GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

NEW YORK CITY RETIREMENT SYSTEMS

ACTUARIAL AUDIT OF EMPLOYER CONTRIBUTIONS FOR FISCAL YEAR 2012

(JUNE 30, 2010 LAG VALUATION)

October 28, 2014
Prepared by:
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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Background

Gabriel, Roeder, Smith & Company (GRS) was retained by the Comptroller to serve as Independent Actuary under Section 96 of the New York City Charter and provide other services related to the review of the funding of the following five actuarial pension funds (collectively NYCRS or the Systems):

- New York City Employees' Retirement System (NYCERS)
- Teachers' Retirement System of the City of New York (TRS)
- Board of Education Retirement System of the City of New York (BERS)
- New York City Police Pension Fund (POLICE)
- New York Fire Department Pension Fund (FIRE)

GRS will conduct two consecutive biennial actuarial engagements, encompassing the following:

- Biennial Contribution Audits of the computed employer contributions for each System in NYCRS for fiscal years 2012 and 2014 (including an audit of actuarial accrued liabilities and actuarial valuation of assets);
- Biennial Experience Studies for the periods ending June 30, 2011 and June 30, 2013, for each system in NYCRS;
- Two Administrative Reviews of the data gathering and maintenance practices of the Office of the Actuary (OA) and each system in NYCRS (one review corresponding with each Contribution Audit); and
- Two Independent Actuarial Statements (one for each engagement); GRS, as the independent actuarial auditor, will submit a statement that will briefly describe the scope of the entire engagement, will review the entire engagement and comment on the financial condition and financing progress and policies of each System, and certify that the Systems are being funded on a sound actuarial, financial, and legal basis.

This report constitutes the deliverable with respect to the **Actuarial Audit of the Employer Contributions for Fiscal Year 2012 and the underlying derivations of valuation assets and liabilities.**

The purposes of this audit are to:

- verify that the employer contributions calculated by the OA are accurate, appropriate and reasonable;
- verify that the actuarial liabilities and actuarial values of assets have been computed using actuarial assumptions and methods that have been approved by each System's Board of Trustees and conform to applicable laws and generally accepted Actuarial Standards of Practice;
- verify that the actuarial software is operating accurately;
- review methods and assumptions for general reasonableness; and
- recommend changes that improve the annual valuation calculations.

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The Actuarial Contribution Audit provides an independent verification of the computation of employer pension contributions – including the methodologies used therein and their conformity to law and generally accepted actuarial principles – for the fiscal years 2012 and 2014. The Experience Studies review and comment on the continued appropriateness of the actuarial assumptions used in the computations of employer contributions and identify areas where assumptions may be improved. The Administrative Review evaluates the actuarial data gathering process to ensure that the data collection methods produce sufficiently accurate data for valuation and Experience Study purposes. Thus the three components of the assignment provide assurance that:

- Assets and liabilities are calculated accurately, using appropriate actuarial assumptions and methods, and are based on sufficient and accurate census data; and
- Employer contribution amounts are computed in conformity with all applicable financial, actuarial and statutory requirements.

Organization of this Report

This report is divided into the following sections:

Actuarial Audit Process

The actuarial audits start with the collection of member data, plan benefit provisions and financial information. After gathering and understanding all the relevant data, GRS then performed replication valuations to independently calculate valuation assets, liabilities and employer contributions. Once GRS had developed the base valuations, we then reviewed calculations for over 200 individual test lives. The review of the test lives helped us to identify those areas of the GRS valuation model that differed from the OA's valuation model. In some cases, the identification of these differences resulted in refining the GRS model. In other cases, they resulted in the identification of recommended changes (such as assumptions that needed to be updated, in accordance with the new set of assumptions and methods adopted for first use in the June 30, 2010 actuarial valuations). Once the GRS valuation model was completed, results were compared to the OA's and tested against pre-established tolerances. The comparisons of those tolerances are contained in the body of this report. The process can be summarized in the steps described on the following page.

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1. Collect data:
    a. Member data used by the OA
    b. Summary of benefits valued by the OA
    c. Financial data used by the OA
2. Review plan benefit documentation to independently determine the plan benefits to be valued, including:
    a. Applicable laws
    b. Plan documents and benefit summaries developed by the Systems and posted on their websites
    c. Plan benefit summaries included in the Systems' CAFRs
3. Obtain the actuarial assumptions and methods used in the OA's valuation and independently confirm their applicability, validity and appropriateness
4. Perform independent valuations for each System using GRS' proprietary software and OA's data, assumptions and methods
5. Compare GRS' results with the OA's and identify and investigate areas of significant differences
6. Compare GRS' valuation of test cases with those of the OA's and identify and investigate areas of significant differences
7. Refine GRS' valuation model based on investigations of differences in results
8. Compare GRS valuation results to OA valuation results and test against tolerances
9. Recommend changes, as deemed appropriate by GRS

Results

This was the first actuarial audit since the implementation of the 2012 A&M (Actuarial Assumptions and Methods) as well as the first valuation using the ProVal actuarial valuation software. One of the changes that was part of the 2012 A&M was a change in the actuarial cost method from the Frozen Initial Liability (FIL) Actuarial Cost Method to the Entry Age (EA) Actuarial Cost Method. As a result of this change in actuarial cost methods, there are more components in the actuarial audit of liabilities to replicate. The first component is known as the Present Value of Future Expected Benefits (PVFB). This is the present value of all future benefits (those that have accrued and those that are expected to accrue in the future) to be paid from the Systems to the current plan members. Under the UFIL method, the PVFB less the assets less the frozen unfunded liability (for which there is a payment schedule) is spread over the future working lifetime of the current active population to develop a normal cost. The normal cost is then added to the payment for the unfunded liability and the expenses to develop the employer contributions. Therefore, the actuarial audits focused on the calculations of the PVFB and the employer contributions. The table on the following page shows a summary of the results of the actuarial audit relative to the PVFB and the employer contributions for FY 2012.

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Comparison of OA and GRS Valuation Results ($ Millions)						
System	Category	OA Results	GRS Results	Percent Difference	Tolerance Limit	Pass/ Fail
NYCERS	PVFB	$ 78,068	$ 77,513	0.72%	2.00%	Pass
	Employer Contribution	$ 3,017	$ 3,005	0.40%	5.00%	Pass
TRS	PVFB	$ 68,179	$ 67,645	0.79%	2.00%	Pass
	Employer Contribution	$ 2,673	$ 2,597	2.93%	5.00%	Pass
BERS	PVFB	$ 4,633	$ 4,615	0.39%	2.00%	Pass
	Employer Contribution	$ 214	$ 217	-1.38%	5.00%	Pass
POLICE	PVFB	$ 50,641	$ 50,458	0.36%	2.00%	Pass
	Employer Contribution	$ 2,386	$ 2,366	0.85%	5.00%	Pass
FIRE	PVFB	$ 20,505	$ 20,429	0.37%	2.00%	Pass
	Employer Contribution	$ 977	$ 976	0.10%	5.00%	Pass
Total	PVFB	$ 222,026	$ 220,660	0.62%		
	Employer Contribution	$ 9,267	$ 9,161	1.16%		

Under the Entry Age Actuarial Cost Method, the PVFB is allocated between past and future service – Actuarial Accrued Liability (AAL) and Present Value of Future Normal Cost (PVFNC). GRS had difficulty replicating the OA's allocation between AAL and PVFNC for NYCERS, TRS and BERS. Our calculation of PVFNC (and the resulting normal cost) was higher than the OA's and our calculation of the AAL was lower than the OA's (before adjusting for the recommended changes to the One Year Lag Methodology). However, these differences were offset in the development of the employer contribution. We will be exploring these differences further in the second engagement.

GRS therefore confirmed that the OA's calculations of the employer contribution for all Systems were reasonable and appropriate.

Summary of Recommendations/Findings

Applicable to all Systems:

- Produce formal actuarial reports for all Systems;
- Consider the use of a corridor around the market value in the development of the actuarial value of assets;
- Consider changes to the One Year Lag Methodology (OYLM);
- Review the assumed commencement date for deferred vested members for consistency between the valuation of the vested decrement for current active members (who are assumed to become deferred vested in the future) and the valuation of the current deferred vested members;

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NYCERS:
- Review programming for treatment of active members that are over 75 on the valuation date;
- Review calculations of liabilities for the vesting decrement for active members (liabilities for current active members assumed to quit with deferred benefits in the future);
- Review the use of "default plan" provisions to value certain NYCERS members;
- Update the mortality for Transit beneficiaries to the tables adopted with the 2012 A&M;

TRS:
- Review rounding of service for active members;
- Review programming of probabilities of termination on and after 20 years of service – rates shown on the test life cases appear to indicate that these probabilities were rounded to the nearest 1%;

BERS:
- Review the mortality table for beneficiaries and retirement pattern for the Tier II 55/25 optional plan. It appears the old assumptions were used;
- Review the use of imputed data in cases where data is on the file (such as sex for beneficiaries);
- Review the amount of the assumed COLA in the first year after the valuation for members with $0 reported in the maximum allowance field;
- Review the allocation of the liabilities to the vested decrement for Tier I and Tier II;
- Continue to work with BERS to improve the reporting of valuation data related to part-time members;

POLICE:
- Review the assumed age of commencement for current deferred vested members;
- Review the development of the RASF (required member contributions) used in the entry age pass and reprogram accordingly;
- Review the reported active member contributions balances (the OA already identified that there appeared to be an issue with the reported ITHP balances as of June 30, 2010) – GRS suggests they also review the reported required ASF balances as of June 30, 2011;

FIRE:
- Review the assumed age of commencement for current deferred vested members;
- Value benefits (and liabilities) associated with "other service";
- Review modeling of Auto COLA for certain beneficiaries.

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We would like to thank and acknowledge the OA for their education, assistance and cooperation. This report could not have been completed without the information they provided.

Randall Dziubek and James Anderson are Members of the American Academy of Actuaries (M.A.A.A) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully Submitted,

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10/28/2014
Date

SECTION B

DISCUSSION OF METHODS AND FINDINGS RELATED TO ALL SYSTEMS

DISCUSSION OF METHODS

General Comments

Each contribution audit starts with a replication of the valuation. However, a complete replication is not the end goal. The replication is performed to gain an understanding of the methods used by the OA and to verify that the independent auditing actuary can replicate results within reasonable tolerances based on the methods and assumptions described by the OA. Once the replication has been achieved, the auditing actuary must then evaluate the methods and assumptions to determine if the auditing actuary agrees with their use and/or recommends any changes.

Tolerances

While every valuation system will have some differences, these differences should generally be minor, especially in the aggregate. Replication of results within 2%-5% is generally viewed as a successful replication. However, different aspects of the replication may be farther away than others due to differences in valuation programs. For purposes of this audit, GRS has determined that a successful replication will occur if one of two tests is passed. The first test is an individual test. Using retirees and beneficiaries (R&B's) as an example: this test will be passed if the difference between the OA's computation of Present Value of Future Benefits (PVFB) for R&B's and the GRS' computation of the PVFB for R&B's is within a specified tolerance of the OA computation of PVFB for R&B's. The second test is an aggregate test. This test will be passed if the difference between the OA's computation of PVFB for R&B's and the GRS' computation of PVFB for R&B's is within a specified tolerance of the total PVFB for the entire System. The chart below illustrates the tolerances for this engagement:

Category	Individual Tolerance	Aggregate Tolerance
Present Value of Benefits by Category	2.0%	0.5% of Total Present Value of Benefits
Accrued Liability by Category	5.0%	5.0% of Total Accrued Liability
Normal Cost	5.0%	n/a
Computed Contribution	5.0%	5.0% of Total Contribution

It is not uncommon for the differences in actuarial accrued liabilities and normal costs to be in opposite directions (the auditing actuary's accrued liabilities are greater, but the normal costs are lower or vice-versa). This can happen due to minor differences in the way valuation systems allocate the present value of benefits between the past and the future. Because of this, the tolerance range on accrued liabilities is larger than on the present value of benefits. Such differences will frequently be offsetting, resulting in a computed contribution that differs by less than 5%.

Testing of Individual Member Calculations

As part of the process, the auditing actuary will also look at detailed calculations for specific individuals included in the valuations (known as test lives). There are no specific tolerances used by GRS in the comparison of test lives. Small differences in the rounding of ages or the treatment of service can create large differences in test life results that could be offsetting when looking at aggregate results for the System, in total. The test lives are useful for verifying that benefits are generally computed in the same manner and that assumptions are applied in the same manner. In general, when we identified substantial differences in test life results we attempted to spot differences in the intricate details of the valuation calculations. Some of these differences led to the identification of minor differences between what the OA identified as their valuation assumptions and what was used in the valuations in certain cases, such as retiree mortality tables being used to value beneficiaries in BERS and certain NYCERS groups and rounded probabilities of withdrawal used in the TRS valuation.

Actuarial Value of Assets Method

Method Description

The actuarial value of asset method used in the valuations for all of the Systems is as follows:

Assumed investment return (currently 7%) is recognized immediately. Recognition of the difference between the assumed investment return and the actual investment return (on a market value basis) is phased into the actuarial value of assets. The schedule of recognition is 15% in the first year following the investment gain or loss, followed by recognition of 15%, 15%, 15%, 20% and 20% in the following five years. There is no corridor around the market value of assets within which the actuarial value must fall.

As part of the 2012 A&M, the actuarial value of assets was reset to the market value. However, the method was not changed and will continue to be used in future valuations, after the restart date. Due to the timing of the completion of the silver books and the valuations, the investment return results for FY 2011 were already known. The Actuary decided to reset the actuarial value of assets to the market value as of June 30, 2011. For purposes of the June 30, 2010 valuations, the actuarial value of assets was determined by projecting the market value as of June 30, 2011 back one year with actual cash flow and expected investment return of 7%. The intention was to create an actuarial value of assets as of June 30, 2010, that would not generate a gain or loss during FY 2011.

Audit Comments

Most public sector plans use an asset smoothing period that ranges between 3 and 5 years. Some public sector pension plans use shorter periods, some use longer periods and a few use market values with no smoothing. Although the OA uses a longer period than is common in the public sector, we believe the method complies with the Actuarial Standard of Practice (ASOP) No. 44, which discusses the selection and use of asset valuation methods for pension valuations.

Section 3.3 of ASOP 44 states, in part:

> "3.3 Selecting Methods Other Than Market Value – If the considerations in section 3.2 have led the actuary to conclude that an asset valuation method other than market value may be appropriate, the actuary should select an asset valuation method that is designed to produce actuarial values of assets that bear a

reasonable relationship to the corresponding market values. The qualities of such an asset valuation method include the following:

a. The asset valuation method is likely to produce actuarial values of assets that are sometimes greater than and sometimes less than the corresponding market values.

b. The asset valuation method is likely to produce actuarial values of assets that, in the actuary's professional judgment, satisfy both of the following:

1. The asset values fall within a reasonable range around the corresponding market values. For example, there might be a corridor centered at market value, outside of which the actuarial value of assets may not fall, in order to assure that the difference from market value is not greater than the actuary deems reasonable.

2. Any differences between the actuarial value of assets and the market value are recognized within a reasonable period of time. For example, the actuary might use a method where the actuarial value of assets converges toward market value at a pace that the actuary deems reasonable, if the investment return assumption is realized in future periods.

In lieu of satisfying both (1) and (2) above, an asset valuation method could satisfy section 3.3(b) if, in the actuary's professional judgment, the asset valuation method either (i) produces values within a sufficiently narrow range around market value or (ii) recognizes differences from market value in a sufficiently short period."

There are two common rationales for using an actuarial value of asset method to smooth market value fluctuations. One is that the market is volatile and that investment gains and losses should have their own smoothing where the smoothing period reflects the anticipated length of a market cycle. Under this rationale, many actuaries would argue that adding a corridor to the actuarial value of asset method will actually disrupt the smoothing because additional gains occurring after hitting the bottom of the corridor (or losses occurring after hitting the top of the corridor) are recognized immediately. Therefore, in a protracted downturn or a protracted upturn, the smoothing effect of the actuarial value of asset method could be temporarily lost.

The other rationale for using an actuarial value of asset method is a little more complex. Under some actuarial cost methods that develop an accrued liability, the accrued liability is essentially the theoretical value of the desired assets, given everything known on the valuation date and everything assumed after the valuation date. The value of the assets provides an actual measure. The Unfunded Actuarial Accrued Liability (UAAL) is then the difference between desired assets and actual assets. However, in order to make this determination you need to be able to assign a liquid value to your assets. In a portfolio with equities, this is done by multiplying the shares held by the value of those shares on the close of the market on the measurement date. Given that this date is in the past (relative to when the valuation is being performed), the fact that the shares were not sold, and that value of the shares likely changed at the very next market open, this method (known as the market value) is nothing more than a theoretical value. In addition, due to the large equity portfolios held by each of the Systems, it would not actually be physically possible to have liquidated the equity portfolios for the closing values of the market, even if desired. Such liquidation would not only have taken a significant amount of time (which means that not all shares would have necessarily sold for the same price) but could actually influence the market pricing. As such, using a market value based on the closing market prices once every year is not only theoretical, but introduces fluctuations that many would consider to be "random noise." The actuarial value of assets therefore employs a smoothing technique in an attempt to smooth out the "random noise" while ascertaining the value of "where the plan is at currently." Since no one can determine with 100% certainty what portion of the market value is random noise (even in hindsight), actuaries will use slightly different smoothing methods to fit the specific needs of the plan. Under this rationale, a true market correction (whether up or down) should be recognized immediately because it represents "where you are" on the measurement date. However, most large market fluctuations include both true market corrections and temporary "noise". Again, distinguishing between the two cannot be done with certainty (even in hindsight). Therefore, many actuaries employ a secondary process in the actuarial value of asset method to make that distinction. This secondary process is known as a corridor around the market value. If the corridor is hit, then all gains or losses beyond that corridor are treated like a market correction and recognized immediately in the valuation.

In light of:

1) ASOP 44;
2) the fact that the smoothing period exceeds the length used by most public retirement systems; and
3) the second rationale listed above for using an actuarial value of asset method;

we recommend continued consideration of a corridor around the market value to ensure that the actuarial value of assets "maintains a sufficiently narrow range around the market value" of assets. We do not have a specific recommendation on the size of the corridor. However, a 25% corridor is within common practice. We note that the use of a corridor has been considered by the Actuary in the past. The actuary has concluded that implementation of a corridor is not warranted at this time.

Use of June 30, 2011 Market Value Assets in June 30, 2010 Actuarial Value

GRS was uncomfortable that the asset method allowed the June 30, 2010 actuarial valuation to benefit from the investment gains that occurred during the year ending June 30, 2011. However, we do believe that this reset is in compliance with the ASOPs. In general, we prefer not to have gains and losses recognized/reflected in periods prior to when they actually occur. In addition, if we are going to recognize post valuation date activity, we prefer to recognize the activity in as many risk areas as possible.

We were able to reproduce the mathematical calculations used to determine the June 30, 2010 actuarial value of assets.

We recommend that the valuation reports disclose that the expected investment return is net of only investment expenses. It is not net of administrative expenses, but the current description in the FIRE and POLICE reports (page 54) does not distinguish between administrative and investment expenses.

Actuarial Cost Method

The Fiscal Year 2012 employer contributions are determined from the June 30, 2010 actuarial valuation. Thus, there is a 1-year lag between the valuation date and the period for which employer contributions are made. The June 30, 2010 valuations use the Entry Age Actuarial Cost Method (EAACM). This method was first employed for use in the June 30, 2010 NYCRS' actuarial valuations as part of the 2012 A&M. This is the most common actuarial cost method in use by public employee retirement systems. In addition, the EAACM will now be required for accounting purposes under GASB Statements No. 67 and No. 68. We agree that this is an appropriate method for determining employer contributions for funding.

Initial unfunded actuarial accrued liabilities (determined as of June 30, 2010) are amortized as a level percent of pay over a 22-year period. This is well within the area of common practice. Comments on the post-2010 basis amortization method and periods will be part of the second engagement.

One-Year-Lag-Methodology (OYLM)

The One-Year-Lag-Methodology (OYLM) used in the valuation process (first used in the June 30, 2004 valuation to determine the FY 2006 contributions when valuations were performed using the Frozen Initial Liability actuarial cost method) reflects the fact that the employer contributions determined in a specific valuation will be contributed in the fiscal year that starts one year after the valuation date. Essentially, under the OYLM, the employer's cost of each new member's projected benefit is financed over a period starting with the second year of employment (entry age plus one) and ending on the expected year of retirement (retirement age). The OA starts the calculations using the individual level entry age actuarial cost method, which finances each member's projected benefit over the period from entry age to retirement age. However, the OA then modifies the entry age results in aggregate for the group, by financing the total future employer normal cost for the group over the future salaries of the group, starting 1 year after the valuation. Once the OA has made this adjustment, the normal cost is no longer level for each individual. It may still be level for the group if the population stays relatively stable from year to year. The OA notes that when the OYLM was first implemented with the 2004 valuation, two contributions were determined for each employee that was a member as of June 30, 2004. One contribution was for FY 2005 and the other was for FY 2006.

