This Summary Basic Plan Description (SPD) summarizes the major features of the Massachusetts Institute of Technology Basic Retirement Plan (the Basic Plan) as restated and amended through July 31, 2011. Please read this SPD carefully. It explains how the Basic Plan works for you, your spouse and other beneficiaries. This SPD is only a summary of the Basic Plan’s provisions, however. The actual provisions are contained in formal documents available upon request from the Massachusetts Institute of Technology (MIT) Benefits Office. If there are any inconsistencies between this SPD and the formal Basic Plan documents, the formal documents will prevail and control in all cases.
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I. Introduction

Historical Overview

Before July 1, 1989, MIT maintained two retirement plans, one for faculty and staff and the other for service and support employees. The plan for faculty and staff was called the Retirement Plan for Staff Members, or RPSM. The plan for service and support employees was called the Retirement Plan for Employees, or RPE.

The RPSM was a defined contribution plan providing for contributions from both MIT and individual participants. These contributions were credited to individual accounts each year and grew with investment earnings over time. At retirement, an individual's account balance was converted to a lifetime pension. In contrast, the RPE was a defined benefit plan, funded entirely by MIT after 1974, providing lifetime pensions that were calculated using a formula based on each participant's career pay at MIT.

In 1989, MIT adopted a single, unified retirement program for all faculty and staff as well as service and support employees. This program has remained in effect, with various subsequent amendments. The unified program incorporates elements of both the RPSM and the RPE, and includes the following two plans:

- **The Massachusetts Institute of Technology Basic Retirement Plan (Basic Plan):** a defined benefit plan providing a benefit calculated using formulas based on each participant's pay at MIT.

- **The Massachusetts Institute of Technology Supplemental 401(k) Plan (Supplemental 401(k) Plan):** a defined contribution plan providing a 100% MIT match on each participant's voluntary contributions each year up to 5% of pay, with benefits based on the account value.
About This SPD

This summary plan description (or SPD) provides a detailed description of the Basic Plan – how it works, the retirement income it provides and the choices you have. Keep in mind this SPD does not reflect amendments after July 31, 2011, with the exception of the new vesting rules that apply to employees first hired by MIT on or after July 2, 2011. In addition, the way your benefit is determined depends on whether:

- You were first hired by MIT on or after January 1, 2004;
- You worked at MIT between January 1, 1999 and December 31, 2003;
- You were a participant in the RPSM; or
- You were a participant in the RPE.

To find out how your benefit is determined, please refer to the portion of Section III that applies to you. All other sections of the SPD – Sections I, II, and IV through XII – apply to all participants in the Basic Plan except as specifically noted.

For easy reference, the SPD provides a general overview called “The Basic Plan At-a-Glance.” More detailed information, including examples of benefit calculations, is provided later in the document. In addition, the SPD provides you with guidance and contact information if you have additional questions. Throughout the SPD, you will find certain terms that are defined in more detail in the Appendix.

This document replaces the SPD posted in 2011 and includes corrections to certain benefit examples applicable to participants with two Normal Retirement Dates.

How the Basic Plan Is Funded

MIT pays the entire cost of the Basic Plan by making contributions to a trust. Contributions are not required from you. MIT's contributions are determined by an actuary in accordance with strict federal guidelines and are held in a trust for the exclusive benefit of eligible employees. The trustee pays benefits from this trust as they become due.

Legal Considerations

The Basic Plan has been designed to comply with the Employee Retirement Security Act of 1974 (ERISA), as amended, and subsequent employee benefits laws and regulations as enforced by the Department of Labor and the Internal Revenue Service.
## II. The Basic Plan At-a-Glance

<table>
<thead>
<tr>
<th>Features</th>
<th>Basic Plan Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>You are eligible for the Basic Plan if...</td>
<td>You are being paid by MIT and you are:</td>
</tr>
<tr>
<td></td>
<td>• Scheduled to work at least <strong>50% of the normal full-time work schedule</strong> in your department, laboratory or center (or scheduled to work less than 50% provided you have completed 1,000 hours of service* during a calendar year or the first 12-month period beginning with your hire date) and</td>
</tr>
<tr>
<td></td>
<td>• Not excluded from the Basic Plan as described below.</td>
</tr>
<tr>
<td></td>
<td><strong>Excluded from the Basic Plan</strong> are visitors; students and coop students; fellows; summer employees; affiliates; trainees; teaching or research assistants; officers, enlisted personnel and civilian employees of the military assigned to MIT; employees on the voucher payroll; casual employees; and leased employees. Union employees of MIT are eligible for the Basic Plan only if the applicable collective bargaining agreement provides for plan participation.</td>
</tr>
<tr>
<td>You start earning benefits under the Basic Plan...</td>
<td>On the first day you become eligible (generally on the first day of work for employees hired on or after July 1, 1989 and scheduled to work 50% or more). Special rules apply to employees who work less than a 50% schedule (generally must have met eligibility requirements described above and have completed 1,000 hours of service during the calendar year).</td>
</tr>
<tr>
<td></td>
<td>Membership is automatic. You do not need to take any action or make a contribution to start earning benefits from the Basic Plan. We do ask that you designate a beneficiary, however, as soon as you are eligible. You may do so online at <a href="https://mitpension.ehr.com">https://mitpension.ehr.com</a>.</td>
</tr>
<tr>
<td>Benefits provided by the Basic Plan may include...</td>
<td>• A lifetime pension for you</td>
</tr>
<tr>
<td></td>
<td>• A lifetime pension for your surviving spouse or other beneficiary under certain circumstances</td>
</tr>
<tr>
<td></td>
<td>• A single sum payment instead of lifetime pensions under certain circumstances</td>
</tr>
<tr>
<td></td>
<td>• Periodic cost-of-living adjustments to your pension</td>
</tr>
<tr>
<td></td>
<td>• Continued accrual of pension benefits during certain periods of disability</td>
</tr>
</tbody>
</table>

* Hours equivalency rules (as defined by the IRS) may apply to certain employees whose actual hours worked are not available.
### Features

<table>
<thead>
<tr>
<th>Basic Plan Provisions</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your Normal Retirement Date – the date when you can start to receive your full, unreduced pension from the Basic Plan – is...</td>
<td>The first day of the month on or after your 65th birthday.</td>
</tr>
<tr>
<td>If you were employed by MIT between January 1, 1999 and December 31, 2003, however, your Normal Retirement Date is the first day of the month on or after your 62nd birthday for benefits earned before January 1, 2004.</td>
<td></td>
</tr>
<tr>
<td>Your annual lifetime pension starting on your Normal Retirement Date is...</td>
<td>Your Career Pay Benefit or Cash Balance Benefit, whichever is larger:</td>
</tr>
<tr>
<td></td>
<td>- <strong>Career Pay Benefit</strong>: 1.65% of the aggregate Compensation you earned at MIT while a member of the Basic Plan</td>
</tr>
<tr>
<td></td>
<td>- <strong>Cash Balance Benefit</strong>: The annual lifetime pension that can be provided by your Cash Balance Account (determined using actuarial conversion factors)</td>
</tr>
<tr>
<td>Your Cash Balance Account is the accumulation of Basic Credits and Interest Credits over the course of your membership in the Basic Plan. Basic Credits equal 5% of your Compensation each year. Interest Credits are based on market-based fixed income returns.</td>
<td>Additional benefits may apply to former members of the RPE or RPSM.</td>
</tr>
<tr>
<td>For purposes of calculating your Basic Plan benefit, Compensation means...</td>
<td>Your regular basic salary or wages, overtime, bonuses, shift differentials, summer session pay and temporary rates while a member of the Basic Plan. It does not include any other type of compensation, such as incentives, awards, site differentials, lump-sum sick leave payouts, and other payments for services not included above.</td>
</tr>
<tr>
<td>Federal law limits the amount of pay that may be used in a calendar year to determine pension benefits. This limit is generally adjusted annually with inflation and is $245,000 in 2011.</td>
<td></td>
</tr>
<tr>
<td>If you terminate employment with MIT before your Normal Retirement Date...</td>
<td>- In general, if employed by MIT between August 31, 2007 and July 1, 2011, you will be fully vested in the benefit you earned while at MIT.</td>
</tr>
<tr>
<td></td>
<td>- If you are hired after July 1, 2011, you must generally complete at least three years of service to become vested. If you worked for another 501(c)(3) organization, or were a leased employee at MIT, you may apply for extra service toward meeting the three year vesting requirement by going online at <a href="https://mitpension.ehr.com">https://mitpension.ehr.com</a>.</td>
</tr>
<tr>
<td>Once vested, you will “own” your benefit and can start payment at any time after your termination of employment with MIT. If you start payment before your Normal Retirement Date, however, your benefit will be reduced to reflect the longer expected payout period.</td>
<td>Special provisions may apply to former members of the RPE or RPSM.</td>
</tr>
<tr>
<td>If you continue to work at...</td>
<td>You will receive either (a) or (b), whichever is greater:</td>
</tr>
<tr>
<td>Features</td>
<td>Basic Plan Provisions</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>MIT past your Normal Retirement Date…</td>
<td>(a) The Basic Plan benefit you would have received at your Normal Retirement Date with actuarial increases to reflect the expected shorter payout period or (b) The Basic Plan benefit based on your entire career at MIT reflecting your Compensation both before and after your Normal Retirement Date</td>
</tr>
<tr>
<td>When you are about to start your pension, you will have the choice of several payment options, including…</td>
<td>• A Single Life Annuity* with payments made only to you as long as you live • A Joint and Survivor Annuity, with reduced payments made to you as long as you live and a percentage of your reduced benefit continuing to your spouse after your death; the percentage may be 50%, 66 2/3%, 75% or 100% • A Joint and Survivor Annuity as described above, but with a beneficiary other than your spouse* • A Period Certain Annuity* under which payments are guaranteed for 5, 10, 15 or 20 years; this may be elected along with any of the other forms above. *Your spouse’s written, notarized consent is required if you are married and would like to elect one of these options.</td>
</tr>
<tr>
<td>Cost-of-living adjustments will be made to your pension payments…</td>
<td>Every three years, starting the third July 1st on or after your Normal Retirement Date. Each adjustment is 75% of the cumulative rise in the Consumer Price Index over the prior three years (measured on March 31) to a maximum of 10%. Your first COLA will generally be prorated.</td>
</tr>
<tr>
<td>Instead of a lifetime pension, you may elect a Single Sum if…</td>
<td>If you have been employed at MIT for 10 years or less or your Cash Balance Account is $10,000 or less. Your spouse’s written, notarized consent is required if you are married and would like to elect a Single Sum in lieu of a lifetime pension. If the single sum value of your benefit is below $5,000, you will receive a Single Sum automatically (no consent required).</td>
</tr>
<tr>
<td>If you die before benefit payments start…</td>
<td>The full value of your benefit will be paid to your designated beneficiary. • If your beneficiary is your spouse, he or she may elect either a lifetime pension or a Single Sum. • If your beneficiary is not your spouse, he or she will receive a Single Sum. A special Qualified Spouse Benefit may apply to former members of the RPSM.</td>
</tr>
<tr>
<td>If you die after benefit</td>
<td>Benefits to your surviving spouse or other beneficiary will depend on the form</td>
</tr>
</tbody>
</table>

* Your spouse’s written, notarized consent is required if you are married and would like to elect one of these options.
<table>
<thead>
<tr>
<th><strong>Features</strong></th>
<th><strong>Basic Plan Provisions</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>payments start...</td>
<td>of payment you chose before your pension started.</td>
</tr>
<tr>
<td></td>
<td>A special Qualified Spouse Benefit may apply to former members of the RPSM.</td>
</tr>
<tr>
<td>If you become totally disabled and are collecting benefits from MIT’s Long-</td>
<td>You will continue to earn Basic Plan benefits based on your rate of Compensation immediately before the start of your disability.</td>
</tr>
<tr>
<td>Term Disability Plan...</td>
<td></td>
</tr>
</tbody>
</table>
III. How Your Basic Plan Benefits Are Determined

Participants First Hired On or After January 1, 2004

If You Retire at Your Normal Retirement Date

If you were first employed by MIT on January 1, 2004 or later, your Normal Retirement Date is the first day of the month on or after your 65th birthday. If you work at MIT until then, you will be eligible for the annual lifetime benefit described below.

Your annual lifetime benefit starting at your Normal Retirement Date will be your Career Pay Benefit or your Cash Balance Benefit, whichever is larger.

- **Career Pay Benefit**: 1.65% of your aggregate Compensation at MIT while a member of the Basic Plan
- **Cash Balance Benefit**: Your Cash Balance Account − Basic Credits plus Interest Credits − converted to an equivalent lifetime benefit

To illustrate, let's determine the benefit for a hypothetical employee named Sam. We'll make some simplifying assumptions to keep the math easy. Let's assume:

- Sam starts working full-time at MIT on January 1, 2004 at age 45;
- He earns $40,000 each year of his 20-year career at MIT; and
- He retires on January 1, 2024, his Normal Retirement Date.

