



## Executive Director's Recommendation

Commission Meeting: April 5, 2018

---

<b>PROJECT</b> <b>South Mall Campus Master Plan</b> National Mall, between 7 <sup>th</sup> Street, SW, Jefferson Drive, SW, 12 <sup>th</sup> Street, SW, and Independence Avenue, SW Washington, DC	<b>NCPC FILE NUMBER</b> 7630
<b>SUBMITTED BY</b> Smithsonian Institution	<b>NCPC MAP FILE NUMBER</b> 1.41(05.00)44719
<b>REVIEW AUTHORITY</b> Approval of Master Plans for use by the Commission per 40 U.S.C. § 8722(a) and (b)(1)	<b>APPLICANT'S REQUEST</b> Approval of comments on draft master plan
	<b>PROPOSED ACTION</b> Approve comments as requested
	<b>ACTION ITEM TYPE</b> Staff Presentation

---

The Smithsonian Institution (SI) has submitted the draft South Mall Campus Master Plan for the Commission's review and comment. The purpose of the proposed Master Plan is to guide future short-term and long-term renovation and development of the 17-acre campus that includes the Smithsonian Institution Building (the Castle), the Quadrangle Complex (the Ripley Center, the Arthur M. Sackler Gallery, the National Museum of African Art, and the Enid A. Haupt Garden), the Freer Gallery of Art, the Arts and Industries Building, the Hirshhorn Museum and Sculpture Garden, the Kathrine Dulin Folger Rose Garden and the Mary Livingston Ripley Garden.

SI proposes the Master Plan to meet its long-term space requirements and to address physical and operational deficiencies across the campus that impact visitor use and experience as well as the Smithsonian's ability to effectively and safely implement its programs. This effort is a result of work that began in 2012, at which time SI identified comprehensive goals and priorities for the South Mall Campus.

NCPC is the lead agency under the National Environmental Policy Act (NEPA). To meet its NEPA responsibilities, NCPC along with SI as the project owner, prepared a Draft Environmental Impact Statement (DEIS). Public comments were received regarding the NEPA alternatives and impacts through January 16, 2018. Three action alternatives (B, D, and F) were analyzed in the DEIS, in addition to the no action alternative. SI, as project owner, has indicated that Alternative F best meets their needs. Following the Commission's identification of a preferred alternative for NEPA purposes, the Final EIS will be prepared. The final master plan will return to the Commission for review later in the spring or early summer.

### KEY INFORMATION

- The Smithsonian Institution is the world's largest museum, education, and research complex.

- 
- The South Mall Campus is located on the National Mall, generally between Independence Avenue, Jefferson Drive, 12<sup>th</sup> Street and 7<sup>th</sup> Street, SW in Washington, DC.
  - The campus includes a collection of world-renowned museums, anchored by the Smithsonian Institution Building, also known as the Castle.
  - The proposed master plan will guide the development of the South Mall Campus over the next 20 to 30 years.
  - Individual projects within the master plan will be designed and implemented when funding becomes available. The Smithsonian Institution will submit each project to the Commission for review and approval.
  - The campus is 17 acres in size, and includes the Smithsonian Castle, Freer Gallery, Arts and Industries Building, Hirshhorn Museum and Sculpture Garden, the Quadrangle Building, the Sackler Gallery, the National Museum of African Art, the Haupt Garden, Ripley Garden, and Folger Rose Garden.
  - The Quadrangle Building includes three below-grade levels, and access is provided to the Ripley Center, Sackler Gallery and National Museum of African Art through three separate pavilions.
  - The Castle and Arts and Industries Building are National Historic Landmarks; the Freer Gallery is individually listed on the National Register; and the Hirshhorn Museum has been determined eligible for listing. The entire campus is within the National Mall Historic District.
  - Eleven public and consulting parties meetings have been held over the last three years, and public input has assisted in the development of master plan alternatives.
- The Smithsonian Institution provided information presentations to the Commission in April 2016 and September 2017. The Commission reviewed the Concept Master Plan in January 2018.
- 

## RECOMMENDATION

The Commission:

**Supports** the goals of the South Mall Campus Master Plan, which address the Smithsonian's need to meet its long-term space requirements and address physical and operational deficiencies across the campus that impact visitor use and experience as well as the Smithsonian's ability to effectively and safely implement its programs.

**Notes** the Master Plan identifies elements and general locations of projects to be implemented over the next 20-30 years; and further, that individual projects contained within the Master Plan, including new pavilions and gardens, will be subject to additional Commission review and approval at the time when detailed designs are developed.

