Executive Director's Recommendation

Commission Meeting: April 6, 2017

PROJECT
Bird House Renovation and Addition
Smithsonian Zoological Park
3001 Connecticut Avenue, NW
Washington, DC

SUBMITTED BY
Smithsonian Institution

REVIEW AUTHORITY
Federal Projects in the District
per 40 U.S.C. § 8722(b)(1) and (d)

NCPC FILE NUMBER
7673

NCPC MAP FILE NUMBER
2.00(38.00)44518

APPLICANT'S REQUEST
Approval of preliminary and final site and building plans

PROPOSED ACTION
Approve preliminary and final site and buildings plans

ACTION ITEM TYPE
Consent Calendar

PROJECT SUMMARY

The Smithsonian Institution (SI) has submitted preliminary and final site and building plans for the renovation and addition to the existing Bird House Building, redevelopment of the associated landscape and minor improvements to the adjacent Great Flight Cage at the National Zoological Park. The site is located at the Bird Hill Precinct, in a relatively isolated and steep area surrounded by dense vegetation in the northwest corner of the zoo. The site has two access points: the Bird House pedestrian bridge connecting the site to other public zoo areas to the northeast, and a service vehicular access point located along Hawthorne Street NW, connecting the site to the southwest. Nearby attractions include the Asia and Elephant Trails, and Giant Panda exhibits.

The proposed design will address the need for upgrades to an 89-year old facility with dated and unfocused exhibits, out-of-date systems, and significant deferred maintenance. The project will allow the introduction of new *Experience Migration* exhibits and *Smithsonian Migratory Bird Center* educational activities. The proposed upgrades include:

- A welcoming arrival experience where visitors can gather and view wild birds engaging in habitat designed to entice and entertain.
- Immersive, walk-through aviary exhibits representing the migratory bird's habitat.
- Updated exhibits that tell the story of the annual life cycle of a migratory bird.
- Formal and informal spaces that provide a variety of hands on learning opportunities.
- Updated animal collection dedicated to supporting Smithsonian conservation stories.
- Improved animal holding areas to support animal care and management.
- New site and building systems to support state of the art exhibits, sustainability practices and current building codes.
- Restored gracious entry experience that was lost during the 1965 renovation with the removal of the historic entry portico.

The four main project components entail:

1. Renovation and restoration of the existing 26,700 gross square-foot Bird House Building.
2. Construction of a new 2,500 gross square-foot contemporary addition to the north of the Bird House Building that houses educational programs with direct outdoor deck access, including a tracking station and discovery classroom, and visitor service areas such as restrooms and vestibule.
3. Redevelopment of the 34,000 gross square-foot grounds to improve the landscape design, and the northern arrival experience.
4. Minor renovations to the existing 12,800 gross square-foot Great Flight Cage.

The total proposed area for the renewed Bird House is 29,200 gross square feet. Additional project components include interpretive outdoor signage, landscape improvements, and specimen tree preservation. The project includes sustainable stormwater management strategies with the goal to comply with federal and local regulations. The final plan aims to integrate sustainable design features to achieve Leadership in Energy and Environmental Design (LEED) Gold standards.

KEY INFORMATION

- The project is scheduled to be constructed beginning in October 2017 with an estimated two year construction period. During construction, the public will not have access to Bird Hill.
- The Bird House, designed by the Municipal Architect of the District of Columbia Albert Harris, was completed in 1928 and renovated in 1936 and 1965.
- The 1965 renovation included the removal of the focal point of the building. The old decorative entrance was removed and reinstalled within the building's Indoor Flight Room. As a result, the existing Bird House entry sequence is bland, uninviting, and lacks a distinct and memorable character.
- John Joseph Earley designed the historic mosaic portal, consisting of a gabled porch with a door surround, executed in poured colored concrete, featuring colorful birds and flowers among an abstract design.
- The historic mosaic portal will be relocated to a more prominent location within the building lobby to reintroduce a focal point at the terminus of the visitor arrival experience.
- Although the Bird House has been altered over the years, it continues to contribute to the significance of the National Zoological Park Historic District along with the Great Flight Cage. This iconic tensile steel structure, designed in a modernist style, was built in 1965.
- The site topography, consisting of a plateau, is among the highest elevation areas of the zoo and has the potential for visual connections with areas to the north and east; however, dense foliage at the perimeter provides a secluded and quiet woodland environment.
- NCPC participated in five consultation meetings with the applicant, and other review agencies including the Commission of Fine Arts and DC State Historic Preservation Office on April 22, 2015; June 15, 2015; March 11, 2016; June 23, 2016; and December 8, 2016 to provide feedback during the design process.

RECOMMENDATION

The Commission

Approves the preliminary and final site and building plans for the Bird House Renovation and Addition at the Smithsonian National Zoological Park.

Commends the Smithsonian Institution for restoring the historic mosaic portal to a more prominent location, and achieving a balance between architecture, landscape and sustainability strategies.

Notes that any substantial changes to the Bird House Renovation and Addition project, including but not limited to changes in the building design, stormwater management, site plan and landscape design are required to be submitted to the Commission for review.

PROJECT REVIEW TIMELINE

Previous actions	**November 2008** – Approval of master plan for the Smithsonian National Zoological Park. (NCPC File No. MP053).
Remaining actions (anticipated)	– none

PROJECT ANALYSIS

Executive Summary

The renovation of the existing Bird House complex, and associated landscape will improve the visitor experience in the Upper Zoo. The proposed design is compatible with the historic context; it contributes to the diverse architectural vocabulary, and respects the natural features of the Bird Hill Precinct. The proposed site plan complements and strengthens the existing geometrical composition, consisting of circular and square footprints of the Great Flight Cage and Bird House building by introducing a curvilinear vestibule that embraces an oval shaped arrival plaza. The landscape design offers a balance between shade, bird friendly habitat, and bioretention areas while providing a sense of arrival. The project is consistent with polices in the Federal Elements of the Comprehensive Plan for the National Capital, in particular the Urban Design, Federal Environment, Historic Preservation, and Visitors and Commemoration Elements. In addition, the project aligns with the Smithsonian National Zoological Park Master Plan approved by the Commission in 2008. Therefore, staff recommends the Commission **approve the preliminary and final site and building plans for the Bird House Renovation and Addition at the Smithsonian National Zoological Park**.

Analysis

Staff focused on urban design, environmental, historic preservation, and visitor experience considerations. The bird house complex is located in the upper zoo area, a site with a very distinct topography that offers a quiet and secluded forested environment and unique architectural vocabulary within the larger context of the Smithsonian National Zoological Park Historic District. Therefore, maintaining a sense of a cohesive campus, historic continuity, evolution and sense of arrival is important. The project will enhance the Bird House Precinct with attractive amenities, and landscape. In addition, the project preserves and rehabilitates the existing bird house and the iconic Great Flight Cage structure representative of 1930s and 1960s eras, and allows proposed contemporary styles to emerge. The project responds to the historic fabric, improves accessibility and the gracious arrival sequence that was lost in the 1965 renovation, and integrates sustainability objectives. The proposed architecture, consisting of a dynamic geometry, and contemporary materials such as metal panels and glass, evoke plumages while being sympathetic to the historic fabric. The curved geometry of the north addition provides a playful, light and open structure that contrasts with the heavy, rigid and solid existing square brick masonry structure.

According to the applicant, the project includes the following goals:

1. Provide an immersive, multisensory visitor-friendly experience that allows opportunities for interaction and reflection.
2. Inspire visitors to find a connection to the wonder of migratory birds.
3. Provide the best avian animal care to support bird well-being, enrichment, diet, husbandry, and health maintenance of a diverse collection of species.
4. Build opportunities for special experiences and events that promote education, social interaction, and revenue generation.
5. Provide an efficient, durable and low-maintenance facility that demonstrates and validates sustainable principles.

The Bird Hill Precinct features distinct structures that exhibit a variety of scales and architectural styles. The bridge that connects visitors to the plateau (constructed in the 1990s) includes a steel truss structure. At the center of the site, the Bird House, a massive, one-story with a square footprint, symmetrically arranged brick structure was constructed in 1928, with additions in 1935. The focal point of the design was a gabled porch. Unfortunately, significant modifications in 1965 included the removal of the building's gabled portico and hipped roof over the elevated central gallery. As a result, the existing entry sequence is indistinct, with limited views of a solid masonry wall of the Bird House through the foliage. Concrete trellis structures line visitor paths along the south and east sides of the site. West of the Bird House, the Great Flight Cage provides an iconic tensile steel structure and powerful curved forms from 1965. A concrete bridge with a massive arc supported by pyramidal piers spans between the original masonry structure and the Great Flight Cage.

Landscape Design

The submission materials indicate that the proposed site design is based on the understanding of the historic site plan evolution over the last ninety years. The proposed site plan opens up the entrance to the plateau, which has become cluttered and overgrown, by providing a welcoming,

entry space that includes a wide entry path, large clearing, and open view of the visitor's destination. The entry path invites visitors to meander around the edge of the site to view bird/pollinator friendly habitats and integrated stormwater bioretention areas. The design includes places where visitors can sit, enjoy lunch, and appreciate the surrounding Rock Creek forest. The design team has identified specimen trees, which will be preserved and integrated into the clearing providing bird habitat as well as shade for visitors.

According to the project narrative, the planting plan is inspired by the movements of a murmuration. Bands of plantings mimic the flow, and direction of birds in flight. Like a flock of birds that can be understood as one single moving element or as the movement of many individual birds, the plants will be seen and appreciated as a whole and at the individual plant level. Varying colors, textures, and scales of plantings will provide year round visual interest to the visitor as well as habitat for birds. Trees, shrubs, grasses, and perennials will provide a variety of scale and texture. The design provides the necessary balance of sun and shade, in order to have a viable and robust understory for visitor comfort and bird-friendly environment.

The landscape design includes a landing, a central promenade and an arrival plaza to provide flexible space for special events. The program requires open paving areas to accommodate a variety of temporary tent sizes and functions. Therefore, additional trees have not been placed within the promenade paving, but into the adjacent planting beds to ensure the long-term horticultural success. Existing precedents within the Zoo indicate that placing trees in hardscape areas lead to poor long-term survival rate. Based on this experience, the SI's horticulture and park management team determined that the placement of trees in hardscape was problematic due to the operational requirements of the site, which includes clearance for handling snow removal, food service, event functionality, daily vehicular circulation for general maintenance and delivery throughout the plaza, café and walkway. Therefore, the plan includes trees into the softscape, and to mitigate the lack of trees within the hardscape, the design team increased the quantity of small trees, like Red Bud tree clusters at both the plaza and café areas, thereby increasing the diversity of seasonal color and size characteristic of a woodland landscape.

The serpentine path is an important component of the habitat trail that connects the clearing to the entry plaza, the tracking station deck and the plant pollinator garden. The material of the serpentine path and habitat trail is crushed stone surfacing. The area in front of benches is designed as precast pavers to endure high pedestrian volume.

Tree Preservation and Removal

The revitalization of the north site on Bird Plateau is designed to weave together a transformative visitor experience and an enhanced forest edge. A native bird-friendly landscape will be established throughout the site from the landing to the Bird House, providing an immersive setting for education about local bird habitats. To support the transition between forest and clearing, and insure the long-term health of the north site trees, selective tree removal will be necessary. By opening the canopy the design provides a balance of sun and shade, allowing for vital sun-loving bird and pollinator-friendly plantings and bioretention features, while maintaining the lush character of the existing Plateau.

The design team conducted a tree inventory of existing trees within the north site. A professional arborist and NZP horticultural staff evaluated the survey to determine the health of existing trees. Based on the survey and evaluation, the team identified a tree preservation plan. The result is a balanced ecologically friendly landscape that provides the successional edge habitat critical for birds and pollinators within an immersive and educational visitor experience.

According to the inventory of existing trees to be removed, a total of 32 existing trees, equivalent to 392 caliper inches of trees, will be removed. These trees were showing increased signs of poor health or were growing against the building. The landscape plan proposes a total of 80 new trees; the total caliper inches of trees at planting is 366.5; the total anticipated caliper inches of established trees in ten years is 991. Smaller caliper sized trees are proposed to be planted to ensure quicker establishment and long-term survivability. A total of 20 existing trees will be preserved.

Bird House North Addition

The project includes the revitalization of the Bird House Building and the introduction of new *Experience Migration* exhibits and *Smithsonian Migratory Bird Center* educational activities. In addition, the project entails a new, distinct but complementary addition to the building's north façade. The north addition will address critical visitor experience and interpretive goals, and house educational and visitor services program areas. The project includes the following goals:

1. Providing a focal point for the visitor arrival experience that acknowledges the multi-generational identity of the place;
2. Creating an animated, visitor-friendly north-facing façade; seamlessly extending the visitor path from exterior to interior exhibits; and
3. Referencing the lightness, power, and character of the bird collections.

Visitor paths through the facility will provide immersive, multi-sensory experiences. The proposed intervention will be complementary but distinct from the historic fabric, contributing a new chapter to the narrative of animal care, visitor experience, and interpretative facility for birds to support the next fifty years of service.

