

CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM

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February 14, 2017

Honorable Mayor and Members of City Council, Charlotte, North Carolina,
Members of the Board of Trustees, Charlotte Firefighters' Retirement System,
and Participants of the Charlotte Firefighters' Retirement System:

The Comprehensive Annual Financial Report ("Report") of the Charlotte Firefighters' Retirement System ("System"), a Component Unit of the City of Charlotte, North Carolina, for the fiscal year ended June 30, 2016 is herewith submitted. The Board and the System's staff are responsible for the preparation and presentation of the financial information and all other data contained herein, and believe that the Report is based on accounting principles generally accepted in the United States of America, presents fairly and consistently the System's financial position and results of operations and conforms to the standards of governmental accounting and financial reporting principles as promulgated by the Governmental Accounting Standards Board (GASB). The Report consists of five sections:

- (1) Introductory Section which contains this Letter of Transmittal and general information regarding the system;
- (2) Financial Section consisting of the Independent Auditor's Report, audited financial statements and the accompanying notes to the financial statements, and required supplementary information and schedules which includes Management's Discussion and Analysis pursuant to GASB Statement No. 34;
- (3) Investment Section which contains supportive documentation related to the System's investments;
- (4) Actuarial Section which contains the consulting actuary's opinion and the results of the annual actuarial valuation report, as of July 1, 2016; and
- (5) Statistical Section which contains financial trends and information on membership activity and other statistical information which may be of interest to readers.

HISTORY

The System was organized pursuant to Chapter 926 of the 1947 Session Laws, as amended, of the State of North Carolina, and is officially known as the Charlotte Firefighters' Retirement System Act ("Act"). The System was established on the fifth

day of April 1947, for the purpose of providing retirement, disability and survivor benefits to the uniformed employees of the Fire Department of the City of Charlotte. In 2013, a new Letter of Determination from the Internal Revenue Service was received affirming the tax-qualified status of the System. In January 2016, the System filed for an updated Letter of Determination and is awaiting response from the Internal Revenue Service.

ADMINISTRATION OF THE SYSTEM

The administration and responsibility for the proper operation of the System is vested with the System's Board of Trustees ("Board"), which is comprised by the following Trustees as defined by the Act: (a) a Chairperson who is a Mecklenburg County resident and who is appointed by the Resident Judge of the Superior Court of Mecklenburg County to serve as Chairperson for a three year term; (b) three Citizen Trustees who are Mecklenburg County residents and who are appointed by the Resident Judge of the Superior Court of Mecklenburg County for three year staggered terms; (c) the City Manager, who serves by virtue of his position, or some other City department head or employee as designated by the City Manager; (d) the City Finance Director, who serves by virtue of his position, or a deputy finance director as designated by the Finance Director; (e) the City Treasurer who serves by virtue of his position; (f) three Member Trustees who are elected by the active Members for three year staggered terms; and (g) one Retiree Trustee who is elected by the Retirees for a term of three years.

The current Board is listed on the title page of this report.

COMMITTEES

The Board operationally functions under a committee structure. An Investment Committee and a Benefits Committee are annually appointed by the Chairperson of the Board to monitor, fact-find, and recommend actions for the Board's consideration. Although not required, the committees have generally been comprised of at least three trustees with one committee member being a Citizen Trustee, another a Member Trustee, and the other an ex-officio (i.e., City official) Trustee. During the past fiscal year, Tim R. Ramsey, Member Trustee, served as Chair of the Investment Committee. A. Scott King and Kevin Gordon, Member Trustees, served as Chairs of the Benefits Committee. Other committees may be appointed for specific projects at the discretion of the Chairperson. A transitional Funding Committee was established at the beginning of fiscal year 2016 to review funding practices. The function of the Funding Committee transitioned to the Investment Committee in fiscal year 2017.

