# MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM 

ACTUARIAL VALUATION AS OF JUNE 30, 2011

## G. S. CURRAN \& COMPANY, LTD.

Actuarial Services
10555 N. Glenstone Place • Baton Rouge, Louisiana 70810 • (225) 769-4825

Gary S. Curran, FCA, MAAA, ASA, EA
Consulting Actuary
December 12, 2011

Board of Trustees
Municipal Employees' Retirement System
7937 Office Park Blvd.
Baton Rouge, LA 70809
Ladies and Gentlemen:
We are pleased to present our report on the actuarial valuation of the Municipal Employees' Retirement System for the fiscal year ending June 30, 2011. Our report is based on the actuarial assumptions specified and relies on the data supplied by the system's administrative director and auditors. This report was prepared at the request of the Board of Trustees of the Municipal Employees' Retirement System. The primary purposes of the report are to determine the actuarially required contribution for the retirement system for the fiscal year ending June 30, 2012, to recommend the net direct employer contribution rate for fiscal 2013, and to provide information for the system's financial statements. This report was prepared exclusively for the Municipal Employees' Retirement System for a specific limited purpose. It is not for the use or benefit of any third party for any purpose.

This report has been prepared in accordance with generally accepted actuarial principles and practices, and to the best of our knowledge and belief fairly reflects the actuarial present values and costs stated herein. The undersigned actuaries are members of the American Academy of Actuaries and have met the qualification standards for the American Academy of Actuaries to render the actuarial opinions incorporated in this report, and are available to provide further information or answer any questions with respect to this valuation.

## Sincerely,

## G. S. CURRAN \& COMPANY, LTD.



## TABLE OF CONTENTS

SUBJECT ..... PAGE
Summary of Valuation Results - Plan A ..... 1
Summary of Valuation Results - Plan B ..... 2
Comments on Data ..... 3
Comments on Actuarial Methods and Assumptions ..... 4
Changes in Plan Provisions ..... 4
Asset Experience ..... 5
Plan A - Demographic and Liability Experience ..... 6
Plan B - Demographic and Liability Experience ..... 7
Funding Analysis and Recommendations ..... 7
Cost of Living Increases ..... 10
Graphs ..... 11
Exhibit I - Plan A: Analysis of Actuarially Required Contributions ..... 21
Exhibit II - Plan A: Present Value of Future Benefits ..... 22
Exhibit III - Plan A: Schedule A - Market Value of Assets ..... 23
Exhibit III - Plan A: Schedule B - Actuarial Value of Assets ..... 24
Exhibit IV - Plan A: Present Value of Future Contributions ..... 25
Exhibit V - Plan A: Change in Frozen Unfunded Actuarial Accrued Liability ..... 25
Exhibit VI - Plan A: Analysis of Increase in Assets ..... 26
Exhibit VII - Plan A: Fund Balance ..... 27
Exhibit VIII - Plan A: Pension Benefit Obligation ..... 27
Exhibit IX - Plan A: Cost Of Living Adjustments - Target Ratio. ..... 28
Exhibit X - Plan A: Census Data ..... 29
Exhibit XI - Plan A: Year to Year Comparison ..... 37
Exhibit XII - Plan B: Analysis of Actuarially Required Contributions ..... 39
Exhibit XIII - Plan B: Present Value of Future Benefits ..... 40
Exhibit XIV - Plan B: Schedule A - Market Value of Assets ..... 41
Exhibit XIV - Plan B: Schedule B - Actuarial Value of Assets ..... 42
Exhibit XV - Plan B: Present Value of Future Contributions. ..... 43
Exhibit XVI - Plan B: Change in Frozen Unfunded Actuarial Accrued Liability ..... 43
Exhibit XVII - Plan B: Analysis of Increase in Assets ..... 44
Exhibit XVIII - Plan B: Fund Balance ..... 45
Exhibit XIX - Plan B: Pension Benefit Obligation ..... 45
Exhibit XX - Plan B: Cost Of Living Adjustments - Target Ratio ..... 46
Exhibit XXI - Plan B: Census Data ..... 47
Exhibit XXII - Plan B: Year to Year Comparison ..... 55
Summary of Principal Plan Provisions ..... 57
Actuarial Assumptions ..... 62
Glossary ..... 67

## SUMMARY OF VALUATION RESULTS MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM - PLAN A

Valuation Date:

| Census Summary: | Active Members |
| :--- | :--- |
|  | Retirees and Beneficiaries |
|  | Terminated Due a Deferred Benefit |
|  | Terminated Due a Refund |

Payroll:
Benefits in Payment:
Frozen Unfunded Actuarial Accrued Liability:
Market Value of Assets:
Actuarial Asset Value:
Actuarial Accrued Liability (as defined by GASB-25)
Ratio of Actuarial Value of Assets to Actuarial Accrued Liability:

June 30, 2011
June 30, 2010

| 5,029 | 5,068 |
| ---: | ---: |
| 3,001 | 2,907 |
| 174 | 183 |
| 2,594 | 2,590 |

\$ 164,262,655 \$ 162,546,523
\$ 44,218,709 \$ 41,527,971
\$ 75,313,546 \$ 75,064,492
\$ 679,285,361 \$ 624,427,505
\$ 723,942,801 \$ 704,735,602
\$ 799,256,347 \$ 779,800,094
$90.58 \% \quad 90.37 \%$
************************************************************************************************

|  | FISCAL 2012 | FISCAL 2011 |  |
| :--- | ---: | ---: | ---: |
| Employer Normal Cost (July 1): | $\$$ | $26,605,047$ | $\$ 25,342,972$ |
| Amortization Cost (July 1): | $\$$ | $5,556,240$ | $\$ 5,329,727$ |
| Interest Adjusted Gross Employer Actuarially Required |  |  |  |
| Contribution Including Estimated Administrative Costs: | $\$$ | $34,122,855$ | $\$ 32,574,340$ |
| Projected Ad Valorem and Revenue Sharing Funds | $\$$ | $5,228,362$ | $\$$ |
| Net Direct Employer Actuarially Required Contribution: | $\$$ | $28,894,493$ | $\$ 27,443,645$ |
| Actuarially Required Net Direct Employer Contribution Rate |  | $17.08 \%$ | $16.41 \%$ |
| Actual Net Direct Employer Contribution Rate: | $16.75 \%$ | $14.25 \%$ |  |

$* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *$
Minimum Recommended Net Direct Employer Contribution Rate Fiscal 2013: 17.00\% Fiscal 2012: 16.75\%
Employee Contribution Rate: $9.25 \%$ of Payroll
Actuarial Cost Method: Frozen Attained Age Normal Actuarial Cost Method
Valuation Interest Rate: 8\% (Net of Investment Expense)
Exclusions from Census: None
Basis of Actuarial Asset Value: The actuarial value of assets is based on the market value of assets adjusted to phase in asset earnings above or below the assumed rate of return over a five-year period with limits set at $85 \%$ and $115 \%$ of the market value of assets. When the adjusted value falls outside of the limits, the actuarial value is set equal to the average of the limited and adjusted value.

Changes in Valuation Methods, Assumptions, and/or Amortization Periods: None
Method of Recognizing Gains and Losses: Under the Frozen Attained Age Normal Method, actuarial gains and losses are spread over future normal costs.

## SUMMARY OF VALUATION RESULTS MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM - PLAN B

| Valuation Date: | June 30, 2011 | June 30, 2010 |
| :---: | :---: | :---: |
| Census Summary: Active Members | 2,175 | 2,197 |
| Retirees and Beneficiaries | 865 | 836 |
| Terminated Due a Deferred Benefit | 62 | 72 |
| Terminated Due a Refund | 1,062 | 1,062 |
| Payroll: | \$ 65,427,477 | \$ 65,241,810 |
| Benefits in Payment: | \$ 7,953,795 | \$ 7,339,269 |
| Frozen Unfunded Actuarial Accrued Liability: | \$ 4,346,525 | \$ 4,633,960 |
| Market Value of Assets: | \$ 144,028,034 | \$ 130,596,777 |
| Actuarial Asset Value: | \$ 152,966,837 | \$ 147,046,143 |
| Actuarial Accrued Liability (as defined by GASB-25) | \$ 157,313,362 | \$ 151,680,103 |
| Ratio of Actuarial Value of Assets to Actuarial Accrued Liability: | 97.24 \% | 96.94\% |
| ************************************************************************************************** |  |  |
|  | FISCAL 2012 | FISCAL 2011 |
| Employer Normal Cost (July 1): | \$ 6,247,028 | \$ 6,123,501 |
| Amortization Cost (July 1): | \$ 597,212 | \$ 609,400 |
| Interest Adjusted Gross Employer Actuarially Required Contribution Including Estimated Administrative Costs: | \$ 7,391,507 | \$ 7,277,329 |
| Projected Ad Valorem and Revenue Sharing Funds | \$ 2,082,510 | \$ 2,059,304 |
| Net Direct Employer Actuarially Required Contributions: | \$ 5,308,997 | \$ 5,218,025 |
| Actuarially Required Net Direct Employer Contribution Rate | 7.89\% | 7.78\% |
| Actual Net Direct Employer Contribution Rate: | 8.00\% | 6.75\% |

Employee Contribution Rate: $5.00 \%$ of Payroll
Actuarial Cost Method: Frozen Attained Age Normal Actuarial Cost Method
Valuation Interest Rate: 8\% (Net of Investment Expense)
Exclusions from Census: None
Basis of Actuarial Asset Value: The actuarial value of assets is based on the market value of assets adjusted to phase in asset earnings above or below the assumed rate of return over a five-year period with limits set at $85 \%$ and $115 \%$ of the market value of assets. When the adjusted value falls outside of the limits, the actuarial value is set equal to the average of the limited and adjusted value.
Changes in Valuation Methods, Assumptions, and/or Amortization Periods: None
Method of Recognizing Gains and Losses: Under the Frozen Attained Age Normal Method, actuarial gains and losses are spread over future normal costs.

## COMMENTS ON DATA

For the valuation, the administrative director of the system furnished a census on compact disk derived from the system's master data processing file indicating each active covered employee's sex, date of birth, service credit, annual salary, and accumulated contributions. Information on retirees detailing dates of birth of retirees and beneficiaries, as well as option categories and benefit amounts, was provided in like manner. In addition, data was supplied on former employees who are vested or who have contributions remaining on deposit. As illustrated in Exhibit X, there are 5,029 active members in Plan A of whom 2,133 have vested retirement benefits including 244 participants in the Deferred Retirement Option Plan (DROP); 3,001 former Plan A members or their beneficiaries are receiving retirement benefits. An additional 2,768 Plan A members have contributions remaining on deposit with the system; of this number, 174 have vested rights for future retirement benefits. Census data on Plan B members may be found in Exhibit XXI. There are 2,175 active members in Plan B of whom 782 have vested retirement benefits including 79 participants in the Deferred Retirement Option Plan (DROP); 865 former Plan B members or their beneficiaries are receiving retirement benefits. An additional 1,124 Plan B members have contributions remaining on deposit with the system; of this number, 62 have vested rights for future retirement benefits. All individuals submitted were included in the valuation.

Census data submitted to our office is tested for errors. Several types of census data errors are possible; to ensure that the valuation results are as accurate as possible, a significant effort is made to identify and correct these errors. In order to minimize coverage errors (i.e., missing or duplicated individual records) the records are checked for duplicates, and a comparison of the current year's records to those submitted in prior years is made. Changes in status, new records, and previous records which have no corresponding current record are identified. This portion of the review indicates the annual flow of members from one status to another and is used to check some of the actuarial assumptions, such as retirement rates, rates of withdrawal, and mortality. In addition, the census is checked for reasonableness in several areas, such as age, service, salary, and current benefits. The records identified by this review as questionable are checked against data from prior valuations; those not recently verified are included in a detailed list of items sent to the system's administrative staff for verification and/or correction. Once the identified data has been researched and verified or corrected, it is returned to us for use in the valuation. Occasionally some requested information is either unavailable or impractical to obtain. In such cases, values may be assigned to missing data. The assigned values are based on information from similar records or based on information implied from other data in the record.

In addition to the statistical information provided on the system's participants, the system's administrative director furnished general information related to other aspects of the system's expenses, benefits and funding. Valuation asset values as well as income and expenses for the fiscal year were based on information furnished by the system's auditor, the firm of Duplantier, Hrapmann, Hogan \& Maher, L.L.P. As indicated in the system's audit report, the net market value of Plan A's assets was $\$ 679,285,361$ as of June 30, 2011. Net investment income for fiscal 2011 measured on a market value basis for Plan A amounted to $\$ 65,014,850$. Contributions to the Plan for the fiscal year totaled $\$ 43,949,827$; benefits and expenses paid by Plan A amounted to $\$ 54,106,821$. The net market value of Plan B's assets was $\$ 144,028,034$ as of June 30, 2011. Net investment income for fiscal 2011 measured on a market value basis for Plan B amounted to $\$ 13,722,021$. Contributions to the Plan for the fiscal year totaled $\$ 9,949,931$; benefits and expenses
G. S. CURRAN \& COMPANY, LTD.
paid by Plan B amounted to $\$ 10,240,695$. In addition to the two benefit trust funds the system maintains an expense fund for payment of certain investment and administrative expenses. The balance in this fund at the beginning of the year was $\$ 341,267$ and at the end of the year the balance was $\$ 298,975$.

Notwithstanding our efforts to review both census and financial data for apparent errors, we must rely upon the system's administrative staff and accountants to provide accurate information. Our review of submitted information is limited to validation of reasonableness and consistency. Verification of submitted data to source information is beyond the scope of our efforts.

## COMMENTS ON ACTUARIAL METHODS AND ASSUMPTIONS

This valuation is based on the Frozen Attained Age Normal actuarial cost method with the unfunded actuarial accrued liability frozen as of June 30, 1989. Under the provisions of Louisiana R.S. 11:103 the unfunded accrued liability for Plan A, which was determined to be $\$ 48,466,297$ as of June 30, 1989, was amortized over forty years with payments increasing at $4.25 \%$ per year. The unfunded accrued liability for Plan B, which was determined to be $\$ 9,853,175$ as of June 30, 1989, was amortized over forty years with payments decreasing at $2 \%$ per year. In Plan A, payroll growth less than $4.25 \%$ per year will increase future amortization payments as a percent of payroll. In Plan B, any payroll growth or payroll decline less than $2 \%$ per year will reduce future amortization payments as a percent of payroll. Under the Frozen Attained Age Normal Cost Method, actuarial gains and losses are spread over future normal costs. Thus, favorable plan experience will lower future normal costs; unfavorable experience will cause future normal costs to increase. In addition, changes in benefits and assumptions are also spread over future normal costs.

Prior to the June 30, 2009 valuation, in any year in which the net direct employer contribution was set above the actuarially required employer contribution rate, excess funds collected, if any, were used to reduce the frozen unfunded actuarial accrued liability. In Plan B, the board elected to freeze the employer contribution rate in fiscal 2001. As a result of the additional contributions generated by this freeze in rates, the unfunded accrued liability will be fully amortized by June 30, 2023. Effective with the June 30, 2009 valuation, any excess funds collected as a result of a freeze in employer contributions are credited to the Funding Deposit Account. Funds deposited into the Funding Deposit Account can be used to reduce the unfunded accrued liability, reduce future normal costs, or offset net direct employer contributions as determined by the board of trustees.

The current year actuarial assumptions utilized for the report are outlined on pages 62 through 66 . The assumptions used are the same as those used for the prior year report. In the aggregate the assumptions represent our "best estimate" of future long-term experience for the fund. All calculations, recommendations, and conclusions are based on the assumptions specified. To the extent that prospective experience differs from that assumed, adjustments to contribution levels will be required. Such differences will be revealed in future actuarial valuations.

## CHANGES IN PLAN PROVISIONS

The following changes in plan provisions were enacted during the 2011 Regular Session of the Louisiana Legislature:
G. S. CURRAN \& COMPANY, LTD.

Act 238 made changes recommended by the Funding Review Panel. In addition to specific changes made to the Firefighters' Retirement System and the Municipal Police Employees' Retirement System, the act changed the structure of the Funding Review Panel and required that the systems, the Louisiana Municipal Association, and the Louisiana Conference of Mayors provide such staff and facilities as needed by the panel. In addition, the act changed the anti-spiking provisions of the system to reduce the limit by which the salaries used in the calculation of the average final compensation could increase year over year from a maximum of twenty-five percent to a maximum of fifteen percent. The act set a minimum on the average compensation to be used to calculate retirement benefits equal to the average compensation as it existed prior to the effective date of the act and excludes any salary increases due to promotion within civil service from the anti-spiking provision.

