JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT
THIRD QUARTER MEETING
September 14, 2016

The Joint Committee on Public Employee Retirement held its 3rd Quarter Meeting on Wednesday, September 14, 2016 at 9:00am in House Hearing Room 3. With a quorum being established, Representative Leara called the meeting to order. Joint Committee members in attendance were Senators Schaaf and Wallingford and Representatives Anders, Bernskoetter, Leara, Pierson, Runions and Walker. Senators Chappelle-Nadal, Kehoe and Walsh were not in attendance. One vacancy currently exists on the joint committee because Senator Keaveny resigned his Senate seat.

Representative Leara turned the meeting over to the Executive Director, Michael Ruff. The first discussion item was the State of Missouri Compensation and Benefits Study Report completed by CBIZ Human Capital Services on July 29, 2016. This report was presented on September 7, 2016 to the Joint Interim Committee on State Employee Wages, which is chaired by Representative Bernskoetter. Representative Bernskoetter described the joint interim committee's activities and stated that the last salary study was performed in 1980. This current study shows there are 5,050 state workers whose salaries fall below the minimum level. One specific finding of the study was in regards to retirement vesting for the Missouri State Employees Retirement System (MOSERS) and MoDot & Highway Patrol Employees' Retirement System (MPERS). Retirement vesting for both plans was increased from 5 years to 10 years during the 2010 special legislative session. The CBIZ study notes that Missouri is not the only state to use a ten year vesting period but the median vesting period is five years. In regards to retirement vesting, CBIZ offered the recommendation to reduce the ten year vesting requirement because it is "out of step with trends in the market". There will be another CBIZ presentation sometime in January. More details will be provided once the date, time and location are decided.

Next, the Executive Director discussed changes made by the City of Carthage to its Police and Fire plan and to its benefit program for the City's general employees who are members of the Local Government Employees Retirement System (LAGERS). CBIZ conducted a study of compensation and benefits for city employees. The results were released in December 2015. CBIZ surveyed 30 comparable cities across Missouri for compensation and benefit levels. All of the 30 surveyed cities are members of LAGERS for either some or all of their employees. The study found that Carthage's benefits are slightly below the market median and Carthage's employees receive total compensation that is below proposed market competitive practices. Since release of this study, Carthage has made changes to both retirement plans. The change to the Police and Fire plan was to lower the normal retirement age from 58 to 55. For the general employees in LAGERS, the city increased the benefit multiplier from 1.5% to 2%. The CBIZ study, actuarial cost statement and city ordinance changes are located in the packet.

The City of Hannibal Police & Fire Pension Plan is pursuing an alternative way of addressing disability. Currently, the board is responsible for making disability determinations. The city is considering possibly repealing existing disability provisions from the plan document and contracting with Standard Insurance for disability coverage.

Standard Insurance would also be responsible for disability determinations. The cost statement from the actuary indicates that the proposed change would have a positive impact on the plan. Committee members commented on how Hannibal has previously made several changes to improve the long-term solvency of the plan.

Quarterly plan investment reporting was reviewed from the second quarter of 2016, ending June 30. The returns are broken down in 12 months, 36 months and 60 months. Committee members discussed how 2015, along with the first half of 2016, has been a challenging time for investment returns with much volatility in the markets.

The Executive Director gave a summary of attendance at the annual conference of the Missouri Association of Public Employee Retirement Systems (MAPERS), held on July 13-15, 2016 at the Lake of the Ozarks. Some of the topics presented were Sunshine Law, board governance, benefits of DB plans, economics update, terrorism, geopolitical events, ethics, and audits. The Executive Director presented the Capitol Report with an overview and background of the Joint Committee, legislation from the 2016 legislative session, and a brief summary of the annual report. This conference is an opportunity for pension plan board of trustees members to complete their annual education requirements under section 105.666. Committee members are always encouraged to attend this annual conference.

The JCPER received a letter in May from Thomas Mug, a private attorney in St. Louis who represents public retirement plans. He is requesting guidance and interpretation of section 105.666, regarding whether self-study is permitted to fulfill the annual education requirements. This issue is something for the committee to discuss in the future. Committee members may also possibly pursue any needed statute changes.

The committee members' packet contains an updated news article from the St. Louis Post-Dispatch describing the situation with the St. Louis City Airport Police and Social Security coverage. The article indicates that a tentative agreement has been reached to provide Social Security coverage to the affected employees.

In June, the Joint Committee hired Tanya Pleus as a part-time temporary employee. Tanya has been digitizing paper files using a high speed & high volume scanner loaned to the committee from Senate CIS. Tanya is also helping to reorganize electronic files and with any other duties as needed. Plan year 2015 information continues to be reviewed and processed for the Annual Report, which will be presented at the first quarter 2017 meeting. Preliminarily, plan changes that have been noticed include actuarial changes, such as lowering of assumed rates of return, along with adoption of more recent mortality tables. Also, the Executive Director and Senate Computer Information Systems staff have worked together to produce a new JCPER website. The new website should be available by the fourth quarter meeting.

The fourth quarter meeting will be held in November. The annual JCPER Watch List will be presented at that time.

No further business being presented, the committee adjourned.

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JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

3rd QUARTER MEETING
September 14 , 2016
9:00 a.m.— House Hearing Room 3

AGENDA

Roll Call

State of Missouri—Compensation & Benefits Study Report

Plan Developments
City of Carthage Police & Fire—CBIZ Study
City of Hannibal Police & Fire

Quarterly Reporting

MAPERS Conference Overview

Board Member Education Statute

Other Business
JCPER Office

State of Missouri

Compensation & Benefits Study Report
July 29, 2016

Presented By:

CBIZ Human Capital Services

Table of Contents

I. Executive Summary

CBIZ Human Capital Services ("CBIZ") was engaged by the State of Missouri ("State") to conduct a comprehensive compensation study for its employees, including a review of current compensation practices, an update of the compensation plan, and a benefits analysis.

In order to assist the State in implementing a compensation system that considers both market and internal factors, CBIZ matched the State's positions to positions in the market, developed a new salary structure, and calculated the cost of implementing the recommendations. In addition to evaluating base salaries at the State, CBIZ assessed total cash compensation and competitive benefits levels.

As a part of this process, the employee data reflects the 2% general structure adjustment that took effect on July 1, 2016.

This report details CBIZ's findings and recommendations, the summary of which indicates that the State's current compensation practices are, in the aggregate, below market-competitive levels as evidenced by the following:

- Base salary is, on average, 10.4% below the recommended salary range midpoints, which approximates the published survey data market median. (See Exhibit 5A for additional detail.)
- Total cash compensation (the sum of base salary and incentives, the latter of which the State does not provide) is, on average, 12.6% below market. (See Exhibit 8 for additional detail.)
- The benefits offered by the State are 19.7% above market and improve the overall market position of the State. However, State employees remain 4.6% below market when totaling base salary, incentives, and benefits. (See Exhibit 8 for additional detail.)
- The cost to adjust compensation to the threshold of market competiveness, identified as the minimum of the proposed pay ranges, is $13,690,388 as the result of 5,050 State employees being paid below the proposed pay range minimums. (See Exhibit 5A for additional detail.)
- Missouri ranks last among the 50 states in average employee pay. (See Exhibit 10 for additional detail.) For reasons detailed later in this report, this analysis has limited utility. CBIZ focused on the broader market for most of the analysis.

The remainder of this report will explain the methodology and expand on this summary in order to clearly document the comprehensive approach taken to analyze the State's current compensation practices and develop its new compensation plan.

II. Objectives and Scope of the Study

The objective of the compensation and benefits study is to provide the State with a plan that:

- Enhances the State's ability to attract, retain, and motivate qualified individuals;
- Establishes structures that are flexible in order to meet changing needs; and
- Is well-aligned with the State's broader goals and strategies.

The scope of the study included:

- A competitive market analysis of base salary, total cash compensation, and benefits;
- Development of a salary structure;
- Reconciliation of actual compensation with market-competitive compensation;
- Calculation of plan implementation costs;
- Analysis of market-competitive benefits levels;
- "Total Rewards" analysis;
- Overall program recommendations; and
- A financial wellness review.

III. Methodology

A. Definitions

Base Salary: the annual fixed rate that an individual is paid for performing a job, including any differential pay.

Bonus/Annual Incentive: the actual direct compensation paid under a bonus, commission, profit-sharing, or other short-term cash compensation plan that provides awards based on established criteria or management discretion, such as the overall performance of the organization or achievement of individual goals.

Total Cash Compensation: the sum of base salary and annual incentive compensation payments from variable pay programs.

Employee Benefits: non-cash compensation provided to an employee. Some benefits are required by law (e.g., payroll taxes, unemployment compensation, and workers compensation), while others may be provided at the discretion of an employer (e.g., life insurance, paid time off, retirement plans).

Total Compensation: the sum of total cash compensation and employee benefits.

Data Points:

- **25th percentile:** the value in an array that falls at the first quarter of the sampled data (75% or ¾ of the values in the sample are greater than the 25th percentile value).
- **50th percentile:** the value in an array that falls in the middle or median of the sampled data (half of the values in the sample fall above this value and half fall below it). This is the data point of reference for the proposed pay grade assignments.
- **75th percentile:** the value in an array that falls at the third quarter of the sampled data (25% or ¼ of the values in the sample are greater than the 75th percentile value).

Compa-ratio: the employee's current salary divided by a market comparison point, which is usually the market 50th percentile or the midpoint of the salary range. An employee whose salary equals the 50th percentile of the market has a compa-ratio of 100%. A compa-ratio of less than 100% indicates that the employee's salary is less than the 50th percentile of the market, and a compa-ratio greater than 100% indicates that the employee's salary is greater than the 50th percentile of the market.

B. Market Pricing

Competitive Market Analysis
According to a recent WorldatWork[1] survey of market pricing practices, the vast majority of organizations (approximately 85%) utilize a compensation philosophy that strives to compensate employees at the median of the competitive labor market. Median pay is the point at which half of the employers pay more and half pay less.

Based on CBIZ's discussions with the State, it intends to be competitive with its level of pay, which generally corresponds to setting the pay structure at the market median.

The labor market influences described below were considered for the jobs included in the scope of the study. Job descriptions provided by the State were also utilized to ensure relevant market matches.

Labor Market Influences
The three most important labor market characteristics are the size of the organization, geographic scope, and industries from which the State recruits talent. Because surveys focus on different market characteristics (e.g., some focus on size, others focus on geography or industry), CBIZ determined each characteristic as it relates to each position at the State before conducting the market analysis, as follows:

Size of Organization
A key factor to be considered in determining the market-competitive compensation, particularly for senior management positions, is the size of the organization. While compensation for many positions is based primarily upon location, industry, job tasks, and responsibilities, compensation for upper-level positions is also significantly affected by the size of the organization. CBIZ considered size factors such as operating budget and team headcount when proposing the compensation for department directors and division directors.

Geographic Influence
Many jobs in an organization are recruited locally. Professional jobs may be recruited statewide or regionally. Because individuals who work in senior management positions often relocate solely to accept a new job, national searches are commonly conducted for these positions. In contrast, lower-paid salaried employees seldom relocate primarily on the basis of a job. To accurately reflect this market place characteristic, the survey data must be

[1] WorldatWork (formerly the American Compensation Association) is a compensation and total rewards industry association group. Their surveys and publications are widely accepted for use in the field of compensation analysis.

comprised of participants who reflect the geographic scope of the position in question. Too narrow or broad a market area scope either does not consider all necessary factors or introduces irrelevant factors.

However, when considering senior management positions, it is most reasonable to geographically adjust the data to the higher of the local or national market. This is due to the fact that organizations in locations that have greater comparative salaries will provide higher salaries to employees. In addition, the higher (local) rates would be required to compensate an employee moving from an area with a lower cost of living. Conversely, although executives are often recruited on a national basis, in practical application executives rarely are open to reductions in pay, even if they are moving to a lower-cost area.

CBIZ primarily utilized data specific to the Missouri statewide average since it is expected that Missouri is the primary market for recruiting employees under the scope of the analysis.

Industry Influence
Industry is the final key consideration for matching jobs to the market. Some jobs only exist within a certain industry and are most accurately priced to that industry exclusively. Conversely, some jobs are found in all organizations, and the true market for these jobs usually considers this broader market. For example, most clerical and trade jobs can be found in any organization. For this reason, CBIZ focused on government and state support services or the broader labor market, as appropriate.

Salary Surveys
The first step in ascertaining the competitiveness of compensation was to determine what competitors pay for jobs comparable to those at the State. CBIZ used its proprietary survey database that aggregates data from thousands of valid and reliable published salary surveys and includes specific data based on geographic area, size of organization, years of experience, and industry—including government-specific surveys. In addition, CBIZ relied on the National Compensation Association of State Governments (NCASG) survey for data specific to state governments. Data from the database and NCASG survey were reported separately.

Aging Data
Survey data must be adjusted to account for market pay movement between the time of publication and when the data are to be used. For example, a survey may have been conducted to report salaries effective as of September 1, 2015. In order to market-price the jobs at the State as of July 1, 2016, CBIZ had to age the survey data ten months. In addition, different surveys have different publication dates, and they must be aged to a common point in time. Put simply, aging the

data provides up-to-date salary data and allows for an "apples to apples" comparison of survey data. All salary data were aged to reflect estimated market pay as of July 1, 2016. Data were aged using a factor of 2.80%, which is the anticipated salary growth rate. This figure reflects the value for projected pay movement as reported by WorldatWork's Salary Budget Survey.

Job Matching

CBIZ reviewed the content of each job description provided by the State and searched the salary survey job descriptions to find the best possible match. When a valid match was found, the corresponding salary survey market data were recorded. CBIZ recorded the 25^{th}, 50^{th}, and 75^{th} percentiles for both base salary and total cash compensation.

IV. Compensation Study Results

A. Market Analysis

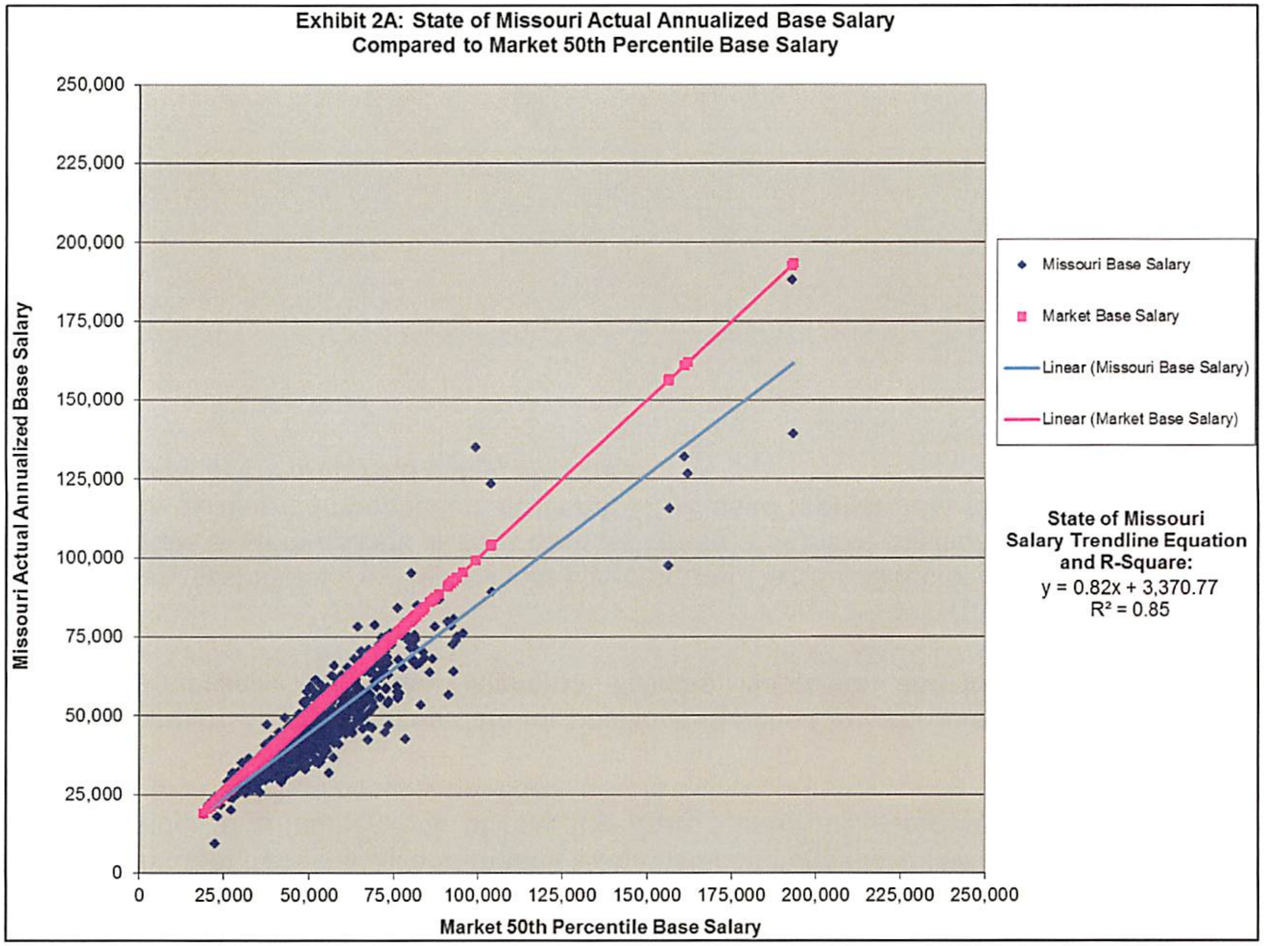
Exhibit 1A displays the composite market data for the State. The analysis is a comprehensive review of the included positions compared to the market base salary and market total cash compensation. The 25^{th}, 50^{th}, and 75^{th} percentiles are reported. This exhibit provides a summary look at how the State's positions compare to the labor market. A detailed analysis with associated implementation costs is provided later in this report.

Exhibit 1A also displays comparison base salary data for positions matched to peer roles for the surrounding eight states (i.e., Illinois, Kentucky, Tennessee, Arkansas, Oklahoma, Kansas, Nebraska, and Iowa) as reported in the NCASG survey.

Exhibit 1B provides summary results for the Department Director and Division Director roles. The exhibit shows both the executive level within the State system as well as the proposed grade. For these positions, CBIZ analyzed the established hierarchy of roles within the existing compensation structure. CBIZ used market data to recommend new pay ranges for the respective executive levels in the proposed salary structure.

IV. Compensation Study Results

Market data were also compared graphically to the State's current average compensation by position. Exhibit 2A reveals the trendline for actual and market 50th percentile <u>base salary</u>.



As evidenced by the number of blue markers below the market trendline, there are a significant number of positions at lower salary levels paid below the market rate. However, base salaries provided by the State are closer to the market rate for lower-level positions than for higher-level positions.