The OA verbally provided the following example to illustrate the OYLM under the EAACM: Consider a member with a 20 year career who was entitled to a lump sum of $19 at retirement. For simplicity, assume the member stays in employment for the entire 20 years and retires upon his 20th anniversary of employment. Also for simplicity, assume no mortality, no interest and no expenses. Then under the EAACM, the normal cost would be $0.95 for each of the 20 years of employment. This would accumulate to $19 ($0.95 x 20 years = $19) at the end of the 20 years of employment. Under the OYLM with EAACM, the normal cost would be $0 for the first year of employment and $1 for each of the following 19 years. This would also accumulate to $19.

While we understand and agree with this example, we do not agree that this example is representative of the implementation of the OYLM that the OA has employed. A general description of the OA's implementation of the OYLM under the EAACM follows:

- Actuarial results for Present Value of Future Benefits (PVFB), Actuarial Accrued Liability (AAL), Present Value of Future Normal Cost (PVFNC), and Present Value of Future Salary (PVFS) are first determined as of the valuation date under the individual EAACM and aggregated for the group.
- Total PVFS is then projected forward one year by accounting for the salaries expected to be paid during the first year following the valuation date.
- An Employer Normal Cost percentage is calculated by dividing the unadjusted Employer PVFNC by the projected PVFS.
    - This Employer Normal Cost percentage is then applied to payroll projected to the year starting one year after the valuation date.
- The unfunded liability on the valuation date is adjusted by Employer Normal Cost contributions that are expected to be made during the lag year (year starting on the valuation date).
- Administrative expenses paid during the year ending on the valuation date are funded by adding the amount of the expenses with two years of interest at 7% to the required contribution for the year starting one year after the valuation date.

The example on the following pages (Charts 1, 2 and 3) illustrate the EAACM, the EAACM with the theoretical (intended) OYLM and the EAACM with the OA implemented OYLM. They are based on the example verbally provided by the OA and described above.

The abbreviation key for the charts is:

PVFS = Present Value of Future Salary
PVB = Present Value of Future Benefits
EA = Entry Age
PVFNC = Present Value of Future Normal Cost
EANC = Entry Age Normal Cost
AAL = Actuarial Accrued Liability
UAAL = Unfunded AAL
Val = Valuation

Chart 1
Illustration of EAACM with No Lag

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Val Date	Service on Val Date	Pay During Upcoming Year	PVFS at Val Date	PVB at Val Date	PVB at EA	NC%	PVFNC at Val Date	AAL at Val Date	Assets at Val Date	UAAL	Contribution During Year (15 year amort of UAAL)	Assets 1 year after Val Date
2010	0	10.00	200.00	19.00	19.00	9.50%	19.00	-	-	-	0.95	0.95
2011	1	10.00	190.00	19.00	19.00	9.50%	18.05	0.95	0.95	-	0.95	1.90
2012	2	10.00	180.00	19.00	19.00	9.50%	17.10	1.90	1.90	-	0.95	2.85
2013	3	10.00	170.00	19.00	19.00	9.50%	16.15	2.85	2.85	-	0.95	3.80
2014	4	10.00	160.00	19.00	19.00	9.50%	15.20	3.80	3.80	-	0.95	4.75
2015	5	10.00	150.00	19.00	19.00	9.50%	14.25	4.75	4.75	-	0.95	5.70
2016	6	10.00	140.00	19.00	19.00	9.50%	13.30	5.70	5.70	-	0.95	6.65
2017	7	10.00	130.00	19.00	19.00	9.50%	12.35	6.65	6.65	-	0.95	7.60
2018	8	10.00	120.00	19.00	19.00	9.50%	11.40	7.60	7.60	-	0.95	8.55
2019	9	10.00	110.00	19.00	19.00	9.50%	10.45	8.55	8.55	-	0.95	9.50
2020	10	10.00	100.00	19.00	19.00	9.50%	9.50	9.50	9.50	-	0.95	10.45
2021	11	10.00	90.00	19.00	19.00	9.50%	8.55	10.45	10.45	-	0.95	11.40
2022	12	10.00	80.00	19.00	19.00	9.50%	7.60	11.40	11.40	-	0.95	12.35
2023	13	10.00	70.00	19.00	19.00	9.50%	6.65	12.35	12.35	-	0.95	13.30
2024	14	10.00	60.00	19.00	19.00	9.50%	5.70	13.30	13.30	-	0.95	14.25
2025	15	10.00	50.00	19.00	19.00	9.50%	4.75	14.25	14.25	-	0.95	15.20
2026	16	10.00	40.00	19.00	19.00	9.50%	3.80	15.20	15.20	-	0.95	16.15
2027	17	10.00	30.00	19.00	19.00	9.50%	2.85	16.15	16.15	-	0.95	17.10
2028	18	10.00	20.00	19.00	19.00	9.50%	1.90	17.10	17.10	-	0.95	18.05
2029	19	10.00	10.00	19.00	19.00	9.50%	0.95	18.05	18.05	-	0.95	19.00
2030	20	-	-	19.00	19.00			19.00	19.00			

Chart 2
Illustration of EAACM with Theoretical OYLM Implementation

(1) Val Date	(2) Service on Val Date	(3) Pay During Upcoming Year	(4) PVFS at Val Date	(5) PVB at Val Date	(6) PVB at EA	(7) NC%	(8) PVFNC at Val Date	(9) AAL at Val Date	(10) Assets at Val Date	(11) UAAL	(12) During Year (15 year amort of UAAL)	(13) Assets 1 year after Val Date
2010	0	10.00	200.00	19.00	19.00	10.00%	*19.00*	-	-	-	-	-
2011	1	10.00	190.00	19.00	19.00	10.00%	19.00	-	-	-	1.00	1.00
2012	2	10.00	180.00	19.00	19.00	10.00%	18.00	1.00	1.00	-	1.00	2.00
2013	3	10.00	170.00	19.00	19.00	10.00%	17.00	2.00	2.00	-	1.00	3.00
2014	4	10.00	160.00	19.00	19.00	10.00%	16.00	3.00	3.00	-	1.00	4.00
2015	5	10.00	150.00	19.00	19.00	10.00%	15.00	4.00	4.00	-	1.00	5.00
2016	6	10.00	140.00	19.00	19.00	10.00%	14.00	5.00	5.00	-	1.00	6.00
2017	7	10.00	130.00	19.00	19.00	10.00%	13.00	6.00	6.00	-	1.00	7.00
2018	8	10.00	120.00	19.00	19.00	10.00%	12.00	7.00	7.00	-	1.00	8.00
2019	9	10.00	110.00	19.00	19.00	10.00%	11.00	8.00	8.00	-	1.00	9.00
2020	10	10.00	100.00	19.00	19.00	10.00%	10.00	9.00	9.00	-	1.00	10.00
2021	11	10.00	90.00	19.00	19.00	10.00%	9.00	10.00	10.00	-	1.00	11.00
2022	12	10.00	80.00	19.00	19.00	10.00%	8.00	11.00	11.00	-	1.00	12.00
2023	13	10.00	70.00	19.00	19.00	10.00%	7.00	12.00	12.00	-	1.00	13.00
2024	14	10.00	60.00	19.00	19.00	10.00%	6.00	13.00	13.00	-	1.00	14.00
2025	15	10.00	50.00	19.00	19.00	10.00%	5.00	14.00	14.00	-	1.00	15.00
2026	16	10.00	40.00	19.00	19.00	10.00%	4.00	15.00	15.00	-	1.00	16.00
2027	17	10.00	30.00	19.00	19.00	10.00%	3.00	16.00	16.00	-	1.00	17.00
2028	18	10.00	20.00	19.00	19.00	10.00%	2.00	17.00	17.00	-	1.00	18.00
2029	19	10.00	10.00	19.00	19.00	*10.00%*	1.00	18.00	18.00	-	1.00	19.00
2030	20	-	-	19.00	19.00			19.00	19.00			

= calculated, but not used

Chart 3
Illustration of EAACM with OA Implementation of OYLM

(1) Val Date	(2) Service on Val Date	(3) Pay During Upcoming Year	(4) PVFS at Val Date	(5) PVB at Val Date	(6) PVB at EA	(7) NC% -- before lag	(8) PVFNC at Val Date	(9) AAL at Val Date	(10) NC% -- after lag	(11) Assets at Val Date	(12) NC Dollars	(13) Projected Assets with Accrued NC	(14) Projected UAAL	(15) 15 year amort	(16) Assets Year End
2010	0	10.00	200.00	19.00	19.00	9.50%	19.00	-	10.00%	-		-			
2011	1	10.00	190.00	19.00	19.00	9.50%	18.05	0.95	10.03%	-	1.00	1.00	(0.05)	(0.00)	1.00
2012	2	10.00	180.00	19.00	19.00	9.50%	17.10	1.90	10.06%	1.00	1.00	2.00	(0.10)	(0.01)	1.99
2013	3	10.00	170.00	19.00	19.00	9.50%	16.15	2.85	10.09%	1.99	1.01	3.00	(0.15)	(0.01)	2.99
2014	4	10.00	160.00	19.00	19.00	9.50%	15.20	3.80	10.13%	2.99	1.01	4.00	(0.20)	(0.01)	3.98
2015	5	10.00	150.00	19.00	19.00	9.50%	14.25	4.75	10.18%	3.98	1.01	5.00	(0.25)	(0.02)	4.98
2016	6	10.00	140.00	19.00	19.00	9.50%	13.30	5.70	10.23%	4.98	1.02	6.00	(0.30)	(0.02)	5.98
2017	7	10.00	130.00	19.00	19.00	9.50%	12.35	6.65	10.29%	5.98	1.02	7.00	(0.35)	(0.02)	6.98
2018	8	10.00	120.00	19.00	19.00	9.50%	11.40	7.60	10.36%	6.98	1.03	8.01	(0.41)	(0.03)	7.98
2019	9	10.00	110.00	19.00	19.00	9.50%	10.45	8.55	10.45%	7.98	1.04	9.02	(0.47)	(0.03)	8.99
2020	10	10.00	100.00	19.00	19.00	9.50%	9.50	9.50	10.56%	8.99	1.05	10.03	(0.53)	(0.04)	10.00
2021	11	10.00	90.00	19.00	19.00	9.50%	8.55	10.45	10.69%	10.00	1.06	11.05	(0.60)	(0.04)	11.01
2022	12	10.00	80.00	19.00	19.00	9.50%	7.60	11.40	10.86%	11.01	1.07	12.08	(0.68)	(0.05)	12.03
2023	13	10.00	70.00	19.00	19.00	9.50%	6.65	12.35	11.08%	12.03	1.09	13.12	(0.77)	(0.05)	13.07
2024	14	10.00	60.00	19.00	19.00	9.50%	5.70	13.30	11.40%	13.07	1.11	14.18	(0.88)	(0.06)	14.12
2025	15	10.00	50.00	19.00	19.00	9.50%	4.75	14.25	11.88%	14.12	1.14	15.26	(1.01)	(0.07)	15.19
2026	16	10.00	40.00	19.00	19.00	9.50%	3.80	15.20	12.67%	15.19	1.19	16.38	(1.18)	(0.08)	16.30
2027	17	10.00	30.00	19.00	19.00	9.50%	2.85	16.15	14.25%	16.30	1.27	17.57	(1.42)	(0.09)	17.47
2028	18	10.00	20.00	19.00	19.00	9.50%	1.90	17.10	19.00%	17.47	1.43	18.90	(1.80)	(0.12)	18.78
2029	19	10.00	10.00	19.00	19.00	9.50%	0.95	18.05		18.78	1.90	20.68	(2.63)	(0.18)	20.50
2030	20	-	-	19.00	19.00			19.00		20.50	-	20.50			

Chart 1 shows how the assets would accumulate for this example under the EAACM without the one year lag. For this case, the normal cost is 9.5% of pay each and every year and produces a $0.95 contribution for 20 years that accumulates to $19 at the end of the 20 years. Under this illustration, there is no UAAL, since experience is exactly as expected.

Chart 2 shows how the assets would accumulate for this example under the EAACM and OYLM as we believe is intended by the OA. For this case, the normal cost is 10% of pay beginning in year 2 and continuing for 19 years. This produces a $0.00 contribution for 1 year and a $1.00 contribution for 19 years that accumulates to $19 at the end of the 20 years. Again, under this illustration there is no UAAL, since experience is exactly as expected.

Chart 3 shows how the assets would accumulate for this example under the EAACM and OYLM as implemented by the OA. Column 10 shows that the normal cost rate increases each year, starting at 10% of pay and ending at 19% of pay. This pattern of normal costs, by itself, will overfund the benefit. By the 20th year, the normal cost contributions would generate an asset of $21.45 (the sum of the Normal Cost in column 12). The OA also compares the assets with the next year of normal cost contributions to the accrued liabilities (which includes that next year of normal cost) to determine the UAAL. The UAAL is then amortized over 15 years in the example and added to the normal cost (the OA uses different amortization periods – 15 years is shown for simplicity). Under the example, the assets always differ from the accrued liabilities, even though there is no gain or loss. The amortization of this difference mitigates the overfunding, but does not eliminate it. The assets accumulate to $20.50 by the time the member retires.

It is important to note that due to the effect of interest, pay increases and decrement assumptions, it is not likely that the difference between the OA's implementation and the theoretical implementation will be as great as shown in these charts (and possibly in different directions in certain cases). What can be concluded from these charts is 1) that the normal cost is not a level percent of pay, as intended, and 2) that a UAAL can develop without a gain or loss under the OA's implementation.

One-Year-Lag-Methodology (OYLM) – Determination of UAAL

Under the OYLM the OA makes adjustments to the valuation assets before comparing them to the accrued liability to determine the unfunded actuarial accrued liability. A simplified version of this adjustment is illustrated in the example on the previous page. The main reason for the adjustment is to account for the fact that the accrued liability contains a normal cost that will be contributed in the upcoming year. This occurs because of the lag between the valuation date and the contribution effective date. This contribution includes an amount for expenses that were paid 2 years prior to the contribution effective date. However, the expenses for the year immediately preceding the valuation are also out of the assets, but will be added back in to the contribution. We do not believe the OA has accounted for these expenses in the adjustment. A more detailed example follows:

Assume an asset balance of $24.0 billion as of June 30, 2010 and annual expenses of $2 million. The $2 million of expenses paid out in FY 09 are included in the contributions scheduled for FY 11. However, the expenses paid out in FY 10 have also been removed from the assets and will be reimbursed in FY 12. The normal cost that will be paid in FY 11 is included in the development of the accrued liability under the OA's implementation of the OYLM. Expenses are not part of the accrued liability calculation. The OA adds the present value of the FY 11 normal cost to the valuation assets (to be comparable to the accrued liability, but does not add the FY 10 expenses (that will be reimbursed). Unless the FY 10 expenses are added back in, they will show up in the valuation as a loss and become part of the UAAL contribution. When the OA then adds these expenses to the FY 12 contribution, expenses will essentially be double counted in the development of the contribution.

We understand that this has been changed effective with the development of the Fiscal Year 2013 Contribution, going forward.

It is important to note that the OA discovered this issue and pointed it out to the Independent Actuary. We understand that the OA has addressed this issue in subsequent valuations. The OA also pointed out that an additional issue arose with the TRS assets (and BERS assets, to a lesser extent) that GRS will see once we begin the second engagement. The issue relates to the fact that the TDA (Tax Deferred Annuity) fixed funds and the QPP (Qualified Pension Plan) funds are comingled and that TDA gets a fixed interest allocation regardless of fund performance. GRS will review this issue in more detail in the second engagement.

<u>One-Year-Lag-Methodology (OYLM) – Employer Contributions versus Employee Contributions</u>

Since members begin contributing upon employment, there is no lag in their contributions. In the implementation of the OYLM, only the employer portion of the normal costs is adjusted for the one year lag.

<u>Loads</u>

Each of the Systems has loads included in liabilities for various reasons. GRS reviewed the calculations of these loads for reasonableness. We found all of the loads to be reasonable. None of the loads were of a magnitude that would warrant a more detailed analysis, with the exception of the load in the POLICE valuation for data issues related to the reported required ITHP balances. This one-time load was investigated further, and discussed in the POLICE comparison of results section.

<u>Valuation Report Content (Applies only to POLICE and FIRE)</u>

There have been recent changes to the Actuarial Standards of Practice regarding report content. In accordance with these changes, we recommend the following additions to the valuation reports:

1. Disclose to what extent the mortality assumption provides a margin for future improvement.
2. Provide discussion of how actual experience during the prior year compared to actuarial assumptions.
3. Add a comment that indicates the measurement may not be appropriate for other purposes.
4. Provide a description of the amortization period for Unfunded Actuarial Accrued Liability.
5. Provide a statement(s) indicating future measurements may differ significantly from those provided in the report.
6. State the extent of the actuary's reliance on data provided by others (e.g., the actuary is not responsible for data errors or omissions).
7. Discuss the independence of the actuary from the plan sponsor.
8. Describe assumptions for regular disability retirees – assumed to retire under service retirement rules in order to benefit from the VSF.

Summary of Comments on Actuarial Methods and Report Content

1. We believe the methods used by the OA in the June 30, 2010 (Lag) actuarial valuation are reasonable and comply with Actuarial Standards of Practice.
2. We recommend that the OA consider including a corridor around the market value in the development of the valuation assets.
3. We recommend the OA reconsider the use of the OYLM to determine if a less complicated approach may achieve the OA's modeling goals.
4. If the OA decides to keep the OYLM then we recommend the following changes to their implementation:
    a. Apply the method at the individual level in a manner that is level for each member throughout their career;
    b. In adjusting the assets, include 2 years of expenses in the adjustment (we understand the OA has already implemented this adjustment).
5. Include additional disclosures in the valuation reports.

With regard to comment 4(a), GRS developed a modification to its programming of the June 30, 2010 actuarial valuations for NYCRS to implement the OYLM at the individual level. Under this modification, the present value of benefits, as of the valuation date, are computed in the same manner. However, the entry age normal cost is computed to be the present value of employer financed benefits at entry age divided by (the present value of future salary at entry age, less the expected pay during the first year of employment). This rate is then applied to the present value of future pay at attained age to determine the present value of future employer normal cost or applied to the expected pays for FY 2012 to determine the employer normal cost for 2012. Implementing this modification resulted in the following estimated employer contributions for FY 2012:

FY 2012 Employer Contribution Comparison
($Millions)

	GRS -- Using OA Implementation of OYLM	GRS -- Using Individual Implementation of OYLM	Difference	
NYCERS	$ 3,004.9	$ 2,967.3	$ (37.6)	-1.3%
TRS	2,597.2	2,648.8	51.6	2.0%
BERS	217.3	215.4	(1.9)	-0.9%
POLICE	2,366.0	2,359.7	(6.3)	-0.3%
FIRE	975.8	981.2	5.4	0.6%
Total (All Systems)	$ 9,161.2	$ 9,172.4	$ 11.2	0.1%

For each of the Systems, the individual implementation changed the allocation between the normal cost and the accrued liabilities (typically increasing the accrued liabilities and lowering the normal cost). The change in the employer contribution, however, varied by System and is related to the relationship between the expected working career of a member and the amortization period. The difference is expected to vary from year to year.

SECTION C

GRS REPLICATIONS AND FINDINGS BY SYSTEM

REPLICATIONS AND FINDINGS BY SYSTEM

NYCERS

During the contribution audit for NYCERS, GRS was able to replicate the OA's computation of total present value of benefits within tolerances. GRS was also able to replicate the OA's computations of the present value of benefits by group reasonably well (i.e., General, Corrections, HP/TP, Sanitation, TBTA, and Transit). However, GRS' measurements of the present value of benefits for Transit members and General members were outside of tolerances. GRS results were higher for Transit members and lower for General members. In aggregate, these differences were offsetting. GRS will further investigate this difference in the second engagement.

GRS was also able to replicate the OA's computation of the employer contributions within tolerances, both in aggregate and by employer group. We understand that details of the computations down to the obligors have been traditionally outside the scope of the contribution audits. However, the OC did request that we show our computation of the employer contributions by obligor for NYCERS. This is shown on the table on page C-4. As seen on that table, GRS was able to reproduce the computation of employer contributions by obligor within tolerances. Furthermore, GRS has reviewed the method the Actuary used to allocate contributions to the obligors and believes it to be reasonable and within the requirements of the New York City Administrative Code, Section 13-127.

The Present Value of Expected Future Benefits (PVFB) represents the liabilities for all current members for benefits that have accrued in the past and are expected to accrue in the future (based on the actuarial methods and assumptions). The development of the normal cost and the accrued liability allocates the PVFB between past and future accruals, in accordance with the actuarial cost method. GRS had some difficulty replicating the OA's computation of normal cost and accrued liabilities. The differences were outside of our tolerances. However, since the differences were in different directions (GRS' computation of normal cost was higher; accrued liability was lower) the differences were offsetting in the development of the employer contributions. GRS will research this allocation difference further in the second engagement.

We have the following findings for the NYCERS contribution audit:

1. Active members over age 75 on the valuation date appear to be valued as if they were exactly 75 on the valuation date. GRS recommends that members be valued at their actual age. This issue does not affect a significant number of members.
2. GRS recommends the OA review the modeling of future deferred members (current actives who are assumed to quit after vesting and before retirement eligibility). GRS offers the following observations;
    a. Future deferred members are assumed to commence benefits at first eligibility. However, current deferred members are assumed to commence benefits in accordance with the retirement pattern. We recommend these assumptions be unified.
    b. The allocation of present value of deferred vested benefits (future deferred members) to the Sanitation group was less than the present value of deferred vested benefits (future deferred members) shown in one active Sanitation test case.
    c. The assumed commencement age used for future deferred members did not always match the group they were valued under in the test cases. For example, for two test life

cases in the Corrections group, the assumed commencement for deferred benefits changed throughout the lifetime, even though in each case the member should be able to commence on their 20th anniversary of employment.

