RETIREMENT
HORIZONS
INCORPORATED

September 30, 2010

Mr. Craig T. Mason
Chief Pension Executive
City of Houston
611 Walker, 10th Floor
Houston, Texas 77002

Re: ***HFRRF Plan Design Study***

Dear Craig:

Based on the most recent actuarial valuation performed by the Houston Firefighters Relief and Retirement Fund (HFRRF) actuary as of July 1, 2009, City contribution rates are expected to increase from 23.8% of payroll for fiscal year 2011 to 45.2% by fiscal year 2015. Compared to current member contribution rates set at 9.0% of payroll, the City contribution rate will increase from a *3-to-1 ratio* to a *5-to-1 ratio*, which the Mayor has communicated to the HFRRF Board, is not sustainable within City budget constraints.

The City of Houston retained Retirement Horizons Inc. (RHI) to perform an independent actuarial study of the HFRRF Retirement System, including replication of the valuation prepared by the HFRRF actuary as of July 1, 2009, and analysis of lower cost plan design alternatives for new hires that would reduce long-term City contribution rates back within the historical target rate of a *2-to-1 ratio* of member contribution rates.

Current Benefit Levels

Under the traditional retirement adequacy models, retirees can generally maintain their standard of living with total retirement income ranging from 70% to 90% of their pre-retirement income levels. The current HFRRF plan design replaces 50% of highest 36-month average compensation after completing 20 years of service, or 80% of highest 36-month average compensation after completing 30 years of service, without any minimum age requirement. Rather than commencing pension payments immediately, however, HFRRF members are also eligible to enter the Deferred Retirement Option Plan (DROP) for up to 10 years and accumulate substantial additional retirement benefit value:

- A member entering DROP at age 45 with 20 years of service can retire at age 55 with their total benefit value reaching $1.367 million in current dollars, equivalent to a lifetime income replacement ratio of 93% with a 3.0% annual cost-of-living increase guaranteed (and 100% surviving spouse protection).

- A member entering DROP at age 50 with 25 years of service can retire at age 60 with their total benefit value reaching $1.938 million in current dollars, equivalent to a lifetime income replacement ratio of 134% with a 3.0% annual cost-of-living increase guaranteed (and 100% surviving spouse protection).

- A member entering DROP at age 55 with 30 years of service can retire at age 65 with their total benefit value reaching $2.421 million in current dollars, equivalent to a lifetime income replacement ratio of 172% with a 3.0% annual cost-of-living increase guaranteed (and 100% surviving spouse protection).

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Summary of Findings

Current Plan Design

Under the current plan design, benefits are calculated based on gross compensation over the 36-months that produce the highest average (consecutive months not required). Given the relatively short averaging period combined with the use of gross compensation rather than base pay, there is a powerful financial incentive for employees to work excessive amounts of over-time in the last few years preceding retirement to inflate their long-term pension.

Firefighters are eligible for a standard service pension equal to 50% of their high 36-month average pay after completing 20 years of service, or 80% of their high 36-month average pay after completing 30 years of service. The service pension is payable without any minimum age requirement to be eligible for immediate commencement. This pension benefit is payable for the lifetime of the retired firefighter, with the following additional plan features that enhance the total retirement economic value to the member:

- Automatic 3.0% cost-of-living adjustment (COLA) each October 1st for pensioners age 48 or older.
- Additional $150 monthly pension supplement (not eligible for automatic COLA increase).
- 100% of benefit continued to surviving spouse or children after death of the retired firefighter.
- Additional one-time lump sum benefit of $5,000 payable on death of the retired member.

Deferred Retirement Option

Under the current plan design, members that have qualified for a service pension are also eligible to enter the deferred retirement option plan (DROP). The service pension is calculated as if the member had retired as of the date of DROP entry, based on service and high 36-month average pay "frozen" at that point in time, even though the member continues working. A special DROP account is established for the member and credited with the following amounts until actual retirement date:

- Monthly service pension including any applicable COLA increases.
- Member contributions (but not corresponding City contributions) during the DROP period.
- Interest at 5-year average rate of return earned by the Fund (5% minimum, 10% maximum).

Active members may accumulate these credits for up to 10 years. Upon retirement they are eligible to receive their DROP account balance as a single lump sum payment, installment payout or some combination of the two. In addition, they are eligible to receive their monthly service pension including accumulated COLA as well as an additional 2% increase in the monthly pension for each full year of DROP participation (up to a maximum 20% monthly pension increase).

