American Museum of Natural History

Richard Gilder Center
for Science, Education, and Innovation

HISTORIC PRESERVATION BACKGROUND RESEARCH REPORT

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INTRODUCTION

This report has been compiled by Higgins Quasebarth & Partners, LLC, for the American Museum of Natural History and Studio Gang Architects to assist in assessing the history, existing context and physical fabric at the west and north sides of the Museum complex where a new central entrance building and architectural focal point, known as the Gilder Center for Science, Education & Innovation, is planned for construction. The project will be understood in the context of the Museum complex as a New York City and State and National Register Individual Landmark and contributing property within the surrounding Upper West Side/Central Park West Historic District. This report will also assess the proposed project's visual, contextual and physical impacts on the site's architectural resources.

The appropriateness of the proposed Gilder Center is rooted in the following three themes:

- Appropriateness of constructing a central entrance building and architectural focal point at the unfinished portion of the west side of the museum complex, and of completing the east-west internal circulation axis between Central Park West and Columbus Avenue. Both aspects of the project are in conformance with the Museum's original mission and its historic Master Plan;
- Appropriateness of a new, architecturally compatible contemporary building to the Master Plan and to the subsequent evolution of the Museum complex and the adjacent parkland;
- Appropriateness of demolishing the existing Buildings 15, 15A and the Weston Pavilion, which are not architecturally significant to the complex.

SUMMARY

The Museum is located within Theodore Roosevelt Park and bounded by West 81st Street to the north, West 77th Street to the south, Central Park West to the east, and Columbus Avenue to the west. The site for the proposed Gilder Center project is at the center of the west side of the complex, at the intersection of Columbus Avenue and West 79th Street, where a central entrance building and architectural focal point is called for in the Master Plan. Construction at this site is a significant step in the evolution of the west primary facade, and in resolving the axial circulation within the Museum complex. It will be in keeping with the Museum's architectural history while employing a contemporary architectural language. The Gilder Center will replace three existing buildings; Buildings 15 and 15A, which are publicly inaccessible, and the Weston Pavilion, a non-historic programmatically void entrance and circulation hall.

The new building will be approximately 193,530-gross-square-feet (gsf), with five stories above grade (approximately 105 feet tall; taking into account mechanical and elevator bulkheads, a portion of the rooftop would reach 115 feet), and one below-grade. Because the building will be integrated into the Museum complex, an additional approximately 41,595 gsf of existing space will be renovated to accommodate the program and make connections into the new building, for a total of approximately 235,125 gsf of new construction and renovation. It will feature sculptural, curvilinear forms in the facade, on both sides of a central interior-arched entrance. It will be harmonious with the naturalistic landscape of the park which has evolved on the unbuilt portions of the site respecting the essential character of the Museum complex.

THE INSTITUTION AND ITS MISSION

Since the Museum's founding, its purpose as set forth in the 1869 Charter enacted by the New York State legislature has been to encourage and develop the study of Natural Science, to advance the general knowledge of kindred subjects, and to furnish popular instruction and recreation. As the Museum approaches its 150th anniversary, continued fulfillment of the original mission is fundamental to the Museum's architectural and institutional planning process. The Gilder Center will integrate science, education and exhibition more fully than has ever been accomplished in any of the other museum buildings.

The proposed project would be designed to reveal the behind-the-scenes work of the Museum and integrate it into the visitor experience, to serve as a platform for the partnership between scientists and educators, and to offer spaces where students of all levels and ages can find engagement and inspiration through their immersion in the process of authentic scientific research and discovery. Collection storage spaces, the research library, and laboratories for gene mapping, 3D imaging, and big data assimilation would be located adjacent to immersive exhibition galleries and interactive education spaces for children and adults in family and school groups.

