

**Retirement Plan for
Employees of City of Jonesboro, Arkansas**

Independent Actuarial Study

Prepared by Wertz & Associates, Inc.

February 2009

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In response to the City's RFP #2008-15, Wertz & Associates, Inc. (W&A) provided a Fee Proposal on June 3, 2008. Our Fee Proposal described the various services that would be performed by W&A and the fee basis for providing those services. Our Fee Proposal also provided background information about our firm and brief biographies of those individuals that would be responsible for the work done by our firm. The attached Report provides the results of our Study.

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PART I

Review and Commentary Regarding Current Plan Document

Form of Plan

The Retirement Plan for Employees of City of Jonesboro, Arkansas (Plan) is a defined benefit pension plan funded entirely by contributions made by the City. The Plan was originally adopted on November 1, 1970, and is invested in a Group Annuity Contract at The Principal Life Insurance Company (The Principal). The Plan document provided to us for our review appears to be an individually designed plan drafted by The Principal as a restatement effective January 1, 1997.

While it is likely that certain required amendments have been adopted since the January 1, 1997, Restatement (adopted December 23, 2002), were only provided with one Plan amendment with an effective date of January 1, 2002, (adopted April 3, 2003), for our review. We were not provided with a copy of a determination letter applicable to the Plan.

Regulatory Compliance Recommendations: The initial remedial amendment period for EGTRRA expires January 31, 2009, for governmental plans. However, the IRS issued a news release on November 5, 2008, that announced relief provisions for governmental plans. Essentially, the IRS has provided a one-time extension to January 31, 2011, for sponsors of governmental plans. We recommend that the City employ competent ERISA counsel to review the Plan to determine whether any Plan amendments are recommended and/or required and to determine whether it is advisable for the City to apply for a determination letter with respect to the Plan.

Eligibility Provisions

The Plan provides that any full-time Employee (other than an elected official, a uniformed police officer, or a firefighter) who is customarily employed with the Employer for more than 20 hours per week and more than five months per year shall become an active Participant in the Plan as soon as the above conditions are satisfied.

Compensation and Average Compensation

Compensation is defined to mean total earnings paid to the Participant by the Employer. Average Compensation is defined to be the average of an Employee's Monthly Compensation for the five latest calendar years (all calendar years, if less than 5).

Funding

All current funding is being provided by the City of Jonesboro, the amounts and timing of such contributions being determined on the basis of actuarial valuations and recommendations made by The Principal. All Plan assets are held in a Group Annuity Contract No. GA 4-49993, a Flexible Pension Investments Group Contract Guaranteed Benefit Policy with Pooled Separate Accounts.

Prior to July 1, 1998, Participants were required to make after-tax employee contributions to the Plan. Since July 1, 1998, Employee contributions are no longer either required or permitted. The employee contributions account is being accounted for separately.

Retirement Dates

Normal Retirement Date is defined as the first day of the month on or after the later of the date the Participant reaches his 65th birthday or the date the Participant completes 5 years of Accrual Service. Unless otherwise provided by the Plan, a Participant's retirement benefits shall begin on a Participant's Normal Retirement Date if he has ceased to be an Employee on such date.

Early Retirement Date is defined as the first day of any month before a Participant's Normal Retirement Date which the Participant selects for the start of his retirement benefit. This day shall be on or after the date on which he ceases to be an Employee and the date he has attained age 55 and has completed 5 years of Accrual Service.

Late Retirement Date is defined as the first day of any month which is after the Participant's Normal Retirement Date and on which retirement benefits begin. If a Participant continues to work for the Employer after his Normal Retirement Date, his Late Retirement Date shall be the earliest first day of the month on or after he ceases to be an Employee. A later Retirement Date may apply if the Participant so elects.

Normal Retirement Benefit

An Active Participant's monthly Accrued Benefit as of any date, subject to the modifications below, will be equal to the sum of (a) and (b) below:

- (a) An amount equal to 0.5% of his Average Compensation multiplied by his Accrual Service prior to November 1, 1970, if any.
- (b) An amount equal to 1.50% (1.25% prior to July 1, 1998) of his Average Compensation multiplied by his Accrual Service on and after November 1, 1970.

Modifications include a minimum monthly benefit equal to \$25, a provision that offsets the above amount by the amount of deferred monthly retirement benefit on the Normal Form beginning on his Normal Retirement Date in lieu of which he has received a single sum payment under the Plan. Further, a Participant's Accrued Benefit resulting from Employer Contributions is equal to the Participant's total Accrued Benefit reduced by his Required Contribution Accrued Benefit.

