

Massachusetts Bay Transportation Authority Retirement Fund

Investment Policy Statement



Revised and adopted by the Retirement Board: April 19, 2019

INVESTMENT POLICY STATEMENT

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

INVESTMENT POLICY STATEMENT

Initially adopted June 1993, revised and adopted by the Retirement Board: April 19, 2019

1. Purpose of this Investment Policy Statement.

The purpose of this Investment Policy Statement (this “IPS”) is to enumerate for stakeholders clear and concise guidelines by which the Retirement Board administers the Fund. This IPS is designed to allow sufficient flexibility to capture investment opportunities while providing guidance to facilitate compliance with the governing documents of the Fund and Massachusetts law. The Retirement Board periodically reviews this IPS to ensure that it conforms with best practices applicable to the Fund.

2. Background of the Fund.

The Massachusetts Bay Transportation Authority Retirement Fund (the “Fund”) is a private trust, established pursuant to a Declaration of Trust, dated January 1, 1948 (the “1948 Trust Agreement”). The Fund was established for the benefit of the employees of the Metropolitan Transit Authority. The Massachusetts Bay Transportation Authority was created in 1964 as the successor to the Metropolitan Transit Authority.

The Fund is a contributory defined benefit retirement plan for a single employer; it is generally exempt from federal and state income tax and, as a government plan, is exempt from ERISA. The Fund is governed by two documents; the Trust Agreement and the Pension Agreement (each defined below). The Fund continues as a distinct, private trust, “for the exclusive benefit of the members and their beneficiaries and to defray reasonable and necessary expenses”.¹ Capitalized terms not defined within the context they are used have the meanings set out in **Exhibit A** (Definitions).

3. Legal Authority; Structure.

The Trust Agreement, dated October 28, 1980 (the “Trust Agreement”), by and among the Authority, the Union and the Retirement Board, superseded and replaced the 1948 Trust Agreement. The current version of the Pension Agreement is dated as of July 1, 2014 (the “Pension Agreement”), and is the result of collective bargaining between the Authority and the Union. Pursuant to its terms, the Authority and the Union periodically renegotiate the Pension Agreement.

The Retirement Board is the sole trustee of the Fund pursuant to paragraph 1 of the Trust Agreement. The seven members of the Retirement Board are appointed pursuant to Article VI(1) of the Pension Agreement.

This IPS is created under the Retirement Board’s authority in paragraph 4 of the Trust Agreement. The Retirement Board has authorized and adopted this IPS pursuant to its authority under Article VI(8) of the Pension Agreement, which allows the Retirement Board to adopt rules for the administration of the Fund. As a private trust, the Fund is generally not subject to state law regulating public entities or laws specifically governing public pension funds,² however, the Fund complies with the Public Records Law

¹ See Trust Agreement Paragraph 2. The Pension Agreement sets retirement benefits of eligible retired members of the Fund as well as contribution rates for the employer and employees.

² When state law was amended in 1964 to revise M.G.L. c. 32 (the statute governing public pension plans for state, county and municipal employees), the Fund was expressly excluded from the purview of that statute.

(the “PRL”).³

4. Fiduciary Standards.

As the trustee of a private trust, the Retirement Board is subject to the terms of the Trust Agreement, Massachusetts common law, and the Massachusetts Prudent Investor Act.⁴ The Retirement Board’s interpretation of its duties required by the Trust Agreement, Massachusetts common law, and the Massachusetts Prudent Investor Act are set out in the Standards of Fiduciary Responsibility, a copy is attached hereto as **Exhibit B** (Standards of Fiduciary Responsibility) (the “Fiduciary Standards”). The Retirement Board adopted the Fiduciary Standards per Article VI(8) of the Pension Agreement. The Fiduciary Standards impose fiduciary obligations on each member of the Retirement Board as well as Fund employees and advisors. The Retirement Board periodically reviews best practices and applies appropriate policies to the Fund.

5. Duties and Responsibilities.

Each individual or entity fulfilling one of the roles below is expected to be familiar with and adhere to this IPS as well as comply with standards and codes of conduct applicable to their profession. Each service provider will execute a contract with the Fund outlining their roles, responsibilities, obligations and, where appropriate, reporting and performance expectations.

5.1. Retirement Board.

As the Fund’s trustee, the Retirement Board has sole authority over the management of the Fund, including “to invest and reinvest the assets of the Fund.”⁵ Pursuant to the By-Laws, the Retirement Board may appoint committees with powers as determined by the Retirement Board.⁶

5.2. Management.

The Executive Director is the chief executive officer of the Fund, who, with the assistance of the other members of Management, is responsible for day to day administration of the Fund, including implementing the policies of the Retirement Board, managing all employees and consultants as well as finalizing contracts and other administrative matters concerning Investment Managers. The Executive Director reports to the Retirement Board. The Trust Agreement recognizes the role of the Executive Director⁷ and the By-Laws state that the Retirement Board shall appoint and assign administrative duties to an Executive Director.⁸ The Trust Agreement stipulates that the Retirement Board shall elect a Chair and Secretary and “may authorize . . . any agent to execute or deliver any instrument or make any payment.”⁹ All employees of the Fund are fiduciaries.¹⁰

³ Chapter 121 of the Acts of 2016, effective January 1, 2017, specifically added the Fund to the definition of public records under M.G.L. c. 66. Since then, while reserving its rights to contest application of the PRL to a private trust, the Retirement Board authorized Fund management to comply with the PRL “in spirit”.

⁴ See M.G.L. c. 203C, §§ 1 et seq. For a discussion of how Massachusetts common and statutory law apply to duties of trustees see *The Woodward School for Girls, Inc. v. City of Quincy*, 469 Mass. 151 (2014).

⁵ See Trust Agreement Paragraphs 1, 3 and 8. For a discussion of the role of the Retirement Board and its members, see *MBTA Ret. Bd. v. State Ethics Comm’n*, 414 Mass. 582, 585 (1993).

⁶ See By-Laws Article II, Section 8.

⁷ See Trust Agreement, Paragraph 9.

⁸ See By-Laws, Article II(4).

⁹ See Trust Agreement, Article VI.

¹⁰ See Fiduciary Standards, Article 1.

5.3. Investment Advisor (Investment Consultant).¹¹

The Trust Agreement authorizes the Retirement Board to engage an Investment Advisor, which must “be either a bank, a trust company, an insurance company or an investment adviser registered as such” under the Investment Advisors Act.¹² Under the Trust Agreement, the Investment Advisor can be engaged to recommend investment policies, advise on asset allocation, and provide advice regarding the engagement or removal of Investment Managers. An Investment Manager is subject to the Fiduciary Standards.¹³ The Investment Advisor is responsible for monitoring Investment Managers for material changes in their performance or status (organizational, ownership or staff) as well as ensuring Investment Managers properly report to the Fund.

5.4. Investment Managers.

The Trust Agreement: (i) allows the Retirement Board to segregate a portion of the assets of the Fund and engage an Investment Manager to manage those assets and (ii) requires an Investment Manager to “be either a bank, a trust company, an insurance company or an investment adviser registered as such” under the Investment Advisors Act.¹⁴ Investment Managers are subject to the Fiduciary Standards.¹⁵ Each Investment Manager is required to execute a contract with the Fund that delineates such Investment Manager’s responsibilities, appropriate performance expectations and reporting obligations. While each Investment Manager is expected to adhere to this IPS, the contract between the Investment Manager and Fund may supersede this IPS.

5.5. Custodian.

The Trust Agreement permits the Retirement Board to appoint a Custodian and designate specific duties to it.¹⁶ The Custodian is subject to the Fiduciary Standards.¹⁷ The specific obligations of the Custodian are set out in a contract between the Fund and the Custodian, but, generally, the custodian is responsible for the physical retention and administration (including financial reporting) of Fund property it has received.

5.6. Actuary; Auditor.

The Pension Agreement directs the Retirement Board to retain an actuary to make annual actuarial valuations of the Fund’s contingent assets and liabilities and suggest to the Retirement Board rates of contribution.¹⁸ The Fund engages an auditor to audit its financial statements annually.¹⁹ The Fund engages the actuary to conduct an Experience Study approximately every five years.

5.7. Counsel; Investment Counsel.

The Trust Agreement envisions that the Retirement Board will engage counsel to provide legal advice. The Retirement Board has engaged Investment Counsel to assist Management in reviewing matters surrounding the investment and reinvestment of the assets of the Fund.

¹¹ While the principal investment advisor to a pension fund is typically referred to as the “Investment Consultant” this IPS refers to the ‘Investment Advisor’ in order to adhere to the term used in the Trust Agreement.

¹² See Trust Agreement, Paragraph 4.

¹³ See Fiduciary Standards, Sections 3.3.4 and 2.7.

¹⁴ See Trust Agreement, Paragraph 7.

¹⁵ See Fiduciary Standards, Sections 3.3.4 and 2.7.

¹⁶ See Trust Agreement, Paragraph 3.

¹⁷ See Fiduciary Standards, Sections 3.3.4 and 2.7.

¹⁸ See Pension Agreement, Article (VI)(9).

¹⁹ Article VI(13) of the Pension Agreement requires the Fund to produce a Comprehensive Annual Financial Audit (CAFR) following Government Finance Officers Association (GFOA) guidelines.

5.8. Proxy Voting Agent.

The Retirement Board will exercise ancillary rights associated with ownership of its assets (such as the right to vote as share or interest holders) for the exclusive purpose of enhancing the value of the Fund. The Retirement Board has adopted (and periodically reviews) a proxy voting policy and engages a third-party (proxy voting agent) to assist in implementation of the policy as well as suggesting periodic revisions and updates.

6. Investment Objective, Philosophy & Vehicles.

6.1. Investment Objective.

In fulfilling the mission of the Trust, the objective of the Retirement Board is to ensure the availability of sufficient assets to pay benefits by achieving the highest level of investment performance compatible with acceptable levels of risk in a cost effective manner and prudent investment practices in order to lower costs. Specifically, in order to maintain if not improve upon its funded status, the Retirement Board seeks to meet or exceed the actuarial target rate of return as further discussed in Section 7.1 (Rate of Return Assumption) (the “Assumed Rate of Return”). Maintaining if not exceeding the Assumed Rate of Return should have the benefit of stabilizing employer and employee contributions to the Fund. The Fund shall have a risk tolerance consistent with that of other funds created for similar purposes, and the assets of the Fund shall be invested accordingly. The Fund has adopted a Risk Management Framework, a copy of which is attached as **Exhibit C** (Risk Management Framework). As a mature defined benefit plan, the Fund will have a negative cash flow as more participants retire which, in turn, impacts the Fund’s tolerance for market volatility.

6.2. Investment Philosophy.

The Fund’s investment program is based on the precepts of the generally accepted capital markets theory of institutional investors, which holds that:

- Increasing risk is rewarded with compensating returns over time and, therefore, prudent risk-taking is justifiable for long-term investors.
- Risk can be mitigated through diversification of asset class exposure, implementation strategies and individual security holdings.
- Diversification benefits shall be measured by examining the correlation between asset classes, implementation strategies and manager styles, with a goal of maximizing diversification and limiting concentration and overlap in asset classes and strategies that are more highly correlated.
- The primary determinant of long-term investment performance is the strategic or long term asset allocation strategy.

The Fund’s adherence to these precepts results in a long-term asset allocation policy that balances the desired return with an appropriate risk level. The Retirement Board will evaluate the Fund’s performance over long term time horizons as well as complete market cycles, or, if warranted, more frequently.

6.3. Investment Vehicles.

The Fund generally utilizes two broad categories of investment vehicles to implement its investment strategy: (i) separate accounts pursuant to which the Investment Manager trades Fund assets (typically held by the Custodian), and (ii) commingled or pooled accounts of various structures and terms

managed by the Investment Manager (typically held by a vehicle managed by the Investment Manager). In each case, investments are governed by agreements between the Fund and the Investment Manager.

6.3.1. Separate Accounts.

The Fund typically attempts to invest in assets in the Equities and Fixed Income classes via a separate account due to the control and transparency afforded by that vehicle. However, a separate account vehicle may not be available or advantageous for a particular asset class or opportunity. The Fund has adopted a form of Investment Services Agreement it prefers to use when engaging an Investment Manager for a separate account.

6.3.2. Commingled Accounts.

Commingled funds are structured such that the Investment Manager is overseeing the assets of multiple investors with assets either held in custody at a bank designated by the Investment Manager or, more typically, by an investment vehicle created by the Investment Manager to execute a specific investment strategy. Some investment strategies are only pursued by commingled accounts. Mutual funds and/or other types of commingled investment vehicles, including, but not limited to, Alternative Investments, may provide lower costs and better diversification than can be obtained with a separate account that pursues the same investment objectives. Typically, once the investment has been made, the Fund holds an interest in the investment vehicle, which is managed by the Investment Manager pursuant to the document(s) that govern the vehicle ("Governing Documents"),²⁰ with the Fund (and all investors in the vehicle) having very limited, if any, management rights. The investment vehicle is, typically, illiquid due to either or both the redemption restrictions in the governing documents or the illiquidity of the underlying assets. Consequently, the right of the Fund to actively manage or redeem its investment in a commingled fund may be severely limited. This, however, does not diminish the obligation that the Fund, Retirement Board, Executive Director, Investment Advisor and Investment Counsel have to actively monitor and take reasonable actions regarding the investment.²¹ Finally, Investment Managers that control commingled funds, given that the vehicle has many investors, may be unwilling or unable to agree to adhere to the Fiduciary Standards, in which case the Fund shall utilize reasonable efforts to have the Investment Manager acknowledge fiduciary obligations to the investment vehicle (by virtue of its status as a Registered Investment Advisor or otherwise). The Retirement Board is willing to accept the potential downsides of a commingled account if the potential benefits (investment strategy, lower costs and diversification benefits) warrant.