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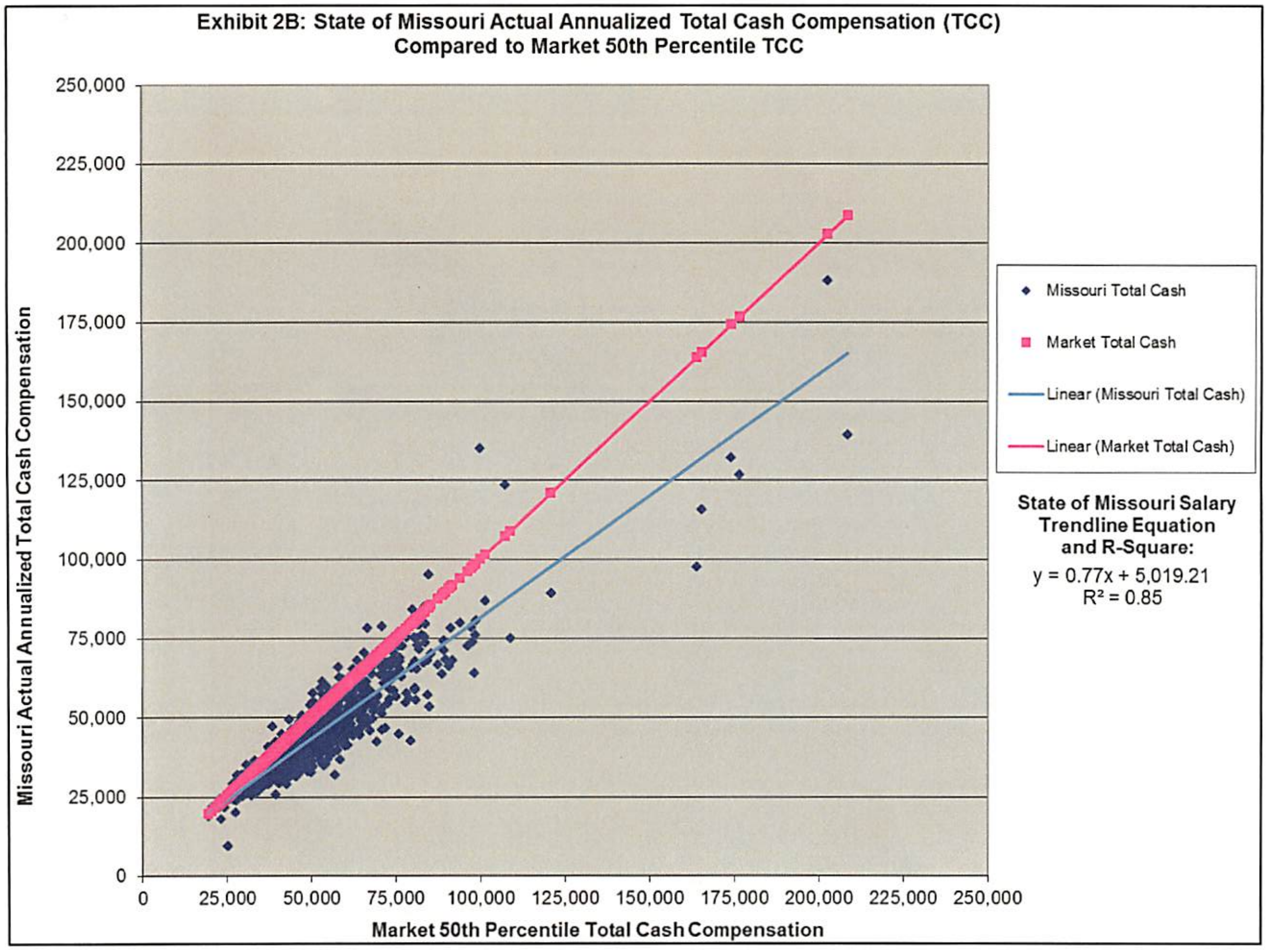
IV. Compensation Study Results

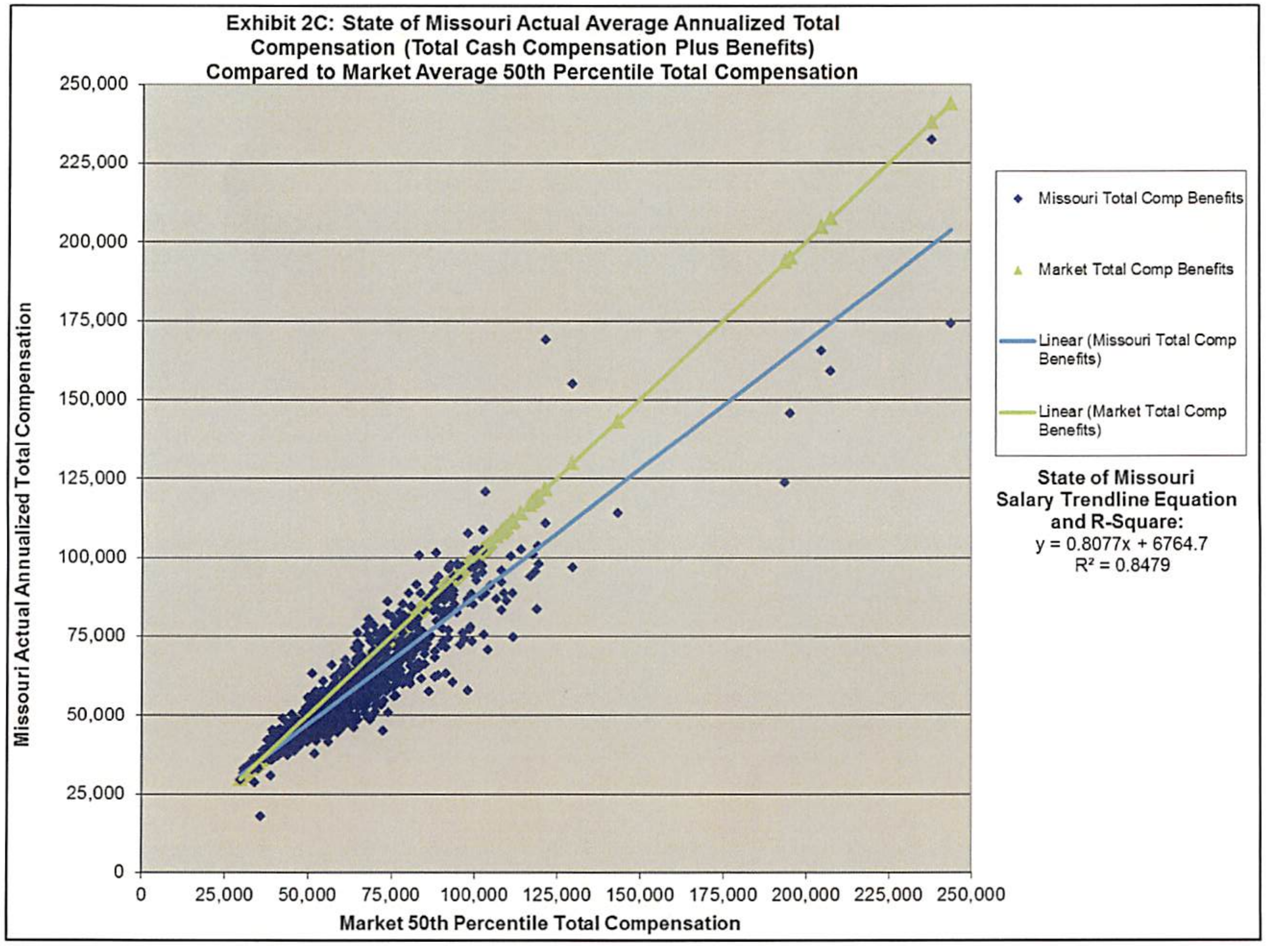
Exhibit 2B provides the trendline for actual and market 50th percentile <u>total cash compensation</u>.



This chart is similar to the previous chart, but the gap to market data widens slightly because the State does not provide incentive compensation.

IV. Compensation Study Results

Finally, Exhibit 2C provides the trendline for actual and market 50th percentile <u>total compensation.</u>



A review of the three charts reveals that while compensation provided by the State is more competitive for lower-level than higher-level positions, compensation for each level generally lags the market. The State's benefits package narrows the total compensation wage gap to the market. However, the gap remains significant in the aggregate at the top of the pay scale.

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IV. Compensation Study Results

B. Salary Structure Development

A critical element of the compensation plan is the salary structure. The salary structure is a compensation framework comprised of multiple grades, each of which has an associated salary range. The salary structure groups jobs with similar market values and/or internal equity into the same grade. The salary structure ensures that each of the State's employees receives a salary that is reasonable given their assigned grade and corresponding salary range.

CBIZ developed a unique salary structure for the State, which will provide a system for slotting all jobs and allow for future growth. The structure is provided in Exhibit 3 on the following page.

In the proposed salary structure, the salary grade midpoint is designed to approximate the market median for each job. CBIZ slotted each position into a grade in the structure based on the grade midpoint that most closely corresponds to the market 50th percentile identified in Exhibit 1A.

Example:

Job Title: Job XYZ
Market Median: $35,455

Salary Grade	Minimum	Midpoint	Maximum
1	$24,778	$30,972	$37,166
2	$27,398	$35,618	$43,837
3	$31,508	$40,960	$50,413

IV. Compensation Study Results

Exhibit 3 - Proposed Salary Structure

Grade	*Salary Range* *Minimum*	*Midpoint*	*Maximum*	*Midpoint Differential*	*Range Spread*
1	$15,912	$18,697	$21,481		35%
2	$16,708	$19,631	$22,555	5.0%	35%
3	$17,543	$20,613	$23,683	5.0%	35%
4	$18,420	$21,644	$24,867	5.0%	35%
5	$19,802	$23,267	$26,732	7.5%	35%
6	$21,287	$25,012	$28,737	7.5%	35%
7	$22,407	$26,888	$31,369	7.5%	40%
8	$24,087	$28,904	$33,722	7.5%	40%
9	$25,894	$31,072	$36,251	7.5%	40%
10	$27,902	$34,179	$40,457	10.0%	45%
11	$30,692	$37,597	$44,503	10.0%	45%
12	$33,761	$41,357	$48,953	10.0%	45%
13	$37,137	$45,493	$53,849	10.0%	45%
14	$40,034	$50,042	$60,051	10.0%	50%
15	$44,037	$55,046	$66,056	10.0%	50%
16	$49,542	$61,927	$74,313	12.5%	50%
17	$55,734	$69,668	$83,602	12.5%	50%
18	$62,701	$78,377	$94,052	12.5%	50%
19	$70,539	$88,174	$105,808	12.5%	50%
20	$77,800	$99,195	$120,590	12.5%	55%
21	$89,470	$114,075	$138,679	15.0%	55%
22	$102,891	$131,186	$159,481	15.0%	55%
23	$118,325	$150,864	$183,403	15.0%	55%
24	$136,073	$173,493	$210,914	15.0%	55%
25	$153,475	$199,517	$245,560	15.0%	60%
26	$181,100	$235,431	$289,761	18.0%	60%
27	$213,698	$277,808	$341,918	18.0%	60%

Definitions

Grade: This is the identifier for the placement of a job within the salary structure.

Salary Range: This is the range of pay established for each grade.

Range Minimum: This is the lowest salary point within the salary range and represents attractive entry-level pay. The minimum should be considered the minimum level of market-competitive pay. Employees paid below this level may be at immediate risk of leaving due to pay and offering salaries below this level would create difficulties in attracting new employees.

Range Midpoint: This is the midpoint of the salary range, which approximates the market median. The median represents market-competitive pay and is the point at which half of the market is paid above and half below.

Range Maximum: This is the highest salary point within the salary range and should be considered the maximum level of market-appropriate pay.

Midpoint Differential: This is the percent difference from one range midpoint to the next. Midpoint differentials grow as the grades escalate to reflect that expectations and responsibilities tend to rise at an increasing rate as market values increase.

Range Spread: This is the percent difference between the range maximum and the range minimum. Range spreads grow wider as the grades escalate because the variability of market pay increases as the market value increases. In addition, this effect allows for more flexibility in pay setting as responsibilities increase.

IV. Compensation Study Results

C. Salary Analysis

The market rate for a given job does not exist uniformly across the state due to local labor market dynamics. The table on the following page, which is expanded in more detail in Exhibit 4, examines the cost of labor differences among counties across the state of Missouri compared to the statewide average.

The analysis shows that St. Louis County market-competitive wages are 104.63% of the statewide market-competitive rate. This suggests that a statewide salary of $44,000 would need to be multiplied by the geographic differential 104.63% and converted to $46,037 to align with competitive wages in St. Louis County. Conversely, Ripley County shows a geographic differential of 91.5%. The same $44,000 statewide salary would be competitive at $40,260 in Ripley County.

Chapter 36 of the Missouri Revised Statutes prohibits geographic differentials in compensation.[2] CBIZ analysis suggests that if this prohibition were removed, the State could implement geography-based wage structures to better align with the respective work location labor markets, many of which are considerably below the statewide average.

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[2] **Director to prepare pay plan.**

36.140. 1. After consultation with appointing authorities and the state fiscal officers, and after a public hearing, the director shall prepare and recommend to the board a pay plan for all classes subject to this chapter. The pay plan shall include, for each class of positions, a minimum and a maximum rate, and such provision for intermediate rates as the director considers necessary or equitable. The pay plan may include provision for grouping of management positions with similar levels of responsibility or expertise into broad classification bands for purposes of determining compensation and for such salary differentials and other pay structures as the director considers necessary or equitable. In establishing the rates, the director shall give consideration to the experience in recruiting for positions in the state service, the rates of pay prevailing in the state for the services performed, and for comparable services in public and private employment, living costs, maintenance, or other benefits received by employees, and the financial condition and policies of the state. **These considerations shall be made on a statewide basis and shall not make any distinction based on geographical areas or urban and rural conditions...**

2. Any change in the pay plan shall be made on a uniform statewide basis. **No employee in a position subject to this chapter shall receive more or less compensation than another employee solely because of the geographical area in which the employee lives or works.**

(L. 1945 p. 1157 § 15, A.L. 1957 p. 498, A.L. 1973 H.B. 133, A.L. 1996 H.B. 1146)

IV. Compensation Study Results

Exhibit 4 - Geographic Analysis

Work County	Geographic Differential
ST. LOUIS COUNTY	104.63%
ST. LOUIS CITY	104.63%
ST. CHARLES	104.38%
LINCOLN	104.27%
WARREN	104.13%
FRANKLIN	104.10%
JEFFERSON	103.82%
CLAY	103.70%
PLATTE	103.70%
JACKSON	103.28%
RAY	102.88%
CARROLL	102.88%
LAFAYETTE	102.85%
CLINTON	102.73%
DEKALB	102.73%
CALDWELL	102.73%
CASS	102.33%
BUCHANAN	97.35%
ANDREW	97.35%
LEWIS	97.10%
BOONE	96.02%
COLE	94.88%
OSAGE	94.88%
JASPER	94.80%
VERNON	94.80%
LAWRENCE	94.80%
BARTON	94.80%
CRAWFORD	94.42%
GASCONADE	94.42%
MARIES	94.42%
GREENE	94.30%
POLK	93.97%
CEDAR	93.97%
DALLAS	93.97%
ST. CLAIR	93.97%
DADE	93.97%
BARRY	93.88%
NEWTON	93.88%
MCDONALD	93.88%

Work County	Geographic Differential
JOHNSON	93.82%
BATES	93.82%
HENRY	93.82%
WEBSTER	93.82%
CHRISTIAN	93.82%
CALLAWAY	93.78%
CAPE GIRARDEAU	93.60%
MONITEAU	93.58%
MILLER	93.58%
CAMDEN	93.58%
HICKORY	93.58%
MORGAN	93.58%
NODAWAY	93.43%
GENTRY	93.43%
HOLT	93.43%
ATCHISON	93.43%
WORTH	93.43%
MADISON	93.33%
REYNOLDS	93.33%
IRON	93.33%
TANEY	93.30%
STONE	93.28%
PHELPS	93.27%
DENT	93.27%
PULASKI	93.27%
LIVINGSTON	93.03%
LINN	93.03%
DAVIESS	93.03%
LACLEDE	93.00%
WRIGHT	93.00%
AUDRAIN	92.97%
MONTGOMERY	92.97%
ST. FRANCOIS	92.92%
WASHINGTON	92.92%
MONROE	92.92%
SHELBY	92.92%
RALLS	92.92%
CLARK	92.90%
COOPER	92.88%

Work County	Geographic Differential
PETTIS	92.88%
BENTON	92.88%
STE. GENEVIEVE	92.88%
SALINE	92.85%
PIKE	92.77%
MARION	92.77%
GRUNDY	92.67%
HARRISON	92.67%
SULLIVAN	92.67%
MERCER	92.67%
RANDOLPH	92.65%
HOWARD	92.65%
CHARITON	92.65%
BOLLINGER	92.63%
MACON	92.58%
ADAIR	92.58%
SCOTLAND	92.58%
KNOX	92.58%
PUTNAM	92.58%
SCHUYLER	92.58%
PERRY	92.47%
MISSISSIPPI	92.05%
SCOTT	92.05%
NEW MADRID	92.05%
STODDARD	91.97%
TEXAS	91.67%
HOWELL	91.67%
OZARK	91.67%
DOUGLAS	91.67%
CARTER	91.67%
SHANNON	91.67%
OREGON	91.67%
DUNKLIN	91.55%
PEMISCOT	91.55%
BUTLER	91.50%
WAYNE	91.50%
RIPLEY	91.50%

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IV. Compensation Study Results

Exhibits 5A, 5B, and 5C compare the market data (and corresponding proposed salary ranges) to actual base salary at the State. Exhibit 5A presents results by grade, while 5B presents results sorted and subtotaled by department, and 5C is sorted and subtotaled by division. The first several columns of each exhibit are tied to State employee census data. The CBIZ analysis begins with the column *Market 50th Percentile*, which is the market median as identified in Exhibit 1A. *Proposed Grade*, *Proposed Range Minimum*, *Proposed Range Midpoint*, and *Proposed Range Maximum* tie back to the proposed salary structure in Exhibit 3 based on the methodology described on page 13 of this report. The *Compa-Ratio* is the *Annualized Salary* divided by the *Proposed Range Midpoint*. *Actual Below Minimum* calculates the difference between *Annualized Salary* and the *Proposed Range Minimum* when the *Annualized Salary* is less than the *Proposed Range Minimum*. This number is then adjusted based on the *FTE%*, which stands for full-time equivalent, to account for reduced schedules (e.g., an employee working half-time would be a 50% FTE). *Actual Above Maximum* performs a similar calculation for salaries above the *Proposed Range Maximum*.

The State's average compa-ratio is 89.6% of the midpoint of the proposed market-competitive salary ranges. This indicates that, on average, base pay is approximately 10.4% below market.

The cost to implement the revised structure would be $13,690,388, approximately 1.0% of the reviewed population payroll. <u>This is the cost to bring all employees to the minimum of their respective proposed ranges.</u> CBIZ does not recommend changing salaries for any employees paid above the minimum.

Among the 37,906 employees included in the scope of the pay study[3], there are 5,050 employees below the salary grade minimum, and 261 above the maximum. Some records will not display market data and proposed salary structure information because either an appropriate market match was not found or job documentation was unavailable.

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[3] Practical constraints, including the financial limitations of the study and the lack of comparable private sector employment for certain public sector jobs, prevented a comprehensive evaluation of all statewide job titles.
The following positions were not included in the pay study:

- All of the positions within the legislative and judicial branches of government;
- All of the positions within the offices of the statewide elected officials (Governor, Lt. Governor, Secretary of State, State Auditor, State Treasurer, and Attorney General);
- All of the positions within the Department of Conservation;
- All of the positions within the various State colleges and universities;
- All of the positions within MOSERS, MCHCP, and other benefit administrators.
- Positions outside of the Uniform Classification and Pay (UCP) System in the following agencies: DIFP, OA/Ethics Commission, and DNR/Petroleum Storage Tank Insurance Board;
- Certain positions within DOLIR/Division of Worker's Compensation (Administrative Law Judge, Chief Administrative Law Judge, and Chief Legal Counsel);
- The majority of unclassified and exempt positions within Merit agencies and UCP Non-Merit agencies, respectively (for many of these titles, individual positions within the same job title are used in a wide variety of ways, making it impracticable to gather salary data and complete an effective analysis);
- Certain job classes within the following agencies: DESE, Higher Education, DPS/Missouri State Highway Patrol, MODOT, and the State Public Defender's Office. A comprehensive evaluation of all statewide job titles was not feasible due to financial limits.

IV. Compensation Study Results

Exhibits 6A–6E summarize the Exhibit 5A analysis by different criteria. Exhibit 6A displays the summary information by department.[4] The table below provides a succinct view of the number of employees below the minimums and above the maximums of the proposed pay ranges, as well as analysis of these figures as a percentage of the broader department population. Exhibit 6B provides similar analysis with the addition of division summary data. Exhibits 6C–6E display summary data reported by job for the entire State, job summary information by department, and job information by division, respectively.

Exhibit 6A - Department Summary Analysis

Department	Count	Total Payroll	Count Below Min	Salary Dollars Below Min	Below Min as a % of Total Payroll	Count Above Max	Salary Dollars Above Max	Above Max as a % of Total Payroll
DEPT OF CORRECTIONS	10,791	355,430,956	1,194	3,983,594	1.1%	117	135,659	0.0%
DEPT OF SOCIAL SERVICES	6,575	227,503,531	1,150	2,464,651	1.1%	5	75,185	0.0%
DEPT OF MENTAL HEALTH	6,453	227,352,330	639	1,754,119	0.8%	57	123,957	0.1%
MO DEPT. OF TRANSPORTATI	2,934	117,162,833	8	2,716	0.0%	12	29,597	0.0%
DEPT OF PUBLIC SAFETY	2,480	87,249,045	212	421,861	0.5%	13	22,527	0.0%
OFFICE ADMINISTRATION	1,685	77,412,038	435	1,079,021	1.4%	11	15,716	0.0%
DEPT OF HEALTH & SENIOR S	1,682	70,887,949	452	1,842,217	2.6%	1	1,318	0.0%
DEPT OF NATURAL RESOURC	1,398	57,969,687	393	816,218	1.4%	9	26,055	0.0%
DEPARTMENT OF REVENUE	989	31,923,306	89	181,729	0.6%	2	3,692	0.0%
DEPT OF ECONOMIC DEVELO	714	31,719,813	216	370,743	1.2%	5	17,798	0.1%
DEPT LABOR & INDUSTRIAL RI	646	24,633,038	58	231,784	0.9%	8	12,067	0.0%
DEPT ELEM & SEC EDUCATIOI	406	12,588,553	26	41,956	0.3%	9	14,541	0.1%
PUBLIC DEFENDER	362	20,682,107	0	0	0.0%	0	0	0.0%
DEPT OF AGRICULTURE	315	13,218,668	74	266,637	2.0%	6	3,351	0.0%
DIFP	256	10,240,297	40	121,584	1.2%	2	42,743	0.4%
MO LOTTERY COMMISSION	148	6,401,732	51	87,178	1.4%	1	2,505	0.0%
DEPT OF HIGHER EDUCATION	40	1,511,457	1	1,730	0.1%	3	7,131	0.5%
STATE TAX COMMISSION	32	1,441,674	12	22,651	1.6%	0	0	0.0%
Totals	**37,906**	**1,375,329,015**	**5,050**	**13,690,388**	**1.0%**	**261**	**533,842**	**0.0%**

[4] Please note that in Exhibit 6A, and all other exhibits, decimals for numbers are not formatted to display, but they are present. As a result, rounding occurs.