**Notes** a Programmatic Agreement (PA) will be prepared pursuant to the National Historic Preservation Act that will describe the process and steps necessary for developing the detailed

designs for individual projects at the time of their implementation. The process will take into account and avoid, minimize and mitigate adverse effects.

**Finds** the Master Plan must consider the context of a changing city, particularly the SW Ecodistrict and Southwest Waterfront, which will change the character of Independence Avenue and the southern approach to the campus.

**Supports** the projects identified in the master plan as they help improve visitor service, increase access across the campus, and modernize facilities, while recognizing that program and functionality must be balanced with historic preservation, planning and urban design goals.

**Finds** the South Mall campus provides an important physical and cultural link between the Smithsonian Institution, the National Mall and Southwest Washington, DC; and further, this connection will be strengthened with the implementation of the master plan and continued coordination and collaboration among all stakeholders.

**Notes** that pursuant to the National Environmental Policy Act, a Draft Environmental Impact Statement was prepared and public comments were received regarding the proposed alternatives and their impacts.

**Notes** the Smithsonian Institution developed a number of alternatives in response to comments and feedback received throughout the planning process:

- Alternative D was the first alternative created and included the most dramatic changes to the campus, and would change the character of the garden, the setting of the Castle and maximize excavation under the Castle.
- Alternative B included more minimal changes to the campus, but it did not best achieve the goals of the Smithsonian.
- Alternative F was then developed to balance changes to the campus with the need to meet the master plan goals. Alternative F retains the character of the gardens, reduces excavation under the Castle and maintains its setting.

**Supports** the Smithsonian Institution's preferred Alternative F as the basis of the campus master plan and the preferred alternative to be identified in the Final Environmental Impact Statement.

**Supports** the use of design guidelines to help inform the design of individual projects at the time of their development, in conjunction with the Section 106 consultation process and further input from the Commission, staff and other agencies.

Regarding the Smithsonian Castle:

**Supports** the restoration of the Castle to its period of significance.

**Finds** the Castle is the physical and symbolic center of the Smithsonian Institution as well as the South Mall Campus, and therefore is the more appropriate location for a centralized visitor center.

**Finds** the relocation of a number of support facilities for the visitor center to an adjacent below-grade space will allow for the restoration of the Castle, including the Great Hall, to its period of significance while improving the visitor experience.

**Notes** the Castle and visitor center spaces will have a direct connection to the Sackler Gallery and National African Art Museum.

Regarding the Arts and Industries Building

**Notes** the Arts and Industries Building is a National Historic Landmark that is recognized for its architectural style and role in initiating one the greatest museum complexes in the world.

**Supports** the restoration of the Arts and Industries Building to its period of significance, including removing non-historic walls and other contemporary interventions, to allow the building to return to its original grandeur and use as an exhibition hall with voluminous spaces and a clear expression of structure when a full revitalization is undertaken.

**Finds** the Smithsonian Institution has a need for large-scale event and exhibition space that does not exist elsewhere on the campus, and further the Arts and Industries Building can provide that space in a way that is consistent with its historic use and character.

**Finds** adding a visitor center and related uses into the building would require adding new walls, rooms and other elements that would be inconsistent with the goals of the building restoration.

**Notes** the Smithsonian Institution has completed a building shell revitalization, and is actively fundraising for additional interior renovations to enable the building's reopening as an exhibition hall in the near future.

**Notes** the Smithsonian has hired a full-time director with a goal of creating year-round programming available to the public.

Regarding the Quadrangle Building:

**Supports** improvements to the Quadrangle Building, including increased public access, expanded amenities and programming, and improved daylighting, that will enhance the visitor experience and help the Smithsonian Institution meet its needs.

**Finds** the relocation of the pavilions will help improve the functionality of the below-grade Quadrangle Building spaces, and notes the new facilities and improved spaces will help provide additional programming, events and educational opportunities for residents and visitors.

**Notes** that the exact location, size and design of new pavilions will be determined at the individual project stage, in consultation with the relevant agencies and consulting parties through the Section 106 process.



**Finds** the relocation of the pavilions opens up the Haupt Gardens, the Smithsonian Castle, and the National Mall to Independence Avenue and the rapidly evolving southwest neighborhood.

**Recommends** that at the time of individual project design, the Smithsonian evaluate the size and scale of any proposed ramps or stairs to help minimize their impact on the setting of the Castle while balancing circulation and access needs. SI will further engage the relevant review agencies and consulting parties through the Section 106 process.