The above benefit formula was amended effective January 1, 2002, to provide for a benefit equal to the product of (a) and (b) below

(a) 1.50% of his Average Compensation; and

(b) His Accrual Service

The above benefit is stated in the Normal Form of a Life Annuity with 120 guaranteed payments.

Early Retirement Benefit

An Active Participant's retirement benefit on his Early Retirement Date shall be equal to his Accrued Benefit on such specified date, multiplied by a factor shown below corresponding to the number of years his Early Retirement Date precedes his Normal Retirement Date:

<u>Number of Years Early Retirement Date Precedes Normal Retirement Date</u>	<u>Factor</u>
1	.933
2	.866
3	.799
4	.732
5	.665
6	.632
7	.599
8	.566
9	.533
10	.500

Effectively, the early retirement reduction factors shown above represent a 1/180th reduction for each of the first 60 months (5 years) by which Early Retirement Date precedes the Participant's attainment of age 65 plus a 1/360th reduction for each of the first 60 months by which Early Retirement Date precedes the Participant's attainment of age 60. These reduction factors are typical of what we find in private sector defined benefit pension plans and represent a slight subsidy for early retirement compared to a true actuarial reduction.

Late Retirement Benefit

An Active Participant's retirement benefit on his Late Retirement Date shall be equal to his Accrued Benefit on his Late Retirement Date.

Termination of Employment Prior to Normal or Early Retirement Date

A Participant that terminates employment or otherwise becomes an Inactive Participant before retirement or death is entitled to (a), (b) or (c) where:

- (a) A deferred monthly retirement benefit commencing at Normal Retirement Date equal to the sum of (i) and (ii) where:
 - (i) Equals the value of the Participant's Accrued Benefit attributable to his Employee Contributions Account; and
 - (ii) Equals the vested portion of the excess of the Participant's Accrued Benefit less the value of the Participant's Accrued Benefit attributable to his Employee Contributions Account; or
- (b) A deferred monthly retirement benefit to begin on his Early Retirement Date equal to amount under (a) above multiplied by the applicable Early Retirement reduction factor (see above); or
- (c) Equals a deferred monthly retirement benefit to begin on his Late Retirement Benefit Date equal to an amount determined under (i) or (ii) below:
 - (i) For a Participant that became an Inactive Participant on or before his Normal Retirement Date, an amount equal to the amount under (a) above; or
 - (ii) For a Participant that became an Inactive Participant after his Normal Retirement Date, an amount equal to the Participant's Accrued Benefit on the day before he became an Inactive Participant.

Pre-Retirement Death Benefit

If a Participant dies before his Normal Retirement Date and before benefit commencement, a death benefit equal to the Participant's Employee Contributions Account (if any) is payable in lump sum to the Participant's beneficiary. If a Participant has no Employee Contributions Account, the Plan does not provide a pre-retirement death benefit unless the Participant dies on or after his Normal Retirement Date (see below).

If a Participant dies on or after his Normal Retirement Date and before his benefit commencement date, the previous paragraph does not apply. Instead, the death benefit is the amount that would have been payable to the Participant's beneficiary if the Participant's Retirement Date had occurred on the date he died.

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PART II

Retirement Benefit and Cost Objectives

One of the items we discussed prior to our engagement was the idea of establishing and formally adopting a relatively basic set of objectives with respect to the benefits to be provided by Plan, along with realistic and relative cost objectives. The City should not only know what it is doing with its retirement plan, it should also know why it is doing what it is doing. In order to determine the effectiveness of any activity, it is necessary to establish and adopt standards by which the activity is to be measured. It is obvious, but true, that without knowing what an activity is supposed to be doing or accomplishing, how is a reviewer supposed to properly evaluate how well it is producing the desired results? For this reason, we believe that it is imperative that management consider the formal establishment and adoption of its philosophical retirement plan objectives. We believe this exercise will enable the City to measure the results of the current Plan and provide a roadmap for determining whether prospective changes are consistent with Management philosophy.

These standards, or objectives, should represent the ideals or goals of the City and should be stated in terms general enough to have broad applicability. While it is not possible for all programs to satisfy all stated objectives, this foundation should allow the City to better resolve current and future questions regarding alternative retirement benefit designs in terms of which design is most consistent with the stated objectives. Once general philosophy is established and understood, the answers to most administrative and operational decisions become more apparent.