3. In NYCERS there were a number of data test cases where the data seemed to indicate the member was entitled to one particular plan, but was valued under a different plan. We recommend that the OA document the rules relative to when a member should be valued under a plan different than indicated by the data and include such rules with the summary of benefits currently maintained. Discussions with the OA have suggested that some of these cases might be related to "default" plans that were used under the prior valuation system and are in the process of being converted under the ProVal valuation system.
4. The mortality table used for Transit beneficiaries does not appear to be updated to the 2012 A&M set of assumptions, based on our review of the test lives.

The charts on the following pages show the details of our replication, both in aggregate and by employer group.

NYCERS Comparison of Aggregate Results ($Millions)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	Count	Liabilities	Count	Individual	Total
1. Present Value of Benefits						
a. Actives	$ 44,044	184,982	$ 43,327	184,980	-1.63%	-0.92%
b. Inactives	873	19,332	867	19,332	-0.66%	-0.01%
c. Terminated Vested	570	8,941	591	8,941	3.53%	0.03%
d. Retirees	31,431	132,487	31,579	132,486	0.47%	0.19%
e. Loads	249		249		0.00%	0.00%
f. VSF	900		900		0.00%	0.00%
g. Total	78,068	345,742	77,513	345,739	-0.71%	-0.71%
2. Present Value of Future Salary	112,705		112,555		-0.13%	-0.13%
3. Present Value of Future Employee Contribution	2,619		2,622		0.12%	0.12%
4. Present Value of Future Employer Normal Costs						
a. Actives	12,343		13,139		6.45%	6.38%
b. VSF	133		133		0.00%	0.00%
c. Total	12,476		13,272		6.38%	6.38%
5. Actuarial Accrued Liability						
a. Actives (1.a. - 4.a.)	29,082		27,566		-5.21%	-2.41%
b. Inactives (1.b.)	873		867		-0.66%	-0.01%
c. Terminated Vested (1.c.)	570		591		3.53%	0.03%
d. Retirees (1.d.)	31,431		31,579		0.47%	0.23%
e. Loads (1.e.)	249.09		249		0.00%	0.00%
f. VSF (1.f. - 4.b.)	767		767		0.00%	0.00%
g. Total	62,973		61,619		-2.15%	-2.15%
h. Total - Net of Retirees	31,542		30,040		-4.76%	-2.38%
6. Development of Normal Cost						
a. Present Value Future NC ER	12,476		13,272		6.38%	
b. Present Value Future Salary	112,705		112,555		-0.13%	
c. Salary - Time 0.5	11,899		11,893		-0.05%	
d. Projected Present Value Future Salary	101,202		101,058		-0.14%	
e. Normal Cost Percent	12.328%		13.133%		6.53%	
f. Salary - Time 1.5	11,727		11,721		-0.05%	
g. Normal Cost (Unallocated)						
h. Normal Cost (Allocated)	1,446		1,539		6.47%	
7. Assets						
a. Market Value of Assets	$ 35,384		$ 35,384		0.00%	
b. Variable Assets	-		-			
c. Actuarial Value of Assets	40,433		40,433		0.00%	
d. PV 1-Year Adj Employer Contrib	2,308		2,360		2.25%	
e. Due to/From TDA						
f. Valuation Assets (c. + d.)	42,741		42,793		0.12%	
8. Assets (VSF)						
a. Market Value of Assets	36		36		0.00%	
b. Variable Assets	-		-			
c. Actuarial Value of Assets	38		38		0.00%	
9. Unfunded Actuarial Accrued Liability Bases						
a. Preliminary Unfunded June 30, 2010	20,194		18,788		-6.96%	-6.96%
b. Less Liability for TWU Refunds	(122)		(122)		0.00%	0.00%
c. Adjusted Unfunded June 30, 2010	20,072		18,666		-7.00%	-6.96%
d. Liability for TWU Refunds	122		122		0.00%	0.00%
e. Total	20,194		18,788		-6.96%	-6.96%
10. Components of Contribution						
a. Entry-Age Normal Cost	1,446		1,539		6.47%	3.10%
b. Initial UAAL Contribution	1,517		1,412		-6.96%	-3.50%
c. Subsequent UAAL Contribution	-		-			
d. Administrative Expenses	54		54		0.00%	0.00%
e. Total (Pension Expense)	3,017		3,005		-0.40%	-0.40%

NYCERS COMPARISON OF CONTRIBUTIONS BY OBLIGOR

	Computed FY 2012 Contribution ($Millions)		
Obligor	**OA Computation**	**GRS Computation**	**Difference**
New York City Transit Authority	$ 711.5	$ 707.1	-0.6%
New York City Housing Authority	149.6	151.5	1.3%
New York City Health and Hospitals Corporation	424.6	426.0	0.3%
Triborough Bridge and Tunnel Authority	33.6	33.8	0.5%
New York City Off-Track Betting Corporation	13.0	12.8	-0.9%
New York City Housing Development Corporation	1.3	1.3	1.2%
New York City School Contruction Authority	1.5	1.6	1.6%
New York City Residential Mortgage Insurance Corporation	N/A	N/A	0.0%
State Judiciary Employees	0.9	0.9	-4.5%
New York City Municipal Water Authority	0.2	0.2	0.7%
City University of New York Senior Colleges	37.2	37.4	0.6%
All Others	1,643.7	1,632.4	-0.7%
Total	$ 3,017.0	$ 3,004.9	-0.4%

TRS

During the contribution audit for TRS, GRS was able to replicate the OA's computation of total present value of benefits within tolerances. GRS was also able to replicate the OA's computation of the employer contributions within tolerances.

GRS had some difficulty replicating the OA's computation of normal cost and accrued liabilities. The differences were outside of our tolerances. However, since the differences were in different directions (GRS' computation of normal cost was higher; accrued liability was lower) the differences were offsetting in the development of the employer contributions. GRS will research this allocation difference further in the second engagement.

We have the following findings for the TRS contribution audit:

1. Service for members appears to be rounded on the valuation data. We recommend using exact years and months of service. This affects the computation of entry age, as well as the computation of benefits.
2. Probabilities of termination for members with 20 or more years of service appear to be rounded to the nearest 1%. Probabilities of termination provided to GRS by the OA were less than 1%. GRS used the probabilities provided to the precision provided. This resulted in a significant difference between the present value of benefits for future deferred vested members (current actives, vested deferred decrement) between the OA computation and the GRS computation. We recommend the OA review the probabilities actually used in the valuation.

The charts on the following pages show the details of our replication.

TRS COMPARISON OF RESULTS ($MILLIONS)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	Count	Liabilities	Count	Individual	Total
Retirees Receiving Benefits						
Pension	$ 29,880		$ 29,801		-0.26%	-0.12%
Supplemental Benefits	2,384		2,393		0.38%	0.01%
Total Retirees Receiving Benefits Liability	32,264	72,168	32,194	72,168	-0.22%	-0.10%
Actives, Inactives and Terminated Vested						
Service Retirements	30,513		30,314		-0.65%	-0.29%
Ordinary Disability	632		620		-1.84%	-0.02%
Accidental Disability	182		181		-0.80%	0.00%
Ordinary Death	320		319		-0.43%	0.00%
Accidental Death	-		-		0.00%	0.00%
Vested & Deferred Retirements	1,302		1,057		-18.79%	-0.36%
Return of Contributions & Misc Liabilities	28		28		0.00%	0.00%
Active Total	32,977	111,647	32,519	111,647	-1.39%	-0.67%
Inactives	353	10,803	353	10,803	-0.11%	0.00%
Terminated Vested	556	8,170	551	8,170	-0.95%	-0.01%
Total Active/Inactive Liabilities without loads	33,886	130,620	33,422	130,620	-1.37%	-0.68%
Loads						
Coverages	54		54		0.00%	0.00%
Nager II Load	272		272		0.00%	0.00%
World Trade Center (WTC)	6		6		0.00%	0.00%
Reserve for Loan Insurance	1		1		0.00%	0.00%
Accum EE Cont Adj	198		198		0.00%	0.00%
Var Acct Balances	1,219		1,219		0.00%	0.00%
Annuitization of VFAB	279		279		0.00%	0.00%
Total	2,029		2,029		0.00%	0.00%
Total Present Value of Benefits	68,179		67,645		-0.78%	-0.78%
Actuarial Accrued Liability						
Actives	19,936		18,564		-6.88%	-2.49%
Inactives	353		353		-0.11%	0.00%
Terminated Vested	556		551		-0.95%	-0.01%
Retirees	32,264		32,194		-0.22%	-0.13%
Loads	2,029		2,029		0.00%	0.00%
Total Actuarial Accrued Liability	55,138		53,691		-2.63%	-2.63%

TRS Comparison of Results
($Millions)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	Count	Liabilities	Count	Individual	Total
Development of Normal Cost						
Actives						
PresentValueFut EE Cont.	$ 1,090		$ 1,101		0.98%	
PresentValueFut N/C_Er	11,951		12,854		7.56%	
PresentValueFutureSalary	94,357		95,167		0.86%	
Salary - Time 0.5 (Expected Pay Paid)	7,920		7,924		0.05%	
Projected Present Value Future Salary	86,437		87,243		0.93%	
Normal Cost Percent (ER Only)	13.78%		14.73%		6.89%	
Salary - Time 1.5 (Projected Ex Pay Paid)	7,922		7,922		0.00%	
Normal Cost - Actives	1,092		1,167		6.89%	
Normal Cost - Total	1,092		1,167		6.89%	
Assets						
Assets (Main Fund)						
AVA	$ 32,478		$ 32,478		0.00%	
PV 1-Year Adj Employer Contributions	2,387		2,430		1.81%	
Due to/from TDA	(250)		(250)		0.00%	
Total Main Fund Valuation Assets	34,615		34,658		0.12%	
Contribution Development						
Unfunded Actuarial Accrued Liability	20,523		19,032		-7.26%	
Amortization Factor						
Amortization UAAL Payment	1,542		1,430		-7.26%	-4.19%
Administrative Expenses	39		47		21.73%	0.32%
Entry-Age Normal Cost	1,092		1,167		6.89%	2.81%
Total Contribution	2,673		2,597		-2.83%	-2.83%

BERS

During the contribution audit for BERS, GRS was able to replicate the OA's computation of total present value of benefits within tolerances. GRS was also able to replicate the OA's computation of the employer contributions within tolerances.

GRS had some difficulty replicating the OA's computation of normal cost and accrued liabilities. The differences were outside of our tolerances. However, since the differences were in different directions (GRS' computation of normal cost was higher; accrued liability was lower) the differences were offsetting in the development of the employer contributions. GRS will research allocation differences further in the second engagement.

We have the following findings for the BERS contribution audit:

1. The mortality table used for beneficiaries does not appear to be updated to the 2012 A&M (based on our review of the test lives). We recommend this be reviewed by the OA and updated accordingly.
2. The OA appears to base beneficiary mortality (for contingent beneficiaries not in pay status) on the opposite sex of the members. In one of the test cases, female mortality rates were used for the member (who was reported to be female) and male rates were used for the beneficiary (who was also reported to be female). We recommend mortality rates for contingent beneficiaries be based on their reported sex.
3. If the maximum allowance field is zero, the OA appears to base the first year COLA amount solely on the Supplementation field. We recommend that for these cases, the first year COLA Amount be based on the sum of the Pension, Annuity and Supplementation fields, similar to the Auto COLA (used for all future years except first year).
4. OA results for the two active Tier I test cases appear to account for the entire Tier I present value of deferred vested benefits. OA results for the two active Tier II test cases appear to account for almost the entire Tier II present value of deferred vested benefits. Since there are more than 2 members in each of those groups that have yet to enter the retirement pattern (the point at which this decrement no longer applies), we suspect that these liabilities are accounted for elsewhere in the OA's numbers. We recommend the OA review the present value of benefits for this decrement.
5. Tier II 55/25 optional plan members are valued using the old retirement pattern (pre-2012 A&M). We recommend the retirement pattern be updated for these members.
6. The OA does not believe the service information is reliable due to the number of part time members and the inability of BERS to provide complete information regarding part time members. Therefore the OA assigns one year of service for each plan year that the member is reported as active. Membership dates are contained on the file. GRS used the membership date to test the reasonability of the integral service used by the OA and determined that the integral service used by the OA was reasonably reflective of the elapsed time between membership date and valuation date. Although the benefit is based on actual service and annualized pay, the OA models benefits in the valuation using annualized service and actual (part time) pay due to the reliability of reported service. We agree that this process provides a reasonable approximation. We recommend the OA continue to work with BERS to obtain better data for part time members.

BERS COMPARISON OF RESULTS
($MILLIONS)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	**Count**	**Liabilities**	**Count**	**Individual**	**Total**
Retirees Receiving Benefits						
Total Pension	$ 1,425	13,969	$ 1,408	13,969	-1.21%	-0.37%
Total Supplemental Benefits	202		204		0.89%	0.04%
Taxed Deferred Annuities						
Total Retirees Receiving Benefits Liability	1,627		1,612		-0.95%	-0.33%
Actives, Inactives and Terminated Vested						
Service Retirements	2,517		2,512		-0.18%	-0.10%
Ordinary Disability	182		179		-1.70%	-0.07%
Accidental Disability	10		10		-2.94%	-0.01%
Ordinary Death	59		58		-3.20%	-0.04%
Accidental Death	-		-		0.00%	0.00%
Vested & Deferred Retirements	117		125		6.58%	0.17%
Return of Contributions & Misc Liabilities	4		4		0.00%	0.01%
Active Total	2,889	23,324	2,888	23,324	-0.06%	-0.04%
Inactives	86	3,661	86	3,661	-0.58%	-0.01%
Terminated Vested	12	199	11	199	-1.72%	0.00%
Total Active/Inactive Liabilities without loads	2,987	27,184	2,984	27,184	-0.08%	-0.05%
Loads						
World Trade Center (WTC)	1		1		0.00%	0.00%
Reserve for Loan Insurance	0		0		0.00%	0.00%
Accumulated EE Contribution Adjustment	14		14		0.00%	0.00%
Variable Account Balances	3		3		0.00%	0.00%
Annuitization of VFAB	0		0		0.00%	0.00%
Total	19		19		0.00%	0.00%
Total Present Value of Benefits	4,633		4,615		-0.39%	-0.39%
Actuarial Accrued Liability						
Actives	1,815		1,715		-5.49%	-2.80%
Inactives	86		86		-0.58%	-0.01%
Terminated Vested	12		11		-1.72%	-0.01%
Retirees	1,627		1,612		-0.95%	-0.43%
Loads	19		19		0.00%	0.00%
Total Actuarial Accrued Liability	3,558		3,443		-3.25%	-3.25%

BERS COMPARISON OF RESULTS
($MILLIONS)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	Count	Liabilities	Count	Individual	Total
Development of Normal Cost						
Actives						
PresentValueFut EE Cont.	$ 175		166		-5.32%	
PresentValueFut N/C_Er	899		1,007		12.02%	
PresentValueFutureSalary	8,251		8,263		0.14%	
Salary - Time 0.5 (Expected Pay Paid)	888		889		0.09%	
Projected Present Value Future Salary	7,393		7,374		-0.25%	
Normal Cost Percent (ER Only)	12.16%		13.65%		12.30%	
Salary - Time 1.5 (Projected Ex Pay Paid)	871		871		0.00%	
Normal Cost - Total	106		119		12.30%	
Assets						
AVA	$ 2,057		$ 2,057		0.00%	
PV 1-Year Adj Employer Contributions	174		183		4.82%	
Due (To)/From TDA	16		16			
Total Valuation Assets	2,246		2,255		0.37%	
Contribution Development						
Unfunded Actuarial Accrued Liability	1,312		1,188		-9.47%	
Amortization Factor						
Amortization UAAL Payment	99		89		-9.47%	-4.37%
Administrative Expenses	9		9		0.00%	0.00%
Entry-Age Normal Cost	106		119		12.30%	6.10%
Total Contribution	214		217		1.73%	1.73%

POLICE

During the contribution audit for POLICE, GRS was able to replicate the OA's computation of total present value of benefits, normal costs and accrued liabilities within tolerances. GRS was also able to replicate the OA's computation of the employer contributions within tolerances. No area failed both the individual and the aggregate tolerance test.

Although GRS replicated the OA's computation of normal costs within tolerances, we did have some difficulty with this component. A detailed analysis of the test lives indicated that the required contribution field (RASF) read in from the data file was used at each and every age of the entry age pass. This means that a deficit or addition to the formula benefit is valued due to an artificial difference between the actual and required employee contributions.

We have the following findings for the POLICE contribution audit:

1. Review the method for determining liabilities for deferred vested members. For members already terminated, the OA assumes that benefit commencement will occur in accordance with the retirement pattern for active members. However, for future deferred members, the OA assumes that benefits will commence upon first eligibility. Under the OA's methods, if deferred vested experience matches the actuarial assumptions in a particular year, the valuation calculations will show a gain even though no gain occurred. We recommend the OA make the assumed commencement of benefits the same for current deferred members and future deferred members.
2. It has been GRS' experience that uniformed members who quit before retirement eligibility typically commence benefits upon first eligibility. Absent Police definitive experience to the contrary, we recommend the OA assume deferred benefits will commence upon first eligibility. The GRS calculation for deferred members was based on commencement of benefits upon first eligibility.
3. We recommend the OA review the development of the RASF (required member contribution) used on the entry age pass and update accordingly.
4. In the June 30, 2010 valuation data, reported required ITHP balances were inconsistent with prior and subsequent reporting. The OA identified this and established an aggregate liability adjustment to account for the incorrect reporting. We queried the total balances for all POLICE members as of June 30, 2009, June 30, 2010, and June 30, 2011 from the experience study file. Those balances are shown below:

	$Millions				
	ASF		ITHP		Active
June 30,	Actual	Required	Actual	Required	Count
2009	$ 1,913.6	$ 1,385.9	$ 1,844.3	$ 1,745.5	35,589
2010	$ 2,105.1	$ 1,413.9	$ 2,054.9	$ 2,795.0	34,219
2011	$ 2,214.7	$ 1,373.0	$ 3,156.0	$ 3,014.2	32,205

As the table shows, June 30, 2010 is the only year where the required ITHP balance is greater than the actual ITHP balance, in total. Although a review of the June 30, 2011 valuation results were not within the scope of our engagement, in looking at the table above, it does appear that there may be a problem with the reported required ASF balance in that year's data. That is the only year where the required ASF balance decreases. However, the actual ASF balance still increases. We recommend these balances be reviewed as well, if they have not already been reviewed.