The proposed Bird House north addition will support a welcoming entry experience that was lost with the 1965 renovation. The existing square building measures approximately 130'-8" by 133', and the new addition will extend the building 31 feet to the north. The new building entry will reintroduce a central focal point for the facade using a new architectural vocabulary of distinct but complementary forms and materials. The new addition will relate to the historic Bird House through scale, symmetry, and use of material patterns. At the same time, the addition's materials, form, and light-filled approach will be distinct from the original fabric, suggesting a lighter, more inviting, and open bird exhibition building. The reclaimed historic mosaic portal is situated at the terminus of the arrival experience, at the interior of the building. The portal will be visible through bird-friendly glazing, and provide a focal point for visitors from the moment of arrival at the plateau. The contemporary exterior reflective, metal panel cladding, including a color palette that ranges from cooper, bronze gold light/dark and bronze tiles, will be sympathetic in color to the historic brickwork.

The Migratory Bird Center's tracking station and discovery classroom will each open to outdoor teaching areas. Roof extensions will provide shelter to allow indoor-outdoor activities throughout the year. Both facilities will be screened from the plaza by vegetation, with glimpses providing a sense of activity beyond the building façade. The cantilevered ends of the roof extend beyond the walls, allowing the roof to hover over the interior/exterior threshold. Additionally, the construction details of the curved walls illustrate how the panel variation in colors and sizes, reminiscent of a sand hill crane's plumage, further reinforces the lightness, and character of the bird collections.

Historic Portal

The Bird House was a one-story building with a square footprint, and a flat roof, punctuated by skylights. At the building's center was a great flight room with a red tile hipped roof and a large skylight at its peak. The great flight room was taller than the surrounding exhibit spaces which allowed a series of clerestory windows to bring natural light. The building's exterior was highlighted by a gabled entrance. The red tile coping and round field tiles covering the expanse of the roof lent the building a Mediterranean or Spanish architectural flavor. On each side of the entrance was a one-story vestibule with shed roof sloping away from the main building. The stepped arch in the gabled facade is reminiscent of a Moorish arch form, with ornaments that carried over into southern Spain. The use of brick facing, semicircular-headed windows, doors, and arches, and a large opening was in keeping with Romanesque building forms. The mosaic inspired, concrete (with glass inset) designs by Earley and the foliate and animal design by the painter Stephen Haweis around the front door, had a Byzantine-Revival flourish.

In 1936, the Public Works Administration completed an addition on the south side of the building. The addition extended the full width of the building to the south by 43 feet. The addition's brick masonry exterior continued with the same style and ornamentation as the original construction. In 1965, building renovations included removal of the original gabled building entry portico and the red tiled hipped roof; installation of flat skylights over the central space; and construction of the Great Flight Cage. The innovative form of the Great Flight Cage consisted of six parabolic steel arches that formed a circle approximately 130 feet in diameter with a central mast height of nearly 90 feet. The aviary was covered by a vinyl-coated steel wire mesh. A reinforced concrete bridge connects the upper level of the indoor flight room to the Great Flight Cage. Following the 1960s renovations, the Bird House received maintenance and repairs for the next 30 years. The building's mechanical system was replaced in the 1990s and an aluminum and glass addition was added to the building's east elevation in the mid-2000s. Aside from these minor changes, the facility has remained largely unchanged from its 1965 appearance.

The proposed design introduces a curved building form to express a playful sense of movement. The design includes the relocation of the historic portal, which is currently located in the indoor flight room, to a more prominent location within the building lobby. Upon arrival inside lobby, visitors can go through or around the historic portal to experience the tropical aviary. Additionally, detailing surrounding the portal has been refined to distinguish the ceiling geometry from the portal. This transition announces the variety of migration-themed, light-filled aviaries and intermediary migration exhibit passageways. The design team originally proposed the wall surround of the historic concrete portal to be a Venetian plaster material in a color that is sympathetic to that of the historic masonry. As a result of further consultation with the SHPO, the

surround material of the historic portal fabric will be comprised of face brick with sympathetic (but identifiably new) hue, coursing, and detailing to the historic masonry. The transition between the surround and portal is addressed by an arched soldier course.

Bird House Renovation

The project devises a new treatment for historic features according to bird-friendly design principles that control the perceived scale of openings and distracting lighting effects that may be confusing and harmful to birds in the area. The exterior of the existing Bird House building masonry will be refurbished, and existing tall gallery window openings reglazed. The leaky, flat polycarbonate central skylight of the 1960s will be replaced with a pyramidal formed skylight designed in conjunction with the new entry. The new enclosure will be comprised of a steel structure with an expansive ETFE (Ethylene Tetrafluoroethylene) film for maximum glare-free interior natural light. ETFE film is durable, highly transparent and very lightweight material.

Chimney Modifications at South Facade

Recent mechanical modeling has introduced the need for a higher elevation exhaust at the back-of-house areas south of the facility. The existing brick chimney, added in 1964, is inadequate to enclose all of the required flues. Therefore, a new brick chimney enclosure will replace the existing structure, modifications will result in a total footprint roughly twice the size of the existing chimney but at the same height. The proposed design has no visual impact on the primary public entrance at the north of the facility; no impact on the historic decorative panel west of the existing chimney; and utilizes a modern brick of sympathetic hue, coursing, and detailing with respect to the historic masonry to the historic masonry.

Great Flight Cage

The Great Flight Cage is an iconic architectural element. It was the most innovative part of the 1965 Bird House renovation project. This soaring "exhibition tent" received a citation for excellence in engineering from the American Iron and Steel Institute for its design and use of steel.

The current project proposes minor improvements to the Great Flight Cage, related to structural refurbishment and animal safety issues. The project also includes improvements to the enclosure at the entrance structure, review and repair of the superstructure, and modification to the lower pool habitat to improve visibility of the animals, safety, and animal husbandry.

Recommendation Summary

The Bird House renovation will support the new *Experience Migration* exhibit and enhance the visitor experience. The project will improve the relationship between the Bird Hill Precinct and the larger NZP context and address long-term sustainability, and durability considerations. The renovated facility will support highly social, interactive, and multi-sensory outdoor and indoor visitor experiences through immersive habitat design around and within the historic building. The design provides generous circulation through the habitat areas and connects viewing areas of varied character. The bird house complex has a rich architectural heritage that reflects design contributions of each new generation, including the original Bird House, a pedestrian bridge, the Great Flight Cage, and southern concrete trellis at the animal yard. In addition to the architecture,

the site topography surrounded by dense vegetation contributes to the special character of Rock Creek Park. The proposed addition and landscape improvements will provide a positive contribution and reinforce the unique identity of the upper zoo area.

CONFORMANCE TO EXISTING PLANS, POLICIES AND RELATED GUIDANCE

Comprehensive Plan for the National Capital

As noted above, the proposed project is not inconsistent with the Comprehensive Plan for the National Capital, in particular the Urban Design, Environment, Historic Preservation, Visitors and Commemoration Elements.

Relevant Federal Facility Master Plan

The project conforms with the Smithsonian National Zoological Park Master Plan, which was approved by the Commission at its November 6, 2008 meeting. The master plan divided the National Zoo into six geographic precincts and the tram system was included as a seventh precinct. The master plan provided site development plans for each precinct, including: Upper Olmstead, Middle Olmstead, Lower Olmsted, Beaver Valley, Bird Hill, Research Hill and Aerial Tram.

The master plan included the Bird Hill revitalization as an animal exhibit area. In particular, the master plan identified the Bird House and Aviary renovations along with the surrounding land areas for animal exhibits and viewing.

Since 2008, the Commission has reviewed several projects included in the master plan located throughout the zoo, in particular in the Lower Olmstead Precinct. Previous projects include the Conservation Carousel, approved in May 2012 (NCPC File No. 7366); Police Station Rehabilitation, Multi-use Space, and Public Restroom Building Site Improvements, approved in June 2016 (NCPC File No. 7718); and the New Lower Zoo Kiosk and Bandshell, approved in March 2017 (NCPC File No. 7862).

National Historic Preservation Act

The National Zoo is listed in the National Register of Historic Places (NRHP) and the Washington DC's Inventory of Historic Sites. The Bird House, designed by the District of Columbia Municipal Architect Albert Harris and completed in 1928, with additions in 1936 and 1965, is considered to be a character defining resource. Harris also designed the Reptile House, which opened in 1931. These structures incorporated architectural decoration such as animal imagery and sculptures inside and out, underscoring the emphasis on popular entertainment.

Both the Smithsonian and NCPC have an independent responsibility to satisfy the requirements of Section 106 of the National Historic Preservation Act. NCPC has elected to designate the Smithsonian Institution as lead agency pursuant to 36 CFR § 800.2(a)(2) to satisfy the Commission's Section 106 responsibility. Following consultation with NCPC staff and the District

of Columbia State Historic Preservation Office (DC SHPO), the Smithsonian determined that the project would not adversely affect historic properties. The Smithsonian initiated consultation with the DC SHPO on April 1, 2015. At the time, the SHPO considered a determination of "no adverse effect" premature. The SHPO recommended additional consultation to evaluate ways that the renovation designs might better relate to the architectural character of the original bird house rather than introducing yet another architectural vocabulary to the bird house complex. The SHPO was interested in identifying ways that the original John Joseph Earley concrete door surround, which is currently housed within the building's main courtyard, might be more prominently utilized in the new addition's entry.

The SHPO provided a comment letter on July 29, 2016, concurring that the proposed renovation of the National Zoo Bird House would have "no adverse effect" on historic properties provided that certain conditions were met, including revising and consulting further on the finish of the new interior wall that will be used to frame the historic J.J. Early concrete door surround.

Lastly, on January 27, 2017, the DC SHPO determined that this project would have no adverse effect on historic properties conditioned upon fulfillment of two conditions: 1.) the Smithsonian would notify DC SHPO of the results of the CFA and NCPC review of this project and 2.) the Smithsonian would consult further with DC SHPO if any options other than the final finish "Brick Surround Option 1 (Hue Option 2)" were endorsed by CFA and/or NCPC, and/or if DC SHPO determined that any other proposed revisions had the potential to constitute adverse effects.

National Environmental Policy Act

The Smithsonian Institution does not have an independent responsibility to fulfill the requirements of the National Environmental Policy Act (NEPA) as it is not considered a federal agency for purposes of NEPA. However, as a result of its approval authority over the project NCPC does have an independent NEPA responsibility since this is a project located in the District of Columbia.

NCPC staff has determined that the approval of the project meets NCPC's categorical exclusion §8(C)(21) of the Commission's Environmental and Historic Preservation Policies and Procedures. This categorical exclusion applies to the review and approval of acquisition of occupiable space by lease acquisition, construction, or expansion, or improvement of an existing facility when specific conditions are met. These conditions include the following: 1) the structure and proposed use are in compliance with local planning and zoning and any applicable District of Columbia, state, or federal requirements; 2) the proposed use will not substantially increase the number of motor vehicles at the facility; 3) the site and scale of construction are consistent with those of existing adjacent or nearby buildings; and 4) there is no evidence of community controversy or other environmental issues. Prior to applying this categorical exclusion, NCPC staff determined that no extraordinary circumstances were present as required by the Commission's NEPA procedures.

CONSULTATION

Coordinating Committee

The Coordinating Committee reviewed the proposal at its March 15, 2017 meeting. Without objection, the Committee forwarded the proposed preliminary and final site and building plans to the Commission with the statement that the proposal has been coordinated with all participating agencies. The participating agencies were: NCPC; the District of Columbia Office of Planning; the Department of Transportation; the State Historic Preservation Office, the Department of Energy and the Environment; the General Services Administration; the National Park Service; and the Washington Metropolitan Area Transit Authority.

U.S. Commission of Fine Arts

At its meeting on April 16, 2015, the U.S. Commission of Fine Arts (CFA) reviewed and approved the general concept and requested further development of the design with the following comments. While CFA supported the scope of the project and strategy to reuse the historic building, they observed that the proposed entrance appeared flat, insubstantial and postmodern in spirit against the robustness of the Bird House and they suggested a more dynamic design for the entrance at the front of the building. They commented that the renovation presented the opportunity to create an expressive design that drew upon the characteristics of birds in its scale and materials, either through lightness and delicacy or through bold gestures as displayed in the soaring design of the flight cage. Regarding the site, CFA endorsed the general approach sequence and suggested emphasizing the successive unfolding axes of bridge, clearing, and building by creating an area for visitors to pause to view the Bird House across the clearing. CFA stated that the clearing should not resemble a plaza, and recommended careful development of its boundaries as successional forest edges.

In its meeting of July 21, 2016, CFA reviewed and approved a revised concept design for the renovation of and additions to the Bird House and its associated landscape and delegated review of the final design to staff. CFA suggested eliminating the roof's projection rafter extensions. CFA endorsed the idea of plumage as the inspiration for the cladding of the entrance pavilion, and emphasized the need for appropriate detailing and a subtle variety of colors and shapes for the proposed metal panels to ensure the realization of this concept. They also encouraged a more abstract rather than representational treatment of the proposed bird-related sculptures. Regarding the landscape concept, they suggested configuring the plantings that frame the oval in undulating drifts to soften its edges, and interspersing trees within the paved areas in order to extend the woodland setting and provide shade for visitor comfort. They questioned the inward curve of the bench on the northern edge of the oval, observing that this configuration complicated pedestrian circulation and weaken the oval's formal strength; they suggested reversing the curve of the bench to continue the oval shape. CFA also suggested that the path within the oval be of a material more consistent with a woodland character, such as stabilized gravel. Finally, at its meeting on February 16, 2017, CFA staff approved the project by delegation, indicating that the final design conformed with the previous recommendations of the Commission.