## ASSET EXPERIENCE

The actuarial and market rates of return for the past ten years are given below. These rates of return on assets were determined by assuming a uniform distribution of income and expense throughout the fiscal year and are based on values provided by the system's auditors.

|  |  | Market Value | Actuarial Value |  |
| :---: | :---: | :---: | :---: | :---: |
| PLAN A | $-1.8 \%$ | $1.1 \%$ |  |  |
|  | 2002 | $4.4 \%$ | $-1.0 \%$ | $*$ |
|  | 2003 | $9.6 \%$ | $3.5 \%$ |  |
| 2004 | $7.2 \%$ | $9.6 \%$ | $*$ |  |
|  | 2005 | $8.6 \%$ | $10.7 \%$ | $*$ |
|  | 2006 | $18.1 \%$ | $\dagger$ | $10.8 \%$ |$\dagger$

[^0]The market rate of return gives a measure of investment return on a total return basis and includes realized and unrealized capital gains and losses as well as interest income. This rate of return gives an indication of performance for an actively managed portfolio where securities are bought and sold with the objective of producing the highest total rate of return. During 2011, the fund earned $\$ 11,067,614$ of dividends and interest and other recurring income for Plan A and $\$ 2,406,076$ for Plan B. Net income was increased by realized and unrealized capital gains of $\$ 58,655,525$ for Plan A and $\$ 12,299,287$ for Plan B and further reduced by net investment expenses of $\$ 4,708,289$ for Plan A and $\$ 983,342$ for Plan B. The geometric mean of the market value rates of return measured over the last ten years was $5.1 \%$ for Plan A and $4.9 \%$ for Plan B. Over the last twenty years, these rates were $7.1 \%$ for Plan A and $7.0 \%$ for Plan B.

The actuarial rate of return is presented for comparison to the assumed long-term rate of return of $8 \%$ used for the valuation. This rate is calculated based on the actuarial value of assets and all interest, dividends, other investment income, and capital gains or losses as given in Exhibit VI for Plan A and Exhibit XVII for Plan B, adjusted for any change in assets due to actuarial smoothing. Investment income used to calculate this yield is based upon a smoothing of gains or losses over a five-year period. The difference between rates of return on an actuarial and market value basis results from the smoothing of gains or losses on investments relative to the valuation interest rate. In addition to the smoothing of investment returns above or below the assumed rate of return of $8.0 \%$, the actuarial and market rates of return differ due to the allocation of expense fund assets and income to both Plan A and Plan B. Yields in excess of the $8 \%$ assumption will reduce future costs; yields below $8 \%$ will increase future costs. Plan A experienced net actuarial investment earnings of $\$ 26,584,705$ less than the actuarial assumed earnings rate of $8 \%$. Plan B experienced net actuarial investment earnings of $\$ 5,527,510$ less than the actuarial assumed earnings rate of $8 \%$. These actuarial losses increased the normal cost accrual rate by $2.2895 \%$ and $1.14973 \%$ respectively for Plan A and Plan B.

At the end of each fiscal year, a review of the data is made to identify current members of Plan A and Plan B who have consecutive service credit in both plans that have not been addressed in previous transfers of assets and liabilities between the Plan A and Plan B trust funds pursuant to the provisions of R.S. 11: 1862(F). In the course of reviewing data for the June 30, 2011 valuation we found three members of Plan A and one member of Plan B with such service and recommend a transfer of $\$ 17,193$ be made from the Plan A trust to the Plan B trust for fiscal 2011.

## PLAN A - DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for Plan A is given in Exhibit X. The average active member is 48 years old with 10.34 years of service and an annual salary of $\$ 32,663$. The Plan's active membership decreased during the fiscal year by 39 members. The plan has experienced a decline in the active plan population of 80 members between 2006 and 2011. Should the five year trend in plan population continue, a change in the structure of the amortization of the frozen unfunded actuarial accrued liability will be required to prevent continual increases in contributions as a percentage of payroll. Review of the active census by age indicates that over the last ten years the population in the thirty through fifty age group has decreased while the proportion of active members over-fifty increased. The population percentage under age 30 has remained constant. Over the same ten-year period the plan showed a decrease in the percentage of members with less
G. S. CURRAN \& COMPANY, LTD.
than fifteen years of service; the percentage of members with service over fifteen years has increased.

The average regular retiree is 70 years old with a monthly benefit of $\$ 1,411$. The number of retirees and beneficiaries receiving benefits from the system increased by 94 during the fiscal year. Over the last five years the number of retirees has increased by 413; during this same period, annual benefits in payment increased by $\$ 11,903,336$.

Plan liability experience for fiscal 2011 was favorable. The primary factor contributing to the experience gain was salary increases below projected levels. In addition, disabilities were below projected levels and deaths were above projected levels. All of these factors tend to reduce costs. These factors were partially offset by retirements well above projected levels. The net effect of all of these elements was a decrease in costs. Plan liability experience gains decreased the normal cost accrual rate by $1.2098 \%$.

## PLAN B - DEMOGRAPHICS AND LIABILITY EXPERIENCE

A reconciliation of the census for Plan B is given in Exhibit XXI. The average active member is 48 years old with 9.47 years of service and an annual salary of $\$ 30,082$. The Plan's active membership decreased during the fiscal year by 22 members. Over the last five years the active population increased by 115 members. A review of the active census by age indicates that over the last ten years the population in the under 50 age group has decreased while the proportion of active members over age 50 has increased. Over the same ten-year period the system showed a decrease in the percentage of members with service of five to fourteen years and a corresponding increase in the percentage of members with service under five years and over twenty years.

The average regular retiree is 73 years old with a monthly benefit of $\$ 863$. The number of retirees and beneficiaries receiving benefits from the system increased by twenty-nine. Over the last five years this group increased by 102; during this same period, annual benefits in payment increased by \$2,081,465.

Plan liability experience for fiscal 2011 was favorable. The primary factor contributing to the liability experience gain for the year was salary increases below projected levels. In addition, retiree mortality and withdrawals exceeded projections. All of these factors tend to reduce costs. Partially offsetting these factors were retirements and DROP entries above projected levels. The net effect of all of these factors was a decrease in costs. Plan liability experience gains decreased the normal cost accrual rate by $0.7917 \%$.

## FUNDING ANALYSIS AND RECOMMENDATIONS

Actuarial funding of a retirement system is a process whereby funds are accumulated over the working lifetimes of employees in such a manner as to have sufficient assets available at retirement to pay for the lifetime benefits accrued by each member of the system. The required contributions are determined by an actuarial valuation based on rates of mortality, termination, disability, and retirement, as well as investment return and other statistical measures specific to the particular group. Each year a determination is made of two cost components, and the actuarially required contributions are based on the sum of these two components plus administrative expenses. These
G. S. CURRAN \& COMPANY, LTD.
two components are the normal cost and the amortization payment on the unfunded actuarial accrued liability. The normal cost refers to the portion of annual cost based on the salary of active participants. The term unfunded accrued liability (UAL) refers to the excess of the present value of plan benefits over the sum of current assets and future normal costs. Each year the UAL grows with interest and is reduced by payments. Under the funding method used for both plans, changes in plan experience, benefits, or assumptions do not affect the unfunded actuarial accrued liability. These items increase or decrease future normal costs.

In order to establish the actuarially required contribution in any given year, it is necessary to define the assumptions, funding method, and method of amortizing the UAL. Thus, the determination of what contribution is actuarially required depends upon the funding method and amortization schedules employed. Regardless of the method selected, the ultimate cost of providing benefits is dependent upon the benefits, expenses, and investment earnings. Only to the extent that some methods accumulate assets more rapidly and thus produce greater investment earnings does the funding method affect the ultimate cost.

For Plan A, the derivation of the actuarially required contribution for the current fiscal year is given in Exhibit I. The normal cost for fiscal 2012 as of July 1, 2011, is $\$ 26,605,047$. The amortization payment on the plan's frozen unfunded actuarial accrued liability as of July 1, 2011, is $\$ 5,556,240$. The total actuarially required contribution is determined by adjusting these two values for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 15 of Exhibit I, the total actuarially required contribution for fiscal 2012 is $\$ 34,122,855$. When this amount is reduced by projected tax contributions and revenue sharing funds the resulting employers' net direct actuarially required contribution for fiscal 2012 is $\$ 28,894,493$. This is $17.08 \%$ of the projected Plan A payroll for fiscal 2012.

Liability and asset experience as well as changes in assumptions and benefits can increase or lower plan costs. In addition to these factors, any COLA granted in the prior fiscal year will increase required contributions. New entrants to the system can also increase or lower costs as a percent of payroll depending upon their demographic distribution and other factors related to prior plan experience. Finally, contributions above or below requirements may reduce or increase future costs.

The effects of various factors on the cost structure for Plan A are outlined below:

$$
\text { Normal Cost Accrual Rate - Fiscal } 2011 \quad 16.6336 \%
$$

Factors Increasing the Normal Cost Accrual Rate:

| Asset Experience Loss | $2.2895 \%$ |
| :--- | :--- |
| Contribution Loss | $0.3759 \%$ |

Factors Decreasing the Normal Cost Accrual Rate:
Liability Experience -1.2098\%
New Members -0.7784\%
Normal Cost Accrual Rate - Fiscal 2012
$17.3108 \%$
For Plan B, the derivation of the actuarially required contribution for the current fiscal year is given in Exhibit XII. The normal cost for fiscal 2012 as of July 1, 2011, is $\$ 6,247,028$. The amortization
G. S. CURRAN \& COMPANY, LTD.
payment on the plan's frozen unfunded actuarial accrued liability as of July 1, 2011, is $\$ 597,212$. The total actuarially required contribution is determined by adjusting these two values for interest (since payments are made throughout the fiscal year) and adding estimated administrative expenses. As given on line 15 of Exhibit XII, the total actuarially required contribution for fiscal 2012 is $\$ 7,391,507$. When this amount is reduced by projected tax contributions and revenue sharing funds the resulting employers' net direct actuarially required contribution for fiscal 2012 is $\$ 5,308,997$. This is $7.89 \%$ of the projected Plan B payroll for fiscal 2012.

The effects of various factors on the cost structure for Plan B are outlined below:

Normal Cost Accrual Rate - Fiscal 2011
Factors Increasing the Normal Cost Accrual Rate:
Asset Experience Loss
Contribution Loss
Factors Decreasing the Normal Cost Accrual Rate: Liability Experience
New Members
Normal Cost Accrual Rate - Fiscal 2012
$10.1393 \%$

$$
1.1497 \%
$$

0.1920\%
-0.7917\%
-0.4039\%
$10.2853 \%$

In addition to the above factors, payroll growth affects plan costs to the extent that payments on the system's unfunded liability are on a schedule that varies from actual trends in payroll growth or decline. If payroll changes at rates not consistent with the amortization schedule, the result will be costs that change as a percentage of payroll. For fiscal 2012, the net effect of the change in payroll on amortization costs was an increase of $0.10 \%$ of payroll for Plan A; and a reduction of $0.02 \%$ for Plan B. Required net direct employer contributions are also affected by the available ad valorem taxes and revenue sharing funds which the system receives each year. When these funds change as a percentage of payroll, net direct employer contributions are adjusted accordingly. We estimate that these funds collected in fiscal 2012 will increase by $0.27 \%$ as a percent of payroll in Plan A and will increase by $0.03 \%$ of payroll in Plan B. Although the actuarially required net direct employer contribution rate for Plan A for fiscal 2012 is $17.08 \%$, the actual employer contribution rate for fiscal 2012 is $16.75 \%$ of payroll. After accounting for the anticipated contribution shortfall in fiscal 2012 and rounding the result to the nearest $0.25 \%$ as required by R. S. 11:103, we recommend a minimum net direct employer contribution rate of $17.00 \%$ for fiscal 2013 for Plan A. Although the actuarially required net direct employer contribution rate for Plan B for fiscal 2012 is $7.89 \%$, the actual employer contribution rate for fiscal 2012 is $8.00 \%$ of payroll. After accounting for the anticipated contribution excess in fiscal 2012 and rounding the result to the nearest $0.25 \%$ as required by R.S. 11:103, we recommend a minimum net direct employer contribution rate of $8.00 \%$ for fiscal 2013 for Plan B.

Both Plan A and Plan B have Funding Deposit Account Credit Balances. Since no contribution deposits or withdrawals were made to the accounts during fiscal 2011, the outstanding balances were credited with interest at the valuation interest rate. Funds in these accounts may be used to reduce the outstanding unfunded accrued liability, reduce the future normal costs or reduce contributions for specified fiscal years.
G. S. CURRAN \& COMPANY, LTD.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, completion of amortization payments or credit schedules, and changes in plan provisions or applicable law. Analysis of the effect of all these factors is beyond the scope of this report. We have, however, calculated the sensitivity of the plans' costs to two factors. First, we have determined that based on current assets and demographics, for each percentage earnings in a single year under (or over) the assumed rate of return on the actuarial value of assets, there will be a corresponding increase (or reduction) in the normal cost accrual rate of $0.62 \%$ for Plan A, and $0.32 \%$ for Plan B. We have also determined that a $1 \%$ reduction in the valuation interest rate for each Plan would increase the actuarially required contribution rate for fiscal 2012 by $9.07 \%$ in Plan A and $4.94 \%$ in Plan B.

Notwithstanding recent contribution increases, a significant portion of investment losses incurred in fiscal 2009 have not yet been released into the actuarial value of assets due to the current asset smoothing methodology. These losses will be released over the next two years and, even when the investment returns for the fiscal 2011 are factored in, this will put upward pressure on costs as they are released into income unless they are offset by substantial asset or liability gains.

## COST OF LIVING INCREASES

During fiscal 2011 the actual cost of living (as measured by the US Department of Labor CPI-U) increased by $3.56 \%$. Cost of living provisions for the system are detailed in R.S. 11:1761 and R.S. 11:246. The former statute allows the board to use interest earnings in excess of the normal requirements to grant annual cost of living increases of $2 \%$ of each retiree's original benefit. R.S. 11:246 provides cost of living increases of retirees and beneficiaries over the age of 65 equal to $2 \%$ of the benefit in payment on October 1, 1977, or the date the benefit was originally received if retirement commenced after that date. R.S. 11:241 provides that cost of living benefits shall be in the form (unless the board otherwise specifies) of $\$ \mathrm{X} \times(\mathrm{A}+\mathrm{B})$ where X is at most $\$ 1$ and " A " represents the number of years of credited service accrued at retirement or at death of the member or retiree and " B " is equal to the number of years since retirement or since death of the member or retiree to June $30^{\text {th }}$ of the initial year of such increase. The provisions of this subpart do not repeal provisions relative to cost of living adjustments contained within the individual laws governing systems; however, they are to be controlling in cases of conflict. All of the above provisions require that the system earn sufficient excess interest earnings to fund the increases. In addition, the ratio of the plan's assets to benefit obligations must meet the criteria established in R.S. 11:242. This section sets forth a minimum "target ratio" of the actuarial value of assets to the Pension Benefit Obligation. We have determined that for fiscal 2010, neither plan met the target ratio. In addition, neither plan had excess interest earnings; hence no cost of living increase is payable to regular retirees.

# Plan A - Components of Present Value of Future Benefits June 30, 2011 



## Plan A - Components of Present Value of Future Benefits



## Plan A - Components of Actuarial Funding



Plan A - Frozen Unfunded Accrued Liability


Plan A
Actuarial Value of Assets vs. GASB-25 Accrued Liability


Plan A - Historical Asset Yield


Plan A - Net Non-Investment Income


## Plan A - Total Income vs. Expenses (Based on Market Value of Assets)




Plan A - Active - Census By Age
(as a percent)

Plan A - Active - Census By Service (as a percent)
G. S. CURRAN \& COMPANY, LTD.

