2% of final earnings for each year of service, maximum 60%.
Early Retirement Benefit Formula:	Same as normal retirement, but reduced by the following factors:

PLAN PROVISIONS

(for Members in Tier 1)
(continued)

Years Early	Reduction Factor
1	2%
2	5%
3	9%
4	14%
5	20%
6	28%
7	36%
8	44%
9	52%
10	60%

Termination Prior to Retirement:

Less than 5 years of service: Return of employee contributions with 4.25% interest.

5 years of service or more: At the discretion of the employee, either a return of contributions with interest or the accrued normal retirement benefit taking into account final earnings and service at date of termination, payable at normal retirement date.

Disability: Must be totally and permanently disabled (except as the result of activities specified in the County code) regardless of length of service.

Line of Duty Disability: The greater of the accrued benefit or 66 2/3% of final earnings, payable immediately, unreduced.

Non-Line of Duty Disability: Five years of service are required to receive non-duty benefits. The greater of the accrued benefit or 25% of final earnings, payable immediately, unreduced.

PLAN PROVISIONS

(for Members in Tier 1)
(continued)

Pre-Retirement Spouse's Benefit:

Married and eligible for early retirement: The greatest of:

- $10 per month
- 50% of the final earnings
- The accrued benefit, reduced actuarially for early commencement and the joint and 100% survivor form.

Other Pre-Retirement Death Benefits: Return of employee contributions with 4.25% interest plus a lump sum of 50% of final earnings.

PLAN PROVISIONS

(for Members in Tier 2)

Normal Retirement Age:	Age 60, or if earlier, when the participant has reached 30 years of service.
Early Retirement Age:	Age 50 and the completion of 20 years of service.
Normal Form of Benefit:	Monthly life annuity.
Cost of Living Increase (compound, for benefits accrued after1/31/97):	Retiree benefits are adjusted each year. The revised benefit amount is the lesser of: a. Prior year benefit multiplied by 60% of the increase in the current March CPI from March CPI for prior year, or b. Benefit increased by 2.5%.
Employee Contributions:	No employee contributions required or allowed.
Compensation:	Regular annual rate of pay, exclusive of extra compensation of any kind such as overtime pay, bonuses, and commissions.
Final Earnings:	The average of the highest 3 years of the last 5 years of annual basic pays.
Normal Retirement Benefit Formula:	1.0% of final earnings for each year of service.
Early Retirement Benefit Formula:	Same as normal retirement, but reduced for early commencement (using the same factors as Tier 1).
Termination Prior to Retirement:	
Less than 5 years of service:	No benefit is payable.
5 years of service or more:	The accrued normal retirement benefit taking into account final earnings and service at date of termination, payable at normal retirement date.
Disability:	Must be totally and permanently disabled (except as the result of activities specified in the County code) regardless of length of service.

PLAN PROVISIONS

(for Members in Tier 2)
(continued)

Line of Duty Disability: The greater of the accrued benefit or 66 2/3% of final earnings, payable immediately, unreduced.

Non-Line of Duty Disability: Five years of service are required to receive non-duty benefits. The greater of the accrued benefit or 25% of final earnings, payable immediately, unreduced.

Pre-Retirement Spouse's Benefit:

Married and eligible for early retirement: The greatest of:

- $10 per month
- 50% of the final earnings
- The accrued benefit, reduced actuarially for early commencement and the joint and 100% survivor form.

Unmarried or not eligible for early retirement: A lump sum of 50% of final earnings.

Summary of Legislative Changes

SUMMARY OF MAJOR LEGISLATIVE CHANGES

County Council Bill No. 36-89: Effective 7/1/89.

Pension benefits and vesting provisions were improved. The accrual percentage per year of service was increased from 1.8% to 2.0%, permitting accrual of the maximum 60% benefit in 30 years instead of 33-1/3.

Full vesting was granted after 5 years of service. The old provisions used a graded scale granting 75% vesting after 10 years, climbing to 100% vesting after 15 years.

County Council Bill No. 34-92: Effective 6/1/92 through 8/31/92.