Stormwater Management

According to the calculations included in the construction documents, the project provides the required Stormwater Retention Volume (SWRv) in accordance with the Department of Energy and Environment (DOEE) Stormwater Management Guidebook. The Bird House Renovation and Addition project provides acceptable stormwater "Best Management Practices" (BMP) by implementing five bioretention areas on site integrated into the landscape design that provide the total required SWRv. The total project site disturbance is approximately 1.53 acres.

Currently the site includes a total of 31,785 square feet (47.7%) of impervious areas and 34,783 square feet (52.3%) of pervious areas. The design proposes a total of 26,477 square feet of impervious areas, plus 2,963 of BMP area (assumed as impervious by DOEE), which equals 29,440 square feet of impervious areas (44.2%) and a total of 37,128 sf (55.8%) pervious area. Therefore, the project decreases impervious area by 3.5%.

The submission materials state that the project will comply with federal stormwater regulations included in the Energy Independence and Security Act of 2007 (EISA) Section 438 to the maximum extent technically feasible.

ONLINE REFERENCE

The following supporting documents for this project are available online:

- Submission Letter and Package
- Project Synopsis

Prepared by Vivian Lee
03/29/2017

POWERPOINT (ATTACHED)

National Capital Planning Commission

NCPC File #: 7673
National Zoological Park
Bird House Renovation

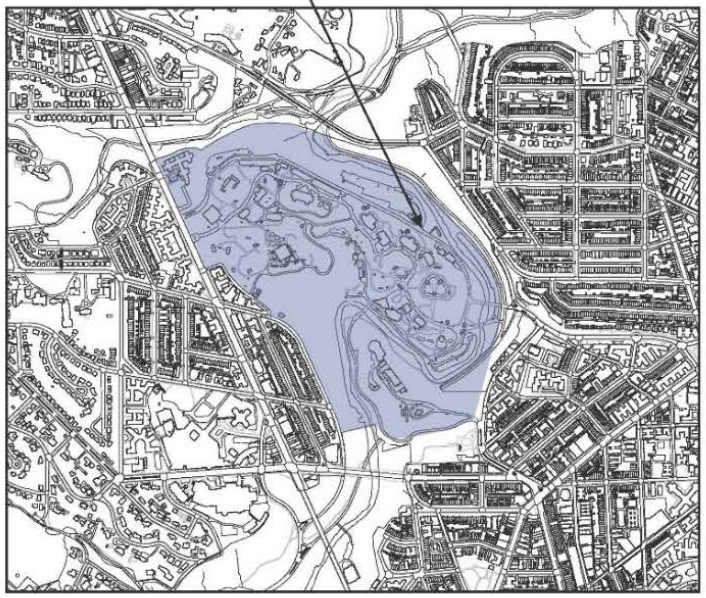
3001 Connecticut Avenue, NW

Washington, DC

Smithsonian Institution

Preliminary and Final Site and Building Plans

Site Location



VICINITY MAP N.T.S.

CONTEXT MAP

NORTH

National Zoo Context - Vicinity and Context Maps

Smithsonian
National Zoological Park

QEA • TPG

Project Location

AERIAL PHOTO OF PROJECT SITE

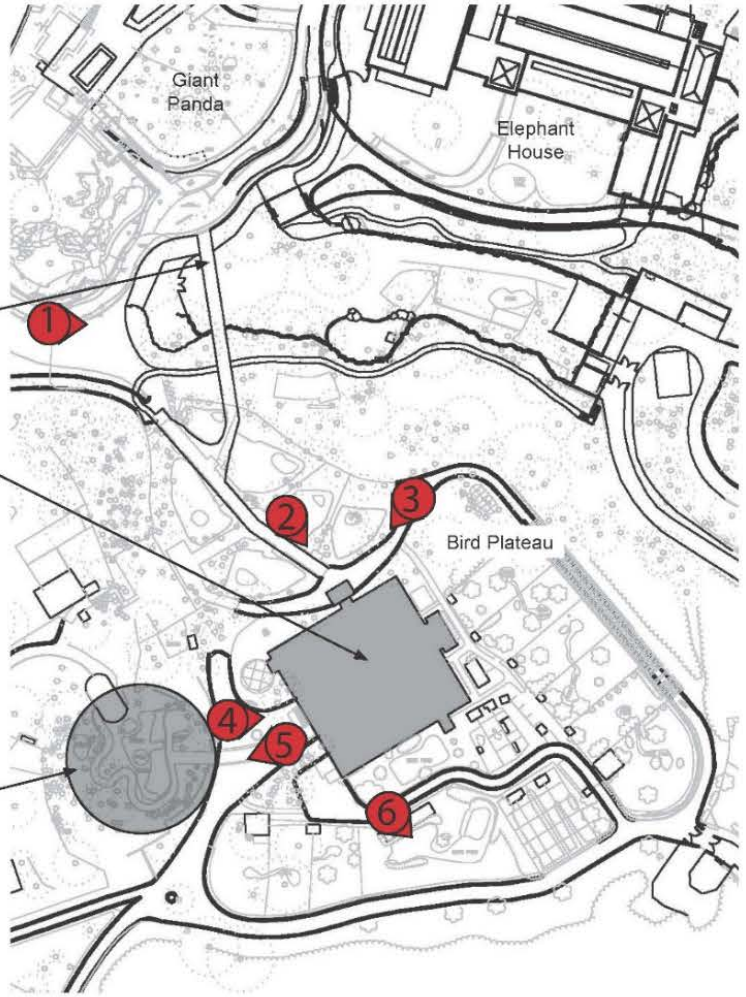


PHOTO KEY PLAN

NORTH

Project Context - Aerial Photo and Photo Key Plan

Smithsonian
National Zoological Park

Architectural Elements

Birdhouse Bridge in Winter

Existing 1965 Entry and Bird House Building in Winter

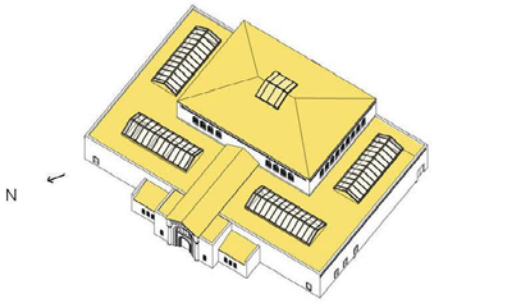
Existing 1965 Entry and Bird House Building beyond in Summer

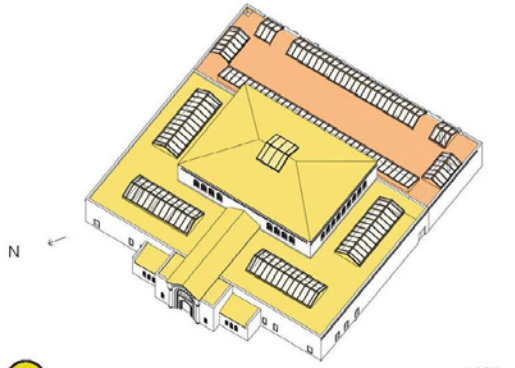
Great Flight Aviary Bridge

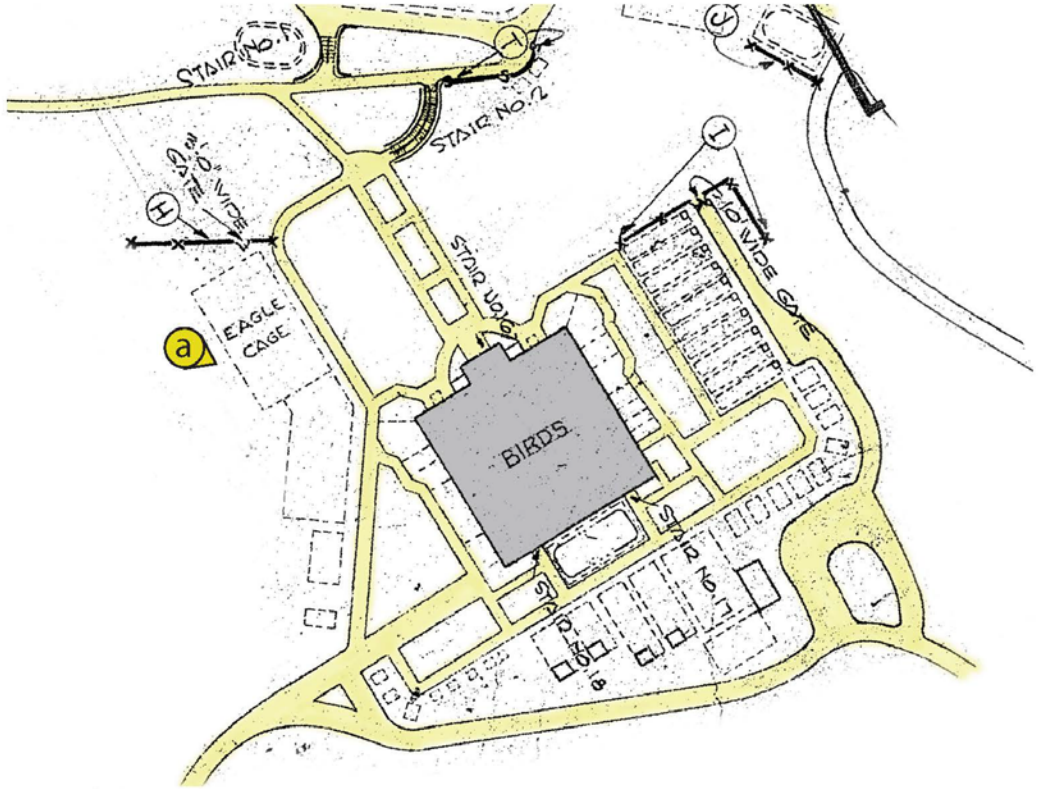
Great Flight Aviary and Entrance Bridge

Southern Concrete Trellis at animal yard; Existing to Remain

Development History







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LEGEND

1920s Construction

1930s Construction

3-Dimensional views of the Bird House showing the major form changes during the key development periods.

NORTH

50' 0' 100'

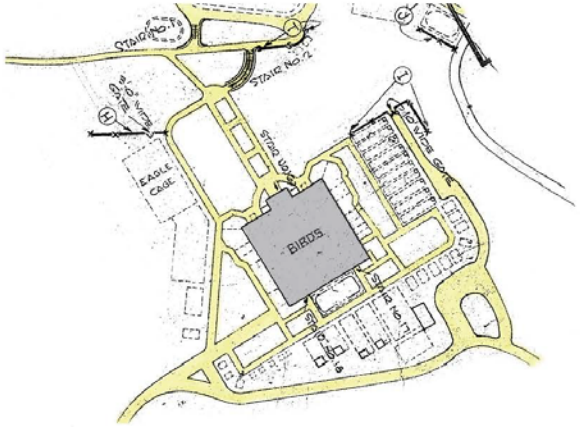
1" = 100' SCALE OF FEET

First Period of Development - 1920s and 1930s

Smithsonian
National Zoological Park

QEA • TPG

Development History



NORTH

100' 0' 200'
1" = 200' SCALE OF FEET

Historic Bird Plateau Images

Smithsonian
National Zoological Park

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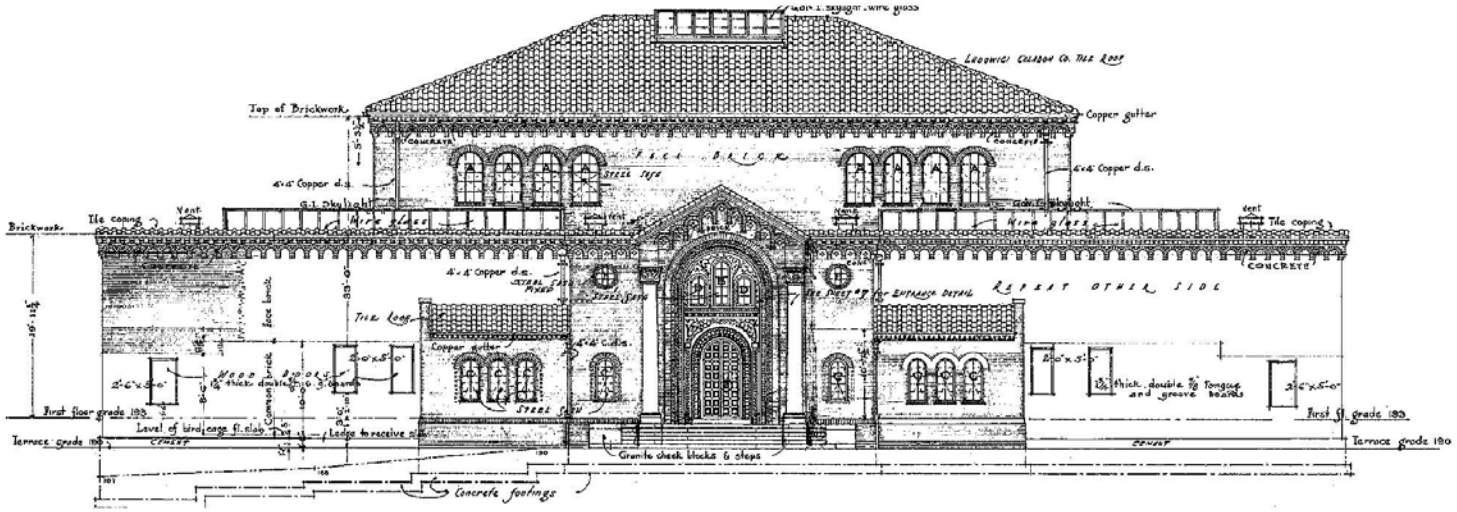
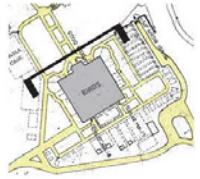