Plan B - Components of Present Value of Future Benefits June 30, 2011

$\square$ Present Value of Future Employer Normal Cost
$\square$ Unfunded Accrued Liability

- Present Value of Future Employee Contributions
$\square$ Actuarial Value of Assets (Net of Funding Deposit Account)


## Plan B - Components of Present Value of Future Benefits



## Plan B - Components of Actuarial Funding



## Plan B - Frozen Unfunded Accrued Liability



Plan B
Actuarial Value of Assets vs. GASB-25 Accrued Liability


Plan B - Historical Asset Yield


Plan B - Net Non-Investment Income


## Plan B - Total Income vs. Expenses

(Based on Market Value of Assets)


|  |  | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Total Income (\$Mil) |  | 0.8 | 9.3 | 16.0 | 15.3 | 17.9 | 29.1 | 10.7 | -9.0 | 22.4 | 23.6 |
| Benefits and Expenses (\$Mil) | $\square$ | 6.7 | 7.2 | 6.9 | 7.1 | 7.4 | 8.4 | 8.2 | 8.6 | 9.1 | 10.2 |
| Net Change in MVA (\$Mil) |  | -5.9 | 2.1 | 9.1 | 8.2 | 10.5 | 20.7 | 2.5 | -17.6 | 13.3 | 13.4 |



Plan B - Active - Census By Service (as a percent)

G. S. CURRAN \& COMPANY, LTD.

## EXHIBITS

## EXHIBIT I <br> PLAN A: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits ..... \$ 1,085,673,090
2. Frozen Unfunded Actuarial Accrued Liability ..... \$ 75,313,546
3. Actuarial Value of Assets ..... \$ 723,942,801
4. Present Value of Future Employee Contributions ..... \$ 92,535,571
5. Funding Deposit Account Credit Balance ..... \$ 7,121,966
6. Present Value of Future Employer Normal Costs (1-2-3-4+5) ..... \$ 201,003,138
7. Present Value of Future Salaries ..... \$ 1,161,145,792
8. Employer Normal Cost Accrual Rate $(6 \div 7)$ ..... 17.310758\%
9. Projected Fiscal 2012 Salary for Current Membership ..... \$ 153,690,826
10. Employer Normal Cost as of July 1, 2011 (8 x 9) ..... \$ 26,605,047
11. Amortization Payment on Frozen Unfunded Accrued Liability of \$75,313,546 with Payments increasing at $4.25 \%$ per year. ..... \$ ..... 5,556,240
12. Total Employer Normal Cost \& Amortization Payment $(10+11)$ ..... \$ ..... 32,161,287
13. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment ..... \$ ..... 33,422,990
14. Estimated Administrative Cost for Fiscal 2012 ..... \$ ..... 699,865
15. Gross Employer Actuarially Required Contribution for Fiscal $2012(13+14)$ ..... \$ ..... 34,122,855
16. Projected Tax Contributions for Fiscal 2012 ..... \$ ..... 5,113,129
17. Projected Revenue Sharing Funds for Fiscal 2012 ..... \$ ..... 115,233
18. Net Direct Employer Actuarially Required Contribution for Fiscal 2012 (15-16-17). ..... \$ ..... 28,894,493
19. Projected Payroll (July 1, 2011 through June 30, 2012) ..... \$ 169,170,402
20. Employers Minimum Net Direct Actuarially Required Contribution as a \% of Projected Payroll for Fiscal $2012(18 \div 19)$ ..... 17.08\%
21. Actual Employer Contribution Rate for Fiscal 2012 ..... 16.75\%
22. Contribution Shortfall (Excess) as a \% of Payroll (20-21) ..... 0.33\%
23. Increase (Reduction) to Following Year Payment for Contribution Shortfall (Excess) ..... 0.04\%
24. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2013 ( $20+23$, Rounded to nearest $0.25 \%$ ) ..... $17.00 \%$

## EXHIBIT II PLAN A: PRESENT VALUE OF FUTURE BENEFITS

Present Value of Future Benefits for Active Members:
Retirement Benefits ..... \$ 620,223,897
Survivor Benefits ..... 10,675,448
Disability Benefits ..... 7,674,629
Vested Deferred Termination Benefits. ..... 12,630,888
Contribution Refunds ..... 18,340,491
TOTAL Present Value of Future Benefits for Active Members ..... \$ 669,545,353
Present Value of Future Benefits for Terminated Members:
Terminated Vested Members Due Benefits at Retirement. ..... \$ 13,661,617
Terminated Members with Reciprocals
Due Benefits at Retirement ..... 871,782
Terminated Members Due a Refund ..... 1,902,011
TOTAL Present Value of Future Benefits for Terminated Members ..... \$ 16,435,410
Present Value of Future Benefits for Retirees:
Regular Retirees ..... \$ 333,651,115
Disability Retirees ..... 17,382,745
Survivors \& Widows ..... 44,816,713
Reserve for Accrued Retiree DROP Account Balances ..... 3,841,754
TOTAL Present Value of Future Benefits for Retirees \& Survivors. ..... \$ 399,692,327
TOTAL Present Value of Future Benefits ..... \$1,085,673,090

## EXHIBIT III - Schedule A PLAN A: MARKET VALUE OF ASSETS

Current Assets:
Cash ..... \$Accrued Alternative Investments3,693,457
Accrued Interest and Dividends on Investments ..... 370,868
Investment Receivable ..... 41,323,408
Contributions Receivable from Employers ..... 1,683,869
Contributions Receivable from Members ..... 1,022,921
Other Receivables ..... 269,087
Due From Plan B ..... 50,324
TOTAL CURRENT ASSETS\$ 57,173,543
Property Plant \& Equipment ..... \$
Mitigation Bank Capitalized Project Costs ..... \$ ..... 82, 540
Prepaid Expense ..... \$
Other Assets ..... \$
Investments:
Co-Mingled Funds ..... \$ 167,584,278
Limited Partnerships ..... 106,361,447
Mutual Fund - Equities ..... 83,218,093
Cash Equivalents ..... 25,407,912
Common Stock ..... 96,544,457
Mitigation Credits ..... 43,510,937
Mutual Fund - Fixed Income ..... 27,079,612
Real Estate-Mitigation Banks and LLC. ..... 18,048,419
Bonds ..... 18,739,835
Notes Receivable ..... 11,686,365
Line of Credit ..... 8,365,368
Limited Liability Companies. ..... 27,378,658
Convertible Notes ..... 1,708,054
TOTAL INVESTMENTS ..... \$ 635,633,435
TOTAL ASSETS ..... \$ 694,391,650
Current Liabilities:
Other Payables ..... \$ ..... 369,226
Investment Payable ..... 502,371
Mitigation Bank Unearned Revenue ..... 466,749
Refunds Payable ..... 224,001
Accounts Payable ..... 193,614
Long-Term Mitigation Liability ..... 132,574
Due To Plan B (accrued) ..... 17,193

## G. S. CURRAN \& COMPANY, LTD.

## EXHIBIT III - SCHEDULE B PLAN A - ACTUARIAL VALUE OF ASSETS

Excess (Shortfall) of invested income for current and previous 4 years:
Fiscal year 2011 ..... \$ 15,459, 113
Fiscal year 2010 ..... 16,842,738Fiscal year 2009(144,474,440)
Fiscal year 2008 ..... $(45,633,930)$Fiscal year 200756,997,359
Total for five years ..... \$ ..... $(100,809,160)$
Deferral of excess (shortfall) of invested income:
Fiscal year 2011 (80\%) ..... \$ 12,367,291
Fiscal year 2010 (60\%) ..... 10,105,643
Fiscal year 2009 (40\%) ..... (57,789,776)
Fiscal year 2008 (20\%) ..... $(9,126,786)$
Fiscal year 2007 (0\%) ..... 0
Total deferred for year ..... \$ (44,443,628)
Market value of plan net assets, end of year ..... \$ 679,285,361
Preliminary actuarial value of plan assets, end of year ..... \$ 723,728,989
Actuarial value of assets corridor
$85 \%$ of market value, end of year ..... \$ 577,392,557
$115 \%$ of market value, end of year ..... \$ 781,178,165
Allocated Share of the Expense Fund ..... \$ ..... 213,812
Final actuarial value of plan net assets, end of year (average of preliminary actuarial value of plan assets and $115 \%$ of market value plus allocated share of the expense fund) ..... \$ ..... 723,942,801
EXHIBIT IVPLAN A: PRESENT VALUE OF FUTURE CONTRIBUTIONS
Employee Contributions to the Annuity Savings Fund ..... \$ 92,535,571
Employer Normal Contributions to the Pension Accumulation Fund ..... 201,003,138
Employer Amortization Payments to the Pension Accumulation Fund ..... 75,313,546
Funding Deposit Account Credit Balance ..... (7,121,966)
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... \$361,730,289
EXHIBIT V
PLAN A: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITY
Prior Year Frozen Unfunded Accrued Liability\$ 75,064,491
Interest on Frozen Unfunded Accrued Liability ..... \$ 6,005,160
Employer Normal Cost for Prior Year ..... 25,342,972
Interest on the Normal Cost ..... 2,027,438
Administrative Expenses ..... 774,024
Interest on Expenses ..... 30,365
Credit to Funding Deposit Account ..... 0
TOTAL Increases to Frozen Unfunded Accrued Liability ..... \$ 34,179,959
Gross Regular Employer Contributions ..... \$ 28,445,893
Interest on Employer Contributions ..... 1,115,946
Contribution Shortfall (Excess) ..... 4,204,135
Interest on Contribution Shortfall (Excess) ..... 164,930
TOTAL Decreases to Frozen Unfunded Accrued Liability ..... \$ 33,930,904
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ..... \$ 75,313,546

## EXHIBIT VI <br> PLAN A: ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (June 30, 2010) ..... \$ ..... 704,735,602
Income:
Member Contributions ..... \$ 14,376,333
Employer Contributions ..... 23,520,242
Ad Valorem Taxes ..... 4,809,913
Revenue Sharing Funds ..... 115,738
Irregular Contributions ..... 1,127,601
Total Contribution Income ..... \$ ..... 43,949,827
Net Appreciation in Fair Value of Investments ..... \$ ..... 56,447,764
Interest and Dividend Income ..... 3,602,981
Income from Alternative Investments ..... 7,347,631
Securities Lending ..... 117,002
Investment Income Allocated from Expense Fund ..... 586
Investment Expense ..... $(4,708,289)$
Net appreciation attributable to non controllable interest ..... 2,207,761
Net Investment Income ..... \$65,015,436
TOTAL Income\$ 108,965,263
Expenses:
Retirement Benefits ..... \$
42,759,833
Funds Transferred to Another System ..... 929,448
Refunds of Contributions ..... 3,523,239
DROP Disbursements ..... 6,169,229
Allocated Share of Administrative Expenses ..... 745,980
Transfer of Funds from Plan B ..... $(31,165)$
Depreciation ..... 28,044
Transfer to Plan B (accrued) ..... 17,193
TOTAL Expenses ..... \$ ..... 54,141,801
Net Market Income for Fiscal 2011 (Income - Expenses) ..... \$ ..... 54,823,462
Adjustment for Change in Allocated Expense Fund Balance ..... \$ ..... 4,682
Adjustment for Actuarial Smoothing ..... \$ ..... $(35,620,945)$
Actuarial Value of Assets (June 30, 2011) ..... \$ 723,942,801

## EXHIBIT VII PLAN A: FUND BALANCE

Present Assets of the System Creditable to:
Annuity Savings Fund ..... \$ 108,135,422
Annuity Reserve Fund. ..... 395,850,573
Pension Accumulation Fund ..... 144,269,516
Deferred Retirement Option Plan Account ..... 23,907,884
Funding Deposit Account ..... 7,121,966
NET MARKET VALUE OF ASSETS ..... \$ 679,285,361
ADJUSTMENT FOR ACTUARIAL SMOOTHING ..... 44,443,628
ALLOCATED SHARE OF THE EXPENSE FUND ..... 213,812
ACTUARIAL VALUE OF ASSETS ..... \$ ..... 723,942,801
EXHIBIT VIII
PLAN A: PENSION BENEFIT OBLIGATION
Present Value of Credited Projected Benefits Payable to Current Employees ..... \$ ..... 468,459,438
Present Value of Benefits Payable to Terminated Employees ..... $16,435,410$
Present Value of Benefits Payable to Current Retirees and Beneficiaries ..... 399,692,327
TOTAL PENSION BENEFIT OBLIGATION ..... 884,587,175
TOTAL ACTUARIAL VALUE OF ASSETS ..... 723,942,801
Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation ..... 81.84\%

## G. S. CURRAN \& COMPANY, LTD.

## EXHIBIT IX PLAN A: COST OF LIVING ADJUSTMENTS - TARGET RATIO

1. Actuarial Value of Assets Divided by PBO as of Fiscal 1986: ..... $65.05 \%$
2. Amortization of Unfunded Balance over 30 years: ..... 29.13\%
Adjustments in Funded Ratio Due to Changes in Assumption(s):
Changes for Fiscal 1988 ..... 4.97\%
Changes for Fiscal 1989 ..... (1.98\%)
Changes for Fiscal 1995 ..... (1.38\%)
Changes for Fiscal 1997 ..... (3.44\%)
Changes for Fiscal 1998 ..... (3.63\%)
Changes for Fiscal 2000 ..... (1.35\%)
Changes for Fiscal 2003 ..... 0.89\%
Changes for Fiscal 2005 ..... 0.02\%
Changes for Fiscal 2006 ..... 2.66\%
Changes for Fiscal 2009 ..... 5.73\%
Changes for Fiscal 2010 ..... (2.81\%)
3. TOTAL Adjustments ..... (0.32\%)
Amortization of Adjustments in Funded Ratio over 30 years:
Changes for Fiscal 1988 ..... (3.81\%)
Changes for Fiscal 1989 ..... 1.45\%
Changes for Fiscal 1995 ..... 0.74\%
Changes for Fiscal 1997 ..... 1.61\%
Changes for Fiscal 1998 ..... 1.57\%
Changes for Fiscal 2000 ..... 0.50\%
Changes for Fiscal 2003 ..... (0.24\%)
Changes for Fiscal 2005 ..... (0.00\%)
Changes for Fiscal 2006 ..... (0.44\%)
Changes for Fiscal 2009 ..... (0.38\%)
Changes for Fiscal 2010 ..... 0.09\%
4. TOTAL Amortization of Adjustments ..... 1.09\%
5. Target Ratio for Current Fiscal Year (Lesser of $1+2+3+4$ or $100 \%$ ). ..... 94.95\%
6. Actuarial Value of Assets Divided by PBO as of June 30, 2011 ..... 81.84\%

## G. S. CURRAN \& COMPANY, LTD.

## EXHIBIT X <br> PLAN A: CENSUS DATA

\begin{tabular}{|c|c|c|c|c|c|}
\hline \& Active \& Terminated with Funds on Deposit \& DROP \& Retired \& Total \\
\hline Number of members as of June 30, 2010 \& 4,839 \& 2,773 \& 229 \& 2,907 \& 10,748 \\
\hline \begin{tabular}{l}
Additions to Census \\
Initial membership \\
Death of another member \\
Omitted in error last year \\
Adjustment for multiple records
\end{tabular} \& \[
598
\]
\[
1
\] \& 23 \& \& \[
\begin{array}{r}
33 \\
(1)
\end{array}
\] \& \[
\begin{array}{r}
621 \\
33 \\
(1) \\
1 \\
\hline
\end{array}
\] \\
\hline \begin{tabular}{l}
Change in Status during Year \\
Actives terminating service \\
Actives who retired \\
Actives entering DROP \\
Term. members rehired \\
Term. members who retire \\
Retirees who are rehired \\
Refunded who are rehired \\
DROP participants retiring \\
DROP returned to work
\end{tabular} \& \[
\begin{array}{r}
(110) \\
(143) \\
(89) \\
19 \\
\\
11 \\
\\
35 \\
\hline
\end{array}
\] \& \begin{tabular}{l}
110 \\
(19) \\
(15) \\
2
\end{tabular} \& \begin{tabular}{l}
89 \\
(39) \\
(35)
\end{tabular} \& 143
15

39 \& 13 <br>

\hline | Eliminated from Census |
| :--- |
| Refund of contributions |
| Deaths |
| Included in error last year |
| Suspended Benefits |
| Adjustment for multiple records | \& (368)

(8) \& | (104) |
| :--- |
| (2) | \& \& (132)

(3) \& | (472) |
| :--- |
| (142) |
| (3) | <br>

\hline Number of members as of June 30, 2011 \& 4,785 \& 2,768 \& 244 \& 3,001 \& 10,798 <br>
\hline
\end{tabular}

plan a - actives census by age:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Salary | Total <br> Salary |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $16-20$ | 21 | 2 |  |  |  |
| $21-25$ | 155 | 57 | 212 | 19,863 | 456,850 |
| $26-30$ | 238 | 107 | 345 | 21,918 | $4,646,523$ |
| $31-35$ | 238 | 139 | 377 | 25,459 | $8,783,361$ |
| $36-40$ | 310 | 161 | 471 | 28,377 | $10,697,956$ |
| $41-45$ | 395 | 196 | 591 | 29,548 | $13,917,208$ |
| $46-50$ | 497 | 266 | 763 | 32,341 | $19,113,284$ |
| $51-55$ | 566 | 274 | 840 | 34,212 | $26,103,379$ |
| $56-60$ | 481 | 229 | 710 | 35,549 | $29,861,084$ |
| $61-65$ | 285 | 139 | 424 | 35,924 | $25,505,801$ |
| $66-70$ | 133 | 48 | 181 | 37,231 | $15,785,848$ |
| $71-75$ | 46 | 16 | 62 | 36,374 | $6,583,639$ |
| $76-80$ | 17 | 4 | 2 | 24,930 | $1,793,655$ |
| $81-85$ | 3,386 | 1,643 | 5,029 | 34,992 | 839,799 |
| TOTAL |  |  |  |  |  |

the active census INCLUDES 2,133 ACTIVES WITH VESTED BENEFITS, INCLUDING 244 DROP PARTICIPANTS AND 178 ACTIVE FORMER DROP PARTICIPANTS.
plan a - terminated members due a deferred retirement benefit:

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | $\begin{gathered} \text { Total } \\ \text { Benefit } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31-35 | 0 | 1 | 1 | 13,536 | 13,536 |
| 36-40 | 5 | 1 | 6 | 9,462 | 56,769 |
| 41-45 | 7 | 16 | 23 | 15,175 | 349,030 |
| 46-50 | 24 | 16 | 40 | 12,454 | 498,179 |
| 51-55 | 26 | 21 | 47 | 12,721 | 597,869 |
| 56-60 | 34 | 12 | 46 | 19,086 | 877,962 |
| 61-65 | 2 | 1 | 3 | 10,951 | 32,852 |
| 66-70 | 4 | 2 | 6 | 3,544 | 21,266 |
| 71-75 | 1 | 0 | 1 | 32,163 | 32,163 |
| 86-90 | 1 | 0 | 1 | 2,485 | 2,485 |
| TOTAL | 104 | 70 | 174 | 14,265 | 2,482,111 |

PLAN A - TERMINATED MEMBERS DUE A REFUND OF CONTRIBUTIONS:

| Contributions Ranging |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: |
| From |  | то | Number | Contributions |
| 0 | - | 99 | 1,844 | 103,670 |
| 100 | - | 499 | 327 | 80,713 |
| 500 | - | 999 | 115 | 80,165 |
| 1000 | - | 1999 | 96 | 135,263 |
| 2000 | - | 4999 | 95 | 306,328 |
| 5000 | - | 9999 | 62 | 439,735 |
| 10000 | 1 | 19999 | 41 | 565,028 |
| 20000 | - 9 | 99999 | 14 | 415, 111 |
|  |  | TAL | 2,594 | 2,126,013 |