POLICE COMPARISON OF RESULTS ($MILLIONS)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	Count	Liabilities	Count	Individual	Total
Retirees Receiving Benefits						
SubChapter Two	$18,281	44,329	$18,266	44,329	-0.08%	-0.03%
SubChapter One	2	305	2	305	0.89%	0.00%
Total Pension	18,282	44,634	18,268	44,634	-0.08%	-0.03%
SubChapter Two Supplemental	2,330		2,327		-0.13%	-0.01%
SubChapter One Supplemental	4		4		-1.47%	0.00%
Total Supplemental Benefits	2,334		2,331		-0.14%	-0.01%
Total Retirees Receiving Benefits Liability	20,616		20,598		-0.09%	-0.03%
Actives, Inactives and Terminated Vested						
Service Retirements	15,137		15,115		-0.15%	-0.04%
Ordinary Disability	534		527		-1.16%	-0.01%
Accidental Disability	6,946		6,846		-1.44%	-0.20%
Ordinary Death	121		125		3.64%	0.01%
Accidental Death	50		48		-3.78%	0.00%
Vested & Deferred Retirements	244		252		3.53%	0.02%
Return of Contributions & Misc Liabilities	2		2		-5.26%	0.00%
Active Total	23,033	34,597	22,916	34,597	-0.51%	-0.23%
Inactives	100	1,836	102	1,836	2.21%	0.00%
Terminated Vested	113	848	114	848	0.98%	0.00%
Total Active/Inactive Liabilities without loads	23,245	37,281	23,131	37,281	-0.49%	-0.23%
VSFs						
Active	2,445		2,453		0.32%	0.02%
Retired	3,336		3,277		-1.77%	-0.12%
Total	5,781		5,730		-0.89%	-0.10%
Loads						
World Trade Center (WTC)	137		137		0.00%	0.00%
Transfer	21		21		0.00%	0.00%
Reserve for Loan Insurance	3		3		0.00%	0.00%
RITHP Fix	850		850			
Accum EE Cont Adj	(12)		(12)		0.00%	0.00%
Total	999		999		0.00%	0.00%
Total Present Value of Benefits	50,641		50,458		-0.36%	-0.36%
Actuarial Accrued Liability						
Actives	12,475		12,805		2.64%	0.84%
Inactives	100		102		2.21%	0.01%
Terminated Vested	113		114		0.98%	0.00%
Retirees	20,616		20,598		-0.09%	-0.04%
Loads	999		999		0.00%	0.00%
VSF Active	1,671		1,676		0.33%	0.01%
VSF Retired	3,336		3,277		-1.77%	-0.15%
Total VSF	5,007		4,953		-1.07%	-0.14%
Total Actuarial Accrued Liability	39,309		39,571		0.67%	0.67%

POLICE COMPARISON OF RESULTS ($MILLIONS)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	Count	Liabilities	Count	Individual	Total
Development of Normal Cost						
Actives						
PresentValueFut N/C_Er	$ 10,081		$ 9,610		-4.68%	
PresentValueFutureSalary	30,526		30,141		-1.26%	
Salary - Time 0.5 (Expected Pay Paid)	3,456		3,448		-0.23%	
Projected Present Value Future Salary	27,185		26,692		-1.81%	
Normal Cost Percent (ER Only)	37.08%		36.00%		-2.92%	
Salary - Time 1.5 (Projected Ex Pay Paid)	3,441		3,433		-0.23%	
Normal Cost - Actives	1,276		1,236.05		-3.14%	
VSF						
PresentValueFutN/C_Er	775		777		0.28%	
PresentValueFutureSalary	30,526		30,141		-1.26%	
Salary - Time 0.5	3,456		3,448		-0.23%	
Projected PresentValueFutureSalary	27,185		26,692		-1.81%	
Normal Cost Percent	2.85%		2.91%		2.13%	
Salary - Time 1.5	3,441		3,433		-0.23%	
Normal Cost - VSF	98		100		1.90%	
Normal Cost - Total	1,374		1,336		-2.78%	
Assets						
Assets (Main Fund)						
AVA	$ 22,909		$ 22,909		0.00%	
PV 1-Year Adj Employer Contributions	2,014		2,032		0.86%	
Total Main Fund Valuation Assets	24,923		24,940		0.07%	
Assets (VSFs)						
PSOVSF	496		496		0.00%	
POVSF	703		703		0.01%	
Total Actuarial Value of VSF Fund	1,198		1,199		0.01%	
Contribution Development						
Unfunded Actuarial Accrued Liability	13,187		13,432		1.85%	
Amortization Factor						
Amortization UAAL Payment	993		1,011		1.85%	0.77%
Admin	19		19		0.00%	0.00%
Entry-Age Normal Cost	1,374		1,336		-2.78%	-1.60%
Total Contribution	2,386		2,366		-0.83%	-0.83%

FIRE

During the contribution audit for FIRE, GRS was able to replicate the OA valuation results well within our tolerances. We matched the OA results within our aggregate tolerances in every category. In addition, we matched the OA results within our individual tolerances in all but three categories. The GRS calculation of the present value of future normal cost(s) was higher than the OA's and the unfunded actuarial accrued liability was lower. These differences were offsetting in the development of the employer contribution which GRS was able to reproduce to within 0.11%.

The chart on the following page shows the details of this replication.

GRS has found no material issues in the FIRE contribution audit. Most of the differences between the OA calculations and the GRS calculations are attributable to differences in how age and service were rounded within the calculations. These differences were mostly offsetting in aggregate, but they result in material differences in some of the test case lives we reviewed. The difference in the rounding of service can be seen in test life comparisons predominately in the vesting decrement. During the latter part of the FIRE audit, we reviewed the calculation of the Present Value of Benefits by active member. Approximately 300 of these members showed material differences between the GRS calculations and the OA calculations (half were higher, half were lower). Upon further inspection, we determined that all of these members had between 4 and 5 years of service. There is a large assumed pay increase in the fourth year of service and the manner in which exact service is rounded results in this large pay increase assumption being applied differently for many of these active members.

We have the following recommendations specific to FIRE:

1. Review the method for determining liabilities for deferred vested members. For members already terminated, the OA assumes that benefit commencement will occur in accordance with the retirement pattern for active members. However, for future deferred members, the OA assumes that benefits will commence upon first eligibility. Under the OA's methods, if deferred vested experience matches the actuarial assumption in a particular year, the valuation calculations will show a gain even though no gain occurred. We recommend the OA make the assumed commencement of benefits the same for current deferred members and future deferred members.
2. It has been GRS' experience that uniformed members who quit before retirement eligibility typically commence benefits upon first eligibility. We recommend the OA assume deferred benefits will commence upon first eligibility. The GRS calculation for deferred members was based on commencement of benefits upon first eligibility. GRS' calculation of liabilities for current deferred members was approximately 16% higher than the OA's as a result of the differences in assumed commencement date.
3. We recommend the OA include the liabilities for "other service." This service is currently reported on the data file. Although there are not a significant number of members with this service, it does not add any significant complications to the valuation model and is fairly simple to model.
4. We recommend that the OA review the modeling of the Auto COLA for certain beneficiaries. We identified some modeling of the Auto COLA in the test lives that differed from our expectations. These differences are detailed in Appendix 3.

FIRE COMPARISON OF RESULTS ($MILLIONS)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	**Count**	**Liabilities**	**Count**	**Individual**	**Total**
Retirees Receiving Benefits						
SubChapter Two	$8,749	16,462	$8,762	16,462	0.14%	0.06%
SubChapter One	8	678	8	678	-0.31%	0.00%
Total Pension	8,757	17,140	8,770	17,140	0.14%	0.06%
SubChapter Two Supplemental	927		924		-0.35%	-0.02%
SubChapter One Supplemental	12		12		-0.64%	0.00%
Total Supplemental Benefits	939		936		-0.35%	-0.02%
Total Retirees Receiving Benefits Liability	9,696		9,705		0.09%	0.04%
Actives, Inactives and Terminated Vested						
Service Retirements	2,670		2,672		0.10%	0.01%
Ordinary Disability	635		629		-0.82%	-0.03%
Accidental Disability	6,236		6,146		-1.44%	-0.44%
Ordinary Death	94		97		3.78%	0.02%
Accidental Death	89		92		3.00%	0.01%
Vested & Deferred Retirements	32		32		1.43%	0.00%
Return of Contributions & Misc Liabilities	0		0		0.00%	0.00%
Active Total	9,755	11,080	9,669	11,080	-0.88%	-0.42%
Inactives	4	23	4	23	2.56%	0.00%
Terminated Vested	5	33	5	33	16.08%	0.00%
Total Active/Inactive Liabilities without loads	9,763	11,136	9,678	11,136	-0.87%	-0.41%
VSFs						
Active	450		447		-0.53%	-0.01%
Retired	628		631		0.41%	0.01%
Total	1,078		1,078		0.02%	0.00%
Loads						
World Trade Center (WTC)	37		37		0.00%	0.00%
Transfer	1		1		0.00%	0.00%
Reserve for Loan Insurance	1		1		0.00%	0.00%
Accum EE Cont Adj	(71)		(71)		0.00%	0.00%
Total	(32)		(32)		0.00%	0.00%
Total Present Value of Benefits	20,505		20,429		-0.37%	-0.37%
Actuarial Accrued Liability						
Actives	5,489		5,450		-0.72%	-0.25%
Inactives	4		4		2.97%	0.00%
Terminated Vested	5		5		16.08%	0.00%
Retirees	9,696		9,705		0.09%	0.06%
Loads	(32)		(32)		-0.72%	0.00%
VSF Active	292		287		-1.58%	-0.03%
VSF Retired	628		631		0.41%	0.02%
Total VSF	920		918		-0.22%	-0.01%
Total Actuarial Accrued Liability	16,081		16,050		-0.20%	-0.20%

FIRE COMPARISON OF RESULTS
($MILLIONS)

	Office of the Actuary		Gabriel, Roeder, Smith & Company		Tolerance Test	
	Liabilities	Count	Liabilities	Count	Individual	Total
Development of Normal Cost						
Actives						
PresentValueFut N/C_Er	$ 4,132		$ 4,082		-1.23%	
PresentValueFutureSalary	12,278		12,126		-1.24%	
Salary - Time 0.5 (Expected Pay Paid)	1,143		1,142		-0.14%	
Projected Present Value Future Salary	11,173		10,984		-1.69%	
Normal Cost Percent (ER Only)	36.99%		37.16%		0.47%	
Salary - Time 1.5 (Projected Ex Pay Paid)	1,156		1,153		-0.26%	
Normal Cost - Actives	427		428		0.20%	
VSF						
PresentValueFutN/C_Er	158		160		1.15%	
PresentValueFutureSalary	12,278		12,126		-1.24%	
Salary - Time 0.5	1,143		1,142		-0.14%	
Projected PresentValueFutureSalary	11,173		10,984		-1.69%	
Normal Cost Percent	1.42%		1.46%		2.88%	
Salary - Time 1.5	1,156		1,153		-0.26%	
Normal Cost - VSF	16		17		2.61%	
Normal Cost - Total	444		445		0.29%	
Assets						
Assets (Main Fund)						
AVA	$ 7,393		$ 7,393		0.00%	
PV 1-Year Adj Employer Contributions	861		861		0.00%	
Total Main Fund Valuation Assets	8,254		8,254		0.00%	
Assets (VSFs)						
FOVSF	275		275		0.00%	
FFVSF	456		456		0.00%	
Total Actuarial Value of VSF Fund	731		731		0.00%	
Contribution Development						
Unfunded Actuarial Accrued Liability	7,096		7,065		-0.44%	
Amortization Factor						
Amortization UAAL Payment	533		531		-0.44%	-0.24%
Entry-Age Normal Cost	444		445		0.29%	0.13%
Total Contribution	977		976		-0.11%	-0.11%

APPENDIX 1

BENEFIT SUMMARIES BY SYSTEM (AS OF JUNE 30, 2010)

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

TIERS

Tier 1 **–** Member before 7/1/73

Tier 2 **–** Member between 7/1/73 and 7/26/76

Tier 3 **–** Member between 7/27/76 and 8/31/83. Correction Officers on or after 7/26/76.

Tier 4 **–** Member after 8/31/83

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

TERMS

Accumulated Deductions. The total of all contributions made by members, plus interest earned on such contributions (8.25% for Tiers 1 and 2; 5% for Tiers 3 and 4), compounded annually.

Additional Member Contributions (AMCs). Contributions that are made by members, in addition to the basic member contributions, that are required to be paid each payroll period by Participants in any one of the Special Plans described in this document. The AMC percentages differ in each Special Plan and all AMCs are maintained in the Retirement Reserve Fund.

Annuity. Payments made to Tiers 1 and 2 retirees derived from their Accumulated Deductions.

Average Compensation (Tier 1 and 2 only). The average of compensation earned from the completion of 20 years of Allowable Correction Service to the date of retirement (also applies to Tier 2 DA Investigators and Accidental Disability Benefits for Tier 1 and Tier 2 Uniformed Sanitation Members with more than 20 years of Allowable Service).

Credited Service. *Includes:*
- Service rendered while a member of NYCERS, and
- Service rendered while a member of another retirement system within New York City or New York State and transferred to NYCERS, and
- Service purchased under applicable laws and rules for buy-back, which can include:
- Membership Reinstatement Service
- Military Service
- Union Leave Service

Final Average Salary (FAS). The greater of the average annual Wages earned during any three consecutive calendar year periods, or the final 36 months immediately preceding the member’s retirement date. But, if the salary earned during any year included in the calculation of the member’s FAS exceeds the specific limits for Tier 2, Tier 3 or Tier 4 members, the amount in excess of such limits is excluded from the computation.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

TERMS (CONT.)

Final Compensation. The average compensation earned during:
- the five-year period immediately preceding the member's retirement date, or
- any consecutive five calendar-year period prior to the member's retirement date that would provide him or her with the greatest average compensation.

Where the period used to determine Final Compensation is the period which immediately precedes the date of retirement, any month or months (not in excess of 12) during which the member was on authorized leave of absence at partial pay or without pay are excluded and an equal number of months immediately preceding the five-year period shall be substituted in lieu thereof to provide Credited Service totaling five calendar years.

Final Salary (Tier 1 Members).
For members of the uniformed forces of the departments of Sanitation and Correction who joined the retirement system prior to July 1, 1973:
The annual rate of salary earnable on the day before the date of retirement.

For all others:
The salary earnable in the year ending on the day before the date of retirement or alternatively, the average annual compensation during any three calendar years designated by the member, if in a Career Pension Plan Position.

Tier 1 members with a membership date after 6/17/71 may be subject to certain limits if their Final Salary exceeds that of the prior year by more than 20%.

Increased-Take-Home-Pay (ITHP). Contributions for Tier 1 and Tier 2 members that are contributed by their employer equal to 2% of the members' gross salaries; 2.5% for Correction Officers.

Reserve for Increased-Take-Home-Pay (ITHP). For some Tier 1 and Tier 2 members, an amount which at the time of death or retirement is equal to the accumulation of the contributions for ITHP, plus interest earned thereon.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION
TIER 1 BENEFITS

SERVICE RETIREMENT

Plan	Eligibility
A	Age 55 (age 50 for physically taxing) and 25 years of service or 20 years of service, but payable when member would have completed 25 years of service and reached age 55
B	Age 55
25-Year Plans for EMT, Fire Alarm Dispatchers and Special Officers	25 years of credited service
25-Year Plan for DA Investigators	25 years of allowable service
20-Year Plan for DA Investigators	20 years of allowable service
20-Year Plan for Correction Officers	20 years of allowable service
25-Year Plan for Correction Officers	25 years of allowable service
Transit Operating Employees	Age 50 with 20 years of Transit Service
20-Year Plan for Sanitation Employees	20 years of Allowable Sanitation Service

NYCERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Tier 1 Benefits

Plan	Allowance
A	First 25 years of service: 55% of Final Salary plus; For all years other than the first 25: 1.2% of Final Salary for years prior to 7/1/68 plus 1.7% of Final Salary for years after 6/30/68 plus; The annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over the sum of: 1. Value of the Required Minimum and; 2. Value at retirement of Required ITHP brought forward with interest to retirement
B	1.2% of Final Salary for service prior to 7/1/68 plus; 1.53% of Final Salary for service after 6/30/68 plus; Annuity based on Annuity Savings Fund and ITHP fund.
25-Year Plans for EMT, Fire Alarm Dispatchers, Special Officers and DA Investigators	Same as Plan A except, for credited service after 25 years, 1.7% of Final Salary for service over 25 years. Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over the sum of: 1. Value of the Required Minimum and; 2. Value at retirement of Required ITHP brought forward with interest to retirement
20-Year Plan for DA Investigators	2.5% of Final Salary for credited service up to 20 years plus; 1/60 of Average Compensation plus; For each year of Non-DAI service after 10/1/51: 75% of 1/60 of Final Compensation Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over the sum of: 1. Value of the Required Minimum and; 2. Value at retirement of Required ITHP brought forward with interest to retirement
20-Year Plan for Correction Officers	2.5% of Final Salary for allowable Correction service up to 20 years plus; 1/60 of Average Compensation for allowable Correction service greater than 20 years plus; The annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over the sum of: 1. Value of the Required Minimum and; 2. Value at retirement of Required ITHP brought forward with interest to retirement

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION
TIER 1 BENEFITS

Plan	Allowance
25-Year Plan for Correction Officers	2.2% of Final Salary for allowable Correction service up to 25 years plus; 1/60 of Average Compensation for allowable Correction service greater than 25 years plus; The annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over the sum of: 1. Value of the Required Minimum and; 2. Value at retirement of Required ITHP brought forward with interest to retirement
Transit Operating Employees	50% of Final Salary plus; 1.5% of Final Compensation for each year of Transit service over 20 after 7/1/68 plus; 1% of Final Compensation for all other service plus; The annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over the sum of: 1. Value of the Required Minimum and; 2. Value at retirement of Required ITHP brought forward with interest to retirement
20-Year Plan for Sanitation Employees	50% of Final Salary plus; 1.5% of Final Compensation for each year of Sanitation service over 20 after 7/2/65 plus; 1.0% of Final Compensation for each year of Sanitation service over 20 before 7/2/65 plus; The annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over the sum of: 1. Value of the Required Minimum and; 2. Value at retirement of Required ITHP brought forward with interest to retirement

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 1 BENEFITS

VESTING

Eligibility: 5 years of credited service.
20 years of credited service for Transit Operating Employees.

Plan	Allowance
A and B	Benefit calculated under service retirement Plan B, payable at age 55
25-Year Plans for EMT, Fire Alarm Dispatchers, Special Officers and DA Investigators	2.2% of Final Salary for each year of allowable service. Payable at 25-year date
20-Year Plan for DA Investigators	2.5% of Final Salary for each year of allowable service. Payable at 20-year date
Correction Officers	Service retirement allowance based on Plan selected, years of allowable Correction service, years of credited non-Correction service. Benefit is payable when member would have been eligible for service retirement. Vested members can withdraw accumulated contributions instead of receiving vested benefit.
Transit Operating Employees	50% of Final Salary plus; 1.5% of Final Compensation for each year of Transit service over 20 after 7/1/68 plus; 1% of Final Compensation for all other service. Benefit is payable at age 50.
20-Year Plan for Sanitation Employees	2.5% of Final Salary for Allowable Sanitation Service plus; 1% of Final Compensation for other service, payable when member would have completed 20 years of service. Vested members with less than 15 years of service can withdraw accumulated contributions instead of receiving a vested benefit.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION
TIER 1 BENEFITS

ORDINARY DISABILITY RETIREMENT

Eligibility: 10 years of credited service.
5 years of credited service for Sanitation Employees.

Plan	Allowance
Others	1.2% of Final Salary for each year of credited service before 7/1/68, plus 1.53% of Final Salary for each year of credited service after 6/30/68, plus annuity based on Annuity Savings Fund plus ITHP fund. If eligible for immediate commencement of service retirement benefit, either above ordinary disability or service retirement benefit.
Correction Officers	1/40 of Final Salary for each year of service subject to the following minimums: If less than 10 years of service: 1/3 of Final Salary If more than 10 and less than 20 years of service: 1/2 of Final Salary. Plus the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts as described above for Service Retirement.
Transit Operating Employees	If under age 50: 50% of Final Salary plus; 1.5% of Final Compensation for each year of Transit service over 20 after 7/1/68 plus; 1% of Final Compensation for all other service. If age 50 with 20 years: Same as service retirement.
20-Year Plan for Sanitation Employees	If less than 10 years of service: 1/3 of Final Salary If more than 10 and less than 20 years of service: 1/2 of Final Salary increased (decreased) by any excess (deficiency) of member contributions. If more than 20 years of service: same as service retirement benefit including the annuity of contributions after 20 years. If eligible for immediate commencement of service retirement benefit, either above ordinary disability or service retirement benefit.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 1 BENEFITS

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: No age or service requirement. Presumptive eligibility for maladies in connection with the World Trade Center attack for eligible members. EMT presumptive for HIV, TB, et. al. Correction Officers presumptive for HIV, TB or Hepatitis, and heart disease.

Plan	Allowance
Others	75% of Final Compensation, plus annuity based on Annuity Savings Fund and pension based on ITHP fund minus workers' comp. If eligible for immediate commencement of service retirement benefit, either above accidental disability or service retirement benefit.
Correction Officers	75% of Final Salary plus; 1/60 of salary for years of service greater than 20 years plus; Annuity based on member's accumulated contributions plus; Pension based on actuarial value of ITHP reserve minus; 100% of Worker’s Compensation.
20-Year Plan for Sanitation Employees	75% of Final Compensation, plus annuity based on Annuity Savings Fund and pension based on ITHP fund minus workers' comp plus; If more than 20 years of service: 1% of Average Compensation for years in excess of 20 plus 0.5% of Average Compensation for years in excess of 20 after 7/1/67. If eligible for immediate commencement of service retirement benefit, either above accidental disability or service retirement benefit.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 1 BENEFITS

ORDINARY DEATH BENEFIT:

Eligibility: No age or service requirement. Vested with 10 years of service for death benefit after termination and before retirement benefit commences.

Plan	Allowance
Others	If less than 10 years credited service, 6 months earnable salary; If 10-20 years credited service, 1 year of earnable salary; If more than 20 years credited service, 2 years of earnable salary; Plus balance of accumulated contributions and ITHP reserve. If eligible for service or deferred retirement, according to eligibility Option 1 reserve for deferred death, CPP (Plan A) or ISF (Plan B) if greater (presumptive retirement or death gamble).
Correction Officers	If less than 10 years credited service, 6 months earnable salary; If more than 10 years credited service, 1 year of earnable salary; Plus balance of accumulated contributions and ITHP reserve. If eligible for service retirement lump sum equal to maximum reserve for retirement allowance (death gamble reserve) if greater than above.
Transit Operating Employees	If less than 10 years credited service, 6 months earnable salary; If more than 10 years credited service, 1 year of earnable salary; Plus balance of accumulated contributions and ITHP reserve. If eligible for service or deferred retirement, Option 1 reserve based on service retirement benefit (Death Gamble) or deferred basis if less than age 50.
20-Year Plan for Sanitation Employees	If less than 10 years credited service, 6 months earnable salary; If more than 10 years credited service, 1 year of earnable salary; Plus balance of accumulated contributions and ITHP reserve. If eligible for service retirement, Death Gamble is greater.

NYCERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Tier 1 Benefits

Benefits for death after termination before retirement benefit commences:

Plan	Allowance
Others	If less than 20 years credited service, 6 months earnable salary; If more than 20 years credited service and not eligible for deferred retirement, 1 year of earnable salary. Plus return of member's accumulated contributions and ITHP and, for members of the special 25-Year Plans, return of additional member contributions with interest if more than 15 years of credited service.
Correction Officers	If less than 10 years credited service, 3 months earnable salary; If more than 10 years credited service, 6 year of earnable salary; Plus balance of accumulated contributions and ITHP reserve.
TBTA	If more than 10 years credited service and not eligible for deferred retirement, 150% of earnable salary plus return of member's accumulated contributions.
20-Year Plan for Sanitation Employees	6 months earnable salary plus return of member’s accumulated contributions.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 1 BENEFITS

ACCIDENTAL DEATH BENEFIT:

Eligibility: No age or service requirement. Presumptive WTC maladies for eligible members.

Allowance: 50% of Final Compensation plus lump sum equal to balance in Annuity Savings and ITHP funds less 100% Workers Compensation. Pension only payable to certain relatives (spouse, minor children, dependent parents). For members of the special 25-Year Plans, return of additional member contributions with interest if more than 15 years of credited service.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 1 BENEFITS

MEMBER CONTRIBUTIONS

Plan	Eligibility
All	Based on Plan and entry age.
Correction Officers	Based on age at entry. Required until eligible for service retirement. ITHP contributions of 2.5%.
25-Year Plan for EMT and Special Officers	Additional contributions: 6.25% for the first 30 years of service (1 year minimum)
25-Year Plan for Fire Alarm Dispatchers	Additional contributions: 6.00% for the first 30 years of service (1 year minimum)
Transit Operating Employees	No contributions are required for Transit 20-year Non-Contributory Plan members. Voluntary member contributions are permitted.
Sanitation Employees	Based on entry age, designed to accumulate to 25/75ths of Final Salary at 20-year retirement date.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 2 BENEFITS

SERVICE RETIREMENT

Plan	Eligibility
C	Age 55 (age 62 for unreduced) and 25 years of service
D	Age 55 (age 62 for unreduced) and 5 years of service.
55/25 Plan	Age 55 (age 50 for physically taxing) and 25 years of credited service.
25-Year Plans for EMT, Fire Alarm Dispatchers, Special Officers, Deputy Sheriffs, DA Investigators, and 911 Operators	25 years of credited service
25-Year Plan for Auto Mechanics	25 years of allowable service
20-Year Plan for DA Investigators	20 years of allowable service
Correction Officers	20 years of allowable service
Modified Transit 20-Year Plan	Age 55 with 25 years of Transit Service. Age 50 and 20 years for reduced retirement.
Modified One Percent Transit Plan	Age 62 (age 55 for unreduced)
20-Year Age 50 TBTA Plan	Age 50 and 20 years of Allowable Service
Modified 20-Year Plan for Sanitation Employees	25 (20 for reduced) years of Allowable Sanitation Service.
20-Year Plan for Sanitation Employees	20 years of Allowable Sanitation Service

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 2 BENEFITS

Plan	Allowance
C	First 25 years of service: 55% of FAS plus; For all years other than the first 25: 1.2% of FAS for years prior to 7/1/68 plus 1.7% of FAS for years after 6/30/68 plus; Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts, as computed in Tier 1. Reduction before age 62: 6% for first 2 years, 3% for next 5 years.
D	1.2% of FAS for service prior to 7/1/68 plus; 1.53% of FAS for service after 6/30/68 plus; Annuity based on Annuity Savings Fund and ITHP fund. Reduction before age 62: 6% for first 2 years, 3% for next 5 years.
55/25 Plan	Same benefits as Plan C, except no reduction before age 62. 50% AMC refund if retire after 62.
25-Year Plans for EMT, Fire Alarm Dispatchers, Special Officers, Auto Mechanics, and 911 Operators	2% of FAS for credited service up to 30 years. Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts, as computed in Tier 1.
25-Year Plans for DA Investigators and Deputy Sheriffs	2.2% of FAS for credited service up to 25 years, plus 1.7% of FAS for credited service after 25 years not more than 7 years. Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts, as computed in Tier 1.
20-Year Plan for DA Investigators	2.5% of Final Salary for credited service up to 20 years plus; 1/60 of Average Compensation plus; For each year of Non-DAI service after 10/1/51: 75% of 1/60 of Final Compensation. Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts, as computed in Tier 1.
Correction Officers	2.5% of FAS for allowable Correction service up to 20 years plus; 1/60 of Average Compensation for allowable Correction service greater than 20 years (30 year benefit limit) plus; Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts, as computed in Tier 1.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION
TIER 2 BENEFITS

Plan	Allowance
Modified Transit 20-Year Plan	50% of FAS plus; 1.5% of Final Compensation for each year of Transit service over 20 after 7/1/68 plus; 1% of Final Compensation for all other service plus; For members entering Transit with ITHP and employee contributions: annuitized net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts. Reduced benefit: 2% of FAS for each year of credited service.
Modified One Percent Transit Plan	1% of Final Compensation for each year of credited service plus an annuity based on employee contributions and ITHP, if any.
20-Year Age 50 TBTA Plan	50% of FAS plus; 1.5% of Final Compensation for each year over 20 to a maximum of 30 years.
Modified 20-Year Plan for Sanitation Employees	50% of FAS plus; 1.5% of Final Compensation for each year of Sanitation service over 20 after 7/2/65 plus; 1.0% of Final Compensation for each year of Sanitation service over 20 before 7/2/65 plus; Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts, as computed in Tier 1.
20-Year Plan for Sanitation Employees	50% of FAS plus; 1.5% of Final Compensation for each year of Sanitation service over 20 after 7/2/65 plus; 1.0% of Final Compensation for each year of Sanitation service over 20 before 7/2/65 plus; Plus, the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement over required amounts, as computed in Tier 1. Benefit limited to 30 years.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 2 BENEFITS

VESTING

Eligibility: 5 years of credited service.
15 years of credited service for 25-Year Plan for DA Investigators.
20 years of credited service for Transit Operating Employees.

Plan	Allowance
C	Benefit calculated under service retirement Plan D, payable at age 55. If age 55 with over 20 years but less than 25 years of service: 2.2% of FAS for each year of service. Deferred to projected 25 years of service date and reduced if commencing before age 62.
Others	Benefit calculated under service retirement Plan D, payable at age 55. Vested members with less than 15 years of service: Can withdraw accumulated contributions and half of additional member contributions for the optional 55/25 Plan with interest instead of receiving a vested benefit. EMTs, Special Officers, and Dispatchers can withdraw AMC and still get full vested benefit (no deficit.). 55/25 Plan: no AMC withdrawal permitted and no refund of ½ AMC even if defer payment to age 62.
DA Investigators	Same as Tier 1 except FAS replaces Final Salary
Correction Officers	Same as Tier 1 except FAS replaces Final Salary
Transit Operating Employees	2% of FAS for each year of service. The 2% formula is payable at age 50 if a members has at least 20 years of service but is not eligible for immediate service retirement benefits based on having both attained age 55 and having 25 years of service.
Modified 20-Year Plan for Sanitation Employees	2% of FAS for Allowable Sanitation Service. Vested members with less than 15 years of service can withdraw accumulated contributions instead of receiving a vested benefit.
20-Year Plan for Sanitation Employees	2.5% of FAS for Allowable Sanitation Service plus; 1% of Final Compensation for other service, payable when member would have completed 20 years of service. Vested members with less than 15 years of service can withdraw accumulated contributions instead of receiving a vested benefit.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION
TIER 2 BENEFITS

ORDINARY DISABILITY RETIREMENT

Eligibility: 10 years of credited service.
5 years of credited service for Sanitation Employees.

Plan	Allowance
Others	1.2% of FAS for each year of credited service before 7/1/68, plus 1.53% of FAS for each year of credited service after 6/30/68, plus annuity based on Annuity Savings Fund plus ITHP fund. If eligible for unreduced immediate commencement of service retirement benefit, either above ordinary disability or service retirement benefit. Members of 55/25 and 50/20 Plans also receive refund of 50% of accumulated additional member contributions. Members of special 25-Year Plans with less than 15 years of credited service (5 years for Auto Mechanics, Deputy Sheriffs and 911 Operators) also receive refund of accumulated additional member contributions.
Correction Officers	Same as Tier 1. If age 55 with 25 years of service, use Tier 2 service retirement formula. Plus the annuitized value of the net excess (deficit) of accumulated employee contributions and ITHP at retirement. If eligible for unreduced immediate commencement of service retirement benefit, either above ordinary disability or service retirement benefit.
Sanitation Employees	If less than 10 years of service: 1/3 of FAS If more than 10 and less than 20 years of service: 1/2 of FAS increased (decreased) by any excess (deficiency) of member contributions. If more than 20 years of service: same as service retirement benefit including the annuity of contributions after 20 years. If eligible for immediate commencement of service retirement benefit, either above ordinary disability or service retirement benefit.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 2 BENEFITS

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: No age or service requirement. Presumptive eligibility for maladies in connection with the World Trade Center attack for eligible members. EMT presumptive for HIV, TB, et. al. Correction Officers presumptive for HIV, TB or Hepatitis, and heart disease.

Plan	Allowance
Others	75% of Final Compensation, plus annuity based on Annuity Savings Fund and pension based on ITHP fund minus workers' comp. If eligible for immediate commencement of service retirement benefit, either above accidental disability or service retirement benefit. Accidental disability retirement benefit for members of 55/25 Plan is not compared to the service retirement benefit after eligible for immediate commencement of service retirement. Members of 55/25 and 50/20 Plans also receive refund of 50% of accumulated additional member contributions. Members of Special Officer 25-Year Plans with less than 15 years of credited service (5 years for Auto Mechanics and Deputy Sheriffs) also receive refund of accumulated additional member contributions.
Correction Officers	75% of FAS plus; 1/60 of salary for years of service greater than 20 years plus; Annuity based on member's accumulated contributions plus; Pension based on actuarial value of ITHP reserve minus; 100% of Worker's Compensation.
Sanitation Employees	75% of FAS, plus annuity based on Annuity Savings Fund and pension based on ITHP fund minus workers' comp plus; If more than 20 years of service: 1% of Average Compensation for years in excess of 20 plus 0.5% of Average Compensation for years in excess of 20 after 7/1/67. If eligible for immediate commencement of service retirement benefit, either above accidental disability or service retirement benefit.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 2 BENEFITS

ORDINARY DEATH BENEFIT:

Eligibility: No age or service requirement. 90 days of service for Correction Officers, Transit Operating Employees, and Sanitation Employees. Vested with 10 years of service for death benefit after termination and before retirement benefit commences.

Plan	Allowance
Others	Greater of 1 and 2: 1. 1 year of salary for each year of service (max 3 years) plus accumulated deductions. If eligible for unreduced retirement: Greater of above or reserve for service retirement benefit which would have been payable if retired day before death. 2. 1 year of salary for each year of service (max 3 years) plus accumulated deductions; reduced by 5% per year after age 60 but not less than 50% of benefit at age 60. Post-retirement benefit: First year: 50% of pre-retirement benefit Second year: 25% of pre-retirement benefit Third & after: 10% of age 60 pre-retirement benefit amount. Minimum of 10% of age 60 amount.
Correction Officers, Transit Operating Employees, and Sanitation Employees	Three years of salary plus return of member's accumulated contributions.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 2 BENEFITS

Benefits for death after termination before retirement benefit commences:

Plan	Allowance
Others	One-half of ordinary death benefit in active service plus return of member's regular accumulated contributions. 50% of additional member contributions for the 55/25 Plan with interest. For members of the special 25-Year Plans for Dispatchers, EMTs, and Special Officers, return of additional member contributions with interest if less than 15 years of credited service.
Correction Officers	1.5 years of salary plus return of member's accumulated contributions.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 2 BENEFITS

ACCIDENTAL DEATH BENEFIT:

Eligibility: No age or service requirement. Presumptive WTC maladies for eligible members.

Allowance: 50% of Final Compensation plus lump sum equal to balance in Annuity Savings and ITHP funds less 100% Workers Compensation. Pension only payable to certain relatives (spouse, minor children, dependent parents). For members of the special 25-Year Plans for Dispatchers, EMTs, and Special Offers, return of additional member contributions with interest if more than 15 years of credited service. Return of 50% of additional member contributions with interest for members of the 55/25 and 50/20 Plans.

NYCERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Tier 2 Benefits

Member Contributions

Plan	Eligibility
All	Based on Plan and entry age
55/25 Plan	Additional contributions (first 25 years of service): Before 1/1/98: 4.35% From 1/1/98 to 11/1/2001: 2.85% From 11/21/2001: 1.85% Plus additional 1.98% for members in physically taxing positions.
25-Year Plan for EMT and Special Officers	Additional contributions: 6.25% for the first 30 years of service (1 year minimum)
25-Year Plan for Fire Alarm Dispatchers and 911 Operators	Additional contributions: 6.00% for the first 30 years of service (1 year minimum)
25-Year Plan for Auto Mechanics	Additional contributions: 4.83% for the first 30 years of service (1 year minimum)
25-Year Plan for Deputy Sheriffs	Additional contributions: 6.75% for the first 30 years of service (1 year minimum)
Transit Operating Employees	No contributions are required for Modified Transit 20-Yr (Non-Contributory) Plan members. Voluntary member contributions are permitted.
Correction Officers	Based on age at entry. Required until eligible for service retirement. ITHP contributions of 2.5%.
20-Year Correction Officers Plans	Additional contributions (first 20 years of service): 6.37% If became rank of Captain or above before 11/1/92, 5.56% If became rank of Captain or above after 11/1/92, 7.46%
TBTA 50/20 Plan	Additional contributions: 5.5% for Bridge & Tunnel Officers and 6% for Bridge & Tunnel Sergeants and Lieutenants. These contributions are required for the first 20 years of credited service.
20-Year Plan for Sanitation Employees	Additional contributions: 5.35% for the first 20 years of service

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 3 BENEFITS

SERVICE RETIREMENT

Plan	Eligibility
Others	Age 55 (age 62 for unreduced)
25-Year Plan for Correction Officers	25 years of service
20-Year Plan for Correction Officers	20 years of service

Plan	Allowance
Others	1.67% of FAS if less than 20 years of service. 2% of FAS if more than 20 years of service up to 30 years. Reduced by 50% of Social Security Benefit after age 62. Reduction before age 62 is 6-2/3% for first 2 years below 62 and by 3-1/3% for next 5 years below 60. Escalation on 4/1 up to 3% per year applies if retired at age 65 or greater and on a reduced basis (1/36 per month) for service retirement in years between ages 62 and 65. No escalation if service retirement is before age 62. Also, COLA applies, if eligible and greater.
25-Year Plan for Correction Officers	50% of FAS Escalation up to 3% per year if retired at or above age 65; proportional for retirement between ages 62 and 65. Alternatively, COLA applies, if greater & eligible.
20-Year Plan for Correction Officers	50% of FAS for first 20 years of service plus; 1.67% of FAS for service over 20 years (up to 30 years).

NYCERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Tier 3 Benefits

Vesting

Eligibility: 5 years of credited service.

Plan	Allowance
Others	Service retirement benefit payable in full at age 62 or on a reduced basis (1/15 per year for ages 60 through 62 and then by 1/30 per year between age 55 and 62). Escalation up to 3% reduced by 1/36 per month if retirement commences between ages 62 and 65. No escalation if benefits commence before age 62. Also, COLA applies, if eligible and greater. Vested members with less than 10 years of service can withdraw accumulated contributions and 50% of 55/25 and Age 57 Plan additional member contributions with interest instead of receiving a vested benefit.
25-Year Plan for Correction Officers	Same as service retirement.
20-Year Plan for Correction Officers	2.5% of FAS for each year of service. Payable on date member would have accrued 20 years of credited service. Not payable if AMC deficit.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 3 BENEFITS

ORDINARY DISABILITY RETIREMENT

Eligibility: 5 years of credited service and deemed disabled by the Social Security Administration.

Plan	Allowance
Others	The greater of 2% of FAS for credited service and 1/3 of FAS. Reduced by 50% of Social Security Benefit and 100% of Workers' Compensation. Escalation on 4/1 up to 3% per year from disability retirement date. Also, COLA applies, if eligible and greater. If eligible for service retirement: choice of either above ordinary disability or service retirement benefit. Alternatively, Tier 4 benefit if greater and eligible.
Correction Officers	If less than 10 years of service (RSSL 506.b): Greater of 1/3 of FAS and 2% of FAS for credited service (maximum of 30 years). Reduced by 100% of Workers' Compensation. If more than 10 years of service (RSSL 507-a.d), greater of: 1. 1/3 of FAS 2. 1/60 of FAS for credited service 3. Service retirement benefit, if eligible. Escalation is up to 3%/yr. on 4/1 from date of disability retirement. Alternatively, COLA applies, if greater & eligible. Use service retirement rules, if retire for service. AMC refund, if less than 15 years of service. No benefit reduction due to AMC refund.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 3 BENEFITS

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: No age or service requirement. Presumptive eligibility for maladies in connection with the World Trade Center attack for eligible members. Correction Officers presumptive for HIV, TB or Hepatitis, and heart disease.

Plan	Allowance
Others	60% of FAS, reduced by 50% of Social Security Benefit and 100% of Workers' Compensation. Escalation on 4/1 up to 3% per year from disability retirement date. Also, COLA applies, if eligible and greater.
Correction Officers	Greater of (1, 2, and 3 eligible for escalation): 1. 60% of FAS (requires Social Security eligibility) 2. 1/60 of FAS for credited service (min 1/3 of FAS) 3. Service retirement benefit, if eligible. 4. If applicable, 75% of FAS with no escalation, (however, COLA applies for Presumptive Disability for injury due to attack by inmate – HIV if associated with inmate fluid exchange, TB, hepatitis, and WTC-related maladies). Escalation is up to 3% per year. Alternatively, COLA applies, if eligible and greater. AMC refund if less than 15 years of service. No benefit reduction due to AMC refund.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 3 BENEFITS

ORDINARY DEATH BENEFIT:

Eligibility: No age or service requirement. 90 days of service for Correction Officers, Transit Operating Employees, and Sanitation Employees. Vested with 10 years of service for death benefit after termination and before retirement benefit commences.

Plan	Allowance
Others	Same as Tier 2. Benefit reduced by 5% per year starting at age 60, but not less than 50% of benefit. Alternative elective spouse benefit if vested: 1/3 of lump sum death benefit plus annuity of 1% of FAS for each year of credited service (reduced if spouse is 10 years younger than member).
Correction Officers, Transit Operating Employees, and Sanitation Employees	Three years of salary plus return of member's accumulated contributions. Benefit reduced by 5% per year starting at age 60, but not less than 50% of benefit. Alternative elective spouse benefit if vested: 1/3 of lump sum death benefit plus annuity of 1% of FAS for each year of credited service (reduced if spouse is 10 years younger than member).

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 3 BENEFITS

Benefits for death after termination before retirement benefit commences:

Plan	Allowance
Others	One-half of ordinary death benefit in active service plus return of member's regular accumulated contributions. 50% of additional member contributions with interest for the 55/25 and Age 47 Plans. For members of the special 25 Year and 50/20 Plans, return of additional member contributions. Annuities: 3% escalation from date of death but no COLA.
Correction Officers	1.5 years of salary plus return of member's accumulated contributions or 50% of Alternative Death Benefit, AMC is also refunded.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 3 BENEFITS

ACCIDENTAL DEATH BENEFIT:

Eligibility: No age or service requirement. Presumptive WTC maladies for eligible members.

Allowance: 50% of FAS (minimum is amount of ordinary death benefit) plus refund of additional member contributions. Pension only payable to certain relatives (spouse, minor children, dependent parents). Escalation up to 3% per year from date of eligibility for accidental death benefit. Also, COLA applies, if eligible and greater.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 3 BENEFITS

MEMBER CONTRIBUTIONS

Plan	Eligibility
All	3% of compensation accumulated at 5% interest; Contributions are eliminated after 10 (30 for Transit) years of membership or credited service.
20-Year Plan for Correction Officers	Additional contributions (first 20 years of service): 4.61% Rank of Captain or above: 5.11% Member of closed plan before 7/1/88: 5.11% Member of closed plan after 7/1/88: 3.61%

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 4 BENEFITS

SERVICE RETIREMENT

Plan	Eligibility
62/5 Plan	Age 55 (age 62 for unreduced) and 5 years of service.
55/25 Plan	Age 55 (age 50 for physically taxing) and 25 years of service
Age 57 Plan	Age 57 and 5 years of service
25-Year Plan for EMT, Fire Alarm Dispatchers, Special Officers, Deputy Sheriffs and 911 Operators	25 years of credited service
25-Year Plan for Auto Mechanics	Age 50 with 25 years of credited service
Transit 25/55 Plan	Age 55 and 25 years of Allowable service
TBTA 50/20 Plan	Age 50 and 20 years of credited service
Sanitation 20-Year Plan	20 years of allowable Sanitation service
Sanitation 30-Year Plan	Age 55 and 30 years of credited service

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 4 BENEFITS

Plan	Allowance
Others	1.67% of FAS if less than 20 years of service. 2% of FAS if more than 20 years of service up to 30 years and 1.5% of FAS for service more than 30 years. Reduction before age 62 is 6% from ages 60-62, and 3% from ages 55-60. Members of 55/25 and Age 57 Plans who retire after age 62 also receive refund of 50% of accumulated additional member contributions. Physically taxing members of 55/25 and Age 57 Plans who retire after age 55 (after age 57 for Age 57 Plan) with 25 years of service also receive refund of 50% of accumulated with additional 1.98% physically taxing member contributions.
25-Year Plans for EMT, Fire Alarm Dispatchers, Special Officers, Auto Mechanics, and 911 Operators	2% of FAS for credited service up to 30 years.
25-Year Plans for Deputy Sheriffs	2.2% of FAS for credited service up to 25 years, plus 1.7% of FAS for credited service after 25 years not more than 7 years.
TBTA 50/20 Plan	50% of FAS for first 20 years of service plus' 1.5% of FAS for each year of service over 20 years (up to 30 years)
20-Year Plan for Sanitation Employees	50% of FAS for first 20 years of Sanitation service plus; 1.5% of FAS for years over 20 (up to 30 years) plus; 1% of Final Compensation for each year of non-Sanitation service. Benefit limited to 30 years.
30-Year Plan for Sanitation Employees	2% of FAS for each year of service up to 30 years and 1.5% of FAS for service more than 30 years.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION
TIER 4 BENEFITS

VESTING

Eligibility: 5 years of credited service.