**Step 1: Determine Sam's Career Pay Benefit**

To determine Sam's Career Pay Benefit, we only need to know his aggregate Compensation at MIT while a member of the Basic Plan. Because he earns $40,000 each year of his 20-year career, his aggregate Compensation is $40,000/year times 20 years, or $800,000.

Sam's Career Pay Benefit is:

1.65% of $800,000 = $13,200/year
Step 2: Determine Sam's Cash Balance Benefit

To determine Sam's Cash Balance Benefit, we need to know his Cash Balance Account at his Normal Retirement Date – Basic Credits plus Interest Credits – as well as the actuarial factor that will convert his Cash Balance Account into an equivalent annual lifetime pension.

Remember that Basic Credits are 5% of Compensation each year. Because Sam earns $40,000 each year, his Basic Credits are 5% of $40,000, or $2,000 each year. In addition, Sam earns Interest Credits each year based on market rates for a fixed income portfolio. Assuming the Cash Balance Account grows at an average annual rate of about 4% over his 20-year career, Sam's Cash Balance Account at his Normal Retirement Date is approximately $60,000.

This $60,000 would produce a pension of $5,400/year ($60,000 x 9%) using the annuity conversion factors required under the Basic Plan terms and supplied by MIT’s actuary. These factors change every year based on market interest rates and depend on the age at which benefits start. (See the sidebar to the right for more information.)

Sam’s Cash Balance Benefit is:

9% of $60,000 = $5,400/year

Step 3: Determine Sam's Annual Lifetime Benefit

Sam’s annual lifetime benefit is the larger of his Career Pay Benefit ($13,200/year) and his Cash Balance Benefit ($5,400/year). In this example, his Career Pay Benefit is the larger benefit.

Starting at age 65, his Normal Retirement Date, Sam will receive an annual Basic Plan benefit of $13,200.

- This benefit will be paid monthly ($1,100 per month) for life.
- This assumes Sam chooses to receive his benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.

Each year, MIT’s actuary determines the factors to be used to convert Cash Balance Accounts to equivalent annual lifetime pensions. In addition to reflecting current interest rates, these factors take into account life expectancies, so they vary depending on the age when benefits start. Here is a summary of average factors for the five years 2006 through 2010 for selected ages.

To obtain the equivalent annual lifetime pension, multiply the Cash Balance Account by the factor shown for the appropriate age:

<table>
<thead>
<tr>
<th>Age</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>6%</td>
</tr>
<tr>
<td>60</td>
<td>7%</td>
</tr>
<tr>
<td>62</td>
<td>8%</td>
</tr>
<tr>
<td>65</td>
<td>9%</td>
</tr>
<tr>
<td>70</td>
<td>10%</td>
</tr>
</tbody>
</table>

Note: These factors are illustrative. Actual factors will be determined at the time of your retirement based on the prevailing interest rates at that time.
If You Leave Before Your Normal Retirement Date and Start Receiving Benefits

If you leave MIT and start your benefits before your Normal Retirement Date, your pension will be less than at your Normal Retirement Date for two reasons:

- You will have fewer years of service to earn benefits and
- Your pension will be reduced to reflect the longer period of time over which payments are expected to be made.

To illustrate, let's determine the benefit for a hypothetical employee named Lynn. We will assume:

- Lynn starts working full-time at MIT on January 1, 2004 at age 45;
- She earns $40,000 each year of her 17-year career at MIT; and
- She retires and starts to receive her pension on January 1, 2021 at age 62.

Step 1: Determine Lynn's Career Pay Benefit

To determine Lynn's Career Pay Benefit starting at her early retirement date of age 62, we need to know her aggregate Compensation at MIT while a member of the Basic Plan. Because she earns $40,000 each year of her 17-year career, her aggregate Compensation is $40,000/year times 17 years, or $680,000.

We also need to know the reduction factor that applies because she is starting benefits at age 62 rather than at her Normal Retirement Date. As shown in the sidebar to the left, this reduction factor is 72% at age 62.

Lynn's Career Pay Benefit starting at age 62 is:

1.65% of $680,000 times 72% = $8,078/year
Step 2: Determine Lynn’s Cash Balance Benefit

To determine Lynn's Cash Balance Benefit, we need to know her Cash Balance Account – Basic Credits plus Interest Credits – as well as the actuarial factor that will convert her Cash Balance Account into an equivalent annual lifetime pension.

Remember that Basic Credits are **5% of Compensation each year**. Because Lynn earns $40,000 each year, her Basic Credits are 5% of $40,000, or $2,000 each year. In addition, Lynn's Cash Balance Account earns Interest Credits each year based on market rates for a fixed income portfolio. Assuming Lynn’s Cash Balance Account grows at an average annual rate of about 4% over her 17-year career, Lynn's Cash Balance Account at age 62 is approximately **$48,000**.

This $48,000 would produce a pension of $3,840/year ($48,000 x 8%) using the annuity conversion factors required under the Basic Plan terms and supplied by MIT’s actuary. These factors change every year based on market interest rates and depend on the age at which benefits start. (See the sidebar on page 13 for more information.)

Lynn’s Cash Balance Benefit starting at age 62 is:

8% of $48,000 = $3,840/year

Step 3: Determine Lynn’s Annual Lifetime Benefit

Lynn's annual lifetime benefit is the larger of her **Career Pay Benefit** ($8,078/year) and her **Cash Balance Benefit** ($3,840/year). In this example, her Career Pay Benefit is the larger benefit.

Starting at age 62, Lynn will receive an annual Basic Plan benefit of $8,078.

- This benefit will be paid monthly ($673 per month) for life.
- This assumes Lynn chooses to receive her benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.

Career Pay Benefit vs. Cash Balance Benefit: Which is Larger?

- For many employees retiring at or near their Normal Retirement Date, the Career Pay Benefit is larger than the Cash Balance Benefit.
- Several factors affect which benefit is larger, including career length, age when benefits begin and Interest Credits on the employee’s Cash Balance Account.
- Employees hired at young ages who leave MIT well before their Normal Retirement Date often receive greater value from the Cash Balance Benefit.
If You Leave Before Your Normal Retirement Date and Defer Benefits

If you leave MIT before your Normal Retirement Date, you may:

- Start your pension right away, as Lynn did in the prior example or
- Defer payment of your pension to a later date if your single sum value is greater than $1,000. You may not defer to a date later than April 1 of the year following the calendar year in which you reach age 70 ½, or, if later, terminate employment.

If you defer your pension, you will receive a greater annual benefit because of the shorter period of time over which payments are expected to be made. Interest Credits will continue to be added to your Cash Balance Account during the period of deferral, but Basic Credits will stop being added at the time of your termination of employment.

For example, if Lynn retires at age 62 but decides to wait until her Normal Retirement Date to start her pension, her benefit will be $11,220 per year – rather than $8,078 – calculated as shown below. (This assumes her Career Pay Benefit is greater than her Cash Balance Benefit at her Normal Retirement Date.)

![Starting at age 65, Lynn will receive an annual Basic Plan benefit of $11,220, calculated as follows:]

1.65% of $680,000 = $11,220/year

- This benefit will be paid monthly ($935 per month) for life.
- This assumes Lynn chooses to receive her benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
If You Work Past Your Normal Retirement Date

If you work past your Normal Retirement Date, you will receive either (a) or (b), whichever is greater:

(a) The Basic Plan benefit you would have received at your Normal Retirement Date – with actuarial increases to reflect the expected shorter payout period

(b) The Basic Plan benefit calculated based on your entire career at MIT, reflecting your Compensation after your Normal Retirement Date

Let's say our hypothetical employee Sam decides to work until age 70 rather than retiring at age 65. How will his benefit be determined when he retires at age 70?

Step 1: Determine Career Pay Benefit with Actuarial Increase

We will first calculate Sam’s benefit at his Normal Retirement Date with actuarial increases. On page 12, we show Sam’s annual benefit starting at his Normal Retirement Date to be $13,200. This amount needs to be adjusted using the age 70 factor shown in the sidebar to the right: 160%.

Sam’s Career Pay Benefit with actuarial increases is:

$13,200 times 160% = $21,120/year

Step 2: Determine Career Pay Benefit with Continued Accruals

We then calculate Sam’s benefit at age 70 using all his Compensation, including his pay after his Normal Retirement Date. We will assume he continues to earn $40,000 each year after age 65, so his aggregate Compensation at MIT is $40,000/year times 25 years, or $1,000,000.

Sam’s Career Pay Benefit with continued accruals is:

1.65% of $1,000,000 = $16,500

Actuarial increase factors depend on the age when benefits start, as follows:

<table>
<thead>
<tr>
<th>Age</th>
<th>Factor*</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>100%</td>
</tr>
<tr>
<td>66</td>
<td>109%</td>
</tr>
<tr>
<td>67</td>
<td>120%</td>
</tr>
<tr>
<td>68</td>
<td>131%</td>
</tr>
<tr>
<td>69</td>
<td>145%</td>
</tr>
<tr>
<td>70</td>
<td>160%</td>
</tr>
</tbody>
</table>

* These are rounded factors; actual unrounded factors are in Appendix B.
Step 3: Determine Sam’s Annual Lifetime Benefit

Sam's annual lifetime benefit is the larger of his Career Pay Benefit with an actuarial increase and his Career Pay Benefit with continued accruals. In this example, his Career Pay Benefit with an actuarial increase is the larger benefit. This assumes his Career Pay Benefit is greater than his Cash Balance Benefit at retirement. (Sam's Cash Balance Account would continue to receive Basic Credits and Interest Credits until his retirement.)

Starting at age 70, Sam will receive an annual Basic Plan benefit of $21,120.

- This benefit will be paid monthly ($1,760 per month) for life.
- This assumes Sam chooses to receive his benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
III. How Your Basic Plan Benefits Are Determined

Participants Employed by MIT Between January 1, 1999 and December 31, 2003

If You Retire at Your Normal Retirement Date

In general, if you worked at MIT anytime between January 1, 1999 and December 31, 2003, you have two Normal Retirement Dates under the Basic Plan as follows:

- For benefits earned after December 31, 2003, your Normal Retirement Date is the first day of the month on or after your 65th birthday. *(We will refer to this date as your Age-65 NRD.)*

- For benefits earned through December 31, 2003, your Normal Retirement Date is the first day of the month on or after your 62nd birthday. *(We will refer to this date as your Age-62 NRD.)*

What does it mean to have two Normal Retirement Dates? Normal Retirement Date is defined as the date you can start receiving your full pension without reductions for starting your benefit early. Having two Normal Retirement Dates does not mean you have to retire on either date. It just means:

- Career Pay Benefits earned after December 31, 2003 will be reduced if they start before your Age-65 NRD.

- Career Pay Benefits earned through December 31, 2003 will be reduced if they start before your Age-62 NRD.

At your Normal Retirement Date, your benefit will be determined as follows:

> Your annual lifetime benefit starting at your Normal Retirement Date will be your Career Pay Benefit or your Cash Balance Benefit, whichever is larger:

- **Career Pay Benefit**: 1.65% of your aggregate Compensation at MIT while a member of the Basic Plan

- **Cash Balance Benefit**: Your Cash Balance Account – Basic Credits plus Interest Credits – converted to an equivalent annual lifetime benefit
To illustrate, let’s look at how benefits would be determined for a hypothetical employee named Tim who has decided to continue to work until his Age-65 NRD. Specifically, we will assume:

- Tim starts working full-time at MIT on January 1, 1992 at age 32;
- He earns $50,000 each year of his 33-year career at MIT; and
- He retires on January 1, 2025, his Age-65 NRD.

We will also assume Tim’s Career Pay Benefit is larger than his Cash Balance Benefit at his retirement date. See page 27 for a description of how the Cash Balance Benefit is calculated.

Tim’s Career Pay Benefit will be either (a) or (b), whichever is greater:

(a) The Basic Plan benefit he would have received at his Age-62 NRD – with an actuarial increase to reflect the expected shorter period (percentage increases shown in the table on page 22)
(b) The Basic Plan benefit calculated based on his entire career at MIT, reflecting all Compensation

**Step 1: Determine Tim’s Career Pay Benefit with Continued Accruals**

We will first calculate Tim’s benefit at his Age-65 NRD using his aggregate Compensation at MIT while a member of the Basic Plan from his hire date of January 1, 1992 until his retirement on January 1, 2025, a 33-year period.

Because we are assuming he earns $50,000 each year of his career, his aggregate Compensation is $50,000/year times 33 years, or $1,650,000.