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D. Benefits Analysis

The table on the following page and in Exhibit 7 outlines the results of the benefits analysis among two different comparator groups. The first comparison assesses the market-competitive benefit levels provided by the broad labor market in comparison to those of the State. The second comparison displays data for state governments as reported in the NCASG survey where available. In some minor instances, the data for this second comparison were supplemented with broad labor market benefits data. CBIZ determined the market-competitive benefits value based on a combination of fixed dollar values and percentages of base salary. For some benefits, namely medical and medical-related benefits, it is most accurate to utilize a fixed cost per employee because the cost incurred by the organization typically does not depend on the salary level of the employee. For example, healthcare benefits provided to an executive and a clerk would be expected to cost the employer the same amount. Other benefits, including paid time off and retirement and savings, are most accurately represented as a percent of the incumbent's base salary. The data points highlighted in yellow indicate whether the data point is assessed as a fixed cost or as a percentage.

State benefits data, aggregated for State employees across multiple state agencies and covered under multiple medical and retirement plans, is displayed.

Medical comparisons to the NCASG data in Exhibit 7 display an asterisk (*). This is because the NCASG data were not collected in a way that allowed CBIZ to draw a reliable comparison of medical benefits. Nevertheless, by using the NCASG data in a vacuum, some measure of comparison can be extrapolated. Specifically, the average employer share of medical premiums across participating states was 85.7%. The State's reported employer share was 87.8%, so by this metric the State's medical benefits are competitive. The NCASG also provides an average medical cost per employee, with $10,685 as the average among participating states. The State's average cost was $9,279, which may indicate that the State is better at controlling plan costs, provides less medical plan coverage, or a combination of the two.

The table then shows compa-ratios for how the State compares to the specific comparator group. The State's compa-ratio for the fixed-cost per employee items and the items assessed as a percent of base salary is 91.66% and 178.73%, respectively, when compared to the broader market comparator group. For the state government comparator analysis, the fixed-cost analysis is excluded for the reasons mentioned above, and the compa-ratio for the percent of salary items is 91.24%.

Overall, the analysis indicates that the State's benefits program, when compared to the broader market, is competitive with medical benefits and substantially above market in other areas, primarily with paid time off and retirement benefits.

Exhibit 7 - Benefits Analysis Data

Benefits	Average Market Data: Average Annual Dollars/EE	Average Market Data: Percent of Payroll	Average State Data: Average Annual Dollars/EE	Average State Data: Percent of Payroll	Actual Missouri Benefits: Average Annual Dollars/EE	Actual Missouri Benefits: Total Annual Dollars/All EE	Actual Missouri Benefits: Percent of Payroll	Compa-Ratios (Market): Average Annual Dollars/EE	Compa-Ratios (Market): Percent of Payroll	Compa-Ratios (State): Average Annual Dollars/EE	Compa-Ratios (State): Percent of Payroll
Payments for Time Not Worked	**5,442**	**7.08%**	**7,109**	**11.71%**	**6,280**	**452,721,977**	**12.90%**		**182.25%**		**110.15%**
Payments for Holidays	1,008	1.29%	**2,015**	**4.15%**	2,434	175,424,210	5.00%				
Paid Time Off	1,524	1.92%	1,524	1.92%	1,024	73,801,972	2.10%				
Payments for Vacations	1,565	2.00%	1,565	2.00%	1,690	121,830,283	3.47%				
Sick Leave Pay	728	1.07%	**1,388**	**2.84%**	876	63,111,121	1.80%				
Family and Medical Leave Pay	409	0.53%	409	0.53%	257	18,554,391	0.53%				
Other	207	0.27%	207	0.27%	0	0	0.00%				
Medical and Medically-Related Payments	**7,494**	**9.61%**	*	*	**6,869**	**495,148,207**	**14.11%**	**91.66%**		*	
STD, Sickness or Accident Insurance	363	0.37%	363	0.37%	0	0	0.00%				
LTD or Wage Continuation	142	0.16%	142	0.16%	130	9,364,140	0.27%				
Medical Insurance Premiums	5,493	7.30%	*	*	5,776	416,387,008	11.87%				
Dental Insurance Premiums	258	0.33%	258	0.33%	0	0	0.00%				
Vision Care	8	0.00%	8	0.00%	0	0	0.00%				
Retiree Medical Insurance Premiums	617	0.62%	617	0.62%	688	49,628,230	1.41%				
Life Insurance and Death	99	0.16%	99	0.16%	96	6,890,721	0.20%				
Prescription Drug Coverage	475	0.64%	475	0.64%	68	4,900,000	0.14%				
Administration Costs	22	0.01%	22	0.01%	98	7,099,201	0.20%				
Other (EAP, Other Emp Welfare)	17	0.02%	17	0.02%	12	878,907	0.03%				
Retirement and Savings	**5,329**	**6.69%**	**7,922**	**15.90%**	**6,276**	**452,387,091**	**12.89%**		**192.74%**		**81.08%**
401(K) and Similar	1,350	1.70%	**6,842**	**13.88%**	0	0	0.00%				
Defined Benefit Pension Plan	2,898	2.97%			6,276	452,387,091	12.89%				
Cash Balance or Other Hybrid Plan	21	0.03%	21	0.03%	0	0	0.00%				
Administration Costs	115	0.14%	115	0.14%	0	0	0.00%				
Profit-Sharing	18	0.02%	18	0.02%	0	0	0.00%				
Stock Bonus/ESOP	396	1.16%	396	1.16%	0	0	0.00%				
Other	531	0.67%	531	0.67%	0	0	0.00%				
Miscellaneous Benefit Pay	**546**	**0.67%**	**546**	**0.67%**	**6**	**398,815**	**0.01%**		**1.70%**		**1.70%**
Severance Pay	85	0.09%	85	0.09%	0	0	0.00%				
Dependent Care	18	0.02%	18	0.02%	0	0	0.00%				
Employee Tuition Reimbursement	169	0.21%	169	0.21%	0	12,690	0.00%				
Employee Relocation Reimbursement	202	0.28%	202	0.28%	5	386,125	0.01%				
Other	71	0.07%	71	0.07%	0	0	0.00%				
Total Highlighted	**$7,494**	**14.44%**	*	**28.29%**	**$6,869**	**1,400,656,090**	**25.81%**	**91.66%**	**178.73%**	*	**91.24%**

While a full pension analysis is outside the scope of this project, it came to CBIZ's attention that the retirement plan vesting schedule was shifted from five years to ten years. The State is not the only state among the NCASG participants to offer ten-year vesting for retirement. However, the majority of states and the competitive labor market offer a shorter vesting period. The NCASG data reveal that the median time required to achieve full vesting is five years.

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Finally, Exhibit 8 incorporates both actual and market data for base pay, total cash compensation, and benefits to provide a "Total Rewards" compa-ratio analysis. The MOSERS Retirement Plan is identified in the analysis to highlight that participants in the Missouri State Employees' Plan 2011 (MSEP 2011) contribute 4% to the MOSERS trust fund. CBIZ used the broader market benefits data for purposes of the Total Rewards comparison. Exhibit 8 reveals the State's compa-ratio for the respective compensation categories, including total compensation (i.e., the sum of total cash compensation and benefits). The State's total compensation compa-ratio is 95.4%, which is approximately 4.6% below the market median.

E. Compression Analysis

CBIZ's primary emphasis was to assign market-competitive ranges. As a secondary consideration, the State may consider alleviating compression within grades. Compression exists when inexperienced employees within a grade are paid an identical or similar rate as those with greater tenure. Exhibit 9 provides an interactive tool that will allow the State to model different scenarios to identify and alleviate compression by identifying a budget and working backwards into a scenario that fits within a budget.

F. State Government Pay Ranking Analysis

The data on the following page, provided in more detail in Exhibit 10, illustrates the results of a ranking analysis conducted to assess the average annual pay of the State's employees in comparison with other states. CBIZ determined the Average Annual Pay (AAP) of state employees, and then adjusted the results to a national scope by quantifying each state's AAP with the respective state's average cost of labor. The adjusted figure is listed as Adjusted Average Annual Pay (AAAP).

Using this methodology, Iowa shows an AAP of $64,209, which ranks 7th nationally. The statewide cost of labor in Iowa is 91.13% of the national average. The Iowa AAAP is calculated by dividing $64,209 by 91.13%, resulting in an AAAP of $70,458. This creates a national level of pay number and provides an "apples to apples" comparison to other states. In the final AAAP, Iowa moves to the top of the list. Conversely, a state like Connecticut, which has a cost of labor above the national level at 110.9%, moves down in ranking from 3rd in AAP at $68,185 to 6th in AAAP at $61,484.

In this analysis, Missouri ranked last in terms of both AAP and AAAP. CBIZ strongly cautions against basing decisions on this comparison alone. Average pay may be impacted more by staffing strategies than actual market competitiveness. For example, a state may contract with a services organization for cafeteria and custodial functions, thereby eliminating a significant portion of their lower-wage workforce and raising the average pay for the remaining employees. In addition, the State primarily competes against Missouri private industry and local governments for talent.

The data used were sourced from the US Census Bureau's Census of Governments. The data were last revised on April 26, 2016. Higher Education payroll was disregarded as higher education pay is often attributed to the caliber of local state universities and university administration rather than state government salary spending. Only Full Time Equivalent employees were considered in the analysis.

Exhibit 10 - State Governments Pay Ranking

State	Average Annual Pay (AAP)	AAP Rank	Adjusted Average Annual Pay (AAAP)	AAAP Rank
Iowa	$64,209	7	$70,458	1
California	$75,229	1	$67,325	2
Illinois	$67,845	5	$65,343	3
Rhode Island	$67,177	6	$63,729	4
New York	$68,173	4	$62,054	5
Connecticut	$68,185	3	$61,484	6
New Jersey	$68,362	2	$59,972	7
Ohio	$57,914	11	$59,940	8
Massachusetts	$63,849	8	$58,804	9
Michigan	$58,586	10	$58,110	10
Minnesota	$57,107	12	$56,552	11
Oregon	$55,621	14	$56,143	12
Alaska	$63,074	9	$55,887	13
Wisconsin	$54,457	16	$55,619	14
Idaho	$50,000	22	$55,599	15
Colorado	$55,636	13	$55,398	16
Wyoming	$50,750	21	$54,400	17
Vermont	$51,903	19	$54,145	18
Montana	$48,529	26	$53,748	19
Louisiana	$48,695	25	$53,329	20
Kansas	$47,227	31	$52,352	21
Maine	$49,151	24	$52,311	22
Nevada	$53,823	18	$52,129	23
Washington	$55,277	15	$51,986	24
Pennsylvania	$51,880	20	$51,958	25

State	Average Annual Pay (AAP)	AAP Rank	Adjusted Average Annual Pay (AAAP)	AAAP Rank
South Dakota	$44,135	39	$51,614	26
Utah	$47,110	32	$51,023	27
New Mexico	$46,367	36	$51,004	28
Maryland	$54,221	17	$50,835	29
North Carolina	$46,819	34	$50,441	30
Alabama	$45,830	37	$50,192	31
North Dakota	$47,477	30	$50,176	32
Arizona	$46,797	35	$50,018	33
Texas	$46,860	33	$49,457	34
Oklahoma	$42,504	43	$49,268	35
Arkansas	$42,609	42	$49,202	36
Nebraska	$43,646	40	$49,117	37
New Hampshire	$49,497	23	$48,675	38
Tennessee	$43,159	41	$48,330	39
Virginia	$48,101	28	$47,414	40
Indiana	$44,207	38	$46,914	41
Kentucky	$42,349	44	$46,768	42
Hawaii	$48,377	27	$46,543	43
Delaware	$47,545	29	$46,286	44
Mississippi	$39,387	47	$45,445	45
Florida	$40,875	45	$43,186	46
West Virginia	$38,102	49	$43,082	47
Georgia	$40,562	46	$42,919	48
South Carolina	$38,979	48	$42,707	49
Missouri	$37,476	50	$39,682	50

IV. Compensation Study Results

G. Financial Wellness

A recent study by PwC LLP shows that many Americans struggle with personal finance management, and that this difficulty affects these individuals' health and workplace performance.[5] While CBIZ did not perform an employee wellness survey for the State, CBIZ did perform a high-level review of the State's employee wellness resources in light of the nation-wide challenges that, among other Americans, these employees confront. As part of that review, CBIZ assessed the State's current wellness offerings. Exhibit 11 contains a summary of current prominent offerings and recommendations for improving the financial health of the State's workforce.

[5] PricewaterhouseCoopers Employee Financial Wellness Survey, April 2015.

V. Summary of Findings

- The State's average base salary compa-ratio is 89.6%. This indicates that on average base pay is approximately 10.4% below the recommended salary range midpoints, which approximates the published survey data market median.
- There are many reasons that an individual employee's pay may be above or below market median pay levels. New employees or poor performers should be paid below the market, while experienced employees with excellent performance should be paid well above the market.
- As presented in Exhibits 5A–5C, the initial cost to implement the new structures would be approximately $13,690,388. This is the cost to bring all employees to the minimum of their respective proposed ranges and represents 1.0% of payroll.
- The State's benefits are above-market when compared to the broader labor market. However, these benefits do not overcome the deficiencies of below-market base pay and zero bonus opportunity.

VI. Recommendations

- Increase the compensation of all employees to the minimum of their respective proposed salary ranges. The range minimum represents the level at which entry-level pay can be considered market-competitive.
- Implementation of the compensation plan should occur uniformly across all positions. While different implementation scenarios may recognize budget constraints, partial or sporadic implementation can result in pay equity issues.
- Update structures annually. In order to reduce the administrative burden associated with salary structure maintenance, CBIZ will provide update factors that will allow the State to update the recommended salary structures for five years after the study.
- Temporarily freeze pay for employees above the maximum of their respective proposed grade. The pay freeze should remain in place until the point at which the range maximum surpasses actual pay.
- Conduct a comprehensive market review every three to five years to ensure that the ranges remain market-competitive.
- The State should reduce the ten-year vesting requirement because it is out of step with trends in the market. Specifically, most employers are shortening their vesting schedules; the millennial generation has shown a willingness to change jobs often and typically places a much higher value on benefits that vest quickly and are transportable. Additionally, the ten-year vesting creates a challenge in attracting "second career" employees, who may be deterred by the ten-year requirement.
- Move away from steps to open ranges. Open ranges align with market norms, offer less administrative burden, and can even provide cost savings to the State. Step systems are a rigid, antiquated approach to compensation administration that offer limited flexibility and can be expensive due to rounding pay to the nearest step.
- As reported in Exhibit 4, pay levels in different areas of the State vary dramatically. Current prohibitions on geographic differentials may result in over- or under-compensation in different locations. The State should remove this restriction.
- We recommend that the State focus on the broader market data comparisons. Direct comparisons to pay at other states are provided in both Exhibit 1A and Exhibit 10 for information purposes.

Political Fix

http://www.stltoday.com/news/local/govt-and-politics/missouri-could-launch-overhaul-of-state-worker-pay-in-january/article_d2a9461d-95f4-5be7-a144-2e12fec2b27c.html

Missouri could launch overhaul of state worker pay in January

By Kurt Erickson St. Louis Post-Dispatch 3 hrs ago

Missouri Capitol

JEFFERSON CITY • Missouri lawmakers could begin work as soon as January on a plan to boost the pay for state government's lowest paid employees.

A joint House and Senate committee met Wednesday to review the results of a $324,750 report that concluded Missouri's employees are the lowest paid in the nation.

The 25-page report, released in late July, bolsters contentions that the low pay leads to high turnover rates in many state jobs. That costs taxpayers additional money in overtime and training.

"The fact that Missouri ranks 50th is not something I'm very proud of," said Sen. Shalonn "Kiki" Curls, D-Kansas City.

The chairman of the committee, Rep. Mike Bernskoetter, R-Jefferson City, said he hopes the panel can meet again in January to begin implementing some of the changes recommended by St. Louis-based consulting firm CBIZ Human Capital Services.

"It does seem like it's doable in the budget," said Bernskoetter, whose district includes thousands of state workers.

The study found that the average pay for a state worker is $39,682 a year, putting Missouri 50th among the states.

The study didn't include all state employees, covering 37,906 workers out of Missouri's 50,324 active employees.

Left out of the study were positions at the state's education bureaucracy, the Missouri Highway Patrol and the state public defender's office.

"A comprehensive evaluation of all statewide job titles was not feasible due to financial limits," the study noted.

Of those, the study found there are 5,050 workers earning below what workers in similar jobs make in other states and private industry. It would cost over $13 million to boost their pay alone.

But, the price tag could be balanced against the added costs brought on by high turnover.

At the Missouri Department of Mental Health, for example, a separate 2015 report said 25.7 percent of its employees left the workforce in 2014. The state's largest agency — the 10,958-employee Department of Corrections — had a turnover rate of 16.3 percent.

In addition to boosting the pay for some state workers, the study recommended reducing the time it takes a state worker to qualify for a pension. A five-year wait — rather than the current 10-year period — might induce more workers to stay on the job for a longer period of time.

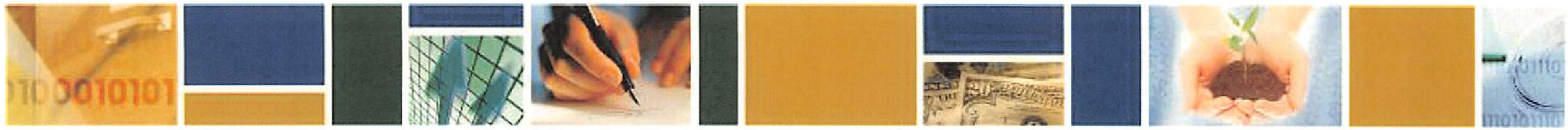
The study determined that Iowa pays its state workers the best in the nation after the wages are adjusted at $70,458. That is more than $2,000 higher than the No. 2 state of California.

Illinois is ranked third at $65,343. Kansas' adjusted salary level of $52,352 is ranked 21st. Kentucky is 42nd with an adjusted average wage of $46,768.

In addition to bipartisan support from lawmakers, both candidates for governor support boosting pay for state workers.

Kurt Erickson

Kurt Erickson is a reporter for the St. Louis Post-Dispatch



City of Carthage
MISSOURI

Compensation & Benefits Study
Results Report

December 2015

Presented By:
CBIZ Human Capital Services

CBIZ

Table of Contents

I. Executive Summary

CBIZ Human Capital Services ("CBIZ") was engaged by the City of Carthage, Missouri ("the City") to conduct a comprehensive compensation study for its employees, including a review of current compensation practices, recommendations for a market-based compensation plan and a benefits analysis.

In order to assist the City in implementing a structure that considers both market and internal factors, CBIZ matched the City's positions to positions in the market, developed a revised salary structure and calculated the cost of incorporating the findings of the analysis into the City's human resource policies and practices. CBIZ found that the salary levels provided to employees included in the study are somewhat below market.

In addition to evaluating salaries, CBIZ conducted a benefits review to assess the competitiveness of the City's benefits package. Various benefits offerings were included in the evaluation, including paid leave, health and welfare benefits and retirement benefits. The results of the benefits study indicate that the City's benefits are just slightly below the market median.

Finally, CBIZ combined the results of the compensation and benefits studies to compare the City's total compensation package (i.e., base salary plus benefits) to the market. The results of the total compensation analysis suggest that the City's employees receive total compensation that is below proposed market-competitive practices as well.

This report details CBIZ's methodology, findings and recommendations in order to clearly document the comprehensive approach taken in analyzing and updating the City's compensation plan.

II. Objectives and Scope of the Study

The objective of the compensation and benefits study is to provide the City with a plan that:

- Enhances the City's ability to attract, retain and motivate qualified individuals
- Establishes a structure that is flexible in order to meet changing needs
- Is well-aligned with the City's broader goals and strategies

The scope of the study includes:

- A competitive market review of base salary
- Development of a new salary structure
- Benchmarking of benefits costs
- Reconciliation of actual compensation to market-competitive compensation
- Calculation of plan implementation costs
- Recommended compensation administration guidelines
- Overall program recommendations

III. Methodology

A. Definitions

Base Salary: the annual fixed rate that an individual is paid for performing a job.

Employee Benefits: Non-cash compensation provided to an employee. Some benefits are required by law (e.g., payroll taxes, unemployment compensation and workers compensation), while others may be provided at the discretion of an employer (e.g., medical care, life insurance, paid time off, retirement plans, etc.).

Total Compensation: the sum of base salary and employee benefits.

Data Points:

25th percentile: the value in an array that falls at the first quarter of the sampled data (75% or ¾ of the values in the sample are greater than the 25th percentile value).

50th percentile: the value in an array that falls in the middle or median of the sampled data (half of the values in the sample fall above this value and half fall below it). This is the data point to which the City has been compared.

75th percentile: the value in an array that falls at the third quarter of the sampled data (25% or ¼ of the values in the sample are greater than the 75th percentile value).

Compa-ratio: the employee's current salary divided by a market comparison point, which is usually the market 50th percentile or the midpoint of the salary range. An employee whose salary equals the 50th percentile of the market has a compa-ratio of 100%. A compa-ratio of less than 100% indicates that the employee's salary is less than the 50th percentile of the market, and a compa-ratio greater than 100% indicates that the employee's salary is greater than the 50th percentile of the market.

