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May 19, 2021

Mr. Brian P. Golden, Director
Boston Planning & Development Agency
Boston City Hall, 9th Floor
One City Hall Square
Boston, MA 02201-1007

RE: Renewal of the Arnold Arboretum Institutional Master Plan

Dear Director Golden:

I am pleased to submit for the Boston Planning & Development Agency's review the enclosed Institutional Master Plan Notification Form (IMPNF) for the renewal of the Institutional Master Plan (IMP) for the Arnold Arboretum of Harvard University. This IMPNF is submitted in accordance with Section 80D-8 of the Boston Zoning Code. The IMP that is the subject of this renewal was approved by the Boston Redevelopment Authority (BRA) on August 14, 2007 and by the Boston Zoning Commission on January 9, 2008, for a ten-year term.

At this time, the Arboretum is not contemplating any new Proposed Institutional Projects during the renewal term of the IMP. Thus, in accordance with Section 80D-5.2(e) of the Zoning Code ("Waiver of Further Review of Unchanged Plans"), we request the BPDA to waive additional review of this renewal application and approve the IMPNF, along with the existing IMP, together as the renewed Institutional Master Plan.

We will publish a public notice of this IMPNF submission in the *Boston Herald* and will provide the BPDA with a copy of the notice. We understand that our renewal request will be placed on the agenda for a BPDA Board meeting following the 30-day public comment period.

Thank you for your assistance. Please feel free to contact me if you have questions or require any additional information.

Sincerely,

A handwritten signature in black ink that reads "Ned Friedman". The signature is written in a cursive style with a long horizontal flourish extending to the right.

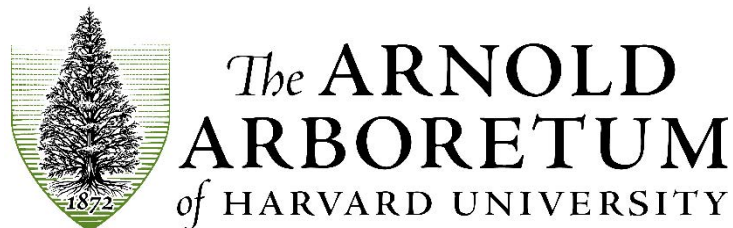
William (Ned) Friedman, Director
Arnold Arboretum

Enclosure

cc: Gerald Autler, BPDA
Matt Fitzgerald, BPDA

Institutional Master Plan Notification Form

**for renewal of the
Arnold Arboretum
Institutional Master Plan**



Submitted to:
The Boston Planning & Development Agency

Submitted By:
The Arnold Arboretum of Harvard University

May 19, 2021

I. INTRODUCTION

This Institutional Master Plan Notification Form (“IMP NF”) is submitted to the Boston Planning & Development Agency (“BPDA”), formerly the Boston Redevelopment Authority (“BRA”), in compliance with Section 80D-8 of the Boston Zoning Code (the “Zoning Code”), for purposes of renewing with no changes the current Institutional Master Plan (the “Arboretum IMP” or the “IMP”) for the Arnold Arboretum of Harvard University.

At this time, the Arboretum is not anticipating any new Proposed Institutional Projects for the term of the renewed IMP.

II. ARNOLD ARBORETUM BACKGROUND AND MISSION

Founded in 1872, the Arnold Arboretum is the first arboretum planned from its inception to be a public landscape as well as a center for research on woody plants. The mission of the Arboretum has remained focused on research and education about plants since the time of its establishment:

The Arnold Arboretum of Harvard University discovers and disseminates knowledge of the plant kingdom to foster greater understanding, appreciation, and stewardship of the Earth’s botanical diversity and its essential value to humankind.

This mission is accomplished through three areas of activity: research, education, and horticulture.

III. ARBORETUM PROPERTY AND CONTEXT

The Arnold Arboretum is located in Boston’s Jamaica Plain and Roslindale neighborhoods and includes approximately 256 acres of City-owned parkland leased to and maintained by the Arnold Arboretum of Harvard University, along with approximately 25 acres of land divided among four separate parcels that are privately owned by Harvard University. The map at Attachment 1 shows the Arnold Arboretum, both the parkland and Harvard-owned land.

As described more fully in the IMP, the Arboretum leased land operates under a unique partnership between the City of Boston and Harvard University whereby Harvard—acting through the Arboretum—maintains the living plant collections and buildings, while the City is responsible for maintaining roadways, sidewalks, and boundary walls in the parkland that are part of the leased area; facilitating public use of the parkland grounds; and providing security.

IV. IMP APPROVALS BACKGROUND and IMP PROJECT

The Arboretum IMP was approved by the BRA on August 14, 2007 – and by the Boston Zoning Commission on January 9, 2008 – for a ten-year term. In conjunction with its approval of the IMP, the Boston Zoning Commission also voted to approve Map Amendment No. 540, thereby amending Boston Zoning Map 10 – Roslindale by creating an Institutional Master Plan Overlay

Area on the 14.2-acre Harvard-owned Weld Hill Parcel. In accordance with the provisions of Sections 80D-6 and 80D-11, the zoning controls for institutional uses on the Weld Hill Parcel are governed by the terms of the IMP.