Regarding the Haupt Garden:

**Notes** the garden is the roof to the Quadrangle Building and the 30-year old roof membrane under the garden is at the end of its useful life and must be replaced.

**Finds** the garden provides a view to and setting for the Castle as seen from the south; and further, the intimate character and scale of the existing garden is a beloved component of the South Mall campus, and are an important counterpoint to the scale and openness of the National Mall.

**Notes** the garden design has evolved over time and will continue to be altered to respond to changes in aesthetics, functionality, and climate.

**Notes** the Smithsonian has committed to retaining the parterre, although the exact design and layout of the remainder of the garden will be determined at the individual project stage, and further, the Smithsonian has committed to maintain the high quality landscape of the garden, along with its intimate character.

**Requests** the Smithsonian Institution consider opportunities to reuse existing garden elements, where appropriate, to provide a link between the history of the garden and its future iterations

**Requests** the Smithsonian Institution evaluate opportunities to save, store and replant trees and other plantings after construction has been completed.

**Requests** the gardens continue to accommodate a variety of native plants as well as those that will help support pollinator health.

**Requests** that at the time of garden design, tree replacement should prevent net loss of tree canopy in accordance with the policies set forth in the *Comprehensive Plan for the National Capital*.

Regarding the Hirshhorn Museum and Sculpture Garden:

**Supports** restoration of the museum and only a limited open in the perimeter wall surrounding the site to provide a direct pedestrian connection to the Arts and Industries Building.

**Supports** restoration the below-grade tunnel connection between the museum and sculpture garden.

**Notes** that the Smithsonian Institution may seek to alter the sculpture garden response to contemporary needs related to the function and display of art.

**Requests** that future project submissions for the sculpture garden should describe the proposed program needs, the existing and proposed functionality of the space, and how the project might affect the garden's original design intent.

## PROJECT REVIEW TIMELINE

<b>Previous actions</b>	<b>April 2016</b> – Information Presentation <b>September 2017</b> – Information Presentation <b>January 2018</b> – Concept Review of Master Plan
<b>Remaining actions</b> (anticipated)	Release Final EIS Prepare and Finalize Programmatic Agreement Review of Final Master Plan Adopt Record of Decision

## PROJECT ANALYSIS

### Executive Summary

Beginning in 2012, the Smithsonian Institution undertook an effort to identify comprehensive goals and priorities for the South Mall Campus. These goals focused on improving visitor service and education, creating clear entrances and connections between the museums and gardens, National Mall, and surrounding neighborhood, replacing aging building systems, and protecting the historic buildings and features of the campus. The master plan is intended to support the mission, responsibilities and functions of the SI, and provide a framework to guide future development.

These goals are generally consistent with many of the policies identified in the Visitors and Commemoration, Urban Design and Historic Preservation Elements of the Comprehensive Plan. The master plan must also consider how to accommodate change and modernization which considering the important buildings and landscapes found within the campus. As such, staff recommends the **Commission supports the goals of the South Mall Campus Master Plan, which address the Smithsonian's need to meet its long-term space requirements and address physical and operational deficiencies across the campus that impact visitor use and experience as well as the Smithsonian's ability to effectively and safely implement its programs.**

In compliance with the National Environmental Policy Act (NEPA), NCPC along with SI prepared a Draft Environmental Impact Statement (DEIS) to meet its NEPA responsibility. Three action alternatives (B, D, and F) were analyzed in the DEIS, in addition to the no action alternative. Public comments were sought on the NEPA alternatives and impacts during a 60-day public comment period that ended on January 16, 2018. A number of comments were received, with a majority focused on maintaining the Haupt Gardens. Other comments focused on the future use of the Arts and Industries Building and the proposed changes to the Quadrangle pavilions.

Several master plan alternatives were developed through the planning process, each seeking to achieve SI's goals while considering impacts to the existing campus, including its setting and historic buildings. Alternative D was the first alternative created and included the most dramatic changes to the campus, changing the character of the garden, the setting of the Castle and maximizing excavation under the Castle. Alternative B included more minimal changes to the campus, but it did not best achieve the goals of the Smithsonian. Alternative F was then developed to balance changes to the campus with the need to meet the master plan goals. Alternative F retains the character of the gardens, reduces excavation under the Castle and maintains its setting.