III. Methodology

B. **Market Pricing**

Competitive Market Analysis
Based on prevalent practices among municipalities, the median of the market has been used as the target benchmark level for employee pay. According to a recent WorldatWork survey of market pricing practices, the vast majority of organizations (approximately 85%) utilize a compensation philosophy that strives to compensate employees at the median of the competitive labor market. Median pay is the point at which half of the employers pay more and half pay less.

Custom Survey
CBIZ conducted a custom survey to collect compensation and benefits data for select positions within municipalities and other comparable entities. CBIZ and the City identified entities to participate in the survey based on similarity in terms of organizational size, population served and geographic location; data was collected for the following Missouri municipalities:

- Arnold
- Farmington
- Grain Valley
- Jackson
- Kirksville
- Maryville
- Neosho
- Poplar Bluff
- Rolla
- Washington
- Bolivar
- Festus
- Hannibal
- Joplin
- Lebanon
- Mexico
- Nixa
- Raymore
- Sikeston
- Webb City
- Cameron
- Fulton
- Harrisonville
- Kennett
- Marshall
- Moberly
- Ozark
- Republic
- Warrensburg
- West Plains

The custom survey data was supplemented, for positions where the survey results were insufficient, with market pay data that is representative of the City's location, industry and size and collected from CBIZ's published survey library.

III. Methodology

Aging Data

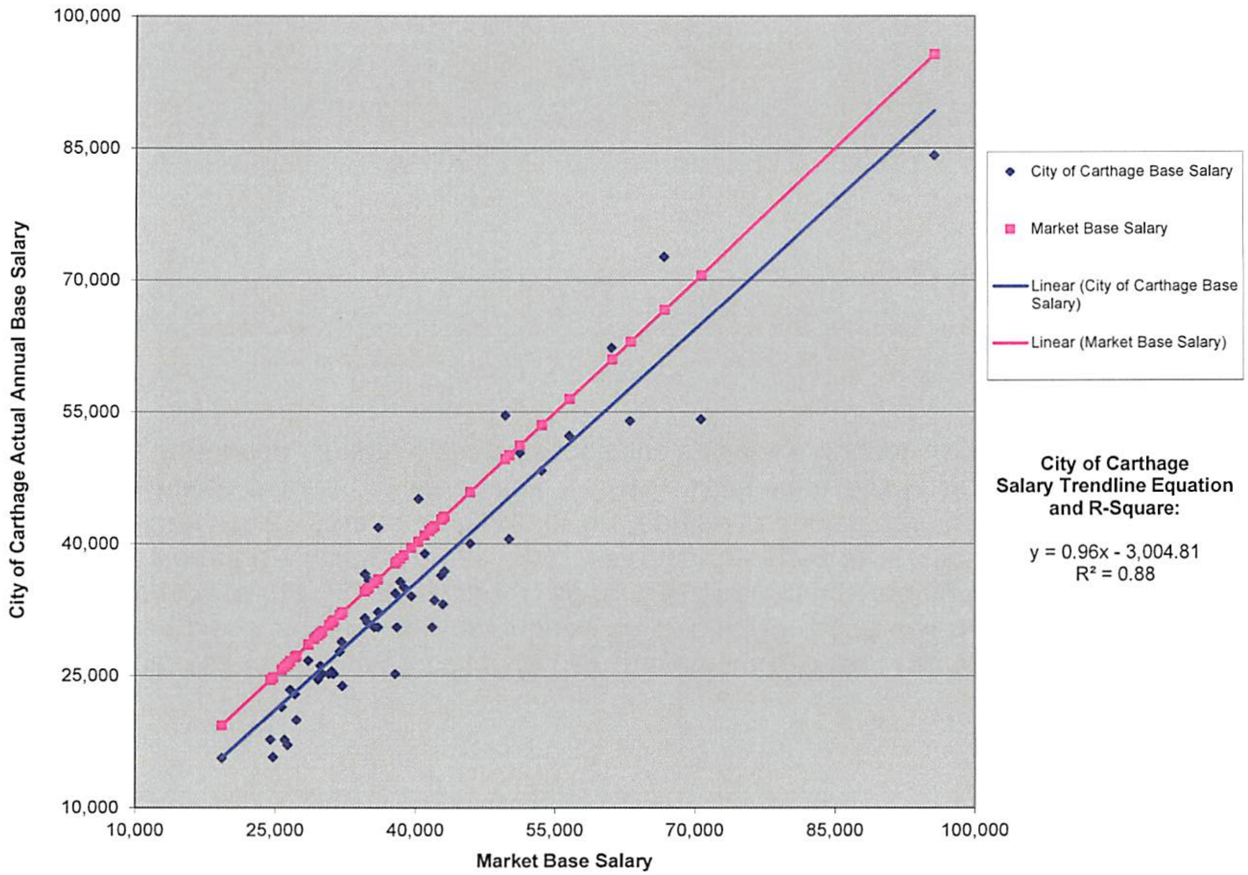
Survey data must be adjusted to account for market pay movement between the time of publication and when the data are to be used. For example, a survey may have been conducted to report salaries effective as of March 1, 2015. In order to market price the jobs at the City as of July 1, 2016, CBIZ had to age the survey data sixteen months. In addition, different surveys have different publication dates, and they must be aged to a common point in time. Put simply, aging the data provides up-to-date salary data and allows for an "apples to apples" comparison of survey data. All salary data were aged to reflect estimated market pay as of July 1, 2016. Data were aged using a factor of 2.6% which reflects the WorldatWork's (formerly American Compensation Association's) Salary Budget Survey reported value for projected pay movement.

IV. Compensation Study Results

A. Market Salary Analysis

Job-specific market data was collected for the City's positions, according to the methodology described in the previous section. The analysis included a review of base salary and reporting of market levels at the 25th, 50th and 75th percentiles. The market data is displayed in Exhibit 1.

Market data were also compared graphically to the City's current average salary by position. The chart presented below, and also in Exhibit 2, reveals the trend line for base salary.



CBIZ

IV. Compensation Study Results

B. Salary Structure Development

A critical element of the compensation plan is the salary structure. Salary structures ensure that each of the City's employees receives a salary that is reasonable given their assigned grade and corresponding salary range.

CBIZ developed a updated salary structure for the City. The new proposed structure reflects an adjustment for 2016 projected range movement, refined step increments set at 2% and the current 10% grade differentials with the exception of grade 12 in order to better align with market pay practices and organizational hierarchy. The purpose of salary ranges are to provide a basis by which slot all jobs and allow for future growth. The proposed structure is shown in Exhibit 3.

The midpoint of the salary range midpoint is designed to approximate the market 50th percentile, or median, for each job. CBIZ slotted each position into a grade in the structure based on the market 50th percentile identified for each benchmark job.

Example:

Job Title: Job XYZ
Market Median: $35,455

Salary Grade	Minimum	Midpoint	Maximum
1	$24,778	$30,972	$37,166
2	$27,398	$35,618	$43,837
3	$31,508	$40,960	$50,413

The proposed grade assignment for each of the City's jobs is reported in Exhibit 4.

C. Salary Analysis

Three potential implementation strategies have been proposed:

1. Market-Based Implementation Approach
   Each employee's proposed step is the immediately grater step above current salary in the assigned salary grade.
2. Tenure-Based Implementation Approach (Current Step)
   Each employee's proposed step is equal to the employee's current step in the newly assigned salary grade.
3. Tenure-Based Implementation Approach (Years in Title)
   Each employee's proposed step is equal to the employee's number of years in the current job title.

The City has indicated the Tenure-Based Implementation Approach based on Current Step is the preferred plan for introducing the new pay plan. Accordingly, Exhibits 5A and 5B compare the market data (and corresponding salary ranges) to actual base salary at the City, given this implementation approach. Exhibit 5A presents results for all employees by grade, while 5B has sorted results by department.

The comparison of actual pay to market is best illustrated through the compa-ratio. The City's average compa-ratio is approximately 89.5% of the market 50th percentile base salary.

The cost to implement the new compensation plan would be $50,827, or approximately 1.5% of total payroll. Among the 164 employees included in the scope of the study, there are 82 employees below the salary grade minimum. However, this is only the cost to bring all employees to at least the minimum of their respective ranges. The following additional costs are associated with the alternative implementation approaches to bring all employees on to a step:

	Tenure-Based Implementation Approach (Current Step)
Total Step Adjustments ($)	$46,118
Total Step Adjustments (% of Payroll)	21.3%
Total Implementation Cost ($) **(Below Minimum plus Step Adjustments)**	$96,945
Total Implementation Cost (% of Payroll) **(Below Minimum plus Step Adjustments)**	2.8%

D. Benefits Analysis

Exhibit 6A outlines the results of the benefits analysis assessing the market-competitive benefit levels provided by similarly-situated organizations. CBIZ determined the market-competitive benefits value based on a combination of fixed dollar values and percentages of base salary.

For some benefits, namely medical and medically-related benefits, it is most accurate to utilize a fixed cost per employee as the cost incurred by the organization typically does not depend on the position held by the employee. For example, healthcare benefits provided to an executive and a secretary would be expected to cost the employer the same amount. Other benefits, including paid time off and retirement and savings, are most accurately represented as a percent of the incumbent's base salary.

CBIZ evaluated benefits exclusive to similar governmental entities as well as benefits among public and private sector comparable organizations. Among the comparable organizations, market-competitive medical and medically-related benefits are $10,734 per employee and paid time off, retirement and savings benefits as well as other common benefits are approximately 15.8% of base salary. Total expected employer costs, based on the City's employee size and the market-competitive benefits levels, are $1,751,702. The City's estimated actual benefits expenditures are $1,648,656 or 94.1% of market. This suggests that the City's employee benefits package is slightly below the market average.

E. Total Compensation Analysis

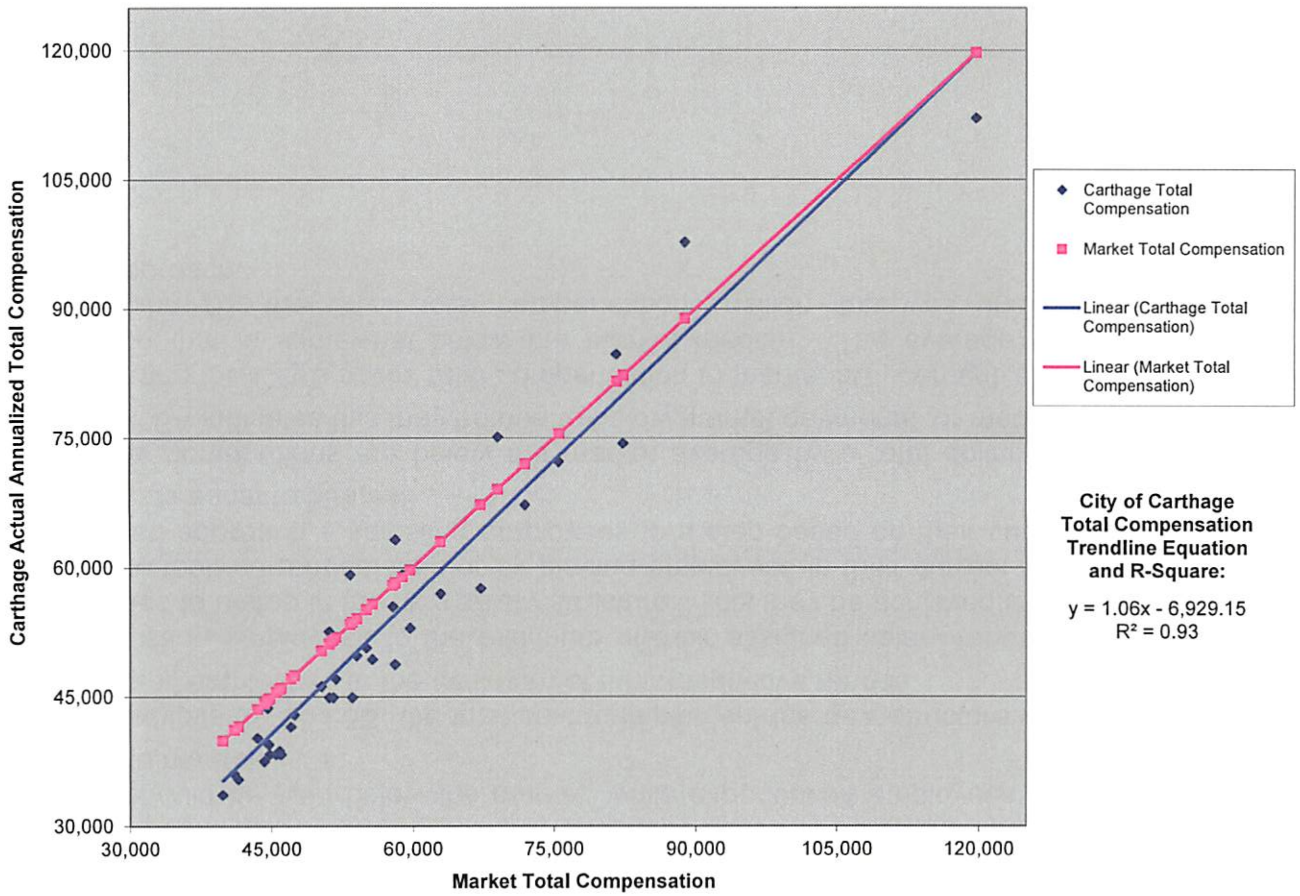
Exhibit 7A presents the results of the total compensation analysis, comparing actual total compensation (i.e., base salary and benefits) to market median levels. Actual benefits per employee were estimated using the methodology described in the Benefits Analysis section above: the average fixed dollar amount provided for medical and medically-related benefits was added to the sum of all other benefits, which were determined as a percentage of each employee's annualized base salary.

The results of the analysis indicate that the City's total compensation is just below market, with an average compa-ratio of 90.6%. It is not surprising that the average total compensation compa-ratio is below the market median, in consideration of the previous analyses. Base salary among all employees was below market while benefits were more closely-aligned with market, but still below; as a result, benefits offset the base salary somewhat such that the compa-ratio for total compensation is between those of base salary and benefits.

Exhibit 7B presents the comparison of the City's total compensation to market levels following the execution of the proposed implementation approach. The suggested step adjustments under this approach have a notable improvement on the City's average total compensation compa-ratio.

Market data were also compared graphically to the Organization's existing total compensation by position. The chart on the following page, also in Exhibit 8A, reveals the current trend line for total compensation relative to market. Exhibit 8B displays the improved position of the City's trend line following the proposed plan implementation approach.

IV. Compensation Study Results



City of Carthage Total Compensation Trendline Equation and R-Square:

$y = 1.06x - 6,929.15$

$R^2 = 0.93$

V. Summary of Findings

Findings

- The City's average base salary compa-ratio is 89.5% of the market 50th percentile. This indicates that, on average, base pay is approximately 10.5% below the competitive market benchmark.
- There are many reasons that an employee's pay should be above or below market median pay levels. New employees or poor performers should be paid below the market, while experienced employees with excellent performance should be paid well above the market.
- As presented in Exhibits 5A and 5B, the total cost to implement the new structure would be approximately $50,827. This is the cost to bring all employees to the minimum of their respective ranges.
- In addition to adjusting employees to the minimum of their assigned salary range, full system implementation requires adjusting employees to a step in the new salary structure. This may be achieved simply by slotting employees to the next greater step above their current salaries or by placing employees in their current step in order to better maintain equity. The City's preferred approach – adjusting employees to a step based on their current step – results in step adjustment implementation costs equal to $96,945.
- The City's benefits contributions are below the market average by a total dollar amount of $103,047, as displayed in Exhibit 6B. Exhibit 6A indicates this may be due to below market payments for medically-related benefits.
- Exhibit 7A, comparing the City's actual total compensation to market 50th percentile levels indicates that the City provides total compensation that is somewhat below the market median. The average compa-ratio is 90.6%. However, as presented in Exhibit 7B, the City's total compensation position improves under the proposed compensation plan implementation approach.

VI. Recommendations

Recommendations

- Approve market-competitive salary ranges to be utilized in the upcoming fiscal year.
- Increase the compensation of all employees to the minimum of their respective salary ranges.
- Execute the preferred compensation plan implementation approach.
- Implementation of the compensation plan should occur uniformly across all positions. While different implementation scenarios may recognize budget constraints, partial or sporadic implementation can result in pay equity issues (e.g., inadvertently providing male-dominated jobs with recommended increases that are not simultaneously provided to female-dominated jobs, etc.).
- Freeze pay for employees above maximum of their respective grade. A lump sum may be paid in lieu of a base salary increase, but only if the payment is based on performance.
- Consider utilizing a merit matrix tool to reward performance, with consideration for employees' placement within their salary range. The merit matrix can be an important tool in consistently and fairly rewarding employees in order to encourage superior performance, provided that an effective performance management process is in place.
- Update salary ranges annually. In order to reduce the administrative burden associated with salary structure maintenance, CBIZ will provide update factors which will allow the City to update the recommended salary structures for five years after the study.
- Conduct a comprehensive market review every 3 to 5 years to ensure that the minimum, midpoint and maximum of the salary ranges remain market-competitive.
- Periodically assess benefits offerings to ensure that the employer cost is market-competitive and fiscally sound and that the benefits provided by the City are of value to the employees. Such an assessment may be performed through benefit cost analyses and employee surveys.

COUNCIL BILL NO. 16-28 **ORDINANCE NO. 16-27**

AN ORDINANCE TO AMEND ARTICLE I, DEFINITIONS, 1.23 "NORMAL RETIREMENT DATE", OF THE AMENDED AND RESTATED CITY OF CARTHAGE POLICEMEN'S AND FIREMEN'S PENSION PLAN.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF CARTHAGE, JASPER COUNTY, MISSOURI as follows:

SECTION I: Section 1.23 "Normal Retirement Date" of the Amended and Restated City of Carthage Policemen's and Firemen's Pension Plan Code of Carthage is hereby repealed and the following enacted in lieu thereof:

1.23 "Normal Retirement Date" means the first day of the month coincident with or immediately following the Participant's fifty-fifth (55) birthday.

SECTION II: This ordinance shall take effect and be in force from after its passage and approval.

PASSED AND APPROVED THIS 28th DAY OF June , 2016.

J. Michael Harris

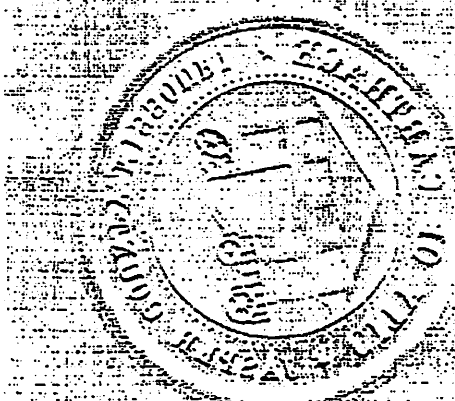
J. Michael Harris, Mayor

ATTEST:

Traci Cox

Traci Cox, City Clerk

Sponsored by: Committee on Insurance, Audit and Claims



CITY OF CARTHAGE, MISSOURI POLICEMEN'S AND FIREMEN'S PENSION PLAN

ACTUARIAL COST STATEMENT FOR REDUCING NORMAL RETIREMENT AGE TO 55

August 2016

CBIZ Cottonwood

CBIZ Retirement Plan Services

CBIZ Cottonwood
CBIZ Benefits & Insurance Services, Inc.
6900 College Boulevard, Suite 300
Ph: 913.345.0500 ▪ F: 913.354.0172
www.cbiz.com/retirement

August 26, 2016

Pension Committee
Policemen's and Firemen's Pension Plan
City of Carthage
326 Grant
Carthage, MO 64836

Dear Committee Members:

This report contains the information required to support the change in normal retirement age from age 58 to 55 for the City of Carthage, Missouri Policemen's and Firemen's Pension Plan.

This report has been conducted in accordance with generally accepted actuarial principles and practices. The employee data was provided by the City as of January 1, 2016 and the Plan asset data was provided by BMO Harris Bank N.A. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. The valuation was based on the provisions of the Plan as amended through the beginning of the Plan Year. Certain actuarial assumptions, including interest rates, mortality tables and others identified in this report, are prescribed by regulation or statute. In our opinion, the remaining actuarial assumptions used in this valuation are reasonably related to the past experience of the Plan and represent reasonable expectations of future experience under the Plan.

We are available to answer questions on our report, or to provide explanations or further details as may be requested. The undersigned credentialed actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. 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.

Respectfully submitted,

CBIZ Cottonwood

By Daniel P. Nichols

Daniel P. Nichols, F.S.A.
Enrollment Number 14-03073

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SECTION I – Cost Study Results

SECTION II – Actuarial Basis

SECTION I

COST STUDY RESULTS

Summary of Actuarial Contribution Requirement

		Current Normal Retirement Age 58	Amended Normal Retirement Age 55
1.	Normal Cost Component of Contribution		
	a. Normal Cost	$ 209,273	$ 222,382
	b. Participating Payroll (under NRA)	$1,891,197	$1,736,564
	c. Normal Cost Rate (1a div. 1b)	11.07%	12.81%
2.	Unfunded Actuarial Accrued Liability	$2,095,316	$2,628,674
3.	Payment on Unfunded Actuarial Accrued Liability – 30 Yr. Funding	157,807	197,977
4.	Required Contribution (Normal Cost Plus Payment on UAAL)	$ 367,080	$ 420,359
5.	Interest to end of calendar year	25,696	29,425
6.	Total Required Contribution with interest	$ 392,776	$ 449,784
7.	Total Required Contribution with interest as a % of Participating Payroll (under NRA)	22.62%	25.90%
8.	Total Required Contribution with interest as a % of Participating Payroll (All EEs)	19.51%	22.34%

Each year the City of Carthage contributes the total contribution rate as shown on line 8 above. The current plan contribution rate for the fiscal year ending in 2016 was 18.70% and the City of Carthage made this contribution through the month of June 2016.