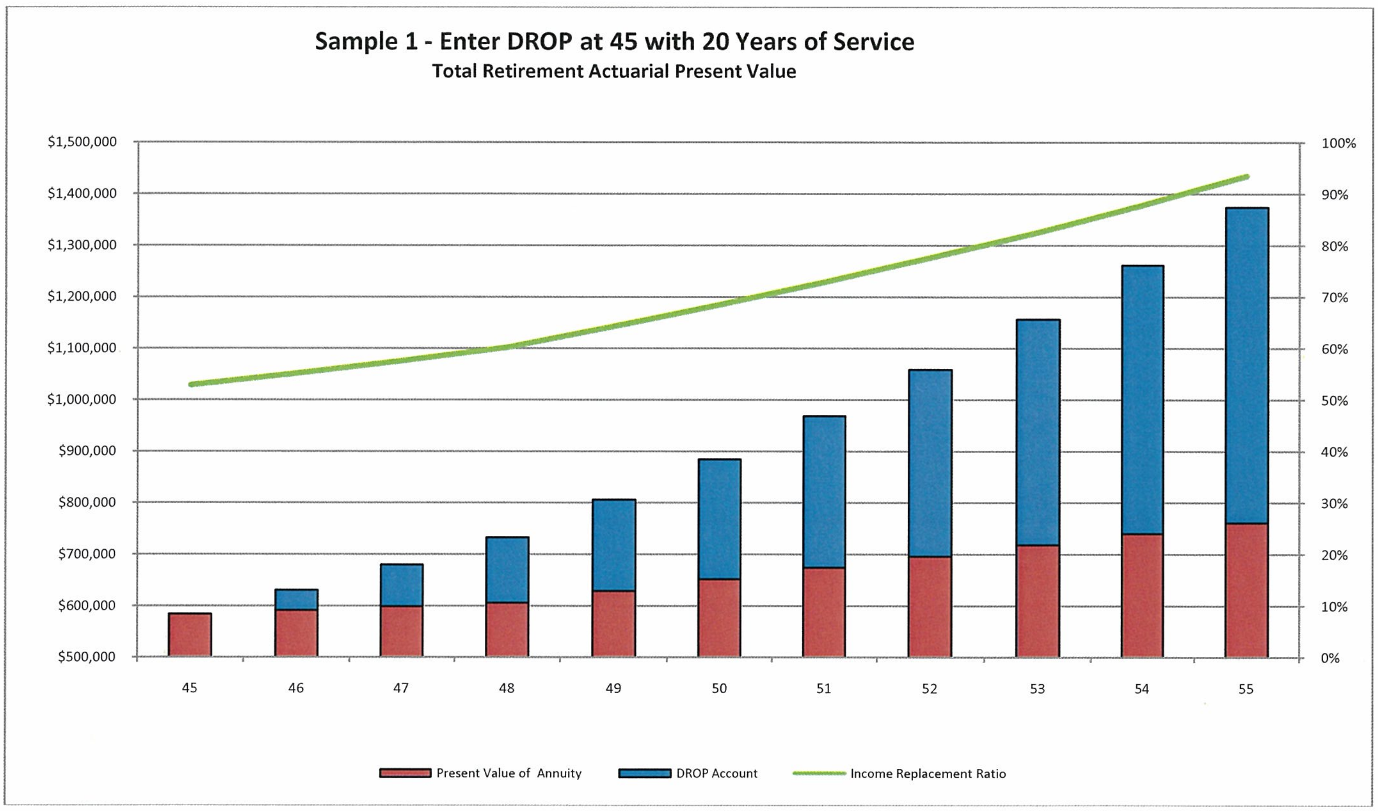
Based on the plan experience study report published by the HFRRF actuary dated June 17, 2010, it is clear that the DROP feature is heavily utilized by the members. About 20% to 40% of eligible members elect to enter DROP somewhere between 20-29 years of service, but more than 80% of the remaining members elect to enter DROP shortly after completing 30 years of service (maximum service pension accrual). This study also indicates that most members remain in DROP for 9 or more years, maximizing the value of their DROP accumulation.

Summary of Findings

Current Benefit Illustrations – Sample 1

The first example represents a member that retires as early as possible, entering DROP at age 45 with 20 years of service and current pay of $70,000. Although the basic service pension calculation is fixed at the date of DROP entry, the actuarial present value of the service pension continues to grow due to the special 2% DROP annuity credit and the automatic 3% COLA increase. At the end of the 10 year DROP period, this member will have a total retirement package (annuity plus DROP) worth almost $1.4 million at age 55:

- Annuity present value increases from $528 thousand at age 45 to $754 thousand at age 55.
- DROP account balance grows from $0 at age 45 to $613 thousand at age 55.
- Total retirement present value increases from $528 thousand at age 45 to $1.367 million at age 55.