It should be noted that, while adoption of benefit and cost objectives is very important, the objectives should not be inviolate, nor should they be static. Objectives, even philosophical objectives, must evolve and change as changes in environmental and census circumstances transpire. The City should schedule regular periodic reviews of its retirement program objectives and adopt adjustments when indicated.

In order to assist the City in the development of these objectives, we have provided below two different sets of sample objectives. The first is a list of retirement benefit objectives that have been adopted by some of our clients. The second is a list of a listing of retirement cost objectives that have been adopted by our clients. These objectives may or may not be similar or even identical to those chosen and adopted by the City. Some should be eliminated; others combined or expanded upon. We recommend that the City review, discuss, make changes as appropriate, prioritize and develop a list of its own retirement program objectives.

EXAMPLES OF FUNDAMENTAL
RETIREMENT BENEFITS OBJECTIVES

Basic Benefit Objectives:

1. To establish and maintain a competitive position in the organization's relative labor markets; thereby enabling it to attract and maintain qualified and productive employees.
2. To provide a means for the organization to "take care" of employees by allowing them to retire without a dramatic decrease in standard of living.
3. To provide a retirement benefit which result in the higher paid employees a proportionately greater benefit from the Plan by integrating with benefits provided by Social Security.
4. To reward long-time service with the organization.
5. To encourage employees to retire on their Normal Retirement Date and thus make possible the advancement of younger employees.
6. To encourage thrift and savings among employees.
7. To provide a reasonable level of death benefits.
8. To provide disability benefits to protect employees from the unexpected loss of income, but should not encourage absenteeism or malingering.
9. To provide deferred compensation for its employees on a currently deductible basis.
10. To arrange all employee benefit plans so as to maximize their effectiveness from the standpoint of both corporate and individual taxation.
11. To provide a means for employees with long-term service to retire prior to age 65 without a significant decrease in retirement benefits.
12. To make available programs which will address the continuing benefit needs of retired employees.
13. To recognize the employee benefit needs as they may differ between employees with differing levels of income.
14. To coordinate employee benefit programs in a manner which will address specific events (e.g., retirement, death, disability), in order to avoid expensive overlaps or costly gaps in coverage.
15. To provide a replacement income which, when combined with social security benefits, will enable career employees to retire without suffering a substantial decrease in standard of living.

Basic Cost Objectives:

1. To systematically set aside, on a conservatively realistic basis, monies needed to assure satisfaction of pension plan liabilities as they arise.
2. Costs of the Plan should be on a basis which is designed to establish an annual contribution to the Plan which bears a reasonably constant relationship to covered payroll.
3. Employees should share in the risk of investment performance of a Trust Fund.
4. Employees should share in the cost of providing retirement benefits.
5. Management desires to have at least indirect control over the investments of Trust Fund assets.
6. Management desires to have at least indirect control over the level of benefits provided by the Plan.

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PART III

Review of 2008 Actuarial Valuation Report As Prepared by the Principal Financial Group

Background

For purposes of our review, we were provided with a copy of the January 1, 2008, Actuarial Valuation Report (2008 Valuation) as prepared by The Principal Financial Group and delivered with their letter dated July 3, 2008. We were also provided with the underlying census data used to develop the valuation. The first step in our review involved re-valuing the Plan in an attempt to match the results shown in the 2008 Valuation using the same actuarial assumptions as those used by The Principal. This step enables us to determine that (1) the data provided for our use is consistent with the data used by The Principal and (2) we have a comprehensive and validated understanding of the benefits being valued by the Principal. We were able to calculate amounts that are reasonably close to matching the results shown in the 2008 Valuation.

Review of Actuarial Assumptions

The valuation interest rate used by The Principal in the 2008 Valuation is 7½%. This interest rate is used to discount future benefits to determine the Plan's liabilities. This interest rate should be a reasonable expectation of long-term future rates of return on the plan's assets. Based on how the assets are currently invested and current markets, we believe that a 7½% interest rate is unreasonably high and markedly higher than the interest rates that we have been using in recent years to value the plans of our similarly situated defined benefit plan clients.

There are several reasons why we feel that 7½% is unreasonably high:

1. The interest rate used by Principal in calculating the "(Retired Lives) Benefit Index" and the immediate annuity purchase price is considerably below 7½%.

On December 2, 2008, Principal reported the Benefit Index as \$4,200,000, the purchase price of annuities as \$2,990,000 and assets as \$4,180,000 (all rounded to nearest \$10,000). At 417(e) rates, as of January 2008 (4.52%), we found the liability to be \$2,430,000. Principal's higher liabilities imply a lower interest assumption.