PLAN A - REGULAR RETIREES:

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 41-45 | 0 | 2 | 2 | 26,478 | 52,955 |
| 46-50 | 41 | 13 | 54 | 22,761 | 1,229,087 |
| 51-55 | 82 | 48 | 130 | 23,026 | 2,993,397 |
| $56-60$ | 153 | 50 | 203 | 24,905 | 5, 055, 733 |
| 61-65 | 238 | 114 | 352 | 19,800 | 6,969,443 |
| 66-70 | 296 | 107 | 403 | 15,623 | 6,295,868 |
| 71-75 | 307 | 96 | 403 | 15,475 | 6,236,398 |
| 76-80 | 210 | 65 | 275 | 13,848 | 3,808,281 |
| 81-85 | 135 | 57 | 192 | 12,564 | 2,412,360 |
| 86-90 | 77 | 23 | 100 | 10,386 | 1,038,583 |
| 91-99 | 25 | 15 | 40 | 9,697 | 387, 871 |
| тотAL | 1,564 | 590 | 2,154 | 16,936 | 36,479,976 |

PLAN A - DISABILITY RETIREES:

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 31-35 | 0 | 1 | 1 | 11,249 | 11,249 |
| 36-40 | 3 | 0 | 3 | 12,659 | 37,978 |
| 41-45 | 3 | 2 | 5 | 11,603 | 58,017 |
| 46-50 | 9 | 0 | 9 | 11,065 | 99,583 |
| 51-55 | 22 | 7 | 29 | 12,467 | 361,552 |
| 56-60 | 36 | 16 | 52 | 11,262 | 585,616 |
| 61-65 | 29 | 5 | 34 | 10,441 | 354,993 |
| 66-70 | 19 | 7 | 26 | 9,045 | 235,172 |
| 71-75 | 15 | 2 | 17 | 7,507 | 127,616 |
| 76-80 | 5 | 1 | 6 | 8,013 | 48,079 |
| 81-85 | 1 | 2 | 3 | 4,470 | 13,410 |
| total | 142 | 43 | 185 | 10,450 | 1,933,265 |

PLAN A - SURVIVORS:

| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | $\begin{gathered} \text { Total } \\ \text { Benefit } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0-25 | 1 | 3 | 4 | 6,321 | 25,283 |
| 26-30 | 0 | 1 | 1 | 9,798 | 9,798 |
| 31-35 | 2 | 0 | 2 | 5,576 | 11,152 |
| 36-40 | 1 | 2 | 3 | 7,241 | 21,724 |
| 41-45 | 5 | 6 | 11 | 3,682 | 40,497 |
| 46-50 | 5 | 20 | 25 | 7,886 | 197,141 |
| 51-55 | 3 | 3.1 | 34 | 9,445 | 321,140 |
| 56-60 | 5 | 38 | 43 | 8,183 | 351,876 |
| 61-65 | 3 | 47 | 50 | 8,654 | 432,704 |
| 66-70 | 8 | 83 | 91 | 9,845 | 895,894 |
| 71-75 | 8 | 97 | 105 | 9,566 | 1,004,394 |
| 76-80 | 2 | 105 | 107 | 8,748 | 936,075 |
| 81-85 | 0 | 101 | 101 | 10,147 | 1,024,850 |
| 86-90 | 5 | 49 | 54 | 6,535 | 352,867 |
| 91-99 | 1 | 30 | 31 | 5,809 | 180,073 |
| TOTAL | 49 | 613 | 662 | 8,770 | 5,805,468 |

PLAN A - ACIIVE MEMBERS:

| $\begin{aligned} & \text { Attained } \\ & \text { Ages } \end{aligned}$ | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 15 | 7 | 1 |  |  |  |  |  |  |  |  | 23 |
| 21-25 | 84 | 47 | 38 | 25 | 12 | 6 |  |  |  |  |  | 212 |
| 26-30 | 87 | 67 | 51 | 47 | 32 | 58 | 3 |  |  |  |  | 345 |
| 31-35 | 73 | 51 | 34 | 49 | 38 | 91 | 39 | 2 |  |  |  | 377 |
| 36-40 | 76 | 43 | 36 | 45 | 26 | 98 | 77 | 61 | 9 |  |  | 471 |
| 41-45 | 69 | 50 | 48 | 44 | 38 | 85 | 89 | 106 | 58 | 4 |  | 591 |
| 46-50 | 70 | 40 | 52 | 48 | 45 | 120 | 96 | 102 | 90 | 88 | 12 | 763 |
| 51-55 | 65 | 50 | 45 | 44 | 41 | 121 | 113 | 125 | 95 | 85 | 56 | 840 |
| 56-60 | 33 | 31 | 51 | 36 | 27 | 112 | 121 | 96 | 93 | 55 | 55 | 710 |
| 61-65 | 20 | 10 | 19 | 33 | 23 | 79 | 59 | 56 | 66 | 32 | 27 | 424 |
| 66-70 | 9 | 7 | 8 | 10 | 13 | 33 | 28 | 23 | 21 | 17 | 12 | 181 |
| 71 \& Over | 3 | 2 | 3 | 3 | 2 | 17 | 17 | 18 | 11 | 8 | 8 | 92 |
| totals | 604 | $\triangle 05$ | 386 | 384 | 297 | 820 | 642 | 589 | 443 | 289 | 170 | 5029 |


| Attained Ages | Completed Years of Service |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Salaxy |
| 0-20 | 18,335 | 20,625 | 37,454 |  |  |  |  |  |  |  |  | 19,863 |
| 21-25 | 21,463 | 21,153 | 22,556 | 22,079 | 25,706 | 21,966 |  |  |  |  |  | 21,918 |
| 26-30 | 22,712 | 23,469 | 25,653 | 27,684 | 25,365 | 29,922 | 26,127 |  |  |  |  | 25,459 |
| 31-35 | 24,383 | 25,505 | 24,714 | 27,415 | 33,269 | 31,321 | 31,806 | 39,366 |  |  |  | 28,377 |
| 36-40 | 21,878 | 23,819 | 25,920 | 27,965 | 29,464 | 31,058 | 33,387 | 37,580 | 40,644 |  |  | 29,548 |
| 41-45 | 23,642 | 25,512 | 25,775 | 26,423 | 30,483 | 29,870 | 33,966 | 42,099 | 42,371 | 41,539 |  | 32,341 |
| 46-50 | 25,796 | 27,333 | 26,142 | 28,522 | 27,830 | 30,458 | 32,860 | 38,116 | 42,590 | 46,425 | 50,637 | 34,212 |
| 51-55 | 25,780 | 24,600 | 24,982 | 31,799 | 28,131 | 31,526 | 32,176 | 38,581 | 42,031 | 49,521 | 50,057 | 35,549 |
| 56-60 | 25,633 | 32,105 | 27,917 | 26,233 | 31,571 | 34,136 | 31,460 | 38,293 | 42,128 | 44,671 | 50,241 | 35,924 |
| 61-65 | 27,602 | 27,172 | 28,484 | 30,983 | 34,013 | 35,055 | 36,096 | 40,228 | 43,951 | 38,776 | 48,992 | 37,231 |
| 66-70 | 27,762 | 31,715 | 35,585 | 29,354 | 45,511 | 31,938 | 33,660 | 33,018 | 33,247 | 47,611 | 56,542 | 36,374 |
| 71 \& Over | 23,694 | 19,229 | 19,763 | 25,953 | 24,525 | 34,304 | 31,820 | 23,169 | 32,366 | 32,708 | 44,143 | 30,519 |
| Average | 23,722 | 25,092 | 25,922 | 27,927 | 30,269 | 31,707 | 32,902 | 38,454 | 41,811 | 45,777 | 50,168 | 32,663 |

plan a - terminated menbers due a deferred retirement benefit:

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080ver | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 |  |  |  |  |  |  |  |  |  | 1 |  | 1 |
| 36-40 |  |  |  |  |  |  |  |  | 6 |  |  | 6 |
| 41-45 |  |  |  |  |  |  |  | 23 |  |  |  | 23 |
| 46-50 |  |  |  |  |  |  | 40 |  |  |  |  | 40 |
| 51-55 |  |  |  |  |  | 45 | 2 |  |  |  |  | 47 |
| 56-60 | 3 | 12 | 10 | 15 | 6 |  |  |  |  |  |  | 46 |
| 61-65 | 3 |  |  |  |  |  |  |  |  |  |  | 3 |
| 66-70 | 6 |  |  |  |  |  |  |  |  |  |  | 6 |
| 71-75 | 1 |  |  |  |  |  |  |  |  |  |  | 1 |
| 76-80 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 81-85 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 86-90 | 1 |  |  |  |  |  |  |  |  |  |  | 1 |
| 91 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 14 | 12 | 10 | 15 | 6 | 45 | 42 | 23 | 6 | 1 | 0 | 174 |

PLAN A - SERVICE RETIREES:
Completed Years Since Retirement

Completed Years Since Retirement

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 308Over | Average Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-50 | 29,323 | 21,166 | 22,553 | 25,897 | 18,373 | 19,282 | 10,575 |  |  |  |  | 22,894 |
| 51-55 | 27,069 | 30,633 | 24, 725 | 21,247 | 22,816 | 18,219 | 13,591 |  |  |  |  | 23,026 |
| 56-60 | 25,484 | 29,654 | 26,649 | 24,113 | 23,511 | 24,879 | 22,680 |  | 6,488 |  |  | 24,905 |
| 61-65 | 17,750 | 19,499 | 19,200 | 17,745 | 18,490 | 21,612 | 23,150 | 22,378 | 7,344 |  |  | 19,800 |
| 66-70 | 11,892 | 15,210 | 13,474 | 12,463 | 14,031 | 15,501 | 21,541 | 25,323 | 19,153 |  | 7,680 | 15,622 |
| 71-75 | 16,715 | 18,224 | 13,307 | 12,156 | 15,255 | 13,592 | 14,421 | 20,670 | 23,677 | 8,685 | 7,563 | 15,475 |
| 76-80 | 7,468 | 13,139 | 5,431 | 10,219 | 3,528 | 11,312 | 12,254 | 13,451 | 20,874 | 21,024 |  | 13,848 |
| 81-85 | 10,978 | 14,830 |  |  | 12,341 | 12, 1.92 | 10,481 | 12,409 | 11,579 | 18,920 | 18,060 | 12,564 |
| 86-90 | 4,348 |  |  |  | 7,673 | 6,666 | 7,856 | 11,427 | 11,532 | 9,805 | 11,414 | 10,386 |
| 91 \& Over |  |  |  |  | 4,619 | 31,054 | 9,442 |  | 11,309 | 8,455 | 9,177 | 9,697 |
| Average | 19,140 | 21,120 | 18,676 | 18,505 | 17,473 | 17,109 | 15,566 | 15,445 | 15,351 | 13,059 | 11,141 | 16,936 |

plan a - DISABILITY RETIREES:

| $\begin{gathered} \text { Attained } \\ \text { Ages } \end{gathered}$ | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-30 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 31-35 |  |  |  |  |  | 1 |  |  |  |  |  | 1 |
| 36-40 | 1 | 1 |  |  |  |  | 1 |  |  |  |  | 3 |
| 41-45 |  |  |  | 1 | 2 |  | 2 |  |  |  |  | 5 |
| 46-50 |  |  |  | 2 |  | 1 | 3 | 3 |  |  |  | 9 |
| $51-55$ | 1 | 1 | 1 | 2 | 4 | 11 | 5 | 3 | 1 |  |  | 29 |
| 56-60 | 3 | 3 | 1 | 3 | 3 | 15 | 12 | 9 | 2 | 1 |  | 52 |
| 61-65 |  | 2 | 1 | 2 | 2 | 5 | 8 | 9 | 3 |  | 2 | 34 |
| 66-70 |  |  |  |  | 1 | 5 | 8 | 9 | 1 | 2 |  | 26 |
| 71-75 |  |  | 2 | 1 |  | 2 | 1 | 7 | 1 | 1 | 2 | 17 |
| 76-80 |  |  |  |  |  | 1 | 1 | 1 | 2 | 1 |  | 6 |
| 81-85 |  |  |  |  |  |  |  | 3 |  |  |  | 3 |
| 86 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 5 | 7 | 5 | 11 | 12 | 41 | 41 | 44 | 10 | 5 | 4 | 185 |


Completed Years Since Retixement

PLAN A - SURVIVING BEHEFHCIARIES OF FORMER MEMBERS:

Completed Years since Retirement


## EXHIBIT XI <br> PLAN A: YEAR-TO-YEAR COMPARISON

|  |  | Fiscal 2011 |  | Fiscal 2010 |  | Fiscal 2009 |  | Fiscal 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Active Members |  | 5,029 |  | 5,068 |  | 5,052 |  | 5,030 |
| Number of Retirees and Survivors |  | 3,001 |  | 2,907 |  | 2,861 |  | 2,794 |
| Number Terminated Due Deferred Benefits |  | 174 |  | 183 |  | 172 |  | 184 |
| Number Terminated Due Refund |  | 2,594 |  | 2,590 |  | 2,596 |  | 2,561 |
| Active Lives Payroll | \$ | 164,262,655 | \$ | 162,546,523 | \$ | 157,082,727 | \$ | 148,644,512 |
| Retiree Benefits in Payment | \$ | 44,218,709 | \$ | 41,527,971 | \$ | 39,834,118 | \$ | 37,650,335 |
| Market Value of Assets | \$ | 679,285,361 | \$ | 624,427,505 | \$ | 568,167,813 | \$ | 666,534,551 |
| Ratio of Actuarial Value of Assets to Actuarial Accrued Liability |  | 90.58\% |  | 90.37\% |  | 89.99\% |  | 90.08\% |
| Actuarial Accrued Liability <br> (As defined by GASB-25) | \$ | 799,256,347 | \$ | 779,800,094 | \$ | 745,526,637 | \$ | 745,714,562 |
| Actuarial Value of Assets | \$ | 723,942,801 | \$ | 704,735,602 | \$ | 670,910,030 | \$ | 671,721,084 |
| Unfunded Actuarial Accrued Liability | \$ | 75,313,546 | \$ | 75,064,492 | \$ | 74,616,607 | \$ | 73,993,478 |
| Present Value of Future Employer Normal Cost | \$ | 201,003,138 | \$ | 192,786,430 | \$ | 154,002,240 | \$ | 102,751,307 |
| Present Value of Future Employee Contributions |  | 92,535,571 | \$ | 92,383,724 | \$ | 88,362,181 | \$ | 84,164,497 |
| Funding Deposit Account Credit Balance |  | 7,121,966 | \$ | 6,594,413 | \$ | 6,105,938 |  | N/A |
| Present Value of Future Benefits |  | ,085,673,090 |  | 1,058,375,835 | \$ | 981,785,120 | \$ | 932,630,366 |

Fiscal $2012 \quad$ Fiscal $2011 \quad$ Fiscal $2010 \quad$ Fiscal 2009

| Employee Contribution Rate | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ |
| :--- | :--- | :--- | :--- | :--- |
| Proj. Tax Contribution as \% of Projected Payroll | $3.09 \%$ | $3.07 \%$ | $3.07 \%$ | $2.82 \%$ |
| Actuarially Req'd Net Direct Employer Cont. Rate | $17.08 \%$ | $16.41 \%$ | $13.78 \%$ | $10.25 \%$ |
| Actual Employer Direct Contribution Rate | $16.75 \%$ | $14.25 \%$ | $13.50 \%$ | $13.50 \%$ |

## G. S. CURRAN \& COMPANY, LTD.

|  | Fiscal 2007 |  | Fiscal 2006 |  | Fiscal 2005 |  | Fiscal 2004 |  | Fiscal 2003 |  | Fiscal 2002 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4,965 |  | 5,109 |  | 5,289 |  | 5,325 |  | 5,533 |  | 5,481 |
|  | 2,721 |  | 2,588 |  | 2,512 |  | 2,448 |  | 2,372 |  | 2,316 |
|  | 209 |  | 179 |  | 186 |  | 193 |  | 192 |  | 193 |
|  | 2,553 |  | 2,148 |  | 2,263 |  | 2,266 |  | 2,185 |  | 2,158 |
| \$ | 141,232,448 | \$ | 140,773,796 | \$ | 140,020,164 | \$ | 135,925,550 | \$ | 135,876,426 | \$ | 130,191,230 |
| \$ | 34,978,923 | \$ | 32,315,373 | \$ | 30,555,460 | \$ | 29,043,640 | \$ | 27,431,127 | \$ | 26,145,224 |
| \$ | 667,345,480 | \$ | 567,015,013 | \$ | 521,411,279 | \$ | 485,539,046 | \$ | 444,996,698 | \$ | 432,669,352 |
|  | 89.51\% |  | 88.67\% |  | 87.75\% |  | 86.90\% |  | 86.79\% |  | 87.26\% |
| \$ | 697,658,641 | \$ | 637,909,978 | \$ | 581,801,281 | \$ | 535,579,287 | \$ | 521,766,411 | \$ | 531,127,529 |
| \$ | 624,442,059 | \$ | 565,604,518 | \$ | 510,523,409 | \$ | 465,429,341 | \$ | 452,830,104 | \$ | 463,477,324 |
| \$ | 73,216,582 | \$ | 72,305,460 | \$ | 71,277,872 | \$ | 70,149,946 | \$ | 68,936,307 | \$ | 67,650,205 |
| \$ | 106,821,650 | \$ | 138,753,419 | \$ | 169,264,548 | \$ | 161,387,026 | \$ | 146,656,618 | \$ | 100,815,782 |
| \$ | 81,084,751 | \$ | 82,859,110 | \$ | 84,762,421 | \$ | 85,111,124 | \$ | 86,226,350 | \$ | 83,902,996 |
|  | N/A |  | N/A |  | N/A |  | N/A |  | N/A |  | N/A |
| \$ | 885,565,042 | \$ | 859,522,507 | \$ | 835,828,250 | \$ | 782,077,437 | \$ | 754,649,379 | \$ | 715,846,307 |


| Fiscal 2008 | Fiscal 2007 | Fiscal 2006 | Fiscal 2005 | Fiscal 2004 | Fiscal 2003 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ | $9.25 \%$ |
| $2.62 \%$ | $2.56 \%$ | $2.34 \%$ | $2.38 \%$ | $2.29 \%$ | $2.28 \%$ |
| $11.17 \%$ | $13.89 \%$ | $16.30 \%$ | $15.87 \%$ | $14.61 \%$ | $10.78 \%$ |
| $13.50 \%$ | $16.25 \%$ | $16.00 \%$ | $15.00 \%$ | $11.00 \%$ | $8.00 \%$ |

