

# **DAVIDSON COUNTY BOARD OF EDUCATION RETIREMENT PLAN**

**ACTUARIAL VALUATION  
AND REPORT**

**JULY 1, 2010**



Bryan, Pendleton, Swats & McAllister, LLC  
A Wells Fargo Company

March 4, 2011

Mr. Chris Henson, CPA  
Chief Financial Officer  
Metropolitan Board of Public Education  
2601 Bransford Avenue  
Nashville, Tennessee 37204

Dear Mr. Henson:

The attached report summarizes the results of the actuarial valuation of the Davidson County Board of Education Retirement Plan as of July 1, 2010. We trust this report will be helpful in complying with the reporting requirements of the Governmental Accounting Standards Board.

The opportunity to serve the Metropolitan Board of Public Education is appreciated, and we will be pleased to supplement this report in any way, as you request.

The actuarial valuation summarized in this report has been performed utilizing generally accepted actuarial principles and is based on actuarial assumptions which we consider to be reasonably related, in the aggregate, to reasonable expectations. It is our opinion that the results fully and fairly disclose the actuarial position of the plan on the valuation date. The undersigned is an actuary at BPS&M, is a member of the American Academy of Actuaries, and has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.

Sincerely

A handwritten signature in black ink that reads 'J. Bradford Fisher, F.S.A.' in a cursive style.

J. Bradford Fisher, F.S.A.

Attachment

**CONTENTS**

**Summary of Report** **1**

    Current Valuation Results ..... 1

    Yearly Comparison of Selected Plan Information ..... 1

**Basis of Valuation** **2**

    Summary of Provisions of the Plan ..... 2

    Summary of Actuarial Assumptions ..... 5

**Actuarial Computations** **6**

    Determination of GASB "Annual Required Contribution" ..... 6

**Disclosure Information** **7**

    Governmental Accounting Standards Board Statement Nos. 25 and 27 Information ..... 7

**Employee Data** **9**

    Distribution of Retired Participants' Gross Pensions ..... 9

## Current Valuation Results

An actuarial valuation of the Davidson County Board of Education Retirement Plan was performed as of July 1, 2010. The purpose of the valuation was to examine the liabilities and to determine the necessary amounts to comply with GASB financial reporting. Prior to the implementation of the Guaranteed Payment Program, benefits were financed on a "pay as you go" basis.

Beginning on July 1, 2000, the Plan became a portion of the Guaranteed Payment Program (GPP), an umbrella plan created by the state and local government to ensure actuarially sound funding for a group of five plans supervised by the Metro Benefit Board and the Board of Education. Under the GPP, unfunded liabilities of the aggregate plan are amortized over a period of no more than thirty years. Payments for the Plan move to a payment account from which distributions are paid to the constituent plans of the GPP as necessary to satisfy current benefit needs and to satisfy funding objectives of the GPP. Funding issues that are specific to the GPP are addressed in a separate report.

## Yearly Comparison of Selected Plan Information

	2010	2009	2008	2007	2006
<b>Active Participants</b>					
Number	0	1	1	1	1
Annual Payroll	\$0	\$76,707	\$73,418	\$71,769	\$68,834
<b>Retired Participants</b>					
Number	265	281	295	312	340
Average Age	81.28	80.60	80.08	79.44	79.27
Annual Payroll	\$7,750,714	\$8,004,503	\$8,311,282	\$8,510,960	\$8,887,959
<b>Total Participants</b>	265	282	296	313	341
<b>Present Value of Future Benefits</b>	\$35,188,279	\$37,633,345	\$40,178,889	\$42,140,201	\$44,732,388
<b>Actuarial Value of Assets</b>	5,014,479	4,452,672	4,936,879	3,787,317	2,409,417
<b>Assumed Rate of Return</b>	8.00%	8.00%	8.00%	8.00%	8.00%

The Basis of Valuation section of this report sets forth a summary of benefits provided under the Davidson County Board of Education Retirement Plan and summarizes the actuarial assumptions on which the valuation was based. The Actuarial Computations and Disclosure Information sections set forth details of the plan's funded status in accordance with GASB Statements Number 25 and 27. The Employee Data section summarizes the employee data on which this valuation was based.