PROFESSIONAL SERVICES

The Board employs the services of various professionals to aid it in its fiduciary responsibility for the effective and prudent management of the System. These professionals include: (a) a full-time Administrator who is responsible for the supervision of System staff and administration and coordination of all System operations and activities in accordance with the rules and regulations of the Act and the policies and direction of the Board; (b) the City Attorney and his staff serve as the legal advisor to the Board although additional outside legal counsel may be engaged by the Board from time to time for specialized services; (c) a consulting actuary who is engaged by the City of Charlotte to perform such studies and evaluations of the System as may be necessary and/or desirable in connection with the System's administration and funding, including preparation of the Annual Actuarial Valuation to determine the adequacy of the funding of the retirement benefit liabilities accrued by System members); (d) an independent auditor engaged by the Board on an annual basis to determine whether the financial statements present fairly, in all material respects, the financial position of the System and the results of its yearly operations in conformity with generally accepted accounting principles; (e) a Medical Board appointed by the Board to review and evaluate medical evidence and propose recommendations regarding disability retirements; (f) investment management professionals employed to invest the system's assets consistent with the objectives and direction of the Board, and (g) an investment consultant to advise the Board on matters of investment policy and strategy, conduct manager searches and monitor performance of the investment managers.

The Board may engage other professionals with expertise in various fields for specific services as deemed necessary. All of the advisors, consultants and providers of professional services to the System are listed on Page 10. Information related to investment fees may be found on Page 41.

FINANCIAL REPORTING

An annual report of the financial and actuarial condition of the System is prepared and submitted to the City Council. The annual report to City Council contains, but is not limited to, the auditor's opinion, statements contained in the auditor's report, a summary of the annual actuarial valuation and the actuary's valuation certification. Additionally, a copy of the annual report to City Council is provided to each of the fire stations and fire department administrative offices of the City of Charlotte.

MAJOR INITIATIVES

During the year, as its primary duty, the Investment Committee spent considerable time reviewing the performance of all existing managers. The Committee met in person with each manager. As a result of continuing global market and economic volatility, the Committee had in-depth discussions with managers and the investment consultant to review the target asset allocation of the portfolio and to review risk management policies. An Asset Liability study was performed and results were discussed. A formal

recommendation was made to and approved by the Board to change target allocations and hire additional investment managers.

Investments and managers will continue to be monitored by the Investment Committee on both a proactive and retrospective basis to assure continued success as well as continued commitment to a well-diversified portfolio and prudent asset allocation. The total portfolio investment return for the year ended June 30, 2016 of 1.05% was less than the assumed return rate of 7.5% by 645 basis points and reflected the continuing volatility of the global markets and economic conditions. The last 5 and 10 year rates of returns were 7.89% and 6.48% respectively.

Detailed information concerning the System's investments may be found in the *Investment Section* beginning on Page 43.

The Benefits Committee met on a regular basis during the year. Considerable ongoing discussion regarding the methodology for retirement benefit calculations and addressing the current unfunded liability have been at the forefront of the meetings. These discussions will continue into the next fiscal year.

The Arrivos pension administration system was fully in use during this fiscal year with enhancements made to member statements and updates to actuarial assumptions for service purchase calculations. Arrivos should continue to improve data availability, operations and the services provided to members as the database grows. It has reduced the time to prepare estimates and process service purchase requests from members.

FINANCIAL INFORMATION

The System's internal control structure is designed to provide reasonable, but not absolute, assurance for the safeguarding of assets against loss from theft or unauthorized use and to ensure the reliability and adequacy of the accounting records. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived, and (2) the valuation of costs and benefits requires estimates and judgment by the Board. Accounting data are maintained in a manner suitable for preparing financial reports in conformity with generally accepted accounting principles and for providing accurate and timely data to the City Council, Board, participants of the System, citizens, and other interested parties.

Budgetary Controls

The North Carolina General Statutes require the adoption of an annual budget for all funds except those for which expenditures are authorized by project ordinance, fiduciary funds, and internal service funds. The System is a fiduciary fund and is therefore exempt from budgetary requirements. However, the Board considers and adopts a budget for each fiscal year of operations and receives a quarterly budget report from the Administrator.

Accounting and Actuarial Systems

The financial reports of the System are prepared in accordance with U.S. generally accepted principles of governmental accounting and reporting promulgated by GASB. The accrual basis of accounting is used to record assets and liabilities, and revenues and expenses. Revenues and expenses are recorded when earned or incurred, regardless of collection or disbursement. Capital assets are recorded at cost and depreciated through charges to expense over the estimated useful lives of the assets.