Staff has reviewed the various alternatives, the public comments and the draft master plan. The draft master plan includes additional information regarding a number of areas that were identified by the Commission at concept review, including the proposed changes to the Quadrangle, the design of the gardens, and the relocated pavilions. As the master plan is intended to serve as a guide for the campus for the next 20-30 years, it must respond to current and anticipated needs, while balancing functionality, historic preservation and other goals. It must also respond to a changing context, within a growing city with thriving neighborhood and residents, while remaining an international destination and flagship for the Smithsonian Institution.

Given the complexity of balancing these many needs and interests, the Smithsonian evaluated a number of alternatives ranging from one with the most significant amount of change (Alternative D) to one with much less change, but only limited improvements to functionality and operations (Alternative B). Although Alternative D was the Smithsonian's initial concept, they now believe that Alternative F, which takes into account the feedback received throughout the planning process, is the best approach. This provides the basis for the draft master plan, in which the character of the gardens are maintained, the approach to the Castle remains at a flat grade, and excavation below the Castle basement is also minimized. The master plan also minimizes any changes to the Hirshhorn site walls.

In general, staff supports the steps that have been taken to achieve SI's goals, while minimizing potential impacts. Additional changes and revisions to the master plan can be taken to refine aspects of the plan, as described in the following analysis. Staff therefore recommends the **Commission support the Smithsonian Institution's preferred Alternative F as the basis of the campus master plan and the preferred alternative to be identified in the Final Environmental Impact Statement.** The master plan has also included draft design guidelines that can help provide a framework for developing individual projects, in conjunction with our review processes. Staff recommends the **Commission support the use of design guidelines to help inform the design**

**of individual projects at the time of their development, in conjunction with the Section 106 consultation process and further input from the Commission, staff and other agencies.**

## **Analysis**

### *Background*

The South Mall Campus Master Plan is intended to be a guide for the development of the campus over the next 20 to 30 years, consistent with the goals and mission of the Smithsonian Institution. As with other master plans reviewed by the Commission, the plan will identify projects to be implemented over time as funding becomes available. Individual projects within the master plan will require review and approval by the Commission. As such, while the master plan will include conceptual renderings and graphics of proposed improvements, the Smithsonian will develop specific designs at the individual project stage. As the phasing of projects many impact implementation, the Commission requested a phasing plan be included in the draft master plan. SI has provided that plan to outline the expected timing of the major projects. The Castle and Hirshhorn restoration are expected to occur first.

To address individual project implementation over time and potential impacts to historic resources, the Smithsonian, stakeholder agencies, and consulting parties are developing a Programmatic Agreement (PA) to comply with Section 106 of the National Historic Preservation Act (NHPA). Programmatic agreements are utilized when the potential effects of undertakings are not yet known. The PA will set forth a process for further avoiding, minimizing or mitigating effects through the project design and implementation phase. It will also set forth an engagement process with participating agencies, consulting parties and other interested members of the public. As such, along with the master plan, the PA will have an important role in implementing the master plan.

For the purposes of compliance with NEPA, a Draft Environmental Impact Statement (DEIS) was completed to evaluate potential impacts from implementing the master plan. A Final EIS and Record of Decision will also be prepared. At the time of individual project design, NCPC will determine whether any additional environmental review is necessary.

### *Context*

The South Mall Campus is located on the National Mall, generally bounded by 9<sup>th</sup> Street, SW to the east, 12<sup>th</sup> Street, SW to the west, Independence Avenue, SW to the south and Jefferson Drive, SW to the north. The 17-acre site includes a collection of museums, administrative offices, education facilities and other support spaces that form the heart of the Smithsonian Institution in the monumental core. Pedestrians generally access the campus from the north and south, as there is limited connectivity east to west within the campus. There are a number of transit options nearby, with the Smithsonian Metrorail Station located just to the west, and the L'Enfant Metrorail Station located two blocks to the southeast. The Forrestal Building, home of the Department of Energy, is located immediately across Independence Avenue to south. This building spans several blocks east-to-west and crosses above 10<sup>th</sup> Street, SW.

Today, the National Mall side of the campus is the source of the majority of visitors. As such, the master plan recognizes the need to improve access and wayfinding from the north side of the site. However, the campus is also at the terminus of 10<sup>th</sup> Street, SW, which provides an important visual and physical connection from the National Mall south to Banneker Park and the Southwest Waterfront. The SW Ecodistrict Plan encompasses the area immediately south of the South Mall Campus and contemplates a future where the existing federal facilities may be redeveloped as a sustainable, mixed-use neighborhood. In particular, the site of the Forrestal Building may one day be reconfigured to open up 10<sup>th</sup> Street, SW by removing the building from the right-of-way. Further, the new District of Columbia Zoning Regulations for the DOE site would allow future private development to be taller and closer to Independence Ave, SW, further changing the context of the South Mall campus.