Plan	Allowance
Others	Service retirement benefit payable upon reaching service retirement conditions. Instead of receiving a vested benefit, vested members with less than 10 years of service can withdraw accumulated contributions. Age 57 Plan members can withdraw 50% of additional member contributions with interest. Vested members of special 25-Year Plans and TBTA 50/20 Plan with less than 15 years of service can receive refund of additional member contributions with interest. Vested members of the Transit 25/55 Plan with less than 25 years of service can withdraw accumulated AMC.
20-Year Plan for Sanitation Employees	2.5% of FAS for each year of Allowable Uniformed Sanitation Service plus; 1.0% of Final Compensation for other credited service, payable when member would have completed 20 years of service. Benefit not less than the member's annuitized accumulated contributions.
30-Year Plan for Sanitation Employees	See "Others" allowance. Benefit payable at age 62.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 4 BENEFITS

ORDINARY DISABILITY RETIREMENT

Eligibility: 10 years of credited service.

Plan	Allowance
Others	The greater of 1.67% of FAS for credited service and 1/3 of FAS. If eligible for service retirement, member has the choice of either above ordinary disability or service retirement benefit. Regular Tier 4 service retirement benefit reduced by early retirement factors if member becomes disabled after age 55 with at least 5 years of service but not more than 10 years. Members of 55/25 and Age 57 Plans also receive refund of 50% of accumulated additional member contributions. Members of special 25-Year Plans, 20-Year Sanitation Plan, and TBTA 50/20 Plan with less than 15 years of credited service (5 years for Auto Mechanics, Deputy Sheriffs and 911 Operators) also receive refund of accumulated additional member contributions. Vested members of the Transit 25/55 Plan with less than 25 years of service receive refund of accumulated AMC.

NYCERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Tier 4 Benefits

Accidental Disability Retirement

Eligibility: No age or service requirement. Presumptive eligibility for maladies in connection with the World Trade Center attack for eligible members. EMTs and Correction Officers presumptive for HIV, TB or Hepatitis, and heart disease.

Plan	Allowance
Others	Same as ordinary disability.
25-Year Plans for EMTs and Fire Alarm Dispatchers	75% of FAS but not less than service retirement benefit, if eligible.
25-Year Plan for Deputy Sheriffs	75% of Final Compensation but not less than service retirement benefit, if eligible.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 4 BENEFITS

ORDINARY DEATH BENEFIT:

Eligibility: No age or service requirement. 90 days of service for Transit Operating Employees and Sanitation Employees. Vested with 10 years of service for death benefit after termination and before retirement benefit commences.

Plan	Allowance
Others	Same as Tier 2. Beneficiaries of members of 55/25 and Age 57 Plans also receive refund of 50% of accumulated additional member contributions. Beneficiaries of members of special 25-Year Plans, 20-Year Sanitation Plan, and the TBTA 50/20 Plan also receive refund of accumulated additional member contributions. Members of the Transit 25/55 Plan with less than 25 years of service receive refund of accumulated AMC. Alternative elective spouse benefit if vested: Alternate Death Benefit for pre 7/26/86 members: Lump sum or annuity based on 1/12 of last 12 months' earnings for each year of service (maximum 36 years) or accumulated member contributions if greater. See also Tier 3 alternative if a member before 9/1/83.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 4 BENEFITS

Benefits for death after termination before retirement benefit commences:

Plan	Allowance
Others	One-half of ordinary death benefit in active service plus return of member's regular accumulated contributions. 50% of additional member contributions with interest for the 55/25 and Age 57 Plans. For members of the special 25-Year Plans and the TBTA 50/20 Plan, return of additional member contributions if less than 15 years of service. For members of the 20-Year Sanitation Plan, return of additional member contributions.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 4 BENEFITS

ACCIDENTAL DEATH BENEFIT:

Eligibility: No age or service requirement. Presumptive WTC maladies for eligible members.

Allowance: 50% of last year's earnings (minimum benefit is ordinary death benefit amount). Pension only payable to certain relatives (spouse, minor children, dependent parents). Beneficiaries of members of 55/25 and Age 57 Plans also receive refund of 50% of accumulated additional member contributions. Beneficiaries of members of special 25-Year Plans and the TBTA 50/20 Plan also receive refund of accumulated additional member contributions if less than 15 years of service (less than 5 year. for Mechanics and 911 Operators). Members of the Transit 25/55 Plan with less than 25 years of service and the 20-Year Sanitation Plan receive refund of accumulated AMC.

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER 4 BENEFITS

MEMBER CONTRIBUTIONS

Plan	Eligibility
All	3% of compensation accumulated at 5% interest; Contributions are eliminated after 10 years (no limit for Transit) of membership or credited service.
55/25 Plan Age 57 Plan	Additional contributions (first 30 years of service): Before 1/1/98: 4.35% From 1/1/98 to 11/1/2001: 2.85% From 11/21/2001: 1.85% Plus additional 1.98% for members in physically taxing positions.
25-Year Plan for EMT and Special Officers	Additional contributions: 6.25% for the first 30 years of service (1 year minimum)
25-Year Plan for Fire Alarm Dispatchers and 911 Operators	Additional contributions: 6.00% for the first 30 years of service (1 year minimum)
25-Year Plan for Auto Mechanics	Additional contributions: 4.83% for the first 30 years of service (1 year minimum)
25-Year Plan for Deputy Sheriffs	Additional contributions: 6.75% for the first 30 years of service (1 year minimum)
Transit 25/55 Plan	Additional contributions: 2.3% for the first 30 years of service
TBTA 50/20 Plan	Additional contributions: 5.5% for Bridge & Tunnel Officers and 6% for Bridge & Tunnel Sergeants and Lieutenants. These contributions are required for the first 20 years of credited service.
Sanitation 20-Year Plan	Additional contributions: 5.35% for the first 20 years of service

NYCERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION COST-OF-LIVING ADJUSTMENT (COLA) ALL TIERS

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Line of duty spouses and children who have been receiving benefits for 5 years
- Surviving spouses of retirees who elected a joint and survivor option

COLA:

50% of the rate of increase in CPI-U based on the year ending March 31st, rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of the annual pension. Surviving spouses of retirees who elect a joint and survivor option receive ½ the increase the retiree would have received.

NYCERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Correction Officers' Variable Supplements Fund (COVSF)

Eligibility: Service retirement on or after July 1, 1999 as Uniformed Corrections member with at least 20 or 25 (by Plan) years of service.

Allowance: First payment of $8,500 made in Calendar Year 2000, increasing by $500 per year of retirement until benefit reaches maximum of $12,000 in Calendar Year 2007 and thereafter. Benefit is reduced by COLA until the later of: January 1, 2007 or attainment of age 62.

Prior to Calendar Year 2019, VSF payment subject to Actuary letter stating assets sufficient. COVSF payments were made in Calendar Year 2000 through Calendar Year 2005 - after such year COVSF assets have been insufficient.

All payments after Calendar Year 2018 are payable regardless of COVSF assets and, as necessary, NYCERS will transfer appropriate amount to insure payments are made. Prior to Calendar Year 2019, payments can become guaranteed, if certified by the Actuary or if legislation is enacted.

Based on valuation estimates of possible future SKIM from NYCERS to the Fund, VSF payments may not resume until Calendar Year 2019.

Life annuity payable on or about December 15th of each year in a lump sum. In year of retirement and death, a proportional benefit is paid.

TRS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Members Hired Prior to July 1, 1973 - Tier I Benefits

Participation

Tier I participants include all employees who first became members prior to July 1, 1973.

Final Average Salary (FAS)

If served at least three years in position retiring from, Final Average Salary (FAS) would be actual gross salary earnable during the twelve (12) months preceding the date of retirement.

If served less than three years in position retiring from, FAS would be the annual earnable salary during the last years of the most recent position held for at least three years.

If greater, FAS will equal the average annual salary earnable during any five consecutive years of Total Service Credit.

Credited Service

Members are credited with one year and one month of service for each year of service for the first 24 years of service. After 24 years, members are credited with one year of service for each year of actual service.

Normal Form of Retirement Income

Life Annuity

Contributions

Required Employee Contributions. Members contribute a percentage of earnings (based on age, years of service and actuarial tables in effect at appointment) for the first 20 years of service. After 20 years, contributions continue unless the member requests to discontinue. Contributions earn 8.25% per year. The ***minimum required contribution*** is determined on the member's 20th anniversary.

Increased-Take-Home-Pay (ITHP) Contributions. Portion of employee contributions paid by the City of New York currently equal to 2.5%.

TRS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Members Hired Prior to July 1, 1973 - Tier I Benefits

Loans

Eligibility: 3 years of service

Amount: Up to 75% of member's Annuity Savings Fund (ASF) or $50,000, whichever is less.

Service Retirement

Eligibility:

Plan A: Attainment of age 55 and completion of 25 years of credited service

Plan B: Attainment of age 55

Allowance:

Plan A:

Sum of 1) through 4)

1) 50% of final average salary
2) For each additional year over 20 years of service 1.2% times FAS times service rendered before 7/1/1970 and 1.7% times FAS times service rendered on or after 7/1/1970
3) An annuity based on ITHP contributions and interest after 20 years
4) An annuity based on excess or deficient contributions and interest in the ASF account

Plan B:

Sum of 1) through 3)

1) 1.2% times FAS times credited service rendered prior to 7/1/1970 and 1.53% times FAS times credited service rendered on or after 7/1/1970
2) An annuity based on ITHP contributions and interest
3) An annuity based on excess or deficient contributions and interest in the ASF account

Early Retirement

Eligibility:

Plan A: Completion of 30 years of credited service

Plan B: N/A

TRS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Members Hired Prior to July 1, 1973 - Tier I Benefits

Allowance:

Computed the same as set forth under Normal Retirement, based upon FAS as of early retirement date and reduced for commencement prior to Normal Retirement Date.

VESTING

Eligibility:

Plan A: 20 years of service, benefit commences at the later of the date the member would have completed 25 years of service or age 55

Plan B: 5 years of service, benefit commences at age 55

Allowance:

Computed the same as set forth under Normal Retirement, based upon FAS as of termination date.

ORDINARY DISABILITY RETIREMENT

Eligibility: 10 years of service

Allowance:

Sum of 1) through 3)

1) 1.2% times FAS times credited service rendered prior to 7/1/1970 and 1.53% times FAS times credited service rendered on or after 7/1/1970
2) An annuity based on ITHP contributions and interest
3) An annuity based on excess or deficient contributions and interest in the ASF account

Alternative benefit - 20% of the average of the final five years of earnable salary immediately preceding disability plus 0.2% times final five year average times credited service in excess of ten (10) years.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED PRIOR TO JULY 1, 1973 - TIER I BENEFITS

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: Must be found by the TRS Medical Board to be physically or mentally unable to perform regular job duties as result of an accidental injury received in the performance of duties.

Allowance:

Sum of 1) through 3)

1) 75% of the average of the final five years of earnable salary immediately preceding retirement
2) An annuity based on ITHP contributions and interest
3) An annuity based on the accumulated balance in the ASF account

The above are subject to reduction upon benefits received under Worker's Compensation Act.

ORDINARY DEATH BENEFIT

Eligibility: No age or service requirement.

Allowance:

If less than 10 years of service: 50% of earnable salary in the year immediately preceding death

If 10 but less than 20 years of service: 100% of earnable salary in the year immediately preceding death

If 20 or more years of service: 200% of earnable salary in the year immediately preceding death

In addition to the benefit above, each beneficiary will receive a lump sum equal to the accumulated member contributions and ITHP with interest.

TRS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Members Hired Prior to July 1, 1973 - Tier I Benefits

Accidental Death Benefit (line-of-duty)

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 50% of average final five years of compensation paid to surviving spouse, or other eligible dependents
2) Lump sum equal to ITHP reserve account balance
3) Lump sum equal to accumulated balance in the ASF account
4) Special Accidental Death Benefit (paid by the State) equal to the member's final year's salary, less the amount of pension calculated in (1) and Social Security benefits

Cost of Living Adjustment (COLA)

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Accidental death benefit beneficiaries who have been receiving benefits for five years

Amount:

50% of the rate of increase in CPI based upon the 12 months ending March 31st, rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of the annual pension. If a retiree dies and has chosen an optional form of payment which provides for benefits to be continued to the spouse, for life, one half of the COLA amount is paid to such spouse.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 27, 1976 TIER II BENEFITS

PARTICIPATION

Tier II participants include all employees who first became members on or after July 1, 1973 but prior to July 27, 1976.

FINAL AVERAGE SALARY (FAS)

The greatest average three consecutive years' pensionable compensation, where each year's salary cannot exceed 120% of the average of the two previous years.

CREDITED SERVICE

Members are credited with one year and one month of service for each year of service for the first 24 years of service. After 24 years, members are credited with one year of service for each year of actual service.

NORMAL FORM OF RETIREMENT INCOME

Life Annuity

CONTRIBUTIONS

Required Employee Contributions. Members contribute a percentage of earnings (based on age, years of service and actuarial tables in effect at appointment) for the first 20 years of service. After 20 years, contributions continue unless the member requests to discontinue. Contributions earn 8.25% per year. The ***minimum required contribution*** is determined on the member's 20^{th} anniversary.

Increased-Take-Home-Pay (ITHP) Contributions. Portion of employee contributions paid by the City of New York currently equal to 2.5%.

TRS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Members Hired After July 1, 1973 But Before July 27, 1976 Tier II Benefits

Loans

Eligibility: 3 years of service

Amount: Up to 75% of member's Annuity Savings Fund (ASF) or $50,000, whichever is less.

Service Retirement

Eligibility:

Plan C: Attainment of age 62 and completion of 25 years of credited service or attainment of age 55 and completion of 30 years of credited service

Plan D: Attainment of age 62 and completion of 5 years of credited service

Allowance:

Plan C:

Sum of 1) through 3)

1) 2.0% of FAS times the number of years of credited service for the first 20 years plus 1.7% of FAS times the number of years of credited service in excess of 20 years
2) An annuity based on ITHP contributions and interest
3) An annuity based on excess or deficient contributions and interest in the ASF account

Plan D:

Sum of 1) through 3)

1) 1.2% times FAS times service rendered before 7/1/1970 and 1.53% times FAS times service rendered on or after 7/1/1970
2) An annuity based on ITHP contributions and interest
3) An annuity based on excess or deficient contributions and interest in the ASF account

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 27, 1976 TIER II BENEFITS

EARLY RETIREMENT

Eligibility:

Plan C: Attainment of age 55 and completion of 25 years of credited service

Plan D: Attainment of age 55 and completion of 5 years of credited service

Allowance:

Computed the same as set forth under Normal Retirement, based upon FAS as of early retirement date and reduced for commencement prior to Normal Retirement Date.

VESTING

Eligibility:

Plan C: Attainment of age 62 and 20 years of service, benefit commences on the date the member would have completed 25 years of service. Attainment of age 55 and 20 years of service, reduced benefit commences on the date the member would have completed 25 years of service.

Plan D: 5 years of service, benefit commences at age 55. Payments reduced if less than 30 years of
service

Allowance:

Plan C:

Computed the same as set forth under Normal Retirement, based upon FAS and service as of termination date. The benefit is reduced for commencement prior to age 62.

Plan D:

Computed the same as set forth under Normal Retirement, based upon FAS and service as of termination date. The benefit is reduced for commencement prior to age 62.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 27, 1976 TIER II BENEFITS

ORDINARY DISABILITY RETIREMENT

Eligibility: 10 years of service

Allowance:

Sum of 1) through 3)

1) 1.2% times FAS times credited service rendered prior to 7/1/1970 plus 1.53% times FAS times credited service rendered on or after 7/1/1970
2) An annuity based on ITHP contributions and interest
3) An annuity based on excess or deficient contributions and interest in the ASF account

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: Must be found by the TRS Medical Board to be physically or mentally unable to perform regular job duties as result of an accidental injury received in the performance of duties.

Allowance:

Sum of 1) through 3)

1) 75% of the average of the final five years of earnable salary immediately preceding retirement
2) An annuity based on ITHP contributions and interest
3) An annuity based on the accumulated balance in the ASF account

The above are subject to reduction upon benefits received under Worker's Compensation Act.

ORDINARY DEATH BENEFIT

Eligibility: One year of service

Allowance: The accumulated balance in the ASF account plus the greater of Death Benefit #1 and Death Benefit #2.

Death Benefit #1: The amount of the benefit is 1/12th of the member's last 12 months of earnings times service to a maximum of three times the member's annual salary.

Death Benefit #2: The amount of the benefit is one year's salary if the member completed one year of service, two years' salary if the member completed two years of service, and three years'

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 27, 1976 TIER II BENEFITS

salary if the member completed three or more years of service. If the member remains in service to age 61, the in-service death benefit would be reduced by 5% for each succeeding year until age 70, after which time the benefit would equal 50% of the benefit payable at age 60 or under.

ACCIDENTAL DEATH BENEFIT (LINE-OF-DUTY)

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 50% of average final five years of compensation paid to surviving spouse, or other eligible dependents
2) Lump sum equal to ITHP reserve account balance
3) Lump sum equal to accumulated balance in the ASF account
4) Special Accidental Death Benefit (paid by the State) equal to the member's final year's salary, less the amount of pension calculated in (1) and Social Security benefits

COST OF LIVING ADJUSTMENT (COLA)

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Accidental death benefit beneficiaries who have been receiving benefits for five years

Amount:

50% of the rate of increase in CPI based upon the 12 months ending March 31, rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of the annual pension. If a retiree dies and has chosen an optional form of payment which provides for benefits to be continued to the spouse, for life, one half of the COLA amount is paid to such spouse.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 26, 1976 BUT BEFORE SEPTEMBER 1, 1983 - TIER III BENEFITS

PARTICIPATION

Tier III participants include all employees who first became members on or after July 27, 1976 but prior to September 1, 1983.

FINAL AVERAGE SALARY (FAS)

The greatest average three consecutive years' pensionable compensation, where each year's salary cannot exceed 110% of the average of the two previous years.

CREDITED SERVICE

Members are credited with one year of service for each year of actual service.

NORMAL FORM OF RETIREMENT INCOME

Life Annuity

CONTRIBUTIONS

Required Employee Contributions. Members contribute 3.0% of earnings for a maximum of 10 years into a Member Contributions Accumulation Fund (MCAF). Contributions earn 5% per year. Effective February 27, 2008, active members were eligible to enroll in a 55 retirement age minimum and 25 credited years of service retirement option ("55/25 retirement option") enabling them to eliminate any age-reduction factor in their retirement allowance. Those choosing the age 55/25 retirement option are required to make additional contributions of 1.85% of salary from February 28, 2008 until June 29, 2008 or until they have accumulated 25 years of credited service, whichever is later.

Annuity Savings Accumulation Fund (ASAF). The Department of Education makes a Supplemental Contribution to the accounts of certain members who reach the maximum of their salary schedule. An amount of $400 ($550 for supervisors) is deposited annually into a savings account. These contributions are credited with regular and special interest and will provide an additional annuity at retirement or a lump sum.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 26, 1976 BUT BEFORE SEPTEMBER 1, 1983 - TIER III BENEFITS

LOANS

Eligibility: 1 year of service

Amount: Up to 75% of Member's Contribution Accumulation Fund (ASF) and Additional Member Contribution balance or $50,000, whichever is less.

SERVICE RETIREMENT

Eligibility: Attainment of age 62 and completion of 5 years of credited service or attainment of age 55 and completion of 30 years of credited service

Allowance:

If less than 20 years of service: 1 2/3% of FAS times the number of years of credited service for the first 20 years

If 20 or more years of service: 2.0% of FAS times the number of years of credited service for the first 30 years plus 1.5% of FAS times the number of years of credited service in excess of 30 years

In addition, each member will receive an annuity based contributions and interest in the ASAF account

EARLY RETIREMENT

Eligibility: Attainment of age 55 and completion of 5 years of credited service

Allowance: Computed the same as set forth under Normal Retirement, based upon FAS as of early retirement date and reduced for commencement prior to Normal Retirement Date.