All calculations made in this report have been made utilizing employee data supplied by the Metropolitan Board of Public Education, asset information supplied by the Metropolitan Government of Nashville and Davidson County, and the actuarial assumptions summarized herein.

## **Summary of Provisions of the Plan**

---

### **Eligibility**

All teachers and classified employees of the Davidson County Board of Education hired prior to April 1, 1963, are eligible under the plan.

### **Normal Retirement**

#### Condition

A member may retire and receive an immediate benefit upon either

- (i) reaching age 60 and having accumulated at least 15 years of service; or
- (ii) completing at least 25 years of service before reaching age 60.

#### Benefit

The monthly benefit under qualification (i) above is 1/12 of the product of:

- 2-1/2% of the highest annual established salary, and
- Years of Service (not less than 15 years, but not more than 24 years).

The monthly benefit under (ii) above is 1/12 of the product of:

- 2% of the highest annual established salary, and
- Years of Service (not less than 25 years, but not more than 30 years).

### **Early Retirement**

#### Condition

A participant may elect early retirement after 15 years of credited service.

#### Benefit

A deferred benefit, commencing at age 60, is determined as of the Early Retirement Date as in the Normal Retirement Benefit above, based on service and salary at the date of early retirement.

### **Disability Retirement**

#### Condition

If a participant becomes totally and permanently disabled as defined in the plan due to injuries arising in the line of duty, he may retire and receive a disability benefit.

#### Benefit

The monthly benefit, commencing on the date of disability is equal to 1/12 of the following percentages of the highest established annual salary:

<u>Years of Service</u>	<u>Percentage</u>
5-9	30%
10-14	35
15-19	40
20-23	45
24 or more	60

**Death Before Retirement**

If a member dies prior to retirement, a refund of 75% of the member's contributions is payable to his beneficiary, plus \$1,000 if death results from injury received in the line of duty.

**Termination of Employment**

If employment is terminated before a member is eligible for a benefit as provided above, a refund of 75% of the member's contributions without interest is payable.

**Contributions**

Members contribute 3% of earnings for a maximum of 24 years.

Each year the employer contributes an amount determined in accordance with the Guaranteed Payment Program.

**Reclaim of Service**

A member who terminated service, received a refund, subsequently returned to service, and is now a plan member, may elect to reclaim the earlier service by repaying the refund plus interest.

**Broken Service - No Refund**

A member who terminated service, received no refund, subsequently returned to service and is now a plan member, may elect to reclaim the earlier service at no cost.

**Transfer Option**

A member may elect to transfer to the Tennessee Consolidated Retirement System at any time prior to retirement.

**Military Service**

A member who had active duty military service during certain periods of armed conflict may claim up to a maximum of four years of creditable service.

**Cost-of-Living Increment After Retirement**

Each July 1, up to 3% of the original retirement benefit is added to a member's retirement benefit. The percentage increase is based on the increase in the Consumer Price Index (all items--United States city average), but will not exceed 3%. In any year when the CPI increase is less than 1% or a decrease, there is no benefit adjustment made on the following July 1.

**Unused Sick Leave**

A member may use unused sick leave as creditable service on the basis of 20 days equaling one month.

**Summary of Actuarial Assumptions**(Sample Values per 1,000 Lives)

	AGE		
	70	80	90
<b><u>Mortality Rates</u></b>			
1994 Uninsured Pensioner Mortality Table			
Male	25.52	66.70	164.44
Female	14.76	42.36	125.02

**Disablement Rate**

Not Applicable

**Withdrawal Rate**

Not Applicable

**Assumed Salary Increases**

Not Applicable

**Rate of Investment Return**

8.00% per annum

**Rate of Retirement**

Not Applicable

**Cost of Living Increases**

Benefits increase 3% annually after commencement

**Actuarial Funding Method**

Level Dollar Amortization

**Asset Valuation Method**

Market value

**ACTUARIAL COMPUTATIONS**

**Determination of GASB "Annual Required Contribution"**

Present Value of Benefits (Net of State Reimbursements)	
Active Lives	\$ 0
Retired Lives	<u>35,188,279</u>
Total	\$ 35,188,279
Less Actuarial Value of Assets	<u>(5,014,479)</u>
Present Value of Future Costs	\$ 30,173,800
15-Year Amortization of Future Costs from July 1, 2002	5,366,259
Interest Adjustment for Mid-year Payment	<u>214,650</u>
Annual Required Contribution	\$ 5,580,909