## G. S. CURRAN \& COMPANY, LTD.

## EXHIBIT XII <br> PLAN B: ANALYSIS OF ACTUARIALLY REQUIRED CONTRIBUTIONS

1. Present Value of Future Benefits ..... \$
2. Frozen Unfunded Actuarial Accrued Liability ..... \$
3. Actuarial Value of Assets ..... \$
4. Present Value of Future Employee Contributions ..... \$
5. Funding Deposit Account Credit Balance ..... \$
6. Present Value of Future Employer Normal Costs (1-2-3-4+5) ..... \$
7. Present Value of Future Salaries ..... \$
8. Employer Normal Cost Accrual Rate $(6 \div 7)$ ..... $10.285346 \%$
9. Projected Fiscal 2012 Salary for Current Membership ..... \$
60,737,173
10. Employer Normal Cost as of July 1, 2011 ( $8 \times 9$ ) ..... \$ ..... 6,247,028
11. Amortization Payment on Frozen Unfunded Accrued Liability of $\$ 4,346,525$ with Payments decreasing at $2 \%$ per year ..... \$ ..... 597,212
12. TOTAL Employer Normal Cost \& Amortization Payment $(10+11)$ ..... \$ ..... 6,844,240
13. Employer Normal Cost and Amortization Payment Interest Adjusted for Midyear Payment ..... \$ ..... 7,112,743
14. Estimated Administrative Cost for Fiscal 2012 ..... \$ ..... 278,764
15. TOTAL Employer Actuarially Required Contribution for Fiscal $2012(13+14)$ ..... \$ ..... 7,391,507
16. Projected Tax Contributions for Fiscal 2012 ..... \$
17. Projected Revenue Sharing Funds for Fiscal 2012 ..... \$
18. Net Direct Employer Actuarially Required Contribution for Fiscal 2012 (15-16-17) ..... \$ ..... 5,308,9972,036,611
\$
19. Projected Payroll (July 1, 2011 through June 30, 2012) ..... 67,275,033
20. Employers' Minimum Net Direct Actuarially Required Contribution as a \% of Projected Payroll for Fiscal $2012(18 \div 19)$ ..... 7.89\%
21. Actual Employer Contribution Rate for Fiscal 2012 ..... 8.00\%
22. Contribution Shortfall (Excess) as a \% of Payroll (20-21) ..... (0.11\%)
23. Increase (Reduction) to Following Year Payment for Contribution Shortfall (Excess) ..... (0.01\%)
24. Minimum Recommended Net Direct Employer Contribution Rate for Fiscal 2013 (17 + 20, Rounded to nearest 0.25\%) ..... 8.00\%

## EXHIBIT XIII PLAN B: PRESENT VALUE OF FUTURE BENEFITS

Present Value of Future Benefits for Active Members:
Retirement Benefits ..... \$ 136,435,525
Survivor Benefits ..... 3,023,626
Disability Benefits ..... 2,223,811
Vested Deferred Termination Benefits ..... 6,662,180
Contribution Refunds ..... 5,276,250
TOTAL Present Value of Future Benefits for Active Members ..... \$
Present Value of Future Benefits for Terminated Members:
Terminated Vested Members Due Benefits at Retirement.... \$ ..... \$ 3,369,986
Terminated Members with Reciprocals
Due Benefits at Retirement ..... 354,932
Terminated Members Due a Refund ..... 518,751
TOTAL Present Value of Future Benefits for Terminated Members ..... \$
4,243,669
Present Value of Future Benefits for Retirees:
Regular Retirees ..... \$ 52,050,184
Disability Retirees ..... 4,911,166
Survivors \& Widows ..... 10,285,883
Reserve for Accrued Retiree DROP Account Balances ..... 741,689
TOTAL Present Value of Future Benefits for Retirees \& Survivors ..... \$ ..... 67,988,922
TOTAL Present Value of Future Benefits ..... \$ ..... $225,853,983$

## EXHIBIT XIV - Schedule A PLAN B: MARKET VALUE OF ASSETS

Current Assets:
Cash ..... \$Accrued Alternative Investments737,596
Contributions Receivable from Employers ..... 380,630
Accrued Interest on Investments ..... 64,848
Investments Receivable ..... 8,616,815
Contributions Receivable from Members ..... 268,005
Dividends Receivable ..... 7,183
Other ..... 70,748
Due from Plan A ..... 17,193
Due To Other Funds ..... $(50,324)$
TOTAL CURRENT ASSETS ..... \$ 13,345,638
Property, Plant \& Equipment ..... 224,411
Mitigation Bank Capitalized Project Costs ..... 172,067
Prepaid Expense ..... 12,088
Other Assets ..... \$ ..... 6,999
Investments:
Co-Mingled Funds ..... \$ 35,327,089
Limited Partnerships ..... 22,367,028
Mutual Fund - Equities ..... 17,487,420
Common Stock ..... 20,374,005
Cash Equivalents ..... 5,105,291
Mitigation Credits ..... 9,102,046
Mutual Fund - Fixed Income ..... 5,665,778
Real Estate-Mitigation Banks and LLC ..... 3,775,546
Bonds ..... 3,932,011
Notes Receivable ..... 2,451,091
Line of Credit ..... 1,763,417
Limited Liability Companies ..... 5,739,075
Convertible Notes ..... 357,308
TOTAL INVESTMENTS ..... \$ 133,447,105
TOTAL ASSETS ..... \$ 147,208,308
Current Liabilities:
Other Payables ..... \$ ..... 77,238
Investments Payable ..... 103,678
Mitigation Bank Unearned Revenue. ..... 97,639
Refunds Payable ..... 74,975
Accounts Payable ..... 37,586
Long-Term Mitigation Liability ..... 27,733
TOTAL CURRENT LIABILITIES ..... \$ 418,849
OTHER CONTROLLING INTEREST ..... \$ $(2,761,425)$
MARKET VALUE OF ASSETS. ..... \$ 144,028,034

## EXHIBIT XIV - SCHEDULE B PLAN B - ACTUARIAL VALUE OF ASSETS

Excess (Shortfall) of invested incomefor current and previous 4 years:
Fiscal year 2011 ..... \$ 3,285,686
Fiscal year 2010 ..... 3,382,611
Fiscal year 2009 ..... $(29,319,546)$
Fiscal year 2008 ..... $(8,919,684)$
Fiscal year 2007 ..... 10,509,451
Total for five years ..... \$ $(21,061,482)$
Deferral of excess (shortfall) of invested income:
Fiscal year 2011 (80\%) ..... \$ 2,628,549
Fiscal year 2010 (60\%) ..... 2,029,567
Fiscal year 2009 (40\%) ..... $(11,727,819)$
Fiscal year 2008 (20\%) ..... $(1,783,937)$
Fiscal year 2007 (0\%) ..... 0
Total deferred for year ..... $\$ \quad(8,853,640)$
Market value of plan net assets, end of year ..... \$ 144,028,034
Preliminary actuarial value of plan assets, end of year ..... \$ 152,881,674
Actuarial value of assets corridor
$85 \%$ of market value, end of year. ..... \$ 122,423,829$115 \%$ of market value, end of year\$ 165,632,239
Allocated Share of the Expense Fund ..... \$ ..... 85,163
Final actuarial value of plan net assets, end of year (average of preliminary actuarialvalue of plan assets and $115 \%$ of market value plus allocated share of the expensefund)
EXHIBIT XVPLAN B: PRESENT VALUE OF FUTURE CONTRIBUTIONS
Employee Contributions to the Annuity Savings Fund ..... \$ 21,582,459
Employer Normal Contributions to the Pension Accumulation Fund ..... 49,451,626
Employer Amortization Payments to the Pension Accumulation Fund ..... 4,346,525
Funding Deposit Credit Account. ..... $(2,493,464)$
TOTAL PRESENT VALUE OF FUTURE CONTRIBUTIONS ..... \$ 72,887,146
EXHIBIT XVI
PLAN B: CHANGE IN FROZEN UNFUNDED ACTUARIAL ACCRUED LIABILITYPrior Year Frozen Unfunded Accrued Liability.Interest on Frozen Unfunded Accrued Liability\$ 370,717
Employer Normal Cost for Prior Year ..... 6,123,501
Interest on the Normal Cost ..... 489,880
Administrative Expenses ..... 307,024
Interest on Expenses ..... 12,045
Credit to Funding Deposit Account

$\qquad$ ..... 0
TOTAL Increases to Frozen Unfunded Accrued Liability

$\qquad$
Gross Employer Contributions ..... \$ 6,420,614
Interest on Employer Contributions ..... 251,884
Contribution Shortfall (Excess) ..... 883,446
Interest on Contribution Shortfall (Excess) ..... 34,658
TOTAL Decreases to Frozen Unfunded Accrued Liability ..... \$ ..... 7,590,602
CURRENT YEAR FROZEN UNFUNDED ACCRUED LIABILITY ..... \$ ..... 4,346,525

## G. S. CURRAN \& COMPANY, LTD.

## EXHIBIT XVII PLAN B: ANALYSIS OF INCREASE IN ASSETS

Actuarial Value of Assets (June 30, 2010) ..... \$ 147,046,143
Income:
Member Contributions ..... \$ 3,129,115
Employer Contributions ..... 4,447,594
Ad Valorem Taxes ..... 1,926,660
Irregular Contributions ..... 383,009
Revenue Sharing Funds ..... 46,360
Transfer from Plan A (accrued) ..... 17,193
Total Contribution Income ..... \$ ..... 9,949,931
Net Appreciation in Fair Value of Investments ..... \$ 11,837,446
Interest and Dividend Income ..... 748,555
Income from Alternative Investments ..... 1,633,069
Securities Lending ..... 24,452
Investment Income Allocated from Expense Fund ..... 234
Investment Expense ..... $(983,342)$
Net appreciation attributable to non controllable interest .. ..... 461,841
Net Investment Income ..... \$ ..... 13,722,255
TOTAL Income ..... \$ ..... 23,672,186
Expenses:
Retirement Benefits ..... \$ 7,674,468
Refunds of Contributions ..... 966,321
Funds Transferred to Another System ..... 269,773
DROP Disbursements ..... 1,000,076
Allocated Share of Administrative Expenses ..... 297,132
Transfer to Plan A ..... 31,165
Depreciation ..... 9,892
TOTAL Expenses ..... \$ $10,248,827$
Net Market Income for Fiscal 2011 (Income - Expenses) ..... \$ 13,423,359
Adjustment for Change in Allocated Expense Fund Balance ..... \$$(4,682)$
Adjustment for Actuarial Smoothing ..... \$ ..... (7,497,983)
Actuarial Value of Assets (June 30, 2011) ..... \$ 152,966,837

## EXHIBIT XVIII <br> PLAN B: FUND BALANCE

Present Assets of the System Creditable to:
Annuity Savings Fund..................................................................................... \$ 22,645,070
Annuity Reserve Fund.................................................................................... 67,247,233
Pension Accumulation Fund ........................................................................... 46,703,509
Deferred Retirement Option Plan Account ...................................................... 4, 4, 438,758
Funding Deposit Account .............................................................................. 2,493,464

NET MARKET VALUE OF ASSETS ...................................... \$ 144,028,034
ADJUSTMENT FOR ACTUARIAL SMOOTHING ............... 8,853,640
ALLOCATION OF EXPENSE FUND ..................................... 85,163
ACTUARIAL VALUE OF ASSETS ........................................ \$ 152,966,837

## EXHIBIT XIX <br> PLAN B: PENSION BENEFIT OBLIGATION

Present Value of Credited Projected Benefits Payable to Current Employees ...... \$ 100,804,310
Present Value of Benefits Payable to Terminated Employees ............................... 4, 4,243,669
Present Value of Benefits Payable to Current Retirees and Beneficiaries ............. 67,988,922
TOTAL PENSION BENEFIT OBLIGATION ......................... \$ 173,036,901
NET ACTUARIAL VALUE OF ASSETS ............................... \$ 152,966,837
Ratio of Net Actuarial Value of Assets to Pension Benefit Obligation ................. $88.40 \%$

## EXHIBIT XX PLAN B: COST OF LIVING ADJUSTMENTS - TARGET RATIO

1. Actuarial Value of Assets Divided by PBO as of Fiscal 1986: ..... $63.44 \%$
2. Amortization of Unfunded Balance over 30 years: ..... $30.47 \%$
Adjustments in Funded Ratio Due to Changes in Assumption(s):
Changes for Fiscal 1988 ..... 2.40\%
Changes for Fiscal 1989 ..... (2.94\%)
Changes for Fiscal 1995 ..... (1.22\%)
Changes for Fiscal 1997 ..... (3.84\%)
Changes for Fiscal 1998 ..... (3.71\%)
Changes for Fiscal 2000 ..... (2.29\%)
Changes for Fiscal 2001 ..... 1.21\%
Changes for Fiscal 2003 ..... 0.53\%
Changes for Fiscal 2005 ..... (1.12\%)
Changes for Fiscal 2006 ..... 5.18\%
Changes for Fiscal 2009 ..... 6.13\%
Changes for Fiscal 2010 ..... (3.99\%)
3. TOTAL Adjustments ..... (3.66\%)
Amortization of Adjustments in Funded Ratio over 30 years:
Changes for Fiscal 1988 ..... (1.84\%)
Changes for Fiscal 1989 ..... 2.16\%
Changes for Fiscal 1995 ..... 0.65\%
Changes for Fiscal 1997 ..... 1.79\%
Changes for Fiscal 1998 ..... 1.61\%
Changes for Fiscal 2000 ..... 0.84\%
Changes for Fiscal 2001 ..... (0.40\%)
Changes for Fiscal 2003 ..... (0.14\%)
Changes for Fiscal 2005 ..... 0.22\%
Changes for Fiscal 2006 ..... (0.86\%)
Changes for Fiscal 2009 ..... (0.41\%)
Changes for Fiscal 2010 ..... $0.13 \%$
4. TOTAL Amortization of Adjustments ..... 3.75\%
5. Target Ratio for Current Fiscal Year (Lesser of $1+2+3+4$ or $100 \%$ ) ..... $94.00 \%$
6. Actuarial Value of Assets Divided by PBO as of June 30, 2011 ..... 88.40\%

## EXHIBIT XXI <br> PLAN B - CENSUS DATA

|  | Active | Terminated with Funds on Deposit | DROP | Retired | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of members as of June 30, 2010 | 2,113 | 1,134 | 84 | 836 | 4,167 |
| Additions to Census <br> Initial membership <br> Death of another member <br> Omitted in error last year <br> Adjustment for multiple records | 260 | 8 |  | 17 | 268 17 |
| Change in Status during Year <br> Actives terminating service <br> Actives who retired <br> Actives entering DROP <br> Term. members rehired <br> Term. members who retire <br> Retirees who are rehired <br> Refunded who are rehired <br> DROP participants retiring <br> DROP returned to work | (68) <br> (39) <br> (25) <br> 12 <br> 7 <br> 15 | 68 <br> (12) <br> (6) <br> 3 | $25$ <br> (15) (15) | 39 6 | 10 |
| Eliminated from Census <br> Refund of contributions <br> Deaths <br> Included in error last year <br> Adjustment for multiple records <br> Moved to Plan A | (175) <br> (4) | $\begin{array}{r} (66) \\ (5) \end{array}$ |  | (48) | $\begin{array}{r} (241) \\ (57) \end{array}$ |
| Number of members as of June 30, 2011 | 2,096 | 1,124 | 79 | 865 | 4,164 |