VESTING

Eligibility: 5 years of service, benefit commences at age 55

Allowance: Computed the same as set forth under Normal Retirement, based upon FAS and service at termination date and reduced for commencement prior to Normal Retirement Date.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 26, 1976 BUT BEFORE SEPTEMBER 1, 1983 - TIER III BENEFITS

ORDINARY DISABILITY RETIREMENT

Eligibility: 5 years of service and eligible for a Social Security Disability Benefit

Allowance: The greater of 33 1/3% of FAS or 2.0% of FAS times the number of years of credited service (not in excess of 30 years) less 50% of Primary Social Security Disability Benefit and less 100% of Worker's Compensation benefits. In addition, each member will receive an annuity based on excess or deficient contributions and interest in the ASAF account.

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: Must be found by the TRS Medical Board to be physically or mentally unable to perform regular job duties as result of an accidental injury received in the performance of duties.

Allowance: 60% of FAS less 50% of Primary Social Security Disability Benefits and less 100% of Worker's Compensation benefits plus an annuity based on the accumulated balance in the ASAF account an annuity based on contributions and interest in the ASAF account.

ORDINARY DEATH BENEFIT

Eligibility: One year of service

Allowance: The accumulated balances in the MCAF and ASAF accounts plus the greater of Death Benefit #1 and Death Benefit #2.

Death Benefit #1: The amount of the benefit is $1/12^{th}$ of the member's last 12 months of earnings times service to a maximum of three times the member's annual salary.

Death Benefit #2: The amount of the benefit is one year's salary if the member completed one year of service, two years' salary if the member completed two years of service, and three years' salary if the member completed three or more years of service. If the member remains in service to age 61, the in-service death benefit would be reduced by 5% for each succeeding year until age 70, after which time the benefit would equal 50% of the benefit payable at age 60 or under.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 26, 1976 BUT BEFORE SEPTEMBER 1, 1983 - TIER III BENEFITS

ACCIDENTAL DEATH BENEFIT (LINE-OF-DUTY)

Eligibility: No age or service requirement.

Allowance: 50% of average final three years' of compensation paid to surviving spouse, or other eligible dependents

COST OF LIVING ADJUSTMENT (COLA)

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Accidental death benefit beneficiaries who have been receiving benefits for five years

Amount:

50% of the rate of increase in CPI based upon the 12 months ending March 31, rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of the annual pension. If a retiree dies and has chosen an optional form of payment which provides for benefits to be continued to the spouse, for life, one half of the COLA amount is paid to such spouse.

If a member retires and the payability date occurs after the member has reached age 62, but before the member becomes eligible for the COLA described above, the retirement allowance payments would be subject to a cost-of-living increase (or decrease) based on changes in the CPI. The following conditions apply:

- If your payability date occurs after you reach your 65th birthday, your payments would be adjusted by 3% or the change in the CPI, whichever change is smaller. This adjustment is known as the full escalation (or de-escalation) rate. In any case, your benefit would not be reduced below the amount of your initial payment at retirement.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 26, 1976 BUT BEFORE SEPTEMBER 1, 1983 - TIER III BENEFITS

- If your payability date occurs on or after your 62nd birthday, but before your 65th birthday, the full escalation (or de-escalation) rate for your payments would be reduced by 1/36 for each month that your payability date precedes your 65th birthday.
- If you defer commencement of your retirement allowance payments beyond the date you are eligible to receive immediate payments, your benefits would be subject to the full escalation (or de-escalation) rate until the date your payments commence.

Once you become eligible for the COLA, your retirement allowance payments would be increased by the higher of the COLA or the Tier III cost-of-living plan.

TRS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution Members Hired After August 31, 1983 - Tier IV Benefits

Participation

Tier IV participants include all employees who first become members on or after September 1, 1983.

Final Average Salary (FAS)

The greatest average three consecutive years' pensionable compensation, where each year's salary cannot exceed 110% of the average of the two previous years.

Credited Service

Members are credited with one year of service for each year of actual service.

Normal Form of Retirement Income

Life Annuity

Contributions

Required Employee Contributions. Members contribute 3.0% of earnings for a maximum of 10 years into a Member Contributions Accumulation Fund (MCAF). Contributions earn 5% per year. Effective February 27, 2008, active members were eligible to enroll in a 55 retirement age minimum and 25 credited years of service retirement option ("55/25 retirement option") enabling them to eliminate any age-reduction factor in their retirement allowance. Those choosing the age 55/25 retirement option are required to make additional contributions of 1.85% of salary from February 28, 2008 until June 29, 2008 or until they have accumulated 25 years of credited service, whichever is later. Members joining after February 27, 2008, are automatically enrolled in a 55 retirement age minimum and 27 credited years of service retirement program ("55/27 retirement program"). These members are required to make additional plan contributions of 1.85% of salary until they have accumulated 27 years of credited service. Chapter 504 of the Laws of 2009 (Chapter 504/09) provides that individuals joining after December 10, 2009, who participate in the 55/27 retirement program, will be required to make pension contributions of 4.85% of salary until they have 27 years of credited service and contributions of 1.85% of salary thereafter.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER AUGUST 31, 1983 - TIER IV BENEFITS

Annuity Savings Accumulation Fund (ASAF). The Department of Education makes a Supplemental Contribution to the accounts of certain members who reach the maximum of their salary schedule. An amount of $400 ($550 for supervisors) is deposited annually into a savings account. These contributions are credited with regular and special interest and will provide an additional annuity at retirement or a lump sum.

LOANS

Eligibility: 1 year of service

Amount: Up to 75% of Member's Contribution Accumulation Fund (ASF) and Additional Member Contribution balance or $50,000, whichever is less.

NORMAL SERVICE RETIREMENT

Eligibility: Attainment of age 62 and completion of 5 years of credited service or attainment of age 55 and completion of 30 years of credited service

Allowance:

If less than 20 years of service: 1 2/3% of FAS times the number of years of credited service for the first 20 years

If 20 or more years of service: 2.0% of FAS times the number of years of credited service for the first 30 years plus 1.5% of FAS times the number of years of credited service in excess of 30 years

In addition, each member will receive an annuity based on contributions and interest in the ASAF account

EARLY RETIREMENT

Eligibility: Attainment of age 55 and completion of 5 years of credited service

Allowance: Computed the same as set forth under Normal Retirement, based upon FAS as of early retirement date and reduced for commencement prior to Normal Retirement Date.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER AUGUST 31, 1983 - TIER IV BENEFITS

VESTING

Eligibility: 5 years of service, benefit commences at age 55

Allowance: Computed the same as set forth under Normal Retirement, based upon FAS and service at termination date and reduced for commencement prior to Normal Retirement Date.

ORDINARY DISABILITY RETIREMENT

Eligibility: 10 years of service

Allowance: The greater of 33 1/3% of FAS or 1/60th of FAS times the number of years of credited service plus an annuity based on contributions and interest in the ASAF account.

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: Must be found by the TRS Medical Board to be physically or mentally unable to perform regular job duties as result of an accidental injury received in the performance of duties.

Allowance: 2/3 of FAS plus an annuity based on contributions and interest in the ASAF account.

ORDINARY DEATH BENEFIT

Eligibility: One year of service

Allowance: The accumulated balances in the MCAF and ASAF accounts plus the greater of Death Benefit #1 and Death Benefit #2. Members hired after January 1, 2001 will automatically receive Death Benefit #2.

Death Benefit #1: The amount of the benefit is 1/12th of the member’s last 12 months of earnings times service to a maximum of three times the member’s annual salary.

TRS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER AUGUST 31, 1983 - TIER IV BENEFITS

Death Benefit #2: The amount of the benefit is one year's salary if the member completed one year of service, two years' salary if the member completed two years of service, and three years' salary if the member completed three or more years of service. If the member remains in service to age 61, the in-service death benefit would be reduced by 5% for each succeeding year until age 70, after which time the benefit would equal 50% of the benefit payable at age 60 or under.

ACCIDENTAL DEATH BENEFIT (LINE-OF-DUTY)

Eligibility: No age or service requirement.

Allowance: 50% of average final year's compensation paid to surviving spouse, or other eligible dependents

COST OF LIVING ADJUSTMENT (COLA)

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Accidental death benefit beneficiaries who have been receiving benefits for five years

Amount:

50% of the rate of increase in CPI based upon the 12 months ending March 31, rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of the annual pension. If a retiree dies and has chosen an optional form of payment which provides for benefits to be continued to the spouse, for life, one half of the COLA amount is paid to such spouse.

BERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

TIERS

Tier 1 – Member hired before 7/1/73
- **Plan A –** The Career Pension Plan
- **Plan B –** The Increased Service Fraction Plan

Tier 2 – Member hired on or after 7/1/1973 but before 7/26/1976
- **Plan C –** The Modified Career Pension Plan
- **Plan D –** The Modified Increased Service Fraction Plan

Tier 3 – Member hired on or after 7/27/1973 but before 8/31/1983

Tier 4 – Member hired after 8/31/1983 but before 4/1/2012

Tier 6 – Member hired on or after 4/1/2012

TERMS

Final average salary (Tier 1) means regular annual wages without including any additional compensation, such as overtime pay, earned during the final 12 months before retirement or the average regular wages earned during any three consecutive calendar years.

Final Compensation (Tier 1/Tier 2) means average annual salary without including any additional compensation, such as overtime pay, earned during any 5 consecutive calendar years.

Final average salary (Tier 2) means average annual salary without including any additional compensation, such as overtime pay, earned during any 3 consecutive calendar years.

Final average salary (Tier 3/4) means average annual salary including overtime pay, earned during any 3 consecutive calendar years or during the final 36 months before retirement.

BERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution

Contributions

Tier 1 / Tier 2

Required Employee Contributions. Members contribute a Certified Contribution Rate (CCR) as a percentage of earnings based on age at membership start date, plan elected and whether or not the position is physically taxing. Contributions are not mandatory after 25 years of qualifying service. Account balances can be invested in the Fixed Income Fund only, the Variable Annuity Fund or 50% in each fund. The minimum required contribution is determined on the member's 25th anniversary.

Annuity Savings Fund (ASF) Waiver. Member contributions can be reduced by an amount that offsets the portion of FICA taxes attributable to Social Security (6.2%).

Increased-Take-Home-Pay (ITHP). Portion of employee contributions paid by the City of New York currently equal to 2%.

Excess Contributions. Contributions in excess of required contributions. At service retirement or accidental disability, member can take excess contributions as a lump sum or an additional annuity. At ordinary disability, member is required to take a lump sum of excess contributions.

Tax Deferred Annuity. Members may contribute additional contributions to establish a pool of tax-deferred assets. These contributions will provide an additional annuity at retirement or a lump sum.

Tier 3 / Tier 4

Required Employee Contributions. Members contribute 3% of their annual wages accumulated at 5% interest. Contributions cease after 10 years, except for members hired in UFT titles after December 10, 2009, whose contributions cease after 27 years. Regular contributions plus interest earnings are called the Member Contributions Accumulation Fund (MCAF). Any deficit in the MCAF account will result in a reduction of benefits.

BERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

Additional Employee Contributions. Members of the 55/25 and age 57 programs contribute an additional 1.85% for the 1st 30 years of service (25 years for Chapter 19). Members of the Special Officers' Program contribute 6.25 for the 1st 30 years of service. Members of the 57/27 program contribute an additional 1.85% for the 1st 27 years of service. Members in physically taxing positions also contribute an additional 1.98%.

TIER 1 BENEFITS

SERVICE RETIREMENT

Eligibility: Plan A - Age 55 (age 50 for physically taxing positions) and 25 years of service.
Plan B - Age 55 and 5 years of service.

Allowance:

Plan A - Sum of 1) through 3)

1) Final Average Salary times 2.2% times service up to 25 years plus 1.7% times service over 25 years
2) An annuity based on excess(deficit) contributions and interest
3) An annuity based on excess(deficit) ITHP contributions and interest

Plan B - Sum of 1) through 3)

1) Final Average Salary times 1.53% times years of service
2) An annuity based on excess(deficit) contributions and interest
3) An annuity based on excess(deficit) ITHP contributions and interest

VESTING

Eligibility: 20 years of service (5 years for Plan B members).

Allowance: Same as Service retirement

Plan A - The vested retirement allowance is payable on the later of age 55 (age 50 for physically taxing positions) and the date at which 25 years of service would have been attained. Plan B - The vested retirement allowance is payable at age 55.

BERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation Which Develops the 2012 Fiscal Year Contribution

Tier 1 Benefits

Ordinary Disability Retirement

Eligibility: 10 years of service.

Sum of 1) through 4)

1) Final Average Salary times 1.53% times years of service
2) An annuity based on contributions and interest
3) An annuity based on ITHP contributions and interest
4) Minus any Workers' Compensation Payments

Accidental Disability Retirement

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 75% of Final Compensation
2) An annuity based on contributions and interest
3) An annuity based on ITHP contributions and interest
4) Minus any Workers' Compensation Payments

BERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution

Tier 1 Benefits

Survivor Benefits

Ordinary Death Benefit:

If the member is not eligible for retirement at time of death, a lump sum death benefit would be paid to the beneficiary. The amount of the benefit is 6 months of current earnable salary for less than 10 years of service, one year of current earnable salary for more than 10 but less than 20 years of service and 2 years of current earnable salary for more than 20 years of service. The lump sum also includes the balance of the member's ITHP Reserve Fund and the Annuity Reserve Fund.

Presumptive Death Benefit:

If the member is eligible for retirement at time of death, the beneficiary would receive the greater of the Ordinary Death Benefit or the Accidental Death Benefit and the actuarial value of the reserve for the retirement allowance would have been entitled too had the member retired on the day before their death.

Accidental Death Benefit (line-of-duty):

Sum of 1) through 4)

1) 50% of final compensation paid to surviving spouse, or dependent child under age 18, or dependent parents
2) Lump sum equal to ITHP reserve account
3) Lump sum equal to accumulated deductions/contributions
4) Minus any Workers' Compensation Payments

BERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution

Tier 2 Benefits

Service Retirement

Eligibility: Plan C - Age 62 and 25 years of service.

Plan D - Age 62 and 5 years of service.

25-Year Early Retirement Program - Age 55 with 25 years of service.

Special Officers 25-Year Retirement Program - 25 years of service.

Allowance:

Plan C (includes 55/25 Program) - Sum of 1) through 3)

1) Final Average Salary times 2.2% times service up to 25 years plus 1.7% times service over 25 years
2) An annuity based on excess(deficit) contributions and interest
3) An annuity based on excess(deficit) ITHP contributions and interest

Plan D - Sum of 1) through 3)

1) Final Average Salary times 1.53% times years of service
2) An annuity based on excess(deficit) contributions and interest
3) An annuity based on excess(deficit) ITHP contributions and interest

Special Officers 25-Year Retirement Program - Sum of 1) through 3)

1) Final Average Salary times 2.0% times years of service up to 30 years
2) An annuity based on excess(deficit) contributions and interest
3) An annuity based on excess(deficit) ITHP contributions and interest

Early Retirement

Eligibility: Plan C - Age 55 and 25 years of service. Plan D – Age 55 and 5 years of service.

Allowance: Same as Service retirement but reduced by 0.5% per month for the first 24 months before age 62 and 0.25% per month for any month prior to age 60. No reduction applies for participants of the 25-Year Early Retirement Program.

BERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution

Tier 2 Benefits

Vesting

Eligibility: 20 years of service (5 years for Plan D members).

Allowance: Same as Service retirement

Plan C - The vested retirement allowance is payable on the later of age 55 and the date at which 25 years of service would have been attained. Plan D - The vested retirement allowance is payable at age 55. If deferred retirement payments begin prior to age 62 then the benefit is reduced (see early retirement).

Ordinary Disability Retirement

Eligibility: 10 years of service.

Sum of 1) through 4)

1) Final Average Salary times 1.53% times years of service
2) An annuity based on contributions and interest
3) An annuity based on ITHP contributions and interest
4) Minus any Workers' Compensation Payments

Accidental Disability Retirement

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 75% of Final Compensation
2) An annuity based on contributions and interest
3) An annuity based on ITHP contributions and interest
4) Minus any Workers' Compensation Payments

BERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution

Tier 2 Benefits

Survivor Benefits

Ordinary Death Benefit:

If the member is not eligible for retirement at time of death, a lump sum death benefit would be paid to the beneficiary. The amount of the benefit is 1 year of current earnable salary for more than 1 year of service and less than 2 years of service, two years of current earnable salary for more than 2 years but less than 3 years of service and 3 years of current earnable salary for more than 3 years of service. The lump sum also includes the balance of the member's ITHP Reserve Fund and the Annuity Reserve Fund.

Each year after age 60 and while still in active service, the Ordinary Death Benefit is reduced by 5% of the original amount that would have been paid. Once at age 70 or older, the amount is not reduced below 50% of the original death benefit.

Accidental Death Benefit (line-of-duty):

Sum of 1) through 4)

1) 50% of final compensation paid to surviving spouse, or dependent child under age 18, or dependent parents
2) Lump sum equal to ITHP reserve account
3) Lump sum equal to accumulated deductions/contributions
4) Minus any Workers' Compensation Payments

BERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

TIER 3/4 BENEFITS

SERVICE RETIREMENT

Eligibility: Age 62 and 5 years of service. The 25 year Early Retirement Program (55/25) plan for certain employees allows for retirement at age 55 with 25 years of service or age 50 with 25 years of service in a physically taxing position. The Age 57 Retirement Program (57/5) for certain employees allows for retirement at age 57 with 5 years of service or age 50 with 25 years of service in a physically taxing position. Special Officers 25-Year Retirement Program – 25 years of service. The Age 55 Program (Chapter 19) for certain employees allows for retirement at age 55 with 25 years of service (or 27 years for mandated new hires after February 27, 2008).

Allowance:

Tier 3 - With less than 20 years of service, Final Average Salary times 1.67% times service times years of service minus 50% primary social security benefit. With 20 or more years of service, Final Average Salary times 2.00% times service up to 30 years of service minus 50% primary social security benefit.

Tier 4 - With less than 20 years of service, Final Average Salary times 1.67% times service times years of service. With 20 or more years of service, Final Average Salary times 2.00% times service up to 30 years plus 1.50% times service in excess of 30 years.

EARLY RETIREMENT

Eligibility: Tier 3 - Age 55 and 5 years of service.

Allowance: Same as Service retirement but reduced by approximately 0.55% per month for the first 24 months before age 62 and 0.275% per month for any month prior to age 60. No reduction applies for participants of the 25-Year Early Retirement Program.

BERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution

Tier 3/4 Benefits

Vesting

Eligibility: 5 years of service.

Allowance: Same as Service retirement.

Tier 3 - The vested retirement allowance is payable at age 55. If deferred retirement payments begin prior to age 62 then the benefit is reduced (see early retirement). Tier 4 - The vested retirement allowance is payable at age 62. Special Officers' Program – The vested retirement allowance is payable at the age the member would have completed 25 years of service. The Age 57 Retirement Program (57/5) Program - The vested retirement allowance is payable at age 57.

Ordinary Disability Retirement

Eligibility: 10 years of service. 5 years of service and eligible for Social Security Disability.

Allowance:

Tier 3 – Greater of Final Average Salary times 2.00% times service up to 30 years of service and 33.33% times Final Average Salary. Disability benefits are reduced by 50% primary social security benefit and 100% of member's workers' compensation benefits. Disability benefits are escalated by up to 3% per year based on the cost-of-living index.

Tier 4 - Greater of Final Average Salary times 1.67% times service times years of service and 33.33% times Final Average Salary.

Accidental Disability Retirement

Eligibility: No age or service requirement.

Allowance:

Tier 3 – 60% of Final Average Salary. Disability benefits are reduced by 50% primary social security benefit and 100% of member's workers' compensation benefits. Disability benefits are escalated by up to 3% per year based on the cost-of-living index.

Tier 4 - Same as Ordinary Disability retirement.

BERS Summary of Benefits and Conditions Evaluated for the June 30, 2010 Actuarial Valuation which Develops the 2012 Fiscal Year Contribution

Tier 3/4 Benefits

Survivor Benefits

Ordinary Death Benefit:

Eligibility: 1 year of service.

Allowance: Death Benefit Plan 1 – Lump sum consisting of refund of Membership Contributions Accumulation Fund plus one month's salary times number of years of credited service, up to a maximum of 36 years. Death Benefit Plan 2 – Lump sum consisting of refund of Membership Contributions Accumulation Fund plus 1 year of current earnable salary for more than 1 year of service and less than 2 years of service, two years of current earnable salary for more than 2 years but less than 3 years of service and 3 years of current earnable salary for more than 3 years of service. The lump sum also includes the balance of the member's Annuity Reserve Fund.

Accidental Death Benefit (line-of-duty):

Eligibility: No age or service requirement.

Allowance: 50% of wages earned during the last year of service paid to surviving spouse, or dependent child under age 25, or dependent parents.

BERS SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

COST OF LIVING ADJUSTMENT (COLA)

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Line of duty beneficiaries who have been receiving benefits for five years

COLA:

50% of the rate of increase in CPI rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of maximum retirement allowance. Surviving spouses of retirees who elected a joint and survivor option receive one-half of the COLA.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

PLANS

Original – Members before 7/1/81 that did not elect to transfer to the Improved Benefits Plan (IBP)

Improved Benefits Plan - Members on or after 7/1/81 or member who transferred from the Original Plan

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED PRIOR TO JULY 1, 1973 - TIER I BENEFITS

PARTICIPATION

Tier I participants include all employees who first became members prior to July 1, 1973.