The higher contribution rates in the right-hand column are required in order to support the proposed change in normal retirement age. As long as the higher contribution amounts are made to the plan, the proposed change will not impair the ability of the plan to meet its benefit obligations that were in effect at the time the change is made.

Statement of Net Assets

December 31, 2015

Assets		
Common Stocks	$2,795,422.12	(46.3%)
Fixed Income Securities	2,976,991.29	(45.4%)
Convertible Securities	375,304.57	(6.1%)
Cash & Equivalents	154,623.45	(2.2%)
Total Investments	$6,302,341.43	
Contribution Receivable	0.00	
Accrued Income	35,179.21	
Total Assets	$6,337,520.64	
Liabilities		
Accrued Expenses and Benefits Payable	(15,167.80)	
Net Assets	$6,322,352.84	

DEVELOPMENT OF ACTUARIAL ASSET VALUE

Market Value of Assets On:	01/01/2015		6,508,548

Change in Assets for the Period:
January 1, 2015 - December 31, 2015

a. Contributions	373,826	
b. Benefit Payments	560,011	
c. Expenses	63,937	
d. Investment Income (using assumed 7% rate of return)		
1. Beginning Asset Value	455,598	
2. Contributions	1,692	
3. Benefit Payments	20,326	
4. Expenses	1,686	
Total (1+2-3-4)	445,278	
Net Expected Increase in Assets (a-b-c+d):		195,156

Expected Assets as of:	01/01/2016	6,703,704
Actual Market Value as of:	01/01/2016	6,322,353

Adjustment to Determine Valuation Assets

Date	Market Value	Expected Market Value	Asset Gain/(Loss)	% Deferred	Deferred Gain/(Loss)
01/01/09	5,080,400	6,411,576	(1,331,176)	20%	(266,235)
01/01/13	5,685,391	5,737,871	(52,480)	20%	(10,496)
01/01/14	6,307,065	5,949,588	357,477	40%	142,991
01/01/15	6,508,548	6,606,133	(97,585)	60%	(58,551)
01/01/16	6,322,353	6,703,704	(381,351)	80%	(305,081)

Total Deferred Gain/(Loss)	(497,372)
Actuarial Value = Market Value on 1/1/2016 Minus Total Deferred Gain/(Loss)	6,819,725

FUNDED RATIO

		Current Normal Retirement Age 58	Revised Normal Retirement Age 55
1.	Actuarial Accrued Liability – 1/1/2016	$8,915,041	$9,448,399
2.	Actuarial Value of Assets – 1/1/2016	$6,819,725	$6,819,725
3.	Market Value of Assets - 1/1/2016	$6,322,353	$6,322,353
4.	Funded Ratio - 1/1/2016	76.50%	72.18%

TEN-YEAR COST PROJECTION

Projected Cost Impact of Plan Amendment Reducing Normal Retirement Age from 58 to 55

Before Change in Normal Retirement Age	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Projected Contribution - $ Amount	392,776	416,903	438,455	453,576	472,007	478,525	485,285	492,305	489,992	496,761
Projected Contribution - % of Pay	19.51%	20.65%	21.24%	21.48%	21.90%	21.52%	21.15%	20.78%	20.03%	19.81%
Actuarial Asset Value	6,819,725	6,903,741	7,002,100	7,173,600	7,387,751	7,719,946	8,108,631	8,574,351	9,092,714	9,633,923
Market Value of Assets	6,322,353	6,574,273	6,830,043	7,097,330	7,387,751	7,719,946	8,108,631	8,574,351	9,092,714	9,633,923
Actuarial Accrued Liability	8,915,041	9,167,055	9,408,312	9,647,074	9,899,765	10,186,884	10,529,377	10,947,882	11,418,526	11,911,352
Funded Ratio	76.50%	75.31%	74.42%	74.36%	74.63%	75.78%	77.01%	78.32%	79.63%	80.88%
Unfunded Actuarial Accrued Liability	2,095,316	2,263,314	2,406,212	2,473,474	2,512,014	2,466,938	2,420,746	2,373,531	2,325,812	2,277,429

After Change in Normal Retirement Age	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Projected Contribution - $ Amount	449,784	501,492	522,689	538,184	551,804	548,546	554,929	569,482	567,850	546,030
Projected Contribution - % of Pay	22.34%	25.50%	25.79%	25.76%	25.60%	24.67%	24.36%	24.42%	23.58%	21.97%
Actuarial Asset Value	6,819,725	6,859,672	6,964,084	7,174,249	7,466,484	7,877,468	8,315,382	8,801,384	9,349,493	9,941,762
Market Value of Assets	6,322,353	6,530,204	6,792,027	7,097,979	7,466,484	7,877,468	8,315,382	8,801,384	9,349,493	9,941,762
Actuarial Accrued Liability	9,448,399	9,650,162	9,890,931	10,161,874	10,486,605	10,847,130	11,234,022	11,668,288	12,164,100	12,703,889
Funded Ratio	72.18%	71.08%	70.41%	70.60%	71.20%	72.62%	74.02%	75.43%	76.86%	78.26%
Unfunded Actuarial Accrued Liability	2,628,674	2,790,490	2,926,847	2,987,625	3,020,121	2,969,662	2,918,640	2,866,904	2,814,607	2,762,127
Additional Actuarial Accrued Liability	533,358	483,107	482,619	514,800	586,840	660,246	704,645	720,406	745,574	792,537
Additional Actuarial Asset Value	0	-44,069	-38,016	649	78,733	157,522	206,751	227,033	256,779	307,839
Additional Unfunded Actuarial Liability	533,358	527,176	520,635	514,151	508,107	502,724	497,894	493,373	488,795	484,698

SECTION II

ACTUARIAL BASIS

ACTUARIAL ASSUMPTIONS

Interest -	7% per annum
Mortality -	RP-2014 Total Mortality Tables, projected generationally with MP-2015 projection scale, adjusted to reflect the 2015 Social Security Intermediate Actuarial Assumptions
Retirement -	Participants are assumed to retire at the later of attained age or the plan's normal retirement age.
Turnover -	Based on rates from the Actuary's Pension Handbook, Table T-2 plus incidence of disability based on the 1974 Railroad Retirement Board disability table. Sample rates are as follows:

Age	Rate of Turnover
25	5.3017%
30	5.0822%
35	4.7184%
40	3.5735%
45	1.8986%
50	.6748%
55	.4900%

Expenses -	None. It is assumed that the interest assumption is net of all plan expenses.
Salary Scale -	Current salary is assumed to increase by 3.5% per annum.
Assets -	Market value of assets adjusted by percentage of investment gains and losses over a five-year period. The percentage starts at 80% in the first year following the investment gain or loss, decreasing by 20% for each additional year. The 2008 investment loss is being recognized over a ten-year period due to the unusual circumstances surrounding the 2008 economy/investment market.

Actuarial Funding Method

Entry Age Normal Cost Method With Unfunded Liability

Under the entry age normal cost method, the Normal Cost is computed as the level percentage of pay which, if paid from the earliest time each employee would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

When a Plan is established after the company has been in existence for some time, the Actuarial Accrued Liability under this method, at the Plan's inception date, is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years. The Unfunded Actuarial Accrued Liability represents the difference between the Actuarial Accrued Liability and the Plan's assets.

In subsequent years, the unfunded actuarial accrued liability is reduced by the value of contributions made to the plan that are in excess of the plan's normal cost. In addition, the unfunded actuarial accrued liability is adjusted to reflect experience gains and losses that occur due to actual plan experience deviating from the actuarial assumptions.

SUMMARY OF MAJOR PLAN PROVISIONS

Eligibility -	Each policeman or fireman whose customary employment is for at least 1,000 hours per year is eligible to become a participant on his date of hire.
Average Monthly Earnings -	Highest average of any five consecutive Plan year's total earnings.
Retirement -	Prior to June 28, 2016, the Plan's normal retirement age was 58. The normal retirement age was reduced to 55 effective June 28, 2016. The retirement benefit is equal to 2.5% of average monthly earnings multiplied by years of service up to 20 years plus 1% of average monthly earnings multiplied by years of service credited from 20 to 35 years.
Early Retirement -	A person is eligible for early retirement after attaining age 50 with 15 years of service. The benefit payable immediately is the accrued benefit reduced 5% for each year that the benefit commencement date precedes normal retirement date.
Disability -	Benefit is vested accrued benefit deferred to normal retirement date, i.e., the participant is treated like a terminated participant.
Death -	A deferred benefit payable at earliest retirement date equal to the amount the beneficiary would have received had the participant retired and chosen a 100% survivor benefit.
Termination -	The participant is eligible for a portion of his accrued benefit beginning at normal retirement date if he has five or more years of service. The portion is determined by the following table.

Years of Service	Vested Percentage
5	30%
6	40%
7	50%
8	60%
9	80%
10	100%

EE Contributions -	No employee contributions required since 7/1/88.

BILL NO: 16-27

ORDINANCE NO: 16-26

AN ORDINANCE OF THE CITY OF CARTHAGE, MISSOURI ELECTING CHANGES UNDER THE MISSOURI LOCAL GOVERNMENT EMPLOYEES RETEIRMENT SYSTEM.

WHEREAS, the Council of the City of Carthage has complied with the notice and filing requirements of Section 105.675 RSMo; and

WHEREAS, the fiscal officer of the City of Carthage is authorized to deduct from the wages or salaries of each employee member, the employee contributions, if any, required by Section 70.705, RSMo, and to promptly remit such contributions to LAGERS, along with the employer contributions required by Sections 70.705, 70.730, and 70.735 RSMo.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF CARTHAGE, MISSOURI, AS FOLLOWS:

SECTION I: that the Council of the City of Carthage, an employer under the Missouri Local Government Employees Retirement System (LAGERS), hereby elects the following;

1. To adopt a change in the Benefit Program of covered employees, changing to Benefit Program L-6 in accordance with 70.655 RSMo.

2. The City Clerk shall certify this election to the Missouri Local Government Employees Retirement System within ten days hereof. Such election shall be effective on the first day July, 2016.

SECTION II: This Ordinance shall take effect and be in force from and after its passage and approval.

PASSED AND APPROVED THIS 28th DAY OF June 2016.

J. Michael Harris

J. Michael Harris, MAYOR

ATTEST:

Traci Cox

Traci Cox, **CITY CLERK**

CERTIFICATION

I hereby certify that the above Ordinance is a true and correct copy of an Ordinance that was duly enacted by the Council of the City of Carthage.

06/29/2016
Date

Traci Cox
Signature, Traci Cox, City Clerk

GRS

Gabriel Roeder Smith & Company
Consultants & Actuaries

One Towne Square
Suite 800
Southfield, MI 48076-3723

248.799.9000 phone
248.799.9020 fax
www.gabrielroeder.com

May 15, 2015 E-mail

Mr. Keith Hughes
Executive Secretary
Missouri Local Government
Employees Retirement System
P.O. Box 1665
Jefferson City, Missouri 65102

Dear Keith:

Enclosed is the report of the February 28, 2014 Supplemental Actuarial Valuation of LAGERS benefits for the employees of:

The City of Carthage

Sincerely,

Mita Drazilov

Mita D. Drazilov, ASA, MAAA

MDD:rmg
Enclosure

GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

THE CITY OF CARTHAGE

SUPPLEMENTAL ACTUARIAL VALUATION OF ALTERNATE LAGERS BENEFITS

FEBRUARY 28, 2014

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GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
One Towne Square
Suite 800
Southfield, MI 48076-3723
248.799.9000 phone
248.799.9020 fax
www.gabrielroeder.com

May 15, 2015

The City of Carthage
Carthage, Missouri

Ladies and Gentlemen:

Submitted in this report are the results of an actuarial valuation prepared to determine the employer contribution rates required to support, for your employees, certain benefits provided by the Missouri Local Government Employees Retirement System (LAGERS). This report contains the information needed to comply with Missouri state disclosure requirements regarding changes in LAGERS benefits by a political subdivision (Sections 105.660 - 105.685 RSMo).

The contribution requirement for benefits likely to accrue as a result of the future service of your employees is described in this report as the current cost plus the disability cost. This contribution rate, expressed as a percent of active employee payroll, will depend on the benefit plan adopted.

The contribution requirement to pay for benefits likely to result from service rendered by your employees prior to the valuation date, the liability for which is not covered by present employer account balances, is described in this report as the prior service cost. The prior service cost is the rate of contribution designed to pay for any unfunded actuarial accrued liability.

Section 70.730 of the Revised Statutes of Missouri requires participating employers to contribute the current cost, disability cost, and prior service cost for the benefit plan in effect. These contributions are mandatory.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix I of this report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2014. Annual actuarial valuation results for the political subdivision and information pertaining to those results may be found in the political subdivision's annual actuarial valuation report as of February 28, 2014.

The computed contribution rates will permit the System to continue to operate in sound condition in accordance with the actuarial principles of level cost financing and the state law which governs LAGERS. Summary provisions of the law as well as benefit illustrations can be found in Appendices II and III.

In accordance with 105.675 RSMo, note that this entire report must be available as public information for at least 45 calendar days prior to the date final official action is taken by your governing body to adopt an alternate benefit plan. You may wish to make notice of this report in the official minutes of the next meeting of your governing body. This action would not be binding on your subdivision, yet would establish the beginning date of the 45 day waiting period. The statement of cost must also be provided to the Joint Committee on Public Employee Retirement. The statement can be mailed to the State Capitol, Room 219-A, Jefferson City, MO 65101 or e-mailed to jcpers@senate.mo.gov.

The valuation was based on the same data as was used in your February 28, 2014 annual actuarial valuation. If you have any questions concerning this report or LAGERS in general, please contact the LAGERS office in Jefferson City.

Mita D. Drazilov is a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Mita Drazilov

Mita D. Drazilov, ASA, MAAA

Alternate Plan Provisions Affecting Employer Contribution Rates

The law governing LAGERS provides for either a contributory plan or a non-contributory plan, with benefits based on either a 5 year or 3 year Final Average Salary (FAS).

Contributory Plan. Under the contributory plan, each covered member contributes 4% of compensation to LAGERS. If an employee terminates before being eligible for an immediate benefit, the member's contributions, plus any interest credited to the member's individual account, are refunded upon request.

Non-Contributory Plan. Under the non-contributory plan, there is no individual employee contribution to the plan, no individual account maintained for each employee, and no refund paid to employees who terminate before being eligible for a benefit.

The law further provides for nine different benefit programs (benefit formula factors) and allows an employer to elect "rule of 80" eligibility for benefits. Under the rule of 80, employees are eligible for unreduced benefits at the earlier of (i) attainment of their minimum service retirement age or (ii) such time as their years of age plus years of LAGERS credited service equals 80.

In total this allows for 72 different combinations of benefit plans, giving employers considerable latitude in designing the retirement program that best suits their particular situation.

The applicable combinations of these items may be changed from time to time, however, there are limitations on the frequency of changes. A more detailed description of plan provisions may be found in Appendix II of this report.

The City of Carthage
Computed Employer Contribution Rates - General Employees
As of February 28, 2014

Benefit Plans	Present	Alternate
# Benefit Program:	L-7	L-6
Final Average Salary:	3 year	3 year
Member Contributions:	Non-Contributory	Non-Contributory
Retirement Eligibility:	Regular	Regular

Present Plan	Rates
Current Service Cost	8.3%
Disability Cost	0.2
Prior Service Cost	(0.6)
Total	7.9%

Alternate Plan	
Current Service Cost	11.1%
Disability Cost	0.3
Prior Service Cost*	4.3
Total	15.7%
INCREASE IN CONTRIBUTION RATE FOR ALTERNATE PLAN	7.8%

Employer contribution rates shown above are for the fiscal year beginning in 2015. If the alternate plan is adopted prior to the fiscal year beginning in 2015, 7.8% would be added to the employer contribution rate currently in effect.

Change in provisions from present plan.

* Adoption of the alternate plan would increase the actuarial accrued liability by $1,109,884 which was amortized over a 20 year period to compute the increase in the Prior Service Cost.

The City of Carthage

Projected Estimated Employer Contribution Rates - General Employees

As of February 28, 2014

		Present Plan			Alternate Plan			Change Due to Proposed Provisions		
		Estimated Employer Contribution		Estimated Difference	Estimated Employer Contribution		Estimated Difference	Estimated Employer Contribution		Estimated Difference
Valuation Date Feb. 28	Estimated Projected Payroll	As a % of Payroll	Annual Dollars	Between AAL and AVA	As a % of Payroll	Annual Dollars	Between AAL and AVA	As a % of Payroll	Annual Dollars	Between AAL and AVA
2014	$1,623,717	7.9%	$128,274	$(105,582)	15.7%	$254,924	$1,004,302	7.8%	$126,650	$1,109,884
2015	1,680,547	7.9	132,763	(103,666)	15.7	263,846	1,004,955	7.8	131,083	1,108,621
2016	1,739,366	7.9	137,410	(101,276)	15.7	273,080	1,003,130	7.8	135,670	1,104,406
2017	1,800,244	7.9	142,219	(98,365)	15.7	282,638	998,560	7.8	140,419	1,096,925
2018	1,863,253	7.9	147,197	(94,884)	15.7	292,531	990,953	7.8	145,334	1,085,837
2019	1,928,467	7.9	152,349	(90,780)	15.7	302,769	979,994	7.8	150,420	1,070,774
2020	1,995,963	7.9	157,681	(85,993)	15.7	313,366	965,343	7.8	155,685	1,051,336
2021	2,065,822	7.9	163,200	(80,462)	15.7	324,334	946,630	7.8	161,134	1,027,092
2022	2,138,126	7.9	168,912	(74,119)	15.7	335,686	923,454	7.8	166,774	997,573
2023	2,212,960	7.9	174,824	(66,889)	15.7	347,435	895,386	7.8	172,611	962,275

AAL = Actuarial Accrued Liability
AVA = Actuarial Value of Assets

Notes regarding the above projections:

1) The purpose of the above projections is to comply with the requirements of Section 105.665 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
2) For purposes of the above projections, it was assumed that all actuarial assumptions would be realized. In particular, it was assumed that the actuarial value of assets would earn 7.25% in each year.
3) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.50%.
4) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
5) Differences between fiscal end dates of the employer and the actuarial valuation date of February 28th have not been incorporated in the above results.
6) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

Other disclosures required by Section 105.665 of the Revised Statutes of Missouri (RSMo):

1) As of February 28, 2014, the actuarial value of assets is $3,875,971; the estimated market value of assets is $4,306,634; the actuarial accrued liability is $3,770,389; and the funded ratio is 102.8%. These results are based on the assets and liabilities associated with the Employer Accumulation Fund and the Member Deposit Fund for this division.
2) Under Section 70.730 of the Revised Statutes of Missouri, the computed employer contribution rate shall not exceed the contribution rate for the immediately preceding fiscal year by more than one percent (not including the effects of any benefit changes). As of February 28, 2014, there is no difference between the capped and uncapped employer contribution rate.

APPENDIX I

SUMMARY OF FINANCIAL ASSUMPTIONS

Summary of Assumptions Used in Actuarial Valuations

Assumptions Adopted by Board of Trustees After Consulting With Actuary

1. The investment return rate used in making the valuations was 7.25% per year, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. Considering other financial assumptions, the 7.25% investment return rate translates to an assumed real rate of return of 3.75%. Adopted 2011.

2. The mortality table used to evaluate mortality among active members was 75% of the RP-2000 Combined Healthy Table set back 0 years for men and 0 years for women. It was assumed that 50% of pre-retirement deaths would be duty related. Adopted 2011.

3. The mortality table used in evaluating allowances to be paid was 105% of the 1994 Group Annuity Mortality (GAM) Table set back 0 years for men and 0 years for women. The disability post-retirement rates were equal to the standard rates set forward 10 years. Adopted 2011.

4. The probabilities of withdrawal from service, together with individual pay increase assumptions, are shown in Schedule 1. Adopted 2011.

5. The probabilities of retirement with an age and service allowance are shown in Schedule 2. Adopted 2011.

6. Total active member payroll is assumed to increase 3.50% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. In effect, this assumes no change in the number of active members per employer. Adopted 2011.

7. An individual entry-age actuarial cost method of valuation was used in determining age and service allowance actuarial liabilities and normal cost. Adopted 1986.

8. The data about persons now covered was furnished by the political subdivision. Although examined for general reasonableness, the data was not audited by us.

Schedule 1.