## G. S. CURRAN \& COMPANY, LTD.

PLAN B - ACTIVES CENSUS BY AGE:

| Age | Number Male | Number <br> Female | Total <br> Number | Average Salary | Total <br> Salary |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16-20 | 10 | 1 | 11 | 17,866 | 196,525 |
| 21-25 | 76 | 16 | 92 | 20,669 | 1,901,518 |
| 26-30 | 93 | 37 | 130 | 24,614 | 3,199,814 |
| 31-35 | 122 | 51 | 173 | 27,071 | 4, 683,339 |
| 36-40 | 129 | 63 | 192 | 28,082 | 5,391,692 |
| 41-45 | 161 | 88 | 249 | 29,605 | 7,371,648 |
| 46-50 | 203 | 103 | 306 | 31,480 | 9,632, 768 |
| 51-55 | 256 | 133 | 389 | 31,673 | 12,320,800 |
| 56-60 | 214 | 89 | 303 | 32,535 | 9,857,992 |
| 61-65 | 148 | 59 | 207 | 33,977 | 7,033,270 |
| 66-70 | 55 | 15 | 70 | 33,206 | 2,324,439 |
| 71-75 | 30 | 6 | 36 | 27,852 | 1,002,674 |
| 76-80 | 8 | 2 | 10 | 36,616 | 366, 155 |
| 81-85 | 6 | 0 | 6 | 20,604 | 123,622 |
| 86-90 | 1 | 0 | 1 | 21,221 | 21,221 |
| TOTAL | 1,512 | 663 | 2,175 | 30,082 | 65,427,477 |

the active census includes 782 actives with Vested benefits, including 79 DROP PARTICIPANTS AND 56 ACTIVE FORMER DROP PARTICIPANTS.
pLAN B - TERMINATED MEMBERS DUE A DEFERRED RETIREMENT BENEFIT:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $41-45$ | 3 | 2 |  |  |  |
| $46-50$ | 5 | 3 | 8 | 7,238 | 36,191 |
| $51-55$ | 10 | 8 | 18 | 8,948 | 71,585 |
| $56-60$ | 19 | 9 | 1 | 28 | 9,441 |
| $61-65$ | 1 | 0 | 2 | 9,869 | 276,942 |
| $66-70$ | 1 | 23 | 1 | 4,265 | 8,530 |
| TOTAL | 39 |  |  |  | 42 |

PLAN B - terminated members due a refund of contributions:

| Contributions Ranging |  | Total |  |  |
| ---: | ---: | ---: | :---: | :---: |
| From | TO | Number | Contributions |  |
| 0 | - | 99 | 726 | 20,957 |
| 100 | - | 499 | 182 | 40,236 |
| 500 | - | 999 | 43 | 29,474 |
| 1000 | - | 1999 | 35 | 51,002 |
| 2000 | - | 4999 | 45 | 146,954 |
| 5000 | - | 9999 | 22 | 158,282 |
| 10000 | - | 19999 | 9 | 127,515 |
|  | TOTAL | 1,062 | 574,420 |  |


| Age | Number Male | Number <br> Female | Total <br> Number | Average <br> Benefit | $\begin{gathered} \text { Total } \\ \text { Benefit } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 46-50 | 2 | 1 | 3 | 21,798 | 65,395 |
| 51-55 | 6 | 3 | 9 | 17,849 | 160,641 |
| 56-60 | 20 | 3 | 23 | 17,630 | 405,493 |
| 61-65 | 55 | 29 | 84 | 12,653 | 1,062,884 |
| 66-70 | 92 | 28 | 120 | 11,180 | 1,341,547 |
| 71-75 | 91 | 36 | 127 | 10,302 | 1,308,401 |
| 76-80 | 87 | 28 | 115 | 8,601 | 989,127 |
| 81-85 | 40 | 21 | 61 | 7,579 | 462,335 |
| 86-90 | 25 | 8 | 33 | 7,440 | 245,513 |
| 91-99 | 10 | 6 | 16 | 5,031 | 80,498 |
| total | 428 | 163 | 591 | 10,358 | 6,121,834 |

PLAN B - DISABILITY RETIREES:

| Age | Number <br> Male | Number <br> Female | Total <br> Number | Average <br> Benefit | Total <br> Benefit |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $41-45$ | 1 | 0 | 1 |  | 6,872 |

PLAN B - SURVIVORS:

| Age | Number Male | Number <br> Female | Total Number | Average Benefit | Total Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 36-40 | 0 | 1 | 1 | 4,280 | 4,280 |
| 41-45 | 1 | 1 | 2 | 2,217 | 4,434 |
| 46-50 | 1 | 5 | 6 | 4,468 | 26,805 |
| 51-55 | 2 | 7 | 9 | 8,988 | 80,890 |
| 56-60 | 1 | 17 | 18 | 6,546 | 117,834 |
| 61-65 | 0 | 19 | 19 | 6,528 | 124,027 |
| 66-70 | 1 | 30 | 31 | 6,256 | 193,927 |
| 71-75 | 1 | 33 | 34 | 6,084 | 206, 854 |
| 76-80 | 1 | 35 | 36 | 6,257 | 225,259 |
| 81-85 | 0 | 27 | 27 | 6,374 | 172,088 |
| 86-90 | 1 | 24 | 25 | 5,787 | 144,667 |
| 91-99 | 0 | 12 | 12 | 1,901 | 22,807 |
| total | 9 | 211 | 220 | 6,018 | 323,872 |

PLAN B - ACTIVE MEMBERS:
Completed Years of Service

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 3080Ver | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 7 | 4 |  |  |  |  |  |  |  |  |  | 11 |
| 21-25 | 42 | 11 | 20 | 11 | 6 | 2 |  |  |  |  |  | 92 |
| 26-30 | 26 | 20 | 18 | 27 | 11 | 27 | 1 |  |  |  |  | 130 |
| $31-35$ | 36 | 13 | 27 | 22 | 17 | 34 | 22 | 2 |  |  |  | 173 |
| 36-40 | 23 | 17 | 19 | 16 | 15 | 55 | 25 | 18 | 4 |  |  | 192 |
| 41-45 | 29 | 18 | 23 | 15 | 27 | 51 | 43 | 29 | 13 | 1 |  | 249 |
| $46-50$ | 28 | 29 | 28 | 24 | 24 | 63 | 43 | 25 | 17 | 18 | 7 | 306 |
| 51-55 | 36 | 18 | 25 | 26 | 30 | 69 | 45 | 39 | 50 | 30 | 21 | 389 |
| 56-60 | 22 | 19 | 19 | 24 | 16 | 51 | 35 | 36 | 39 | 20 | 22 | 303 |
| 61-65 | 6 | 7 | 18 | 5 | 17 | 56 | 21 | 24 | 28 | 6 | 19 | 207 |
| 66-70 | 2 | 3 | 1 | 5 | 5 | 17 | 12 | 10 | 8 | 2 | 5 | 70 |
| 71 \& Ovex | 1 | 1 | 3 | 1 | 1 | 4 | 8 | 10 | 11 | 6 | 7 | 53 |
| Totals | 258 | 160 | 201 | 176 | 169 | 429 | 255 | 193 | 170 | 83 | 81 | 2175 |

plan b - average annual salary of active members:

| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 308Over | Average Salary |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-20 | 18,416 | 16,903 |  |  |  |  |  |  |  |  |  | 17,866 |
| 21-25 | 19,889 | 17,580 | 23,241 | 21,368 | 22,294 | 19.575 |  |  |  |  |  | 20,669 |
| 26-30 | 20,712 | 24,782 | 23,543 | 24,792 | 24,926 | 28,053 | 40,900 |  |  |  |  | 24,614 |
| 31-35 | 23,496 | 23,622 | 24,108 | 25,113 | 36,405 | 27,586 | 32,276 | 30,060 |  |  |  | 27,071 |
| 36-40 | 22,029 | 22,998 | 26,123 | 30,329 | 29,045 | 28,962 | 31,225 | 31,012 | 36,258 |  |  | 28,082 |
| 41-45 | 22,510 | 22,004 | 28,961 | 26,089 | 31,086 | 28,162 | 33,969 | 32,695 | 41,601 | 40,102 |  | 29,605 |
| 46-50 | 21,075 | 21,955 | 29,609 | 26,530 | 40,068 | 30,694 | 32,822 | 36,619 | 39,777 | 43,181 | 37,787 | 31,480 |
| 51-55 | 23,090 | 23,857 | 24,987 | 23,420 | 30,315 | 31,776 | 29,041 | 34,108 | 37,964 | 41,888 | 44,409 | 31,673 |
| 56-60 | 23,835 | 27,803 | 23,544 | 26,738 | 33,221 | 30,836 | 30,435 | 34,017 | 40,051 | 40,589 | 43,116 | 32,535 |
| 61-65 | 25,164 | 26,896 | 24,539 | 33,875 | 31,908 | 33,058 | 32,922 | 32,224 | 39,734 | 41,679 | 45,364 | 33,977 |
| 66-70 | 33,943 | 45,632 | 23,588 | 21,459 | 33,434 | 37,628 | 31,967 | 30,496 | 31,334 | 13,811 | 43,013 | 33,206 |
| 71 \& Orer | 19,576 | 17,660 | 20,027 | 34,243 | 21,235 | 37,928 | 23,829 | 18,055 | 35,808 | 28,039 | 39,409 | 28,560 |
| Average | 22,063 | 23,675 | 25,514 | 25,749 | 32,161 | 30,548 | 31,535 | 32,620 | 38,702 | 40,141 | 43,191 | 30,082 |

plan b - terminated members due a deferred retirement benefit:

| Attained Ages | Years Until Retirement Eligibility |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Total |
| 0-40 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 41-45 |  |  |  |  |  |  |  | 5 |  |  |  | 5 |
| 46-50 |  |  |  |  |  |  | 8 |  |  |  |  | 8 |
| 51-55 |  |  |  |  |  | 18 |  |  |  |  |  | 18 |
| 56-60 | 3 | 7 | 3 | 8 | 7 |  |  |  |  |  |  | 28 |
| 61-65 | 2 |  |  |  |  |  |  |  |  |  |  | 2 |
| 66-70 | 1 |  |  |  |  |  |  |  |  |  |  | 1 |
| 71 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Totals | 6 | 7 | 3 | 8 | 7 | 18 | 8 | 5 | 0 | 0 | 0 | 62 |
| plan b - average annual benefits of terminated members due a deferred retirement benefit: <br> Years Until Retirement Eligibility |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Attained Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30\&Over | Average Benefit |
| 0-40 |  |  |  |  |  |  |  |  |  |  |  | 0 |
| 41-45 |  |  |  |  |  |  |  | 7,238 |  |  |  | 7,238 |
| 46-50 |  |  |  |  |  |  | 8,948 |  |  |  |  | 8,948 |
| 51-55 |  |  |  |  |  | 9,441 |  |  |  |  |  | 9,441 |
| 56-60 | 8,039 | 11,013 | 10,704 | 10,190 | 8,786 |  |  |  |  |  |  | 9,869 |
| 61-65 | 4,265 |  |  |  |  |  |  |  |  |  |  | 4,265 |
| 66-70 | 494 |  |  |  |  |  |  |  |  |  |  | 494 |
| 71 \& Over |  |  |  |  |  |  |  |  |  |  |  | 0 |
| Average | 5,523 | 11,013 | 10,704 | 10,190 | 8,786 | 9,441 | 8,948 | 7,238 | 0 | 0 | 0 | 9,082 |


Years Until Retirement Eligibility
PLAN B - SERVICE RETIREES

| Attained |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ages | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 308Over | Total |
| 0-50 | 2 | 1 |  |  |  |  |  |  |  |  |  | 3 |
| 51-55 | 7 |  | 1 |  |  | 1 |  |  |  |  |  | 9 |
| 56-60 | 8 | 4 | 1 | 1 | 3 | 5 | 1 |  |  |  |  | 23 |
| 61-65 | 16 | 10 | 26 | 11 | 6 | 13 | 2 |  |  |  |  | 84 |
| 66-70 | 15 | 5 | 11 | 10 | 17 | 51 | 10 | 1 |  |  |  | 120 |
| 71-75 | 4 | 5 | 4 | 7 | 4 | 52 | 45 | 5 | 1 |  |  | 127 |
| 76-80 | 2 | 2 | 2 | 3 | 4 | 13 | 50 | 32 | 6 | 1 |  | 115 |
| 81-85 | 1 |  | 2 |  | 1 | 3 | 4 | 23 | 25 | 2 |  | 61 |
| 86-90 |  |  |  |  | 1 | 1 |  | 6 | 10 | 15 |  | 33 |
| 91 \& Orer |  |  |  |  |  | 1 |  | 2 | 2 | 5 | 6 | 16 |
| Totals | 55 | 27 | 47 | 32 | 36 | 140 | 112 | 69 | 44 | 23 | 6 | 591 |

PLAN B - AVERAGE ANNUAL BENEFITS PAYABLE TO SERVICE RETIREES:


$\begin{array}{r}2 \\ \hline\end{array}$

$N$
0
$N$
0
N
$\begin{array}{r}1 \\ \hline\end{array}$
6
0
0
$\infty$
7
 $N$
$M$
N
N
G. S. CURRAN \& COMPANY, LTD.
plan b - disability retirees:
Completed Years Since Retirement


G. S. CURRAN \& COMPANY, LTD.
PLAN B - SURVIVING BENEFICIARIES OF FORMER MEMBERS:


## EXHIBIT XXII <br> PLAN B: YEAR-TO-YEAR COMPARISON

|  | Fiscal 2011 | Fiscal 2010 | Fiscal 2009 | Fiscal 2008 |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Active Members | 2,175 | 2,197 | 2,269 | 2,191 |  |  |
| Number of Retirees and Survivors |  | 865 | 836 | 833 | 793 |  |
| Number Terminated Due Deferred Benefits |  | 62 |  | 72 | 67 | 68 |
| Number Terminated Due Refund |  | 1,062 | 1,062 | 1,022 | 998 |  |
| Active Lives Payroll | $\$$ | $65,427,477$ | $\$$ | $65,241,810$ | $\$$ | $64,816,945$ |

Fiscal 2012 Fiscal $2011 \quad$ Fiscal $2010 \quad$ Fiscal 2009

| Employee Contribution Rate | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ |
| :--- | :--- | :--- | :--- | :--- |
| Proj. Tax Contribution as \% of Projected Payroll | $3.10 \%$ | $3.07 \%$ | $3.06 \%$ | $2.82 \%$ |
| Actuarially Req'd Net Direct Employer Cont. Rate | $7.89 \%$ | $7.78 \%$ | $5.95 \%$ | $4.50 \%$ |
| Actual Employer Direct Contribution Rate | $8.00 \%$ | $6.75 \%$ | $6.75 \%$ | $6.75 \%$ |

## G. S. CURRAN \& COMPANY, LTD.

|  | Fiscal 2007 |  | Fiscal 2006 |  | Fiscal 2005 |  | Fiscal 2004 |  | Fiscal 2003 |  | Fiscal 2002 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2,153 |  | 2,060 |  | 2,038 |  | 2,052 |  | 2,064 |  | 2,066 |
|  | 794 |  | 763 |  | 745 |  | 734 |  | 720 |  | 705 |
|  | 74 |  | 77 |  | 79 |  | 74 |  | 63 |  | 60 |
|  | 928 |  | 777 |  | 806 |  | 820 |  | 790 |  | 761 |
| \$ | 54,572,935 | \$ | 51,055,201 | \$ | 48,690,316 | \$ | 47,676,817 | \$ | 45,260,679 | \$ | 43,560,002 |
| \$ | 6,328,157 | \$ | 5,872,330 | \$ | 5,649,984 | \$ | 5,476,263 | \$ | 5,216,962 | \$ | 5,039,462 |
| \$ | 132,326,073 | \$ | 111,581,452 | \$ | 101,109,899 | \$ | 92,904,743 | \$ | 83,836,074 | \$ | 81,767,131 |
|  | 95.81\% |  | 95.13\% |  | 94.18\% |  | 93.51\% |  | 93.04\% |  | 92.99\% |
| \$ | 129,930,047 | \$ | 117,108,583 | \$ | 102,373,290 | \$ | 95,618,087 | \$ | 92,615,633 | \$ | 95,381,233 |
| \$ | 124,483,332 | \$ | 111,404,638 | \$ | 96,417,685 | \$ | 89,415,704 | \$ | 86,170,714 | \$ | 88,697,416 |
| \$ | 5,446,715 | \$ | 5,703,945 | \$ | 5,955,605 | \$ | 6,202,383 | \$ | 6,444,919 | \$ | 6,683,817 |
| \$ | 26,365,299 | \$ | 32,959,966 | \$ | 41,742,178 | \$ | 42,458,765 | \$ | 36,670,550 | \$ | 28,532,252 |
| \$ | 18,627,179 | \$ | 17,883,419 | \$ | 17,253,376 | \$ | 18,040,618 | \$ | 17,184,709 | \$ | 16,666,322 |
|  | N/A |  | N/A |  | N/A |  | N/A |  | N/A |  | N/A |
| \$ | 174,922,525 | \$ | 167,951,968 | \$ | 161,368,844 | \$ | 156,117,470 | \$ | 146,470,892 | \$ | 140,579,807 |


| Fiscal 2008 | Fiscal 2007 | Fiscal 2006 | Fiscal 2005 | Fiscal 2004 | Fiscal 2003 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $5.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.00 \%$ |
| $2.60 \%$ | $2.54 \%$ | $2.36 \%$ | $2.37 \%$ | $2.28 \%$ | $2.27 \%$ |
| $5.06 \%$ | $7.08 \%$ | $9.86 \%$ | $9.72 \%$ | $9.22 \%$ | $7.53 \%$ |
| $6.75 \%$ | $9.75 \%$ | $9.75 \%$ | $9.50 \%$ | $7.75 \%$ | $6.25 \%$ |

## G. S. CURRAN \& COMPANY, LTD.

## SUMMARY OF PRINCIPAL PLAN PROVISIONS

All members of the Municipal Employees' Retirement System are participants in either Plan A or $B$ according to the provisions of the agreement entered into by their employer. All employees of a participating employer must participate in the same plan. The principal provisions of each plan are given below. The following summary of plan provisions as of June 30, 2011, is for general informational purposes only and does not constitute a guarantee of benefits.