Tim’s Career Pay Benefit with continued accruals is:

\[ 1.65\% \text{ of } 1,650,000 = 27,225/\text{year} \]
Step 2: Determine Tim’s Career Pay Benefit at his Age-62 NRD

Tim’s Career Pay Benefit at his Age-62 NRD reflects Compensation earned up to his Age-62 NRS, or January 1, 2022. Because Tim has two Normal Retirement Dates, we need to look at his benefit in two pieces – his Career Pay Benefit earned through and after December 31, 2003.

To determine Tim’s Career Pay Benefit earned after December 31, 2003, we need to know his aggregate Compensation at MIT while a member of the Basic Plan from January 1, 2004 until his Age-62 NRD on January 1, 2022, an 18-year period. Because he earns $50,000 each year of his career, his aggregate Compensation after December 31, 2003 is $50,000/year * 18 years, or $900,000.

To determine Tim’s Career Pay Benefit earned through December 31, 2003, we look at his aggregate Compensation at MIT while a member of the Basic Plan from his date of hire of January 1, 1992 through December 31, 2003, a 12-year period. Because he earns $50,000 each year of his career, his aggregate Compensation through December 31, 2003 is $50,000/year * 12 years, or $600,000.

We also need to know the actuarial factor that increases his benefit from his Age-62 NRD to his actual retirement at his Age-65 NRD. This factor is shown in column 1 of the table on page 22, and is 129%.

Tim’s Career Pay Benefit at his Age-62 NRD is:

1.65% of $600,000 times 129% +
1.65% of $900,000 = $27,621/year

Step 3: Determine Tim’s Total Annual Lifetime Benefit

We determine Tim’s total annual lifetime benefit starting January 1, 2025 (his Age-65 NRD) by comparing the results of Step 1 and Step 2. His total annual benefit will equal the greater of $27,255 and $27,621, or $27,621.

Starting January 1, 2025, his Age-65 NRD, Tim will receive an annual Basic Plan benefit of $27,621.

- This benefit will be paid monthly ($2,302 per month) for life.
- This assumes Tim chooses to receive his benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
If You Work Past Your Age-65 Normal Retirement Date

If you work past your Age-65 Normal Retirement Date, you will receive either (a), (b) or (c), whichever is greater:

(a) Continued Accrual Benefit
   Total Compensation x 1.65%

(b) Age 65 Actuarial Increase Minimum
   The sum of:
   (i) Pre-2004 pay x 1.65% x Actuarial Increase from age 65 to commencement, plus
   (ii) Post-2003 pay through age 65 x 1.65% x Actuarial Increase from age 65 to commencement

(c) Age 62 Actuarial Increase Minimum
   The sum of:
   (i) Pre-2004 pay at age 62 x 1.65% x Actuarial Increase based on commencement age using the NRD 62 table at right, plus
   (ii) Post-2003 pay through age 62 x 1.65% x Actuarial Increase based on commencement age using NRD65 table at right

Let's say our hypothetical employee Tim decides to work five more years and retire at age 70 rather than age 65. When he retires, he will have a total of 38 years at MIT rather than 33. How will his benefit be determined?

Actuarial increase factors depend on the age when benefits start, as follows:

<table>
<thead>
<tr>
<th>Start Age</th>
<th>Factor for Age-62 NRD*</th>
<th>Factor for Age-65 NRD*</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>129%</td>
<td>100%</td>
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<tr>
<td>66</td>
<td>140%</td>
<td>109%</td>
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<td>67</td>
<td>154%</td>
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<td>68</td>
<td>169%</td>
<td>131%</td>
</tr>
<tr>
<td>69</td>
<td>186%</td>
<td>145%</td>
</tr>
<tr>
<td>70</td>
<td>205%</td>
<td>160%</td>
</tr>
</tbody>
</table>

*These are rounded factors; actual unrounded factors are in Appendix B.
Step 1: Determine Tim’s Career Pay Benefit with Continued Accruals

We first calculate Tim's benefit at age 70 using all his Compensation, including his pay after his Normal Retirement Date. We will assume he continues to earn $50,000 each year after age 65, so his aggregate Compensation at MIT, as shown above, is $50,000/year times 38 years, or $1,900,000.

Tim's Career Pay Benefit with continued accruals is:

1.65% of $1,900,000 = $31,350/year

Step 2: Determine Tim’s Age 65 Actuarial Increase Minimum

We first need to look at Tim’s pre-2004 compensation, the 12 years between January 1, 1992 and January 1, 2004, he earned $50,000 x 12 or $600,000. We then need to look at the compensation he earned between January 1, 2004 and his age 65 (January 1, 2025) or 21 years. $50,000 x 21 = $1,050,000. Looking at the Actuarial Increase Table on page 22, the increase from age 65 to 70 is 160%.

Tim's Age 65 Actuarial Increase Minimum is:

$600,000 x 1.65% x 160% = $15,840

$1,050,000 x 1.65% x 160% = $27,720

$43,560
Step 3: Determine Tim’s Age 62 Actuarial Increase Minimum

We first need to look at Tim’s pre-2004 compensation, the 12 years between January 1, 1992 and January 1, 2004, he earned $50,000 x 12 or $600,000. We then need to look at the compensation he earned between January 1, 2004 and his age 62 (January 1, 2022) or 18 years. $50,000 x 18 = $900,000. Looking at the Actuarial Increase Table on page 22, the increase from age 62 to 70 is 205% and the Actuarial Increase from 65 to 70 is 160%.

<table>
<thead>
<tr>
<th>Tim’s Age 62 Actuarial Increase Minimum is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>$600,000 x 1.65% x 205% = $20,295</td>
</tr>
<tr>
<td>$900,000 x 1.65% x 160% = $23,760</td>
</tr>
<tr>
<td>$44,055</td>
</tr>
</tbody>
</table>

Step 4: Determine Tim’s Annual Lifetime Benefit

Tim’s annual lifetime benefit is the larger of his Career Pay Continued Accruals, Age 65 Actuarial Increase Minimum or Age 62 Actuarial Increase Minimum. In this example, his Age 62 Actuarial Increase Minimum wins. continued accruals.

Starting at age 70, Tim will receive an annual Basic Plan benefit of $44,055.

- This benefit will be paid monthly ($3,671 per month) for life.
- This assumes Tim chooses to receive his benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
If You Leave Before Your Normal Retirement Date and Start Receiving Benefits

If you leave MIT and start to receive Basic Plan benefits before your Age-62 Normal Retirement Date, your pension will be less for two reasons:

- You will have fewer years of service to earn benefits and
- Your pension – both the benefit earned through December 31, 2003 and the benefit earned after that date – will be reduced to reflect the longer period of time over which pension payments are expected to be paid.

To illustrate, let's determine the benefit for a hypothetical employee named Joanna. We will assume:

- Joanna starts working full-time at MIT on January 1, 1992 at age 32;
- She earns $50,000 each year of her 28-year career at MIT; and
- She retires on January 1, 2020, at age 60, two years before her Age-62 NRD.

We will also assume Joanna’s Career Pay Benefit is larger than her Cash Balance Benefit at her retirement date. See page 27 for a description of how the Cash Balance Benefit is calculated.

Step 1: Determine Joanna’s Career Pay Benefit Earned After December 31, 2003

To determine Joanna’s Career Pay Benefit earned after December 31, 2003, we need to know her aggregate Compensation at MIT while a member of the Basic Plan from January 1, 2004 until her retirement on January 1, 2020, a 16-year period.

Because we are assuming she earns $50,000 each year of her career, her aggregate Compensation after December 31, 2003 is $50,000/year times 16 years, or $800,000.

Because the benefit she earns after December 31, 2003 is reduced if she starts to receive it before her Age-65 NRD, we also need to know the reduction factor that would be applied when her benefit starts at her actual retirement date of January 1, 2020, when she is age 60. Based on the second column of the table in the sidebar on page 26, this factor is 59%.

Joanna’s Career Pay Benefit earned after December 31, 2003 starting January 1, 2020 is:

1.65% of $800,000 times 59% = $7,788/year

To determine Joanna’s Career Pay Benefit earned through December 31, 2003, we need to know her aggregate Compensation at MIT while a member of the Basic Plan from her hire date of January 1, 1992 through December 31, 2003, a 12-year period.

Because she earns $50,000 each year of her career, her aggregate Compensation through December 31, 2003 is $50,000/year times 12 years, or $600,000.

We also need to know the reduction factor that would be applied, because she will be receiving her benefit starting at age 60, two years before her Age-62 NRD. Based on the first column of the table in the sidebar to the right, this factor is 81%.

Joanna’s Career Pay Benefit earned through December 31, 2003 starting January 1, 2020 is:

1.65% of $600,000 times 81% = $8,019/year

Step 3: Determine Joanna’s Total Annual Lifetime Benefit

We determine Joanna’s total annual lifetime benefit starting January 1, 2020 (when she is age 60) by adding the results of Step 1 and Step 2. Her total annual benefit will equal $7,788 plus $8,019, or $15,807.

Starting January 1, 2020, when she is age 60, Joanna will receive an annual Basic Plan benefit of $15,807.

- This benefit will be paid monthly ($1,317 per month) for life.
- This assumes Joanna chooses to receive her benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
If You Retire and Decide to Defer Benefits

When you leave MIT, you may:

- Start your pension right away or
- Defer payment of your pension to a later date if your single sum value is greater than $1,000. You may not defer to a date later than April 1 of the year following the calendar year in which you reach age 70 ½, or, if later, terminate employment.

If you defer payment, you will receive a greater annual benefit because of the shorter period of time over which payments are expected to be made. Your benefit will be calculated using the actuarial increase and reduction factors described in the previous examples, based on the age when you retire.

Calculating Your Cash Balance Benefit

To determine your Cash Balance Benefit, we need to know your Cash Balance Account at retirement – Basic Credits plus Interest Credits – as well as the actuarial factor that will convert your Cash Balance Account into an equivalent annual lifetime pension.

Remember that Basic Credits are 5% of Compensation each year. Let’s assume you earn $40,000 each year. Your Basic Credits are 5% of $40,000, or $2,000 each year. In addition, you earn Interest Credits each year based on market rates for a fixed income portfolio. Assuming the Cash Balance Account grows at an average annual rate of 4% and you retire at age 65 after a 20-year career, your Cash Balance Account at age 65 is approximately $60,000, consisting of both Basic Credits plus Interest Credits.

This $60,000 would produce a pension of $5,400/year ($60,000 x 9%) using the annuity conversion factors required under the Basic Plan terms and supplied by MIT’s actuary. These factors change every year and depend on the age at which benefits start. (See the sidebar to the right for more information.)

<table>
<thead>
<tr>
<th>Age</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>6%</td>
</tr>
<tr>
<td>60</td>
<td>7%</td>
</tr>
<tr>
<td>62</td>
<td>8%</td>
</tr>
<tr>
<td>65</td>
<td>9%</td>
</tr>
<tr>
<td>70</td>
<td>10%</td>
</tr>
</tbody>
</table>

Note: These factors are illustrative. Actual factors are determined at the time of your retirement based on the prevailing interest rates at that time.
III. How Your Basic Plan Benefits Are Determined

Participants Who Were Members of the RPSM Before July 1, 1989

If you were a member of the Retirement Plan for Staff Members (or RPSM) before July 1, 1989 when the Basic Plan became effective, there are special provisions and features that apply to you. Specifically:

- For your MIT service on or after July 1, 1989, you will receive Basic Plan benefits as described in this section.
- For your MIT service before July 1, 1989, you will receive your prior RPSM benefit as described in the Supplemental 401(k) Plan SPD.
- You may be entitled to a special “Early Retirement Supplement” from the Basic Plan, described in this section. To be eligible, you must terminate between the first of the month on or after your 60th birthday and the July 1st on or after your 65th birthday and have 20 years of service with MIT.
- Your spouse may be eligible for an additional death benefit called the “Qualified Spouse Benefit” described in Section VI.

If You Retire at Your Normal Retirement Date

In general, if you worked at MIT anytime between January 1, 1999 and December 31, 2003, you have two Normal Retirement Dates under the Basic Plan as follows:

- For benefits earned after December 31, 2003, your Normal Retirement Date is the first day of the month on or after your 65th birthday. (We will refer to this date as your Age-65 NRD.)
- For benefits earned through December 31, 2003, your Normal Retirement Date is the first day of the month on or after your 62nd birthday. (We will refer to this date as your Age-62 NRD.)

What does it mean to have two Normal Retirement Dates? Normal Retirement Date is defined as the date you can start receiving your full pension without reductions for starting your benefits early. Having two Normal Retirement Dates does not mean you have to retire on either date. It just means:

- Career Pay Benefits earned after December 31, 2003 will be reduced if they start before your Age-65 NRD.
• Career Pay Benefits earned through December 31, 2003 will be reduced if they start before your Age-62 NRD.