Withdrawal From Active Employment Before Age & Service Retirement and Individual Pay Increase Assumptions

Sample Ages	Years of Service	Percent of Active Members Separating Within Next Year: General Members: Men	General Members: Women	Police	Fire	Percent Increase in Individual's Pay During Next Year Excluding Fire
All	0	18.00%	21.00%	18.00%	8.00%	
	1	16.00	20.00	17.00	7.00	
	2	14.00	16.00	16.00	6.00	
	3	11.00	13.00	13.00	6.00	
	4	9.00	12.00	12.00	5.00	
25	5 & Over	7.50	10.70	10.10	5.00	6.8%
30		6.50	9.40	8.00	4.00	6.0
35		5.10	7.20	6.10	2.80	5.5
40		3.80	5.50	4.70	2.20	5.0
45		3.00	4.20	3.60	1.80	4.5
50		2.40	3.40	1.80	1.00	4.1
55		1.80	2.50	1.00	0.50	3.9
60		1.00	1.20	0.00	0.00	3.8
65		0.00	0.00	0.00	0.00	3.5

Sample Ages	Percent Increase in Individual's Pay During Next Year Fire
25	8.6%
30	6.7
35	5.4
40	4.7
45	4.4
50	4.1
55	3.9
60	3.8
65	3.5

Schedule 2.

Percent of Eligible Active Members Retiring Within Next Year Without Rule of 80 Eligibility

Early Retirement

Retirement	General Members		Retirement		
Ages	Men	Women	Ages	Police	Fire
55	2.50%	3.00%	50	3.00%	2.50%
56	2.50%	3.00%	51	3.00%	2.50%
57	2.50%	3.00%	52	3.00%	2.50%
58	2.50%	3.00%	53	3.00%	2.50%
59	2.50%	3.00%	54	3.00%	2.50%

Normal Retirement

Retirement	General Members		Retirement		
Ages	Men	Women	Ages	Police	Fire
60	10%	10%	55	10%	15%
61	10	10	56	10	15
62	25	15	57	10	10
63	25	15	58	10	15
64	20	15	59	10	15
65	25	20	60	10	20
66	25	25	61	10	10
67	20	20	62	25	30
68	20	20	63	20	30
69	20	15	64	20	25
70	100	100	65	100	100

Schedule 2. (Continued)

Percent of Eligible Active Members Retiring Within Next Year With Rule of 80 Eligibility

Retirement	General Members			
Ages	Men	Women	Police	Fire
50	15%	15%	25%	25%
51	15	15	25	15
52	15	15	15	15
53	15	15	15	15
54	15	15	15	15
55	15	15	15	15
56	15	15	15	15
57	15	15	15	15
58	15	15	15	15
59	15	15	15	20
60	15	15	15	30
61	15	15	25	30
62	30	15	30	45
63	30	15	30	45
64	30	20	30	45
65	30	25	100	100
66	30	25		
67	30	25		
68	30	25		
69	30	25		
70	100	100		

APPENDIX II

SUMMARY OF LAGERS PROVISIONS

Missouri LocAl Government Employees Retirement System
Brief Summary of LAGERS
Benefits and Conditions Evaluated and/or Considered
as of February 28, 2014
(Section References are to RSMo)

Voluntary Retirement. Sections 70.645 & 70.600. A member may retire with an age & service allowance after both (i) completing 5 years of credited service, and (ii) attaining the minimum service retirement age.

The minimum service retirement age is age 60 for a general employee and age 55 for a police or fire employee. Optionally, employers may also elect to provide for unreduced benefits for employees whose combination of years of age and years of service equals 80 or more.

Final Average Salary. Section 70.600. The average of a member's monthly compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) of credited service producing the highest monthly average, which period is contained within the 120 consecutive months of credited service immediately preceding retirement.

Age & Service Allowance. Section 70.655. The allowance, payable monthly for life, equals a specified percent of a member's final average salary multiplied by the number of years of credited service. Each employer elects the percent applicable to its members, from the following programs:

L-1 Benefit Program:	1.00% for life
L-3 Benefit Program:	1.25% for life
L-7 Benefit Program:	1.50% for life
L-9 Benefit Program:	1.60% for life
L-12 Benefit Program:	1.75% for life
L-6 Benefit Program:	2.00% for life
LT-4(65) Benefit Program:	1.00% for life, plus 1.00% to age 65
LT-5(65) Benefit Program:	1.25% for life, plus 0.75% to age 65
LT-8(65) Benefit Program:	1.50% for life, plus 0.50% to age 65
LT-10(65) Benefit Program:	1.60% for life, plus 0.40% to age 65
LT-14(65) Benefit Program:	1.75% for life, plus 0.25% to age 65

The only LT benefit programs available for adoption after August 1, 1994 are the LT(65) programs.

Benefit programs L-9 and LT-10(65) are unavailable for adoption after August 1, 2005.

Benefit program L-11, available only to groups not covered by social security, provides for 2.5% for life.

Subsequent to joining the System the governing body can elect to change benefit programs for the employees, but not more often than once every 2 years.

Early Allowance. Section 70.670. A member may retire with an early allowance after both (i) completing 5 years of credited service, and (ii) attaining age 55 if a general employee or age 50 if a police or fire employee. The early allowance amount, payable monthly for life, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of early retirement, but reduced to reflect the fact that the age when payments begin is younger than the minimum service retirement age. The amount of the reduction is 1/2 of 1% (.005) for each month the age at retirement is younger than the minimum service retirement age.

Deferred Allowance. Section 70.675. If a member leaves LAGERS-covered employment (i) before attaining the early retirement age, and (ii) after completing 5 years of credited service, the member becomes eligible for a deferred allowance; provided the former member lives to the minimum service retirement age and does not withdraw the accumulated contributions.

The deferred allowance amount, payable monthly for life from the minimum service retirement age, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of leaving LAGERS coverage.

Deferred allowances are also payable any time after reaching the early retirement age, with the reduction for early retirement noted on the previous page.

Non-Duty Disability Allowance. Section 70.680. A member with 5 or more years of credited service who becomes totally and permanently disabled from other than duty-connected causes becomes eligible to receive a non-duty disability allowance computed in the same manner as an age & service allowance, based upon the service & earnings record to time of disability.

Duty Disability Allowance. Section 70.680. A member regardless of credited service who becomes totally and permanently disabled from duty-connected causes becomes eligible to receive a duty disability allowance computed in the same manner as an age & service allowance, based upon the earnings record to time of disability but based upon the years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

Death-in-Service. Section 70.661. Upon the death of a member who had completed 5 years of credited service, the eligible surviving dependents receive the following benefits:

(a) The surviving spouse receives an allowance equal to the Option A allowance (joint and 75% survivor benefit) computed based upon the deceased members' service & earnings record to time of death.

(b) When no spouse benefit is payable, the dependent children under age 18 (age 23 if they are full time students) each receive an equal share of 60% of an age & service allowance computed based upon the deceased member's service & earnings record to time of death.

(c) If the death is determined to be duty related, the 5 year service requirement is waived and the benefit is based on years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

Benefit Changes After Retirement. Section 70.655. For retirements effective after September 28, 1975, there is an annual redetermination of monthly benefit amount, beginning the October first following 12 months of retirement. As of each October first the amount of each eligible benefit is redetermined as follows:

(a) Subject to the maximum in (b), the redetermined amount is the amount otherwise payable multiplied by: 100% plus up to 4%, as determined by the LAGERS Board of Trustees, for each full year of retirement.

(b) The redetermined amount may not exceed the amount otherwise payable multiplied by the ratio of the Consumer Price Index for the immediately preceding month of June to the Consumer Price Index for the month of June immediately preceding retirement.

Member Contributions. Sections 70.690 & 70.705. Each member contributes 4% of compensation beginning after completion of sufficient employment for 6 months of credited service.

If a member leaves LAGERS-covered employment before an allowance is payable, the accumulated contributions are refunded to the member. If the member dies, his accumulated contributions are refunded to a designated beneficiary.

The law governing LAGERS also has a provision for the adoption of a non-contributory plan in which the full cost of LAGERS participation is paid by the employer. Adoption of the non-contributory provisions may be done at the time of membership or a later date; however, a change from contributory to non-contributory or vice-versa may not be made more frequently than every 2 years. Under the non-contributory provisions there is no individual account maintained for each employee and no refund of contributions if an employee terminates before being eligible for a benefit.

Employer Contributions. Section 70.730. Each employer contributes the remainder amounts necessary to finance the employees' participation in LAGERS. Contributions to LAGERS are determined based upon level-percent-of-payroll principles, so that contribution rates do not have to increase over decades of time.

APPENDIX III

BENEFIT ILLUSTRATIONS

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-1 Benefit Program is Years of Credited Service times: 1.00% of FAS [1])

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]	Estimated Social Security [2]	Estimated Monthly Total $	Estimated Monthly Total % of FAS
35 Years of Service:				
$1,500	$ 525	$ 890	$1,415	94%
2,000	700	1,040	1,740	87%
2,500	875	1,190	2,065	83%
3,000	1,050	1,343	2,393	80%
3,500	1,225	1,493	2,718	78%
4,000	1,400	1,642	3,042	76%
25 Years of Service:				
$1,500	$ 375	$ 890	$1,265	84%
2,000	500	1,040	1,540	77%
2,500	625	1,190	1,815	73%
3,000	750	1,343	2,093	70%
3,500	875	1,493	2,368	68%
4,000	1,000	1,642	2,642	66%
15 Years of Service:				
$1,500	$225	$ 890	$1,115	74%
2,000	300	1,040	1,340	67%
2,500	375	1,190	1,565	63%
3,000	450	1,343	1,793	60%
3,500	525	1,493	2,018	58%
4,000	600	1,642	2,242	56%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-3 Benefit Program is Years of Credited Service times: 1.25% of FAS [1])

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]	Estimated Social Security [2]	Estimated Monthly Total $	Estimated Monthly Total % of FAS
35 Years of Service:				
$1,500	$ 656	$ 890	$1,546	103%
2,000	875	1,040	1,915	96%
2,500	1,094	1,190	2,284	91%
3,000	1,313	1,343	2,656	89%
3,500	1,531	1,493	3,024	86%
4,000	1,750	1,642	3,392	85%
25 Years of Service:				
$1,500	$ 469	$ 890	$1,359	91%
2,000	625	1,040	1,665	83%
2,500	781	1,190	1,971	79%
3,000	938	1,343	2,281	76%
3,500	1,094	1,493	2,587	74%
4,000	1,250	1,642	2,892	72%
15 Years of Service:				
$1,500	$281	$ 890	$1,171	78%
2,000	375	1,040	1,415	71%
2,500	469	1,190	1,659	66%
3,000	563	1,343	1,906	64%
3,500	656	1,493	2,149	61%
4,000	750	1,642	2,392	60%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-7 Benefit Program is Years of Credited Service times: 1.50% of FAS [1])

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]	Estimated Social Security [2]	Estimated Monthly Total $	Estimated Monthly Total % of FAS
35 Years of Service:				
$1,500	$ 788	$ 890	$1,678	112%
2,000	1,050	1,040	2,090	105%
2,500	1,313	1,190	2,503	100%
3,000	1,575	1,343	2,918	97%
3,500	1,838	1,493	3,331	95%
4,000	2,100	1,642	3,742	94%
25 Years of Service:				
$1,500	$ 563	$ 890	$1,453	97%
2,000	750	1,040	1,790	90%
2,500	938	1,190	2,128	85%
3,000	1,125	1,343	2,468	82%
3,500	1,313	1,493	2,806	80%
4,000	1,500	1,642	3,142	79%
15 Years of Service:				
$1,500	$338	$ 890	$1,228	82%
2,000	450	1,040	1,490	75%
2,500	563	1,190	1,753	70%
3,000	675	1,343	2,018	67%
3,500	788	1,493	2,281	65%
4,000	900	1,642	2,542	64%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-9 Benefit Program is Years of Credited Service times: 1.60% of FAS [1])

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]	Estimated Social Security [2]	Estimated Monthly Total $	Estimated Monthly Total % of FAS
35 Years of Service:				
$1,500	$ 840	$ 890	$1,730	115%
2,000	1,120	1,040	2,160	108%
2,500	1,400	1,190	2,590	104%
3,000	1,680	1,343	3,023	101%
3,500	1,960	1,493	3,453	99%
4,000	2,240	1,642	3,882	97%
25 Years of Service:				
$1,500	$ 600	$ 890	$1,490	99%
2,000	800	1,040	1,840	92%
2,500	1,000	1,190	2,190	88%
3,000	1,200	1,343	2,543	85%
3,500	1,400	1,493	2,893	83%
4,000	1,600	1,642	3,242	81%
15 Years of Service:				
$1,500	$360	$ 890	$1,250	83%
2,000	480	1,040	1,520	76%
2,500	600	1,190	1,790	72%
3,000	720	1,343	2,063	69%
3,500	840	1,493	2,333	67%
4,000	960	1,642	2,602	65%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-12 Benefit Program is Years of Credited Service times: 1.75% of FAS [1])

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]	Estimated Social Security [2]	Estimated Monthly Total $	Estimated Monthly Total % of FAS
35 Years of Service:				
$1,500	$ 919	$ 890	$1,809	121%
2,000	1,225	1,040	2,265	113%
2,500	1,531	1,190	2,721	109%
3,000	1,838	1,343	3,181	106%
3,500	2,144	1,493	3,637	104%
4,000	2,450	1,642	4,092	102%
25 Years of Service:				
$1,500	$ 656	$ 890	$1,546	103%
2,000	875	1,040	1,915	96%
2,500	1,094	1,190	2,284	91%
3,000	1,313	1,343	2,656	89%
3,500	1,531	1,493	3,024	86%
4,000	1,750	1,642	3,392	85%
15 Years of Service:				
$1,500	$ 394	$ 890	$1,284	86%
2,000	525	1,040	1,565	78%
2,500	656	1,190	1,846	74%
3,000	788	1,343	2,131	71%
3,500	919	1,493	2,412	69%
4,000	1,050	1,642	2,692	67%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-6 Benefit Program is Years of Credited Service times: 2.00% of FAS [1])

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]	Estimated Social Security [2]	Estimated Monthly Total $	Estimated Monthly Total % of FAS
35 Years of Service:				
$1,500	$1,050	$ 890	$1,940	129%
2,000	1,400	1,040	2,440	122%
2,500	1,750	1,190	2,940	118%
3,000	2,100	1,343	3,443	115%
3,500	2,450	1,493	3,943	113%
4,000	2,800	1,642	4,442	111%
25 Years of Service:				
$1,500	$ 750	$ 890	$1,640	109%
2,000	1,000	1,040	2,040	102%
2,500	1,250	1,190	2,440	98%
3,000	1,500	1,343	2,843	95%
3,500	1,750	1,493	3,243	93%
4,000	2,000	1,642	3,642	91%
15 Years of Service:				
$1,500	$ 450	$ 890	$1,340	89%
2,000	600	1,040	1,640	82%
2,500	750	1,190	1,940	78%
3,000	900	1,343	2,243	75%
3,500	1,050	1,493	2,543	73%
4,000	1,200	1,642	2,842	71%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(L-11 Benefit Program is Years of Credited Service
times: 2.50% of FAS [1])

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]	Estimated Social Security [2]	Estimated Monthly Total $	Estimated Monthly Total % of FAS
35 Years of Service:				
$1,500	$1,313		$1,313	88%
2,000	1,750		1,750	88%
2,500	2,188		2,188	88%
3,000	2,625		2,625	88%
3,500	3,063		3,063	88%
4,000	3,500		3,500	88%
25 Years of Service:				
$1,500	$ 938		$ 938	63%
2,000	1,250		1,250	63%
2,500	1,563		1,563	63%
3,000	1,875		1,875	63%
3,500	2,188		2,188	63%
4,000	2,500		2,500	63%
15 Years of Service:				
$1,500	$ 563		$ 563	38%
2,000	750		750	38%
2,500	938		938	38%
3,000	1,125		1,125	38%
3,500	1,313		1,313	38%
4,000	1,500		1,500	38%

[1] "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

[2] "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

[3] Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-4(62) Benefit Program is Years of Credited Service
times: 2.00% of FAS [1] to age 62)
1.00% of FAS [1] at age 62)

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3] To 62	LAGERS BENEFIT [3] At 62	Estimated Social Security [2]	Estimated Monthly Total To 62	Estimated Monthly Total At 62	Percent of FAS To 62	Percent of FAS At 62
35 Years of Service:							
$1,500	$1,050	$ 525	$ 725	$1,050	$1,250	70%	83%
2,000	1,400	700	847	1,400	1,547	70%	77%
2,500	1,750	875	969	1,750	1,844	70%	74%
3,000	2,100	1,050	1,092	2,100	2,142	70%	71%
3,500	2,450	1,225	1,214	2,450	2,439	70%	70%
4,000	2,800	1,400	1,336	2,800	2,736	70%	68%
25 Years of Service:							
$1,500	$ 750	$ 375	$ 725	$ 750	$1,100	50%	73%
2,000	1,000	500	847	1,000	1,347	50%	67%
2,500	1,250	625	969	1,250	1,594	50%	64%
3,000	1,500	750	1,092	1,500	1,842	50%	61%
3,500	1,750	875	1,214	1,750	2,089	50%	60%
4,000	2,000	1,000	1,336	2,000	2,336	50%	58%
15 Years of Service:							
$1,500	$ 450	$225	$ 725	$ 450	$ 950	30%	63%
2,000	600	300	847	600	1,147	30%	57%
2,500	750	375	969	750	1,344	30%	54%
3,000	900	450	1,092	900	1,542	30%	51%
3,500	1,050	525	1,214	1,050	1,739	30%	50%
4,000	1,200	600	1,336	1,200	1,936	30%	48%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 62 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary

(LT-4(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS [1] to age 65)
1.00% of FAS [1] at age 65)

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3] To 65	LAGERS BENEFIT [3] At 65	Estimated Social Security [2]	Estimated Monthly Total To 65	Estimated Monthly Total At 65	Percent of FAS To 65	Percent of FAS At 65
35 Years of Service:							
$1,500	$1,050	$ 525	$ 890	$1,050	$1,415	70%	94%
2,000	1,400	700	1,040	1,400	1,740	70%	87%
2,500	1,750	875	1,190	1,750	2,065	70%	83%
3,000	2,100	1,050	1,343	2,100	2,393	70%	80%
3,500	2,450	1,225	1,493	2,450	2,718	70%	78%
4,000	2,800	1,400	1,642	2,800	3,042	70%	76%
25 Years of Service:							
$1,500	$ 750	$ 375	$ 890	$ 750	$1,265	50%	84%
2,000	1,000	500	1,040	1,000	1,540	50%	77%
2,500	1,250	625	1,190	1,250	1,815	50%	73%
3,000	1,500	750	1,343	1,500	2,093	50%	70%
3,500	1,750	875	1,493	1,750	2,368	50%	68%
4,000	2,000	1,000	1,642	2,000	2,642	50%	66%
15 Years of Service:							
$1,500	$ 450	$225	$ 890	$ 450	$1,115	30%	74%
2,000	600	300	1,040	600	1,340	30%	67%
2,500	750	375	1,190	750	1,565	30%	63%
3,000	900	450	1,343	900	1,793	30%	60%
3,500	1,050	525	1,493	1,050	2,018	30%	58%
4,000	1,200	600	1,642	1,200	2,242	30%	56%

[1] "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

[2] "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

[3] Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

(LT-5(62) Benefit Program is Years of Credited Service
times: 2.00% of FAS [1] to age 62)
1.25% of FAS [1] at age 62)

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3] To 62	LAGERS BENEFIT [3] At 62	Estimated Social Security [2]	Estimated Monthly Total To 62	Estimated Monthly Total At 62	Percent of FAS To 62	Percent of FAS At 62
35 Years of Service:							
$1,500	$1,050	$ 656	$ 725	$1,050	$1,381	70%	92%
2,000	1,400	875	847	1,400	1,722	70%	86%
2,500	1,750	1,094	969	1,750	2,063	70%	83%
3,000	2,100	1,313	1,092	2,100	2,405	70%	80%
3,500	2,450	1,531	1,214	2,450	2,745	70%	78%
4,000	2,800	1,750	1,336	2,800	3,086	70%	77%
25 Years of Service:							
$1,500	$ 750	$ 469	$ 725	$ 750	$1,194	50%	80%
2,000	1,000	625	847	1,000	1,472	50%	74%
2,500	1,250	781	969	1,250	1,750	50%	70%
3,000	1,500	938	1,092	1,500	2,030	50%	68%
3,500	1,750	1,094	1,214	1,750	2,308	50%	66%
4,000	2,000	1,250	1,336	2,000	2,586	50%	65%
15 Years of Service:							
$1,500	$ 450	$281	$ 725	$ 450	$1,006	30%	67%
2,000	600	375	847	600	1,222	30%	61%
2,500	750	469	969	750	1,438	30%	58%
3,000	900	563	1,092	900	1,655	30%	55%
3,500	1,050	656	1,214	1,050	1,870	30%	53%
4,000	1,200	750	1,336	1,200	2,086	30%	52%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 62 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary

(LT-5(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS [1] to age 65)
1.25% of FAS [1] at age 65)