6.3.2.1. Group Trusts.

A specific type of commingled account is a group trust. The investment theory behind pooling assets generally, and specifically with regard to group trusts, is to achieve economies of scale that allow for lower fees, enhanced risk management and more diverse investment opportunities. The Internal Revenue Service ("IRS") has ruled that tax exempt employee benefit plans (including 'government pension plans' like the Fund) may, if certain conditions are met, invest in group trusts without jeopardizing the tax status of the pension plan or the group trust (which the IRS has held to be tax exempt). Group trusts are frequently utilized surrounding passive investment strategies.

²⁰ Typically these agreements take the form of a limited partnership agreement, limited liability company agreement, trust agreement (or similar documents governing an off-shore entity) as well as a subscription agreement, offering memorandum and, in some cases, a side letter.

²¹ The Supreme Court's recent holding in *Tibble v. Edison International et al.*, 135 S.Ct. 1823 (2015) states that a trustee has a continuing duty to monitor and remove imprudent investments, which is separate and apart from the trustee's duty to exercise prudence in selecting an investment.

The Retirement Board shall have the authority to invest in group trusts that: (i) are established solely for the purpose of the investment of assets of pension and profit sharing trusts; (ii) are qualified and tax exempt under the Internal Revenue Code; and (iii) meet the requirements imposed by the IRS in Revenue Ruling 81-100. Prior to any investment in a group trust, the Retirement Board, with the assistance of the Executive Director, Investment Advisor and Investment Counsel, shall ensure that the group trust will maintain separate records of account for the assets of the Fund within the group trust fund in order to properly reflect the Fund's share. The Retirement Board may appoint as an ancillary trustee of the Fund, the trustee of any group trust fund designated for investment; provided, however that such ancillary trustee or its affiliate must: (i) be a bank or similar financial institution supervised by the United States or by a state and (ii) maintain the group trust fund exclusively for the collective investment of money contributed by the ancillary trustee (or its affiliate) in a trustee capacity that, as is required by IRS rules and regulations: (a) conforms to the rules of the Comptroller of the Currency then, and (b) conforms to the provisions of the group trust agreement that governs the investment of assets, which are incorporated by reference herein and become part of the plan documents of the Fund. The investment powers delegated to the ancillary trustee shall include only, and be limited to, the right to invest the portion of the assets of the Fund that are held in the group trust fund and only pursuant to the trust agreement of the group trust.

6.3.2.2. PRIT.

Notwithstanding the fact that the Fund is a private trust, Section 23 of the 2018 Budget Bill amended M.G.L. c. 32, Section 1 to expand the definition of a "system" to include the Fund. This authorizes, but does not require, the Fund to invest in PRIT as a Purchasing System, as that term is defined in the PRIT Trust Agreement. PRIT is a pooled investment fund that invests retirement assets of the Commonwealth as well as counties, authorities, school districts and municipalities of the Commonwealth. A system may invest all its assets in PRIT (by investing in the General Allocation Account) or, alternatively, purchase units in individual asset classes (referred to by PRIT as the 'segmentation program' (the "PRIT Segmentation Program"))²². The Fund shall be permitted to invest in PRIT upon appropriate authorization of such investment. For purposes of this IPS, an investment in PRIT will be considered an investment in a commingled account with PRIM as the Investment Manager. It is recognized that an investment in PRIT, whether or not through a PRIT Segmentation Program shall principally be governed by statutes pertaining to PRIT and PRIM (and not a Governing Document).

7. Fund Return Targets and Asset Allocation Strategy.

7.1. Rate of Return Assumption.

The Retirement Board will, with the assistance of the Actuary²³ and Investment Advisor, establish and annually review the Assumed Rate of Return and may adopt changes over a market cycle or more frequently if warranted. The current Assumed Rate of Return is 7.5% annually, net of all fees and operating expenses. The Assumed Rate of Return shall be revised by the Retirement Board and this IPS shall be automatically revised by stating the newly adopted Assumed Rate of Return on **Schedule 1**,

²² The PRIT Segmentation Program was authorized by a 1994 amendment to the PRIM Trust Agreement. Currently there are ten accounts available through the PRIT Segmentation Program (Domestic Equity, International Equity, Emerging Markets, Core Fixed Income, Public Value Added Fixed Income, Real Estate, Hedge Fund, and Private Equity Vintage Year accounts). See also Sec. 3.4 of the Operating Trust Agreement of PRIM, dated September 22, 1998.

²³ Pursuant to Article VI(9) of the Pension Agreement, the actuary (annually) values the contingent assets and liabilities of the Fund (to assist the Retirement Board in fixing rates of contributions to the Fund). The actuary also periodically (every 3-5 years) performs a Asset-Liability Management (ALM) study.

along with the date of adoption.

7.2. Relative Return Objectives and Timeline.

The Fund shall seek to achieve a rate of return that ranks in the top half of the appropriate peer fund universes given a comparable level of risk and to achieve a long-term rate of return on investments that is equal to or exceeds both the Asset Allocation Index Return and the Policy Index Return, as each is defined in Section 7.5.2 (Definitions). Given its investment philosophy, the Retirement Board recognizes that the return targets may not be achieved in any single year; the Retirement Board will measure the performance of the Fund over an appropriate longer-term horizon.

7.3. Impact of Asset Allocation.

It is generally recognized that asset allocation decisions may account for up to 90% of the investment return for a large pool of assets; in terms of direct impact on the Fund's performance, the Fund's policy asset mix choice outweighs all other decisions. The Retirement Board shall manage the Fund to achieve the Assumed Rate of Return while adhering to fiduciary obligations and ensuring liquidity sufficient to pay benefits.

7.4. Current Asset Allocation Targets & Ranges.

The Retirement Board will, with the assistance of the Actuary and Investment Advisor, review the asset allocation targets at least annually and may adopt changes over a market cycle or more frequently if warranted by economic conditions. Factors considered in determining asset allocation include: (i) the Assumed Rate of Return; (ii) the risk tolerance of the Retirement Board; (iii) liquidity requirements; (iv) funded status; and (v) other characteristics unique to the Fund. The current asset allocation targets and ranges, as approved by the Retirement Board on September 16, 2016, are set forth below. The asset allocation may be amended by the adoption by the Retirement Board of a revised asset allocation, which shall be reflected on **Schedule 1** (Assumed Rate of Return / Asset Allocation) (along with the date of adoption) and shall automatically amend this IPS. The Retirement Board may temporarily suspend minimum or maximum exposure limits if factors such as liquidity needs or market conditions so require. As referenced in Section 6.3.2.2 (PRIT), the Fund may have the opportunity to invest in PRIT. If the Fund invests with a PRIT Segmentation Program, the Investment Advisor will, at the time of the investment is being considered by the Retirement Board, suggest to the Retirement Board allocations to the Fund's asset (sub)classes (if necessary), recognizing that a PRIT Segmentation Account may not fit uniformly into the Fund's asset allocation rubric; this assignment will impact the IM Benchmark(s) applicable to the PRIT Segmentation Account.

| ASSET CLASS | Target (%) | Minimum Exposure (%) | Maximum Exposure (%) |
|----------------------------------|------------|----------------------|----------------------|
| Equities | 43 | 38 | 48 |
| US Large Cap | 18 | 13 | 23 |
| US Small Cap | 7 | 4 | 10 |
| International Equity (unhedged) | 9 | 5 | 13 |
| International Small Cap | 2 | 0 | 4 |
| Global | 5 | 3 | 8 |
| Emerging Markets | 2 | 0 | 4 |
| | | | |
| Fixed Income | 25 | 22 | 32 |
| FI – Core | 8 | 4 | 12 |
| FI - Mortgages | 3 | 0 | 5 |
| FI - Real Estate Debt | 1 | 0 | 2 |
| FI – Inflation Linked Securities | 3 | 0 | 5 |
| FI – Bank Loans | 2 | 0 | 4 |
| FI – Global Multi Sector | 8 | 4 | 12 |
| | | | |
| Cash | 2 | 0 | 3 |
| | | | |
| Alternative Investments | 30 | 18 | 37 |
| Hedge Funds (FoHF) | 4 | 1 | 7 |
| Private Equity | 10 | 6 | 14 |
| Real Estate | 9 | 5 | 12 |
| Opportunistic – Hedge Funds | 2 | 0 | 4 |
| Risk Parity / Diversified Beta | 5 | 2 | 8 |

Notes to Asset Allocation:

1. At any time, in order to meet the Fund’s liquidity requirements, 3% of the Fund’s NAV may be held in cash reserves or a cash equalization account.
2. As of December 31, 2018, a single global equity manager is utilized to implement the global equity and emerging markets policy targets within limits set forth in their guidelines.
3. The Real Estate Equity target encompasses, core, value added and other real estate investment strategies.
4. The FI - Real Estate Debt portfolio is in the process of liquidation.

7.5. Performance Benchmarks for Investment Managers.

7.5.1. Total Fund Return.

Total Fund Return, as defined in Section 7.5.2 (Definitions), shall be compared against other corporate, jointly trusted and public pension plans of similar size and circumstances, as identified by the Investment Advisor. The Total Fund Return objective is to meet or exceed the Asset Allocation Index Return and the Policy Index Return.

7.5.2. Definitions.

Each of the following returns are measured over a specified period.

The “Asset Allocation Index Return” measures the success of the Fund’s current asset allocation. It is calculated by using index rates of return for each asset class multiplied by the actual percent allocated to each asset class. The difference between the Asset Allocation Index Return and the Total Fund Return

measures the effect of active management. If the Total Fund Return is greater than the Asset Allocation Index Return net of fees, then active management has added value.

The “Policy Index Return” measures the success of the Fund’s target asset allocation. It is calculated by using index rates of return for each asset class multiplied by the percent targeted to each asset class. The difference between the Asset Allocation Index Return and the Policy Index Return measures the effects of deviating from the target allocation. If the Asset Allocation Index Return is greater than the Policy Index Return net of fees, then deviating from the target allocation has added value. If the Asset Allocation Index Return is less than the Policy Index Return, then active management has not added value.

The “Total Fund Return” is the rate of return for the Fund’s investment portfolio. The Total Fund Return encompasses all sources of investment return including, but not limited to, dividends, interest, realized and unrealized gains and losses. The Total Fund Return may be reported both gross of investment management fees and net of investment management fees and in such reports the Investment Advisor must clearly state if those returns are gross or net of fees.

7.5.3. Investment Manager Benchmarks.

Net of fee returns generated by the Investment Managers shall be compared to a combination of passively managed index returns matching the managers’ specific investment styles, as well as the median manager in their appropriate peer group universe. Where applicable, benchmarks assigned to Fund investment managers are attached as **Exhibit D** (Investment Manager Benchmarks) (each, an “IM Benchmark”).

7.5.4. Rebalancing.

The actual asset allocation mix will deviate from the targets due to market movements, cash flows, and manager performance. The Retirement Board and Executive Director with the assistance of the Investment Advisor will review the actual asset allocation at least quarterly to determine compliance with the targets and rebalance as warranted. The Executive Director shall report material rebalancing activity to the Retirement Board.

8. Investment Manager Selection.

The Fund is committed to procurements that provide efficient selection of Investment Managers that will provide exceptional service and risk adjusted, cost effective performance. The Fund’s Investment Manager Selection Process has been developed and is subject to revisions by Management with the review and approval of the Retirement Board.

9. Manager Reporting and Review Process.

9.1. Reporting Requirements; Diligence by Management.

The investment contract executed by the Fund and each Investment Manager details the applicable reporting requirements. Generally, however, Investment Managers are responsible for reporting holdings, valuations and transactions monthly (Investment Managers within the Real Estate, Private Equity and Fund of Hedge Funds - Opportunistic asset classes report quarterly). Management is able to track assets held by the Custodian daily via information provided by the Custodian; this information is reconciled with the data provided by Investment Managers (when received (monthly or quarterly)). If Management identifies material issues in its daily review, Investment Managers are responsible for working with Management and the Custodian to address those issues. Through this information, Management, with the assistance of the Investment Advisor and Custodian, regularly verifies whether

each Investment Manager is meeting its applicable IM Benchmarks and adhering to guidelines. In addition Management, with the assistance of the Investment Advisor, conducts regular due diligence on Investment Managers in order to understand the drivers of performance. If warranted, diligence may involve on-site visits with Investment Managers. Management reports material findings surrounding its Investment Manager monitoring and diligence to the Retirement Board, including identifying potential modifications to the investment strategy that could enhance performance.

9.2. General Obligations of Investment Managers.

In addition to the obligations referenced above Investment Managers are responsible for timely communicating in writing to the Executive Director material matters surrounding the investment of Fund assets, including, but not limited to: (i) changes in investment strategy, portfolio structure, tactical approaches and market value; (ii) the Investment Manager’s progress in meeting the Fund’s objectives and guidelines; (iii) changes in the ownership, structure, financial condition, key personnel, or clientele of the Investment Manager; and (iv) any material litigation or investigation concerning the Investment Manager, its affiliates or its key personnel. The Fund also expects that an Investment Manager will initiate written communication with the Executive Director if it believes that applicable guidelines of this IPS should be revised. Investment Managers are also required to provide: information evidencing compliance with the Fiduciary Standards, including documenting brokerage expenses, information supporting buy, sell or hold decisions, and, for Investment Managers other than PRIM, a copy of its most recently filed Form ADV (in compliance with the Investment Advisors Act). Investment Managers of separate accounts shall verify their compliance with this IPS annually.

9.3. Retirement Board Review Process.

In order for the Retirement Board to monitor performance and conduct continuing diligence, including receiving updates on how the investment strategy of the Investment Manager may have evolved, the Retirement Board meets with Investment Managers pursuant to the following schedule:

| Asset Class | Target Frequency | Group |
|------------------------------|-------------------------|--------------|
| Domestic Equity | Every Year | A |
| International Equity | Every Year | A |
| Global/Emerging Equity | Every Year | A |
| Fixed Income | Every Year | A |
| Hedge Funds | Every Year | A |
| Risk Parity/Diversified Beta | Every Year | A |
| Real Estate – Open End | Every Year | A |
| Real Estate – Closed End | Every 2 Years | B |
| Opportunistic | Every 2 Years | B |
| Private Equity | Every 3 years | C |

Note to Investment Manager Meeting Schedule:

1. The Retirement Board may delegate review of liquidating investments to Management subject to Retirement Board oversight through appropriate reporting (currently the Lifecycle Status Report) and provided that the investment is less than \$3 million in current value.