At your Normal Retirement Date, your benefit will be determined as follows:

Your annual lifetime benefit starting at your Normal Retirement Date will be your Career Pay Benefit or your Cash Balance Benefit, whichever is larger:

- **Career Pay Benefit**: 1.65% of your aggregate Compensation at MIT while a member of the Basic Plan after July 1, 1989
- **Cash Balance Benefit**: Your Cash Balance Account – Basic Credits plus Interest Credits – converted to an equivalent annual lifetime benefit

To illustrate, let’s look at how benefits would be determined for a hypothetical employee named Ray who has decided to continue to work until his Age-65 NRD. Specifically, we will assume:

- Ray starts working full-time at MIT on July 1, 1985 at age 25;
- He earns $50,000 each year of his 40-year career at MIT; and
- He retires on July 1, 2025, his Age-65 NRD.

We will also assume Ray’s Career Pay Benefit is larger than his Cash Balance Benefit at his retirement date. See page 37 for a description of how the Cash Balance Benefit is calculated.

Ray’s Career Pay Benefit will be either (a) or (b), whichever is greater:

(a) The Basic Plan benefit he would have received at his Age-62 NRD – with an actuarial increase to reflect the expected shorter payout period (percentage increases shown in the table on page 22)
(b) The Basic Plan benefit calculated based on his career at MIT reflecting all Compensation

**Step 1: Determine Ray’s Career Pay Benefit with Continued Accruals**

We will first calculate Ray’s benefit at his Age-65 NRD using his aggregate Compensation at MIT while a member of the Basic Plan from July 1, 1989 until his retirement on July 1, 2025, a 36-year period. (Remember that Ray’s prior RPSM benefit for his service from July 1, 1985 through June 30, 1989 will be paid from the Supplemental 401(k) Plan.)
Because we are assuming he earns $50,000 each year of his career, his aggregate Compensation is $50,000/year times 36 years, or $1,800,000.

Step 2: Determine Ray’s Career Pay Benefit at his Age-62 NRD

Ray’s Career Pay Benefit at his Age-62 NRD reflects Compensation earned up to his Age-62 NRD, or July 1, 2022. Because Ray has two Normal Retirement Dates, we need to look at his benefit in two pieces – his Career Pay Benefit earned through and after December 31, 2003.

To determine Ray’s Career Pay Benefit earned after December 31, 2003, we need to know his aggregate Compensation at MIT while a member of the Basic Plan from January 1, 2004 until his Age-62 NRD on July 1, 2022, an 18 ½ -year period. Because he earns $50,000 each year of his career, his aggregate Compensation after December 31, 2003 is $50,000/year times 18 ½ years, or $925,000.

To determine Ray’s Career Pay Benefit earned through December 31, 2003, we look at his aggregate Compensation at MIT while a member of the Basic Plan from his date of hire of July 1, 1989 through December 31, 2003, a period of 14 ½ years. (Remember that Ray’s prior RPSM benefit for his service from July 1, 1985 through June 30, 1989 will be paid from the Supplemental 401(k) Plan.) Because he earns $50,000 each year of his career, his aggregate Compensation through December 31, 2003 is $50,000/year times 14 ½ years, or $725,000.

We also need to know the actuarial factor that increases his benefit from his Age-62 NRD to his actual retirement at his Age-65 NRD. This factor is shown in column 1 of the table on page 22, and is 129%.

Ray’s Career Pay Benefit with continued accruals is:

1.65% of $1,800,000 = $29,700/year

Ray’s Career Pay Benefit at his Age-62 NRD is:

1.65% of $725,000 times 129% +
1.65% of $925,000 = $30,694/year

Career Pay Benefit vs. Cash Balance Benefit: Which is Larger?

- For many employees retiring at or near their Normal Retirement Date, the Career Pay Benefit is larger than the Cash Balance Benefit.
- Several factors affect which benefit is larger, including career length, age when benefits begin and Interest Credits on the employee’s Cash Balance Account.
- Employees hired at young ages who leave MIT well before their Normal Retirement Date often receive greater value from the Cash Balance Benefit.
Step 3: Determine Ray’s Total Annual Lifetime Benefit

We determine Tim’s total annual lifetime benefit starting January 1, 2025 (his Age-65 NRD) by comparing the results of Step 1 and Step 2. His total annual benefit will equal the greater of $29,700 and $30,694, or $30,694.

Starting January 1, 2025, his Age-65 NRD, Ray will receive an annual Basic Plan benefit of $30,694.

- This benefit will be paid monthly ($2,558 per month) for life.
- This assumes Ray chooses to receive his benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
If You Work Past Your Age-65 Normal Retirement Date

If you work past your Age-65 Normal Retirement Date, you will receive either (a) or (b), whichever is greater:

(a) The Basic Plan benefit you would have received at your two Normal Retirement Dates — with actuarial increases to reflect the expected shorter payout period (percentage increases shown in the table below.

(b) The Basic Plan benefit calculated based on your entire career at MIT, reflecting all Compensation

Let's say our hypothetical employee Ray (see page 29) decides to work five more years and retire on July 1, 2030 at age 70 rather than age 65. How will his benefit be determined?

Step 1: Determine Ray’s Career Pay Benefit with Continued Accruals

We first calculate Ray’s benefit at age 70 using all his Compensation, including his pay after his Normal Retirement Date. We will count his pay from July 1, 1989 through June 30, 2030, a period of 41 years. (Remember that Ray’s prior RPSM benefit for his service from July 1, 1985 through June 30, 1989 will be paid from the Supplemental 401(k) Plan.)

We will assume he continues to earn $50,000 each year after age 65, so his aggregate Compensation at MIT after July 1, 1989 is $50,000/year times 41 years, or $2,050,000.

Ray’s Career Pay Benefit with continued accruals is:

1.65% of $2,050,000 = $33,825/year

Actuarial increase factors depend on the age when benefits start, as follows:

<table>
<thead>
<tr>
<th>Start Age</th>
<th>Factor for Age-62 NRD*</th>
<th>Factor for Age-65 NRD*</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>129%</td>
<td>100%</td>
</tr>
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<td>67</td>
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<td>131%</td>
</tr>
<tr>
<td>69</td>
<td>186%</td>
<td>145%</td>
</tr>
<tr>
<td>70</td>
<td>205%</td>
<td>160%</td>
</tr>
</tbody>
</table>

*These are rounded; actual unrounded factors are in Appendix B.
Step 2: Determine Ray’s Career Pay Benefit with Actuarial Increase

This benefit is the greater of (1) or (2):

(1) Ray’s Age-65 NRD benefit, reflecting Compensation earned up to July 1, 2025 (his Age-65 NRD) and actuarially increased from age 65 to his retirement age (age 70) with an Age-65 NRD actuarial increase factor.

\[
\text{Age-65 NRD} = \text{50,000/yr. x 36 yrs. (7/1/1989 – 7/1/2025) x 1.65% x 160% = 47,520}
\]

(2) Ray’s Age-62 NRD benefit, reflecting Compensation earned up to July 1, 2022 (his Age-62 NRD) and actuarially increased from age 62 to his retirement age (age 70) with an Age-62 NRD. The Age-62 NRD actuarial increase factor applies on the benefit earned through December 31, 2003 and the Age-65 NRD actuarial increase factor applies on the benefit earned after December 31, 2003.

\[
\text{Age-62 NRD} = \begin{align*}
&\text{50,000/yr. x 14.5 yrs. (7/1/1989 – 12/31/2003) x 1.65% x 205% = 24,523} \\
+ &\text{50,000/yr. x 18.5 yrs. (1/1/2004 – 7/1/2022) x 1.65% x 160% = 24,420} \\
&\text{48,943}
\end{align*}
\]

We then determine Ray’s benefit at his Normal Retirement Date actuarially increased until age 70 to be $48,943/year.

Step 3: Determine Ray’s Annual Lifetime Benefit

Ray’s annual lifetime benefit is the larger of his Career Pay Benefit with an actuarial increase and his Career Pay Benefit with continued accruals. In this example, his Career Pay Benefit with an actuarial increase is the larger benefit.

Starting at age 70, Ray will receive an annual Basic Plan benefit of $48,943.

- This benefit will be paid monthly ($4,079 per month) for life.
- This assumes Ray chooses to receive his benefit as a “Single Life Annuity.” See Section V to learn about other available payment forms.
If You Leave Before Your Normal Retirement Date and Start Receiving Benefits

If you leave MIT and start to receive Basic Plan benefits before your Normal Retirement Date, your pension will be less for two reasons:

- You will have fewer years of service to earn benefits and
- Your pension – both the benefit earned through December 31, 2003 and the benefit earned after that date – will be reduced to reflect the longer period of time over which pension payments are expected to be paid.

To illustrate, let's determine the benefit for a hypothetical employee named Jen. We will assume:

- Jen starts working full-time at MIT on July 1, 1985 at age 25;
- She earns $50,000 each year of her 35-year career at MIT; and
- She retires on July 1, 2020, at age 60, two years before her Age-62 NRD.

We will also assume Jen’s Career Pay Benefit is larger than her Cash Balance Benefit at her retirement date. See page 33 for a description of how the Cash Balance Benefit is calculated.

**Step 1: Determine Jen’s Career Pay Benefit Earned After December 31, 2003**

To determine Jen’s Career Pay Benefit earned after December 31, 2003, we need to know her aggregate Compensation at MIT while a member of the Basic Plan from January 1, 2004 until her retirement on July 1, 2020, a 16 ½ year period.

Because we are assuming she earns $50,000 each year of her career, her aggregate Compensation after December 31, 2003 is $50,000/year times 16 ½ years, or $825,000.

Because the benefit she earns after December 31, 2003 is reduced if she starts to receive it before her Age-65 NRD, we also need to know the reduction factor that would be applied when her benefit starts at her actual retirement date of July 1, 2020, when she is age 60. Based on the second column of the table in the sidebar on page 35, this factor is 59%.

Jen’s Career Pay Benefit earned after December 31, 2003 starting July 1, 2020 is:

1.65% of $825,000 times 59% = $8,031/year
Step 2: Determine Jen’s Career Pay Benefit Earned from July 1, 1989 through December 31, 2003

To determine Jen’s Career Pay Benefit earned through December 31, 2003, we need to know her aggregate Compensation at MIT while a member of the Basic Plan from July 1, 1989 through December 31, 2003, a period of 14 ½ years. (Remember that her prior RPSM benefit for service from July 1, 1985 through June 30, 1989 will be paid from the Supplemental 401(k) Plan.)

Because she earns $50,000 each year of her career, her aggregate Compensation through December 31, 2003 is $50,000/year times 14 ½ years, or $725,000.

We also need to know the reduction factor that would be applied, because she will be receiving her benefit starting at age 60, two years before her Age-62 NRD. Based on the first column of the table in the sidebar on [to the right], this factor is 81%.

Jen’s Career Pay Benefit earned through December 31, 2003 starting July 1, 2020 is:

1.65% of $725,000 times 81% = $9,690/year

Step 3: Determine Jen’s Total Annual Lifetime Benefit

We determine Jen’s total annual lifetime benefit starting January 1, 2020 (when she is age 60) by adding the results of Step 1 and Step 2. Her total annual benefit will equal $8,031 plus $9,690, or $17,721.

Starting July 1, 2020, when she is age 60, Jen will receive an annual Basic Plan benefit of $17,721.

• This benefit will be paid monthly ($1,477 per month) for life.

• This assumes Jen chooses to receive her benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
If You Retire and Decide to Defer Benefit Payments

When you leave MIT, you may:

- Start your pension right away or
- Defer payment of your pension to a later date if your single sum value is greater than $1,000. You may not defer to a date later than April 1 of the year following the calendar year in which you reach age 70 ½, or, if later, terminate employment.

If you defer payment, you will receive a greater annual benefit because of the shorter period of time over which payments are expected to be made. Your benefit will be calculated using the actuarial adjustment factors described in the previous examples, based on the age when you retire.

<table>
<thead>
<tr>
<th>Retirement Age*</th>
<th>Monthly Lifetime ERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>$625</td>
</tr>
<tr>
<td>61</td>
<td>$500</td>
</tr>
<tr>
<td>62</td>
<td>$375</td>
</tr>
<tr>
<td>63</td>
<td>$250</td>
</tr>
<tr>
<td>64</td>
<td>$125</td>
</tr>
<tr>
<td>65</td>
<td>$0</td>
</tr>
</tbody>
</table>

*Based on a 7/1 birthday
Calculating Your Cash Balance Benefit

To determine your Cash Balance Benefit, we need to know your Cash Balance Account at retirement – Basic Credits plus Interest Credits – as well as the actuarial factor that will convert your Cash Balance Account into an equivalent annual lifetime pension.