An annual actuarial valuation is performed by the System's actuary Cavanaugh Macdonald Consulting, LLC. The actuarially calculated contribution rates are developed using the entry age cost method. This cost method attempts to allocate the cost of each member's benefit as a level percent of compensation over the member's projected service from date of hire to date of retirement or exit. The calculated contribution rates include a current or "normal" cost for the year plus an amortization amount to reduce any unfunded accrued liability.

Last year an experience study, which reviews the economic and demographic experience over the period of 5 years from 2010 through 2014, was performed by Cavanaugh Macdonald. The results of the experience study prompted the Board to adopt more conservative economic and demographic assumptions which are used for the annual actuarial valuation.

Revenues and Funding

Revenues essential to the sound funding of the System flow from three sources:

Contributions by Members: A System Member contributes an amount equal to the Member's eligible compensation multiplied by the current contribution rate of 12.65%. Member contributions are made on a tax-deferred basis. The contributions are posted to individual accounts for each Member. The accumulated amount in each account is used for the Member's benefit if he or she remains in service. If the Member leaves service, he or she may withdraw the amount of his or her accumulated contribution. A Member with five or more years of membership service receives interest on his or her contributions if a refund is requested. A Member may, if he or she has five or more years of membership service, choose to elect a deferred annuity providing lifetime income commencing at age 60.

Contributions by the City of Charlotte: The City of Charlotte contributes an amount equal to the Member's eligible compensation multiplied by the current contribution rate of 12.65%. Any differences between the aggregate City and Member contributions are due to (a) service purchases made by Members for which the City does not make contributions and (b) City contributions for those Members away on military deployments during which Members are not required to make contributions.

Investment Income: Investment income is the third source of System revenues and must be regarded as both a vital and major contributor to the System's strong funding status. Statutorily, since 1947, the Board has exercised responsibility for investing the System's assets in a prudent and diligent manner.

The reader of this Report should note that year-to-year investment return variation is a function of unrealized gains or losses on securities' valuations and the subsequent realization of gains or losses on the sale of investments and is not necessarily reflective of actual investment cash flow or income.

The primary critical concern of the Board is the System's funding adequacy. High funding levels are directly related to benefit security for participants. It is the responsibility of the Board to make prudent and sound investment decisions in order to increase the assets and thereby the funding level of the System. The Board has a goal of maintaining the funding of the System at or near 100%. Although the market has experienced a recovery since the financial crash of 2008, investment returns have not been sufficient to overcome the current liabilities of the system. The decrease in funding level is also compounded by the change in economic and demographic assumptions. The resulting funding level as of July 1, 2016 of 86.9%, is down from 92.7% as of July 1, 2015.

A more complete discussion of System funding status may be found in the *Actuarial Section* beginning on Page 53.

Expenses

The primary expense of the System relates to the purpose for which it was created, namely, the payment of benefits to retirees and their beneficiaries. Benefit payments and refunds to terminated members were responsible for 96.3% of all deductions from plan assets, compared to 97.9% for the prior year. Administrative costs and depreciation accounted for 2.3% of deductions from plan assets for fiscal year 2016, compared to 2.1% for the prior year. A more detailed discussion of System expenses may be found in the *Financial Section* beginning on Page 15.

The reader may also obtain additional information in *Management's Discussion and Analysis* beginning on Page 17.

OTHER INFORMATION

Independent Audit

Pursuant to North Carolina law, the System is required to undergo an annual audit by a certified public accountant. The Board has selected the independent certified public accounting firm of Cherry Bekaert LLP to provide these services. The auditors' report on the financial statements and required supplementary information is included in the *Financial Section*.

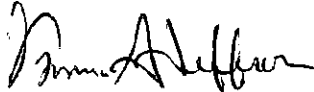
Acknowledgments

The compilation of this Report is intended to provide complete and reliable information regarding the stewardship for the funds contributed by the members of the System and the City of Charlotte.

