

The Barnes Foundation  
2025 Benjamin Franklin Parkway, Philadelphia, PA 19130

# Building Statistics Part I

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**Building Name**

The Barnes Foundation  
Philadelphia Campus

**Location**

2025 Benjamin Franklin Parkway, Philadelphia, PA 19130

**Building Occupant Name**

The Barnes Foundation

**Occupancy or Function Types (Type of Building)**

Assembly (A-3), Business  
Conference Rooms, Auditorium, Lounges, Library

**Size (Total square feet)**

91,748 sq ft

**Number of Stories Above Grade / Total Levels**

2 Stories above ground | 61' above ground  
3 Stories total

**Dates of Construction**

11/10/2009 – 2/23/2012

**Cost Information**

Total Cost - \$75,890,374

**Project Delivery Method**

Guaranteed Maximum Price (GMP)

## Primary Project Team

### Owner

The Barnes Foundation | <http://www.barnesfoundation.org/>

### Architect

Tod Williams Billie Tsien Architects | <http://www.twbta.com/>

### Associate Architect/LEED

Ballinger Architects | <http://www.ballinger-ae.com/>

### MEP Engineer

Altieri Sebor Wieber | <http://www.altieriseborwieber.com/>

### Structural Engineer

Severud Associates | <http://www.severud.com/index.php>

### Landscape Architect

Olin Partnership | <http://www.theolinstudio.com/>

### Civil Engineer

Hunt Engineering | <http://www.huntengineering.com/>

### Lighting Designer

Fisher Marantz Stone | <http://www.fmsp.com/>

### General Contractor

Aegis Property Group | <http://www.aegispg.com/>

### Acoustic & Audio Visual Consultant

Acoustic Dimensions | <http://www.acousticdimensions.com/>

### Exterior Wall Consultant

Axis Facades | <http://www.facades.com/>

### Geotechnical Engineer

Earth Engineering | <http://www.earthengineering.com/>

## Architecture

When designing this building, the driving idea was to create “a gallery in a garden and a garden in a gallery”. This is accomplished first by utilizing the site as a public garden that guests must walk through between the gate house (where tickets are purchased) to the main building, seen in figures 1. Within the museum is a grand interior public space that can be used for a variety of events and extends out into the public garden, shown in figure 2.

Doctor Albert Coombs Barnes established The Barnes Foundation in 1922 in Merion, PA, with the help of his wife, Laura Barnes. His goal was to “promote the advancement of education and the appreciation of the fine arts and horticulture.” It is here, in Merion, where Barnes accumulated artwork while his wife developed a 12-acre arboretum surrounding the house. After the construction of The Barnes Foundation’s Philadelphia campus, the artwork from the Merion campus was moved to the 12,000 square feet of art galleries in the new facility. Classrooms were then included on every floor to encourage the education of the art in honor of Dr. Barnes.

Used as both the beacon for The Barnes Foundation and a key daylighting feature, a light box runs the length of the building and cantilevers over the terrace. While the box itself is square, the forms inside are quite unique, allowing a vast amount of daylight to enter in the interior courtyard. At night, the light box glows to create a symbol for The Barnes Foundation.



Figure 1 | Exterior Walkway | Courtesy of FMS



Figure 2 | Lower Lobby | Courtesy of FMS



Figure 3 | Exterior Light Box Canopy | Courtesy of FMS

## Major National Model Codes

IBC 2006

IFC 2006

IMC 2006

ANSI A117.1: 2003 edition

ADA 1994

## Zoning

Philadelphia Zoning District | Active Parks and Open Space (Special Purpose) [SP-PO-A]

“All lighting must prevent glare onto surrounding Residentially-zoned properties”

- Philadelphia Zoning Code

Construction Type IIA

Allowable height – 85 ft

Allowable stories – 4 ft

Allowable building area per floor with 200% increase for automatic sprinkler protection throughout – 46,500 sq ft

Allowable total building area – 139,500 sq ft

## Historical Requirements

After Albert Barnes passed away in 1951, in his will was the requirement for this new facility to have the galleries constructed to perfectly match the same shape and size as the galleries in Merion, PA. Furthermore, his will required that all the artwork be displayed in the same locations and manner.

## Building Enclosure

### Windows

The windows along The Barnes are fixed, wood framed windows. There are both contemporary and traditional styles for the windows. The traditional styles match the windows found on the original Merion Building. Low transmission glazing was applied to the windows to protect artwork inside.

### Façade/Exterior Wall Materials

The museum is clad in fossilized limestone panels of various sizes secured by a steel sub-frame. A portion of the museum consists of a long interior courtyard space that is identified on the exterior by a “light box”. The box is made up of a laminated translucent glazing system.

### Roofing

There are three different parts of the roof: Reinforced Polyvinyl-Chloride (PVC) flexible membrane sheet roofing over the gallery, a green roof with grounding screen over the pavilion, and a photovoltaic roof over the light box. The PVC is found on all types of roofing and acts as a thermoplastic waterproofing membrane.

### Shading Devices

The clerestories within the building are accompanied by blackout shades and fixed aluminum sunshades extruded across the clerestory. The museum windows have electrically operated shades that are controlled by a calendar timer for control during low sun angle months.

## Sustainability Features

The Barnes Foundation has a daylight control system throughout the building. This system is able to analyze daylight levels using photosensors, be programmed to remember specific calendar events, and use an astronomic time clock. The time clock is also used to control the shading system to limit the amount of direct sunlight penetrating the space. The daylighting system uses an open loop solar adaptive algorithm. Low transmission glazing on the windows prevents UV-radiation from entering the building while also reducing the electrical usage of lighting.

Furthermore, the green roof covering the majority of the roof allows for the collection of rain and grey water to be reused in irrigating the building site. Materials used in the building come from renewable, local, and recycled content. The Barnes Foundation is the first art educational facility in the country to receive a LEED Platinum Certification.