FINAL SALARY (FS)

The contract rate of base pay plus holiday pay on the last day paid, plus overtime and night shift differential and worked vacation earned in the prior 12 months, plus longevity pay. For members appointed on or after June 17, 1971, the pensionable compensation for the final year of service is limited to 120% of the pensionable compensation for the year immediately preceding the final year.

LOANS

Eligibility: 3 years of service

Amount: Up to 90% of member's Annuity Savings Fund (ASF)

SERVICE RETIREMENT

Eligibility: 20 years of allowable police service or completion of 25 years of allowable police service, if elected the 25-Year Plan.

Allowance:

Sum of 1) through 5)

1) 50% of final average salary
2) 1/60th of earnings after 20th anniversary
3) 1/80th of average annual earnings of the last 5 years times “other” credited service
4) An annuity based on ITHP contributions and interest after 20 years
5) An annuity based on excess or deficient contributions and interest in the Annuity Savings Fund (ASF) account

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED PRIOR TO JULY 1, 1973 - TIER I BENEFITS

VESTING

Eligibility: 5 years of service.

Allowance:

Sum of 1) through 3)

1) 1/40th of final salary times allowable police credited service
2) 1/80th of average annual earnings of the last 5 years times "other" credited service
3) An annuity based on excess or deficient contributions and interest to normal retirement date in the ASF account balance

The vested retirement allowance is payable on the earliest date the member could have retired with 20 years of service.

ORDINARY DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance:

If less than 10 years of service: 1/3rd of final salary rate,

If 10 but less than 20 years of service: 50% of final salary rate.

If 20 or more years of service: 1/40th of final salary rate times all credited service.

In addition to the benefit above, each member will receive an annuity based on excess or deficient contributions and interest in the ASF account balance.

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 75% of final salary
2) 1/60th of earnings after 20th anniversary
3) An annuity based on ITHP contributions
4) An annuity based on the accumulated balance in the ASF account

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED PRIOR TO JULY 1, 1973 - TIER I BENEFITS

ORDINARY DEATH BENEFIT

Eligibility: No age or service requirement.

Allowance: The amount of the benefit is 50% of final salary for beneficiaries of members with less than 10 years of service at time of death. The amount of the benefit is 100% of final salary plus accumulated member contributions and ITHP with interest for beneficiaries of members with at least 10 years of service at time of death. The benefit can be paid in the form of a lump sum or annuity.

ACCIDENTAL DEATH BENEFIT (LINE-OF-DUTY)

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 50% of average final five years of compensation paid to surviving spouse, or other eligible dependents
2) Lump sum equal to ITHP reserve account balance
3) Lump sum equal to accumulated balance in the ASF account
4) Special Accidental Death Benefit (paid by the State) equal to the member's final year's salary, less the amount of pension calculated in (1) and Social Security benefits

DEATH GAMBLE BENEFIT (NON-LINE-OF-DUTY)

Eligibility: Must be eligible for Service Retirement at the time of death.

Allowance: The benefit is computed as though the member had retired the day before death. The beneficiary receives an amount equal to the reserve for the service retirement benefit.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED PRIOR TO JULY 1, 1973 - TIER I BENEFITS

CONTRIBUTIONS

Required Employee Contributions. Members contribute a percentage of earnings (based on age at appointment) for the first 20 years of service. After 20 years, contributions continue unless the member requests to discontinue. Contributions earn 8.25% per year. The ***minimum required contribution*** is determined on the member's 20th anniversary.

Voluntary Employee Contributions. Members may contribute additional contributions equal to 50% of their required contributions. These contributions are credited with regular and special interest and will provide an additional annuity at retirement or a lump sum.

Increased-Take-Home-Pay (ITHP) Contributions. Portion of employee contributions paid by the City of New York currently equal to 5%.

Excess Contributions. Contributions in excess of required contributions. At service retirement or accidental disability, member can take excess contributions as a lump sum or an additional annuity. At ordinary disability, member is required to take a lump sum of excess contributions.

COST OF LIVING ADJUSTMENT (COLA)

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Line of duty beneficiaries who have been receiving benefits for five years

Amount:

50% of the rate of increase in CPI based upon the 12 months ending March 31, rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of the annual pension. If a retiree dies and has chosen an optional form of payment which provides for benefits to be continued to the spouse, for life, one half of the COLA amount is paid to such spouse.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED PRIOR TO JULY 1, 1973 - TIER I BENEFITS

VARIABLE SUPPLEMENTS FUND

Members who retire for service on or after October 1, 1968 are eligible to receive an annual statutorily defined Variable Supplements Fund (VSF) payment in addition to regular pension payments. The VSF is prorated based upon the number of full months of retirement. The annual VSF benefit is $12,000. Vested members and members who retire for Ordinary or Accidental Disability are not eligible for VSF benefits.

VSF Deferred Retirement Option Plan (DROP)

In addition to the annual VSF benefit discussed above, members who continue on active duty beyond the 20th anniversary, and ultimately retire for Service, may be entitled to the VSF DROP, also known as the "Banked Variable". The VSF DROP was designed to retain experienced members of the NYPD by guaranteeing a lump sum payment upon retirement for each year the member remains in active service beyond the member's twentieth police anniversary. The VSF DROP is not payable to members who die while in active service or retire for a disability.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 1, 2009 TIER II BENEFITS

PARTICIPATION

Tier II participants include all employees who first became members on or after July 1, 1973 but prior to July 1, 2009.

FINAL AVERAGE SALARY (FAS)

Members appointed before July 1, 2000: Total pensionable compensation (wages, overtime, night differential, worked vacation, etc.) earned during the final 12 months before retirement not in excess of 120% of the immediate previous 12 months' pensionable compensation. If greater, FAS will equal the greatest average three consecutive years' pensionable compensation, where each year's salary cannot exceed 120% of the average of the two previous years.

Members appointed on or after July 1, 2000: Total pensionable compensation (wages, overtime, night differential, worked vacation, etc.) earned during the final 12 months before retirement not in excess of 120% of the immediate previous 12 months' pensionable compensation.

LOANS

Eligibility: 3 years of service
Amount: Up to 90% of member's Annuity Savings Fund (ASF)

SERVICE RETIREMENT

Eligibility: 20 years of allowable police service or completion of 25 years of allowable police service, if elected the 25-Year Plan.

Allowance:

Sum of 1) through 5)

1) 50% of final average salary
2) 1/60th of earnings after 20th anniversary
3) 1/80th of average annual earnings of the last 5 years times “other” credited service
4) An annuity based on ITHP contributions and interest after 20 years
5) An annuity based on excess or deficient contributions and interest in the Annuity Savings Fund (ASF) account

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 1, 2009 TIER II BENEFITS

VESTING

Eligibility: 5 years of service.

Allowance:

Sum of 1) through 3)

1) 1/40th of FAS times allowable police credited service
2) 1/80th of average annual earnings of the last 5 years times "other" credited service
3) An annuity based on excess or deficient contributions and interest to normal retirement date in the ASF account balance

The vested retirement allowance is payable on the earliest date the member could have retired with 20 years of service.

ORDINARY DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance:

If less than 10 years of service: 1/3rd of FAS,

If 10 but less than 20 years of service: 50% of FAS.

If 20 or more years of service: 1/40th of FAS times all credited service.

In addition to the benefit above, each member will receive an annuity based on excess or deficient contributions and interest in the ASF account balance.

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 75% of FAS
2) 1/60th of earnings after 20th anniversary
3) An annuity based on ITHP contributions
4) An annuity based on the accumulated balance in the ASF account

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 1, 2009 TIER II BENEFITS

ORDINARY DEATH BENEFIT

Eligibility: 90 days of service.

Allowance: Paid to beneficiaries of members with less than 20 years of service at time of death. The amount of the benefit is 3 times the member's last 12 months of earnings rounded up to the next higher $1,000 plus accumulated member contributions. The benefit can be paid in the form of a lump sum or annuity.

ACCIDENTAL DEATH BENEFIT (LINE-OF-DUTY)

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 50% of average final five years of compensation paid to surviving spouse, or other eligible dependents
2) Lump sum equal to ITHP reserve account balance
3) Lump sum equal to accumulated balance in the ASF account
4) Special Accidental Death Benefit (paid by the State) equal to the member's final year's salary, less the amount of pension calculated in (1) and Social Security benefits

DEATH GAMBLE BENEFIT (NON-LINE-OF-DUTY)

Eligibility: Must be eligible for Service Retirement at the time of death.

Allowance: The benefit is computed as though the member had retired the day before death. The beneficiary receives an amount equal to the reserve for the service retirement benefit. The benefit can be paid in the form of a lump sum or an annuity.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 1, 2009 TIER II BENEFITS

CONTRIBUTIONS

Required Employee Contributions. Members contribute a percentage of earnings (based on age at appointment) for the first 20 years of service. After 20 years, contributions continue unless the member requests to discontinue. Contributions earn 8.25% per year. The ***minimum required contribution*** is determined on the member's 20th anniversary.

Voluntary Employee Contributions. Members may contribute additional contributions equal to 50% of their required contributions. These contributions are credited with regular and special interest and will provide an additional annuity at retirement or a lump sum.

Increased-Take-Home-Pay (ITHP) Contributions. Portion of employee contributions paid by the City of New York currently equal to 5%.

Excess Contributions. Contributions in excess of required contributions. At service retirement or disability, member can take excess contributions as a lump sum or an additional annuity.

COST OF LIVING ADJUSTMENT (COLA)

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Line of duty beneficiaries who have been receiving benefits for five years

Amount:

50% of the rate of increase in CPI based upon the 12 months ending March 31, rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of the annual pension. If a retiree dies and has chosen an optional form of payment which provides for benefits to be continued to the spouse, for life, one half of the COLA amount is paid to such spouse.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 1973 BUT BEFORE JULY 1, 2009 TIER II BENEFITS

VARIABLE SUPPLEMENTS FUND

Members who retire for service on or after October 1, 1968 are eligible to receive an annual statutorily defined Variable Supplements Fund (VSF) payment in addition to regular pension payments. The VSF is prorated based upon the number of full months of retirement. The annual VSF benefit is $12,000. Vested members and members who retire for Ordinary or Accidental Disability are not eligible for VSF benefits.

VSF Deferred Retirement Option Plan (DROP)

In addition to the annual VSF benefit discussed above, members who continue on active duty beyond the 20th anniversary, and ultimately retire for Service, may be entitled to the VSF DROP, also known as the "Banked Variable." The VSF DROP was designed to retain experienced members of the NYPD by guaranteeing a lump sum payment upon retirement for each year the member remains in active service beyond the member's twentieth police anniversary. The VSF DROP is not payable to members who die while in active service or retire for a disability.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 2009 TIER III BENEFITS

PARTICIPATION

Tier III participants include all employees who first become members on or after July 1, 2009.

FINAL AVERAGE SALARY (FAS)

Members appointed between July 1, 2009 and March 31, 2012: The greatest average three consecutive years' pensionable compensation, where each year's salary cannot exceed 110% of the average of the two previous years.

Members appointed on or after April 1, 2012: The greatest average five consecutive years' pensionable compensation, where each year's salary cannot exceed 110% of the average of the four previous years.

NORMAL SERVICE RETIREMENT

Eligibility: 22 years of credited service.
Allowance: 2.1% of FAS times the number of years of credited service for the first 20 years plus 4.0% of FAS times the number of years of credited service in excess of 20 years to a maximum benefit of 50% of FAS. The benefit is reduced by 50% of Primary Social Security at age 62.

EARLY SERVICE RETIREMENT

Eligibility: 20 years of credited service.
Allowance: 2.1% of FAS times the number of years of credited service for the first 20 years plus 4.0% of FAS times the number of years of credited service in excess of 20 years. The benefit is reduced by 50% of Primary Social Security at age 62.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 2009 TIER III BENEFITS

MANDATORY RETIREMENT

A member must separate from uniformed service upon turning age 62. The separation must occur regardless of whether the member is eligible for a Normal Service Retirement.

Members appointed between July 1, 2009 and March 31, 2012: If a member attains mandatory retirement age and does not have enough service credit for a Normal or Early Service Retirement, the member must take a Vested Retirement. The Vested benefit will be reduced 1/15th for each year that a member’s early retirement age is in excess of age 60.

Members appointed on or after April 1, 2012: If a member attains mandatory retirement age and does not have enough service credit for a Normal or Early Service Retirement, the member must take a Vested Retirement.

VESTING

Eligibility: 5 years of credited service.
Allowance: 2.1% of FAS times the number of years of credited service payable at the date the member would have completed 20 years of service or at age 55, if earlier and elected, with a reduction of 1/30th for each year the benefit commenced before the 20th anniversary. The benefit is reduced by 50% of Primary Social Security at age 62.

ORDINARY DISABILITY RETIREMENT

Eligibility: 5 years of service and eligible for a Social Security Disability Benefit.
Allowance: The greater of 33 1/3% of FAS or 2.0% of FAS times the number of years of credited service (not in excess of 22 years) less 50% of Primary Social Security Disability Benefit.

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 2009 TIER III BENEFITS

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance: 50% of FAS less 50% of Primary Social Security Disability Benefits.

ORDINARY DEATH BENEFIT

Eligibility: 90 days of service.

Allowance: The amount of the benefit is 3 times the member's last 12 months of earnings rounded up to the next higher $1,000 plus accumulated member contributions.

ACCIDENTAL DEATH BENEFIT (LINE-OF-DUTY)

Eligibility: No age or service requirement.

Allowance: 50% of FAS plus a Special Accidental Death Benefit, paid by the State, equal to the member's final year's salary, less the amount of City paid pension and Social Security benefits paid to surviving spouse, or other eligible dependents

CONTRIBUTIONS

Required Employee Contributions. Members contribute 3.0% of earnings for a maximum of 25 years. Contributions earn 5% per year.

COST OF LIVING ADJUSTMENT (COLA)

Full Escalation Date:

- Vested and Service Pensions: The first day of the month after a member would have completed 25 years of credited service
- Disability Pensions: The first day of the month following the day on which a disability retiree first becomes eligible for Ordinary or Accidental Disability Retirement
- Death Benefits: The first day of the month following the day on which a beneficiary first becomes eligible for a death benefit paid as other than a lump sum

POLICE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION MEMBERS HIRED AFTER JULY 1, 2009 TIER III BENEFITS

Amount:

If a member first begins receiving benefits on the same date as the full escalation date, the full escalation will be calculated as the lesser of a 3% increase or increase in CPI of the current annual pension.

Partial escalation is calculated on benefits that commence prior to the member's full escalation date. A member will receive 1/36th of the full escalation rate for each month the benefit starts after the 22nd police anniversary.

VARIABLE SUPPLEMENTS FUND

Members who retire for service with at least 20 years of credited police service, on or after October 1, 1968 are eligible to receive an annual statutorily defined Variable Supplements Fund (VSF) payment in addition to regular pension payments. The VSF is prorated based upon the number of full months of retirement. The annual VSF benefit is $12,000. Vested members and members who retire for Ordinary or Accidental Disability are not eligible for VSF benefits.

VSF Deferred Retirement Option Plan (DROP)

In addition to the annual VSF benefit discussed above, members who continue on active duty beyond the 20th anniversary, and ultimately retire for Service, may be entitled to the VSF DROP, also known as the "Banked Variable". The VSF DROP was designed to retain experienced members of the NYPD by guaranteeing a lump sum payment upon retirement for each year the member remains in active service beyond the member's Early Service Retirement Eligibility Date. The VSF DROP is not payable to members who die while in active service or who are terminated from the NYPD.

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

TIERS

Tier I – Member before 7/1/73

Tier II – Member on or after 7/1/73

PLANS

Original – Member before 7/1/81 that did not elect to transfer to the Improved Benefits Plan (IBP)

Improved Benefits Plan - Member on or after 7/1/81 or member who transferred from the Original Plan

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION

TERMS

Final salary (Tier I) means base pay plus holiday pay on the last day paid, plus overtime and shift differential earned in the prior 12 months, plus longevity.

Final average salary ("FAS") (Tier II) means pensionable compensation earned during the final 12 months before retirement.

CONTRIBUTIONS

Required Employee Contributions. Members contribute a percentage of earnings (based on age at appointment) for the first 20 years of service. After 20 years, contributions continue unless the member requests to discontinue. Contributions earn 8.25% per year. The ***minimum required contribution*** is determined on the member's 20th anniversary.

Voluntary Employee Contributions. Members may contribute additional contributions equal to 50% of their required contributions. These contributions will provide an additional annuity at retirement or a lump sum.

Increased-Take-Home-Pay (ITHP). Portion of employee contributions paid by the City of New York currently equal to 5%.

Excess Contributions. Contributions in excess of required contributions. At service retirement or accidental disability, member can take excess contributions as a lump sum or an additional annuity. At ordinary disability, member is required to take a lump sum of excess contributions.

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER I BENEFITS

SERVICE RETIREMENT

Eligibility: 20 years of service.

Allowance:

Sum of 1) through 5)

1) 50% of final salary
2) 1/60th of earnings after 20th anniversary
3) 1/80th of average annual earnings of the last 5 years times “other” credited service
4) An annuity based on ITHP contributions and interest after 20 years
5) An annuity based on excess contributions and interest

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER I BENEFITS

ORDINARY DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance:

Sum of 1) and 2)

1) $1/40^{th}$ of final salary times service
2) An annuity based on excess contributions and interest

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 75% of final salary
2) $1/60^{th}$ of earnings after 20^{th} anniversary
3) An annuity based on ITHP contributions
4) An annuity based on accumulated deductions

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER I BENEFITS

SURVIVOR BENEFITS

Death Gamble Benefit (non-line-of-duty):

The benefit is computed as though the member had retired the day before death. The beneficiary receives an amount equal to the reserve for the service retirement benefit.

Accidental Death Benefit (line-of-duty):

Sum of 1) through 4)

1) 50% of final compensation paid to surviving spouse, or dependent child under age 18, or dependent parents
2) Lump sum equal to ITHP reserve account
3) Lump sum equal to accumulated deductions/contributions
4) Special Accidental Death Benefit

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER II BENEFITS

SERVICE RETIREMENT

Eligibility: 20 years of service.

Allowance:

Sum of 1) through 5)

1) 50% of final average salary
2) 1/60th of earnings after 20th anniversary\
3) 1/80th of average annual earnings of the last 5 years times "other" credited service
4) An annuity based on ITHP contributions and interest after 20 years\
5) An annuity based on excess contributions and interest

VESTING

Eligibility: 5 years of service.

Allowance:

Sum of 1) through 3)

1) 1/40th of final average salary times service
2) 1/80th of average annual earnings of the last 5 years times "other" credited service
3) An annuity based on excess contributions and interest

The vested retirement allowance is payable on the earliest date the member could have retired with 20 years of service.

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER II BENEFITS

ORDINARY DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance:

If less than 10 years of service:

- 1/3rd of final average salary

If 10 but less than 20 years of service:

- 50% of final average salary

If 20 or more years of service:

- 1/40th of final average salary times service

PLUS

Lump sum equal to excess contributions plus interest

ACCIDENTAL DISABILITY RETIREMENT

Eligibility: No age or service requirement.

Allowance:

Sum of 1) through 4)

1) 75% of final salary
2) 1/60th of earnings after 20th anniversary
3) An annuity based on ITHP contributions
4) An annuity based on accumulated deductions

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION TIER II BENEFITS

SURVIVOR BENEFITS

Ordinary Death Benefit:

Paid to beneficiaries of members with less than 20 years of service at time of death. The amount of the benefit is 3 times the member's last 12 months of earnings rounded up to the next higher $1,000. The benefit can be paid a lump sum or annuity.

Death Gamble Benefit (non-line-of-duty):

Must have 20 or more years of service at time of death. The benefit is computed as though the member had retired the day before death. The beneficiary receives an amount equal to the reserve for the service retirement benefit.

Accidental Death Benefit (line-of-duty):

Sum of 1) through 4)

1) 50% of final compensation paid to surviving spouse, or dependent child under age 18, or dependent parents
2) Lump sum equal to ITHP reserve account
3) Lump sum equal to accumulated deductions/contributions
4) Special Accidental Death Benefit

FIRE SUMMARY OF BENEFITS AND CONDITIONS EVALUATED FOR THE JUNE 30, 2010 ACTUARIAL VALUATION WHICH DEVELOPS THE 2012 FISCAL YEAR CONTRIBUTION COST-OF-LIVING ADJUSTMENT (COLA)

Eligibility:

- Retirees who have attained age 62 and have been retired for 5 years
- Retirees who have attained age 55 and have been retired for 10 years
- Disability retirees who have been retired for 5 years
- Line of duty spouses and children who have been receiving benefits for five years
- Surviving spouses of retirees who elected a joint and survivor option

COLA:

50% of the rate of increase in CPI rounded to the next greater 0.1% and limited to a maximum of 3% and a minimum of 1%. The COLA only applies to the first $18,000 of the annual pension. Surviving spouses of retirees who elect a joint and survivor option receive ½ the increase the retiree would have received. Line of duty spouses and children receive the full COLA the retiree would have received. The first COLA is effective on the date the member meets the eligibility criteria. The next COLA increase occurs the following September 30.