Among the major new features that would be included in the proposed project are:

- A physical articulation of the Museum's full, integrated mission of science, education, and exhibition, that will provide visitors with cross-disciplinary exposure to the natural world;
- New kinds of exhibition and learning spaces infused with the latest digital and technological tools, linked to scientific facilities and collections;
-Innovative spaces devoted to the teaching of science—including for middle school, early childhood, family, and adult learners and teachers;
- Spaces for carrying out scientific research—particularly in natural sciences—and facilitating public understanding of this vital scientific field;
- Increased storage capacity and greater visibility and access to the Museum's world-class collections;
- Exhibitions and interpretations of new areas of scientific study;
- Expansion of the natural history library from a world-class repository to a place of adult and public learning;
- Approximately thirty new connections into ten existing Museum buildings on multiple levels, improving circulation and better utilizing existing space;
- Enhanced visitor experience and services;
- Improved building services; and,
- A more visible and accessible entrance on the west side of the Museum complex.

EVOLUTION OF THE MASTER PLAN

The architectural history of the Museum is characterized by respect for, but a series of changing approaches to, the original Master Plan. The original Master Plan, designed by Calvert Vaux and Jacob Wrey Mould in 1872, outlines an institutional-scale complex, square in plan, composed of 21 sections with four similar street facades "distinguished by large entrances of architectural dignity and strength" at the center of each facade. The original plan includes cross-axial circulation corridors, which connect the perimeter spaces and subdivide the interior footprint into four symmetrical open courts (History, Plan and Scope of the American Museum of Natural History, 1910).

In his 1908 Autobiography, founder of the Museum, Albert Smith Bickmore explains the development of the original Master Plan. He recalls, "My own sketch suggested a building like that of the national capital at Washington… But when we found such a large area assigned us, we extended these traverse structures into full-sided wings reaching the corners of the square. The ground plan as thus enlarged contemplates a building with four equal sides, each about seven hundred forty feet long. At the center of the square will rise a high tower dominating the entire structure. From this tower or central dome a wing will radiate to the middle of each of the four sides and thus divide the great square into four large open courts for lighting the interior sides of the exhibition halls."

The Museum's first building, designed by Calvert Vaux and Jacob Wrey Mould in the Gothic Revival style and constructed in 1874-77, laid the foundation for the ambitious original Master Plan. Its location north of the 77th Street primary facade and central entrance building was strategically selected, to encourage future construction. Yet as the museum's resources, needs, architects, and styles changed over the years, so too did the approach to the original Master Plan.

Early in the Museum's development the original Master Plan was recast in 1897 by Cady, Berg & See. The 1897 plan envisioned the same institutional-scale rectilinear footprint as the original plan, but varied in its architectural style to a more contemporary and grander Romanesque Revival, which succeeded Gothic Revival in popularity in the late 19th century and was financially attainable with increasing endowments. The 77th Street facade (Buildings 2-7) designed by Cady, Berg & See and constructed from 1890-1900, and the south-west wing on Columbus Avenue (Building 8), designed by Charles Volz and constructed in 1906-08, followed in the Romanesque Revival style.

EVOLUTION OF THE MASTER PLAN

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Evolving Footprint

The building program subsided for a short time after 1908, and when it resumed in the 1920s, further evolution of the original Master Plan occurred, this time in the internal footprint of the plan. The interior courts, originally envisioned as light-filled courts, began to be filled in with buildings for exhibition and utilitarian function to accommodate the significant increase in Museum collections and visitors.

The Oceanic and Education wings (Buildings 10-11) were the first to be constructed at the center of the southwest and southeast courtyards in 1924 and 1928 respectively. In the 1930s, interior courtyard infill continued, and extended north. The Power and Service building (Building 17) by Trowbridge and Livingston was built in 1930-31 in the northwest courtyard, and the former Hayden Planetarium by Trowbridge and Livingston was constructed in 1934-35 in the northeast courtyard. Numerous other courtyard infill buildings and additions followed these precedents, which resulted in a mix of buildings with varying styles and scales at the interior of the complex. Most significantly, construction in the courts altered the original axial circulation patterns set forth in the original Master Plan.