This schedule does not preclude the Retirement Board from meeting with any Investment Managers at any time if warranted (e.g. issues arise regarding performance, staffing or business practices).

9.4. Retirement Board Agenda for Periodic Review.

Typically, the Investment Advisor asks that presentations by an Investment Manager to the Retirement Board include the following:

9.4.1. Performance for Past Period.

Standard time periods for reports should include: (i) most recently completed calendar quarter; (ii) calendar year-to-date; (iii) prior calendar year; (iv) prior 3 years; (v) prior 5 years; and (vi) since inception. Returns should be annualized and calculated on a time-weighted basis for the total portfolio. All returns will include income and dividends and will be reported as gross and net of fees. Reports by the Investment Manager should specify where results are reported net of fees and where results are reported gross of fees.

9.4.2. Rationale for Performance Results.

A discussion of the rationale for performance results, relating results specifically to investment strategy and tactical decisions.

9.4.3. Specific Near-Term Strategy.

A discussion of the Investment Manager's strategy for the portfolio over the near-term period with specific reference to asset mix (including cash position) and expected portfolio characteristics.

9.4.4. Changes in the Investment Manager's Firm.

A discussion of any changes in the Investment Manager's firm including, but not limited to, professional turnover, ownership changes, investment strategy and philosophy, as well as any pending or threatened litigation that could have a material impact on the Investment Manager.

If the Retirement Board has significant concerns with the recent results, organizational stability or any other matter(s) impacting the performance of the Investment Manager, then the Retirement Board may elect to place the Investment Manager on a "Watch List". Investment Managers on the Watch List receive intensive oversight from Management and the Investment Advisor, which updates the Retirement Board.

10. Investment Manager Guidelines.

10.1. Introduction.

10.1.1. General Guidelines and Monitoring.

Each Investment Manager is provided full discretion, within the parameters of this IPS, to purchase, sell and hold securities as well as the timing of those transactions. When the guidelines contain a limitation expressed as a percentage that percentage shall be measured solely with reference to the portion of the Fund's assets under the control of the specific Investment Manager. With regard to separate accounts, the Investment Manager may not purchase securities that would move the portfolio out of compliance with these guidelines. In the event that a separate account portfolio moves out of compliance with these guidelines as a result of market conditions or other changes outside the control of the Investment Manager, then the Investment Manager shall bring the portfolio back into compliance within 45 days or make a written request for a compliance waiver. The Retirement Board or the Executive Director may elect to provide an Investment Manager with a waiver from specific guidelines of this IPS (either within the investment contract or upon written request). This decision will be based on a documented rationale presented by the Investment Manager and a recommendation by the Investment Advisor. If the Executive Director provides such a waiver, then this will be communicated to the Retirement Board

by the Executive Director at the next regularly scheduled meeting of the Retirement Board. Each Investment Manager responsible for a separate account will be provided guidelines and a IM Benchmark (see reference to IM Benchmarks in Section 7.5.3 (Investment Manager Benchmarks)) in its investment contract. The Investment Advisor and Management will monitor the compliance of each Investment Manager with the asset allocation through monthly performance reports utilizing comparisons to the relevant benchmarks.

10.1.2. Public Equity Manager Styles and Size Characteristics.

Public equity managers deploying a growth strategy invest in companies that are expected to have above-average prospects for long-term growth (predominately companies with price/earnings ratios, price-to-book values, return-on-assets values, and growth-in-earnings values above the broader market). The so-called 'growth' companies typically do not declare dividends or are characterized by dividend yields below the broader market; they exhibit greater volatility than the broader market as measured by the risk statistics such as 'Beta' and 'Standard Deviation'.

Public equity managers deploying a value strategy invest in companies believed to be undervalued or possessing lower than average price/earnings ratios. These managers seek to identify companies that are 'underpriced.' Thus, these managers invest predominantly in companies with P/E ratios and price-to-book values below the broader market. The dividend yields of these so-called 'value' companies are typically in the high range as compared to the broader market and they exhibit lower risk as measured by risk measures such as Beta and Standard Deviation.

Managers of portfolios focusing on non-U.S. equities deploy a broad range of strategies including core international products, top-down country selectors, bottom-up security selectors, capitalization ranges, growth and value - oriented products and products using various mixtures of these strategies.

The delineation of portfolio assets by size varies by asset class (and can vary by manager within the (sub)class). Generally, entities within the Domestic Equities subclass of 'small cap' include companies with market capitalizations of less than \$2 billion; 'mid cap' stocks are securities of companies with a market capitalization of between \$2 billion and \$10 billion; the securities of 'large cap' entities generally have market capitalizations of \$5 billion or greater. The securities of non-US companies characterized as 'small cap' generally, include ventures with market capitalizations of less than \$5 billion. While size delineations are made on the asset allocation, the guidelines are not distinguished by the size of the underlying assets.

No more than 10% of the Fund's total portfolio may be placed with one (1) active Investment Manager and no more than 25% of the portfolio may be placed with one (1) passive Investment Manager (each as measured at the time of the investment). The Fund's assets should be no more than 20% of an Investment Manager's portfolio (as measured at the time of the investment).

10.1.3. General Performance Objectives.

Generally, each Investment Manager is reviewed during the relevant reporting period against its IM Benchmark. Also, in addition to any specific performance guidelines and targets stated in the subsections below addressing specific asset (sub)classes, each Investment Manager is required to achieve the following general minimum performance guidelines:

- a rate of return (after fees) that exceeds the IM Benchmark over a complete market cycle;
- cumulative performance results that consistently rank above the 50th percentile in a relevant style group, as adjusted for risk, over a market cycle; and
- positive risk/reward trade-off when compared to other managers in a relevant style group.

Given short-term market fluctuations, objectives are expected over full market cycles. Quarterly performance will be evaluated to test progress toward attainment of longer-term goals. There are likely to be short-term periods during which performance deviates from market indices; during such times, greater emphasis shall be placed on performance comparisons with managers employing similar styles.

10.2. Equity: Passive Managers.

Investment Managers of passively managed public markets equity strategies are responsible for matching the financial and risk characteristics of the applicable index (e.g. Russell 1000, Russell 2000). The Investment Manager may only invest in the securities that comprise the assigned index; provided, however, a manager may use index futures to expedite cash investments or liquidity.

10.3. Equity: Domestic Active Managers: Guidelines.

Domestic Equity Investment Managers are subject to the following specific guidelines:

- Investment Managers shall not utilize derivative securities that increase the actual or potential risk posture. Investment Managers may not purchase commodities, securities on margin, sell short, invest in private placements, real estate investments, excluding REITS. Investment Managers may utilize exchange-traded funds (“ETFs”) and futures contracts associated with the benchmark index and/or the underlying securities or sectors contained within the benchmark index to manage cash and maintain market exposure provided that the use is not to implement a leveraged portfolio structure.
- Portfolios are to generally remain fully invested. Investment Managers’ cash positions are not generally to exceed 5%. It is the responsibility of the Investment Manager to contact the Retirement Board to obtain authorization if and when it becomes clear that a cash position of more than 5% is warranted for more than 90 days.
- Generally, economic sector diversification will be as follows, where the comparable benchmark index sector weights represent:
 - 5% or less of the index: the lesser of five times the index weight, or 15%.
 - 5% to 15% of the index: the lesser of four times the index weight, or 30%.
 - Over 15% of the index: the lesser of two times the index weight, or 60%.
- Generally, investment in all classes of equity securities of any one issuer shall be limited to 5% of the market value of the portfolio. For those companies whose index weight is more than 5%, the following diversification guidelines will apply:
 - no commitment at the time of purchase should represent more than 1.25 times the benchmark weighting of the individual stock.
 - the maximum commitment to a single position will not exceed 1.5 times the benchmark weighting of the individual stock at any time.

10.4. Equity: International, Global & Emerging Market Managers.

10.4.1. International Equity: Guidelines.

International equity Investment Managers are subject to the following specific guidelines:

- Assets should primarily be in liquid, marketable securities.
- Investment Managers shall not utilize derivative securities that increase the actual or potential risk posture of the Fund nor may they purchase commodities, securities on margin, sell short, lend securities, invest in private placements, real estate investments, oil, gas and mineral

exploration investments, warrants, swaps and similar derivative investments, or other non-marketable securities unless specifically authorized by the investment contract.

- Investment Managers may utilize the futures contracts associated with the benchmark index and/or the underlying securities contained within the benchmark index provided that use is not to implement a leveraged portfolio structure.
- Portfolios are to generally remain fully invested. Managers' cash positions are not generally to exceed 5%. It is the responsibility of the Investment Manager to obtain authorization if and when it becomes clear that a cash position of more than 5% is warranted for more than 90 days.
- Without prior approval of the Fund, no single economic sector shall constitute more than 30% of the market value of the portfolio, or 1½ times its comparable representation in representative index, whichever is larger, without prior approval from the Retirement Board.
- Investment in all classes of equity securities of any one issuer must be limited to 8% of the market value of the portfolio.
- Investments in Emerging Markets require specific authorization within the investment contract.
- Investment Managers may hedge the currency risk of their portfolio for defensive purposes by utilizing currency derivatives; however, at no time can currency derivatives be used to leverage the portfolio or for speculation.

10.4.2. Global Equity: Guidelines.

The global equity Investment Managers' investments may include: (i) the common stocks of U.S. companies, (ii) American Depository Receipts ("ADRs"), (iii) U.S. exchange listed foreign company stocks, and (v) non-U.S. dollar denominated securities of countries included in the MSCI World Index. ETFs are permitted for the purpose of investing excess cash or gaining exposure to a sector or industry versus an individual security. These Investment Managers may hedge the currency risk of their portfolio by utilizing currency derivatives. At no time may such an Investment Manager use currency derivatives to leverage the portfolio or for speculation.

10.4.3. Emerging Markets Equity: Guidelines.

Emerging markets focused equity Investment Managers may invest in non-U.S. dollar denominated securities and ADRs of the countries included in the MSCI Emerging Markets Index or applicable index as detailed in the applicable IM Benchmark(s). Eligible securities will be listed on a regulated stock exchange or traded in a recognized market. ETFs are permitted for the purpose of investing excess cash or gaining exposure to a sector or industry versus an individual security. Such Investment Managers may also invest in the short-term investment fund of the Fund's custodian and individual securities that qualify for investment as detailed below in the Short-Term Investments section of this IPS. Such Investment Managers may hedge the currency risk of its portfolio by utilizing currency derivatives; provided, however, that such Investment Manager may not use currency derivatives to leverage the portfolio or for speculation.

To the extent that the Fund seeks to achieve its emerging markets equity allocation through a global equity Investment Manager through an overweight to the MSCI Emerging Markets Index, then the designated Investment Manager will be measured against a global equity index and a blended index that includes both a global equity index and an emerging markets index.

10.5. Fixed Income: Passive Managers.

Investment Managers deploying passive public markets fixed income strategies are responsible for matching the financial and risk characteristics of the Barclays Capital U.S. Aggregate index or other

specified fixed income index. The Investment Manager may only invest in the securities that comprise the assigned index; provided, however, a manager may use index futures to expedite cash investments and/or for liquidity purposes.

10.6. Fixed Income: Active Managers.

10.6.1. Fixed Income: General Guidelines.

Fixed income Investment Managers serve in a specialist role managing debt securities. Such Investment Managers are subject to the following specific guidelines:

- Investment Managers shall not utilize derivative securities that increase the actual or potential risk posture of the Fund unless authorized by strategy-specific guidelines. Investment Managers may not generally purchase commodities, securities on margin, or effect short sales of securities. Investment Managers may utilize the futures contracts associated with the benchmark index and/or the underlying securities contained within the benchmark index provided that use is not to implement a leveraged portfolio structure.
- No more than 10% of the portfolio shall be invested in the securities of any single issuer and no more than 5% of the portfolio should be invested in any single issue at the time of purchase. These constraints do not apply to direct or indirect obligations of the U.S. Government.
- Investment Managers are prohibited from investing in venture capital, private equity or limited partnerships, options, futures, warrants, swaps, other derivative investments (except collateralized mortgage obligations (“CMOs”) and commercial mortgage backed securities (“CMBS”) consistent with this Policy), unless notified by the Executive Director upon authorization by the Retirement Board.
- With regard to derivatives:
 - At no time may derivatives be utilized to leverage the Fund or for speculation.
 - The Investment Manager will maintain sufficient liquidity to meet margin requirements.
 - An Investment Manager investing in CMOs and CMBS shall comply at all times with the Department of Labor’s Statement on Derivatives, issued March 21, 1996, as amended.
 - Investments in CMOs and CMBS are limited to planned amortization class (PAC) and sequential issues so long as their inclusion is consistent with guidelines above; provided however, that companion tranches or support bonds, floaters, inverse floaters, income only, and principal only CMOs and structured notes are prohibited unless specifically allowed in the investment contract.
 - Prior to making an investment in CMOs and CMBS, the Investment Manager shall secure sufficient information to independently analyze the credit risk and market risk in making the investment, including the effects that such investments will have on the overall portfolio. Where appropriate, the Investment Manager should use stress simulation models showing the projected performance of the derivative and the portfolio under various market conditions, utilizing the most reliable price comparisons available.
 - After making such an investment in CMOs and CMBS, the Investment Manager shall timely obtain and analyze information regarding the Fund’s credit exposure and the current market value of its derivative positions and review with a frequency that is appropriate.
 - An Investment Manager may be given authority in the investment contract to utilize futures, forwards, interest rate swaps, and options; such instruments are permitted only: (i) when the Investment Manager deems the instrument more attractive than a direct investment or (ii) when used to manage risk and as long as risk would not be increased.

