August 28, 2014

Lonnie R. Robbins
Chief Administrative Officer
Howard County Government
3430 Courthouse Drive
Ellicott City, MD 21043

Re: *Howard County Police and Fire Retirement Plan – Proposed DROP changes for Firefighters and Police Officers (Bill 51-2014)*

Dear Lonnie:

We have looked at the impact of Bill 51-2014 covering the DROP changes. The Bill would:

- Provide a DROP option for firefighters (DROP II),
- Close the current police DROP (DROP I) at the end of 2014,
- Allow police to opt into DROP II including those already in DROP I, and
- Provide different DROP benefits for the Police and Fire Chiefs including updating the salary used for the final annuity.

A summary of the plan provisions are discussed on the next page and assumptions are included in the attachments. Generally we expect the following to occur:

1. Adding the DROP II benefit for firefighters will increase costs slightly. This is based on an expectation that firefighters will work an extra year of service if a DROP is provided.

2. For Police, the DROP II benefit will provide a smaller annuity and larger lump sum compared to the DROP I benefit. The annuity is smaller since the DROP II benefit does not provide a COLA until a member retires. The lump sum is larger since it includes employee contributions and interest that are not part of the DROP I lump sum.

3. The Chiefs would be the exception to the above as the DROP II provision would provide both a larger annuity and a larger lump sum compared to DROP I[1]. This is due to the updating (refreshing) of the final average salary used to determine the final annuity payment.

[1] The Fire Chief is not eligible for DROP I and unlikely to become eligible for DROP II since he only has about five years of service. There still could be a cost for DROP II for future fire chiefs promoted from within but the current funding and accounting rules only consider current members.

The Bill is expected to make only a small change in the contribution. There is a slight increase for Firefighters and a slight decrease for Police officers for a net decrease of about $100,000/year.

The key provisions of DROP II are:

- Eligible participants will have the option to elect to participate in DROP II once they have achieved 25 years of creditable service. The maximum DROP II period is 5 years and the minimum period is 2 years.
- Eligible participants who, at the inception of this DROP II program, have 33 or more years of service as an eligible employee will be allowed a 90 day period immediately following implementation of the DROP to elect to enter the DROP for a maximum of 2 years.
- A member's annuity is frozen when they enter DROP. They will not accrue any COLAs while in DROP (this is a key difference compared to DROP I).
- The DROP lump sum account will include deferred annuity payments, regular employee contributions and interest (initially at 3.5%)
- We assume the bill will be amended to add sick leave credit to the DROP lump sum similar to how it is currently credited in DROP I.
- The DROP lump sum account can be paid out as a lump sum, rollover or annuity. If an annuity is elected it must be under the same form of payment as the basic annuity.
- Employees must provide an advanced written notice of their termination date and if it is provided less than 18 month before the termination date there are interest penalties.
- If a DROP participant is approved for a disability pension during the DROP participation period, the DROP participant shall be entitled to elect either:

  (a) A disability retirement benefit, as set forth in § 1-431A, as if the employee had not entered DROP, forfeiting any entitlement to the DROP account, or

  (b) A disability retirement benefit, as set forth in § 1-431A, calculated based on the date the participant entered the DROP and the DROP account balance the participant had earned and accumulated through the date of termination. Any percentage of pay in excess of the disability retirement benefit (50% of the participant's compensation for non-catastrophic line of duty injuries or 66 2/3% of the participant's compensation for catastrophic injuries) shall be treated and paid as a normal retirement.

- If a DROP participant dies during the DROP participation period, the beneficiary or beneficiaries of the participant as described in the Fire & Police Retirement Plan are entitled to the death benefit under the retirement plan, and the accumulated balance of the member's DROP account.

1. **Death result of active duty.** If the death occurs as a direct result of the active performance of duties, the death benefit includes service and salary during the DROP participation period for purposes of calculating the amount of the benefit provided in section 1.439A(b), PLUS 100% of the balance of the DROP participant's DROP account.