Several individuals assisted with the preparation of this report and we wish to acknowledge their efforts and assistance. Kaisha Barron, Administrative Officer I; Tony Bass, Administrative Officer III; City Finance Staff, Betty Mattos, Chief Accountant; and Kelly Kay, Accountant I; all contributed many hours to insure the accuracy and completeness of this report.

We hope that this year's report will be of interest to you and will be helpful in understanding, evaluating, and assuring the continued success of the Charlotte Firefighters' Retirement System.

Respectfully Submitted,



Vanessa Heffron, Chairperson, Board of Trustees



Sandra J. Thiry, Administrator

CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM

CHARLOTTE, NORTH CAROLINA

BOARD OF TRUSTEES

F. Traylor Renfro, Chairman of the Board, Citizen Appointee

Tim R. Ramsey, Vice Chairman, Elected Member

Scott L. Greer, Treasurer, Ex-Officio

Kevin S. Gordon Secretary, Elected Member

Cheryl L. Brown, Ex-Officio

Lydia F. Crutchfield, Citizen Appointee

Bobby W. Davis, Elected Retiree

Robert Campbell, Ex-Officio

David F. Moore, Elected Member

Vanessa Heffron, Citizen Appointee

John M. Carr, Citizen Appointee

STAFF

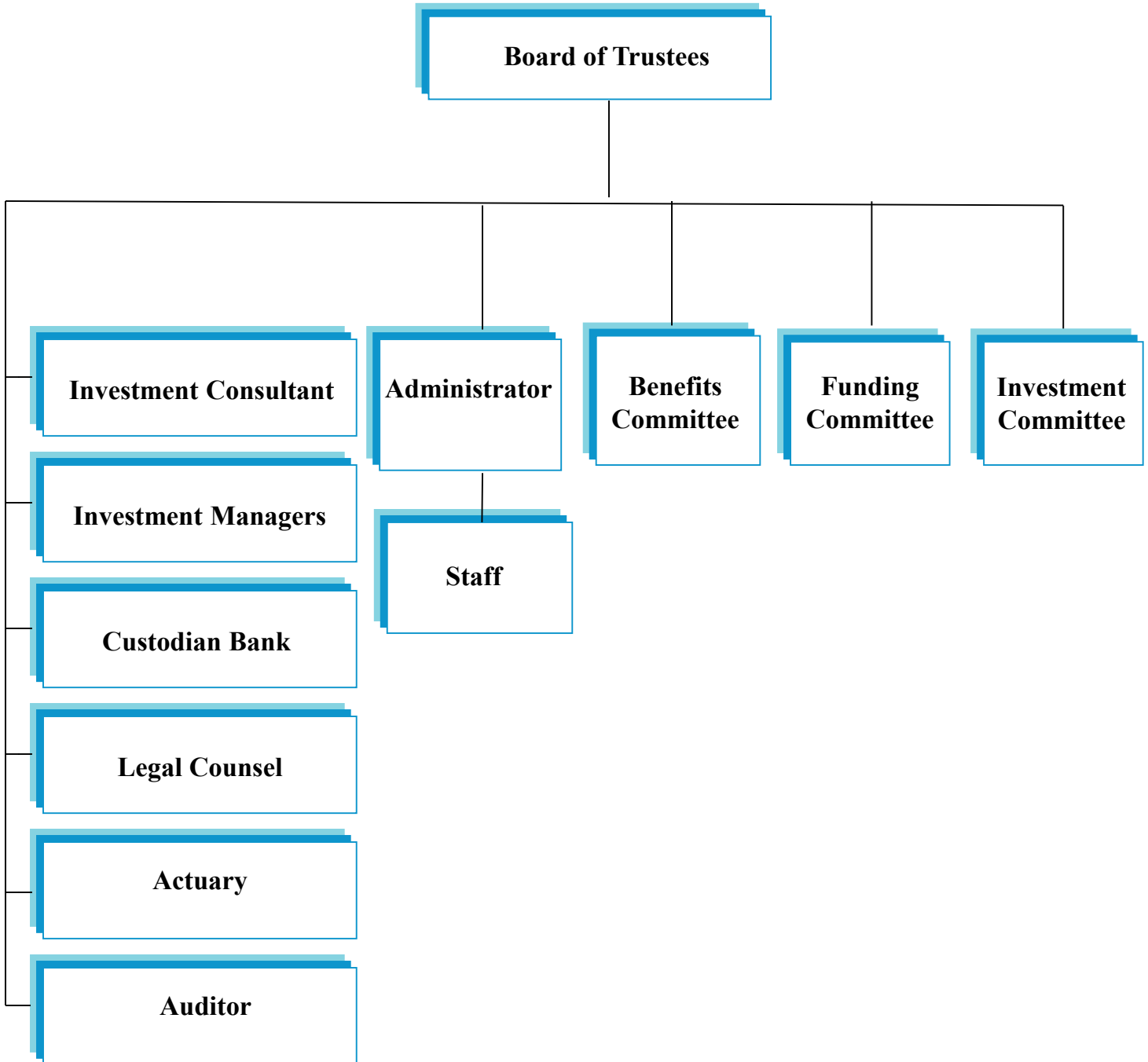
Sandra J. Thiry, Administrator

Tony Bass, Administrative Officer III

Kaisha Barron, Analyst

Tyralyn Phelps, Office Assistant

CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM ORGANIZATIONAL CHART



**PROFESSIONAL SERVICE PROVIDERS
TO THE
CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM**

ACTUARY

Cavanaugh Macdonald Consulting, LLC

CUSTODIAN BANK

USBank

INDEPENDENT AUDITORS

Cherry Bekaert LLP, Raleigh, NC

INVESTMENT ADVISORS

AJO, L.P., Domestic Equities
Baring Asset Management, Inc., Non-U.S. Fixed Income
Barrow, Hanley, Mewhinney & Strauss, Inc., Core Plus Domestic Fixed Income
Eagle Asset Management, Domestic Equities
Investment Counselors of Maryland, Domestic Equities
JP Morgan Chase Asset Management, Real Estate
Morgan Stanley, Non-U.S. Equities
Robeco Investment Management, Domestic Equities
State Street Global Advisors, Domestic Fixed Income Index, Equities Index &
International Equity
T. Rowe Price International, Inc., Non-U.S. Equities
UBS Realty Investors LLC, Real Estate