Participants age 50 or older with at least 20 years of service could elect to retire with an additional pension equal to 1/12 of 2% for each year of credited service. The additional amount could be taken as a pension increase, a lump sum, or as a temporary supplement to age 62. Appropriate actuarial adjustments apply.

State House Bill No. 687: Effective 7/1/90.

County employees were given the opportunity to apply for credit under the County's plan for previous service with the State of Maryland (or a political subdivision of the State).

County Council Bill 90-93: Effective 12/22/93.

Plan participants are required to pay the full actuarial value for service purchases. Purchases can only be made at retirement. To be eligible, an employee must have 60 months of County service. Existing plan participants must be notified of their right to purchase service under existing law.

SUMMARY OF MAJOR LEGISLATIVE CHANGES
(continued)

County Council Bill No. 82-94: Effective 10/31/94.

Transfers assets from general employees plan to A&E plan for participants who have transferred between these two plans.

County Council Bill No. 88-96: Effective 12/4/96.

The previous method of calculating cost of living increases will only apply to benefits accrued as of 1/31/97. The cost of living increase for future benefits is a compound increase equal to 60% of the annual change in the CPI, not to exceed 2.5%. Employees hired, or rehired, on or after 12/4/96 will be Tier Two employees and will have different benefits than current employees.

County Council Bill No. 41-99: Effective 6/15/99.

Employees paid under the deputy sheriff employees pay schedule become Tier Two members of the Detention Center Plan effective as of January 1, 1999. Service credited under the Employees' Plan will count as credited service in the Detention Center Plan and no future benefit will be paid from the Employees' Plan. Assets are transferred from the Employees' Plan to the Detention Center Plan in an amount equal to the projected unit credit accrued liability in the Employees' Plan.

Recodification: Effective 2/25/2002.

Allows a benefit based on disability leave service and pre-plan military service to be paid over the 60% cap. Normal Retirement was changed to the earlier of 30 years of service or age 60.

SUMMARY OF MAJOR LEGISLATIVE CHANGES
(continued)

County Council Bill No. 74-09: Effective 12/11/2009.

For non-represented members, FY2010 annual pay shall be determined by increasing FY2009 annual pay by an assumed 3% for determining the final average basic pay.

County Council Bill No. 6-10: Effective 4/18/2010.

Provides for a disability benefit for those participants who are totally and permanently disabled as a result of qualified military service.

Statement No. 25 of the GASB

STATEMENT NO. 25 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

Schedules of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Unfunded AAL (UAAL) (b-a)	Actuarial Accrued Liability (AAL) (b)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a)/c)
01/01/2002	$321,443,897	$36,352,728	$357,796,625	89.8%	$100,417,059	36.2%
01/01/2003	$335,539,414	$36,932,955	$372,472,369	90.1%	$101,172,221	36.5%
01/01/2004	$367,756,502	$ (215,150)	$367,541,352	100.1%	$100,944,238	(0.2)%
01/01/2005	$395,501,876	$ 9,669,948	$405,171,824	97.6%	$103,105,736	9.4%
01/01/2006	$422,234,496	$16,997,830	$439,232,326	96.1%	$107,290,189	15.8%
01/01/2007	$456,656,849	$25,314,781	$481,971,630	94.7%	$116,709,102	21.7%
01/01/2008[1]	$492,788,674	$20,144,823	$512,933,497	96.1%	$117,222,681	17.2%
01/01/2008[2]	$492,788,674	$33,552,808	$526,341,482	93.6%	$117,222,681	28.6%
01/01/2009	$488,275,803	$79,919,177	$568,194,980	85.9%	$124,803,488	64.0%
01/01/2010	$519,556,093	$79,285,038	$598,841,131	86.8%	$126,030,706	62.9%
01/01/2011[3]	$550,786,200	$76,483,387	$627,269,587	87.8%	$123,498,129	61.9%
01/01/2011[4]	$522,165,144	$105,104,443	$627,269,587	83.2%	$123,498,129	85.1%
01/01/2012	$516,070,401	$137,582,657	$653,653,058	79.0%	$120,415,534	114.3%