- The Investment Manager will monitor the risk of all positions by accounting for the impact on portfolio duration of each position, which will be used to calculate overall portfolio duration.
- No more than 10% of the portfolio may be invested in each of the following security types: emerging market debt (unless otherwise authorized by the investment contract), private placements, taxable municipal bonds, and convertible bonds; and no more than 20% of the portfolio may be invested in in Yankee Bonds or Eurobonds (as defined in Section 10.6.2 (Fixed Income: Core Guidelines)) unless notified by the Executive Director upon authorization by the Retirement Board

10.6.2. Fixed Income: Core Guidelines.

A domestic core fixed income Investment Managers' investments include securities that are included in the Barclays U.S. Aggregate Bond Index, subject to quality, duration and other limitations and may include: (i) U.S. dollar denominated obligations of the United States Government and its Agencies and instrumentalities, and U.S. corporations; (ii) U.S. corporations; (iii) mortgage-backed securities, including CMOs and CMBS; (iv) Asset Backed Securities (ABSs); (iv) registered Rule 144A securities if applicable; (v) municipal bonds, (vi) short term securities as detailed below in the Short-Term Investments section of this IPS; (vii) securities of foreign companies or foreign countries (sovereigns or supranationals) denominated in U.S. dollars, trading in the U.S. markets and capable of settlement in U.S. markets ("Yankee Bonds"); and (viii) dollar denominated obligations of U.S. companies trading outside the U.S. ("Eurobonds").

Fixed income securities must be rated at least BBB- by Fitch, Baa3 by Moody's or BBB- by Standard & Poor's at the time of purchase. If a security's rating falls below such grades, then the Investment Manager will immediately notify the Executive Director in writing of the event and describe its plan to address. Should the Investment Manager decide to continue to hold the downgraded issue, then the Investment Manager shall report to the Executive Director quarterly in writing as to the status of the security. In the event of a split rating, then the higher rating will be applied. The average option adjusted (effective) duration of the core fixed income Investment Manager's portfolio may not exceed 120% of the Barclay's Capital U.S. Aggregate Index.

10.6.3. Fixed Income: Mortgages Guidelines.

Investment Managers of the mortgage asset subclass serve in a specialist role managing mortgages and real estate debt securities. Unless authorized in its investment contract, then the following guidelines apply to each mortgage Investment Manager. Mortgage securities and mortgage-backed securities may be sourced directly or purchased through or by commingled funds. Selection and evaluation of mortgage securities, mortgage-backed securities, direct mortgages, and other debt instruments shall be assumed by each such mortgage Investment Manager utilizing prudent analysis including but not limited to analysis of credit enhancement, collateral characteristics, loan to value, debt service, diversification, prepayment options, risk adjusted spreads, liquidity, duration and convexity. Mortgage-backed securities may be related to residential and commercial properties and may include CMBS. If disclosed in the funds' prospectus, and subject to the investment guidelines therein, commingled funds may also invest a portion of the portfolio in non-mortgage related fixed income securities including but not limited to (i) cash, (ii) securities issued by the U.S. treasury, (iii) swap contracts; and (iv) agency debentures.

10.6.4. Fixed Income: Real Estate Debt Guidelines.

Real estate debt Investment Managers serve in a specialist role originating loans on real estate properties. Such loans include construction financing and permanent mortgages on real estate development properties secured by first-lien mortgages. The resulting portfolio should be geographically diversified as well as diversified by property type including office, condominium, retail, hotels, apartments, mixed use, medical office, and residential within the United States. Such Investment Managers must utilize prudent underwriting criteria including, but not limited to debt service and loan to value ratios and risk adjusted spreads over comparable maturity U.S. Treasury securities.

10.6.5. Fixed Income: Inflation Linked Securities Guidelines.

Assets of Investment Managers in the inflation linked securities subclass may include inflation-indexed bonds issued by the U.S. government, its agencies and instrumentalities and corporations. All bonds purchased by such Investment Manager must be rated "investment-grade" at a minimum. Such Investment Manager may invest a limited portion of the portfolio in holdings that are not inflation-indexed investments. These holdings may include (i) corporate debt obligations, (ii) U.S. government and agency bonds, (iii) futures, options and derivatives, (iv) restricted or illiquid securities, and (v) mortgage dollar roll transactions.

10.6.6. Fixed Income: Bank Loans Guidelines.

The senior bank loan Investment Manger invests primarily in senior-secured, floating-rate loans. At least 80% of total assets are invested in these loans, which are generally of below investment-grade quality. The remaining assets in the portfolio are invested primarily in short-term, higher quality debt securities. The portfolio is measured against the Standard & Poor's/Loan Syndications and Trading Association Index (S&P/LSTA), which is an unmanaged index of the institutional leveraged-loan market.

10.6.7. Fixed Income: Global Multi Sector Guidelines.

Global multi sector Investment Managers are provided broad flexibility to invest across markets, sectors, currencies and security types to access a larger opportunity set than is available within traditional fixed income indexes. As such, this asset subclass is characterized by a higher expected return, higher expected risk and greater variability in returns when compared to traditional benchmark-oriented fixed income managers and indexes. In evaluating the Fund's long-term asset allocation strategy, the Investment Advisor will assist the Fund in assessing the global multi sector Investment Manager(s)' underlying exposures to markets, sectors and currencies and the Investment Manager is expected to be transparent with regard to these issues. Given the broad range of markets, sectors and currencies accessed by the Investment Manager in this asset subclass, particular attention will be paid the assigned guidelines.

An Investment Manager in this subclass may invest in fixed and floating-rate debt securities and debt obligations of government or government-related or corporate issuers worldwide, foreign currencies or securities linked to assets or currencies of any nation, as well as any derivatives on any of those securities. Such Investment Managers may invest in U.S. Treasury securities; government/sovereign bonds; government-related bonds; supranational bonds; inflation-linked government bonds; mortgages including mortgage backed securities, asset-backed securities and commercial mortgage-backed securities; corporate bonds, including investment grade and high yield bonds; municipal bonds; convertible bonds and convertible preferred stock; emerging market debt securities; bank loans; private placement debt securities, including Rule 144A securities; collateralized debt obligations and collateralized loan obligations; money market instruments, cash and cash equivalents; and exchange traded funds/notes, mutual funds and other open-end investment structures.

As part of the strategy, the Fund may have short exposures. Under normal market conditions, the manager may invest up to 50% of total net assets in bonds that are rated below investment grade (below BBB-/Baa3) or securities that are not rated. In addition to the securities listed above, derivatives may be used by such Investment Managers, including for the purposes of managing the risks of the portfolio and gaining exposure to certain asset classes.

Such Investment Managers may leverage its capital if it believes that the use of leverage may enable the Fund to achieve a higher rate of return. Under normal market conditions, such Investment Manager will not borrow for investment purposes, but on an opportunistic basis, may borrow up to 35% of total net assets of the portfolio (this excludes short term borrowings for temporary cash management purposes).

10.7. Cash.

The Fund will utilize a short-term investment fund, commonly referred to as a 'STIF', as offered by the Custodian, to invest cash. The Custodian is also responsible for sweeping all Investment Manager accounts daily so that no cash is left uninvested. Finally, the Custodian is responsible for investing unallocated cash from the accounts of equity Investment Managers in a Cash Equalization Portfolio that provides exposure to equity markets through futures and other instruments.

10.8. Hedge Fund Managers.

10.8.1. Introduction.

The objective of the asset allocation to hedge funds is to reduce the volatility of the total Fund while maximizing returns in a variety of market conditions. A well-constructed hedge fund program should produce attractive absolute returns that are uncorrelated with other asset classes and with lower risk than long-only equities. The hedge fund allocation is implemented solely through a broadly diversified institutional quality of fund(s) of hedge funds ("FoHFs"). FoHF can be diversified across strategies and managers to reduce risks associated with a single hedge fund. When such funds-of-hedge funds or hedge funds are utilized, the Fund's portfolio is expected to benefit from broader diversification resulting in improved Sharpe Ratios at the portfolio level. The Fund considers an investment in the Hedge Fund Segmentation Account of PRIT (see Section 6.3.2.2 (PRIT)) to be a FoHF and may encompass opportunistic hedge fund strategies.

10.8.2. Performance Objectives.

Generally, hedge funds are expected to deliver absolute return characteristics and exhibit low correlations to long only equity or fixed income markets over market cycles or rolling three-year periods of time. FoHFs are expected to deliver over a rolling three-year period or a market cycle if longer, net (of fees), absolute returns that are greater than those available from active investment grade fixed income strategies and closer to that of active core large cap equity strategies, with materially lower risk. The Fund has targeted a composite return of T-Bills plus three hundred (300) basis points for the entirety of its hedge fund program. The program will also be evaluated versus commonly available hedge fund peer group indices, including those offered by HFRI (e.g. the HFRI Fund-of-Funds Index). The Investment Advisor, working with Management, shall establish performance objectives for each FoHF Investment Manager consistent with the strategy employed by Investment Manager. In addition, such Investment Advisor will compare the program and individual Investment Managers to relevant peer group universes.

10.8.3. Investment Guidelines.

The hedge fund Investment Manager must provide a minimum level of transparency regarding the underlying hedge fund managers, investment vehicles, and strategies to allow the Retirement Board and

its advisors to assess the performance and style. In most cases, this will include a list of underlying manager names, investment vehicle names, and strategies.

10.9. Private Equity Managers.

10.9.1. Introduction.

The objective of the asset allocation to private equity funds is, over the long-term, to enhance the rate of return over publicly-traded securities through an asset with a low correlation to other major asset classes (thereby reducing year-to-year portfolio volatility). Such Investment Advisor (or subadvisor) will, annually, prepare a long-term strategic portfolio structure after a review of asset allocation, investment criteria, performance expectations, and liquidity requirements; the strategic portfolio structure will be submitted to the Retirement Board each year for approval. Due to the potential of a conflict of interest, the Fund will not invest in proprietary investment products offered by its Investment Advisor.

10.9.2. Asset Allocation.

Private equity allocation risk is controlled through long-term subjective market value class and sub-class parameters. The private equity targets for the Fund are as set forth in the chart below. The Retirement Board recognizes that it is necessary to make capital commitments in excess of the target allocation in order to achieve and maintain the target allocation. Should the Fund invest in the Private Equity Segmentation Account of PRIT, then the Retirement Board, upon suggestion by the Investment Advisor, shall reasonably allocate such investments to the classes indicated below.

| Private Equity Strategy | Target Allocation | Minimum % | Maximum % |
|--------------------------------|--------------------------|------------------|------------------|
| Venture | 15% | 10% | 25% |
| Growth Equity | 10% | 5% | 20% |
| Buyouts | 20% | 10% | 30% |
| Mezzanine | 20% | 10% | 30% |
| Secondary's | 25% | 10% | 35% |
| Distressed | 2.5% | 0% | 10% |
| Energy | 2.5% | 0% | 10% |
| Special Situations | 5% | 0% | 10% |

Notes to Private Equity Strategy Allocation Schedule:

1. Secondary investments include allocations to multiple strategies.
2. Strategy targets are exclusive of potential allocations to the PRIT Segmentation Program (Private Equity).

10.9.3. Portfolio Performance.

The Fund monitors the performance and diversification of the private equity program at the portfolio, strategy and Investment Manager levels by:

- measuring the net Internal Rate of Return (by vintage year, strategy and Investment Manager) and comparing it to the return of a custom benchmark;
- evaluating the portfolio by Total Value to Paid in Capital, Distribution Ratio and Call Ratio;
- reviewing value or loss by strategy; and
- performing lifecycle analysis.

10.9.4. Risk Management.

Risk in the private equity portfolio is measured and managed through a combination of quantitative and qualitative constraints as listed below:

10.9.4.1. Liquidity.

Private equity investments are structured as commingled funds and are typically have holding periods of 10-12 years. Investments are typically held until maturity; selling prior to maturity is expected to require selling at a discount to fair value. Liquidity risk is managed by minimizing the possibility of forced sales, allocations to strategies that provide greater liquidity (e.g. mezzanine, secondaries) and conducting periodic liquidity tier analyses. Exposure is managed through commitment pacing and monitoring of multi-year cash flow projections.

10.9.4.2. Vintage Risk.

Vintage is tied to the first capital draw; vintage risk refers to the variability of private equity commitments overtime. The Fund controls the short- and long-term investment pacing that minimizes vintage risk while achieving targeted exposure. Secondary opportunities may be pursued to gain prior vintage year exposure.

10.9.4.3. Manager Risk.

Investment Manger risk consists of two elements: (i) the exposure within an investment vehicle and (ii) the number of private equity Investment Managers in the program. The exposure to a specific Investment Manager within an investment vehicle is controlled by limiting the commitment to a particular Investment Manager. The optimum number of Investment Managers in the portfolio varies with time.

10.9.4.4. Currency.

In recognition of the diversification benefits of investing internationally, the private equity program accepts the currency risks consistent with the geographic constraints of the investment opportunity. Private equity investments generally do not hedge currency risk and the private equity program will not implement currency hedges.

10.9.4.5. Industry and Geography.

Typically, private equity funds are permitted to invest in a wide variety of industries with limited controls. Industry risk is controlled primarily through appropriate diversification (strategies of) Investment Managers. Geographic risk is controlled through a long-term international target exposure. Global opportunities generally indicate geographic limits and exposure will be attributed and monitored accordingly.

10.9.5. Other Restrictions.

- By virtue of its investments in private equity comingled vehicles, the Fund may have opportunities to make direct investments in portfolio companies of the private equity fund or its affiliates. Direct investing in portfolio companies by the Fund is currently prohibited.
- Hedge Funds are not within the scope of the private equity program.
- Investments in real estate are not within the scope of the private equity program.
- Private Equity Investment Managers may focus on investments in options, futures, swaps or derivative securities.
- Stock distributions made to the Fund by an Investment Manager of publicly-traded companies will be liquidated within ninety (90) days of receipt and removal of trading restrictions. Unlisted and thinly traded stock distributions will be liquidated in an orderly manner.