Remember that Basic Credits are **5% of Compensation each year**. Let’s assume you earn $40,000 each year. Your Basic Credits are 5% of $40,000, or $2,000 each year. In addition, you earn Interest Credits each year based on market rates for a fixed income portfolio. Assuming the Cash Balance Account grows at an average annual rate of 4% and you retire at age 65 after a 20-year career, your Cash Balance Account at age 65 is approximately **$60,000**, consisting of both Basic Credits plus Interest Credits.

This $60,000 would produce a pension of $5,400/year ($60,000 x 9%) using the annuity conversion factors required under the Basic Plan terms and supplied by MIT’s actuary. These factors change every year based on market interest rates and depend on the age at which benefits start. (See the sidebar to the right for more information.)
III. How Your Basic Plan Benefits Are Determined

*Participants Who Were Members of the RPE Before July 1, 1989*

If you were a member of the Retirement Plan for Employees (or RPE) before July 1, 1989 when the Basic Plan became effective, there are special provisions and features that apply to you. Specifically:

- For your MIT service **on or after July 1, 1989**, you will receive Basic Plan benefits as described in this section.

- For your MIT service **before July 1, 1989**, you will receive the benefit you earned under the RPE. This benefit will also be paid from the Basic Plan.

- If you leave MIT and start benefits before your Normal Retirement Date, you may be eligible for a full unreduced pension if you meet certain requirements. These requirements and other early retirement provisions are described in this section.

**If You Retire at Your Normal Retirement Date**

If you worked at MIT anytime between January 1, 1999 and December 31, 2003, you have two Normal Retirement Dates under the Basic Plan as follows:

- For benefits earned after December 31, 2003, your Normal Retirement Date is the first day of the month on or after your **65th birthday**. *(We will refer to this date as your Age-65 NRD.)*

- For benefits earned through December 31, 2003, your Normal Retirement Date is the first day of the month on or after your **62nd birthday**. *(We will refer to this date as your Age-62 NRD.)*

What does it mean to have two Normal Retirement Dates? Normal Retirement Date is defined as the date you can start receiving your full pension without reductions for early commencement.

---

* This date is January 1, 1990 for members of the Police Union. Throughout this section of the SPD, please substitute January 1, 1990 for July 1, 1989 if you are a member of this union.
Having two Normal Retirement Dates does not mean you have to retire on either date. It just means:

- Career Pay Benefits earned after December 31, 2003 will be reduced if they start before your Age-65 NRD.

- Career Pay Benefits earned through December 31, 2003, including any RPE benefits, will be reduced if they start before your Age-62 NRD.

At your Normal Retirement Date, your benefit will be determined as follows:

**Your annual lifetime benefit starting at your Normal Retirement Date will be your Career Pay Benefit or your Cash Balance Benefit, whichever is larger:**

- **Career Pay Benefit:** 1.65% of your aggregate Compensation at MIT while a member of the Basic Plan after July 1, 1989

- **Cash Balance Benefit:** Your Cash Balance Account – Basic Credits plus Interest Credits – converted to an equivalent annual lifetime benefit

  *In addition, you will receive the benefit you earned under the RPE for your service before July 1, 1989.*

To illustrate, let’s look at how benefits would be determined for a hypothetical employee named Colleen who has decided to continue to work until her Age-65 NRD. Specifically, we will assume:

- Colleen starts working full-time at MIT on July 1, 1985 at age 25;
- She earns $50,000 each year of her 40-year career at MIT; and
- She retires on July 1, 2025, her Age-65 NRD.

We will also assume Colleen’s Career Pay Benefit is larger than her Cash Balance Benefit at her retirement date. See page 47 for a description of how the Cash Balance Benefit is calculated.
Step 1: Determine Colleen’s Career Pay Benefit with Continued Accruals

We will first calculate Colleen’s benefit at his Age-65 NRD using her aggregate Compensation at MIT while a member of the Basic Plan from July 1, 1989 until her retirement on July 1, 2025, a 36-year period. (Remember that for her service from July 1, 1985 through June 30, 1989 she receive the benefit she earned under the RPE.)

Because we are assuming she earns $50,000 each year of her career, her aggregate Compensation is \$50,000/year times 36 years, or \$1,800,000.

\[ \text{Colleen’s Career Pay Benefit with continued accruals is:} \]
\[ \text{1.65\% of } \$1,800,000 = \$29,700/\text{year} \]

Step 2: Determine Colleen’s Career Pay Benefit at her Age-62 NRD

Colleen’s Career Pay Benefit at her Age-62 NRD reflects Compensation earned up to his Age-62 NRD, or July 1, 2022. Because Colleen has two Normal Retirement Dates, we need to look at her benefit in two pieces – her Career Pay Benefit earned through and after December 31, 2003.

To determine Colleen’s Career Pay Benefit earned after December 31, 2003, we need to know her aggregate Compensation at MIT while a member of the Basic Plan from January 1, 2004 until her Age-62 NRD on July 1, 2022, an 18 ½ -year period. Because she earns $50,000 each year of her career, her aggregate Compensation after December 31, 2003 is \$50,000/year times 18 ½ years, or \$925,000.

To determine Colleen’s Career Pay Benefit earned through December 31, 2003, we look at her aggregate Compensation at MIT while a member of the Basic Plan from his date of hire of July 1, 1989 through December 31, 2003, a period of 14 ½ -years. (Remember that for her service from July 1, 1985 through June 30, 1989 she receive the benefit she earned under the RPE.) Because she earns $50,000 each year of her career, her aggregate Compensation through December 31, 2003 is \$50,000/year times 14 ½ years, or \$725,000.

We also need to know the actuarial factor that increases her benefit from her Age-62 NRD to her actual retirement at her Age-65 NRD. This factor is shown in column 1 of the table on page 22, and is 129%.

\[ \text{Colleen’s Career Pay Benefit at her Age-62 NRD is:} \]
\[ \text{1.65\% of } \$725,000 \times 129\% + \]
\[ \text{1.65\% of } \$925,000 = \$30,694/\text{year} \]
Step 3: Determine Colleen’s Annual Pension Benefit Under the RPE for Service From July 1, 1985 Through June 30, 1989

This amount is retained on file by MIT. Let’s assume this amount is $2,000 a year, payable for life starting at age 62 (the RPE benefit at Normal Retirement Date). This benefit will be actuarially increased as well, using the same factor of 129% that applied to Colleen’s Career Pay Benefit earned through December 31, 2003. Colleen’s adjusted RPE benefit is therefore $2,000/year times 129% or $2,580.

Step 4: Determine Colleen’s Total Annual Lifetime Benefit Starting July 1, 2025 (Her Age-65 NRD)

We determine Colleen’s total annual lifetime benefit starting July 1, 2025 (her Age-65 NRD) by adding the results of Step 1, 2 and 3. Her total annual benefit will equal $17,738 plus $15,432 plus $2,580 or $35,750.

Starting July 1, 2025, her Age-65 NRD, Colleen will receive an annual Basic Plan benefit of $35,750.

- This benefit will be paid monthly ($2,979 per month) for life.
- This assumes Colleen chooses to receive her benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
If You Work Past Your Age-65 Normal Retirement Date

If you work past your Age-65 Normal Retirement Date, you will receive either (a) or (b), whichever is greater:

(a) The Basic Plan benefit you would have received at your two Normal Retirement Dates — with actuarial increases to reflect the expected shorter payout period (percentage increases shown in the table below)

(b) The Basic Plan benefit calculated based on your entire career at MIT, reflecting all Compensation

Let’s say our hypothetical employee Colleen (see page 35) decides to work five more years and retire on July 1, 2030 at age 70 rather than age 65. How will her benefit be determined?

Step 1: Determine Colleen’s Career Pay Benefit with Continued Accruals

We first calculate Colleen’s benefit at age 70 using all her Compensation, including her pay after her Normal Retirement Date. We will count her pay from July 1, 1989 through June 30, 2030, a period of 41 years. (Remember that Colleen’s prior RPE benefit will account for her service from July 1, 1985 through June 30, 1989.)

We will assume she continues to earn $50,000 each year after age 65, so her aggregate Compensation at MIT after July 1, 1989 is $50,000/year times 41 years, or $2,050,000.

Colleen’s Career Pay Benefit with continued accruals plus her prior $2,000 RPE benefit is:

1.65% of $2,050,000 plus $2,000 = $35,825/year

Actuarial increase factors depend on the age when benefits start, as follows:

<table>
<thead>
<tr>
<th>Start Age</th>
<th>Factor for Age-62 NRD*</th>
<th>Factor for Age-65 NRD*</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>129%</td>
<td>100%</td>
</tr>
<tr>
<td>66</td>
<td>140%</td>
<td>109%</td>
</tr>
<tr>
<td>67</td>
<td>154%</td>
<td>120%</td>
</tr>
<tr>
<td>68</td>
<td>169%</td>
<td>131%</td>
</tr>
<tr>
<td>69</td>
<td>186%</td>
<td>145%</td>
</tr>
<tr>
<td>70</td>
<td>205%</td>
<td>160%</td>
</tr>
</tbody>
</table>

*These are rounded factors; actual unrounded factors are in Appendix B.
Step 2: Determine Colleen’s Pay Benefit with Actuarial Increase

We then determine Colleen’s benefit at her Normal Retirement Date actuarially increased until age 70 to be $57,003/year.

<table>
<thead>
<tr>
<th>Compensation for the Period</th>
<th>Normal Retirement Age</th>
<th>Actuarial Increase Factor</th>
<th>Benefit Increased from NRD to Age 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,075,000</td>
<td>Age 65</td>
<td>160%</td>
<td>1.65% x $1,075,000 x 160% = $28,380</td>
</tr>
<tr>
<td>(1/1/04 – 6/30/25)</td>
<td>(Age-65 NRD Factor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$725,000</td>
<td>Age 62</td>
<td>205%</td>
<td>1.65% x $725,000 x 205% = $24,523</td>
</tr>
<tr>
<td>(7/1/89-12/31/03)</td>
<td>(Age-62 NRD Factor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2,000 (RPE Benefit)</td>
<td>Age 62</td>
<td>205%</td>
<td>2,000 x 205% = $4,100</td>
</tr>
<tr>
<td>(7/1/85 – 6/30/89)</td>
<td>(Age-62 NRD)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 3: Determine Colleen’s Annual Lifetime Benefit

Colleen’s annual lifetime benefit is the larger of her prior RPE benefit plus Career Pay Benefit with an actuarial increase and her prior RPE benefit plus Career Pay Benefit with continued accruals. In this example, her RPE benefit plus Career Pay Benefit with an actuarial increase is the larger benefit.

Starting at age 70, Colleen will receive an annual Basic Plan benefit of $57,003.

- This benefit will be paid monthly ($4,750 per month) for life.
- This assumes Colleen chooses to receive her benefit as a "Single Life Annuity." See Section V to learn about other available payment forms.
If You Leave Before Your Normal Retirement Date and Start Receiving Benefits

If you leave MIT and start to receive Basic Plan benefits before your Normal Retirement Date, your pension will be less for two reasons:

- You will have fewer years of service to earn benefits and
- Your pension — both the benefit earned through December 31, 2003 and the benefit earned after that date — will be reduced to reflect the longer period of time over which pension payments are expected to be paid.

Special Early Retirement Provisions for Former Members of the RPE

There are important exceptions to the above rule for former members of the RPE who meet certain requirements.

If you were a participant in the RPE on June 30, 1989 and had five years of service on that date, you may receive full unreduced benefits from the Basic Plan if you:

- Retire at age 55 or later with at least 25 years of service or
- Retire at age 62 or later with at least 20 years of service.

If you were a participant in the RPE on June 30, 1989 and do not meet the age and work requirements described above, your benefits will be reduced by 3% per year for each year before your Normal Retirement Date if you terminate employment after 10 years of service and start your benefits on or after age 55.

These provisions generally apply to both the benefit you earned under the RPE for your service up to June 30, 1989 and your Basic Plan Career Pay Benefit earned after that date. However, if you were not eligible under the RPE on June 30, 1989, but still have an RPE benefit, the annual 3% reduction will apply to your RPE benefit and your Basic Plan Career Pay Benefit if it starts at the ages shown:

<table>
<thead>
<tr>
<th>Start Age</th>
<th>Age-62 NRD Factor*</th>
<th>Age-65 NRD Factor*</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>50</td>
<td>31%</td>
<td>23%</td>
</tr>
<tr>
<td>51</td>
<td>34%</td>
<td>25%</td>
</tr>
<tr>
<td>52</td>
<td>38%</td>
<td>27%</td>
</tr>
<tr>
<td>53</td>
<td>41%</td>
<td>30%</td>
</tr>
<tr>
<td>54</td>
<td>45%</td>
<td>33%</td>
</tr>
</tbody>
</table>

*These are rounded factors; actual unrounded factors are in Appendix A.
Career Pay Benefit will be reduced under the Basic Plan’s standard reduction table.