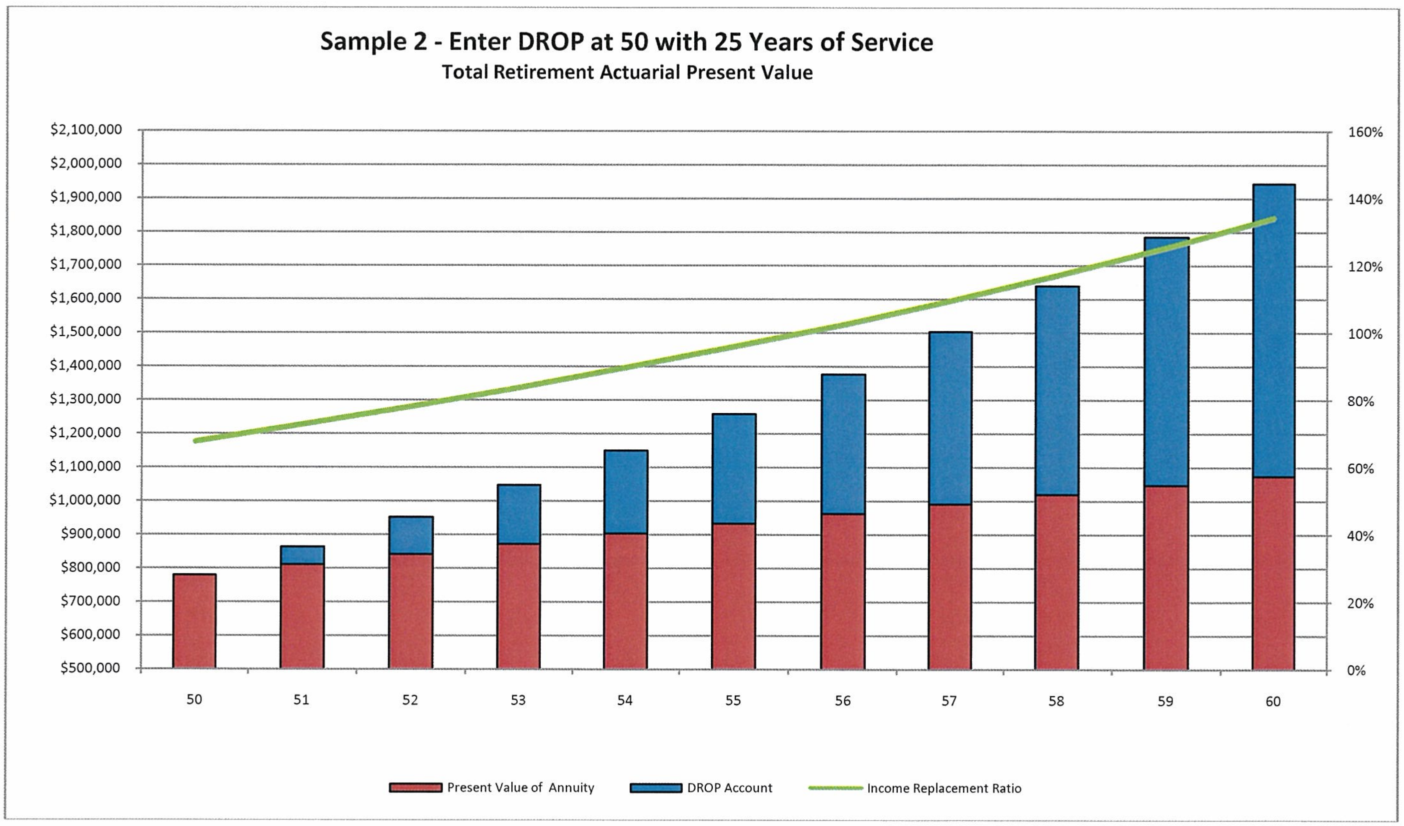
The monthly service pension replaces 52% of final average pay at age 45 with 20 years of service at date of initial DROP entry, but the replacement ratio increases to 93% of final average pay after 10 years of DROP and retirement at age 55. We have converted the DROP account balance to an actuarially equivalent annuity assuming the member is married at retirement (100% joint & survivor) with the 3% automatic COLA.

Summary of Findings

Current Benefit Illustrations – Sample 2

The second example represents a member willing to work beyond the earliest possible retirement date in order to increase their total benefit value, entering DROP at age 50 with 25 years of service and current pay of $75,000. At the end of the 10 year DROP period, this member will accumulate a total retirement package (annuity plus DROP) worth over $1.9 million at age 60:

- Annuity present value increases from $772 thousand at age 50 to $1.068 million at age 60.
- DROP account balance grows from $0 at age 50 to $870 thousand at age 60.
- Total retirement present value increases from $780 thousand at age 50 to $1.938 million at age 60.