10.10. Equity Real Estate Managers.

10.10.1. Portfolio Structure.

It is anticipated that investments in equity real estate will, over a full market cycle, produce an income return that is in excess of the yield of an investment grade, core fixed income investment combined with some level of equity appreciation. In addition, it is expected that equity real estate will exhibit a lower correlation with traditional equity and fixed income securities. The Retirement Board acknowledges that the nature of equity real estate investing may require that the Fund make commitments to both open- and closed-end commingled funds that may or may not offer regular liquidity to investors. The equity real estate program will be comprised primarily of two separate, but complementary, investment strategies: core and specialty.

10.10.1.1. Core.

Core property types include multi-family housing, retail, industrial and office buildings. These assets are characterized by stable and increasing income levels and are located principally in major metropolitan areas that exhibit reasonable economic diversification (i.e., multiple industry economy). Properties will be of institutional quality construction.

10.10.1.2. Specialty.

Specialty strategies may include Value Add, Mezzanine, Secondary & Opportunistic and Sector Focused and may be included in the real estate program in order to enhance the returns of assets capable of, but not currently, exhibiting core type characteristics. Acceptable specialty strategies may include:

- property types including, but not limited to, hotels, assisted-living and congregate care facilities that require specialized management skills focusing primarily on operating business expertise rather than pure real estate management skills;
- properties that are considered in a “workout” mode;
- properties involving significant repositioning, development, lease-up or renovation risks;
- unique property types requiring specialized acquisition and management expertise including agriculture, timber, self-storage, and single tenant triple-net lease; and
- financing or investment structures that impact cash flows and/or require additional administrative expertise.

10.10.1.3. Portfolio Allocation.

Depending upon the market cycle, the portfolio may be proportionally over weighted toward core or specialty in order to achieve targets. The composition of the portfolio will always be structured to provide targeted returns while assuming an appropriate level of risk and preserving invested capital. The following allocation targets are specified as a guideline for the equity real estate portfolio:

| Investment Category | Minimum Allocation | Maximum Allocation |
|----------------------------|---------------------------|---------------------------|
| Core | 30% | 100% |
| Specialty | 0% | 70% |

10.10.2. Investment Guidelines.

The Fund and its real estate Investment Managers shall manage the investment risk associated with equity real estate in several ways, including:

10.10.2.1. Diversification.

The real estate portfolio shall be economically diversified. Other areas of diversification, such as property type and geographic location will be monitored but may, at any given time, exhibit disproportionate over weightings relative to the target index. Diversification reduces the impact on the portfolio of any one investment or any single Investment Manager's investment style to the extent that an adversity affecting any one particular area will not impact a disproportionate share of the total portfolio. Upon investment, the Fund shall not own more than 25% of a commingled fund and shall seek to continue to adhere to this threshold (if liquidity permits).

10.10.2.2. Ownership Structure.

The Fund will not directly invest in real property. When allocating assets to an Investment Manager, the investment vehicle ownership structure may consist of leveraged or unleveraged equity investments. The primary investment vehicle will be commingled funds.

10.10.2.3. Leverage.

Leverage may be utilized at the discretion of the Investment Managers in a constrained manner, consistent with the commingled fund documents, in order to enhance yields of the various investments and/or facilitate the diversification of the portfolio. The total level of debt for any commingled fund is expected to be commensurate with the stage and structure of the fund, but generally not to exceed 60% of the value of that fund. The Investment Advisor shall monitor leverage and report to Management and the Retirement Board.

10.10.2.4. Return.

With regard to total return, over rolling 5-year periods, the equity real estate investment portfolio is expected to outperform the NCREIF Property Index and the NCREIF ODCE Index. In addition, the Fund shall seek equity real estate investments that can reasonably achieve a minimum annualized income return after investment management fees that exceeds one-half of the total return over rolling 5-year periods.

10.10.2.5. Property Valuation.

Annually, each real estate Investment Manager shall provide the Fund with estimates of investment value (valuations) for all properties for which it has asset management responsibility. The Fund's staff and Investment Consultant will also annually request the Investment Managers' valuation procedures to insure compliance with the Investment Policy Statement's Alternative Investments Valuation Statement.

10.10.2.6. Property Management.

The selection of property management is left to the discretion of the Investment Manager. It is expected that the Investment Manager will retain the highest caliber market rate property management service either through a third-party fee manager or the Investment Manager's affiliated property management division.

10.11. Opportunistic Investment Managers.

Investment Managers deploying an "opportunistic" strategy seek to take advantage of a short-medium term investment dislocation in the markets. Such investments may include various asset classes including public or private markets, and may be less liquid than traditional asset class investments. Investment Managers of opportunistic strategies may employ portfolio construction similar to hedge fund strategies, which may involve short and long exposures and leverage. The Fund may utilize a FoHF

Investment Manager in this asset subclass, in which case such allocation will not be counted against the Hedge Fund asset allocation target.

10.12. Risk Parity / Diversified Beta Managers.

Multi-asset class investments include Investment Managers that invest across the asset class spectrum, including, but not limited to, equity, fixed income, commodities and other assets including alternative asset classes. Exposures may be equal weighted regardless of the economic environment or may exhibit more variance on a strategic or tactical basis. Exposures may be accessed through the derivatives markets. All derivative investments are subject to the associated guidelines outlined in the Investment Manager's guidelines. Examples of such Investment Managers include Global Tactical Asset Allocation (GTAA), Risk Parity, Diversified Beta, among others. Each mandate and Investment Manager approach is unique with varying goals and objectives.

10.13. Valuation of Alternative Investments.

The Fund has an allocation to investments that are illiquid and, therefore, more difficult to value. These investments typically involve commingled vehicles and asset classes such as real estate, private equity, and hedge funds ("Alternative Investments"). Investment Managers utilizing Alternative Investments are responsible for adequately performing valuations and providing audited financial statements.²⁴

The Fund's control procedures regarding the valuation of Alternative Investments focus on due diligence, ongoing monitoring and financial reporting controls. Inherent valuation risks associated with Alternative Investments are monitored primarily by Management, the Investment Advisor and the Custodian through a monthly and quarterly review process as well as in preparing year end financials. As referenced in Section 5.6 (Actuary; Auditor), the Fund produces a CAFR.

Specifically, Management deploys a program outlined in Section 9.1 (Reporting Requirements; Diligence by Management) and further review is conducted surrounding regularly scheduled meetings of the Retirement Board as described in 9.3 (Retirement Board Review Process). In addition, Management is responsible for sending, and retrieving responses, to an Annual Compliance Questionnaire (the current form of which is attached as **Exhibit E** (Annual Compliance Questionnaire)) from Investment Managers of Alternative Investments. When meeting with the Retirement Board, such Investment Managers are expected to address relevant topics in the Annual Compliance Questionnaire. The Retirement Board grants Management the authority to revise the Annual Compliance Questionnaire to conform to market conditions and best practices.

As part of the Fund's monitoring framework, the Investment Advisor submits a quarterly detailed report on the Fund's private equity and real estate equity investments, which includes valuations, cash flows and performance and risk measures pertaining to Alternative Investments and Investment Managers of Alternative Investments. In addition, in evaluating prospective Investment Managers of Alternative Investments for the Retirement Board, the Investment Advisor includes (as one of seven evaluation criteria) the integrity of such prospective Investment Managers' operational controls, including, but not limited to the valuation process.

²⁴ Alternative Investments that are in liquidation may no longer provided audited financial statements.

Schedule 1

Assumed Rate of Return

Pursuant to resolution of the Retirement Board on [insert date], the actuarially required return for the Fund is currently [7.5]% annually, net of all fees and operating expenses.

Asset Allocation

Pursuant to resolution of the Retirement Board on [insert date], the Asset Allocation of the Fund is now:

| ASSET CLASS | Target (%) | Minimum Exposure (%) | Maximum Exposure (%) |
|----------------------------------|------------|----------------------|----------------------|
| Equities | 43 | 38 | 48 |
| US Large Cap | 18 | 13 | 23 |
| US Small Cap | 7 | 4 | 10 |
| International Equity (unhedged) | 9 | 5 | 13 |
| International Small Cap | 2 | 0 | 4 |
| Global | 5 | 3 | 8 |
| Emerging Markets | 2 | 0 | 4 |
| | | | |
| Fixed Income | 25 | 22 | 32 |
| FI – Core | 8 | 4 | 12 |
| FI - Mortgages | 3 | 0 | 5 |
| FI - Real Estate Debt | 1 | 0 | 2 |
| FI – Inflation Linked Securities | 3 | 0 | 5 |
| FI – Bank Loans | 2 | 0 | 4 |
| FI – Global Multi Sector | 8 | 4 | 12 |
| | | | |
| Cash | 2 | 0 | 3 |
| | | | |
| Alternative Investments | 30 | 18 | 37 |
| Hedge Funds (FoHF) | 4 | 1 | 7 |
| Private Equity | 10 | 6 | 14 |
| Real Estate | 9 | 5 | 12 |
| Opportunistic – Hedge Funds | 2 | 0 | 4 |
| Risk Parity / Diversified Beta | 5 | 2 | 8 |

Notes to Asset Allocation:

1. At any time, in order to meet the Fund's liquidity requirements, 3% of the Fund's NAV may be held in cash reserves or a cash equalization account.
2. As of December 31, 2018, a single global equity manager is utilized to implement the global equity and emerging markets policy targets within limits set forth in their guidelines.
3. The Real Estate Equity target encompasses, core, value added and other real estate investment strategies.
4. The FI - Real Estate Debt portfolio is in the process of liquidation.

Exhibit A
Definitions

“1948 Trust Agreement” is defined in Section 2 (Background of the Fund).

“ADRs” have the meaning provided in Section 10.4.2 (Global Equity: Guidelines).

“Alternative Investments” are defined in Section 10.13 (Valuation of Alternative Investments).

“Asset Allocation Index Return” is defined in Section 7.5.2 (Definitions).

“Assumed Rate of Return” is defined in Section 6.1 (Investment Objective).

“Authority” is the Massachusetts Bay Transportation Authority, a political subdivision of the Commonwealth.

“By-Laws” are the By-Laws of the Fund, adopted by the Retirement Board and as last amended on March 20, 2009.

“CMOs” have the meaning provided in Section 10.6.1 (Fixed Income: General Guidelines).

“CMBS” have the meaning provided in Section 10.6.1 (Fixed Income: General Guidelines).

“ETFs” are defined in Section 10.3 (Equity: Domestic Active Managers: Guidelines).

“Eurobonds” are defined in Section 10.6.2 (Fixed Income: Core Guidelines).

“Fiduciary Standards” is defined in Section 4 (Fiduciary Standards).

“FoHF” is defined in Section 10.8.1 (Introduction).

“Fund” is defined in Section 2 (Background of the Fund).

“Governing Documents” are defined in Section 6.3.2 (Commingled Accounts).

“IM Benchmark” is defined in 7.5.3 (Investment Manager Benchmarks).

“Investment Advisors Act” is the Investment Advisors Act of 1940, as amended from time to time.

“IPS” is defined in Section 1 (Purpose of this Investment Policy Statement).

“IRS” is defined in Section 6.3.2.1 (Group Trusts).

“Management” shall be the Executive Director and other employees of the Fund as engaged by the Retirement Board or the Executive Director, including, but not limited to, a Deputy Executive Director, Finance Director, Compliance Officer, and Financial Analyst.

“Pension Agreement” is defined in Section 3 (Legal Authority; Structure).

“PRIM” is the Pension Reserves Investment Management Board, a nine member entity, which, under M.G.L. c. 32, is charged with the general supervision of PRIT.

“PRIT” is the Pension Reserves Investment Trust, a component unit of the Commonwealth, was established by the legislature in 1983 to invest the assets of the Massachusetts State Teachers’ and

Employees' Retirement Systems; it now invests assets of county, authority, district and municipal retirement systems. The governing statute of PRI (and PRIM) is M.G.L. c. 32. PRIT is managed by PRIM.

"PRIT Segmentation Program" is defined in Section 6.3.2.2 (PRIT).

"PRIT Trust Agreement" is the Operating Trust Agreement, dated as of September 22, 1998, by and among the then duly authorized members of the PRIM Board.

"PRL" is defined in Section 3 (Legal Authority; Structure).

"Policy Index Return" is defined in Section 7.5.2 (Definitions).

"Retirement Board" is the sole trustee of the Fund.

"Total Fund Return" is defined in Section 7.5.2 (Definitions).

"Trust Agreement" is defined in Section 3 (Legal Authority; Structure).

"Union" is Local 589, Amalgamated Transit Union, AFL-CIO, which represents a majority of the employees of the Authority.

"Yankee Bonds" are defined in Section 10.6.2 (Fixed Income: Core Guidelines).