If you terminate employment and start your benefits before age 55, the reduction factors shown in the sidebar on page 40 will apply to your benefit, depending on the applicable Normal Retirement Date and your age when benefits start.

To illustrate, let's determine the benefit for a hypothetical employee named Mike. We will assume:

- Mike starts working full-time at MIT on July 1, 1985 at age 25;
- He earns $50,000 each year of her 35-year career at MIT; and
- He retires on July 1, 2020, at age 60.

We will also assume Mike’s Career Pay Benefit is larger than his Cash Balance Benefit at his retirement date.

**Step 1: Determine Mike’s Career Pay Benefit Earned After December 31, 2003**

To determine Mike’s Career Pay Benefit earned after December 31, 2003, we need to know his aggregate Compensation at MIT while a member of the Basic Plan from January 1, 2004 until his retirement on July 1, 2020, a 16½ year period.

Because we are assuming he earns $50,000 each year of her career, his aggregate Compensation after December 31, 2003 is $50,000/year times 16½ years, or $825,000.

Because Mike did not have five years of service on July 1, 1989, his benefit earned after December 31, 2003 is therefore reduced by 3% for each of the five years before his Age-65 NRD, a reduction of 15%. *(If Mike had completed the RPE requirement of five years of service by June 30, 1989 and retired at age 62, no reduction factor would apply to his benefit because he is retiring at age 62 with at least 20 years of MIT service.)*

**Mike’s Career Pay Benefit earned after December 31, 2003 starting July 1, 2020 is:**

1.65% of $825,000 times 85% = $11,571/year

**Step 2: Determine Mike’s Career Pay Benefit Earned from July 1, 1989 through December 31, 2003**

To determine Mike’s Career Pay Benefit earned through December 31, 2003, we need to know his aggregate Compensation at MIT while a member of the Basic Plan from July 1, 1989 through
December 31, 2003, a period of 14 ½ years. (Remember that for his service from July 1, 1985 through June 30, 1989, he will receive the benefit he earned under the RPE.)

Because he earns $50,000 each year of his career, his aggregate Compensation through December 31, 2003 is $50,000/year times 14 ½ years, or $725,000.

We also need to know the reduction factor that would be applied, because he will be receiving his benefit starting at age 60, two years before his Age-62 NRD. Because Mike did not have five years of service on July 1, 1989, his benefit earned through December 31, 2003 is therefore reduced by 3% for each of the two years before his Age-62 NRD, a reduction of 6%.

Mike’s Career Pay Benefit earned through December 31, 2003 starting July 1, 2020 is:

\[0.0165 \times 725,000 \times 0.94 = 11,245\] per year

Step 3: Determine Mike’s Annual Pension Benefit Under the RPE for Service From July 1, 1985 Through June 30, 1989

This amount is retained on file by MIT. Let’s assume this amount is $2,000 a year, payable for life starting at age 62 (the RPE benefit at Normal Retirement Date). Because Mike did not have five years of service on July 1, 1989, his prior RPE benefit is reduced by 3% for each of the two years before his Age-62 NRD, a reduction of 6%. Mike’s adjusted RPE benefit is therefore $2,000/year times 94% or $1,880.

Step 4: Determine Mike’s Total Annual Lifetime Benefit

We determine Mike’s total annual lifetime benefit starting January 1, 2020 (when he is age 60) by adding the results of Step 1, 2 and 3. His total annual benefit will equal $11,571 plus $11,245 plus $1,880 or $24,696.

Starting July 1, 2020, when Mike is age 60, he will receive an annual Basic Plan benefit of $24,696.

- This benefit will be paid monthly ($2,058 per month) for life.
- This assumes Mike chooses to receive his benefit as a “Single Life Annuity.” See Section V to learn about other available payment forms.
If You Retire and Decide to Defer Benefit Payments

When you leave MIT, you may:

- Start your pension right away or
- Defer payment of your pension to a later date. You may not defer to a date later than April 1 of the year following the calendar year in which you reach age 70 ½, or, if later, terminate employment.

If you defer payment, you will receive a greater annual benefit because of the shorter period of time over which payments are expected to be made. Your benefit will be calculated using the actuarial adjustment factors described in the previous examples, based on the age when you retire.

Calculating Your Cash Balance Benefit

To determine your Cash Balance Benefit, we need to know your Cash Balance Account at retirement – Basic Credits plus Interest Credits – as well as the actuarial factor that will convert your Cash Balance Account into an equivalent annual lifetime pension.

Remember that Basic Credits are **5% of Compensation each year**. Let’s assume you earn $40,000 each year. Your Basic Credits are 5% of $40,000, or $2,000 each year. In addition, you earn Interest Credits each year based on market rates for a fixed income portfolio. Assuming the Cash Balance Account grows at an average annual rate of 4% and you retire at age 65 after a 20-year career, your Cash Balance Account at age 65 is approximately **$60,000**, consisting of both Basic Credits plus Interest Credits.

This $60,000 would produce a pension of $5,400/year ($60,000 x 9%) using the annuity conversion factors required under the Basic Plan terms and supplied by MIT’s actuary. These factors change every year based on market interest rates and depend on the age at which benefits start. (See the sidebar [to the right] for more information.)
IV. Cost-of-Living Adjustments After Your Benefit Starts

In general, cost-of-living adjustments will be made to your pension payments every three years, starting on the third July 1st on or after your Normal Retirement Date (or your actual retirement date, if later). Each adjustment is 75% of the cumulative rise in the Consumer Price Index (CPI) over the prior three years (measured on March 31) to a maximum of 10%.

To see how this works, let's look at an example. Let's assume Lucas retires at age 65, his Normal Retirement Date, on July 1, 2015. His monthly benefit from the Basic Plan is $1,000.

On the third July 1st after Lucas’s Normal Retirement Date – July 1, 2018 – Lucas will be eligible for his first cost-of-living adjustment to his monthly pension from the Basic Plan. For illustration purposes, let's assume the CPI has risen by 12% between March 31, 2015 and March 31, 2018. Here is how Lucas’s adjusted pension will be determined:

- Calculate 75% of the increase in the CPI between March 31, 2015 and March 31, 2018:
  
  75% of 12% = 9%

- Because 9% is smaller than the maximum increase of 10%, Lucas’s pension of $1,000 per month will be increased by 9%, or $90 per month.

- Starting July 1, 2018, Lucas will start to receive an increased pension of $1,090 per month ($1,000 plus $90).

This cost-of-living adjustment process will be repeated on July 1, 2021 and every three years after that for Lucas’s lifetime. In addition, if you are an employee with two Normal Retirement Dates, you will have an adjustment on the third July 1st on or after age 62 with respect to benefits earned before 2004.

Employees who retire after their Normal Retirement Date will have their first cost-of-living adjustment prorated. For example, an employee with a Normal Retirement Date of July 1, 2010 who retires a year later on July 1, 2011 will be eligible for his or her first adjustment on July 1, 2013. The amount of the first adjustment will equal two-thirds of the increase the
retiree would have received had he or she retired on his/her Normal Retirement Date (July 1, 2010 in this example).

Employees who leave MIT and start their Basic Benefit before their Normal Retirement Date will not receive any cost-of-living increases until the third July 1st after their Normal Retirement Date.

The cost-of-living adjustment will not apply to the Early Retirement Supplement or the Qualified Spouse Benefit. These benefits are provided to former RPSM members. See pages 32 and 50 for more information.
V. How Your Basic Plan Benefits Are Paid

Standard Forms of Payment for Single and Married Employees

If you are single when you start to receive your benefit from the Basic Plan, the standard form of payment is a **Single Life Annuity**. Under this form of payment, your monthly benefit will continue throughout your lifetime and cease upon your death.

If you are married when you start to receive your benefit from the Basic Plan, the standard form of payment is a **50% Joint and Survivor Annuity**. Under the 50% Joint and Survivor Annuity, you will receive reduced payments throughout your lifetime with the provision that your spouse will continue receiving 50% of your benefit for his or her life after your death. The amount of the reduction in your benefit depends on your age and your spouse’s age at the time your benefit begins.

Alternatively, you may elect one of the optional forms described [below]. If you are married, election of some options may require written, notarized consent from your spouse.

Other Forms of Payment Available Under the Basic Plan

The Basic Plan offers the following payment options:

<table>
<thead>
<tr>
<th>Form of Payment</th>
<th>Description</th>
<th>Conditions of Election</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Life Annuity</td>
<td>Payments continue for your life, ceasing upon your death</td>
<td>Your spouse’s written, notarized consent is required if you are married</td>
</tr>
<tr>
<td>Joint and Survivor Annuity with 50%, 66 2/3%, 75% or 100% of your benefit continued to your spouse or other designated beneficiary</td>
<td>Reduced payments continue for your life with the specified percentage continuing to your spouse or designated beneficiary for life after your death</td>
<td>Your spouse’s written, notarized consent is required if you are married and designate a beneficiary other than your spouse</td>
</tr>
<tr>
<td>A Period Certain Annuity (combined with another form of annuity payment) with 5, 10, 15 or 20 years of payments guaranteed</td>
<td>Payments guaranteed to continue for the specified period (Must be elected with either a Single Life Annuity or a Joint and Survivor Annuity)</td>
<td>Your spouse’s written, notarized consent is required if you are married</td>
</tr>
<tr>
<td>Single Sum</td>
<td>The full value of your Basic Plan benefit paid to you in a Single Sum (automatic if the value of your benefit is $1,000 or less)</td>
<td>A Single Sum may be elected only if you have 10 or fewer years of service when you leave MIT or your Cash Balance Account is $10,000 or less. (Your spouse’s written, notarized consent is required if you are married.)</td>
</tr>
</tbody>
</table>
Examples of Different Payment Forms

To give you an idea of how these options work, let’s assume you are married and that you and your spouse are the same age. Let’s also assume your monthly benefit at age 65 is $1,000 and you choose to start your benefit at that time. Here are some of the optional payment forms available to you:

<table>
<thead>
<tr>
<th>Form of Payment</th>
<th>Monthly Benefit Paid to You Throughout Your Lifetime</th>
<th>Monthly Benefit Paid to Your Spouse Following your Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Life Annuity*</td>
<td>$1,000</td>
<td>None</td>
</tr>
<tr>
<td>Single Life Annuity with 10 years of payments guaranteed*</td>
<td>$947</td>
<td>$947 (only for any balance of the 10 year guaranteed period remaining after your death)</td>
</tr>
<tr>
<td>50% Joint and Survivor Annuity (Standard Form)</td>
<td>$912</td>
<td>$456</td>
</tr>
<tr>
<td>50% Joint and Survivor Annuity with 10 years of payments guaranteed*</td>
<td>$887</td>
<td>$887 (only for any balance of the 10 year guaranteed period remaining after your death); $443 for life thereafter</td>
</tr>
<tr>
<td>75% Joint and Survivor Annuity</td>
<td>$874</td>
<td>$655</td>
</tr>
<tr>
<td>75% Joint and Survivor with 10 years of payments guaranteed*</td>
<td>$860</td>
<td>$860 (only for any balance of the 10 year guaranteed period remaining after your death); $645 for life thereafter</td>
</tr>
<tr>
<td>100% Joint and Survivor Annuity</td>
<td>$839</td>
<td>$839</td>
</tr>
<tr>
<td>100% Joint and Survivor with 10 years of payments guaranteed*</td>
<td>$834</td>
<td>$834 (guaranteed for any balance of the 10 year period remaining after your death); $834 for life thereafter</td>
</tr>
</tbody>
</table>

* Would require written, notarized consent from your spouse, if you are married.

For purposes of these elections, a spouse is the person to whom you are legally married on the date benefit payments begin. If required under a Qualified Domestic Relations Order, a former spouse may be treated as a spouse or surviving spouse for purposes of the Joint and Survivor Annuity.
Single Sum Distributions

If you leave MIT with ten or fewer years of service – or if your Cash Balance Account is $10,000 or less – you may elect a Single Sum instead of a lifetime pension. The amount of the Single Sum will be (a) or (b) below, whichever is greater:

(a) The Actuarial Equivalent of your Career Pay Benefit multiplied by 1.25 (This reflects the estimated value of post-retirement cost-of-living adjustments.)

(b) Your Cash Value Account multiplied by 1.25 (This reflects the estimated value of post-retirement cost-of-living adjustments.)

Please note that if the value of your Basic Plan benefit is $1,000 or less, your benefit will be distributed to you automatically as a Single Sum.