Schedules of County's Contributions

Year Ended December 31	*Annual Required Contribution*	*Actual Contribution*	*Percentage Contributed*
2011	$18,186,400	$18,186,202[5]	100.0%

[1] *Prior to Assumption Changes*
[2] *After Assumption Changes*
[3] *Prior to Asset Method Change*
[4] *After Asset Method Change*
[5] *On an accrual basis. Subject to verification.*

STATEMENT NO. 25 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

(continued)

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

Actuarial cost method	Projected Unit Credit
Amortization method	Level percent of pay
Remaining amortization period	Remaining Amortization periods range from 22 to 30 years with an average of 27 years.
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return	8.0%
Projected salary increases	Varies by age
Post Retirement Cost-of-living adjustments	3.0% for pre 2/97 accruals 2.1% for post 2/97 accruals

ACTUARIAL CERTIFICATION

This actuarial valuation sets forth our calculation of an estimate of the liabilities of the pension plan, together with a comparison of these liabilities with the value of the plan assets, as submitted by the County. This calculation and comparison with assets is applicable for the valuation date only. The future is uncertain, and the plan may become better funded or more poorly funded in the future. This valuation does not provide any guarantee that the plan will be able to provide the promised benefits in the future.

This is a deterministic valuation in that it is based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. Other assumptions may be equally valid. We may consider that some factors are not material to the valuation of the plan and may not provide a specific assumption for those factors. We may have used other assumptions in the past. We will likely consider changes in assumptions at a future date.

A change in assumptions does not indicate that the prior assumptions were invalid. At the time the prior assumptions were chosen, they represented our best estimate of the future experience of the plan. If we change assumptions in the future, it would be to align the assumptions with our then-current best estimate.

The County could reasonably ask how the valuation would change if we used a different assumption set or if plan experience exhibited variations from our assumptions. This report does not contain such an analysis. This type of analysis would be a separate assignment.

In addition, decisions regarding benefit improvements, benefit changes, the trust's investment policy, and similar issues should not be based on this valuation. These are complex issues and other factors should be considered when making such decisions. These other factors might include the anticipated vitality of the local economy and future growth expectations, as well as other economic and financial factors.

The cost of this plan is determined by the benefits promised by the plan, the plan's participant population, the investment experience of the plan and many other factors. An actuarial valuation is a budgeting tool for the County. It does not affect the cost of the plan. Different funding methods provide for different timing of contributions to the plan. As the experience of the plan evolves, it is normal for the level of contributions to the plan to change. If a contribution is not made for a particular year, either by deliberate choice or because of an error in a calculation, that contribution can be made in later years. We will not be responsible for contributions that are made at a future time rather than an earlier time. The plan sponsor is responsible for funding the cost of the plan.

ACTUARIAL CERTIFICATION

(Continuation)

We make every effort to ensure that our calculations are accurately performed. These calculations are complex. Despite our best efforts, we may make a mistake. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

This report is based on plan provisions, census data, and asset data submitted by the personnel department of Anne Arundel County. We have relied on this information for purposes of preparing this report, but have not performed an audit. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The plan sponsor is solely responsible for the validity and completeness of this information.

The information in this report was prepared for the internal use of the County and its auditors in connection with our actuarial valuations of the pension plan. It is neither intended nor necessarily suitable for other purposes. Bolton Partners is not responsible for the consequences of any other use.

This report provides certain financial calculations for use by the auditor. These values have been computed in accordance with our understanding of generally accepted actuarial principles and practices and fairly reflect the actuarial position of the Plan. The various actuarial assumptions and methods which have been used are, in our opinion, appropriate for the purposes of this report.

The report is conditioned on the assumption of an ongoing plan and is not meant to present the actuarial position of the Plan in the case of Plan termination. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions or applicable law.

The undersigned credentialed actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. He is currently compliant with the Continuing Professional Development Requirement of the Society of Actuaries. We are not aware of any direct or material indirect financial interest or relationship, including investments or other services that could create a conflict of interest that would impair the objectivity of our work.

BOLTON PARTNERS, INC.

Thomas B. Lowman, FSA, EA