1920s NORTH ELEVATION

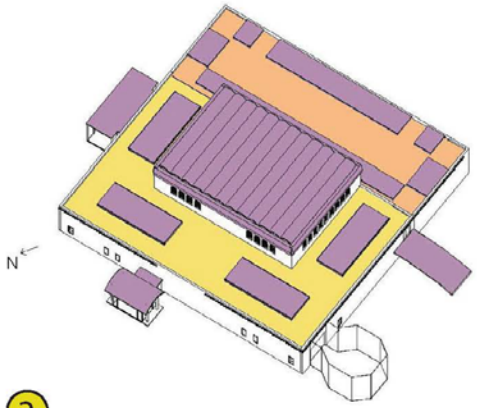


8' 0' 16'
1/16" = 1' - 0" SCALE OF FEET

Historic North Elevation

Smithsonian
National Zoological Park

Development History

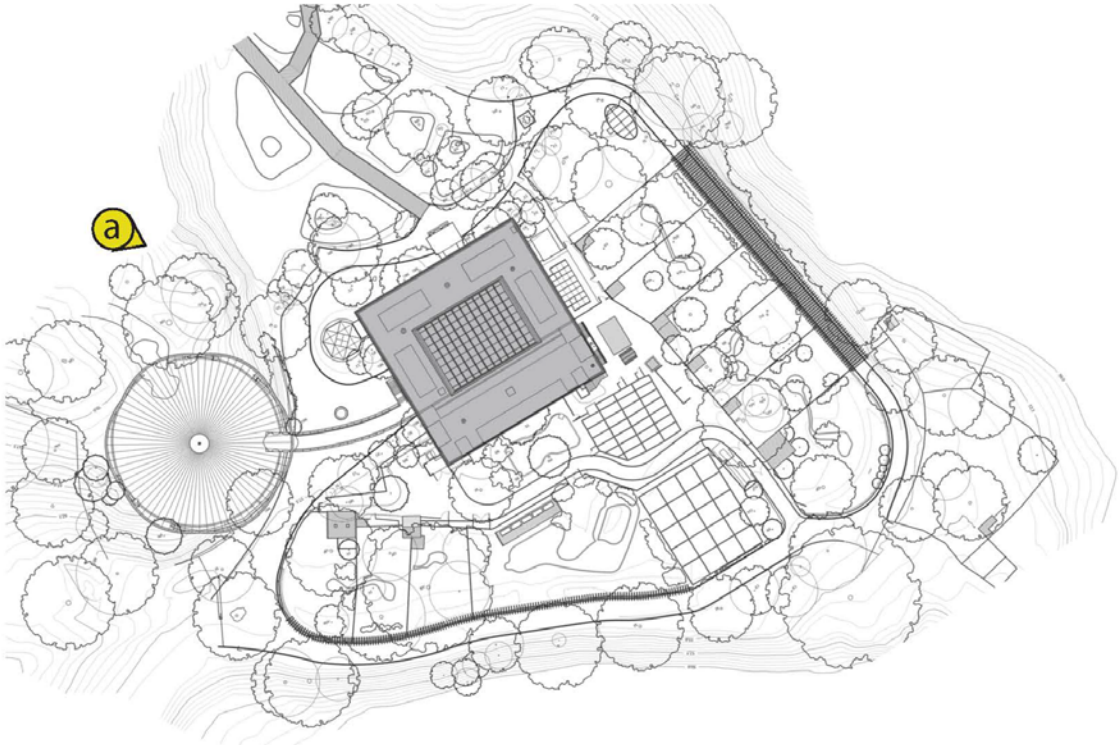


1960s and 1970s

LEGEND

- 1920s Construction
- 1930s Construction
- 1960s and 1970s Construction

3-Dimensional views of the Bird House showing the major form changes during the key development periods.



NORTH

50' 0' 100'
1" = 100' SCALE OF FEET

Second Period of Development - 1960s and 1970s

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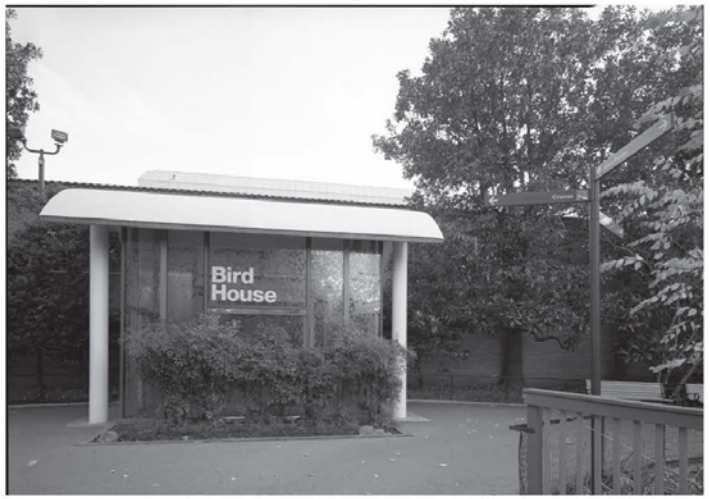
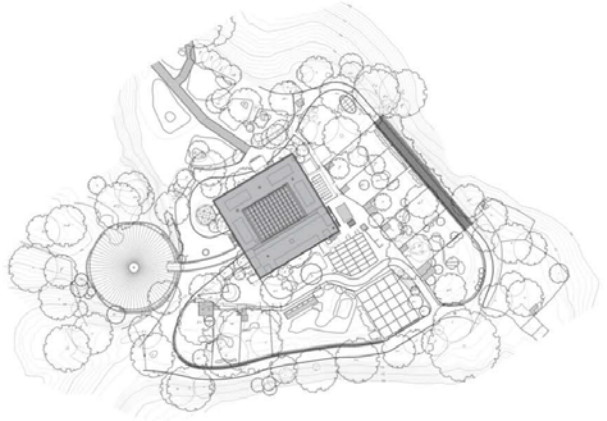
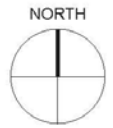
Development History







Second Period of Development - Bird Plateau Images

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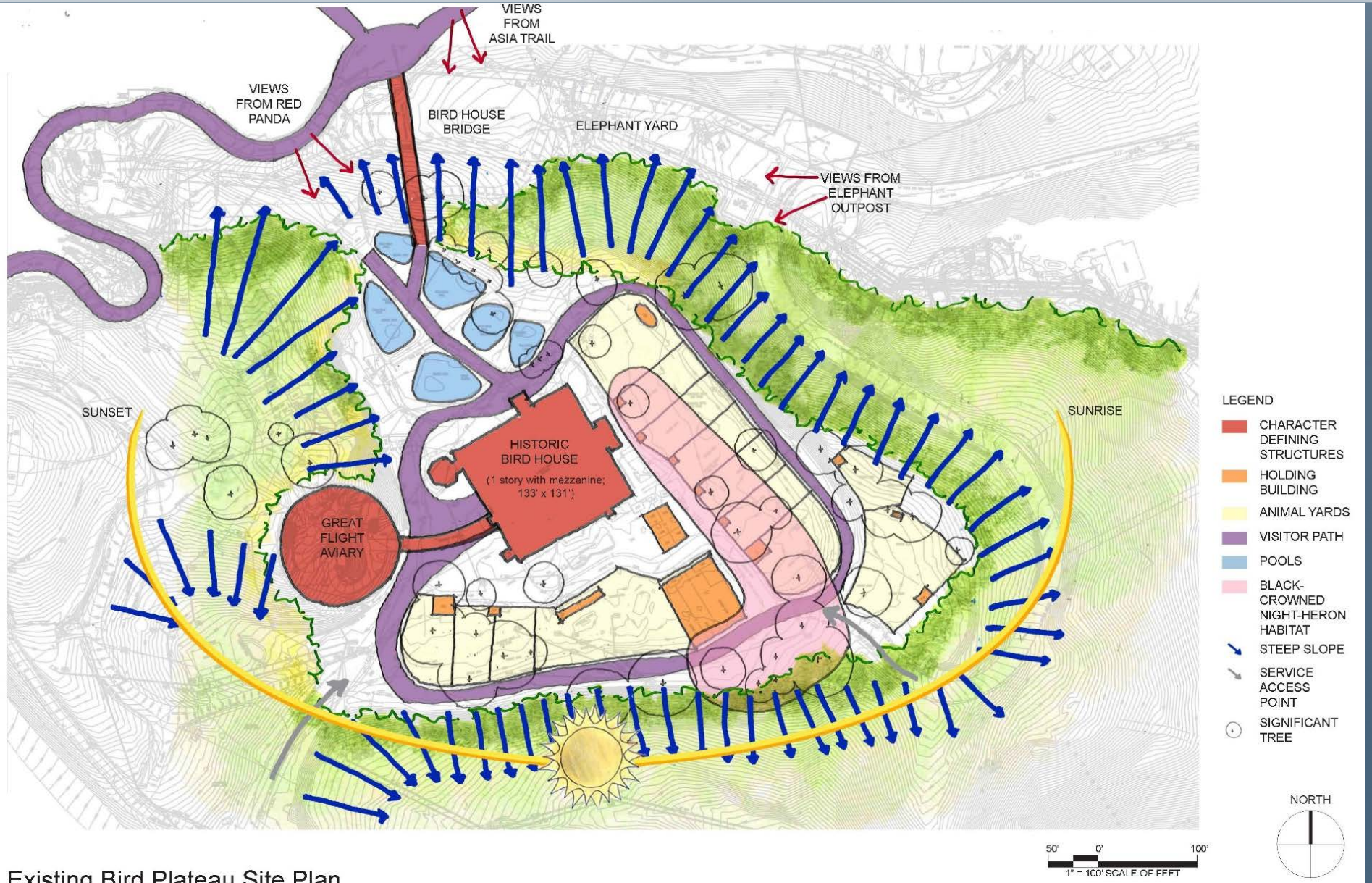
National Zoological Park

Existing Conditions



Existing Bird Plateau Site Plan

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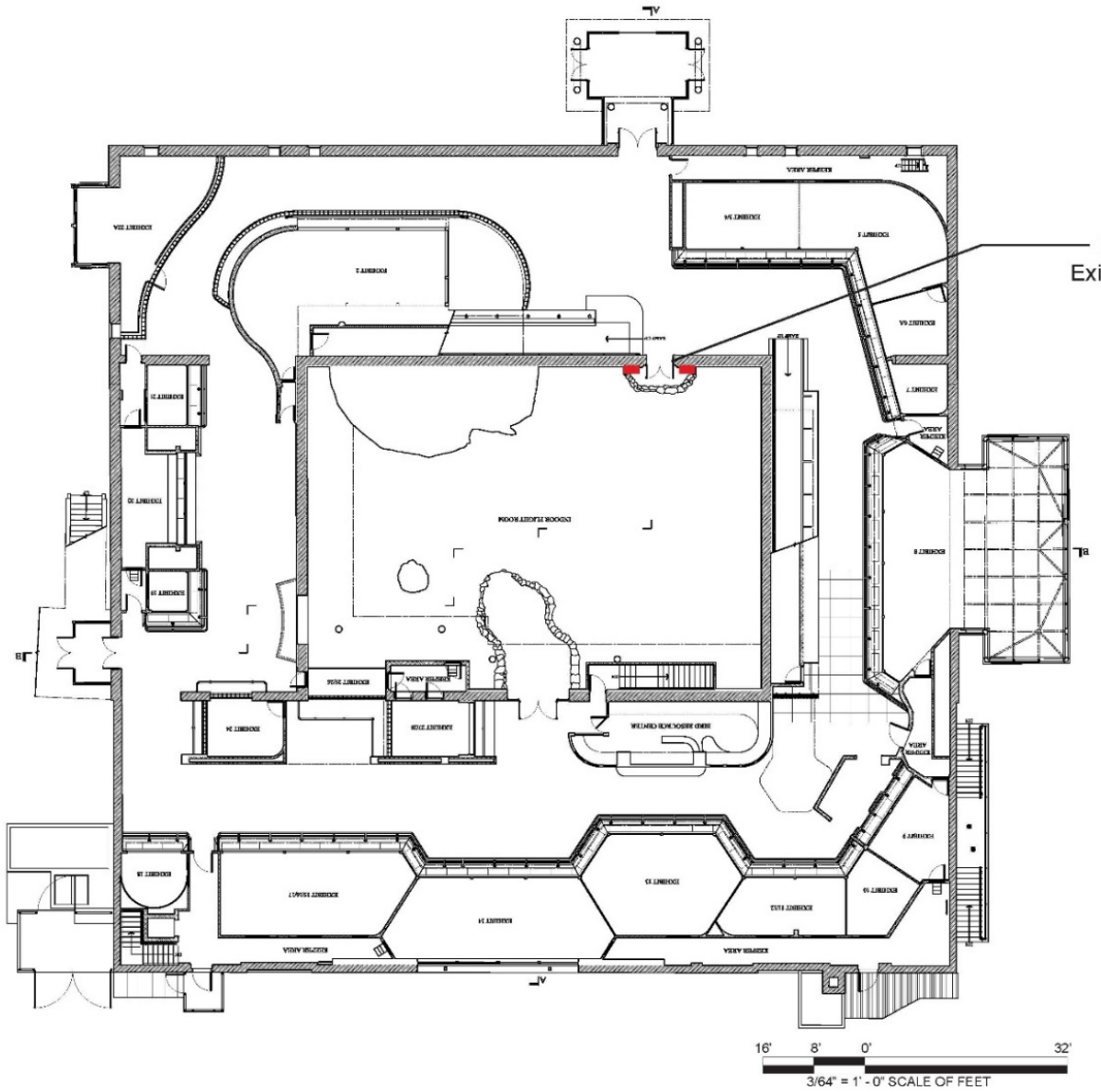
Existing First Floor Plan