Exhibit B

Standards of Fiduciary Responsibility

attached

[see iManage doc 38424005v5; approved by Retirement Board 06-16-17]

**MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT BOARD**

STANDARDS OF FIDUCIARY RESPONSIBILITY

(Initially adopted by Board: February 22, 1992)

(Most recently revised by Board: June 16, 2017)

WHEREAS, the Massachusetts Bay Transportation Authority Retirement Fund (the “**Fund**”) was created in 1948 pursuant to a trust agreement negotiated as a part of a collective bargaining agreement authorized by legislation transferring the private employees and pension obligations of the Boston Elevated Railway to the Metropolitan Transit Authority (the “**MTA**”) and has been operated ever since as a private pension trust for the benefit of eligible employees of the Massachusetts Bay Transportation Authority (the “**Authority**”); and

WHEREAS, the 1948 trust agreement was restated by the Trust Agreement dated October 28, 1980 (“**Trust Agreement**”) entered into by and among the Authority, Local 589, Amalgamated Transit Union, AFL-CIO (the “**Union**”) and the Retirement Board of the Fund (the “**Board**”); and

WHEREAS, the Fund is administered by the Board which was created in 1948 by a set of “Rules and Regulations” later incorporated in Pension Agreements entered into at various times since 1948 by the Authority (and its predecessor, the MTA) and its employees; and

WHEREAS, the current Pension Agreement by and between the Authority and the Union is effective as of July 1, 2014 (the “**Pension Agreement**”) but may be subject to amendment in the future; and

WHEREAS, pursuant to the Pension Agreement the Board consists of seven individual members, two of whom are designated by the Union, one of whom is elected by the Members, as defined in Article I(10) of the Pension Agreement (the “**Members**” or “**Members of the Fund**”), who do not belong to the Union, three of whom are appointed by the Authority (one of whom shall also be a Director of the Massachusetts Department of Transportation, which governs and exercises the corporate powers of the Authority pursuant to Chapter 46 of the Acts of 2015), and one of whom is chosen by the other six appointees to the Board to serve as the Honorary Board Member; and

WHEREAS, an essential characteristic of the Board and its individual members is that they occupy a fiduciary relationship with respect to the Members of the Fund; and

WHEREAS, the Fund is a private trust and has never been a public agency and, therefore, certain Massachusetts statutes such as the Open Meeting Law (M.G.L. c 30A, §§ 18-25) and conflict of interest and financial disclosure laws (M.G.L. c 30A, §§ 18-25, c. 268A and c. 268B), which apply to governmental agencies, do not by operation of law apply to the Board; and

WHEREAS, the Board believes that preservation of its private status independent of governmental operation and control is essential to the performance of its fiduciary obligations to the Members of the Fund and that its status enhances the interests of those Members; and

WHEREAS, the Board, believing that adoption of certain policies and standards of conduct similar to those embodied in, *inter alia*, federal pension law, the above-referenced statutes and the

common law can further the interests of the Fund and protect its Members, has previously adopted and updated such policies and standards; and

WHEREAS, investment decisions are becoming increasingly complex, causing the Board to employ a staff, which administers the affairs of the Fund on a day-to-day basis, and independent Financial Advisors and other Consultants, as each of those terms is defined in Section 3.3 below, who assist the Board in fulfilling its fiduciary obligations; and

WHEREAS, significant changes to statutes and regulations applicable to the Fund specifically and private pension plans and the prudent investment of trust assets generally have occurred since these Standards of Fiduciary Responsibility were last amended, and additional proposals are emerging with frequency; and

WHEREAS, the Board endeavors to select from the various reforms and proposals at the state and federal levels those features and practices that best serve the interests of the Fund's beneficiaries; and

THEREFORE, the Board adopts for itself, collectively and individually, its Employees, Consultants, Financial Advisors and Attorneys, all as further defined in Section 3.3, the following:

Article 1.
Fiduciary Standards Concerning the
Conduct of the Board and the Administration of the Fund

1.1 Duty of Loyalty

The cardinal rule of these Standards of Fiduciary Responsibility (the “**Standards**”) is that the individual Board members and Employees are pension fund fiduciaries who owe a duty of undivided loyalty to the Fund and its Members. Consultants similarly owe a duty of undivided loyalty to the Fund and its Members with respect to the professional and/or investment matters for which they are engaged, as set forth more fully in Section 1.4. These Standards have been adopted by the Board (the individual members of which are referred to as “**Trustees**”, as further defined in Section 3.3 below) pursuant to the Pension Agreement and the Trust Agreement.

1.2 Duty of Representation

1.2.1 The Trustees, whenever acting in relation to matters of interest to the Fund and its Members, are representatives of, and fiduciaries to, the Fund and shall act for the sole and exclusive benefit of the Members of the Fund, not for the MBTA, the Union or any other employee group, or any other person, organization or interest. Thus, despite the source of an individual Trustee's appointment or election (management or labor), they do not “represent” the interests of either management or labor while serving as Trustees, but instead shall act in the sole and exclusive interest of the Fund and its Members.

1.2.2 Employees are representatives of and fiduciaries to the Fund and shall act at all times for the sole and exclusive benefit of the Members of the Fund.

- 1.2.3 The duties of loyalty and representation specific to the administration of the Fund for Trustees, Employees and Consultants are further defined throughout the terms of these Standards including, without limitation, Article 2.

1.3 Duty of Prudent Investment - Rules for Investments

1.3.1 The Trustees, Employees and Financial Advisors are fiduciaries and shall invest and manage Fund assets in general as a prudent investor would, considering the purposes, terms and other circumstances of the Trust and the Pension Agreement, both as amended, and in conformity with the provisions of the Prudent Investment Act, M.G.L. c. 203C (the “Act”). In satisfying this standard, the Trustees, Employees, and Financial Advisors, shall exercise reasonable care, skill, and caution and shall consider each of the circumstances set forth in the Act so far as apt and, in the case of Financial Advisors, consistently with, and limited by, the scope of their contractual agreement(s) with the Fund.

1.3.2 References in the Trust to the common law “prudent man” rule (e.g. Trust at ¶20) shall be interpreted in a manner consistent with the “prudent investor rule” as defined in §11 of the Act. (The Trust was executed in 1980; the Act was adopted in 1998.)

1.3.3 Trustees and Employees involved with particular investment decision(s) shall invest and manage Fund assets, and otherwise discharge their duties with respect to the Fund, solely in the interest of the Members.

1.3.4 Without limiting these obligations, such Trustee, Employee and, insofar as applicable and consistent with their contractual agreement(s) with the Fund, Financial Advisor, shall:

1.3.4.1 act for the exclusive purpose of:

- (a) providing benefits to Members of the Fund; and
- (b) defraying reasonable expenses of administering the Fund (Trust at ¶2 and §8 of the Act).

1.3.4.2 in investigating and managing trust assets, consider each of the circumstances identified in §3(c) of the Act, so far as applicable, including:¹

- (a) general economic conditions;
- (b) the possible effect of inflation or deflation;

¹ The list of considerations in 1.3.4.2(a)-(h) mirror the enumerated considerations in the Act (§3(c)(1)-(8)), which applies to the Fund by operation of law. The Act recognizes that not each of the stated considerations may be relevant to a particular trustee when considering “investment and managing trust assets” nor constitute a comprehensive list of relevant considerations.

- (c) the expected tax consequences of investment decisions or strategies;
- (d) the role that each investment or course of action plays within the overall trust portfolio;
- (e) the expected total return from income and the appreciation of capital;
- (f) other resources of the beneficiaries;
- (g) the needs for liquidity, regularity of income, and preservation or appreciation of capital; and
- (h) an asset's special relationship or special value, if any, to the purposes of the Trust or to one of the beneficiaries.

1.3.4.3 reasonably diversify such investments so as to minimize the risk of large losses (unless, under the circumstances, it is prudent not to do so). *See* §4 of the Act. Investment and management decisions respecting Fund assets shall be considered in the context of the Trust portfolio for which such party is responsible as a part of an overall investment strategy reasonably suited to the Trust as a whole or, in the case of Financial Advisors, those Fund assets for which the Financial Advisor is contractually responsible (§3(b) of the Act).

1.3.4.4 invest in any kind of property or type of investment which is consistent with the Act, (*See* §3(e) of the Act) applicable law, all contractual obligations to which such investment management relationship is subject and these standards.

1.3.4.5 invest in accordance with the documents and instruments governing the Fund and the Act including, without limitation, the then-effective Statement of Investment Policy (“**IPS**”) adopted by the Board. *See* Trust at ¶¶6-9.

1.3.5 A Trustee, Employee or Financial Advisor who has special skills or expertise, or is named as a Trustee, Employee or Financial Advisor in reliance upon such person's representation that the Trustee, Employee or Financial Advisor has such special skills or expertise, shall have a duty to use such special skills or expertise in connection with its performance of its duties and responsibilities with respect to the Fund, and in connection therewith. *See* §3(f) of the Act.

1.3.6 As a consequence of complying with the foregoing provisions of Article 1 hereof, and of the Act, a Trustee or Employee shall not be liable to a Member of the Fund to the extent that the Trustee or Employee acted in reasonable reliance on the provisions of the Pension Agreement, the Trust, and the Fund's other governing documents and instruments, as amended from time to time.

1.3.7 The Fund or the Executive Director may delegate investment and management functions to a Financial Advisor if it is prudent to do so, *See* §10 of the Act, and

1.3.7.1 The Fund shall exercise reasonable care, skill, diligence and prudence in:

- (a) selecting a Consultant or Financial Advisor;
- (b) establishing the scope and terms of the delegation, consistent with the purposes and terms of the Fund; and
- (c) periodically reviewing the Consultant or Financial Advisor's actions in order to monitor such performance and compliance with the terms of the delegation.

1.3.7.2 In performing a delegated function, a Financial Advisor shall owe a duty to the Fund to exercise reasonable care to comply with the terms of the delegation, §10(b) of the Act, and it shall acknowledge in writing to the Fund that it is a fiduciary pursuant to the Act, or in the alternative, and in compliance with the IPS, acknowledge fiduciary status pursuant to a substantially comparable law governing investment fiduciaries reasonably acceptable to Fund investment counsel (e.g. Employee Retirement Income Security Act of 1974, as amended, or the Investment Advisers Act of 1940, as amended).

1.3.7.3 A Trustee or Employee of the Fund who complies with the requirements of subsection 1.3.7 shall not be liable to any Member of the Fund or to the Trustees for the decisions or actions of the Financial Advisor to whom the function was delegated. *See* §10(c) of the Act.

1.3.7.4 By accepting the delegation of trust functions from the Trustees of the Trust, a Consultant or Financial Advisor recognizes application of Massachusetts law and submits to the jurisdiction of Massachusetts' courts, *see* §10(d) of the Act, absent written agreement executed by the parties choosing the application of laws and/or selecting the forum of another jurisdiction.

1.4 Obligations of Consultants and Financial Advisors

Consultants and Financial Advisors hired to perform services by the Trustees or its Executive Director likewise owe an undivided duty of loyalty to the Fund with respect to the professional matters for which they are engaged.

1.4.1 Without limiting any other provisions of the Standards in any way, all Consultants and Financial Advisors shall:

- 1.4.1.1 conduct themselves with integrity and act in an ethical manner in their dealings with the public, Retirement Board, Employees, Members of the Fund and fellow Consultants and Financial Advisors;
 - 1.4.1.2 conduct themselves and encourage other Consultants and Financial Advisors to perform their functions in a professional and ethical manner that will reflect credit on themselves and their profession;
 - 1.4.1.3 act with competence and strive to maintain and improve their competence and that of others in their profession; and
 - 1.4.1.4 use proper care and exercise independent professional judgment.
- 1.4.2 A Consultant or Financial Advisor engaged by the Trustees or the Executive Director may simultaneously represent or work for the Trustees and another vendor to the Trustees or related party to such a vendor only if that multiple representation is disclosed in writing to the Trustees through the Executive Director, and approved by formal vote of the Trustees which is duly recorded and made available for inspection by Members of the Fund as provided herein.
- 1.4.3 Consultants acting as attorneys (e.g. acting in the capacity of general counsel, investment counsel or other outside legal counsel) shall render services to the Fund in full compliance with the Massachusetts Rules of Professional Conduct (SJC Rule 3:07, as amended) and shall comply with all Standards of Conduct (Article 2), except those specifically limited to Financial Advisors as set forth in Sections 2.7 and 2.8.

Article 2.

Standards of Conduct

2.1 Gifts: Gratuities: Entertainment

- 2.1.1 No Trustee, Employee, Consultant or Financial Advisor may directly or indirectly ask for, accept or receive anything of Significant Value, as defined in subsection 2.1.3 below, for himself or another intended to influence or reward him for a Board or Fund-related act performed or to be performed by him.
- 2.1.2 No Trustee, Employee, Consultant or Financial Advisor may directly or indirectly ask for, accept or receive anything of Significant Value for himself or another from a Fund Member or beneficiary other than from a family member in circumstances unrelated to the business of the Board or the administration of the Fund.
- 2.1.3 No Trustee, Employee, Consultant or Financial Advisor may accept or receive anything having Significant Value from any person doing business with or for the Board. “**Significant Value**” shall mean such value as may give rise to reasonable doubts about improper influence, taking into account the existence of pending or foreseeable matters of interest to the giver and customary practices and courtesies in the relevant industry.

2.1.3.1 Nothing contained in subsection 2.1.3 shall preclude a Trustee, Employee, Consultant or Financial Advisor from accepting:

- (a) gifts of modest value (not in excess of \$100) given at Christmas, other holidays or special occasions, such as a hospitalization or bereavement, which represent expressions of friendship;
- (b) ceremonial or commemorative type gifts (such as a plaque, silver-plated shovel or an inscribed pen) of unknown value;
- (c) invitations to and provision of educational seminars, workshops, investment manager annual meetings, lectures, or similar programs germane to pension administration and investments; or
- (d) entertainment events (including meals, cocktail parties, sporting events, plays, etc.) sponsored by vendors and extended to pension fund administrators generally, whether at conventions for pension funds, in conjunction with educational programs, or otherwise, provided, however, that in the case of entertainment events whose value exceeds \$100, (i) the identity of the sponsor, or person paying for the entertainment, (ii) the nature and approximate value of the entertainment, and (iii) the person(s) receiving the entertainment are disclosed in writing to the Board.

2.2 Outside Activities

No Trustee or Employee may engage in the business of investment counseling or related activities without prior written disclosure to and approval from the Executive Director or Chairman of the Board.

2.3 Information

No Trustee, Employee, Consultant or Financial Advisor may utilize proprietary or non-public material information concerning a specific investment opportunity that has been brought to his or her attention in his official capacity with the Board, nor shall such information be divulged to a third party (other than to another pension fund manager) absent a duly executed contractual agreement authorizing such use (which agreement shall be subject to the disclosure and approval requirements of Section 2.6). Any such person who comes into possession of material, non-public information concerning a publicly traded company must safeguard the information and not intentionally or inadvertently communicate it to any third person (including family, friends or business associates) unless the third person has a need to know it for legitimate Fund related business. Additionally, such persons are cautioned that federal law generally prohibits persons who have duties not to disclose material non-public information concerning publicly traded companies from trading on the basis of that information. The Board's policy is that if any Trustee, Employee, Consultant or Financial Advisor obtains any such information concerning a publicly traded company that person may not buy or sell securities of that company or take any other action to take advantage of that information.