The zoning controls for the remainder of the Arboretum land—outside of the Weld Hill Parcel—are governed by the provisions of the applicable zoning districts for those parcels.

IMP Project: The IMP described one institutional project to be undertaken during the ten-year term: an approximately 45,000 square-foot Research and Administration Building on the Harvard-owned Weld Hill parcel at 1300 Centre Street. The Research and Administration Building was completed in December 2010 and occupied in January 2011. The building achieved LEED Gold certification in recognition of the many sustainable features incorporated into the project, including a below-grade geothermal heat exchange system that eliminates the need for natural gas usage for heating purposes and reduces by 70% the amount of electricity needed for cooling the building.

Associated Perimeter Improvements: In conjunction with the construction of the Research and Administration Building, the following pedestrian access, transportation, and perimeter improvements—as described more fully in the IMP—were also completed at the Weld Hill parcel in coordination with the appropriate City and State agencies.

- A pedestrian entry and sidewalk from Centre Street to the Research and Administration building was created along the main entry drive to provide pedestrian access to the building and parking area. Pedestrians are able to traverse the Weld Hill site by entering from Centre Street and connecting to the path that extends to the Walter Street entry.
- Additional pedestrian access was created from Centre Street via the emergency vehicle access driveway.
- A new pedestrian entrance from Walter Street was created via an opening in the stone perimeter wall near the intersection of Walter Street and Weld Street.
- Repairs were undertaken to the stone wall along the eastern boundary of the site that adjoins Walter Street.
- The Arboretum provided funds to the City of Boston for purposes of replacing two City-owned street trees along the Centre Street perimeter of the parcel that died and were removed prior to the beginning of construction.
- New paved sidewalks were installed to replace the previous dirt sidewalks along the Weld Street perimeter of the parcel, and along the north (Arboretum parkland) side of Walter Street, between the Walter Street gate and Centre Street.
- A pedestrian crosswalk was installed at the intersection of Walter and Bussey Streets.

Weld Hill Development Controls: A Declaration of Development Restrictions establishing controls for future development on the Weld Hill Parcel was entered into by Harvard University and the Boston Redevelopment Authority on June 22, 2009. The Declaration was recorded at the Suffolk Registry of Deeds on August 26, 2009.

V. OTHER ACTIVITIES COMPLETED DURING THE TERM OF THE IMP Described for Informational Purposes

Miscellaneous improvements were undertaken at the Arnold Arboretum during the 10-year term of the IMP. While these activities do not constitute “Proposed Institutional Projects” under the definitions of the Zoning Code, they are summarized here for informational purposes.

Sustainability Improvements: In addition to the sustainability features incorporated into the Weld Hill Research and Administration Building, the Arboretum also undertook rooftop solar panel installations at the Hunnewell Building maintenance garage and at the Dana Greenhouses. The solar panels have resulted in a 30% reduction in electrical consumption at these two facilities.

In 2019, the Arboretum completed the installation of a third solar system adjacent to the Weld Hill Building. The system is comprised of 1297 solar panels arranged in two ground-mounted arrays and one canopy array spanning the building’s terrace. Additionally, the system includes a Tesla battery storage system that helps to reduce the building’s peak energy draw from the power grid. The 450kw system is estimated to produce 30% or more of the building’s overall energy demand.

In 2019, the Arboretum completed the installation of an emergency drought mitigation system on Bussey Hill, comprised of seventeen acres of automated irrigation and water access points throughout an additional thirty acres of plant collections. The Bussey Hill installation is the first phase of a multi-phase donor-funded initiative aiming to establish infrastructure for emergency supplemental watering during times of extreme drought (such as in 2015-2016) to protect the long-term health of the Arboretum’s living collections in the face of climate change. In 2020, the Arboretum began planning the second phase of this initiative, which aims to provide water infrastructure for approximately 55 acres of land on Peters Hill.

Bradley Rosaceous Collection Renovation: Completed in 2011, the renovation and redesign of the Bradley Rosaceous Collection was a three-year initiative to improve the Arboretum’s important garden of rose family plants. Partnering with landscape designer Julie Moir Messervy, the Arboretum restructured the arrangement of the collection to strengthen presentation and boost the quality of horticultural displays, improve circulation through the collection, and enhance opportunities for educational enrichment. The renovation also enabled the Arboretum to critically reassess one of its major plant collections from top to bottom, reconsidering the scope of rosaceous plants represented in the garden and assessing the curatorial value of individual plants in the collection.

Signage and Wayfinding Project: With assistance from the environmental graphics firm of Roll, Barresi & Associates, the Arboretum implemented a comprehensive upgrade of directional signage throughout the parkland in 2007-2008. The goal of the project was to make it easier for visitors to find their way through the Arboretum and locate specific paths, collections, scenic vistas, gates, and the Visitor Center. Signage was designed to be consistent and harmonious with the aesthetic and historic character of the Arboretum, relate to Emerald Necklace signage while still communicating the Arboretum’s individual identity, and be visible without distracting from the collections or the landscape.