Existing First Floor Plan

Smithsonian
National Zoological Park

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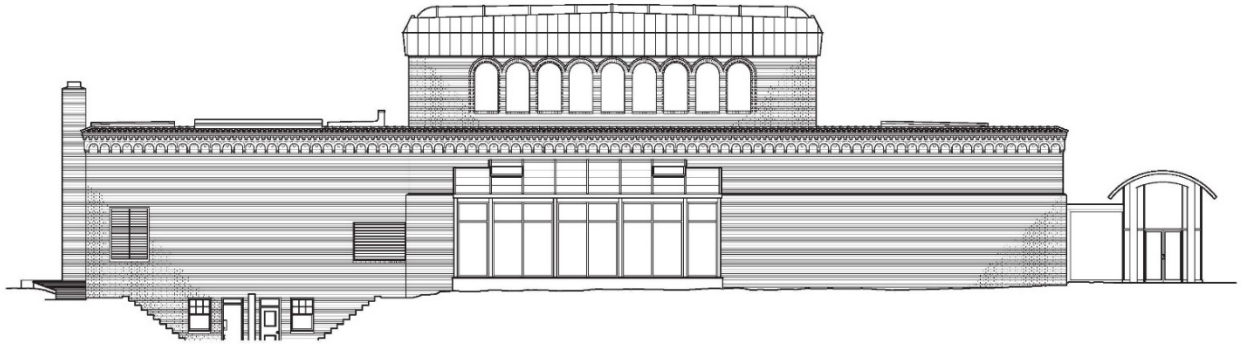
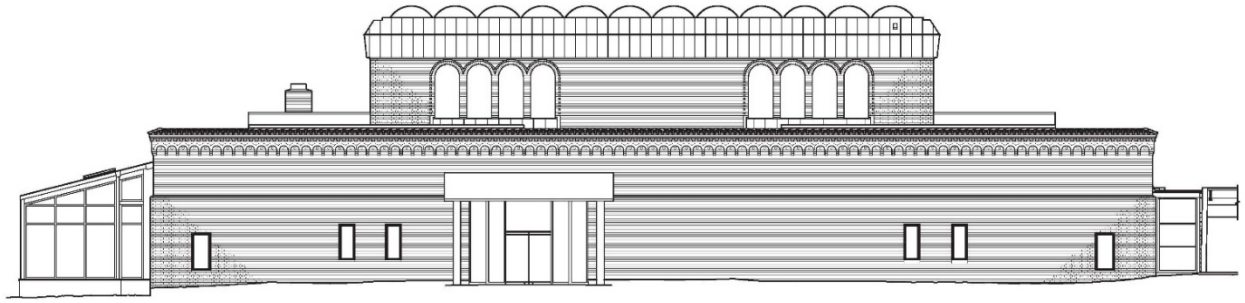
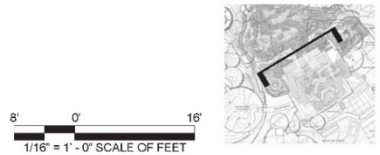
Existing Building Elevations



EXISTING WEST ELEVATION



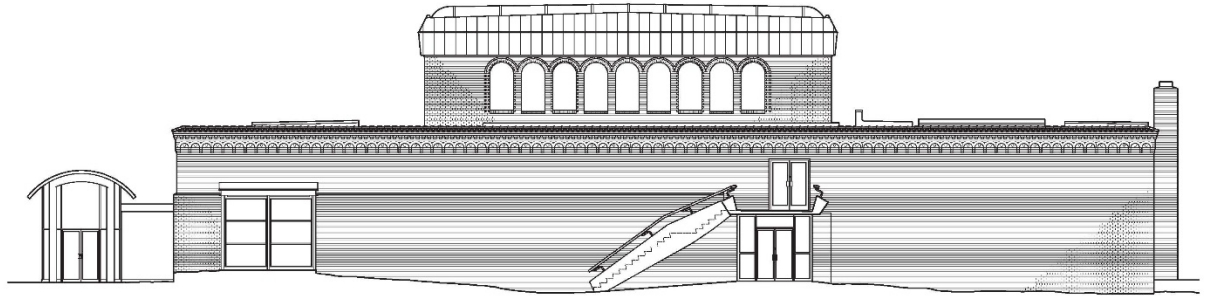
EXISTING NORTH ELEVATION



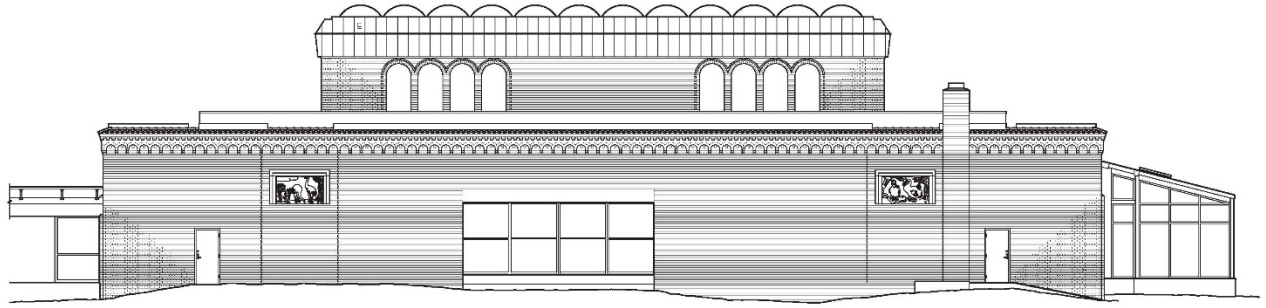
8' 0' 16'
1/16" = 1' - 0" SCALE OF FEET

Existing Elevations - North and West

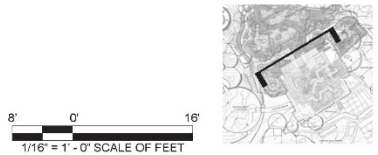
Existing Building Elevations



EXISTING EAST ELEVATION



EXISTING SOUTH ELEVATION



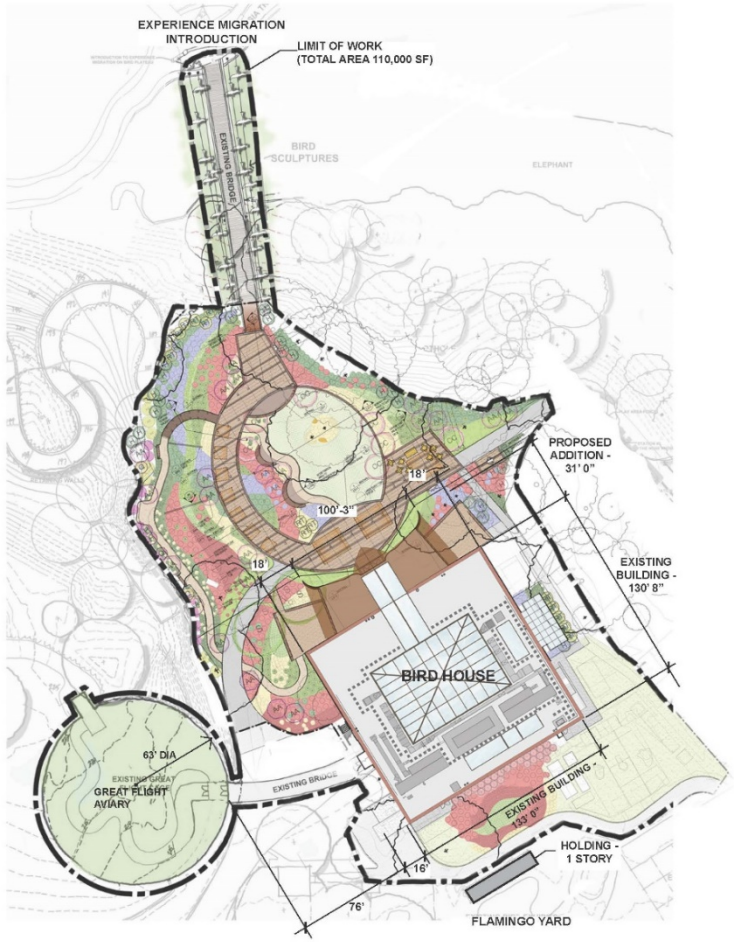
8' 0' 16'
1/16" = 1' - 0" SCALE OF FEET

Existing Elevations - South and East

Proposed Site Plan

Proposed Design

Renew Bird House Facility - Experience Migration on Bird Plateau

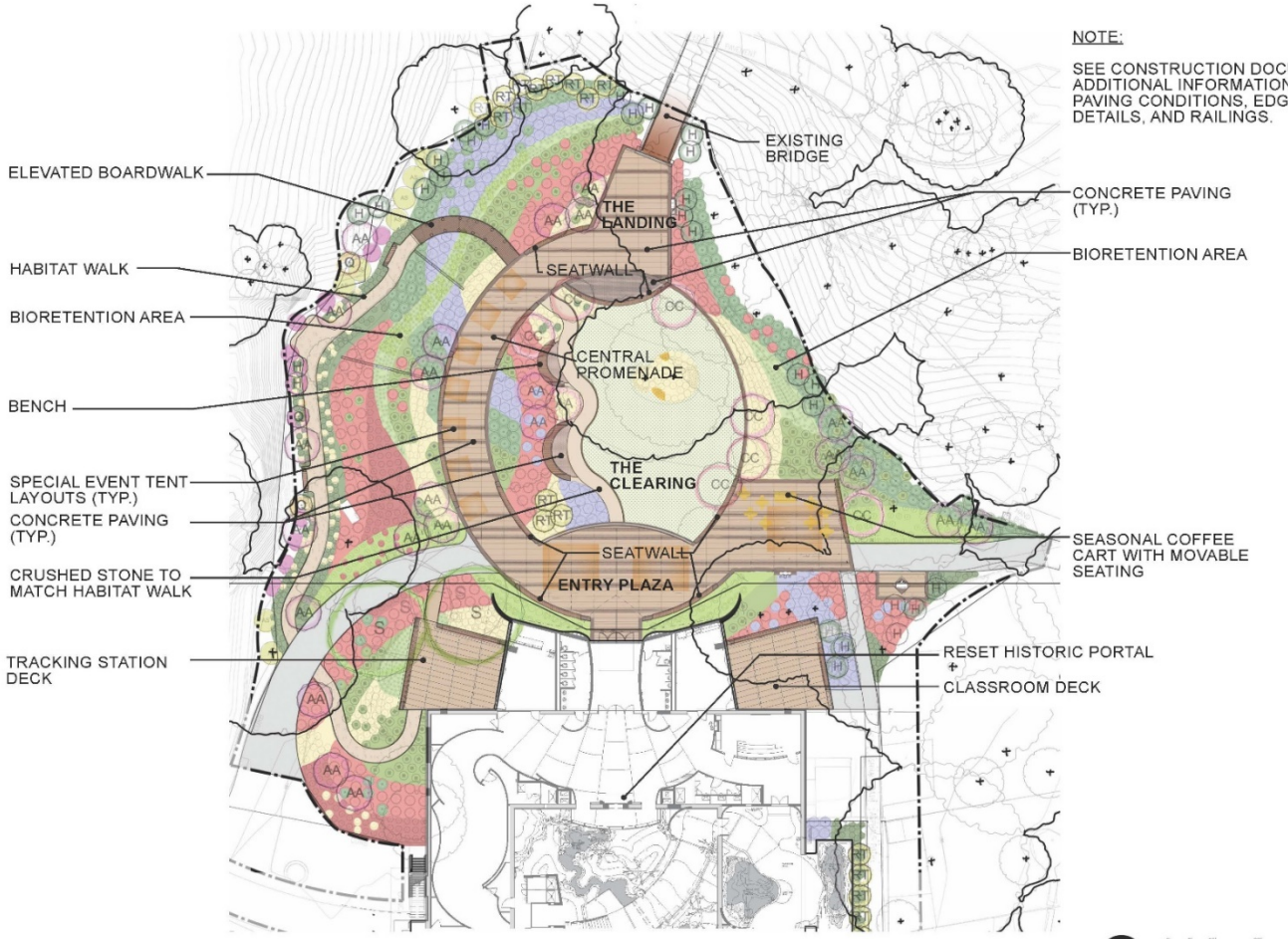


- Improve wayfinding
- Reimagine a gracious arrival experience with critical program space
- Create bird-friendly habitat
- Address stormwater on site
- Introduce a new Bird House building entry
- Incorporate unique learning opportunities
- Provide accessibility throughout public areas
- Create state of the art interactive exhibits
- Introduce walk-through aviary habitats
- Revitalize animal care and health
- Improve natural light and ventilation
- Update life safety systems
- Replace outdated systems and equipment with efficient solutions