## Governmental Accounting Standards Board Statement Nos. 25 and 27 Information

Governmental Accounting Standards Board Statement 25 establishes financial reporting standards for defined benefit pension plans sponsored by employers that are subject to governmental accounting standards. Governmental Accounting Standards Board Statement 27 provides standards for reporting pension expenditures and expense, and related pension liabilities and assets, for such plans. This section provides pertinent plan disclosure information for the 2010-2011 financial statements.

The Schedule of Employer Contributions and the Three-Year Trend Information should be updated at year-end to reflect the contributions made during the current fiscal year.

Actuarial computations under Statements 25 and 27 are for purposes of fulfilling employer governmental accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of the statements.

### Schedule of Funding Progress

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) - Entry Age	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
07/01/2003	\$0	\$50,759,348	\$50,759,348	0.0%	\$241,202	21,044.3%
07/01/2004	0	48,496,408	48,496,408	0.0%	114,132	42,491.5%
07/01/2005	930,671	46,129,614	45,198,943	2.0%	69,331	65,193.0%
07/01/2006	2,409,417	44,732,388	42,322,971	5.4%	68,834	61,485.6%
07/01/2007	3,787,317	42,140,201	38,352,884	9.0%	71,769	53,439.3%
07/01/2008	4,936,879	40,178,889	35,242,010	12.3%	73,418	48,001.9%
07/01/2009	4,452,672	37,633,345	33,180,673	11.8%	76,707	43,256.4%
07/01/2010	5,014,479	35,188,279	30,173,800	14.3%	-	N/A

### Determination of Annual Pension Cost

Annual Required Contribution	\$5,580,909
Interest on net pension obligation	(480,432)
Adjustment to annual required contribution	1,153,472
Annual pension cost	<u>\$6,253,949</u>

**Schedule of Employer Contributions**

Fiscal Year Ending	Annual Required Contribution (ARC)	Actual Contribution	Percentage Contributed
06/30/2004	\$5,928,919	\$6,637,776	112.0%
06/30/2005	5,908,608	7,521,755	127.3%
06/30/2006	5,894,471	7,590,272	128.8%
06/30/2007	5,708,861	7,505,736	131.5%
06/30/2008	5,504,007	7,356,970	133.7%
06/30/2009	5,432,587	6,133,816	112.9%
06/30/2010	5,560,085	5,869,027	105.6%

**Three-Year Trend Information**

Fiscal Year Ending	Annual Pension Cost (APC)	Percentage of APC Contributed	Net Pension Obligation
06/30/2008	\$5,816,887	126.5%	(\$6,072,649)
06/30/2009	5,918,883	103.6%	(6,287,582)
06/30/2010	6,151,212	95.4%	(6,005,397)

**EMPLOYEE DATA****Distribution of Retired Participants' Gross Pensions****BY AGE**

Age Group	Male			Female			Total		
	No	Annual Pensions		No	Annual Pensions		No	Annual Pensions	
		Total	Average		Total	Average		Total	Average
0-65	0	\$ 0	\$ 0	0	\$ 0	\$ 0	0	\$ 0	\$ 0
66-70	3	79,322	26,440	11	362,012	32,910	14	441,334	31,523
71-75	24	856,269	35,677	41	1,273,150	31,052	65	2,129,419	32,760
76-80	16	513,594	32,099	42	1,215,246	28,934	58	1,728,840	29,807
81-85	17	665,621	39,154	43	1,239,861	28,833	60	1,905,482	31,758
86+	7	209,339	29,905	61	1,336,300	21,906	68	1,545,639	22,729
<b>TOTAL</b>	<b>67</b>	<b>\$2,324,145</b>	<b>\$34,688</b>	<b>198</b>	<b>\$5,426,569</b>	<b>\$27,406</b>	<b>265</b>	<b>\$7,750,714</b>	<b>\$29,247</b>