Evolving Style

Simultaneously, beginning in the 1930s, there was a third evolution in the architectural style of the Museum buildings. The Romanesque Revival style of the recast Master Plan by Cady, Berg & See prevailed for the facade buildings in the early 20th century (the courtyard infill buildings were utilitarian in design as they were not expected to be seen upon completion of the primary facades). The Theodore Roosevelt Memorial, constructed in 1931-36, was designed by John Russell Pope with Trowbridge & Livingston in a monumental Roman Revival style. Similar to the earlier shift from Gothic Revival to Romanesque Revival, the Museum sought a more contemporary and grand architectural expression for the central entrance building, which was a memorial to the late President and a new primary entrance to the Museum.

These variations in footprint and architectural style set new precedents for the Museum's development. The recent Rose Center for Earth and Space, designed by Polshek and Partners and constructed in 2000, continued in this vein. The Rose Center works within an evolved dual architectural identity, accepting the northeast courtyard site location of the Hayden Planetarium it replaced, but partially "healing" the utilitarian appearance of the accretionary internal infill with a dynamic extended north facade building and terrace.

EVOLUTION OF THE MASTER PLAN

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Its contemporary design is a distinguished expression of the architectural language of its time, analogous to the Roosevelt Memorial, and appropriate for a primary entrance building. The Rose Center also varies from the original Master Plan, as a primary entrance building by accepting the off-axis courtyard site condition. The off-axis east-west circulation system was partially healed with the construction of an intermediate corridor building, the Weston Pavilion.

Existing Museum Context

The present museum complex comprises roughly two-thirds of the area envisioned in the original Master Plan. It includes complete south and east facades, a partial west facade, and a combination of the modern Rose Center and earlier utilitarian masonry buildings as seen from the north. The complex of 25 buildings has an asymmetrical footprint and features numerous architectural styles, as a result of a century-and-a-half of varying construction initiatives, which began with the 1872 Master Plan but subsequently evolved into a complex interaction between the original Master Plan image and an expression of changing institutional needs and architectural styles. The original Master Plan continues to express a useful vision for the Museum complex, in its essential elements of institutional scale, cross-axial and perimeter circulation, focal entrance buildings on each side, and awe-inspiring exhibition halls. However, the west side of the complex remains unresolved and is a functional and architecturally important site for further evolution in the context of the Museum's architectural history.

EVOLUTION OF THEODORE ROOSEVELT PARK

The Museum has always been situated within the context of a park. Manhattan Square (later renamed Theodore Roosevelt Park) was designated as public parkland in the 1811 Commissioner's Plan. The 1872 Master Plan for the architecture by Calvert Vaux and Jacob Wrey Mould envisioned an institutional-scale complex across the four-block lot. When Manhattan Square was designated as the Museum site in 1876, it was set aside in its entirety for the future expansion of the Museum. Originally there was no predetermined plan for the landscape. An 1897 rendering of the Master Plan recast by Cady, Berg & See shows an expectation that the four street facades would likely be bordered by geometrical planting beds with low shrubs. However, early historic images show the landscape developing informally as provisional path systems and plantings for recreation and circulation to and from the Museum where the buildings called for in the original and recast Master Plans had yet to be constructed.

The Museum's first building is seen in a historic photograph dating to 1877 surrounded by land with areas of open water and piles of stone rubble. During a Parks Department meeting in 1878, Frederick Law Olmsted commented that initial improvements to the landscape were to be made with a view toward keeping the unbuilt areas from being "an eyesore." Olmsted recommended the creation of "a smooth but quietly undulating surface," with fill from excavation of surrounding streets and lots, and overlaid with "earth and soil to sustain turf and shrubbery."

As the early museum building program extended along the south and then up the eastern facade, portions of the square were filled (in part by making it a free dump for a time), graded and planted, with walks to the buildings being laid and relaid to fit the changing footprint. At the south and east facades, the provisional path system gave way to more formal entry paths and service driveways, and lawns framing the facades. At the west and north side of the complex, where the Museum buildings did not come to fruition, a winding provisional path system remained.