Enlarged Site Plan

Site: Landscape

Renew Bird House Facility - Experience Migration on Bird Plateau



Layout Plan - North Entry

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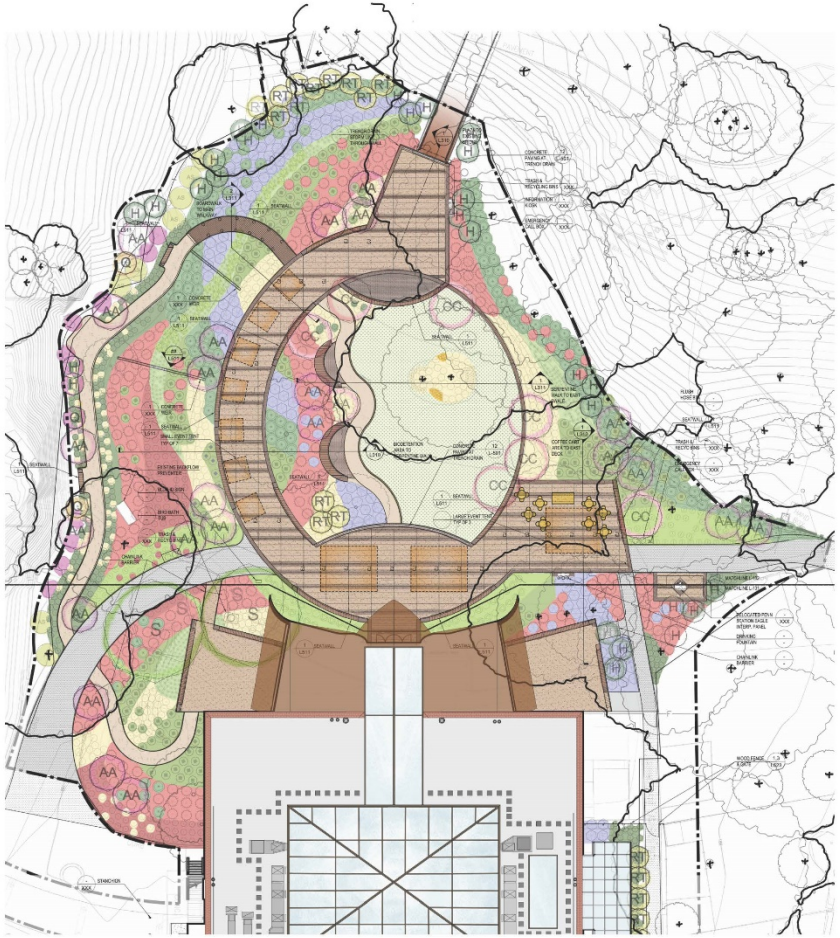
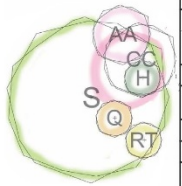
Enlarged Site Plan

Site: Landscape

Renew Bird House Facility - Experience Migration on Bird Plateau





PLANT SCHEDULE - TREES	
COMMON NAME	SCIENTIFIC NAME
DOWNY SERVICEBERRY	Amalanchier arborea
REDBUD	Cercis canadensis
WITCH HAZEL	Hamamelis virginiana
BLACK TUPELO	Nyssa sylvatica
DWARF CHESTNUT OAK	Quercus prinoides
STAGHORN SUMAC	Rhus typhina

PLANT SCHEDULE - SHRUBS	
COMMON NAME	SCIENTIFIC NAME
SMOOTH ALDER	Alnus serrulata
ISANTI REDTWIG DOGWOOD	Cornus sericea 'Isanti'
EVERGREEN WOODFERN	Dryopteris intermedia
INKBERRY	Ilex glabra
WINTERBERRY	Ilex verticillata
STEEPLEBUSH	Spirea tomentosa
STEEPLEBUSH	Spirea tomentosa
HIGHBUSH BLUEBERRY	Vaccinium corymbosum 'Legacy'
AMERICAN CRANBERRY BUSH	Viburnum trilobum

PLANT SCHEDULE - GRASSES	
REED GRASS	Calamagrostis acutiflora 'Karl Foerster'
PENNSYLVANIA SEDGE	Carex pennsylvanica
SWITCH GRASS	Panicum virgatum 'Shenandoah'

PLANT SCHEDULE - PERENNIALS	
COMMON NAME	SCIENTIFIC NAME
GOAT'S BEARD	Aruncus dioicus
BEEBALM	Monarda didyma 'Marshall's Delight'
BLACK-EYED SUSAN	Rudbeckia hirta
IRONWEED	Veronia noveboracensis

SOD LAWN	SEE SPECIFICATIONS
HYDROSEEDED LAWN	SEE SPECIFICATIONS

Planting Plan - North Entry

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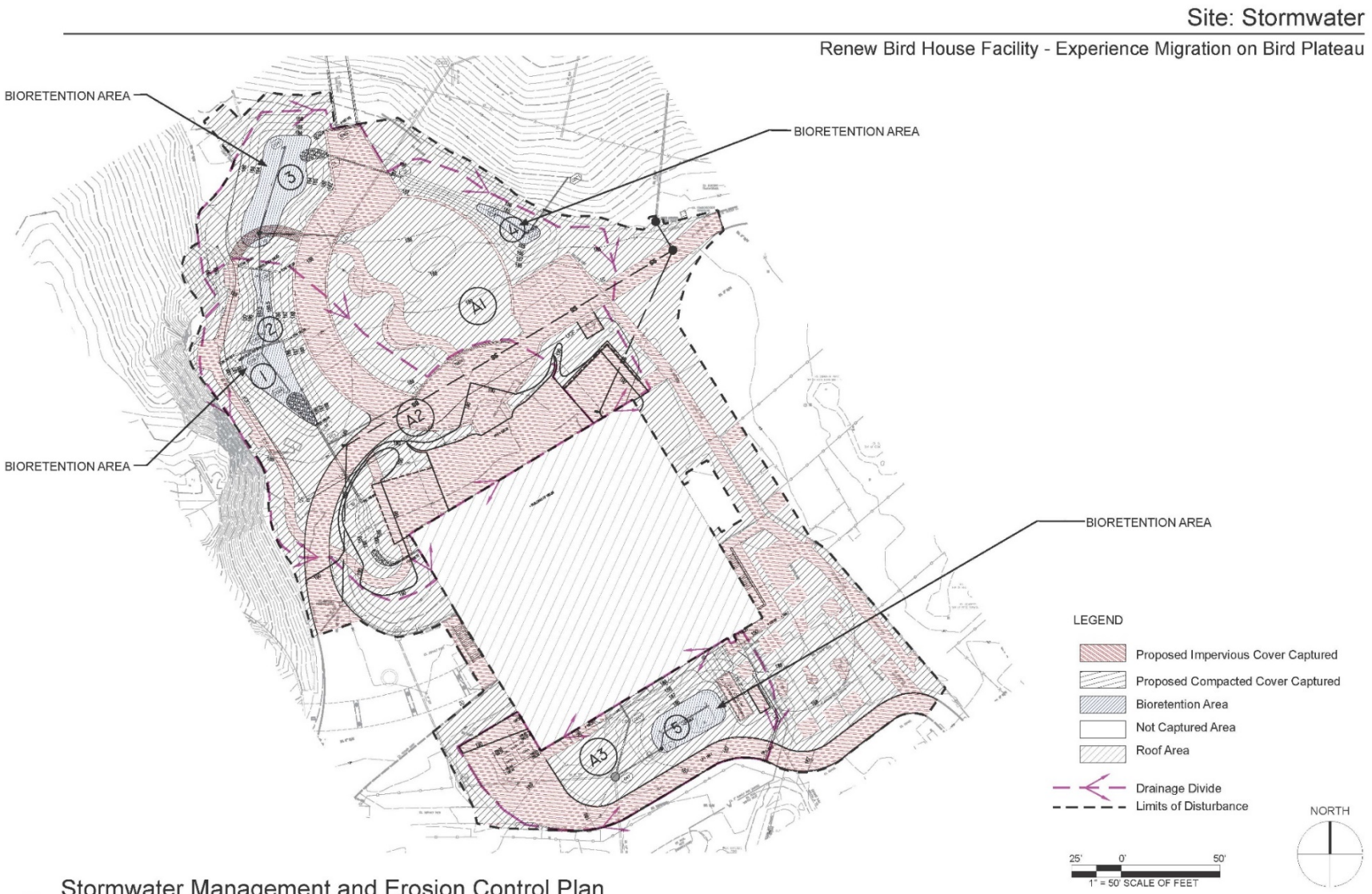
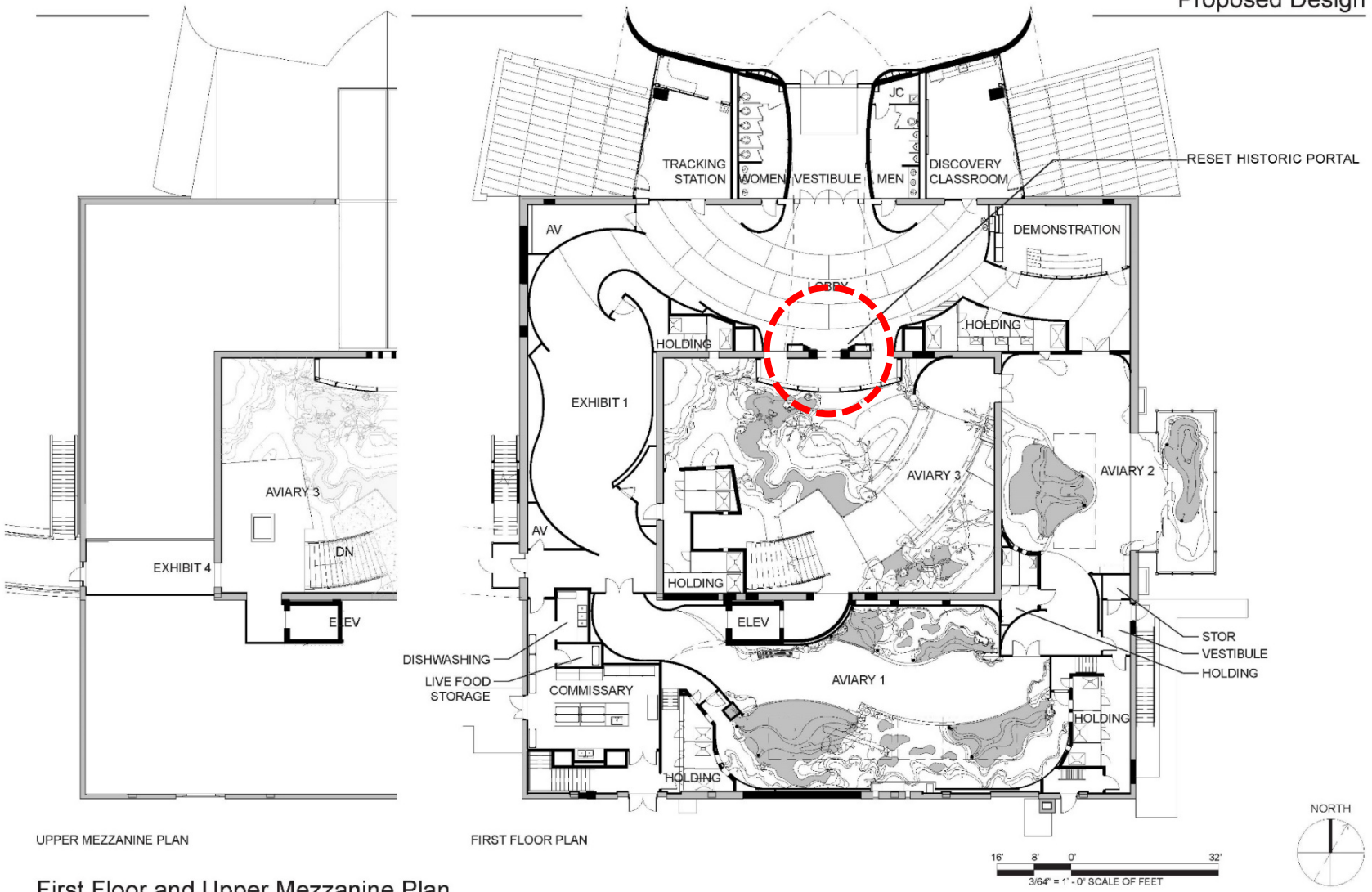
Stormwater Strategy