MEMBERSHIP - All persons who are actively employed by a participating employer on a permanent, regularly scheduled basis of at least an average of thirty-five hours per week are members of this system. Excluded from membership are members of city councils, alderman, town councilmen, and constables; the exclusion does not apply to persons serving in excluded positions on January 1, 1997.

## PLAN A PROVISIONS:

CONTRIBUTION RATES - Employee contributions in Plan A are $9.25 \%$ of the member's earnings. In addition, each sheriff and ex officio tax collector deducts one-fourth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, excepting Orleans Parish, and remits the money to the system on an annual basis. Taxes are apportioned between Plan A and Plan B in proportion to salaries of plan participants. Taxes received from East Baton Rouge Parish are apportioned between the Municipal Employees' Retirement System and the Employees' Retirement System of the City of Baton Rouge. The system also receives revenue sharing funds each year as appropriated by the legislature. The remaining employer contributions are determined according to actuarial requirements and are set annually.

RETIREMENT BENEFITS - Members with ten years of creditable service may retire at age sixty; members with twenty-five years of service may retire regardless of age. The monthly retirement allowance is equal to three percent of the member's final compensation multiplied by his years of creditable service; elected officials receive an additional one-half percent of final compensation for each year of such elected service. However, the accrued retirement benefits for those employees who were members of only the supplemental plan prior to October 1, 1978, are based on one percent of final compensation plus two dollars per month for each year of service credited prior to October 1, 1978. The retirement allowance may not exceed the greater of final annual salary or one hundred percent of the member's final average compensation. Members with twenty years of service credit, not otherwise eligible for normal retirement, are eligible for a modified actuarially reduced early retirement.

DISABILITY BENEFITS - Five years of creditable service are required in order to be eligible for disability benefits. Twenty years of creditable service are required in order for a member to have a vested disability benefit. A disabled member receives a normal retirement allowance if eligible under regular retirement provisions; if he is not eligible for a normal retirement, he receives a disability benefit equal to the lesser of:

## G. S. CURRAN \& COMPANY, LTD.

1) Forty-five percent of his final average compensation or three percent of his final average compensation multiplied by his years of creditable service, whichever is greater; or
2) Three percent of his final average compensation multiplied by his years of creditable service projected to his earliest normal retirement age.

SURVIVOR BENEFITS - Five years of creditable service are required in order to be eligible for survivor benefits. If the member is eligible for normal retirement at the time of death, the surviving spouse receives an automatic option two benefit. If the member is not eligible for a normal retirement, the surviving spouse with minor children receives sixty percent of final compensation payable until no child in her care satisfies the definition of minor child. The surviving spouse with no minor children receives forty percent of final compensation payable upon attainment of age sixty by the spouse, or the actuarial equivalent of this amount payable immediately (such equivalent not to be less than $20 \%$ of final compensation). Minor children with no surviving unmarried parent receive thirty percent of final compensation each not to exceed a total of sixty percent of final compensation. Survivor benefits are also payable to the surviving spouse's of former members who have not withdrawn their accumulated contributions and who have at least twenty years of creditable service. The benefits payable are the actuarial equivalent of the Option 2 benefits that would have become payable to the surviving spouse at the time the former member would have begun receiving deferred normal retirement benefits, had the member survived until that date, elected Option 2, and died at that time.

## PLAN B PROVISIONS:

CONTRIBUTION RATES - Employee contributions in Plan B are $5.00 \%$ of the member's earnings. In addition, each sheriff and ex officio tax collector deducts one-fourth of one percent of the aggregate amount of the tax shown to be collected by the tax roll of each respective parish, excepting Orleans Parish, and remits the money to the system on an annual basis. Taxes are apportioned between Plan A and Plan B in proportion to salaries of plan participants. Taxes received from East Baton Rouge Parish are apportioned between the Municipal Employees' Retirement System and the Employees' Retirement System of the City of Baton Rouge. The system also receives revenue sharing funds each year as appropriated by the legislature. The remaining employer contributions are determined according to actuarial requirements and are set annually.

RETIREMENT BENEFITS - Members with ten years of creditable service may retire at age sixty; members with thirty years of service may retire at any age. The monthly retirement allowance is equal to two percent of the member's final compensation multiplied by his years of creditable service; elected officials receive an additional one-half percent of final compensation for each year of such elected service.

DISABILITY BENEFITS - Ten years of creditable service are required in order to be eligible for disability benefits. Twenty years of creditable service are required in order for a member to have a vested disability benefit. A disabled member receives a normal retirement allowance if eligible under regular retirement provisions; if he is not eligible for a normal retirement allowance, he receives a disability benefit equal to the lesser of:

## G. S. CURRAN \& COMPANY, LTD.

1) Thirty percent of his final average compensation or two percent of his final average compensation multiplied by his years of creditable service, whichever is greater; and
2) Two percent of his final average compensation multiplied by his years of creditable service projected to his earliest normal retirement age.

SURVIVOR BENEFITS - The surviving spouse of a member who was eligible for normal retirement at the time of death receives an automatic option two benefit. The surviving spouse of a member with five or more years of creditable service and not eligible for normal retirement at the time of death receives either $30 \%$ of the member's final compensation payable to the spouse when they attain age 60 or an actuarial equivalent of $30 \%$ of the deceased member's final compensation, but not less than $15 \%$ of such final compensation. Survivor benefits are also payable to the surviving spouse's of former members who have not withdrawn their accumulated contributions and who have at least twenty years of creditable service. The benefits payable are the actuarial equivalent of the Option 2 benefits that would have become payable to the surviving spouse at the time the former member would have begun receiving deferred normal retirement benefits, had the member survived until that date, elected Option 2, and died at that time.

## PROVISIONS APPLICABLE TO BOTH PLAN A AND B:

FINAL AVERAGE COMPENSATION - For a member whose first employment making him eligible for membership in the system began on or before June 30, 2006, final average compensation is based on the average monthly earnings during the highest thirty-six consecutive months or joined months if service was interrupted. The earnings to be considered for each twelve month period within the thirty-six month period shall not exceed $125 \%$ of the preceding twelve month period.

For a member whose first employment making him eligible for membership in the system began after June 30, 2006, final average compensation is based on the average monthly earnings during the highest sixty consecutive months or joined months if service was interrupted. The earnings to be considered for each twelve month period within the thirty-six month period shall not exceed $125 \%$ of the preceding twelve month period.

UNUSED SICK \& ANNUAL LEAVE - All unused sick and annual leave is credited at the time of retirement to the member if the employer so elects for his employees. The actuarial cost of providing this conversion is borne solely by the employer and must be paid to the board within thirty days of the member's retirement date.

OPTIONAL ALLOWANCES - Members may receive their benefits as a life annuity, or in lieu of such a reduced benefit according to the option selected which is the actuarial equivalent of the maximum benefit.

Option 2 - Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will continue to receive the same reduced benefit.

## G. S. CURRAN \& COMPANY, LTD.

Option 3 - Upon retirement, the member receives a reduced benefit. Upon the member's death, the designated beneficiary will receive one-half of the member's reduced benefit.

Option 4 - Upon retirement, the member elects to receive a board-approved benefit which is actuarially equivalent to the maximum benefit.

A member may also elect to receive an actuarially reduced benefit which provides for an automatic $21 / 2 \%$ annual compound increase in monthly retirement benefits based on the reduced benefit and commencing on the later of age fifty-five or retirement anniversary; this COLA is in addition to any ad hoc COLAs which are payable.

DEFERRED RETIREMENT OPTION PLAN - In lieu of terminating employment and accepting a service retirement allowance, any member of Plan A or B who is eligible for a normal retirement may elect to participate in the Deferred Retirement Option Plan (DROP) for up to three years and defer the receipt of benefits. Upon commencement of participation in the plan, membership in the system terminates. During participation in the plan, employer contributions are payable but employee contributions cease. The monthly retirement benefits that would have been payable, had the person elected to cease employment and receive a service retirement allowance, are paid into the DROP account. After a member terminates his participation in DROP his account will earn interest at the actual rate of return earned on the funds left on deposit as certified by the custodian of the system's assets. This interest will be credited to the individual member's account balance on a daily basis beginning July 1, 2006. In addition, no cost of living increases are payable to participants until employment which made them eligible to become members of the system has been terminated for at least one full year.

Upon termination of employment prior to, or at the end of, the specified period of participation, a participant in the plan may receive, at his option, a lump sum payment from the account equal to the payments into the account, a true annuity based upon his account balance in that fund, or any other method of payment if approved by the board of trustees. The monthly benefits that were being paid into the DROP account will begin to be paid to the retiree. If a participant dies during the participation in the plan, a lump sum equal to his account balance in the plan fund shall be paid to his named beneficiary or, if none, to his estate. If employment is not terminated at the end of the three years, payments into the plan fund cease and the person resumes active contributing membership in the system. For any member hired prior to July 1, 2006, additional accrued benefits are based on final average compensation used to calculate the member's original benefit unless the additional period of service is at least thirty-six months. For any member hired on or after July 1, 2006, whose period of additional service after their DROP participation period ends is less than sixty months, the final compensation figure used to calculate the additional benefit will be that used to calculate the original benefit. If their period of additional service is sixty months or more, the final compensation figure used to calculate the additional benefit will be based on their compensation during the period of additional service.

COST OF LIVING INCREASES - The board of trustees is authorized to grant retired members, and widows of members, who have been retired for at least one full year an annual cost of living increase of two percent of their original benefit and all retired members and widows who are sixtyfive years of age and older a two percent increase in their original benefit (or their benefit as of

## G. S. CURRAN \& COMPANY, LTD.

October 1, 1977, if they retired prior to that time). In order for the board to grant either of these increases the system must meet certain criteria detailed in the statute related to funding status and interest earnings on investments. In lieu of other cost of living increases the board may grant an increase to retirees in the form " $\mathrm{X} \times(\mathrm{A} \& \mathrm{~B})$ " where " A " is equal to the number of years of credited service accrued as retirement or death of the member or retiree and " B " is equal to the number of years since death of the member or retiree to June 30 of the initial year of increase and " X " is equal to any amount available for funding such increase up to a maximum of $\$ 1.00$.

## ACTUARIAL ASSUMPTIONS

In determining actuarial costs, certain assumptions must be made regarding future experience under the plan. These assumptions include the rate of investment return, mortality of plan members, rates of salary increase, rates of retirement, rates of termination, rates of disability, and various other factors that have an impact on the cost of the plan. To the extent that future experience varies from the assumptions selected for valuation, future costs will be either higher or lower than anticipated. The effect of emerging experience on the fund is illustrated by the following chart.

| Factor | Increase in Factor Results in |
| :---: | :---: |
| Investment Earnings Rate | Decrease in Cost |
| Annual Rate of Salary Increase | Increase in Cost |
| Rates of Retirement | Increase in Cost |
| Rates of Termination | Decrease in Cost |
| Rates of Disability | Increase in Cost |
| Rates of Mortality | Decrease in Cost |
| ACTUARIAL COST METHOD: | Frozen Attained Age Normal Actuarial Cost Method with allocation based on earnings. The frozen actuarial accrued liabilities were calculated on the projected unit credit cost method. |
| ACTUARIAL ASSET VALUES: | Invested assets are valued at market value adjusted to defer four-fifths of all earnings above or below the valuation interest rate in the valuation year, three-fifths of all earnings above or below the valuation interest rate in the prior year, two-fifths of all earnings above or below the valuation interest rate from two years prior, and one-fifth of all earnings above or below the valuation interest rate from three years prior. The resulting smoothed values are subject to a corridor of $85 \%$ to $115 \%$ of the market value of assets. If the smoothed value falls outside the corridor, the actuarial value is set equal to the average of the corridor limit and the smoothed value. |
| VALUATION INTEREST RATE: | 8\% (Net of Investment Expense) |
| ANNUAL SALARY INCREASE RATE: | 6\% (3.25\% Inflation / 2.75\% Merit) |
| ACTIVE MEMBER MORTALITY: | RP 2000 Employee Table for males and females |
| ANNUITANT, AND BENEFICIARY MORTALITY: | RP 2000 Healthy Annuitant Table for males and females |

## G. S. CURRAN \& COMPANY, LTD.

RETIREE COST OF LIVING INCREASES: The present value of future retirement benefits is based on benefits currently being paid by the system and includes previously granted cost of living increases. The present values do not include provisions for potential future increases not yet authorized by the Board of Trustees.

RATES OF RETIREMENT: The table of these rates is included later in the report. These rates apply only to those individuals eligible to retire. Members are assumed to retire no earlier than normal retirement age. In the first year of eligibility the tabular rates are multiplied by 1.5 .

RETIREMENT LIMITATIONS: Projected retirement benefits are not subjected to IRS Section 415 limits.

DROP ENTRY RATES: The table of these rates is included later in the report. These rates apply only to those individuals eligible to participate in DROP. In the first year of eligibility the tabular rates are multiplied by 1.5 .

DROP PARTICIPATION PERIOD:

RETIREMENT RATES FOR ACTIVE FORMER DROP PARTICIPANTS:

All DROP participants are assumed to participate for 3 years and retire at the end of this participation period.

Retirement rates for active former DROP participants are as follows:

| Ages | Retirement Rates |
| :---: | :---: |
| Below 89 | 0.19 |
| 90 | 1.00 |

RATES OF WITHDRAWAL: The rates of withdrawal are applied based upon completed years of service according to the following table:

| Service | Plan A | Plan B |
| :---: | :---: | :---: |
| 0 | 0.24 | 0.26 |
| 1 | 0.19 | 0.20 |
| 2 | 0.16 | 0.15 |
| 3 | 0.12 | 0.15 |
| 4 | 0.10 | 0.10 |
| 5 | 0.08 | 0.10 |
| 6 | 0.08 | 0.09 |
| 7 | 0.08 | 0.09 |
| 8 | 0.06 | 0.06 |
| 9 | 0.06 | 0.05 |
| 10 | 0.06 | 0.05 |


| 11 | 0.05 | 0.05 |
| :---: | :---: | :---: |
| 12 | 0.05 | 0.05 |
| 13 | 0.05 | 0.05 |
| 14 | 0.03 | 0.05 |
| 15 | 0.03 | 0.05 |
| 16 | 0.03 | 0.03 |
| 17 | 0.01 | 0.03 |
| 18 | 0.01 | 0.03 |
| 19 | 0.01 | 0.03 |
| 20 | 0.01 | 0.02 |
| over 20 | 0.01 | 0.02 |

Note: The withdrawal rate for individuals eligible to retire is assumed to be zero.
RATES OF DISABILITY: $20 \%$ of the disability rates used for the $21^{\text {st }}$ valuation of the Railroad Retirement System for individuals with $10-19$ years of service.

MARRIAGE STATISTICS: $80 \%$ of the members are assumed to be married; husbands are assumed to be three years older than wives.

FAMILY STATISTICS: Assumptions utilized in determining the costs of various survivor benefits as listed below, are derived from the information provided in the 2000 U. S. Census:

| Member's <br> $\frac{\text { Age }}{25}$ | \% With <br> Children | Number of <br> Children | Avg. <br> Age |
| :---: | :---: | :---: | :---: |
| 35 | $82 \%$ | 1.7 | 6 |
| 45 | $66 \%$ | 2.1 | 10 |
| 55 | $19 \%$ | 1.8 | 13 |
| 65 | $2 \%$ | 1.4 | 15 |
|  | 25 | 15 |  |

## DISABLED LIVES MORTALITY: RP-2000 Disabled Lives Mortality Tables for Males and Females

VESTING ELECTING PERCENTAGE: $30 \%$ of those members under age 40 who are terminated vested elect deferred benefits in lieu of contribution refunds. $45 \%$ of those who are between the ages of $40-49$ who are terminated vested elect deferred benefits in lieu of contribution refunds. $60 \%$ of those who are at least age 50 who are terminated vested elect deferred benefits in lieu of contribution refunds.