2. Even "Current Market" as measured by 417(e) rates are currently in the range of 4% to 5% and have been in this range for several years.
3. Long term bond rates are considerably below 7½% (closer to 4½%). In fact, IRS Notice 2009-2, announced on January 9, 2009, that the rate of interest on 30-year Treasury securities for December 2008 is 2.87%. This rate is used in determining the value of lump sum distributions for most private sector plans and is a reasonable indication of the prevailing rates that are being used to purchase terminal annuity contracts from insurance companies for plans that are being terminated.

However, the valuation interest rate should not be a current market rate. Rather, it should be a long term rate guided by current market conditions and by the expected cost of providing benefits at retirement. The use of an unreasonably high valuation interest assumption is that the higher interest rate undervalues the liabilities of the Plan resulting in inadequate funding. If we were to prepare the valuations, we would likely recommend a graduated decline of ½% per year, using 7% for 2008, 6½% for 2009, and 6% for 2010. The attached Exhibit A shows the results as of January 1, 2008, using a 7½% valuation interest rate as presented by The Principal, along our results of revaluing the Plan based on 7% and 6% valuation interest rates.

The Principal also used an assumed rate of salary increase of 4½% for the 2008 Valuation. We would recommend a graduated ½% per year reduction in this assumption as well; with the reductions being made concurrent with the reduction in valuation interest rate. Any amounts shown in this Study Report are based on a 7% valuation interest rate and an assumed 4% rate of salary increase.

We have not gathered sufficient data on this Plan to say, based on Plan experience, that other assumptions used in the 2008 Valuation are reasonable or unreasonable. However, based on data from other similar plans, we believe that other assumptions are reasonable.

Review of Actuarial Valuation and Alternate Results Using W&A Assumptions and Procedures

As described above, the valuation interest assumption of 7½% used by The Principal is higher than the rate that W&A would have utilized in preparing the 2008 Valuation. Below, we show the results of our valuations as of January 1, 2008, using valuation interest rates of 7½%, 7% and 6%.

	Valued Using <u>7½%</u>	Valued Using <u>7%</u>	Valued Using <u>6%</u>
Annual Contribution	\$615,000	\$655,000	\$788,000
Annual Contribution as % of Compensation	7.8%	8.3%	10.0%
Employer Normal Cost	\$575,000	\$600,000	\$652,000
Normal Cost as % of Compensation	7.3%	7.6%	8.3%

Based on our recommended reduction in the valuation interest rate from 7½% to 7% for 2008 and subsequent cuts to 6½% for 2009 and 6% for 2010, the recommended contribution would increase from 7.8% of Compensation (as calculated by The Principal) to our recommended 8.3% of Compensation for 2008. In the next two years we would recommend a continued strengthening of assumptions that would be consistent with 10% of Compensation by 2010. This course of action would be tempered by our continued review of assumptions and experience. We would expect to see a small additional increase in cost for 2009 to partially recognize the substantial decline in asset values.

How Would W&A Valuation Results Have Differed Compared to The Principal

Our valuation results would have differed primarily because of our choice of a less aggressive valuation interest assumption. Also, one of the issues we emphasize in our actuarial valuation reports is the importance of using the Plan's market value accrued liability as a funding target. This approach does not necessarily change the basic funding method. However, when the funded ratio begins to fall below 100% we generally recommend strengthening assumptions used in the valuation.

Review of Funded Status

There are several ways to measure the financial well being of a defined benefit pension plan. In general, we like to compare the ratio of Plan's total assets to the Plan's total liabilities. There are several different ways to measure a Plan's liabilities. The most common ways to value Plan liabilities include valuations based on (1) Ongoing Plan Assumptions, (2) Actuarial Equivalence Basis, and (3) Market Value Basis. A summary of these three methods is shown below:

	<u>Ongoing Plan Basis</u>	<u>Actuarial Equivalent Basis</u>	<u>Market Value Basis</u>
Assets	\$6,820,000	\$6,820,000	\$6,820,000
Present Value of Accrued Benefits	\$4,730,000	\$5,489,000	\$7,230,000
Funded Ratio	144%	124%	94%
Valuation Interest Rate Used	7½%	6%	4.52%