Proposed First Floor Plan

Proposed Design



First Floor and Upper Mezzanine Plan

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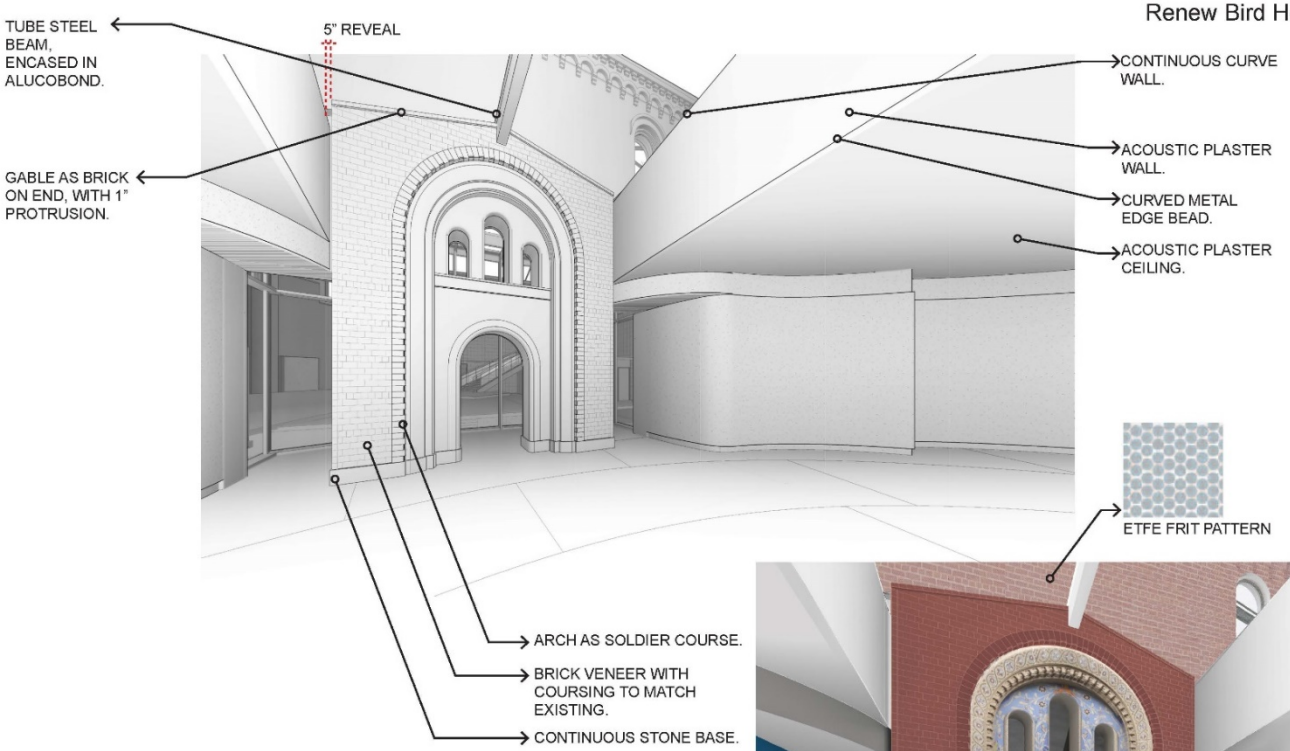
Proposed Location – Historic Portal

Proposed Design

Renew Bird House Facility - Experience Migration on Bird Plateau

Lobby Perspective - Historic Portal

Proposed Surround – Historic Portal



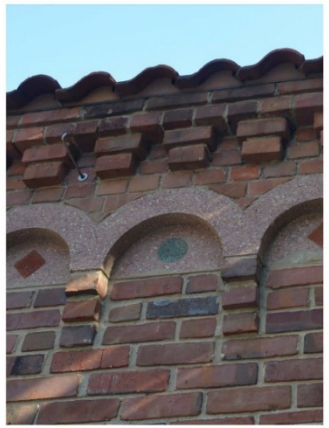
BRICK SAMPLE AT EXISTING BRICK WALL.

COLORS FROM HISTORIC MASONRY ARCH.

Historic Portal Perspective - Brick Surround

Building Material and Design Precedents

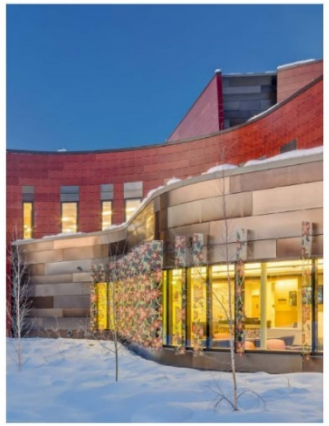

Sand Hill Crane Feathers


Smithsonian National Zoological Park
Bird House - Existing Brick


Ceramic Frit on Glazing


ETFE


Metal Panel - Flat Lock Installation

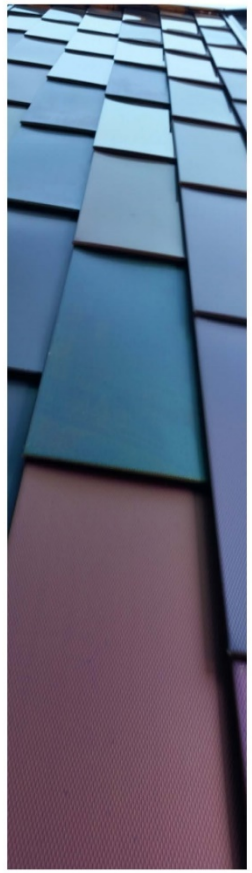

Metal Panel - Flush Joint


Metal Tile - Lapped Shingle
Installation

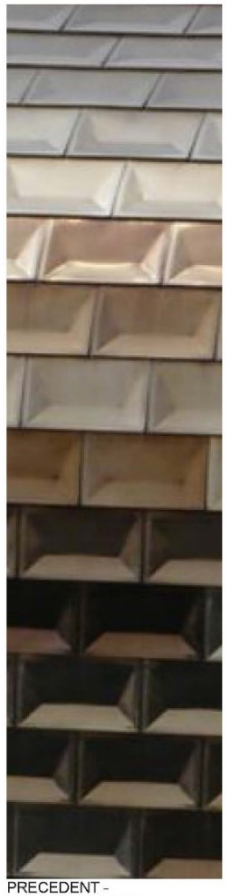

Metal Panel - Flat Lock Installation

Proposed Materials and Precedents - North Addition

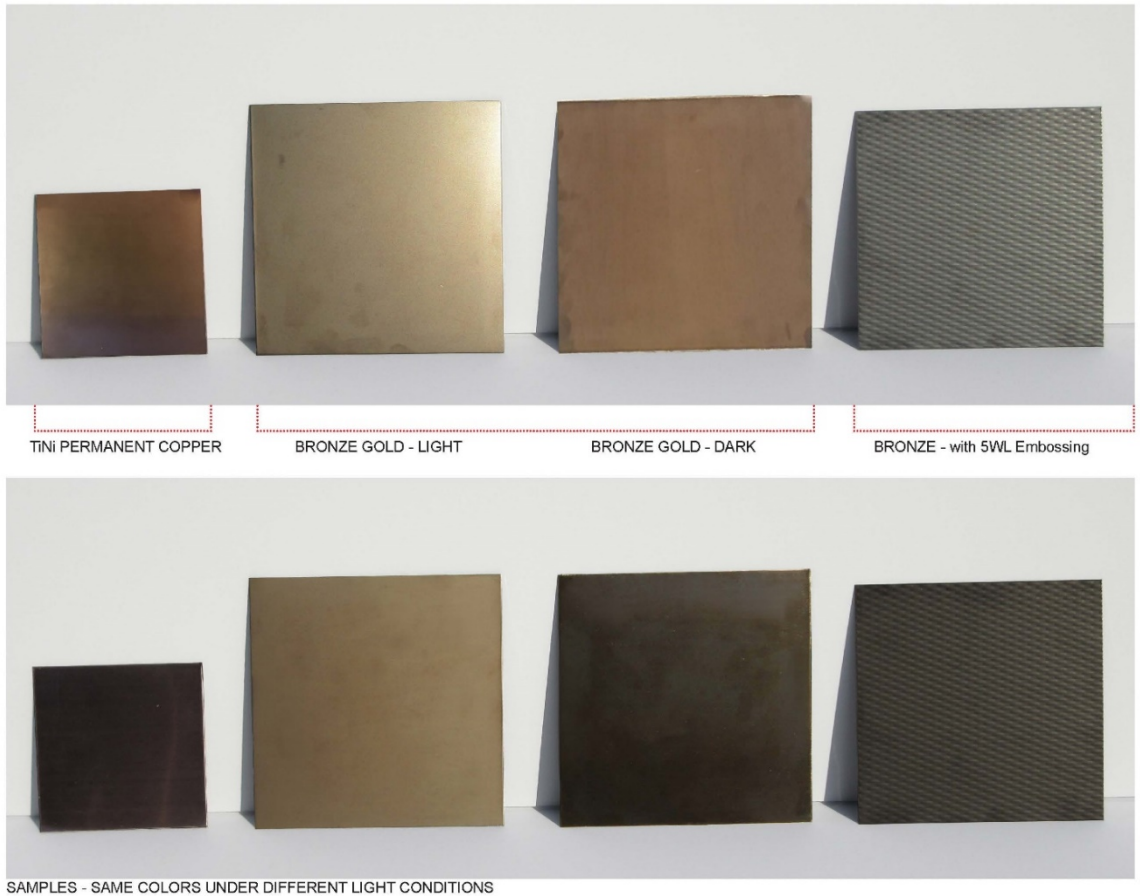
Proposed Materials



PRECEDENT -
FOR PROFILE ONLY



PRECEDENT -
FOR COLOR ONLY



SAMPLES - SAME COLORS UNDER DIFFERENT LIGHT CONDITIONS

Proposed Materials - Daylit Color Ranges

View from South

View Looking South From Bridge

View from South

Building: Exterior

Renew Bird House Facility - Experience Migration on Bird Plateau

View Looking South From Bridge (No Trees)

View toward Entry

View Looking Southeast Toward Building Entry

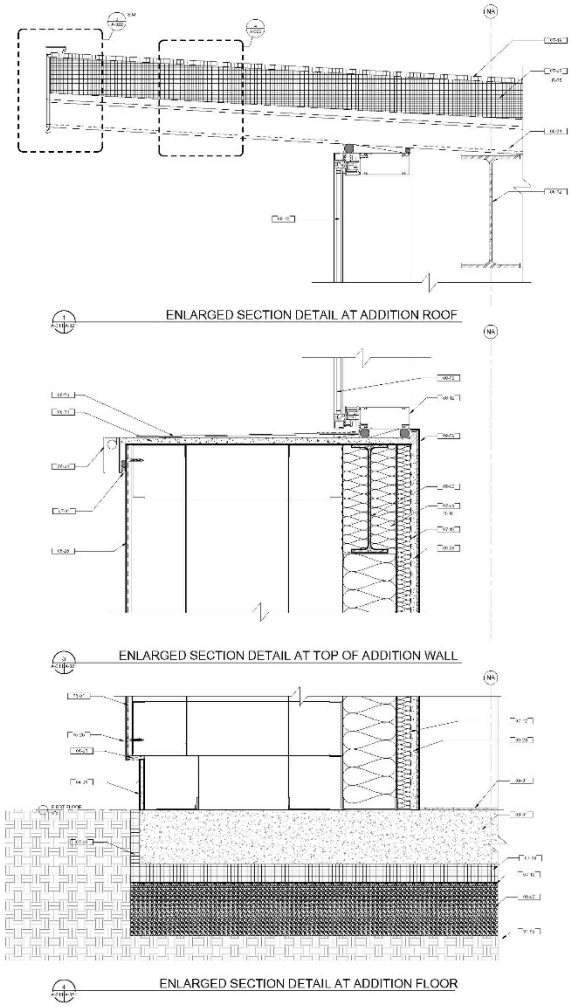
View toward Entry

View Looking Southeast Toward Building Entry (No Trees)