2. **Death not as a result of active duty.** If the death does not occur as a direct result of the active performance of duties, the death benefit includes service and salary during the DROP participation period for purposes of calculating the amount of the benefit provided in section 1.439A(a), PLUS 100% of the balance of the DROP participant's DROP account.

Valuation issues and assumptions

DROP benefits tend to be more valuable than the non-DROP benefits. However, the presence of a DROP tends to encourage employees to work longer. Knowing the impact on employment is important to measuring the cost of DROP but we must make assumptions without any known plan experience. We decided to look at the experience in Philadelphia. Firefighters there worked on average one year longer. While there were differences between the plan designs, having some experience is better than none. The changes we made in the retirement assumptions are included in the attachment.

Employees can stay in DROP for different periods of time. We have assumed on average they will stay in DROP for four years. What needs to be understood is that if employees only work one year longer due to DROP and are in DROP for four years, they are electing to join DROP three years before they would have retired without DROP. For determining the value of the benefits that would be payable if disability and death occurred while in DROP, we assumed that disability or death would occur after two years in DROP. If we had assumed that members don't join DROP until they would otherwise have normally retired, there would be no cost to DROP. However, that does not tend to be the experience we have seen.

Police members already have a DROP option.

See the attachment for more information on assumptions, data and methods.

Actuarial certification

This letter has been prepared for Howard County for the purposes of estimating the impact of a DROP proposal for firefighters. It is neither intended nor necessarily suitable for other purposes. Bolton Partners is not responsible for the consequences of any other use.

We used the assumptions, data and methods shown in the 2012 actuarial valuation except where noted otherwise, including modifications to the retirement rates as shown in the attachment. We believe the assumptions, data and methods used to be sufficient. Future actuarial measurements may differ significantly from the current measurements and projections in this letter due to such factors as the following: plan experience differing from that anticipated by the economic and demographic assumptions, changes in economic or demographic assumptions, and changes in plan provisions or applicable law. I am a credentialed actuary and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this letter. I am currently compliant with the Continuing Professional Development Requirement of the Society of Actuaries. I am not aware of any direct or material indirect conflict of interest that would impair the objectivity of our work. To the best of my knowledge, this letter and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice as set out by the Actuarial Standards Board.

Please let me know if you have any questions.

Sincerely,

BOLTON PARTNERS, INC.

Thomas B. Lowman, FSA, EA, MAAA

cc: Ann Sturner

BOLTON PARTNERS

Attachment

Discussion of Funding Methods and Assumptions

In 2012 and 2013 we did studies based on the 2012 valuation (data, assumptions, methods). These studies reflected the assumption change shown above. They measure the changes associated with the DROP proposals including improvements in ancillary benefits. Even though there have been some changes in the interest assumptions, we do not believe the differences were enough to justify updating the cost studies to reflect the 2013 valuation information.

<u>DROP funding methods:</u>

There are at least two different ways to handle DROP for funding purposes. Many plans use a funding method that prefunds for DROP by assuming that the DROP entry date is the date of retirement for retirement rate purposes. This is a common method and one the Trustees often understand more easily than the other method. This method reflects the additional cost of the DROP through gains and losses amortized after the employees' working lifetime which is far from ideal. While we do not recommend this method, we do not object to the use of this method if it is more conservative. GASB has adopted this model for accounting standards even though it was not recommended by their staff or the Conference of Consulting Actuaries.

The other method is to base the retirement rates on the exit date from DROP. This would require the anticipation of DROP benefit amounts (often greater that the regular benefit amounts) and continues normal cost until the DROP exit date. This has the advantage of making the contribution rate sensitive to variations in designs such as the DROP interest credit rate, as well as reflecting the cost of the DROP benefits during the employees' working lifetime. This is the method the plan already uses for Police DROP funding and what we have used in this study.

Changes in Firefighter retirement rates

For this study we assume that firefighters who enter DROP will work one year longer than they would have otherwise worked. We adjusted the retirement rates to extend the expected working period by one year. The current retirement rates and the retirement rates used for this study are shown below. We assumed 100% of DROP eligible retirements would elect DROP.