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3] To 65	LAGERS BENEFIT [3] At 65	Estimated Social Security [2]	Estimated Monthly Total To 65	Estimated Monthly Total At 65	Percent of FAS To 65	Percent of FAS At 65
35 Years of Service:							
$1,500	$1,050	$ 656	$ 890	$1,050	$1,546	70%	103%
2,000	1,400	875	1,040	1,400	1,915	70%	96%
2,500	1,750	1,094	1,190	1,750	2,284	70%	91%
3,000	2,100	1,313	1,343	2,100	2,656	70%	89%
3,500	2,450	1,531	1,493	2,450	3,024	70%	86%
4,000	2,800	1,750	1,642	2,800	3,392	70%	85%
25 Years of Service:							
$1,500	$ 750	$ 469	$ 890	$ 750	$1,359	50%	91%
2,000	1,000	625	1,040	1,000	1,665	50%	83%
2,500	1,250	781	1,190	1,250	1,971	50%	79%
3,000	1,500	938	1,343	1,500	2,281	50%	76%
3,500	1,750	1,094	1,493	1,750	2,587	50%	74%
4,000	2,000	1,250	1,642	2,000	2,892	50%	72%
15 Years of Service:							
$1,500	$ 450	$281	$ 890	$ 450	$1,171	30%	78%
2,000	600	375	1,040	600	1,415	30%	71%
2,500	750	469	1,190	750	1,659	30%	66%
3,000	900	563	1,343	900	1,906	30%	64%
3,500	1,050	656	1,493	1,050	2,149	30%	61%
4,000	1,200	750	1,642	1,200	2,392	30%	60%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-8(62) Benefit Program is Years of Credited Service
times: 2.00% of FAS [1] to age 62)
1.50% of FAS [1] at age 62)

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]		Estimated Social Security [2]	Estimated Monthly Total		Percent of FAS	
	To 62	At 62		To 62	At 62	To 62	At 62
35 Years of Service:							
$1,500	$1,050	$ 788	$ 725	$1,050	$1,513	70%	101%
2,000	1,400	1,050	847	1,400	1,897	70%	95%
2,500	1,750	1,313	969	1,750	2,282	70%	91%
3,000	2,100	1,575	1,092	2,100	2,667	70%	89%
3,500	2,450	1,838	1,214	2,450	3,052	70%	87%
4,000	2,800	2,100	1,336	2,800	3,436	70%	86%
25 Years of Service:							
$1,500	$ 750	$ 563	$ 725	$ 750	$1,288	50%	86%
2,000	1,000	750	847	1,000	1,597	50%	80%
2,500	1,250	938	969	1,250	1,907	50%	76%
3,000	1,500	1,125	1,092	1,500	2,217	50%	74%
3,500	1,750	1,313	1,214	1,750	2,527	50%	72%
4,000	2,000	1,500	1,336	2,000	2,836	50%	71%
15 Years of Service:							
$1,500	$ 450	$338	$ 725	$ 450	$1,063	30%	71%
2,000	600	450	847	600	1,297	30%	65%
2,500	750	563	969	750	1,532	30%	61%
3,000	900	675	1,092	900	1,767	30%	59%
3,500	1,050	788	1,214	1,050	2,002	30%	57%
4,000	1,200	900	1,336	1,200	2,236	30%	56%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 62 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-8(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS [1] to age 65)
1.50% of FAS [1] at age 65)

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3] To 65	LAGERS BENEFIT [3] At 65	Estimated Social Security [2]	Estimated Monthly Total To 65	Estimated Monthly Total At 65	Percent of FAS To 65	Percent of FAS At 65
35 Years of Service:							
$1,500	$1,050	$ 788	$ 890	$1,050	$1,678	70%	112%
2,000	1,400	1,050	1,040	1,400	2,090	70%	105%
2,500	1,750	1,313	1,190	1,750	2,503	70%	100%
3,000	2,100	1,575	1,343	2,100	2,918	70%	97%
3,500	2,450	1,838	1,493	2,450	3,331	70%	95%
4,000	2,800	2,100	1,642	2,800	3,742	70%	94%
25 Years of Service:							
$1,500	$ 750	$ 563	$ 890	$ 750	$1,453	50%	97%
2,000	1,000	750	1,040	1,000	1,790	50%	90%
2,500	1,250	938	1,190	1,250	2,128	50%	85%
3,000	1,500	1,125	1,343	1,500	2,468	50%	82%
3,500	1,750	1,313	1,493	1,750	2,806	50%	80%
4,000	2,000	1,500	1,642	2,000	3,142	50%	79%
15 Years of Service:							
$1,500	$ 450	$338	$ 890	$ 450	$1,228	30%	82%
2,000	600	450	1,040	600	1,490	30%	75%
2,500	750	563	1,190	750	1,753	30%	70%
3,000	900	675	1,343	900	2,018	30%	67%
3,500	1,050	788	1,493	1,050	2,281	30%	65%
4,000	1,200	900	1,642	1,200	2,542	30%	64%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary

(LT-10(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS [1] to age 65)
1.60% of FAS [1] at age 65)

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]		Estimated Social Security [2]	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
$1,500	$1,050	$ 840	$ 890	$1,050	$1,730	70%	115%
2,000	1,400	1,120	1,040	1,400	2,160	70%	108%
2,500	1,750	1,400	1,190	1,750	2,590	70%	104%
3,000	2,100	1,680	1,343	2,100	3,023	70%	101%
3,500	2,450	1,960	1,493	2,450	3,453	70%	99%
4,000	2,800	2,240	1,642	2,800	3,882	70%	97%
25 Years of Service:							
$1,500	$750	$ 600	$ 890	$ 750	$1,490	50%	99%
2,000	1,000	800	1,040	1,000	1,840	50%	92%
2,500	1,250	1,000	1,190	1,250	2,190	50%	88%
3,000	1,500	1,200	1,343	1,500	2,543	50%	85%
3,500	1,750	1,400	1,493	1,750	2,893	50%	83%
4,000	2,000	1,600	1,642	2,000	3,242	50%	81%
15 Years of Service:							
$1,500	$ 450	$360	$ 890	$ 450	$1,250	30%	83%
2,000	600	480	1,040	600	1,520	30%	76%
2,500	750	600	1,190	750	1,790	30%	72%
3,000	900	720	1,343	900	2,063	30%	69%
3,500	1,050	840	1,493	1,050	2,333	30%	67%
4,000	1,200	960	1,642	1,200	2,602	30%	65%

[1] "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

[2] "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

[3] Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

Missouri LAGERS
Illustrations of Age and Service Allowance Amounts
For Sample Combinations of Service & Salary
(LT-14(65) Benefit Program is Years of Credited Service
times: 2.00% of FAS [1] to age 65)
1.75% of FAS [1] at age 65)

Final Average Salary (FAS) [1]	LAGERS BENEFIT [3]		Estimated Social Security [2]	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
$1,500	$1,050	$ 919	$ 890	$1,050	$1,809	70%	121%
2,000	1,400	1,225	1,040	1,400	2,265	70%	113%
2,500	1,750	1,531	1,190	1,750	2,721	70%	109%
3,000	2,100	1,838	1,343	2,100	3,181	70%	106%
3,500	2,450	2,144	1,493	2,450	3,637	70%	104%
4,000	2,800	2,450	1,642	2,800	4,092	70%	102%
25 Years of Service:							
$1,500	$ 750	$ 656	$ 890	$ 750	$1,546	50%	103%
2,000	1,000	875	1,040	1,000	1,915	50%	96%
2,500	1,250	1,094	1,190	1,250	2,284	50%	91%
3,000	1,500	1,313	1,343	1,500	2,656	50%	89%
3,500	1,750	1,531	1,493	1,750	3,024	50%	86%
4,000	2,000	1,750	1,642	2,000	3,392	50%	85%
15 Years of Service:							
$1,500	$ 450	$ 394	$ 890	$ 450	$1,284	30%	86%
2,000	600	525	1,040	600	1,565	30%	78%
2,500	750	656	1,190	750	1,846	30%	74%
3,000	900	788	1,343	900	2,131	30%	71%
3,500	1,050	919	1,493	1,050	2,412	30%	69%
4,000	1,200	1,050	1,642	1,200	2,692	30%	67%

1 "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

2 "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2014 - it does not include any amounts which might be payable to an eligible spouse or children.

3 Amounts are shown to nearest $1, for simplicity; actual amounts are to nearest 1¢.

McCloud & Associates, Inc.
QUALIFIED PLAN CONSULTING AND ADMINISTRATION

May 19, 2016

Board of Trustees
Hannibal Policemen and Firemen Retirement Fund

Cost statement of Proposed Changes to the Plan

Dear Board Members:

According to Missouri Revised Statute 105.665: 1. The legislative body or committee thereof which determines the amount and type of plan benefits to be paid shall, before taking final action on any substantial proposed change in plan benefits, cause to be prepared a statement regarding the cost of such change.

The following cost statement employs the methods used in preparing the most recent periodic actuarial valuation for the plan and addresses the requirements in the order they are requested in the Statute:

(1) The total level normal cost of plan benefits currently in effect, is $165,973. Expressed as a percent of active employee payroll is 4.6%.

(2) The contribution for unfunded accrued liabilities currently payable by the plan is $861,927. Expressed as a percent of active employee payroll over a period of 20 years is 23.7%;

(3) The total contribution rate, which is the total of the normal cost percent plus the contribution percent for unfunded accrued liabilities adjusted with interest is $1,066,446. Expressed as a percent of active employee payroll over a period of 20 years is 29.4%;

(4) The legislative body is currently paying more than the total contribution rate as defined in subdivision (3) of this subsection;

(5) The plan's actuarial value of assets, market value of assets, actuarial accrued liability, and funded ratio as defined in section 105.660 as of the most recent actuarial valuation is:

Actuarial Value of Assets	$15,285,088
Market Value of Assets	$15,285,088
Actuarial Accrued Liability	$27,598,708
Funded Ratio	55.4%

(6) The total post-change contribution rate is $1,030,391. Expressed as a percent of active employee payroll over a period of 20 years is 28.4%;

(7) By mitigating the risk of unexpected future plan liabilities without increasing costs, the proposed change will improve the ability of the plan to meet its obligations with respect to all benefits offered by the Plan thereof in effect at the time the proposal is made. Please see attached actuarial projections.

(8) No additional contributions are mandated by the proposed change;

(9) The proposed change would not, in any way, impair the ability of the plan to meet the obligations thereof in effect at the time the proposal is made;

(10) All assumptions relied upon to evaluate the present financial condition of the plan and all assumptions relied upon to evaluate the impact of the proposed change upon the financial condition of the plan, which are those assumptions used in preparing the most recent periodic actuarial valuation for the plan, are:

(a) Investment return of 7.50%;

(b) Pay increases of 4.0%;

(c) Mortality of employees and officials, and other persons who may receive benefits under the plan is the RP 2000 Combined Blue Collar mortality table projected to the valuation year by scale AA;

(d) Withdrawal (turnover) is based on past experience of the Plan. Sample rates are as follows:

Age	Annual Rates of Termination
25	10.0%
30	7.5
35	5.0
40	4.0
45	2.0
50	1.0

(e) Disability is based on past experience of the Plan. Sample rates are as follows:

Annual Rates of Disability

Age	Rate
25	0.18%
30	0.18
40	0.30
50	0.79
55	1.35
60	2.00

(f) Retirement rate is 75% at 25 years of service. If a Member has at least 20 years of service, the rate is 10% through age 61, 25% at age 62, 10% at age 63, 15% at age 64 and 100% for age 65 and older.;

(g) There has been no change in active employee group size;

(11) As the Plan actuary I certify that the assumptions used for the valuation produce results which, in the aggregate, are reasonable;

(12) Actuarial Method Used for the Valuation – Entry Age Normal

Normal Cost. Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

The annual normal costs for each individual active Member, payable from date of hire to date of retirement, are sufficient to accumulate the value of the Member's benefit at the time of retirement;

Each annual normal cost is a constant percentage of the Member's year-by-year projected covered pay.

The excess of accrued assets over actuarial accrued assets was amortized as a level percent-of-payroll over 20 years.

Respectfully submitted,

Traci M. Christian, EA, MAAA, MSPA, FCA

Current Plan Provisions

Year	Total Normal Cost	Employer Normal Cost	Amortization	Recommended City Contribution	Expected 35% City Contribution	Payroll	Recommended Contribution as a % of Payroll	Expected Benefit Payments	Assets	Accrued Liability	Unfunded Liability	Funded Ratio
2015	510,783	165,973	861,927	1,066,446	1,270,354	3,629,583	29.4%	1,659,255	15,285,088	27,598,708	12,313,620	55.4%
2016	528,660	171,782	872,750	1,083,702	1,314,816	3,756,618	28.8%	1,640,902	16,027,985	28,496,226	12,468,241	56.2%
2017	547,164	177,794	882,502	1,100,057	1,360,835	3,888,100	28.3%	1,823,515	16,891,770	29,499,317	12,607,547	57.3%
2018	566,314	184,017	891,034	1,115,366	1,408,464	4,024,184	27.7%	1,798,693	17,678,622	30,408,070	12,729,447	58.1%
2019	586,135	190,457	898,189	1,129,471	1,457,760	4,165,030	27.1%	1,875,128	18,599,657	31,431,319	12,831,662	59.2%
2020	606,650	197,123	903,792	1,142,200	1,508,782	4,310,806	26.5%	2,089,774	19,561,612	32,473,318	12,911,706	60.2%
2021	627,883	204,023	907,653	1,153,364	1,561,589	4,461,684	25.9%	2,086,271	20,425,954	33,392,825	12,966,871	61.2%
2022	649,859	211,164	909,567	1,162,758	1,616,245	4,617,843	25.2%	2,199,493	21,413,543	34,407,754	12,994,211	62.2%
2023	672,604	218,554	909,309	1,170,158	1,672,814	4,779,468	24.5%	2,281,713	22,414,439	35,404,960	12,990,520	63.3%
2024	696,145	226,204	906,635	1,175,320	1,731,362	4,946,749	23.8%	2,307,286	23,463,789	36,416,103	12,952,314	64.4%
2025	720,510	234,121	901,279	1,177,977	1,791,960	5,119,885	23.0%	2,506,053	24,626,052	37,501,858	12,875,805	65.7%
2026	745,728	242,315	892,955	1,177,842	1,854,678	5,299,081	22.2%	2,535,356	25,732,135	38,489,015	12,756,880	66.9%
2027	771,828	250,796	881,349	1,174,600	1,919,592	5,484,549	21.4%	2,531,280	26,955,842	39,546,917	12,591,075	68.2%
2028	798,842	259,574	866,122	1,167,909	1,986,778	5,676,508	20.6%	2,634,552	28,342,904	40,716,448	12,373,544	69.6%
2029	826,802	268,659	846,907	1,157,399	2,056,315	5,875,186	19.7%	2,773,030	29,796,556	41,895,589	12,099,033	71.1%
2030	855,740	278,062	823,304	1,142,668	2,128,286	6,080,818	18.8%	2,630,791	31,287,706	43,049,551	11,761,845	72.7%
2031	885,691	287,794	794,882	1,123,277	2,202,776	6,293,646	17.8%	2,649,256	33,112,935	44,468,742	11,355,807	74.5%
2032	916,690	297,867	761,173	1,098,754	2,279,873	6,513,924	16.9%	2,700,019	35,133,183	46,007,412	10,874,229	76.4%
2033	948,774	308,292	721,669	1,068,585	2,359,669	6,741,911	15.8%	2,709,114	37,332,270	47,642,140	10,309,869	78.4%
2034	981,981	319,083	675,822	1,032,213	2,442,257	6,977,878	14.8%	2,697,613	39,769,641	49,424,526	9,654,885	80.5%
2035	1,016,350	330,250	623,036	989,035	2,527,736	7,222,104	13.7%	2,705,388	42,487,433	51,388,222	8,900,789	82.7%

The results presented here are ESTIMATES. They are based on the data, assumptions, methods and plan provisions outlined in this report.
These projections assume a future contribution rate of 35% of payroll.
These results are for **discussion purposes only** and should not be relied upon for purposes of making cash contributions to the Plan nor for any other purposes.

Post Change

Year	Total Normal Cost	Employer Normal Cost	Amortization	Recommended City Contribution	Expected 35% City Contribution	Payroll	Recommended Contribution as a % of Payroll	Expected Benefit Payments	Assets	Accrued Liability	Unfunded Liability	Funded Ratio
2015	476,031	131,221	861,927	1,030,391	1,270,354	3,629,583	28.4%	1,659,255	15,285,088	27,598,708	12,313,620	55.4%
2016	492,692	135,813	870,135	1,043,672	1,314,816	3,756,618	27.8%	1,640,902	16,027,985	28,458,867	12,430,882	56.3%
2017	509,936	140,567	876,984	1,055,709	1,360,835	3,888,100	27.2%	1,823,515	16,891,770	29,420,491	12,528,721	57.4%
2018	527,784	145,487	882,302	1,066,330	1,408,464	4,024,184	26.5%	1,798,693	17,678,622	30,283,312	12,604,690	58.4%
2019	546,257	150,579	885,902	1,075,349	1,457,760	4,165,030	25.8%	1,875,128	18,599,657	31,255,784	12,656,128	59.5%
2020	565,375	155,849	887,583	1,082,560	1,508,782	4,310,806	25.1%	2,089,774	19,561,612	32,241,749	12,680,137	60.7%
2021	585,164	161,304	887,123	1,087,742	1,561,589	4,461,684	24.4%	2,086,271	20,425,954	33,099,518	12,673,564	61.7%
2022	605,644	166,949	884,282	1,090,653	1,616,245	4,617,843	23.6%	2,199,493	21,413,543	34,046,527	12,632,983	62.9%
2023	626,842	172,792	878,800	1,091,028	1,672,814	4,779,468	22.8%	2,281,713	22,414,439	34,969,110	12,554,670	64.1%
2024	648,781	178,840	870,394	1,088,581	1,731,362	4,946,749	22.0%	2,307,286	23,463,789	35,898,371	12,434,582	65.4%
2025	671,489	185,100	858,757	1,083,001	1,791,960	5,119,885	21.2%	2,506,053	24,626,052	36,894,379	12,268,327	66.7%
2026	694,991	191,578	843,555	1,073,950	1,854,678	5,299,081	20.3%	2,535,356	25,732,135	37,783,278	12,051,144	68.1%
2027	719,316	198,283	824,426	1,061,061	1,919,592	5,484,549	19.3%	2,531,280	26,955,842	38,733,707	11,777,866	69.6%
2028	744,492	205,223	800,978	1,043,934	1,986,778	5,676,508	18.4%	2,634,552	28,342,904	39,785,797	11,442,893	71.2%
2029	770,549	212,406	772,788	1,022,138	2,056,315	5,875,186	17.4%	2,773,030	29,796,556	40,836,712	11,040,156	73.0%
2030	797,518	219,840	739,393	995,205	2,128,286	6,080,818	16.4%	2,630,791	31,287,706	41,850,787	10,563,081	74.8%
2031	825,431	227,535	700,297	962,625	2,202,776	6,293,646	15.3%	2,649,256	33,112,935	43,117,482	10,004,547	76.8%
2032	854,321	235,498	654,959	923,850	2,279,873	6,513,924	14.2%	2,700,019	35,133,183	44,490,029	9,356,846	79.0%
2033	884,222	243,741	602,796	878,282	2,359,669	6,741,911	13.0%	2,709,114	37,332,270	45,943,906	8,611,636	81.3%
2034	915,170	252,272	543,176	825,277	2,442,257	6,977,878	11.8%	2,697,613	39,769,641	47,529,533	7,759,891	83.7%
2035	947,201	261,101	475,415	764,136	2,527,736	7,222,104	10.6%	2,705,388	42,487,433	49,279,282	6,791,849	86.2%

The results presented here are ESTIMATES. They are based on the data, assumptions, methods and plan provisions outlined in this report.
These projections assume a future contribution rate of 35% of payroll.
These results are for **discussion purposes only** and should not be relied upon for purposes of making cash contributions to the Plan nor for any other purposes.