Winslow Capital Management, Inc., Domestic Equities
William Blair & Company, Domestic Equities

INVESTMENT CONSULTANT

Callan Associates, Inc.

MEDICAL ADVISORS

Novant Health Urgent Care & Occupational Medicine, Charlotte, North Carolina

CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM

SUMMARY OF PLAN PROVISIONS

1. Eligibility for Membership

Membership is mandatory for all employees of the Charlotte Fire Department who are subject to the provisions of the Civil Service Act.

2. Normal Service Retirement

A member may elect to retire at any time after attaining age 50 with 25 or more years of service, age 60 with 5 or more years of service or at any age with 30 or more years of service.

3. Normal Service Retirement Benefit

A member receives 2.6% of final average salary per year of credited service not to exceed the limit imposed by Section 415 of the IRS Code. Final average salary is defined as the higher amount of: (a) the monthly average Compensation received during the two highest consecutive Plan Years of the Member's last five years of Membership Service; or (b) the monthly average Compensation received during the one hundred and four (104) weeks preceding the end of a Member's Membership Service.

4. Early Retirement

A member may retire early before age 50 at any time after completion for 25 years of membership service.

5. Early Retirement Benefit

The early retirement benefit is calculated in the same manner as for normal service retirement, but reduced by .25% for each month the early retirement date precedes age 50.

6. Disability Retirement Benefits

(a) In Line of Duty No minimum age or service requirements. Disability retirement benefits are the greater of 78% of final average salary determined

as of date of total and permanent disability incurred in the line of duty or 2.6% of final average salary times membership service. (b) Not In Line of Duty Payable in the event of total and permanent disability after 10 years of service. Disability retirement benefit is 39% of final average salary, plus 1.95% of such salary for each year of service in excess of 10 years, maximum benefit not to exceed the limits imposed by Section 415 of the IRS Code determined as of date of disability.