The funded ratios shown above are based on assets and liabilities as of January 1, 2008, as shown in the 2008 Valuation. On January 1, 2008, Plan assets were \$6,820,000 (rounded). Principal reported assets of \$4,180,000 on December 1, 2008. Some of the difference is due to contributions to the Plan and benefits paid from the Plan. However, given what has transpired in the market since January 1, 2008, it is probably reasonable to assume assets have decreased by at least 35%. Accordingly, the revised funded ratios based on assets of \$4,180,000 would be:

	<u>Ongoing Plan Basis</u>	<u>Actuarial Equivalent Basis</u>	<u>Market Value Basis</u>
Funded Status Based on \$6,820,000 on 01/01/2008:	144%	124%	94%
Funded Status Based on \$4,180,000 on 12/01/2008:	88%	76%	58%

Use of Ongoing Versus Market Value Liabilities to Determine Funded Status:

Governmental plans are not subject to ERISA minimum funding standards. Accordingly, there is no requirement that a governmental plan fully fund either the ongoing or the market value of its pension liabilities. Benefits in a governmental plan are only guaranteed to the extent funded. However, we believe that it is rational to fund a governmental plan on a basis that would result in the market value of the plan's liabilities at any given point in time are covered by the assets in the plan. This is equivalent to requiring that goods and services received by citizens should generally be paid for by the time that they are received. For example, while a city may pay for a road that has significant future usefulness, by issuing a bond, payroll should generally be paid for by current income taxes and other sources. Although future changes in interest rates or plan earnings may justify a higher valuation interest assumption for an ongoing plan, it is reasonable to compare the market value of a plan's accrued liabilities to the market value of plan assets.

With this in mind as of January 1, 2008, the Plan was well funded (**not over-funded, but well funded**). The market value of the accrued liability was 98% funded. Based on ongoing assumptions (valuation assumptions), the Plan's assets easily covered the present value of its accrued liability. Because the Plan benefit formula is based on a Participant's final average pay, the benefits accrued as of January 1, 2008, will increase due to a higher average pay being applied to existing service credits. Also, the cost of providing benefits increases as a Participant grows closer to retirement. In other words, it should be expected that the cost (and value) of a Participant's benefit will increase at an increasing rate as a Participant nears retirement. It is, therefore, not just reasonable, but vital for the Plan to continue to strive to have assets in the Plan in excess of the value of its accrued liabilities measured on ongoing assumptions.

Unfortunately, asset markets took a nosedive during 2008. The Plan is no longer well funded by any standard. We do not believe that this represents a long-term problem. In all likelihood assets will come back with time. However, in the short term, we believe that it is unwise to consider benefit enhancement that will further increase liabilities.

Our valuation results differ mainly in our choice of a less aggressive valuation interest assumption. Also, we emphasize the market value of the accrued benefit liability as a minimum to be looked at and strived for. This does not necessarily change the basic funding method. However, when the funded ratio begins to fall below 100% we recommend strengthening assumptions (increasing the cost allocation).

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PART IV

**Analysis of Certain Benefit Enhancement
Being Considered by the City**

One of the primary focuses of this Actuarial Study was to determine the projected cost impact of various benefit enhancements being considered by the City. It is our intent here to provide the results of our analysis in a manner that will enable the City to evaluate the cost/benefit of the enhancements individually and on an incremental basis. Ultimately, the City should be able to use the results of this analysis to estimate the total cost impact of implementing any combination of the enhancements included in our analysis. Note that we have provided a table of factors in Appendix B that can be used for projecting the costs of the enhancements based on the 7% valuation interest rate suggested in our review of actuarial assumptions.

Enhanced Survivor Benefits

Currently, the Plan only provides pre-retirement death benefits equal to the value of the deceased Participant's Employee Contributions Account, if any. Accordingly, only Employees who were Participants before July 1, 1998, are eligible to receive a pre-retirement death benefit. Before considering whether adding any form of additional death benefit to the Plan, any death benefits being provided by the City from programs outside of the Plan should be considered.

Most retirement plans do provide pre-retirement spousal death benefits on behalf of a deceased Participant. In fact, private sector pension plans are actually required to provide certain minimum survivor benefits to the spouse of a Participant. This benefit is generally referred to as a Qualified Pre-retirement Survivor Annuity (QPSA). A QPSA is an immediate monthly benefit payable to the surviving spouse of a Participant who dies before benefit the Participant commences benefits under the Plan.