Years of Service at exit from employment	Retirement Rate 7/1/2012 Valuation	Retirement Rate DROP Study
20	20%	20%
21	5%	5%
22	5%	5%
23	5%	5%
24	5%	3%
25	30%	15%
26	10%	3%
27	10%	5%
28	10%	5%
29	10%	10%
30	30%	30%
31	30%	30%
32	30%	30%
33	30%	30%
34	30%	30%
35	100%	100%

Loads to account for additional DROP benefits for Firefighters

The benefits payable to participants who elect DROP are more valuable than the standard benefits provided by the plan. We estimated the value of the additional benefits and multiplied the standard benefit by this load factor. The load factor varies by age and service at the time the employee exits employment and also varies by the type of DROP benefit (i.e., retirement, disability or death). The table below shows a sample of the load factors for employees who retire after a four year DROP period.

		Service*		
		29	31	33
Age*	50	1.139	1.165	1.201
	54	1.157	1.183	1.220
	58	1.180	1.208	1.244

* The age and service represent the age and service as of the date the employee leaves employment with Howard County (i.e., DROP exit date).

Police Officer Valuation issues and assumptions

We assume that Police Officers will retire at slightly slower rates under the proposed Fire DROP than under the existing DROP. To implement this change, we modified the retirement rates. However, we still assume a 100% retirement rate at 30 year of service as under the existing Police DROP. A chart of our assumptions is shown below.

Years of Service at exit from employment	Retirement Rate assuming current DROP 7/1/2012 Valuation	Retirement Rate DROP Study
20	15%	15%
21	5%	5%
22	5%	5%
23	5%	5%
24	30%	20%
25	30%	20%
26	15%	10%
27	15%	10%
28	15%	10%
29	15%	10%
30	100%	100%

DROP election rates for Police officers

How many did we assume elect DROP? We currently assume 50% of the eligible police participants elect DROP. For purposes of this study, we assumed that 100% of the eligible police participants would elect DROP. The DROP election rate is reflected in the DROP loads discussed below.

Loads to account for additional DROP benefits for Police officers

The benefits payable to participants who elect DROP are more valuable than the standard benefits provided by the plan. We estimated the value of the additional benefits and multiplied the standard benefit by this load factor. The load factor varies by age and service at the time the employee exits employment and also varies by the type of DROP benefit (i.e., retirement, disability or death). The table below shows a sample of the load factors (current vs. assumed for study) for employees who retire after a four year DROP period.

		Service*	
		29	30
Age*	50	1.0465/1.064**	1.0495/1.069
	54	1.053/1.081	1.056/1.086
	58	1.062/1.103	1.065/1.108

* The age and service represent the age and service as of the date the employee leaves employment with Howard County (i.e., DROP exit date).

** The first number is the DROP load under the existing DROP I. The second number is the DROP load based on the proposed DROP II and 100% participation in DROP.

The change in the unfunded liability was amortized over 15 years.

Please understand that our valuation model is just a model. It is not exact and uses some approximations.

Key differences from existing Police DROP I

- Different rule on when employees can join DROP (can join DROP II at any time after first eligibility date and Police in DROP I can only join at 25, 26 or 27 years of service, so DROP II proposal is better)
- Maximum period in DROP I is four years and five for DROP II (which is better from a cost perspective – is complicated)
- DROP I has penalties if in DROP for just 3 years, DROP II proposal has none
- Employee contributions continue while in DROP for both groups but not added to DROP lump sum in Police DROP I (DROP II proposal is better)
- Police get COLA while in DROP I but not proposed DROP II (i.e. DROP I is better for the annuity portion of the benefit)
- Police give no interest on DROP I lump sum account, DROP II does (DROP II proposal is better)
- DROP I does not pay DROP lump sum if disability benefit provided or it is used as an offset (DROP II proposal is better)