7. Retirement Bonus Payment

A retiree may receive an annual bonus payment in the month of January following an annual actuarial valuation when the actuary recommends such a payment and provides the Board with a fiscal note which evaluates the effect of such a payment on the System's funded status. A retiree must have been retired for at least one year as of December 31, preceding the distribution, in order to be eligible for a bonus payment.

8. Benefit Upon Termination of Employment

(a) Less Than 5 Years Lump-sum distribution of member's contributions.
(b) 5 Or More Years Normal service retirement benefits payable at age 60 or lump sum distribution of member's contribution plus interest compounded at 4.0 % per plan year of participation.

9. Death Benefits

(a) Prior to Retirement Member's contributions, plus those made by City on his or her behalf, together with interest at 4.0 % per year, are payable to the named beneficiary in a lump sum or annuity. Under certain conditions, the beneficiary may elect to receive an actuarial equivalent monthly benefit

CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM SUMMARY OF PLAN PROVISIONS

under the 66 2/3% Joint and Survivor Option.

(b) After Retirement Pre-retirement death benefit as of date of retirement, less any retirement benefits already received, is paid to retiree's named beneficiary.

10. Optional Benefits (Other Than Lifetime Benefits) All optional benefits are actuarially equivalent to lifetime retirement benefits.

Option 1 - 10 Years Certain and Life Thereafter Reduced lifetime monthly benefit to member. If member dies within 10 years following retirement, benefit continues to the named beneficiary for balance of 10 year period.

Option 2 - 100% Joint & Survivor Reduced monthly lifetime benefit which continues after retiree's death to the designated beneficiary for beneficiary's lifetime.

Option 3 - 75% Joint & Survivor Similar to Option 2, but 75% of retiree's benefit continues to the designated beneficiary after retiree's death.

Option 4 - 66 2/3% Joint & Survivor Similar to Option 2, but 66 2/3% of retiree's benefit continues to the designated beneficiary after retiree's death.

Option 5 - 50% Joint and Survivor Similar to Option 2, but 50% of retiree's benefit continues to the designated beneficiary after retiree's death.

Option 6 A retiree may elect any of the Options 2-5 with an added provision which allows the benefit to revert to the

amount of the lifetime benefit (pre-option reduced amount) in the event the beneficiary predeceases the retiree.

11. Requirements for Electing Optional Benefits

Any of the options may be elected at any time between 30 and 90 days prior to early or normal retirement. A disability retiree may elect to receive the benefit under Option 5, subject to approval by the Board of the disability retirement application.

12. Purchase of Membership Service Credit for Prior Active Military Duty

Up to five years of additional service may be purchased upon completion of 5 years in the Charlotte Firefighters' Retirement System, for active duty served prior to CFRS membership. This service may be used to qualify for normal service retirement, but not early retirement.

13. Return from Active Military Duty

Membership service credit is granted to a member who returns to CFRS membership from active duty served during any period of national emergency condition or entry at any time through the operation of the compulsory military service law of the United States of America.

14. Accumulated Sick Leave and Vacation at Retirement

Membership service is credited for the balance of any unpaid sick leave and/or vacation at the time of retirement. Also, a member receives the inclusion of the amount of lump sum payoff at retirement for any vacation and/or sick leave

CHARLOTTE FIREFIGHTERS' RETIREMENT SYSTEM SUMMARY OF PLAN PROVISIONS

attributable to the member's period of final average salary.

15. Purchase of Membership Service for Prior Government Service

Up to five years of additional service may be purchased upon completion of 5 years of service in the CFRS, for prior service with another government employer. 50% of prior government service may be purchased up to the maximum. The cost of such service is calculated at full actuarial cost and may be used to qualify for normal service requirement but not early retirement.

16. Purchase of Membership Service for Withdrawn Service

Prior service with the Charlotte Fire Department and contributions withdrawn from the CFRS may be purchased in total at full actuarial cost upon completion of 5 years of service in the CFRS.

This summary of plan provisions is intended for information purposes and is in no way intended to supplant or replace the language of the Charlotte Firefighters' Retirement System Act which is the controlling document relating to benefits and any disputes regarding same. The CFRS Act should be reviewed prior to applying for or selecting benefits from the system.