The amount of the QPSA is based on the actuarially equivalent of the Participant's Accrued Benefit stated in the form of a Joint & Survivor benefit. In general, the QPSA would be equal to 50% of the monthly amount that would have been due to the Participant if:

1. In the case of a Participant who dies after attaining the earliest retirement age under the plan, the Participant had retired with an immediate Qualified Joint & Survivor Annuity (QJSA) on the day before the participant's death.
2. In the case of a participant who dies upon or before attaining the earliest retirement age under the plan, the participant had: (a) separated from service on the date of death, (b) survived to the earliest retirement age, (c) retired with an immediate QJSA at the earliest retirement age, and (d) died on the day after the day on which the earliest retirement age

would have been attained. (If the participant had separated from service prior to death, the amount of the QPSA is calculated by reference to the actual date of separation from service rather than the date of death to prevent the participant from accruing benefits after separation from service).

Because the current Plan provides such limited pre-retirement death benefits, the Plan experiences an actuarial gain whenever a Participant dies before benefit commencement. This actuarial gain is equivalent to the amount of funding previously made to the Plan on behalf of the deceased Participant. Any death benefit added would reduce or eliminate the actuarial gain that would otherwise be experienced by the Plan. We have determined that the cost of adding a pre-retirement death benefit equal to a QPSA payable only to the surviving spouse of a married Participant would add approximately \$60,000 to the annual cost of the Plan with a 5-year average pay formula and approximately \$119,000 to the annual cost of the Plan with a 3-year average pay formula. To add a death benefit equal to the present value of the Participant's Accrued Benefit and payable to any named beneficiary of the Participant would add approximately \$108,000 to the annual cost of the Plan with a 5-year average pay formula and approximately \$172,000 to the annual cost of the Plan with a 3-year average pay formula. Before any changes are considered regarding Plan's death benefit, we recommend that the City establish comprehensive death benefit objectives addressing what death benefits, if any, should be provided by the City and the extent to which these benefits might be provided by other programs sponsored by the City.

Enhanced Disability Benefit

The Plan currently provides no disability benefits per se. Disability benefits are generally provided to a participant immediately upon becoming disabled. Disabled Participants under this Plan are treated as any other Participant that has separated from service. Most employers wanting to provide immediate disability benefits for their employees do so by purchasing a group Long Term Disability (LTD) policy. In other words, the retirement plan is intended to provide retirement benefits to participants that reach retirement age. If disability benefits are being provided by the City from outside the Plan, it is not only appropriate for disability benefits not to be provided by the Plan, it is important that no disability be provided by the Plan. Most group LTD policies provide for a direct dollar-for-dollar offset of any disability benefits otherwise payable from the LTD policy for any disability benefits paid from most other sources (including most retirement plans). We recommend once again, that before any changes are considered regarding Plan's disability benefit, we recommend that the City establish comprehensive disability benefit objectives addressing what disability benefit should be provided, if any, and the extent to which these benefits might be provided by other programs sponsored by the City. Accordingly, we are not recommending that additional disability benefits be considered and we have not calculated an incremental cost associated with adding an immediate disability benefit.

Increasing the Current Benefit Multiplier

The most direct and simplest way of enhancing retirement benefits provided by the Plan would be to increase the benefit multiplier found in the benefit formula. The current multiplier is 1.50%. All of the costs and funded ratios provided in this report have been based on this

multiplier. There are several methods that can be employed to increase the multiplier. The easiest to understand is to simply apply a new multiplier to all years of accrual service. This type of change would have the effect of increasing the liability for past service as well as increasing the cost of providing future benefit accruals. An example of this type of change would result in a new benefit formula as follows:

An Active Participant's monthly Accrued Benefit as of any date will be equal to the product of (a) and (b) below:

- (a) 2.0% of his Average Compensation
- (b) His Accrual Service

Another common method of increasing the multiplier would only have an effect only on future benefit accruals with one benefit formula that applying to accrual service earned up until the increase and another benefit formula applying to accrual service earned after the increase. An example of this type of change would result in a new benefit formula as follows:

An Active Participant's monthly Accrued Benefit as of any date will be equal to the sum of (a) and (b) below:

- (a) 1.50% of his Average Compensation times his Accrual Service earned prior to January 1, 2009
- (b) 2.00% of his Average Compensation times his Accrual Service earned after to December 31, 2008

We have calculated the incremental cost associated with increasing the multiplier on total Accrual Service and on Future Service only. We have determined that for an increase in the multiplier by 0.50% (applied to all Accrual Service) will have an estimated incremental annual cost increase of approximately \$390,000, increasing the total cost from 8.28% to more than 13% of Considered Compensation. If the increase in benefit formula multiplier by 0.50% is applied only to future service, we estimate that the total cost would increase by approximately \$156,000. The above projections are based on no other changes to the Plan. The results of our calculations are shown in Section II Exhibit A.