## PLAN A ACTUARIAL TABLES AND RATES

| Age | Retired Male Mortality | Retired <br> Female <br> Mortality | Active <br> Male Mortality | Active <br> Female <br> Mortality | Retirement Rates | $\begin{aligned} & \text { DROP } \\ & \text { Entry } \\ & \text { Rates } \end{aligned}$ | Disability Rates | Remarriage Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 | 0.00032 | 0.00019 | 0.00032 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.05665 |
| 19 | 0.00033 | 0.00019 | 0.00033 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.05665 |
| 20 | 0.00035 | 0.00019 | 0.00035 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.05665 |
| 21 | 0.00036 | 0.00019 | 0.00036 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.05213 |
| 22 | 0.00037 | 0.00019 | 0.00037 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.04834 |
| 23 | 0.00037 | 0.00020 | 0.00037 | 0.00020 | 0.00000 | 0.00000 | 0.00030 | 0.04522 |
| 24 | 0.00038 | 0.00020 | 0.00038 | 0.00020 | 0.00000 | 0.00000 | 0.00030 | 0.04270 |
| 25 | 0.00038 | 0.00021 | 0.00038 | 0.00021 | 0.00000 | 0.00000 | 0.00030 | 0.04070 |
| 26 | 0.00038 | 0.00021 | 0.00038 | 0.00021 | 0.00000 | 0.00000 | 0.00030 | 0.03915 |
| 27 | 0.00038 | 0.00022 | 0.00038 | 0.00022 | 0.00000 | 0.00000 | 0.00030 | 0.03799 |
| 28 | 0.00039 | 0.00024 | 0.00039 | 0.00024 | 0.00000 | 0.00000 | 0.00030 | 0.03714 |
| 29 | 0.00041 | 0.00025 | 0.00041 | 0.00025 | 0.00000 | 0.00000 | 0.00030 | 0.03654 |
| 30 | 0.00044 | 0.00026 | 0.00044 | 0.00026 | 0.00000 | 0.00000 | 0.00030 | 0.03611 |
| 31 | 0.00050 | 0.00031 | 0.00050 | 0.00031 | 0.00000 | 0.00000 | 0.00030 | 0.03578 |
| 32 | 0.00056 | 0.00035 | 0.00056 | 0.00035 | 0.00000 | 0.00000 | 0.00030 | 0.03549 |
| 33 | 0.00063 | 0.00039 | 0.00063 | 0.00039 | 0.00000 | 0.00000 | 0.00030 | 0.03515 |
| 34 | 0.00070 | 0.00044 | 0.00070 | 0.00044 | 0.00000 | 0.00000 | 0.00030 | 0.03471 |
| 35 | 0.00077 | 0.00047 | 0.00077 | 0.00047 | 0.00000 | 0.00000 | 0.00034 | 0.03409 |
| 36 | 0.00084 | 0.00051 | 0.00084 | 0.00051 | 0.00000 | 0.00000 | 0.00038 | 0.03286 |
| 37 | 0.00090 | 0.00055 | 0.00090 | 0.00055 | 0.00000 | 0.00000 | 0.00042 | 0.03139 |
| 38 | 0.00096 | 0.00060 | 0.00096 | 0.00060 | 0.00000 | 0.00000 | 0.00048 | 0.02973 |
| 39 | 0.00102 | 0.00065 | 0.00102 | 0.00065 | 0.00000 | 0.00000 | 0.00054 | 0.02787 |
| 40 | 0.00108 | 0.00071 | 0.00108 | 0.00071 | 0.00000 | 0.00000 | 0.00062 | 0.02585 |
| 41 | 0.00114 | 0.00077 | 0.00114 | 0.00077 | 0.06000 | 0.27000 | 0.00070 | 0.02352 |
| 42 | 0.00122 | 0.00085 | 0.00122 | 0.00085 | 0.06000 | 0.27000 | 0.00078 | 0.02111 |
| 43 | 0.00130 | 0.00094 | 0.00130 | 0.00094 | 0.06000 | 0.27000 | 0.00088 | 0.01868 |
| 44 | 0.00140 | 0.00103 | 0.00140 | 0.00103 | 0.06000 | 0.27000 | 0.00100 | 0.01629 |
| 45 | 0.00151 | 0.00112 | 0.00151 | 0.00112 | 0.06000 | 0.27000 | 0.00114 | 0.01400 |
| 46 | 0.00162 | 0.00122 | 0.00162 | 0.00122 | 0.06000 | 0.27000 | 0.00130 | 0.01208 |
| 47 | 0.00173 | 0.00133 | 0.00173 | 0.00133 | 0.06000 | 0.27000 | 0.00146 | 0.01034 |
| 48 | 0.00186 | 0.00143 | 0.00186 | 0.00143 | 0.06000 | 0.27000 | 0.00166 | 0.00879 |
| 49 | 0.00200 | 0.00155 | 0.00200 | 0.00155 | 0.06000 | 0.27000 | 0.00188 | 0.00744 |
| 50 | 0.00535 | 0.00234 | 0.00214 | 0.00168 | 0.06000 | 0.27000 | 0.00214 | 0.00629 |
| 51 | 0.00553 | 0.00246 | 0.00229 | 0.00181 | 0.06000 | 0.27000 | 0.00244 | 0.00551 |
| 52 | 0.00564 | 0.00265 | 0.00245 | 0.00197 | 0.06000 | 0.27000 | 0.00276 | 0.00493 |
| 53 | 0.00572 | 0.00290 | 0.00262 | 0.00213 | 0.06000 | 0.27000 | 0.00314 | 0.00451 |
| 54 | 0.00580 | 0.00319 | 0.00281 | 0.00232 | 0.06000 | 0.27000 | 0.00356 | 0.00423 |
| 55 | 0.00590 | 0.00353 | 0.00303 | 0.00253 | 0.06000 | 0.27000 | 0.00404 | 0.00406 |
| 56 | 0.00612 | 0.00393 | 0.00331 | 0.00276 | 0.06000 | 0.27000 | 0.00460 | 0.00000 |
| 57 | 0.00644 | 0.00438 | 0.00363 | 0.00301 | 0.06000 | 0.27000 | 0.00522 | 0.00000 |
| 58 | 0.00690 | 0.00492 | 0.00400 | 0.00329 | 0.06000 | 0.27000 | 0.00592 | 0.00000 |
| 59 | 0.00749 | 0.00553 | 0.00441 | 0.00360 | 0.06000 | 0.27000 | 0.00674 | 0.00000 |
| 60 | 0.00820 | 0.00620 | 0.00488 | 0.00393 | 0.14000 | 0.27000 | 0.00976 | 0.00000 |
| 61 | 0.00900 | 0.00692 | 0.00538 | 0.00429 | 0.14000 | 0.12000 | 0.01060 | 0.00000 |
| 62 | 0.00991 | 0.00769 | 0.00592 | 0.00466 | 0.14000 | 0.12000 | 0.01156 | 0.00000 |
| 63 | 0.01095 | 0.00851 | 0.00647 | 0.00504 | 0.14000 | 0.12000 | 0.01110 | 0.00000 |
| 64 | 0.01212 | 0.00939 | 0.00703 | 0.00543 | 0.14000 | 0.12000 | 0.00702 | 0.00000 |
| 65 | 0.01342 | 0.01036 | 0.00757 | 0.00582 | 0.14000 | 0.12000 | 0.00126 | 0.00000 |

## -65-

## G. S. CURRAN \& COMPANY, LTD.

## PLAN B ACTUARIAL TABLES AND RATES

| Age | Retired Male Mortality | Retired <br> Female <br> Mortality | $\begin{gathered} \text { Active } \\ \text { Male } \\ \text { Mortality } \end{gathered}$ | Active <br> Female Mortality | Retirement Rates | DROP <br> Entry <br> Rates | Disability Rates | Remarriage Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18 | 0.00032 | 0.00019 | 0.00032 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.05665 |
| 19 | 0.00033 | 0.00019 | 0.00033 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.05665 |
| 20 | 0.00035 | 0.00019 | 0.00035 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.05665 |
| 21 | 0.00036 | 0.00019 | 0.00036 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.05213 |
| 22 | 0.00037 | 0.00019 | 0.00037 | 0.00019 | 0.00000 | 0.00000 | 0.00030 | 0.04834 |
| 23 | 0.00037 | 0.00020 | 0.00037 | 0.00020 | 0.00000 | 0.00000 | 0.00030 | 0.04522 |
| 24 | 0.00038 | 0.00020 | 0.00038 | 0.00020 | 0.00000 | 0.00000 | 0.00030 | 0.04270 |
| 25 | 0.00038 | 0.00021 | 0.00038 | 0.00021 | 0.00000 | 0.00000 | 0.00030 | 0.04070 |
| 26 | 0.00038 | 0.00021 | 0.00038 | 0.00021 | 0.00000 | 0.00000 | 0.00030 | 0.03915 |
| 27 | 0.00038 | 0.00022 | 0.00038 | 0.00022 | 0.00000 | 0.00000 | 0.00030 | 0.03799 |
| 28 | 0.00039 | 0.00024 | 0.00039 | 0.00024 | 0.00000 | 0.00000 | 0.00030 | 0.03714 |
| 29 | 0.00041 | 0.00025 | 0.00041 | 0.00025 | 0.00000 | 0.00000 | 0.00030 | 0.03654 |
| 30 | 0.00044 | 0.00026 | 0.00044 | 0.00026 | 0.00000 | 0.00000 | 0.00030 | 0.03611 |
| 31 | 0.00050 | 0.00031 | 0.00050 | 0.00031 | 0.00000 | 0.00000 | 0.00030 | 0.03578 |
| 32 | 0.00056 | 0.00035 | 0.00056 | 0.00035 | 0.00000 | 0.00000 | 0.00030 | 0.03549 |
| 33 | 0.00063 | 0.00039 | 0.00063 | 0.00039 | 0.00000 | 0.00000 | 0.00030 | 0.03515 |
| 34 | 0.00070 | 0.00044 | 0.00070 | 0.00044 | 0.00000 | 0.00000 | 0.00030 | 0.03471 |
| 35 | 0.00077 | 0.00047 | 0.00077 | 0.00047 | 0.00000 | 0.00000 | 0.00034 | 0.03409 |
| 36 | 0.00084 | 0.00051 | 0.00084 | 0.00051 | 0.00000 | 0.00000 | 0.00038 | 0.03286 |
| 37 | 0.00090 | 0.00055 | 0.00090 | 0.00055 | 0.00000 | 0.00000 | 0.00042 | 0.03139 |
| 38 | 0.00096 | 0.00060 | 0.00096 | 0.00060 | 0.00000 | 0.00000 | 0.00048 | 0.02973 |
| 39 | 0.00102 | 0.00065 | 0.00102 | 0.00065 | 0.00000 | 0.00000 | 0.00054 | 0.02787 |
| 40 | 0.00108 | 0.00071 | 0.00108 | 0.00071 | 0.00000 | 0.00000 | 0.00062 | 0.02585 |
| 41 | 0.00114 | 0.00077 | 0.00114 | 0.00077 | 0.00000 | 0.00000 | 0.00070 | 0.02352 |
| 42 | 0.00122 | 0.00085 | 0.00122 | 0.00085 | 0.00000 | 0.00000 | 0.00078 | 0.02111 |
| 43 | 0.00130 | 0.00094 | 0.00130 | 0.00094 | 0.00000 | 0.00000 | 0.00088 | 0.01868 |
| 44 | 0.00140 | 0.00103 | 0.00140 | 0.00103 | 0.00000 | 0.00000 | 0.00100 | 0.01629 |
| 45 | 0.00151 | 0.00112 | 0.00151 | 0.00112 | 0.00000 | 0.00000 | 0.00114 | 0.01400 |
| 46 | 0.00162 | 0.00122 | 0.00162 | 0.00122 | 0.06000 | 0.24000 | 0.00130 | 0.01208 |
| 47 | 0.00173 | 0.00133 | 0.00173 | 0.00133 | 0.06000 | 0.24000 | 0.00146 | 0.01034 |
| 48 | 0.00186 | 0.00143 | 0.00186 | 0.00143 | 0.06000 | 0.24000 | 0.00166 | 0.00879 |
| 49 | 0.00200 | 0.00155 | 0.00200 | 0.00155 | 0.06000 | 0.24000 | 0.00188 | 0.00744 |
| 50 | 0.00535 | 0.00234 | 0.00214 | 0.00168 | 0.06000 | 0.24000 | 0.00214 | 0.00629 |
| 51 | 0.00553 | 0.00246 | 0.00229 | 0.00181 | 0.06000 | 0.24000 | 0.00244 | 0.00551 |
| 52 | 0.00564 | 0.00265 | 0.00245 | 0.00197 | 0.06000 | 0.24000 | 0.00276 | 0.00493 |
| 53 | 0.00572 | 0.00290 | 0.00262 | 0.00213 | 0.06000 | 0.24000 | 0.00314 | 0.00451 |
| 54 | 0.00580 | 0.00319 | 0.00281 | 0.00232 | 0.06000 | 0.24000 | 0.00356 | 0.00423 |
| 55 | 0.00590 | 0.00353 | 0.00303 | 0.00253 | 0.36000 | 0.38000 | 0.00404 | 0.00406 |
| 56 | 0.00612 | 0.00393 | 0.00331 | 0.00276 | 0.22000 | 0.38000 | 0.00460 | 0.00000 |
| 57 | 0.00644 | 0.00438 | 0.00363 | 0.00301 | 0.22000 | 0.38000 | 0.00522 | 0.00000 |
| 58 | 0.00690 | 0.00492 | 0.00400 | 0.00329 | 0.22000 | 0.38000 | 0.00592 | 0.00000 |
| 59 | 0.00749 | 0.00553 | 0.00441 | 0.00360 | 0.22000 | 0.16000 | 0.00674 | 0.00000 |
| 60 | 0.00820 | 0.00620 | 0.00488 | 0.00393 | 0.12000 | 0.16000 | 0.00976 | 0.00000 |
| 61 | 0.00900 | 0.00692 | 0.00538 | 0.00429 | 0.12000 | 0.16000 | 0.01060 | 0.00000 |
| 62 | 0.00991 | 0.00769 | 0.00592 | 0.00466 | 0.12000 | 0.16000 | 0.01156 | 0.00000 |
| 63 | 0.01095 | 0.00851 | 0.00647 | 0.00504 | 0.12000 | 0.16000 | 0.01110 | 0.00000 |
| 64 | 0.01212 | 0.00939 | 0.00703 | 0.00543 | 0.12000 | 0.16000 | 0.00702 | 0.00000 |
| 65 | 0.01342 | 0.01036 | 0.00757 | 0.00582 | 0.12000 | 0.12000 | 0.00126 | 0.00000 |

## - 66 -

## G. S. CURRAN \& COMPANY, LTD.

## GLOSSARY

Accrued Benefit - The pension benefit that an individual has earned as of a specific dated based on the provisions of the plan and the individual's age, service, and salary as of that date.

Actuarial Accrued Liability - The actuarial present value of benefits payable to members of the fund less the present value of future normal costs attributable to the members.

Actuarial Assumptions - Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of mortality, withdrawal, disablement, and retirement. Also included are rates of investment earnings, changes in compensation, as well as statistics related to marriage and family composition.

Actuarial Cost Method - A procedure for determining the portion of the cost of a pension plan to be allocated to each year. Each cost method allocates a certain portion of the actuarial present value of benefits between the actuarial accrued liability and future normal costs. Once this allocation is made, a determination of the normal cost attributable to a specific year can be made along with the payment to amortize any unfunded actuarial accrued liability. To the extent that a particular funding method allocates a greater (lesser) portion of the actual present value of benefits to the actuarial accrued liability it will allocate less (more) to future normal costs.

Actuarial Equivalence - Payments or receipts with equal actuarial value on a given date when valued using the same set of actuarial assumptions.

Actuarial Gain (Loss) - The financial effect on the fund of the difference between the expected and actual experience of the fund. The experience may be related to investment earnings above (or below) those expected or changes in the liability structure due to fewer (or greater) than the expected numbers of retirements, deaths, disabilities, or withdrawals. In addition, other factors such as pay increases above (or below) those forecast can result in actuarial gains or losses. The effect of such gains (or losses) is to decrease (or increase) future costs.

Actuarial Present Value - The value, as of a specified date, of an amount or series of amounts payable or receivable thereafter, with each amount adjusted to reflect the time value of money (through accrual of interest) and the probability of payments. For example: if $\$ 600$ invested today will be worth $\$ 1,000$ in 10 years and there is a $50 \%$ probability that a person will live 10 years, then the actuarial present value of $\$ 1,000$ payable to that person if he should survive 10 years is \$300.

Actuarial Value of Assets - The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to the book value, market value, or some modification involving either or both book and market value. Adjustments to market values are often made to reduce the volatility of asset values.

Asset Gain (Loss) - That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

## G. S. CURRAN \& COMPANY, LTD.

Amortization Payment - That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

Contribution Shortfall (Excess) - The difference between contributions recommended in the prior valuation and the actual amount received.

Decrements - Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.

Employer Normal Cost - That portion of the normal cost not attributable to employee contributions. It includes both direct contributions made by the employer and contributions from other non-employee sources such as revenue sharing and revenues related to taxes.

Funded Ratio - A measure of the ratio of assets to liabilities of the system according to a specific definition of those two values. Typically the assets used in the measure are the actuarial value of assets; the liabilities are defined by reference to some recognized actuarial funding method. Thus the funded ratio of a plan depends not only on the financial strength of the plan but also on the funding method used to determine the liabilities and the asset valuation method used to determine the assets in the ratio.

Normal Cost - That portion of the actuarial present value of pension plan benefits and expenses allocated to a valuation year by the actuarial cost method. This is analogous to one year's insurance premium.

Pension Benefit Obligation - The actuarial present value of benefits earned or credited to date based on the members expected final average compensation at retirement. For current retirees or terminated members this is equivalent to the actuarial present value of their accrued benefit.

Projected Benefits - The benefits expected to be paid in the future based on the provisions of the plan and the actuarial assumptions. The projected values are based on anticipated future advancement in age and accrual of service as well as increases in salary paid to the participant.

Unfunded Actuarial Accrued Liability - The excess of the actuarial accrued liability over the actuarial value of assets.

Vested Benefits - Benefits that the members are entitled to even if they withdraw from service.


[^0]:    * Includes the effect of a change in asset valuation method.
    $\dagger$ Includes the impact of inclusion of the prior period adjustment for investment income as income in fiscal year.