Keep in mind you may elect to roll over all or a portion of a Single Sum payment directly to another employer’s plan that will accept your rollover, or to an Individual Retirement Account (IRA). If you choose a direct rollover:

- Your distribution from the Basic Plan will be transferred directly to your IRA or another employer’s plan that accepts your rollover.
- Your distribution will not be taxed in the year of the rollover and no income tax will be withheld.
- Your distribution will be taxed later when you take it out of the IRA or other employer’s plan.
- If you are over 70 ½ at distribution, a portion of your Single Sum may not be eligible for a rollover.

If you choose to have your Single Sum paid to you rather than rolled over:

- You will receive only 80% of the amount of your payment because 20% federal income tax must be withheld.
- Your payment will be taxed in the current year unless you roll it over, generally within 60 days of your receipt of the distribution.
Maximum Benefits

Federal regulations specify certain limits on the amount of benefits that can be paid to any individual from a retirement plan. If you become affected by these rules, you will be notified and given further explanation at retirement.

Payment of Benefits and Tax Considerations

Amounts you receive from the Basic Plan are subject to federal income taxes. As noted above, if you receive a Single Sum, you can defer current federal income tax by electing to roll over your payment to another employer’s plan or an IRA.

The federal income taxes you pay on your Basic Plan benefits will be based on your individual tax situation. You should also review the state and local tax laws that may apply to you. Because tax laws change from time to time, you should consult with a tax advisor at the time your payments begin to understand what laws and rules apply.
VI. Benefits in the Event of Your Death

Death Before Benefits Start

If you die before your benefits have started, the value of your benefit from the Basic Plan will be paid to your beneficiary after adjustment to reflect your age at death and the age of your beneficiary.

- **If your beneficiary is your spouse**, he or she will have the choice of receiving payment as a Single Sum or Single Life Annuity. Under federal tax law, Single Sums must be paid by December 31 following the fifth anniversary of your date of death, and may be rolled over to an IRA. Single Life Annuities must start by April 1 of the year following the year you would have attained age 70 ½. Please note that if the value of the death benefit is $1,000 or less, it will be distributed to your spouse automatically as a Single Sum.

- **If your beneficiary is not your spouse**, he or she will receive payment as a Single Sum. Under federal tax law, payment must be made by December 31 following the fifth anniversary of your date of death.

If you are married and wish to designate a beneficiary who is not your spouse, your spouse must provide consent to your designation. If you do not designate a beneficiary, your default beneficiary will be your spouse (if you are married) or your estate (if you are not married).

*If you were a participant in the RPSM before July 1, 1989, your spouse may be eligible for a special Qualified Spouse Benefit, as described later in this section.*

Death After Benefits Start

If you die after your monthly pension has started, benefits to your spouse or other beneficiary will depend on the form of payment you selected before your pension began. Refer to Section V for information on forms of payment. If you received a Single Sum instead of a monthly lifetime pension prior to your death, no payments will be made to your spouse or other beneficiary.

*If you were a participant in the RPSM before July 1, 1989, your spouse may be eligible for a special Qualified Spouse Benefit, as described later in this section.*

Qualified Spouse Benefits for Former Participants in the RPSM

If you participated in the RPSM before July 1, 1989, your surviving spouse may be eligible for a special Qualified Spouse Benefit (or QSB) under certain circumstances. If you and your spouse both meet the eligibility conditions, this benefit will be payable in addition to any other death
benefits payable from the Basic Plan. This benefit is payable to your spouse upon your death (either before or after your retirement).

The eligibility conditions are as follows:

- You die when you are age 55 or older
- You have 10 or more years of MIT service on your date of death or termination date (if earlier)
- You have been married to your spouse for at least three years immediately prior to your date of death or termination date (if earlier) and
- You are not divorced or legally separated from your spouse at the time of your death.

The QSB benefit is generally 50% of the monthly lifetime pension that could be provided to you by your RPSM balance (greater reductions apply if your spouse is more than ten years younger than you). For the purposes of this calculation, your RPSM balance is your actual balance as of December 31, 1998 adjusted with assumed rates of investment return from December 31, 1998 until the earlier of your date of death, termination date, or the July 1st on or after your 65th birthday.

This balance is then converted to a monthly lifetime pension based on your age and the Basic Plan’s actuarial conversion factors in effect at the calculation date. If your eligible spouse is more than 10 years younger than you, actuarial reductions will apply to reflect the longer expected payout period.

If you are eligible for a QSB and about to retire, you have the option to increase the QSB available to your spouse to reflect the value of retirement benefits earned after June 30, 1989. In exchange, your Basic Plan benefit will be based only on the Cash Balance Benefit (rather than the greater of the Cash Balance Benefit and the Career Pay Benefit). In addition, your Cash Balance Benefit will not be adjusted for future cost-of-living increases.
VII. Special Circumstances

Disability
If you become totally disabled and are receiving disability payments from MIT’s Long-Term Disability Plan, you will continue to earn Basic Plan benefits while you receive disability payments as if you were continuing to work at MIT at your pay rate immediately before you became disabled.

Breaks in Service
If you have already started your benefits and you are rehired at a 50% schedule or more, your benefit payments will be suspended until your Normal Retirement Date or your termination of employment, whichever comes first. When your benefit resumes, it will be paid in the same form as before you were rehired. In addition, your benefit will increase to reflect the benefits you earned during your period of re-employment.

If you have not yet started your benefit when you are rehired, you will continue to earn benefits during your re-employment that will be added to the benefits you earned during your earlier period of employment.

Military Leave
Upon your return to MIT immediately following your military leave, you may receive retroactive benefit credit for your period of military service as if you had been employed at MIT at your rate of pay immediately prior to your military leave.

Sabbaticals or Other Leaves of Absence
While you are on sabbatical or any other paid leave of absence, you will earn benefits as though you were actively employed. While you are on an unpaid leave of absence, however, you will not earn benefits under the Basic Plan.

Contractors and Leased Employees
If you are not classified by MIT as an employee, for example if you are an independent contractor or leased employee, you will not be eligible for the Basic Plan. If you are later reclassified as an employee, you may become eligible if you meet the requirements above at the time of reclassification, but you will not be eligible for any prior period, even if the reclassification is made on a retroactive basis.
VIII. How to File for Benefits

To find out what you need to do to start your pension, please refer to MIT's pension web site PensionConnect at https://mitpension.ehr.com. Alternatively, you may call 1-855-464-8736 (1-855-4MITPEN).

Claim Procedures

You should receive benefits to which you are entitled when you satisfy the Basic Plan’s requirements. If you believe an error has been made with respect to your benefits under the Basic Plan, you (or your authorized representative) should promptly make your claim in writing to the Director of Benefits.

Timing of Claim Decision

The Director of Benefits will consider your claim for benefits. If your claim is denied, in whole or in part, the Director of Benefits will give you (or your representative) a written (or electronic) notice of the decision within 90 days after your claim is received by the Director of Benefits or within 180 days if special circumstances require an extension of time to process your claim. You will be notified if any extension is required, the special circumstances requiring an extension and the date when a determination is expected.

Disability. If your claim for benefits relates to disability retirement benefits, any claim regarding your disability status will be determined under the applicable disability plan maintained by MIT.
Notice of Claim Denial

If you are denied a claim for benefits, the Director of Benefits will provide you with a written or electronic notice setting forth in clear, understandable language:

- The specific reason(s) for the denial
- Specific reference(s) to pertinent Basic Plan provisions upon which the denial is based
- A description of any additional material or information necessary for you to perfect the claim, and an explanation of why such material or information is necessary
- A description of the Basic Plan’s claims review procedure and the time limits applicable to such procedures, including a statement of your right to bring a civil action under Section 502(a) of ERISA following a denial of benefits on review

Appeal of Claim Denial

You (or your representative) may request a review of a denial of a claim to the Director of Benefits by filing a written application for review within 60 days after your receipt of the written notice of the denial of your claim. You may submit written comments, documents, records and other information relating to your claim without regard to whether such information was submitted or considered in the initial benefit determination. The Director of Benefits will conduct a full and fair review of your claim denial.
Timing of Decision on Appeal
The Director of Benefits will notify you of the determination on review within 60 days after receipt of your request for review, unless the Director of Benefits determines that special circumstances require an extension. The extension may not be longer than 60 days. You will be notified if any extension is required, the special circumstances requiring an extension and the date when a determination is expected.

Notice of Benefit Determination on Review
The Director of Benefits will provide you with a written or electronic notice of the determination on review and, if your claim on review is denied, the notice will set forth in clear, understandable language:

- The specific reason or reasons for the denial
- The specific Basic Plan provision(s) on which the decision is based
- A statement that you are entitled to receive upon request and free of charge, reasonable access to, and copies of, all documents, records and other information relevant to your claim for benefits
- A statement of your right to bring a civil action under Section 502(a) of ERISA following a denial of benefits on review

You must use the administrative claim procedures in the Plan before bringing action under ERISA in a court or any other forum.
IX. Other Information

Basic Plan Funding
MIT pays the full cost of providing your pension benefit. Periodically, an independent actuary makes a valuation of the Basic Plan’s assets and liabilities and recommends how much MIT should contribute to keep the Basic Plan funded on a sound basis. According to the terms of the Basic Plan and a trust agreement, contributions are paid into a trust fund maintained by the Basic Plan’s Trustee.

Continuation, Amendment, or Termination of the Basic Plan
MIT reserves the right to change, modify, discontinue or terminate the Basic Plan, in whole or in part, at any time and for any reason. MIT or its duly authorized officers can take such actions. In the event of Basic Plan termination, your benefit accrual will stop and the benefit you have earned under the Basic Plan will become fully vested.

The Basic Plan can be amended by approval of the Executive Committee of MIT or other person or committee of persons as may be designated by the Executive Committee. The Basic Plan can also be amended by approval of the President of MIT, or other MIT officer designated by the President, as may be necessary or desirable, in the sole discretion of such officer, to conform the Basic Plan with applicable law, clarify ambiguous plan language, simplify or modify plan administration, or simplify or modify other plan language of a technical or clerical nature. Amendments to the Basic Plan may be retroactive if permitted by law. No amendment will reduce your accrued benefit under the Basic Plan or permit Basic Plan assets to be used for anything other than benefits for participants and beneficiaries and payment of Basic Plan expenses, except as permitted by law.

If the Basic Plan is terminated, its assets will be allocated to pay Basic Plan benefits and expenses, as required by law. Any remaining assets after all benefit liabilities have been satisfied may be returned to MIT.

Pension Benefit Guaranty Corporation (PBGC)
If the Basic Plan is terminated, benefits under the Basic Plan are insured by the Pension Benefit Guaranty Corporation (PBGC), a federal insurance agency. If the Basic Plan is terminated without enough money to pay all benefits, the PBGC will step in to pay pension benefits. Most people receive all of the pension benefits they would have received under their pension plan, but some people may lose certain benefits. The PBGC guarantee generally covers:
• Normal and early retirement benefits
• Disability benefits if you become disabled before the Basic Plan terminates and
• Certain benefits for your survivors.

The PBGC guarantee generally does not cover:
• Benefits greater than the maximum guaranteed amount set by law for the year in which
  the Basic Plan terminates
• Some or all of the benefit increases and new benefits based on provisions that have
  been in place for fewer than five years at the time the Basic Plan terminates
• Benefits that are not vested
• Benefits for which you have not met all of the requirements at the time the Basic Plan
  terminates
• Certain early retirement payments (such as supplemental benefits that stop when you
  become eligible for Social Security) that result in an early retirement monthly benefit
  greater than your monthly benefit at the Basic Plan’s Normal Retirement Date and
• Non-pension benefits, such as health insurance, life insurance, certain death benefits,
  vacation pay and severance pay.

Even if a portion of your benefit is not guaranteed, you still may receive some of those benefits
from the PBGC depending on how much money the Basic Plan has and how much money the
PBGC collects from employers.

For more information about the PBGC and the benefits it guarantees, ask your Administrator or
contact the PBGC’s Technical Assistance Division. Inquiries should be directed to:

PBGC Technical Assistance Division
1200 K Street, N.W.
Suite 930
Washington, DC 20005-4026
(202) 326-4000 (Not a toll-free number)

Telecommunications for the deaf (TTY/TDD) users may call the federal relay service toll-free at
1-800-877-8339 and ask to be connected to (202) 326-4000. Additional information about the
PBGC’s pension insurance program is available through the PBGC’s web site on the Internet at www.pbgc.gov.
Basic Plan Documents
This SPD describes the highlights of the Basic Plan and does not attempt to cover all the details. Additional details may be provided in the Basic Plan documents which legally govern the Basic Plan. The documents may be seen in the Administrator’s office during normal working hours. These documents include any documents filed with the U.S. Department of Labor, such as the plan’s annual financial reports. You may obtain copies of these documents by sending a written request to the Administrator. There will be a charge to cover copying costs. In the event of any discrepancy between this SPD and other Basic Plan documents, the Basic Plan documents will always govern.