If a 0.50% increase in benefit formula multiplier (applied to all Accrual Service) is combined with changing from a 5-year Average Compensation to a 3-year Average Compensation, we estimate that the annual cost would increase by approximately \$454,000. If only a QPSA enhanced death benefit is combined with a 0.50% increase in the benefit formula multiplier (applied to all Accrual Service), we estimate that the annual cost would increase by \$469,000. If combined with both a change to a 3-year Average Compensation and an addition of a QPSA enhanced death benefit, we estimate that the annual cost would increase by approximately \$547,000; an increase of more than 183%! The results of our calculations are shown in Section II of Exhibit B.

If other benefit enhancements (3-Year Average Compensation and/or enhanced death benefits) were to be combined with an increased multiplier applied only to future service, we would expect to see similar and somewhat proportional results to those shown in the previous paragraph. We can prepare these additional calculations at the City's request.

Changing Average Compensation Period from 5 Years to 3 Years

If no other changes are made to the Plan, we have projected that the incremental annual cost associated with reducing the averaging period used to determine Average Compensation from 5 years to 3 years to be approximately \$48,000 or approximately 0.6% of Compensation. This would represent approximately 7% increase in the total cost of the Plan. It is important to consider the impact this change will have when combined with other benefit enhancements being considered. We have described this effect above in our calculations for changing the multiplier in the benefit formula and/or enhancing the death benefits provided by the Plan.

The actual incremental cost caused by changing from a 5-year to a 3-year Average Compensation definition will be heavily influenced by the typical salary increases that are attributed to a Participant's final year of Compensation. If a Participant's final year of Compensation is inordinately higher than a typical year of salary increase (due to payment of unused sick or vacation pay), the incremental increase in cost associated with a change in averaging period to a shorter period would be understated. Accordingly, we recommend that a review of historical final year Compensation be performed before giving any further consideration to changing the Compensation averaging period.

Adding a Fully Subsidized Early Retirement Benefit after 28 Years of Accrual Service

We were requested to review the possibility of providing for an unreduced (fully subsidized) Early Retirement Benefit after Participant completes 28 years of Accrual Service. This type of benefit is generally referred to as a "28 & Out" benefit and is a benefit feature unique to governmental plans. This benefit is available under the Arkansas Public Employees Retirement System (APERS). There is a reason for the popularity of this type of benefit; it is very valuable. It is also very expensive for plans to provide. Note that, under the current Plan, a Participant at age 55 with 28 or more years of Accrual Service would receive an immediate benefit equal to only 50% of the amount he would receive (Accrued Benefit) if he waited until age 65 to commence benefits. With "28 & Out", the Participant would be entitled to immediate commencement of monthly benefits equal to 100% of his Accrued Benefit. His benefit would be worth more than twice the amount he is entitled to under the current Plan. Based on our calculations, the incremental annual cost of providing for an unreduced Early Retirement benefit after completion of 28 years of Accrual Service, assuming no other changes to the Plan, would be approximately \$308,000. These results and the results of our calculations of other various combinations of enhancements are shown in Appendix C.

Adding Deferred Retirement Option Plan (DROP) Provisions

Another enhancement you asked us to review was the possibility of adding a "DROP benefit similar to that offered by APERS". A DROP is an arrangement under which an employee who

would otherwise be entitled to retire and receive benefits under an employer's defined benefit plan elects to continue working. However, instead of having the continued Compensation and additional years of Accrual Service taken into account for purposes of the defined benefit plan formula, the employee has a sum of money credited during each year of the continued employment to a separate account under the defined benefit plan. The account earns interest (either at a rate stated in the plan, or based on the earnings of the trust underlying the retirement plan). When the employee retires, the account is paid to the employee, in addition to whatever benefit the employee has acquired under the defined benefit plan based on earlier years of service.

An example may make the arrangement easier to understand. Suppose that Employee A is covered by a defined benefit plan that provides that she will receive a monthly benefit equal to 1.50% of final average pay times her years of Accrual Service. Suppose further that the Plan permits Employee A to retire as early as age 55 with 30 years of Accrual Service, without actuarial reduction for early retirement (a fully subsidized early retirement benefit). If Employee A had average final compensation of \$3,000 per month at age 55 and had completed 30 years of Accrual Service at that point, she could retire immediately with a benefit of \$1,350 per month. In the alternative, she could continue working until, say age 60. At that point, she would have 35 years of Accrual Service with an average final compensation of \$3,500. She would be able to retire at age 60 with a monthly benefit of \$1,837.50.