Joint Committee on Public Employee Retirement
Quarterly Reports

2016 Second Quarter

Plan Name	Beg. Mkt Value	End Mkt Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.	ROR for Inv	Price Inf. Assump..	Sal/Wage Assump.
Affton FPD Retirement Plan	$7,158,387	$7,218,998	1.2% (Net)	6.6% (Net)	6.5% (Net)	6.5%	2.75%	3.5%
Arnold Police Pension Plan	$10,645,012	$10,875,274	-0.50% (Net)	5.46% (Net)	5.66% (Net)	3.5%	3.0%	4.5%
Berkeley Police & Fire Pension Fund	$11,668,169	$11,686,262	N/A% (Net)	N/A% (Net)	N/A% (Net)	7.5%	2.5%	1.5%
Black Jack FPD Retirement Plan	$11,034,127	$11,369,933	1% (Gross)	1% (Gross)	1% (Gross)	7%	3%	2%
Bridgeton Employees Retirement Plan	$25,182,385	$25,432,932	-2.44% (Net)	3.40% (Net)	4.33% (Net)	7.50%	3.00%	4.00%
Carthage Policemen's & Firemen's Pension Plan	$6,372,948	$6,451,895	.69% (Net)	5.58% (Net)	5.47% (Net)	7.0%	2.2%	3.5%
Cedar Hill Fire Protection District Length of Service Awards Program	$138,112	$138,905	N/A% (Gross)	N/A% (Gross)	N/A% (Gross)	4.75%	N/A%	N/A%
Columbia Police and Firemens' Retirement Plan	$117,968,182	$118,883,229	-2.34% (Net)	5.12% (Net)	5.12% (Net)	7.50%	3%	3.50%
County Employees Retirement Fund	$426,486,000	$429,294,000	-3.01% (Gross)	5.77% (Gross)	6.46% (Gross)	7.5%	2.5%	2.5%
Creve Coeur Employees Retirement Plan	$21,359,484	$21,987,226	1.5% (Net)	6.7% (Net)	6.7% (Net)	7.5%	3.5%	5.0%
Creve Coeur FPD Retirement Plan	$9,963,918	$10,010,701	n/a% (Gross)	n/a% (Gross)	n/a% (Gross)	7%	3%	4%
Eureka FPD Retirement Plan	$9,958,912	$10,074,111	1% (Gross)	1% (Gross)	1% (Gross)	7%	3%	2%
Firefighter's Retirement Plan of the City of St. Louis	$31,952,357	$32,741,922	n/a% (Gross)	n/a% (Gross)	n/a% (Gross)	7.625%	3%	3%
Florissant Valley FPD Retirement Plan	$24,128,223	$24,575,125	n/a% (Net)	n/a% (Net)	n/a% (Net)	6.25%	2.50%	see comments%
Glendale Pension Plan	$4,831,865	$4,982,916	1.69% (Gross)	N/A% (Gross)	N/A% (Gross)	7.50%	2.50%	3.75%
Hannibal Police & Fire Retirement Plan	$15,208,079	$15,429,690	4.2% (Gross)	7.1% (Gross)	6.7% (Gross)	7.5%	2%	3.5%
Hazelwood Retirement Plan	$33,919,975	$34,102,326	-6.28% (Net)	8.69% (Net)	9.41% (Net)	7.5%	3%	4.5%
High Ridge Fire Protection District Pension Plan	$7,302,742	$7,119,657	1.2% (Net)	5.9% (Net)	5.8% (Net)	5.5%	2.5%	0%
Jackson County Employees Pension Plan	$240,308,184	$242,069,008	0.45% (Gross)	6.53% (Gross)	7.02% (Gross)	7%	2.5% annually	4%
Jefferson City Firemen's Retirement System	$15,790,120	$15,786,613	1.23% (Net)	4.36% (Net)	4.54% (Net)	5.50%	2.50%	n/a%

Plan Name	Beg. Mkt Value	End Mkt Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.	ROR for Inv	Price Inf. Assump..	Sal/Wage Assump.
Kansas City Civilian Police Employees' Retirement System	$121,271,000	$122,603,000	1.21% (Gross)	6.04% (Gross)	5.44% (Gross)	7.5%	3.0%	3.75%
Kansas City Police Retirement System	$767,068,000	$771,802,000	1.40% (Gross)	6.24% (Gross)	5.63% (Gross)	7.5%	3.0%	3.75%
Kansas City Supplemental Retirement Plan	$1,441,612	$1,409,116	0% (Gross)	0% (Gross)	0% (Gross)	0%	0%	0%
KC Trans. Auth. Union Employees Pension Plan	$43,222,231	$44,152,045	1.32% (Net)	6.77% (Net)	6.70% (Net)	7.50%	3.00%	4.25%
Ladue Non-uniformed Employees Retirement Plan	$4,349,665	$4,375,062	-.4% (Net)	6.1% (Net)	5.67% (Net)	7.0%	2.5%	4.5%
Ladue Police & Fire Pension Plan	$30,318,300	$30,432,997	-0.38% (Net)	6.15% (Net)	5.69% (Net)	7.0%	2.5%	4.5%
LAGERS Staff Retirement Plan	$9,350,451	$9,635,742	4.73% (Net)	8.12% (Net)	7.55% (Net)	7.25%	2.5%	3.25%
Little River Drainage Dist Retirement Plan	$1,302,782	$1,340,146	.53% (Net)	2.89% (Net)	3.01% (Net)	5.0%	0%	3.5%
Local Government Employees Retirement System	$6,177,905,092	$6,273,160,892	-0.19% (Net)	6.67% (Net)	7.57% (Net)	7.25%	2.5%	3.25%
Metro West FPD Retirement Plan	$41,203,555	$41,956,782	-0.98% (Net)	5.61% (Net)	4.79% (Net)	N/A%	N/A%	n/A%
Missouri State Employees Retirement System	$7,891,048,602	$8,227,875,711	0.2938% (Net)	5.1752% (Net)	5.5920% (Net)	8.0%	2.5%	3.0%
MoDOT & Highway Patrol Employees' Retirement System	$1,956,782,858	$1,984,989,056	1.01% (Net)	8.19% (Net)	8.10% (Net)	7.75%	3.0%	3.5%
North Kansas City Hospital Retirement Plan	$237,188,334	$245,651,313	1.91% (Net)	7.19% (Net)	7.18% (Net)	7.0%	2.3%	2.5%
North Kansas City Policemen's & Firemen's Retirement Fund	$46,800,828	$47,086,240	2.1% (Net)	1.0% (Net)	6.6% (Net)	6.5%	4.0%	1.25%
Olivette Salaried Employees' Retirement Plan	$18,738,654	$19,109,804	1.5% (Net)	7.4% (Net)	7.5% (Net)	7.25%	2.75%	4.00%
Overland Non-uniform Pension Fund	$9,420,000	$9,629,000	.68% (Net)	5.74% (Net)	5.15% (Net)	7%	2.5%	3.5%
Overland Police Retirement Fund	$11,840,000	$12,061,000	.58% (Net)	5.86% (Net)	5.32% (Net)	7%	2.5%	3.5%
Pattonville-Bridgeton FPD Retirement Plan	$121,922,645	$28,680,507	3.18% (Net)	6.15% (Net)	6.68% (Net)	7.75%	2.5%	2%
Prosecuting Attorneys' Retirement System	$37,080,543	$37,772,580	.10% (Net)	4.98% (Net)	4.62% (Net)	3.63%	1.5%	0%
Public Education Employees' Retirement System	$3,907,632,108	$3,983,897,399	1.8% (Net)	7.5% (Net)	7.2% (Net)	7.75%	2.25%	3.25%
Public School Retirement System	$33,612,486,848	$34,081,714,882	1.8% (Net)	7.6% (Net)	7.4% (Net)	7.75%	2.25%	2.75%
Raytown Policemen's Retirement Fund	$9,880,964	$9,943,621	0.09% (Gross)	5.92% (Gross)	5.73% (Gross)	7.5%	2.5%	N/A%
Richmond Heights Police & Fire Retirement Plan	$47,477,712	$47,329,897	-1.39% (Net)	6.46% (Net)	7.06% (Net)	7.0%	3.0%	5.0%
Rock Community FPD Retirement Plan	$14,335,516	$14,486,073	-0.79% (Net)	6.19% (Net)	6.31% (Net)	7.5%	2.5%	3.0%

Plan Name	Beg. Mkt Value	End Mkt Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.	ROR for Inv	Price Inf. Assump..	Sal/Wage Assump.
Rock Hill Police & Firemen's Pension Plan	$1,938,130	$1,901,027	2.05% (Net)	2.05% (Net)	2.05% (Net)	6.40%	3.0%	6.50%
Saline Valley Fire Protection District Retirement Plan	$2,417,000	$2,467,880	0.70% (Net)	5.5% (Net)	5.1% (Net)	7.0%	2.5%	2.5%
Sedalia Firemen's Retirement Fund	$6,986,184	$6,998,333	4.0% (Gross)	7.1% (Gross)	6.8% (Gross)	7%	2%	3%
Sedalia Police Retirement Fund	$3,077,137	$3,203,995	-3.21% (Gross)	.57% (Gross)	N/A% (Gross)	6%	None%	None%
Sheriff's Retirement System	$39,087,043	$39,672,280	2.396% (Gross)	8.115% (Gross)	9.263% (Gross)	6.5%	3.5%	see comme nt%
St. Louis County Employees Retirement Plan	$591,370,537	$593,813,559	-1.58% (Gross)	6.97% (Gross)	6.73% (Gross)	7.75%	2.5%	4.5%
St. Louis County Library Dist Empl Pension Plan	$42,504,793	$42,478,237	-1.48% (Net)	4.93% (Net)	4.72% (Net)	7.0%	2.5%	3.5%
St. Louis Employees Retirement System	$732,587,322	$743,310,077	-1.39% (Gross)	5.81% (Gross)	6.54% (Gross)	7.5%	2.5%	3.0%
St. Louis Firemen's Retirement System	$443,008,676	$440,090,512	-1.20% (Gross)	6.37% (Gross)	6.80% (Gross)	7%	2.75%	3%
St. Louis Police Retirement System	$664,217,801	$658,058,885	-1.4% (Net)	5% (Net)	4.9% (Net)	7.75%	2.5%	3%
St. Louis Public School Retirement System	$837,866,746	$825,108,731	-1.5% (Net)	5.6% (Net)	5.6% (Net)	8.0%	3.5%	4.5%
Valley Park FPD Retirement Plan	$5,316,840	$5,273,861	0.06% (Net)	6.89% (Net)	7.00% (Net)	7.00%	1.0%	4.00%
	$59,521,823,690	$60,453,702,965						

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Making a D!fference
July 13-15, 2016 • Tan-Tar-A Resort

Wednesday, July 13, 2016 - Salon A, 6th Floor

10:00 - 5:00 pm *Registration/Courtesy Desk Open*
12:00 - 12:45 pm **Sunshine Law** - Omar Davis, Investment Legal & Compliance Counsel, MOSERS
12:55 - 1:40 pm **Board Administration/Governance** - John Brewer, Director, Firemen's Retirement System, St. Louis
Sue Cox, Executive Director, Association of Retirement Mo. State Employees
Aaron Zalis, Board Chairman, Public School Ret. Sys/Public Edu.Emp. Ret. Sys.
1:50 - 2:35 pm **Capitol Report** - Michael Ruff, Executive Director, Joint Committee-Public Employee Retirement
2:35 - 2:50 pm *Afternoon Break*
2;50 - 3:15 pm **Reframing the Debate Update** - Bob Wilson, Asst. Executive Secretary, Mo. Local Gov. Emp. Ret. System
3:15 - 4:00 pm **The Benefits of DB Plans: Getting the Story Out -** Leslie Thompson, Sr. Consultant, Gabriel, Roeder, Smith & Company
4:00 - 4:20 pm **Why Public Service?** - Tim Moss, President, Oak Forest Fire Pension Board
4:30 - 5:00 pm **Pensionology** - Jeff Kempker, Manager of Member Services, Mo. Local Gov. Emp. Retirement System
OR
4:30 - 5:00 pm **Pension Investing 101 - Types of Investments, Policies & Economic Indicators** - Emily Kampeter, 2nd VP, Government Division & Michael McCoy, Sr. VP, Investment Division, Central Bank
5:30 - 7:00 pm *Whole Hog Reception - Open to all Attendees/Guests/Family (Name Tags Required)*

Thursday, July 14, 2016 - Salon A, 6th Floor

7:00 - 8:15 am *Breakfast Buffet - Open to all Attendees/Guests/Family (Name Tags Required)*
7:30 - 4:00 pm *Registration/Courtesy Desk Open*
8:15 - 8:30 am **Opening Remarks** - Tom Stoff, MAPERS Board President
8:30 - 9:30 am **Introduction to Information Security Threats & Risks -** David Trepp, President & CEO, Info@Risk, Inc.
9:40 - 10:40 am **Economic Update - Where are we Now and What's on the Horizon** -
Dr. Chris Kuehl, Managing Director, Armada Corporate Intelligence
10:40 - 10:50 am *Morning Break*
10:50 - 11:50 am **Changing Regulatory Environment -** Scott Colbert, CFA, Commerce Bank
11:50 - 12:00 N *Awards & Sponsor Recognition*

12:00 - 1:00 pm *Lunch - Open to all Attendees/Guests/Family (Name Tags Required)*

1:00 - 2:00 pm **Crashes, Terrorists & Sharks, Oh My!** - Barry Ritholtz, Chairman & CIO, Ritholtz Wealth Management

2:10 - 3:10 pm **Re-visioning Retirement: New Timing, New Purpose, New Planning, New Funding** - Dan Veto, Sr. Advisor, AgeWave

3:10 - 3:30 pm *Afternoon Break*

3:30 - 4:30 pm **Geopolitical Events - Currencies/Markets** - Brian Singer, William Blair & Company

5:30 - 7:00 pm *Surf, Turf & Pasta Reception - Open to all Attendees/Guests/Family (Name Tags Required)*

Friday, July 15, 2016 - Salon A, 6th Floor

7:00 - 8:15 am *Breakfast Buffet - Open to all Attendees/Guests/Family (Name Tags Required)*

8:15 - 9:15 am **Ethics - Conflicts of Interest** - James Klahr, Executive Director, Missouri Ethics Commission

9:25 - 10:25 am **Why Audits Matter: Process, Policies and Planning** - Nicole Galloway, CPA, MO State Auditor, Office of the State Auditor

10:25 - 10:40 am *Morning Break*

10:40 - 11:40 am **Benefits Panel (Participant Communication, Retirement Counseling, etc.)** - Presenters TBA

11:40 - 12:00 N **General Business Meeting - Close of Conference** - Tom Stoff, MAPERS Board President

12:00 - 12:30 pm *Lunch on the Run - Open to all Attendees/Guests/Family*

Missouri Revised Statutes

Chapter 105

Public Officers and Employees--Miscellaneous Provisions

←105.665 **Section 105.666.1** 105.667→

August 28, 2015

Board member education program, curriculum, requirements--annual pension benefit statement required.

105.666. 1. Each plan shall, in conjunction with its staff and advisors, establish a board member education program, which shall be in effect on or after January 1, 2008. The curriculum shall include, at a minimum, education in the areas of duties and responsibilities of board members as trustees, ethics, governance process and procedures, pension plan design and administration of benefits, investments including but not limited to the fiduciary duties as defined under section 105.688, legal liability and risks associated with the administration of a plan, sunshine law requirements under chapter 610, actuarial principles and methods related to plan administration, and the role of staff and consultants in plan administration. Board members appointed or elected on a board on or after January 1, 2008, shall complete a board member education program designated to orient new board members in the areas described in this section within ninety days of becoming a new board member. Board members who have served one or more years shall attend at least a total of six hours of continuing education programs each year in the areas described in this section.

2. Routine annual presentation by outside plan service providers shall not be used to satisfy board member education or continuing education program requirements contained in subsection 1 of this section. Such service providers may be utilized to perform education programs with such programs being separate and apart from routine annual presentations.

3. Plan governing body or staff shall maintain a record of board member education including, but not limited to, date, time length, location, education material, and any facilitator utilized. The record shall be signed and attested to by the attending board member or board chairperson or designee. Such information shall be maintained for public record and disclosure for at least three years or until the expiration of such board member's term, whichever occurs first.

4. A board member who is knowingly not participating in the required education programs under this section may be removed from such board by a majority of the board members which shall result in a vacancy to be filled in accordance with plan provisions except that ex officio board members shall not be removed under this subsection.

5. Each plan shall, upon the request of any individual participant, provide an annual pension benefit statement which shall be written in a manner calculated to be understood by the average plan participant and may be delivered in written, electronic, or other appropriate form to the extent such form is reasonably accessible to each participant or beneficiary. Such pension benefit statement shall include, but not be limited to, accrued participant contributions to the plan, total benefits accrued, date first eligible for a normal retirement benefit, and projected benefit at normal retirement. Any plan failing to do so shall submit in writing to the joint committee on public employee retirement as to why the information may not be provided as requested.

(L. 2007 S.B. 406, A.L. 2014 H.B. 1882)

2007

Top

Missouri General Assembly

GREENSFELDER
ATTORNEYS AT LAW

Greensfelder, Hemker & Gale, P.C.
10 South Broadway, Ste. 2000
St. Louis, MO 63102

T: 314-241-9090
F: 314-241-8624
www.greensfelder.com

Chicago Office:
200 West Madison St., Ste. 2700
Chicago, IL 60606
T: 312-419-9090

Belleville Office:
12 Wolf Creek Dr., Ste. 100
Belleville, IL 62226
T: 618-257-7308

THOMAS H. MUG
DIRECT DIAL (314) 345-4732
thm@greensfelder.com

RECEIVED
MAY 1 1 2016
BY: ....

May 6, 2016

Mr. Michael Ruff
Joint Committee on Public Employee Retirement
Missouri State Capitol Building
Room 219-A
Jefferson City, MO 65101

Re: §105.666 R.S.Mo. – Trustee Education

Dear Mr. Ruff:

Our firm represents numerous public employee retirement plans from various municipalities, fire protection districts, and public housing authorities. As part of our representation, we provide seminars for our clients in order to meet the statutory education requirements. We also invite trustees from non-client plans to these programs as well.

One question has arisen in our discussion with trustees of various plans. The specific question is whether self-study qualifies as trustee education meeting the statutory requirements. We believe not and have so advised our clients. However, we would appreciate it if you could either confirm our conclusion or let us know that we have incorrectly interpreted the statute.

Our conclusion is based primarily on the last sentence of Section 105.666.1 R.S.Mo. which states:

> Board members who have served one or more years <u>shall attend</u> at least a total of six hours of continuing education programs each year in the areas described in this section. (Emphasis added.)

In addition, subsection 3 requires that the governing body maintain "a record of board member education including, but not limited to, date, time length, location, education material, and any facilitator utilized." Obviously it would be difficult to identify most of the elements of a program if self-study is utilized.

We will look forward to receiving your guidance and appreciate your efforts and assistance in this regard. Please feel free to contact me if you wish to discuss this further.

Very truly yours,

GREENSFELDER, HEMKER & GALE, P.C.

By Thomas H. Mug

Thomas H. Mug

THM/bkh
1598357

STATE OF MISSOURI
JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

STATE CAPITOL, ROOM 219-A
JEFFERSON CITY, MO 65101
PHONE (573) 751-1280
FAX (573) 526-6459

June 7, 2016

Mr. Thomas H. Mug
Greensfelder, Hemker & Gale, P.C.
110 South Broadway, Ste. 2000
St. Louis, MO 63102

Dear Mr. Mug:

Thank you for contacting the Joint Committee on Public Employee Retirement to inquire whether self-study qualifies as public pension plan board member education under section 105.666.

Section 105.666 neither expressly permits nor prohibits self-study to qualify as board member education. Since the enactment of section 105.666's board member education requirement, the JCPER has received similar inquiries from other parties. However, the JCPER is not able to provide legal interpretation of statutes or legal advice.

If you believe that section 105.666 needs to be clarified to specify whether self-study is permitted or prohibited, please feel free to inform me of any changes you think should be made. The Joint Committee will likely hold its third quarter 2016 public meeting in mid-September. At that time, I will be able to communicate any recommendations you may have to the committee.

Thank you for your time and consideration.

Sincerely,

Michael Ruff

Michael Ruff
Executive Director

Political Fix

http://www.stltoday.com/news/local/govt-and-politics/lambert-airport-police-to-get-social-security-benefits-after-all/article_5cd76902-1b6e-5ea6-964f-76854fd3c52f.html

Lambert airport police to get Social Security benefits after all

By Leah Thorsen St. Louis Post-Dispatch 5 hrs ago

A view of Lambert-St. Louis International Airport on Thursday, August 4, 2016. The airport could be changing the name to St. Lo International Airport at Lambert Field. Photo by J.B. Forbes, jforbes@post-dispatch.com

UPDATED *at 2:42 p.m. with comments from Police Chief Sam Dotson about merger between airport and city police.*

About 70 Lambert-St. Louis International Airport police officers will keep their Social Security benefits after being told they weren't eligible.

An agreement was reached Wednesday on those benefits at a meeting in Washington organized by Sen. Claire McCaskill and that included St. Louis Police Chief Sam Dotson, as well as union, city and Social Security officials, according to McCaskill's office.

It is retroactive for current workers and applicable for all future hires, and comes after the Social Security Administration issued a decision in May removing the workers from the benefits program.

And it means the merger between city and airport police can move forward.

St. Louis officials were notified last year that the airport workers, who had paid into the system, were ineligible for Social Security under the terms of an agreement that Missouri and the Social Security Administration signed in 1951.

A Social Security spokesman had said the agency had determined that airport officers are St. Louis police as defined by the old agreement, and that the state of Missouri "never requested Social Security coverage for this position."

In a meeting in February, city officials couldn't convince Social Security officials they were wrong about that agreement, which defined which local government workers would be covered under Social Security and which would receive retirement benefits from Missouri.

McCaskill said in a statement Thursday that she is hopeful the new agreement will give others looking to enter public service "the reassurance that their government stands behind them and the benefits they earn will be secure."

An email to the Social Security Administration was not immediately returned Thursday.

Figuring out the retirement system has been a big hurdle in merging the city police department with airport police, Dotson said. That process started more than two years ago.

Police are part of the police retirement system and don't pay into Social Security. Airport employees do.

Dotson said it was important to make sure that officers who had worked at the airport for many years didn't lose retirement benefits.

Daily operations already are being overseen by city police at the airport. Officials next will focus on logistics such as staffing and reporting structures.

"This is not about cutting positions," Dotson said, saying both agencies are hiring.

He said there was no timeline for when the merger would be complete.

Social Security benefits taken away from Lambert security workers

St. Louis police to take control of airport police force

Leah Thorsen

Leah Thorsen writes about transportation for the St. Louis Post-Dispatch. Email her at lthorsen@post-dispatch.com and follow her on Twitter: @leahthorsen