Nothing contained herein shall preclude a Consultant or Financial Advisor engaged in the business of investment counseling from discussing such opportunities with other clients.

2.4 Acting as Advocate for Others

No Trustee, Employee, Consultant or Financial Advisor may act for compensation as advocate, agent or attorney for another person in connection with any particular matter which has come before or is pending before the Board. Nothing contained herein shall preclude uncompensated action consistent with the faithful discharge of fiduciary obligations including the duties of loyalty and representation.

2.4.1 Neither the Board nor any Employee may initiate any communication to or act on any communication from a former Trustee or Employee within two (2) years of his or her termination as Trustee or Employee in connection with any proposal by any person or entity to provide services or investment products to the Fund, or otherwise to engage in any business transaction with the Fund. Notwithstanding the foregoing, the Executive Director, may, with the approval of the Board, engage in communications with a former Trustee or Employee for the purpose of obtaining services to facilitate the transition or training of a successor to a former Trustee or Employee.

2.5 Conflicting Financial Interests

2.5.1 Except as otherwise provided herein, no Trustee, Employee, Consultant or Financial Advisor may participate as such in any matter before the Board which has a direct or substantial effect on his or her financial interests, those of their family, or of any business, however organized, with which the individual is affiliated in any capacity. This provision is not, however, intended to limit a Financial Advisor who also serves as an investment manager from maintaining a financial interest in a Fund investment as expressly set forth in the terms of a particular investment contract.

2.5.2 Any Trustee, Employee, Consultant or Financial Advisor whose duties to the Fund or the Board would otherwise require them to participate in such a particular matter shall make a written disclosure to the Executive Director, while the Executive Director shall make such written disclosure to the Chairman of the Board, of the nature and circumstances of the particular matter and of such financial interest. The Executive Director or the Board Chair may in their discretion determine that the interest is not so substantial that it is likely to affect the integrity of the services it expects from the disclosing individual and permit them to participate in the matter, or they may determine to take such other action as they deem appropriate. Such determinations shall be reviewed by the Board at its next regular meeting and, if approved, ratified by formal vote of the Board, which shall be duly recorded and the record thereof made available for inspection by all Members of the Fund.

2.6 Personal Investments

- 2.6.1 Except upon approval by the Board after disclosure of all material facts, no Trustee or Employee shall maintain a personal investment account with a Financial Advisor or a product provider with whom the Board makes or has made an investment. The term “private investment account” shall not include a checking or savings account, NOW account, certificate of deposit or similar cash management account with a federal or state chartered banking institution, credit union, mutual fund, or other financial institution.
- 2.6.2 A Trustee, Employee, Consultant and Financial Advisor shall disclose to the Board whether they have any direct financial interest in any product provided to the Fund or any security, instrument, plan, or other investment vehicle; it being understood that Financial Advisors in particular may, within the contractual scope of the services which they have been engaged to provide, maintain such an interest.
- 2.6.3 At the time the Board first considers whether to engage a Financial Advisor or utilize an investment product or at the time the Trustee, Employee, Consultant or Financial Advisor first learns of the engagement (whether the engagement has already occurred or is under consideration), or at the time of the direct investment, whichever first occurs, the Trustee, Employee, Consultant or Financial Advisor shall make a written disclosure to the Executive Director of any direct investment with that Financial Advisor or product provider, whether actual or anticipated. The Executive Director shall bring that written disclosure to the attention of the Board at its next regular meeting. The Board may in its discretion determine that the investment interest is substantial and could interfere with the integrity of the services provided or to be provided and so prohibited or may determine it to be permissible because it is not likely to affect such services. In either event, the Executive Director shall promptly notify in writing the affected Trustee, Employee, Consultant or Financial Advisor of the Board’s decision.
- 2.6.4 No Trustee, Employee, Consultant or Financial Advisor may, knowingly or having reason to know, have a direct or indirect financial interest in a contract with the Board, other than a duly authorized contract of employment, investment or engagement.
- 2.6.4.1 An indirect financial interest within the scope of subsection 2.6.4 is an interest that is not owned directly by the Trustee, Employee, Consultant or Financial Advisor, but which is either controlled by him or held by another for his benefit.
- 2.6.4.2 A financial interest otherwise prohibited by subsection 2.6.4 shall be deemed not to violate said subsection where:
- (a) the Trustee, Employee, Consultant or Financial Advisor divests himself of the interest within 45 days of learning of its existence,

- (b) the interest consists of less than one percent of the stock of a corporation, trust, limited partnership, limited liability company, or other entity, or
- (c) the Trustee, Employee, Consultant or Financial Advisor makes full disclosure to the Board of the nature of the interest and the Board in its discretion determines that the interest is not so substantial that it is likely to affect the integrity of the services it expects from the disclosing individual. Such a determination shall be by formal vote of the Board, and shall be duly recorded and the record thereof shall be made available for inspection by all Members of the Fund.

2.6.5 When a direct or personal investment has been disclosed in accordance with subsection 2.6.4 above and is deemed acceptable by the Board, the transactions implementing it shall be subjugated to transactions involving the Fund so that those transactions do not operate adversely to the Fund. Any Trustee, Employee, Consultant or Financial Advisor making a recommendation for the purchase or sale of a security or other investment shall give the Fund an adequate opportunity to act on the recommendation before acting on their own behalf.

2.7 Specific Rules for Financial Advisors

2.7.1 Financial Advisors shall be subject to the following special and additional rules:

2.7.1.1 Financial Advisors are investment fiduciaries and may be engaged only if they meet the ethical and disclosure standards demanded by the Trustees, including, without limitation, subscribing to or agreeing to be bound by a code of ethics and standards of professional conduct at least as stringent as that of the CFA Institute Code of Ethics and Standards of Professional Conduct in effect at the time of their engagement.

2.7.1.2 As a material term and condition of engagement a potential Financial Advisor must disclose to the Fund on a form prescribed by the Executive Director:

- (a) the identity of any third party who has received or will receive any form of remuneration related to the engagement with the Fund or the provision of services to it, and the amount and nature of the actual or anticipated payments;
- (b) a statement that it has not colluded with any third person in preparing its submittals to the Fund;
- (c) a description of any beneficial ownership interest it or any person associated with it as an owner, officer or Employee has in any security or other investment product that is being offered to the Fund. For purposes of this disclosure provision, a

“beneficial ownership interest” may be direct or indirect and includes a pecuniary interest, the power to vote or direct the voting of securities or other investments or the power to dispose or direct the disposition of the security or investment; and

- (d) a description of any “disclosable interest”, as determined by the Executive Director, that may give rise to an actual, potential or perceived conflict under these Standards and otherwise.

2.7.1.3 On or before January 31, all Financial Advisors engaged by the Fund must annually update their disclosures to the Fund on a form provided by the Executive Director setting forth:

- (a) the amount of any remuneration paid during the prior calendar year to any third party related to the engagement by the Fund or the provision of services or investment products to it, and projecting the identity of any third party and the amount of remuneration to be paid during that calendar year related to the engagement or provision of services or investment products;
- (b) any beneficial ownership interest as described in subsection 2.7.1 above it or any person associated with it as an owner, officer or Employee has acquired or disposed of in the prior calendar year in any security or other investment that has been or will be offered to the Fund; and
- (c) a description of any “disclosable interest,” as determined by the Executive Director that has arisen in the prior calendar year.

2.7.1.4 No Financial Advisor may invest moneys belonging to the Fund in any entity in which it also holds any undisclosed beneficial ownership interest.

2.7.2 The Executive Director, with such legal and staff assistance as he deems necessary, shall review all information provided by the Financial Advisors pursuant to subsection 2.7.1 above and may request additional information, if warranted. The Executive Director shall document their conclusions with respect to such disclosures. Whenever they deem it appropriate and on a current basis, they will report to the Board all such conclusions, and discuss the effect of the disclosed events on the Fund’s investments and any anticipated changes in the “disclosable interests” required in the forms he provides to Financial Advisors. Within a reasonable time after accepting or receiving Fund assets, the Financial Advisor shall review the Fund’s assets for which it is responsible and make and implement decisions concerning the retention and disposition of assets, in order to bring the Fund portfolio into compliance with the purposes, terms and the other circumstances of the Fund, and with the requirements of the Act, including taking all such decisions and actions with respect to the receipt of new contributions made

to the Fund each year, and the appointment of new Financial Advisors, or the investment of new Fund money with an existing or newly appointed Financial Advisor.

2.8 Placement Agents

2.8.1 In addition to the provisions of Section 2.7 above, the following will apply to a Financial Advisor's business practices related to Placement Agents, as defined in subsection 3.3.6:

2.8.1.1 prior to entering into a contract or contract amendment with the Fund the Financial Advisor must provide a written representation that it has not utilized a Placement Agent in seeking an engagement with the Fund; and

2.8.1.2 current Financial Advisors to the Fund must provide an annual written representation to the Fund stating that they are not utilizing a Placement Agent in any of their dealings with the Fund and describing their use of Placement Agents, if any, in dealings with other clients.

2.8.2 In the event that the Financial Advisor has used a Placement Agent, or intends to do so in connection with its future business with the Fund, the following information must be provided to the Board's staff:

2.8.2.1 the name of the Placement Agent, the details of its relationship to the Financial Advisor and the services to be provided;

2.8.2.2 a description of any compensation to be paid by the Financial Advisor to the Placement Agent and confirmation that any such compensation is the sole obligation of the Financial Advisor and not the Fund;

2.8.2.3 resumes of each officer of the Placement Agent and a statement that the officers possess a minimum of three (3) years of investment experience; and

2.8.2.4 a statement as to whether the Placement Agent or any of its affiliates are registered with the Securities and Exchange Commission (SEC), Financial Industry Regulatory Authority (FINRA) or Commodity Futures Trading Commission (CFTC) and the details of such registration.

2.8.3 In the event a Placement Agent is expected to receive compensation of any kind in connection with the Fund's investment with an Financial Advisor, the Executive Director will notify the Board in writing of the details of such an arrangement. The Executive Director will also notify the Board in the event that any Financial Advisor violates the Fund's provisions governing Placement Agents.

- 2.8.4 Financial Advisors will submit an annual statement to the Fund that they are in compliance policy and provided all representations required herein.

Article 3. **Scope of the Standards**

3.1 Application

These Standards shall apply to the fullest extent practicable to all persons associated with the Fund or the Board, including, without limitation, the Trustees, their alternates, and Employees, whether serving on a full-time, part-time, or intermittent basis and regardless of the amount of their compensation, and all Consultants to the Board, including accountants, actuaries, investment advisors, investment managers, custodians, Financial Advisors, brokers or intermediaries and attorneys.

3.2 Effective Date

These Standards shall take effect at the time of their adoption by the Board and shall apply to actions by Trustees, Employees, Consultants and Financial Advisors occurring thereafter. The prior Standards of Fiduciary Responsibility shall continue to apply to actions of such parties during the period of their prior effectiveness.

3.3 Definitions

As used in these Standards, unless the context clearly indicates an alternative construction, the following capitalized terms have the meanings set out below. Other capitalized terms are defined in the context in which they are used.

- 3.3.1 “**Trustee**” means a Member of the seven-person Retirement Board established pursuant to Article VI of the Pension Agreement. “**Trustee**” shall include the Honorary Board Member elected pursuant to paragraph (l)(d) of said Article VI and the alternate members elected or appointed pursuant to paragraph (l)(e) of said Article VI.
- 3.3.2 “**Employee**” shall include both officers and full and part-time employees of the Fund.
- 3.3.3 “**Consultant**” shall include and all types of other outside advisors, including attorneys, accountants, actuaries and auditors other than Financial Advisors.
- 3.3.4 “**Financial Advisor**” shall include the Investment Advisor (referred to in the IPS as the Investment Consultant), as referenced in the Trust at ¶4 and all types of investment managers, investment advisors, money managers, brokers, intermediaries, financial agents, fund managers and custodians, which the Fund is authorized to engage pursuant to the Trust. *See* Trust at ¶7.
- 3.3.5 “**Member(s) of the Fund**” or “**Member(s)**” shall take the meaning assigned in the Recitals above.

3.3.6 “**Placement Agents**” shall include intermediaries who raise capital for Financial Advisors from investors such as the Fund.

3.4 Distribution

A copy of these Standards shall be provided to each new Employee, Trustee, Consultant and Financial Advisor at the time his or her association with the Board commences.

Article 4. **Enforcement**

4.1 Sanctions

4.1.1 Violation of any one or more of the Standards set forth above shall be grounds for immediate termination of the relationship between the violator and the Fund and/or the Trustees. The power to terminate a party found to violate these standards carries with it the lesser power to suspend, publicly censure or privately reprimand the violator. If the violation is committed by a Trustee, the Board may recommend to the organization appointing or electing the Trustee that the offending party be expelled and a replacement appointed.

4.1.2 The sanctions provided herein are intended to supplement and not limit any other sanctions, rights or remedies available to the Trustees and as may be provided by applicable law.

4.1.3 The Board acknowledges that duly authorized, express, written contractual terms, if existing, may influence, effect, supersede or modify enforcement rights hereunder (e.g. contracts with some Financial Advisors may involve illiquid assets and may not be terminable).

4.2 Procedure

4.2.1 An allegation that a Trustee, Employee, Consultant or Financial Advisor has violated any one of these Standards may be initiated by a sworn written complaint made by any Member of the Fund or by a directive from the Chairman of the Board or from the Executive Director. Such complaint or directive shall be timely filed with the Executive Director, or, in the event of a conflict, with the person ordinarily responsible for the duties of the Executive Director in the event of his absence or disability. The complaint or directive shall state the facts upon which the violation is said to have occurred and the specific provisions of these Standards alleged to be violated. A complaint or directive will be deemed to be timely only if filed within sixty (60) days of the date on which the facts are first known to the complainant and in any event within two years of the alleged violation.