A DROP Plan would provide Employee A with a third alternative. Instead of retiring immediately on a \$1,350 month benefit, or deferring retirement and getting \$1,837.50 per month at age 60, she could elect to continue working for five years, but elect to have her final average compensation and years of Accrual Service frozen at the level they were when she was 55. In exchange for giving up her right to continued accrual, her employer would agree to put \$1,350 per month into a separate account under the retirement plan for her. When she ultimately retired, she would receive (a) \$1,350 per month, plus (b) the value produced by taking the \$1,350 per month credited to the account and increasing it by an earnings factor.

The APERS DROP works in a similar manner as the above example. Under APERS, Participants with 28 or more years of accrual service in APERS may "retire" without terminating employment for up to 84 months (7 years). During the DROP period, the monthly benefit payments that would have been payable to the Participant remain in the APERS Trust Fund, earning tax-deferred interest while the Participant continues to work. When the DROP period ends, the Participant must (1) terminate employment (2) receive payment of the accumulated DROP benefits and (3) begin receiving monthly retirement benefits (in the same amount as determined when the Participant entered the DROP, plus annual cost-of-living increases and any Ad Hoc increases).

The primary reason for an employer to initiate a DROP is to address the retention of valued employees that are eligible to retire early. DROPs are especially prevalent in governmental plans where substantial early retirement incentives are often part of the plan design. Currently, the City's Plan offers only a slight subsidy for early retirement; certainly not a sufficient incentive to encourage a Participant to consider a DROP, if offered.

DROP programs are often quite popular with employees that have maximized their benefit payable under a defined benefit plan. Once a participant has qualified for a heavily subsidized or unreduced early retirement benefit, the DROP accumulation is often more valuable than the increases otherwise attributable to continued accrual under the defined benefit plan. In addition, the fact DROP benefits are generally payable as a lump sum is also a popular feature.

From a cost viewpoint, a DROP plan is typically neutral if only those employees who would otherwise have retired early elect the DROP feature. However, in a retirement plan that provides for a heavily subsidized early retirement benefit, any employee who would have stayed even without the DROP feature, but who elects the DROP feature, typically raises plan costs. The actual cost of adding a DROP feature is difficult to project without knowing the provisions of the early retirement subsidy.

Note that APERS Participants eligible for the DROP must be eligible for the “28 and Out” unreduced early retirement benefit otherwise available to the Participant under APERS. The value of additional accruals after qualifying for “28 and Out” is definitely diminished, especially when a DROP is included in the decision-making process. This is a key component of the APERS DROP. Without the “28 and Out” feature in APERS, the DROP would not be a popular option. Similarly, without the addition of a significant early retirement subsidy to the City’s Plan, adding a DROP would likely be ineffective and would also be cost neutral.

Review of Financial Statement Disclosures

We have reviewed the financial statement disclosures as prepared by The Principal and have the following comments to offer:

1. The Implementation Guide to Governmental Accounting Standards Board (GASB) Statements 25, 26, and 27 on Pension Reporting and Disclosure by State and Local Government Plans and Employers – Questions and Answers) indicates in Q&A #9 that GASB Number 25 is for reporting on an employer level.
2. In the Actuarial Valuation Reports provided for our review, it appears that The Principal has provided GASB Statement Number 27 information and has not provided information pertinent to GASB Statement Number 25. It is possible that the GASB Statement Number 27 information has been being provided in a separate report. This matter is really one to be addressed by your outside auditors. It is possible that strict GASB reporting is not required for the City.
3. Based on the GASB 27 reporting provided, it appears that the interest rate used to value the pension liabilities was 7% for 1998 through 2001. The interest rate was increased to 7½% beginning with the 2002 presentation and has remained constant at 7½% since 2002. We find it interesting that interest rate was increased at a time when market interest rates had been and continued to be in a relatively steep decline. However, it appears that Plan funding has been relatively stable when stated as a dollar amount. It is, however, difficult to make a statement without knowing whether other factors such as turnover, deaths, disabilities, have been relatively consistent with actuarial assumptions.

However, assuming that considered Compensation would have increased during that period, we would have expected a gradual increase in the dollar amount funded.

4. We are concerned that a 7½% interest rate used for financial statement presentation purposes underestimates the Plan's liabilities. However, this is a matter to discuss with those responsible for preparation of the City's financial statements.