By the mid-20th century the park had been re-landscaped numerous times, with improvements and design treatments increasingly akin to other city parks. In each instance, however, it was explicitly noted that the improvements were not "permanent," as the site was to be occupied by future additions to the museum building (New York Times, 1935).

EVOLUTION OF THEODORE ROOSEVELT PARK

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Existing Park Context

In recent decades, the winding provisional path system at the north and west portion of the Museum complex where it is still largely unbuilt has become a de-facto characteristic of the landmark site. The northwest section of the park was named Margaret Mead Green in 1979, and the NYC Landmarks Preservation Commission's Historic District Designation Report describes the landscape and fixtures around the complex as a contributing feature. When the northern section of the park underwent a restoration in coordination with the Rose Center's construction, the Landmarks Commission clarified the historical nature of the existing landscape in a 1997 Binding Report specifically finding, that the "existing landscape design is not historic to either the park or the museum," and in evaluating the proposed work in the park their considerations were that "proposed work will maintain the character of the park as green space with many trees; that new lawns and paths relate well to the design" and "work will enhance the appearance of the park and the special architectural and historic character of the Upper West Side/Central Park West Historic District."

EXISTING BUILDINGS

Three existing buildings within the footprint of the new Gilder Center site (Building 15, Building 15A and the Weston Pavilion) will be demolished as part of the expansion project. These buildings combine recent date, utilitarian design, limited visibility and loss of integrity, and as such are not historically significant to the Museum complex. Individually, they do not possess significant historic architectural detail, and Buildings 15 and 15A have plain stucco west facades, facing Columbus Avenue. A view from the major public vantage point at 79th Street and Columbus Avenue, which was historically intended to host a central entrance building and architectural focal point for the west facade, shows a mix of buildings with varying styles and scales. Replacement of Buildings 15, 15A and the Weston Pavilion will provide the opportunity to fulfill the original Master Plan's vision for the center west facade and will resolve the functional and circulation shortcomings of the existing buildings.

Building 15, the Former Power House and south adjoining Boiler House, later known as Buildings 15 and 15A respectively, was constructed in 1903-04 and designed by Charles Volz in the Romanesque Revival style. The Power House was constructed as a three-story brick and stone building with a gable roof and dormers at the north and south elevations. The Boiler house was constructed as a simple one-story brick addition with a gable roof. Building 15's plain brick west elevations and placement at the interior transept and courtyard of the complex suggests that it was not intended for public view.

Building 15 has been substantially altered over the years. In 1905, a three-story circulation corridor addition was constructed between Building 15 and Building 7, eliminating the east facade of Building 15 below the gable. Further alterations were made in the 1930s, in response to the newly built Power and Service Building (Building 17) north of Building 15, including a three-story bridge addition to Building 17 at the west bay of Building 15's north facade, and alterations to windows at the north and west elevations. In 1965, the adjoining Boiler House, Building 15A, was converted to a two-story no-style stucco-clad building with a flat roof, engulfing the south elevation of the Former Power House below the third-story dormers. In 1988, the west elevation of Building 15 was stuccoed to match Building 15A.

As a result of these changes, the existing condition of Building 15 is highly compromised. The north elevation is refaced with non-matching brick on its lower half where it was previously connected to Building 17. The west elevation is entirely refaced and has a plain stucco facade toward the public thoroughfare at West 79th Street and Columbus Avenue. The south elevation is connected with, and largely engulfed by, the two-story, no-style Boiler House addition (Building 15A). The interior of Building 15 has been completely altered and does not retain any historic detail. As a result of these

EXISTING BUILDINGS

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modifications, the building retains minimal character-defining features of its original style and exhibits a severe diminution of architectural integrity.

Building 15 is not noted in the NYC Landmarks Preservation Commission Individual Designation Report for the Museum, which describes the significance of the Museum and discusses eleven component structures and the land on which they stand. Building 15 is noted in the Upper West Side Historic District Designation Report as a part of the eighteen interconnected buildings that comprise the Museum complex. The report does not make a statement of the building's significance.