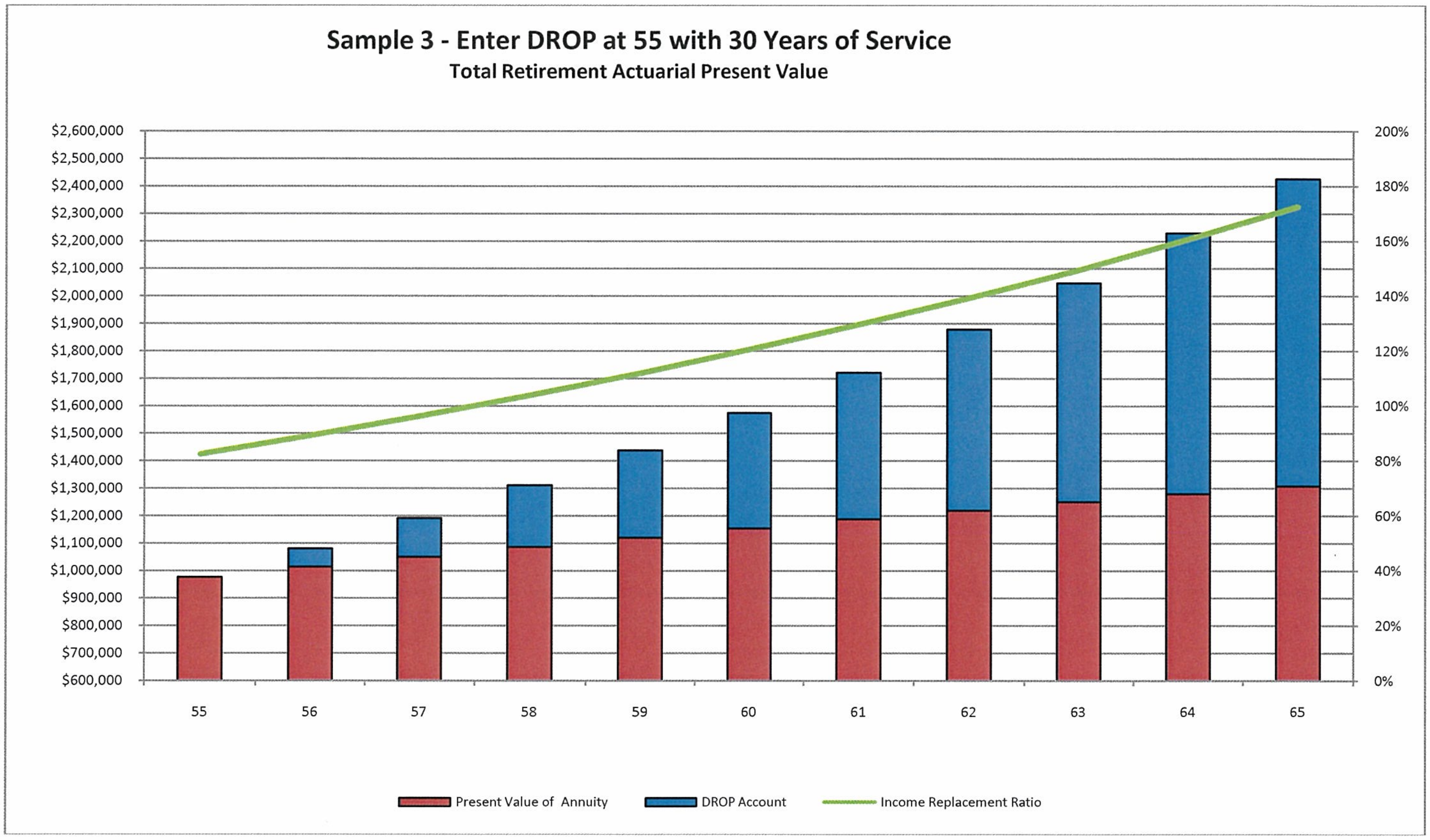
The monthly service pension replaces 67% of final average pay at age 50 with 25 years of service at date of initial DROP entry, but the replacement ratio increases to 134% of final average pay after 10 years of DROP and retirement at age 60. We have converted the DROP account balance to an actuarially equivalent annuity assuming the member is married at retirement (100% joint & survivor) with the 3% automatic COLA.

Summary of Findings

Current Benefit Illustrations – Sample 3

The third example illustrates a member willing to work even longer in order to achieve maximum retirement value, entering DROP at age 55 with 30 years of service and current pay of $80,000. By continuing to work and participate in DROP for the full 10-year period, this member will have a total retirement package worth over $2.4 million at age 65:

- Annuity present value increases from $969 thousand at age 55 to $1.302 million at age 65
- DROP account balance grows from $0 at age 55 to $1.119 million at age 65.
- Total retirement present value increases from $969 thousand at age 55 to $2.421 million at age 65.



The monthly service pension replaces 82% of final average pay at age 55 with 30 years of service at date of initial DROP entry, but the replacement ratio increases to 172% of final average pay after 10 years of DROP and retirement at age 60. We have converted the DROP account balance to an actuarially equivalent annuity assuming the member is married at retirement (100% joint & survivor) with the 3% automatic COLA.