Landscape Management System: Since 2007, the horticultural stewardship of the Arboretum’s collections and landscapes have been guided by a Landscape Management Plan (LMP) that describes the unique care requirements of collections within 72 management zones delineated across the landscape. With the Arboretum’s *Campaign for the Living Collections* as a catalyst, the Arboretum has inaugurated the advancement and creation of the next edition of the LMP through a comprehensive audit of our plant health care and landscape management practices to ensure both exemplary standards and the most sustainable practices possible. In 2020, the Arboretum completed the development of *Arb Manager* and the *Landscape Management System Dashboard*, two digital resources that articulate horticultural priorities and requirements, facilitate communication workflows with internal and external contributors and stakeholders, and increase our capacity for evidence-based decision-making through data collection and analysis. As a component of the project, thirteen landscape-wide programs have been identified and have been developed and implemented.

VI. UPCOMING ACTIVITIES Described for Informational Purposes

In addition to its ongoing maintenance and enhancement of the living collections and landscape, the Arboretum expects to pursue the following activities during the 10-year renewal term of the IMP. While these activities do not constitute “Proposed Institutional Projects” under the definitions of the Zoning Code, they are being included here for informational purposes.

Cold Storage Renovation: In spring 2021, the Arboretum will renovate the cold storage building at the Dana Greenhouse complex, which comprises a 102' x 16' cast-in-place concrete building used for plant storage. The renovation of the building will include routine removal and replacement of the existing floor; shelving; and roof to improve envelope performance and storage capacity. The project will not significantly alter the character or footprint of the building or property.

Hunnewell Building Envelope Restorations: The Arboretum is currently planning a multi-phase restoration of the envelope of the Hunnewell Building. The main building was designed and constructed beginning in 1892 and consists of a two-story brick and mortar structure with a finished hip slate-roofed attic and full basement. The rear “herbarium addition” was completed a few decades later. Building-wide renovations in the 1990s improved a number of interior spaces and saw the addition of a passenger elevator tower and stairwell on the west side of building. While the Hunnewell Building’s envelope is still in reasonably good condition, many of its original and updated features—including slate and rubber roofing, mortar joints, brickwork, gutters, windows, and skylights—are nearing the end of their lifespans and are due for renewal or replacement. The restoration of the building’s envelope will be a multi-phase project predicted to span 6-10 years. The Arboretum will coordinate with the Boston Parks Department to review the proposed work, in accordance with the provisions of the underlying Arnold Arboretum Botanical / Zoological Gardens Open Space subdistrict where the Hunnewell Building is located.

Bonsai / Penjing House Replacement: The Arboretum is exploring expanding and improving public access to some of the country’s oldest dwarfed potted tree collections: the Larz Anderson Bonsai House, located on the Harvard-owned Dana Greenhouse Parcel. Redesign goals would include: increasing the current display space by 2-1/2 times; improving visibility, access and interpretation for visitors; and creating a small Asia garden by the entrance of the display. Once schematic designs are developed and an implementation schedule has been defined, the Arboretum will reach out to the Boston Parks Department to initiate review of the proposed improvements in accordance with the provisions of the underlying Arnold Arboretum Botanical/Zoological Gardens Open Space subdistrict where the Bonsai House is located.

VII. RATIONALE FOR RENEWAL WITH NO CHANGES

This IMPNF for the renewal of the Arboretum IMP meets the requirements of Section 80D-5.2(e) of the Zoning Code (“Waiver of Further Review of Unchanged Plans”) in that: (i) no new Proposed Institutional Projects are planned; (ii) no changes in the Institutional Master Plan are proposed that would constitute a change in the use, dimensional, parking, or loading elements of the Institutional Master Plan (other than de minimis dimensional changes); and (iii) no significantly greater impacts would result from continued implementation of the approved Institutional Master Plan than were originally projected.

Accordingly, the Arboretum requests the BPDA to waive additional review of this renewal application and to approve this IMPNF, along with the existing 2007 IMP, together as the renewed Institutional Master Plan for the Arnold Arboretum of Harvard University.

VIII. REQUESTED RENEWAL PERIOD

The Arboretum requests that the BPDA approve a **ten-year** renewal period for the Arboretum IMP, consistent with the original ten-year term.

ATTACHMENT 1

Map of the Arnold Arboretum



Legend

- City of Boston-owned Land Under Lease to Arboretum
- Harvard University-owned Land
- Institutional Master Plan Overlay
- City of Boston-owned Land Under Arboretum Management
- Building / Structure
- Stream
- Ditch
- 10' Contour
- Wetland
- Entry Gate
- Other Entrance
- Internal / Arboretum Road
- Internal / Arboretum Road
- External Road
- Major Path
- Minor Path
- Collection / Garden Path
- Paved Sidewalk

- Basemap data provided by the Harvard Planning Office
 - Wetland data provided by Boston Water and Sewer
 - Stream data provided by Boston Water and Sewer and modified