The Weston Pavilion, is a contemporary glass and metal frame cube building and attached circulation corridor, constructed in 2000 in coordination with the Rose Center. The Weston Pavilion was designed as an entrance and a link between the unfinished west facade where there was no public entrance, and the north and east sections of the Museum complex. It connects to Building 17, to the north, and the Rose Center and central Museum complex as it spans east.

THE GILDER CENTER

The proposed Gilder Center project will create a distinguished central entrance building of high architectural quality at the west side of the complex, relating sensitively to the existing building context and located within the footprint of the central west entrance building anticipated in the original Master Plan. It will resolve the internal circulation across the complex by completing the center east-west axis between Central Park West and Columbus Avenue and the north-south connection to Buildings 8 and 17. The Gilder Center will continue the evolution of the Museum complex in architectural style. It will be a contemporary building appropriate in expressing the architectural language and technology of its time, as do all of the primary facade buildings throughout the complex. At the same time it relates to its historic context in form, scale and massing and materiality; and expresses the ongoing scientific and educational mission which is central to the museum's historical identity.

Form

The Gilder Center's design evolved out of an exploration of the formal and abstract expressions of the architecture and landscape as they were originally conceived and have evolved over the years. An 1897 rendering of the recast Master Plan by Cady, Berg and See illustrates a complex with a clear rectilinear plan and cross axial interior corridors, but simultaneously within this rectilinear complex there are strong curvilinear expressions typical of its style. The Romanesque Revival south facade features paired, boldly rounded towers at the 77th Street center entrance and the corners of the south facade that are boldly sculptural, curved, and projecting. Arched entryways and curved pathways are additional curvilinear forms found at the center entrance. The curvilinear expression continues to be a dominant feature throughout the history of the Museum's architectural evolution. The form can be found translated into other styles in the curvilinear columns flanking the triumphal arch entryway at the Roosevelt Memorial central entrance building, and in the arched entrance and sphere within cube form of the Rose Center. It also occurs in the curving pathways and plantings of the park.

The undulating forms of the new Gilder Center façade will project outward on both sides of the center entryway. A sculptural, canyon-like interior space visible through a central glass curtain wall will be a contemporary expression of the arched entryways and dramatic public spaces existing throughout the campus. In addition, at the interior, the critical east-west axial corridor, from Central Park West to Columbus Avenue, will be fulfilled through numerous connections to the adjacent buildings. On the exterior, new plantings and landscape will bring together the curvilinear character of both the Gilder Center and the park.

THE GILDER CENTER

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Material

The Gilder Center will be constructed of glass and stone, relating to its contemporary style and the materiality found in other complex buildings. The stone is expected to be a light-colored granite, either a Milford Pink granite from the same quarry as the granite cladding the Roosevelt Memorial building, or a granite of a similar type and coloration to Milford Pink. Granite is the dominant masonry found across all of the Museum's public-facing buildings and central entrances. Deep pink granite clads the 77th Street entrance building and early-20th century wings along the south and east facades, and the Roosevelt Memorial and Rose Center are clad in lighter granite. The use of glass with a range of opacities in the new building will be a distinctly contemporary architectural statement, relating to the glass enclosure of the Rose Center.

Scale and Massing

The Gilder Center is designed to relate to the existing west side context in scale and massing. The new building will be constructed, between Building 8 at the south and Building 17 at the north, with interior connections to both buildings; the buildings were constructed at different periods in the Museum's evolution, and reflect different styles and scale. The Gilder Center building will bridge these two adjacent buildings to unify the west facade.

Building 8 is six-stories tall and situated exactly within the footprint prescribed by the original Master Plan. The facade is rectilinear with curvilinear protrusions and punched openings, and a gabled roof with dormers. Building 17 is five stories tall and situated in the northwest courtyard of the original Master Plan. The facade is rectilinear with punched openings and framed at the north and south ends by taller circulation cores.