4.2.2 Any Trustee, Employee, Consultant or Financial Advisor who is the subject of a complaint or directive under the foregoing Section shall forthwith be provided a copy of the complaint or directive. Such individual shall be afforded an opportunity for a hearing before a hearing officer selected by the Trustees at which he or she

may be represented by counsel. The complaint or directive and all proceedings thereon shall be strictly confidential until the Trustees take final action thereon.

4.2.3 The hearing officer shall have full access to all resources available to the Trustees and may, with the approval of the Trustees, retain independent Consultants to assist him in the conduct of proceedings under this Article. Any person so retained shall be bound by the provisions of these Standards. The hearing officer shall make findings of fact and a recommendation to the Board concerning sanctions.

4.2.4 The Trustees shall accept the findings of the hearing officer if supported by the evidence and it shall thereafter consider his recommendations. The Trustees shall act as promptly as may be consistent with due deliberation.

4.3 Legal Action

In appropriate circumstances, as determined by the Trustees, the Fund may commence legal action in order to recover damages, seek equitable relief, or to obtain other legal remedies or relief with respect to any persons or entities to which these Standards apply, and with respect to any other persons and entities in accordance with applicable law.

Article 5. **Rules of Construction**

5.1 Effective Date

Any references to statutes shall be to those in effect on January 1, 2017.

5.2 Final Arbiter

Resort may be made to judicial case law or administrative agencies' interpretative materials only with respect to terms or phrases whose meaning is specifically incorporated from cited statutes or rules. The Trustees are, in any case, the final arbiter of the interpretation of these Standards.

5.3 Headings

The headings of the respective Articles and Sections are for organizational purposes only and shall not be used as tools of construction to aid in the interpretation of the words of these Standards.

5.4 Miscellaneous

Whenever these Standards would otherwise require disclosure by the Executive Director to him or herself, said disclosure shall be made to the Chairman of the Board.

Exhibit C

Risk Management Framework

The Massachusetts Bay Transportation Authority Retirement Fund (the “Fund”) employs a risk management framework that is designed to enable measurement and management of risk across risk exposures and investment program functions. While maintaining responsibility for risk oversight, the Retirement Board delegates implementation of specific functions to Management, the Investment Advisor, Auditor, Actuary, Custodian, Investment Managers and Investment Counsel who are responsible for managing risk within the scope of their duties and responsibilities.²⁵ Capitalized terms that are not defined within the body of this text shall take the meaning assigned in the Investment Policy Statement (the “IPS”).

As summarized below, the framework includes a governance approach, program of assessments, key measures and reporting processes designed to manage risk categories common to defined benefit pension funds including, but not limited to, market, asset/liability, liquidity, operational and credit risk.²⁶

Risk Governance

Risk governance includes Retirement Board practices and procedures, contract provisions and procedures the Fund employs to measure and manage risk. Governance encompasses functions within the IPS, which documents roles of fiduciaries (see Sec. 4 (Fiduciary Standards)), asset allocation (see Sec. 7.4 (Current Asset Allocation Targets & Ranges)), risk tolerances (see discussion in Sec. 7.1 (Rate of Return Assumption)), Investment Manager selection (see Sec. 8 (Investment Manager Selection)), Investment Manager monitoring (see Sec. 9 (Manager Reporting and Review Process)) and portfolio rebalancing (see Sec. 7.5.4 (Rebalancing)).

Audits and Assessments²⁷

Assessments include the annual audit of its financial statements (CAFR), asset/liability modeling (ALM), experience studies, asset allocation modeling, liquidity tier analysis, cash flow projections, stress testing²⁸ and investment program expense reviews that provide transparency into risk exposures and costs, while also serving as a basis for decision making. Assessments also include an annual compliance

²⁵ See IPS, Sec. 5 (Duties and Responsibilities).

²⁶ Risk categories include market, liquidity, asset / liability, operational and credit risk:

- Market Risk - Market risk is the risk of loss due to adverse movements in market factors such as asset prices, currency rates or interest rates.
- Liquidity Risk – Liquidity risk may be described as the risk of loss due to an asset owner being unable to sell an asset in a timely manner and for its actual value.
- Asset / Liability Risk - Asset / Liability is that the risk that the Fund’s liquidity will not be adequate to meet operational requirements or financial obligations, namely liabilities related to benefit payments.
- Operational Risk - Operational risk is the risk of loss resulting from inadequate or failed processes, people and systems of from external events.
- Credit Risk - Credit risk is the risk of loss due to failure of obligors (e.g. bond issuers) to honor their payments.

²⁷ Assessments and reports include applicable disclosures under GASB and Actuarial Standards of Practice.

²⁸ Asset-liability modeling typically includes stress testing under various projected actuarial and market scenarios.

questionnaire to Investment Managers (see Exhibit E (Annual Compliance Questionnaire) of the IPS), and periodic review of the IPS, and portfolio structure reviews.

Key Measures

Key measures include, but are not limited to, asset class exposures relative to policy targets and thresholds, industry diversification of equity portfolios, tracking error, bond manager characteristics (e.g. average credit rating and average weighted duration), private markets geographic and asset diversification, and, where permitted, Investment Managers' utilization of leverage and financial instruments (e.g. derivatives) that may magnify market risk. Measures also include value at risk (VaR), standard deviation, Sharpe ratio, down market capture ratio, default rates and security issuer concentration. Key measures of asset / liability risk include the funded ratio, changes to net assets available for benefits, projected cash flows and the accrued unfunded actuarial liability.

Reporting

The Retirement Board's ability to manage risk is enabled by reporting provided by the Management, Auditor, Actuary, Investment Advisor, Custodian, and Investment Managers. Reports include, but are not limited to, a monthly report to the Retirement Board (at its regularly scheduled meeting) by the Executive Director, the Custodian's monthly flash report, compliance dashboard, and full accrual, multi-currency accounting statements. Reports also include the Investment Advisor's quarterly total Fund performance and private equity / real estate equity reports, recurring Investment Manager reports, preparation of the CAFR and actuarial reports. The Fund and its service providers utilize information technology and independent, external databases to facilitate reporting processes.

Exhibit D

Investment Manager Benchmarks

| EQUITY MANAGERS | Manager | Style Benchmark | Long-Term |
|--------------------------------------|---|--|--|
| U.S. Large Cap Equities – Core | SSgA Russell 1000 Index Fund | Russell 1000 | Russell 1000 |
| U.S. Large Cap Equities – Value | Robeco Investment Management | Russell 1000 Value Index | S&P 500 |
| U.S. Large Cap Equities – Value | Aristotle Capital Management | Russell 1000 Value Index | S&P 500 |
| U.S. Small Cap Equities – Growth | Alliance Bernstein | Russell 2000 Growth Index | Russell 2000 |
| U.S. Small Cap Equities – Growth | RBC Global Asset Management | Russell 2000 Growth Index | Russell 2000 |
| U.S. Small Cap Equities – Value | SSgA Russell 2000 Index Fund | Russell 2000 Value Index | Russell 2000 |
| U.S. Small Cap Equities – Value | Robeco Investment Management | Russell 2000 Value Index | Russell 2000 |
| | | | |
| International Equities | Gryphon International – EAFE Equities | MSCI EAFE Index | MSCI EAFE Index |
| International Equities | Morgan Stanley Investment Management – International Value Equity | MSCI EAFE Index | MSCI EAFE Index |
| Global and Emerging Markets Equities | Sands Capital Management – Global Growth Equity ²⁹ | MSCI All Country World Index / MSCI Emerging Markets Index | MSCI All Country World Index / MSCI Emerging Markets Index |
| International Small Cap Equities | Principal Global Investors | MSCI World ex-USA Small Cap Index | MSCI World ex-USA Small Index |

U.S. Equity Managers are selected based on their style of management such as Value, Growth and Core. It is expected that U.S. Equity Managers will outperform the Style Benchmark net-of-fees and the median return of a representative database of managers with a similar style over three and five year periods or a market cycle. Over longer periods of time, it is expected that net-of-fee returns generated U.S. Equity Managers will exceed the return of the Long-Term Benchmark regardless of the style of management.

It is expected that net-of-fee returns generated by International Equity, Global Equity and Emerging Markets Equity Managers will exceed the return of the Long-Term Benchmark over three and five year periods or a market cycle. It is also expected that these Managers will outperform the median return of a representative database of managers with a similar strategy, where applicable, over three and five year periods or a market cycle.

²⁹ Due to Sands Capital Management’s expected overweight to emerging markets, the manager will be measured against a global equity index and a blended index that includes global equity and emerging markets index components.

| FIXED INCOME MANAGERS | Manager | Style Benchmark | Long-Term |
|--------------------------------------|--|---|---|
| Core Fixed Income | Income Research & Management | Barclays Capital Aggregate Index | Barclays Capital Aggregate Index |
| Global Inflation-Linked Fixed Income | Income Research & Management | Barclays Capital U.S. TIPS Index / Barclays U.S. TIPS 1 – 10 YR. | Barclays Capital U.S. TIPS Index |
| Bank Loans | Eaton Vance Senior Loan Fund | S&P / LSTA U.S. Leveraged Loan Index | S&P / LSTA U.S. Leveraged Loan Index |
| Global Multi Sector | Franklin Templeton – Global Multi Sector | Barclays Multiverse Index | Barclays Multiverse Index |
| Global Multi Sector | Loomis Sayles & Company – Multi Sector Full Discretion | Barclays Capital Gov / Credit Index | Barclays Capital Gov / Credit Index |
| Mortgage-Backed Fixed Income | AFL – CIO Housing Investment Trust | Barclays Mortgage-Backed Index / Barclays Capital Aggregate Index | Barclays Mortgage-Backed Index / Barclays Capital Aggregate Index |
| Real Estate Debt | Amalgamated Bank – LongVeiw ULTRA | Barclays Capital Aggregate Index | Barclays Capital Aggregate Index |
| Cash | State Street Bank | 91 Day T – Bill | 91 Day T- Bill |

It is expected that net-of-fee returns generated by Fixed Income Managers will exceed the return of the Long-Term Benchmark over three and five year periods or a market cycle. It is also expected Fixed Income Managers will outperform the median return of a representative database of managers with a similar strategy over three and five year periods or a market cycle.

| ALTERNATIVE MANAGERS | Manager | Style Benchmark | Long-Term |
|---|---|---|---|
| Real Estate Equity (Open End & Closed End Funds) | Multiple Managers ³⁰ | NCREIF NPI / NCREIF ODCE Index | NCREIF NPI / NCREIF ODCE Index |
| Private Equity | Multiple Managers ³¹ | State Street Customized Benchmark Index / State Street Private Equity Index | State Street Customized Benchmark index / State Street Private Equity Index |
| <p>It is expected that Real Estate Equity Managers' net-of-fee returns will exceed the return of the NCREIF NPI and/or NCREIF ODCE Real Estate Index over the corresponding market cycle.</p> <p>It is expected that Private Equity Managers' net-of-fee returns will exceed the return of the State Street Customized Benchmark Index over the corresponding market cycle.</p> | | | |
| Fund of Hedge Funds | The Rock Creek Group Fund (E) | 91 Day T – Bill Plus 300 bps / HFRI FOF INDEX | 91 Day T – Bill Plus 300 bps / HFRI FOF INDEX |
| <p>It is expected that net-of-fee returns generated by Fund of Hedge Fund Managers will exceed the Style Benchmark with a level of volatility similar to fixed income over three and five year periods or a market cycle.</p> | | | |
| Risk Parity / Diversified Beta | Invesco Balanced – Risk Allocation Trust | Bloomberg Barclays 3 month U.S. Treasury Bellwether Index 60% MSCI World Equity / 40% Barclays Capital Aggregate | Risk Parity / Diversified Beta |
| Risk Parity / Diversified Beta | PanAgora Asset Management | 60% MSCI World Equity / 40% Barclays Global Aggregate Index | 60% MSCI World Equity / 40% Global Aggregate Index |
| <p>It is expected that the Risk Parity Manager's net-of-fee return will exceed the Style Benchmark with a level of volatility similar to fixed income over three and five year periods or a market cycle.</p> | | | |
| Opportunistic Investments | Hamilton Lane Strategic Opportunities 2017 Fund | Bank of America / Merrill Lynch High Yield | Bank of America / Merrill Lynch High Yield |
| <p>It is expected that the Risk Parity Manager's net-of-fee return will exceed the Style Benchmark with a level of volatility similar to fixed income over three and five year periods or a market cycle.</p> | | | |

³⁰ Details of the Fund's Real Estate Equity Portfolio are included in the Investment Policy Statement.

³¹ Details of the Fund's Private Equity Portfolio are included in the Investment Policy Statement.

Exhibit E

Annual Compliance Questionnaire



2018 Compliance Questionnaire

Firm Name: _____

Please check either yes or no for the following questions with respect to the last 12 months.

- | | YES | NO |
|---|--------------------------|--------------------------|
| 1. Have there been any changes to investment strategy? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Have any clients requested a full redemption of their investment? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Have there been any changes to the valuation policy? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Are there problems determining NAV? | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Have any Partners / Portfolio Managers departed the firm? | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Have there been any significant personnel changes? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Any employees have investigation/warning from a regulation body? | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Application from a regulation body that has been withdrawn? | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Any criminal/civil/regulatory proceedings against Partners? | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Any criminal/civil/regulatory proceedings against employees? | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Recent changes in organizational structure within the firm? | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Are there any known conditions (health, financial, litigation, etc) of any of the Firm's Principals that might influence their ability to execute their duties? | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Has the firm utilized the services of a third-party marketing firm or placement agent in its interactions with the Fund? | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Has any service provider (auditor, legal, administrator, custodian, etc.) been terminated or replaced over the past year? | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are there conflicts with any 3 rd Party Service Providers? | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Does the Firm foresee any potential conflicts? | <input type="checkbox"/> | <input type="checkbox"/> |

Elaborate on any "yes" responses above:

17. Confirm that the Firm is a registered Investment Advisor under the Investment Company Act of 1940 and has maintained registration throughout the year.

Please attach the most current Valuation Policy and Form ADV.

Please send the completed form and all attachments to Jacquelyn Carey at jcarey@mbtarf.com no later than December 21, 2018.