Assignment of Benefits
The Basic Plan is designed to provide benefits exclusively for you or your beneficiary. Therefore, you may not sell, transfer, assign, or otherwise encumber your interest in the Basic Plan except as provided by law. All or some of your benefits may be assigned to a former spouse or a dependent child under a Qualified Domestic Relations Order (QDRO).

Loss of Benefits
Certain limits set by the IRS may reduce, eliminate or otherwise affect the amount of your benefit. The IRS prescribes limits on the compensation used to calculate your benefit as well as the dollar amount of benefit that may be provided under the Basic Plan.

Trustee
The Trustee for the Basic Plan is:

The Board of Directors of the MIT Investment Management Company, Trustees of the MIT Basic Retirement Plan
c/o MIT Benefits Office
E19-215
77 Massachusetts Avenue
Cambridge, MA 02139-4026

Top Heavy Rules
If the total accrued benefit value of certain “key employees” (in general, certain officers of MIT or an affiliate) equals or exceeds 60% of the total value of accrued benefits for all covered employees, the Basic Plan becomes “top heavy” and certain remedies are required. The remedies could include a shorter vesting schedule and minimum benefits for individuals who are not “key employees.” It is not expected that the Basic Plan will become top heavy. However, if the Basic Plan does become top heavy, you will be notified.
Qualified Domestic Relations Order (QDRO)

In general, a Qualified Domestic Relations Order or “QDRO” is a domestic relations order issued by a court that assigns all or a portion of a participant’s benefits under a qualified retirement plan to the participant’s former spouse, child or other dependent. For a domestic relations order to be “qualified,” it must meet certain legal requirements. Any payment made as the result of a QDRO will not violate the rule that benefits may not be transferred or assigned.

There are specific requirements the order must meet to be recognized by the Administrator and specific procedures regarding the amount and timing of payments. The Administrator has contracted with QDRO Consultants Co. to handle this process. If you are affected by such an order, you should contact QDRO Consultants Co. at (800) 527-8481 or by e-mail to HAdams@qdros. Participants and beneficiaries may obtain, without charge, a copy of the procedures governing QDRO determinations under the Plan from the Administrator or from QDRO Consultants Co., 3071 Pearl Road, Medina, OH 44256.

No Rights to Continued Employment

No provision of the Basic Plan or this SPD gives you the right to remain employed by MIT, prohibits changes in the terms of your employment, or prohibits the termination of your employment.

Interpretation of the Basic Plan

The Administrator has the exclusive power and discretionary authority to interpret the terms of the Basic Plan based on the Basic Plan documents, existing laws and regulations. This right includes, for example, discretion to interpret the Basic Plan to resolve questions with respect to an employee’s eligibility for benefits, service and retirement, or to interpret any other provisions of the Basic Plan document. The Administrator’s interpretations and determinations are binding on all Basic Plan participants, employees, former employees and their beneficiaries.

As a member of the Basic Plan, you are entitled to certain rights and protections under federal law through the Employee Retirement Income Security Act of 1974 (ERISA). ERISA provides that you are entitled to:

- Examine, without charge, at the Administrator’s office and at other specified locations, such as work sites and union halls, all documents governing the Basic Plan, including insurance contracts, collective bargaining agreements and a copy of the latest annual report (Form 5500 Series) filed by the Basic Plan with the U.S. Department of Labor, and available at the Public Disclosure Room of the Employee Benefits Security Administration.

- Obtain copies of all documents governing the operation of the Basic Plan, including insurance contracts and collective bargaining agreements and copies of the latest annual report (Form 5500 Series) and Summary Plan Description, upon written request to the Administrator. The Administrator may charge a reasonable fee for the copies.

- Receive a summary of the Basic Plan’s annual financial reports. The Administrator is required by law to furnish each participant with a copy of the summary annual report.

- Obtain a statement telling you whether you have a right to receive a benefit under the Basic Plan at your Normal Retirement Date and if so, what your benefits would be under the Basic Plan if you stop working now. If you do not have a right to a benefit, the statement will tell you how many more years you have to work to get a right to a benefit. This statement must be requested in writing, and is not required to be given more than once every 12 months. The Administrator must provide the statement free of charge.

**Duties of the Basic Plan Fiduciaries**

In addition to creating rights for Basic Plan participants, ERISA imposes duties upon the people who are responsible for the operation of the Basic Plan. The people who operate your Basic Plan, called “fiduciaries” of the Basic Plan, have a duty to do so prudently and in the interest of you and other Basic Plan members and beneficiaries. No one may fire you or otherwise discriminate against you in any way to prevent you from obtaining a benefit from the Basic Plan or exercising your rights under ERISA.
**Steps You Can Take to Enforce Your Rights**

ERISA specifically provides for circumstances under which you can take legal action as a Basic Plan participant. If your claim for a benefit is denied or ignored, in whole or in part, you have a right to know why the claim was denied, to obtain copies of documents relating to the decision free of charge, and to appeal any denial, all within certain timeframes.

Under ERISA, there are steps you can take to enforce the above rights. For instance, if you request a copy of the Basic Plan documents or the latest annual report and do not receive them within 30 days, you may file suit in a federal court. In such case, the court may require the Administrator to provide the materials and pay you up to $110 each day until you receive the materials, unless the materials were not sent because of reasons beyond the control of the Administrator.

If you have a claim for benefits that is denied or ignored, in whole or in part, you can file suit in a state or federal court. In addition, if you disagree with the Administrator’s decision, or lack thereof, concerning the qualified status of a domestic relations order, you may file suit in a federal court.

If the Basic Plan fiduciaries misuse the Basic Plan’s money, or if you are discriminated against for asserting your rights, you (or your beneficiary) may seek assistance from the U.S. Department of Labor or file suit in a federal court. The court will decide who should pay court costs and legal fees. If you (or your beneficiary) are successful, the court may order the person you have sued to pay these costs and fees. If you lose, the court may order you to pay these costs and fees, for example, if it finds your claim is frivolous.

**If You Have Questions**

If you have any questions about the Basic Plan, you should contact the Administrator. If you have any questions about this statement or about your rights under ERISA, or if you need assistance in obtaining documents from the Administrator, you should contact the nearest office of the Employee Benefits Security Administration (EBSA), U.S. Department of Labor, listed in your telephone directory, or the Division of Technical Assistance and Inquiries, Employee Benefits Security Administration, U.S. Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210. You can also obtain certain publications concerning your rights and responsibilities under ERISA by calling the publications hotline of the Employee Benefits Security Administration.
# XI. Basic Plan Identification Information

<table>
<thead>
<tr>
<th><strong>Employer</strong></th>
<th>Massachusetts Institute of Technology (MIT)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Official Plan Name</strong></td>
<td>The Massachusetts Institute of Technology Basic Retirement Plan</td>
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<tr>
<td><strong>Basic Plan Sponsor</strong></td>
<td>Massachusetts Institute of Technology  77 Massachusetts Avenue  Cambridge, MA 02139-4307</td>
</tr>
<tr>
<td><strong>Administrator</strong></td>
<td>The Administrative Committee of the MIT Basic Retirement Plan  c/o MIT  77 Massachusetts Avenue  Cambridge, MA 02139-4307  Telephone: (617) 253-4272</td>
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<tr>
<td><strong>Type of Administration</strong></td>
<td>Employer Administration</td>
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<tr>
<td><strong>Agent for Service of Legal Process</strong></td>
<td>Executive Vice President and Treasurer  c/o MIT  77 Massachusetts Avenue  Cambridge, MA 02139-4307  Service of legal process may also be made on the Administrator or Trustee.</td>
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<td><strong>Basic Plan Funding</strong></td>
<td>MIT pays the full cost of the Basic Plan. Assets of the Basic Plan are maintained in a Trust for the benefit of participants and their beneficiaries.</td>
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<td><strong>Basic Plan Trustee</strong></td>
<td>The Board of Directors of the MIT Investment Management Company, Trustees of the MIT Basic Retirement Plan  c/o MIT Benefits Office  E19-215  77 Massachusetts Avenue  Cambridge, MA 02139-4026</td>
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<tr>
<td><strong>MIT Benefits Office</strong></td>
<td></td>
</tr>
<tr>
<td><strong>On Campus</strong></td>
<td>At Lincoln Labs</td>
</tr>
<tr>
<td>77 Massachusetts Avenue</td>
<td>44 Wood Street, S2-170  Cambridge, MA 02139-4026  Lexington, MA 02420-9108  Telephone: (855) 253-6151  Telephone: (781) 981-7072</td>
</tr>
</tbody>
</table>
XII: Terms to Know

Defined Benefit Plan. This is a type of retirement plan under which a participant's pension is defined by formula, usually related to his or her pay and service with the sponsoring employer. Most defined benefit plans today are paid for entirely by employers and require no contributions from participants. Benefits usually increase as a participant's service increases, and are not affected by investment results. The MIT Basic Retirement Plan is a defined benefit plan.

Defined Contribution Plan. This is a type of retirement plan under which the contributions to an individual participant's account are defined each year, usually as a percentage of pay. Contributions may be made by the sponsoring employer, by individual participants, or both. The participant's account grows over time with accumulated investment earnings or credits. At retirement or termination of employment, the participant may take his or her benefit as an equivalent lifetime pension or as a Single Sum, depending on the provisions of the plan. The amount of benefit the participant ultimately receives depends on both the contributions made over time and investment results. The MIT Supplemental 401(k) Plan is a defined contribution plan.

Cash Balance Account. This is a bookkeeping account maintained for every participant in the Basic Plan, made up of Basic Credits and Interest Credits. The participant's Cash Balance Benefit is derived from the Cash Balance Account using actuarial equivalency factors.

Compensation. This includes the following items of your MIT pay while you are a member of the Basic Plan: your regular basic salary or wages, overtime, bonuses, shift differentials, summer session pay and temporary rates. It does not include any other type of compensation, such as incentives, awards, site differentials, and other payments for services not included above. Includible items of Compensation are generally counted under the Basic Plan only for months in which you are employed for at least 50% of a full-time basis. Federal law limits the amount of pay that may be used in a calendar year to determine pension benefits. This limit is generally adjusted annually with inflation and is $245,000 in 2010.

Basic Credits Under the Basic Plan. Each participant’s Cash Balance Account is credited monthly with a Basic Credit equal to 5% of his or her Compensation for that month. In general, the Basic Credit for a calendar month is credited to the participant’s Cash Balance Account on the last day of the calendar month (and after the addition of the Interest Credit for the month).

Interest Credits Under the Basic Plan. Each participant's Cash Balance Account is credited with an Interest Credit on the last day of each calendar month (before the addition of the Basic Credit for the month). The Interest Credit equals the monthly market rate of return on a
hypothetical fixed income portfolio for the 12 consecutive months ending June 30 of the immediately preceding calendar year. The return on the hypothetical fixed income portfolio is obtained by blending the returns of two indices, with a 75% weighting given to the Barclays Capital Aggregate Bond Index and a 25% weighting given to the Russell 3000 Index. The monthly rate of return expressed as an effective annual yield shall be no less than 0% and no more than 15%.

**Consumer Price Index.** This is the U.S. city average for urban wage earners and clerical workers as published by the Department of Labor.

**Normal Retirement Date.** This is the date at which a participant in a pension plan can start to receive full benefits, without reduction for starting benefits early. Under the terms of the Basic Plan, Normal Retirement Date is generally the first of the month on or after a participant's 65th birthday. For employees who worked at MIT between January 1, 1999 and December 31, 2003, however, Normal Retirement Date is the first of the month on or after the 62nd birthday for benefits earned before January 1, 2004.

**Spouse.** For purposes of the Basic Plan, spouse generally means a legally married opposite-gender or same-gender spouse. Special rules apply to the Qualified Spouse Benefit (QSB), however, based on the RPSM provisions in effect prior to July 1, 1989.
## APPENDIX A: Early Retirement Factors

### Appendix A

The Massachusetts Institute of Technology Basic Retirement Plan

### Early Retirement Factors

#### Normal Retirement Age (NRA) of 65

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<th>Age</th>
<th>Years PRIOR to NRA</th>
<th>Factor</th>
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APPENDIX B: Late Retirement Factors

### Late Retirement Factors

**APPENDIX B**

The Massachusetts Institute of Technology Basic Retirement Plan

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The actuarial basis underlying the above late retirement factors in this Appendix B is an effective annual interest rate of 5% and the 1983 Group Annuity Mortality Table with 50% male and 50% female blended rates.