The Gilder Center building will negotiate the existing height context of the two buildings by rising to six stories in height at Building 8 to the south, and then stepping down to five stories at the north where it meets the shorter Building 17. At maximum height, the new building will be five feet lower than Building 8, respecting that building's historic prominence. The Gilder Center will visually connect the adjacent buildings with a facade that extends west to meet, but not to exceed, the facade line of Building 8 with deferential setbacks at the building connection point and again at the roof peak; and undulating back as the facade extends north toward the northwest courtyard position of Building 17. In addition to relating to the scale and massing of the adjacent buildings, the new building will not exceed the height of any other existing building within the complex.

THE GILDER CENTER

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Secondary Elevation

At the secondary elevation, the Gilder Center will also be compatible with its architectural context in form, material, scale and massing. Views from the north over the Rose Center terrace reveal an assembly of internal buildings that contain the science and education happening within the Museum. The interior portion of the complex has an unintentional but defining character which is both utilitarian and monumental, resulting from of years of architecturally varied secondary elevations, courtyard infill buildings and additions in response to functional needs. These buildings have simple rectilinear volumes, primarily constructed of red brick with copper roofs or siding, at a variety of heights and scales.

The secondary elevations of the Gilder Center will be less formal in design than at the primary facade, in keeping with this utilitarian spirit. This side and rear portion of the building envelope will primarily be rectilinear and faced with a light-colored textured plaster. A portion of the lower wall connecting to the Rose Center terrace will be clad in copper, echoing the copper rooftops and copper-clad walls of the terrace. The building will have numerous setbacks from terrace level to the roof, to transition between the shorter LeFrak Theater building and the taller head house at Building 1 to the east and Building 17 to the north, where glass circulation connectors will gently bridge the new and old buildings. However, within these basic forms and materials, curvilinear joint lines in the textured plaster elevation and a large cavernous window at the center of the east elevation will simultaneously reflect the texture and energy of the primary facade.

Park

The Gilder Center expansion project will respect that the park as a public amenity and an important feature of the landmark site. Its essential character identified in the Landmarks Commission's report will be preserved. The new building will entail minimal change to the existing park around the site, by keeping the building's footprint back from the outline of the center entrance building in the original Master Plan, to the facade line of the adjacent buildings. Unlike the other entrance buildings around the site, the Gilder Center building will not have a formally composed lawn or plaza in front of the building, but will open directly to park paths on a naturalistic curve. The landscape design surrounding the new building will preserve the park's existing character of winding paths with trees and plantings. Similarly, the building facade will reflect its park context with undulating curves and design features inspired by forms found in nature, and in the park specifically.

CONCLUSION

The appropriateness of the proposed Gilder Center is rooted in the themes discussed. The history of the Museum began with an original Master Plan, and both the essential character and evolution of this plan is the defining framework for the Museum's development. The new building will occupy a site at the center of the Columbus Avenue west facade where a central entrance building and architectural focal point is called for in the original and recast Master Plans. Its construction will be a significant step in the evolution of the west primary facade, where the existing condition is three utilitarian buildings that do not directly contribute to the Museum's mission or architectural character. In addition, the new building will resolve the internal circulation throughout the complex by completing the internal axis, called for in the original Master Plan but disrupted by courtyard infill construction as the complex evolved or was left unfinished.

The design of the Gilder Center will be in keeping with the Museum's architectural history of constructing buildings in the style of their time with its contemporary architectural language, while simultaneously relating to the historic context in form, scale, massing and materiality. The new building will feature sculptural, curvilinear forms in the facade, recalling the curvilinear towers of the 77th Street facade, the arches at the Roosevelt Memorial and Rose Center buildings, and the organic curvilinear forms found in nature. It will be harmonious with the naturalistic landscape of the park, incorporating the evolution of the park as a significant character defining feature at the unfinished portion of the Museum's west and north sides.