View toward Entry

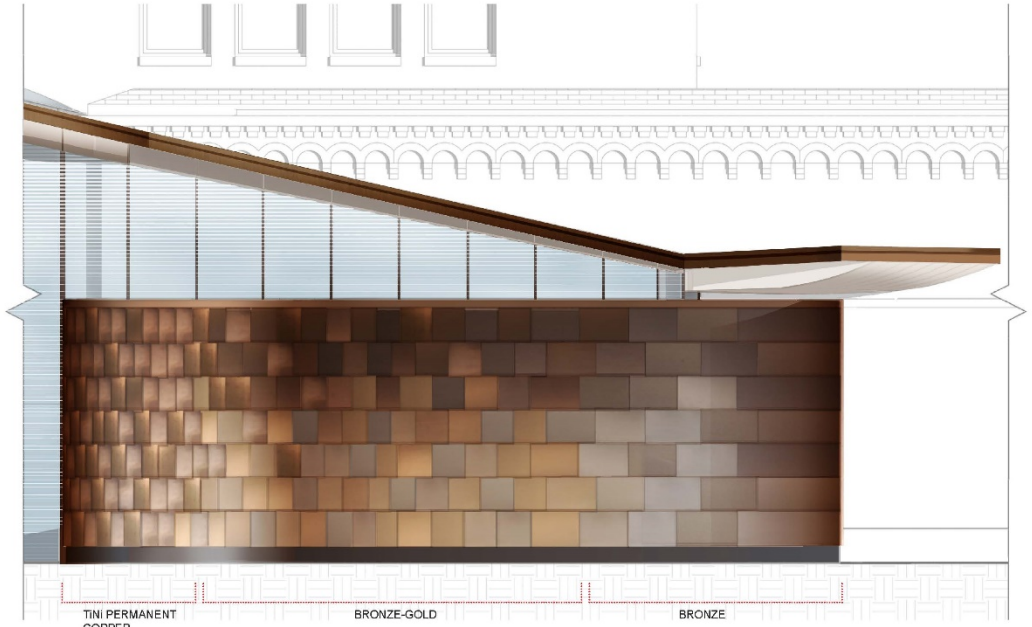
Building: Materials and Constructability

Renew Bird House Facility - Experience Migration on Bird Plateau



KEYNOTES

02-04	Existing wall to remain
03-01	Provide concrete slab. Refer to structural dwgs.
03-05	Provide gravel fill.
04-36	Provide stone wall base
05-02	Provide steel beam. Refer to structural dwgs.
05-21	Provide steel roof deck. Refer to structural dwgs
05-25	Provide metal panel system
06-01	Provide 3/4" plywood sheathing.
06-03	Provide wood blocking.
07-01	Provide sealant w/ backer rod
07-08	Provide rigid insulation.
07-09	Provide thermal batt insulation.
07-12	Provide vapor barrier
07-16	Provide protection board.
07-26	Provide termination bar with fasteners spaces 12" o.C.
07-50	Provide fellback adhered pvc roofing membrane 90mil
07-67	Provide pvc roofing stop and fasteners
08-06	Provide glazing.
08-12	Provide glazed curtain wall system.
08-20	Provide extruded aluminum flashing
09-28	Provide scheduled partition
09-29	Provide continuous finish
09-31	Provide scheduled floor
26-01	Provide light fixture. Refer to elec. Drawings.
31-02	Earth



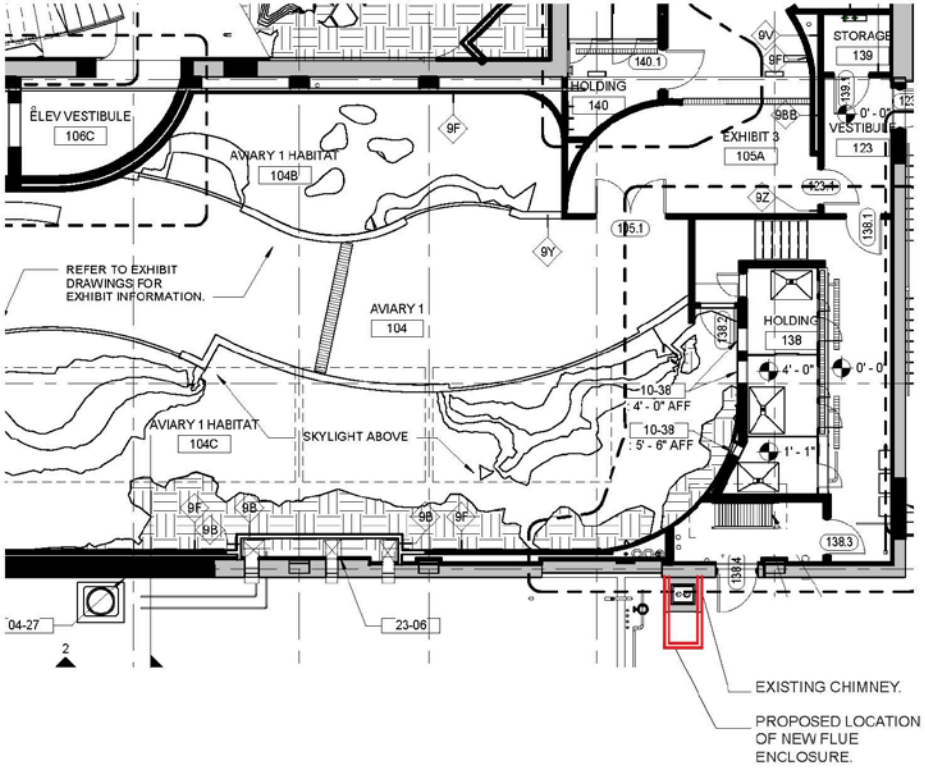
Representative Illustration of Proposed Elevation

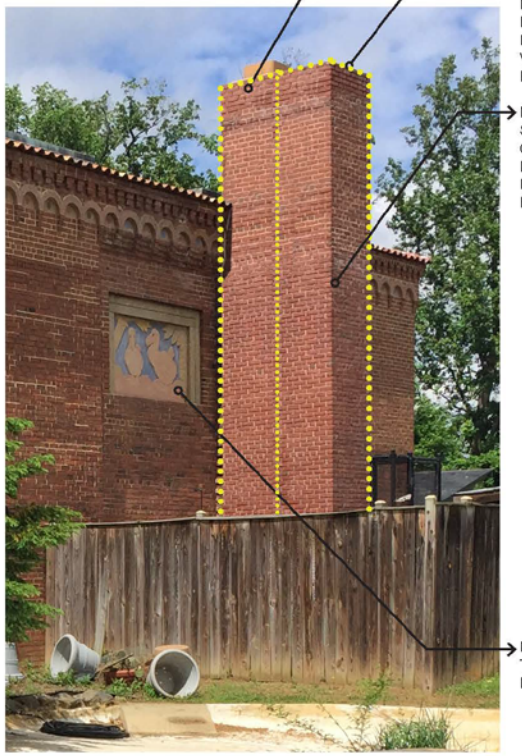
Typical Section and Elevation of Metal Panel Wall

Proposed Flue Enclosure

Proposed Design

Renew Bird House Facility - Experience Migration on Bird Plateau





EXISTING CHIMNEY LOCATION. NOT HISTORIC, CONSTRUCTED IN 1975.

PROPOSED ADDITION OF NEW FLUE ENCLOSURE, HEIGHT NOT TO EXCEED EXISTING CHIMNEY ELEVATION, NO VISUAL IMPACT FROM PRIMARY ENTRANCE.

MODERN BRICK OF SYMPATHETIC HUE, COURSING AND DETAILING WITH RESPECT TO THE HISTORIC MASONRY.

NO IMPACT TO HISTORIC DECORATIVE PANELS.

NORTH

First Floor Plan - Addition of New Flue Enclosure

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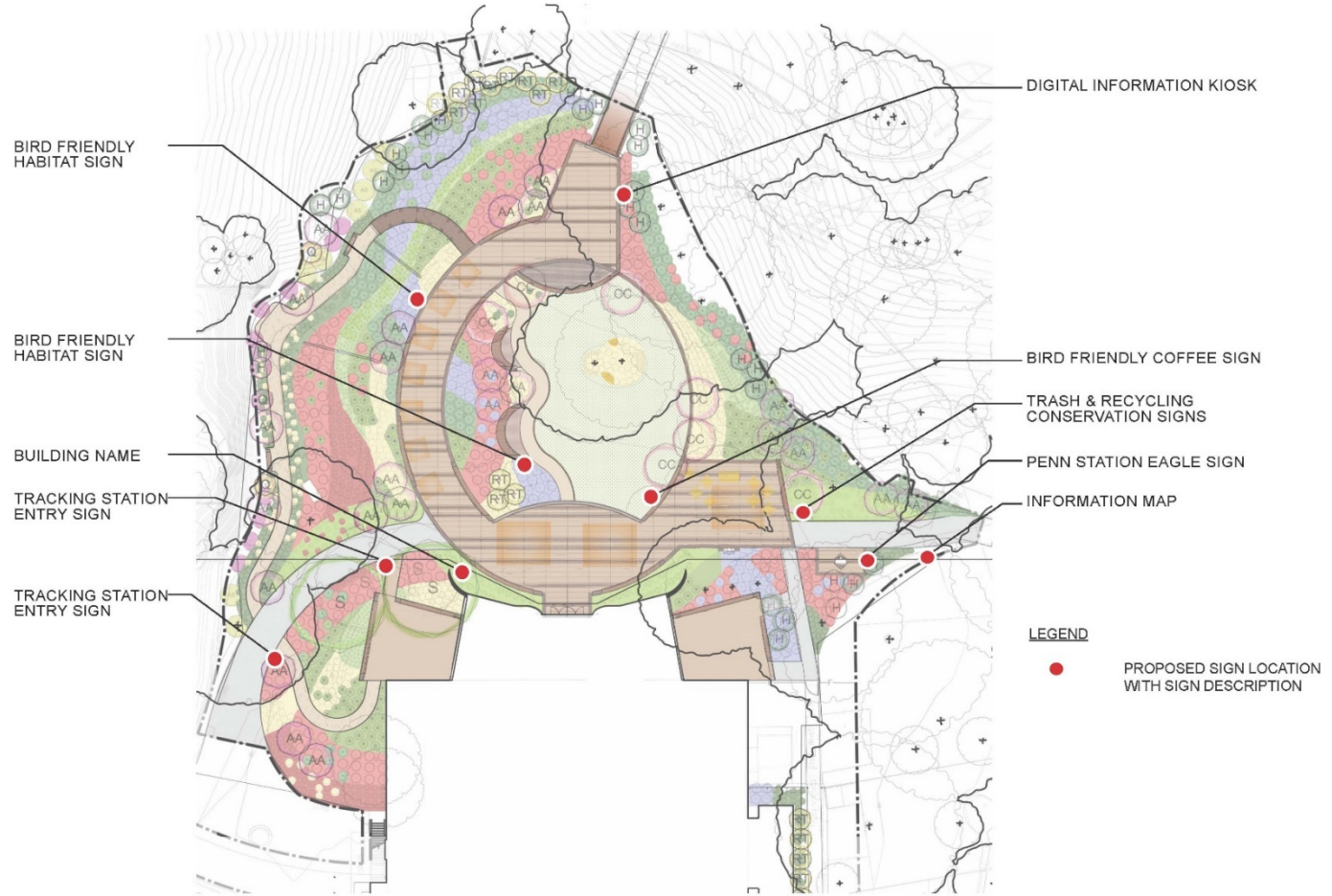
Proposed Signage and Furnishings

Proposed Signage

Renew Bird House Facility - Experience Migration on Bird Plateau



Signage

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Proposed Signage

Renew Bird House Facility - Experience Migration on Bird Plateau

PRECEDENT: BUILDING NAME MOUNTED ON BUILDING.

PRECEDENT: EXHIBIT OR BUILDING NAME MOUNTED IN LANDSCAPE.

WAYFINDING - NZP STANDARD DIGITAL INFORMATION KIOSK.

WAYFINDING - NZP STANDARD DIGITAL INFORMATION KIOSK.

NZP STANDARD RECYCLING AND TRASH CANS WITH CONSERVATION MESSAGING SIGNS.

Proposed Signage

Renew Bird House Facility - Experience Migration on Bird Plateau

This family of signs represents the design aesthetic that will be carried through Experience Migration within Bird House and around the Bird Plateau site.

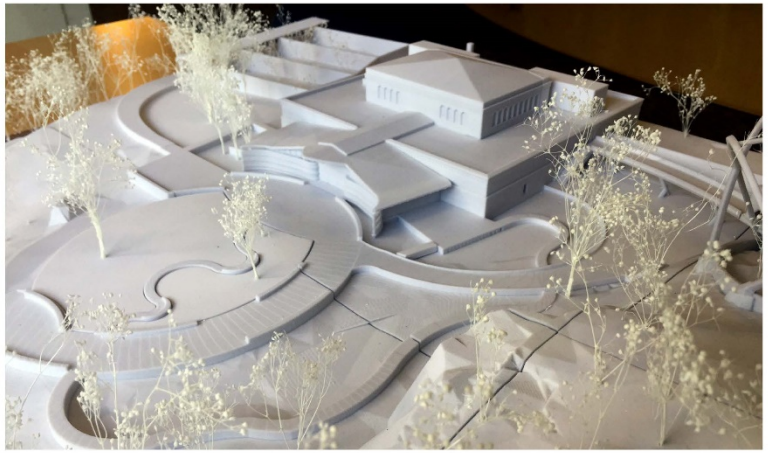
Outdoor signs will be mounted on railings or on posts within the landscape to interpret bird/pollinator friendly planting, sustainability concepts at the bioretention areas, and bird friendly coffee at the café kiosk.

PRECEDENT DIRECTIONAL SIGNS

EXPERIENCE MIGRATION LOGO

Proposed Design

Renew Bird House Facility - Experience Migration on Bird Plateau



Photographs of physical model