The Commission previously approved upgrades to Banneker Park to help facilitate pedestrian and bicycle connectivity as a way to strengthen this connection. At the same time, a number of other projects, such as the Spy Museum and Wharf development are currently under construction or have been recently completed. Given the long period of implementation, the master plan recognizes the context of the city in this area is changing, particular to the south, and therefore considers how to address the idea of dual entrances, both from the National Mall as well as Independence Avenue/10<sup>th</sup> Street, SW.

In response to Commission comments, the draft master plan better emphasizes the importance of the South Mall in establishing this connection between Southwest Washington, DC and the National Mall. The Castle, in particular, is highlighted as a “hub” for the campus, and a nexus of cultural connections for residents and visitors. Improvements to the physical link are proposed through the more open approach to the campus, while other connections to the community will be enhanced through improved operations and collaboration in the surrounding community. For example, the Hirshhorn Museum has worked with the Southwest Business Improvement District (SWBID) to provide placemaking opportunities and hold events. Staff therefore recommends the **Commission find the South Mall campus provides an important physical and cultural link between the Smithsonian Institution, the National Mall and Southwest Washington, DC; and further, this connection will be strengthened with the implementation of the master plan and continued coordination and collaboration among all stakeholders.**

### *Campus Description*

The campus includes the Castle, which was completed in 1855. It is considered the visual centerpiece of the master plan. Today, the Castle includes a visitor center and administrative offices for the Board of Regents and the Secretary. The Freer Galley, completed in 1923, is located on the west side of the campus, and houses one of the premier collections of Asian art. The S. Dillon Ripley Center is entered from a pavilion located between the Castle and Freer Gallery. The Center, located below grade, includes the Smithsonian Associates, the Discovery Theater, and the Smithsonian Traveling Exhibition Service.

The Arts and Industries Building (AIB), completed in 1881, is located just southeast of the Castle, and is currently used for temporary exhibits and public events. The building is also under

consideration as a future museum. The east end of the campus includes the Hirshhorn Gallery and Sculpture Garden. This modern museum, completed in 1974, is dedicated to contemporary art and culture. The museum building is connected by a now-closed tunnel to the outdoor sculpture garden that is located just north of Jefferson Drive.

### *Master Plan Elements*

The draft master plan includes a number of major elements, described in further detail below. In general, these projects are intended to address current and future needs, and to help SI advance its mission. As such, staff recommends the **Commission support the projects identified in the master plan as they help improve visitor service, increase access across the campus, and modernize facilities, while recognizing that program and functionality must be balanced with historic preservation, planning and urban design goals.**

### Castle Restoration

The Castle will be enhanced as the main visitor center. The Castle is the most recognizable building across the Smithsonian, and most visitors associate it directly with SI. In fact, according to SI, many visitors do not realize the other museums across the National Mall are also SI facilities. Given this high level of recognition, staff recommends the **Commission find the Castle is the physical and symbolic center of the Smithsonian Institution as well as the South Mall Campus, and therefore is the more appropriate location for a centralized visitor center.** Further, the Castle is a hub for the wide range of cultural facilities in and near the National Mall, and an important focal point that connects Southwest Washington, DC to the monumental core.

Improvements to the Castle will have the benefit of both enhancing the visitor experience, but they will also help return the Castle to its previous grandeur. As such, staff recommends the **Commission support the restoration of the Castle to its period of significance.** Specifically, the Great Hall, which is currently broken up by more contemporary alterations, would be restored. The existing café, bookstore and other amenities would be relocated below-grade spaces adjacent to the Castle. Once completed, the Great Hall would be an important first experience for visitors, particularly those entering from the National Mall. Exhibits found in the Great Hall would describe the many roles of SI, including those related to research and education, as well as other museums, thereby telling the broader story of SI. At the same time, it would provide the opportunity for visitor orientation. SI docents, supported by portable tablets and other technology, would provide information to visitors seeking assistance or guidance. As such, staff recommends the **Commission find the relocation of a number of support facilities for the visitor center to an adjacent below-grade space will allow for the restoration of the Castle, including the Great Hall, to its period of significance while improving the visitor experience.**

Vertical circulation, including elevators and restored stairs would connect the Great Hall to the improved basement level, which would allow for new interpretive opportunities. Additional amenities, relocated due to the Castle restoration, would be provided here, including a café, bookstore and restrooms. New and expanded skylights, as well as a new ramp entrance from the Haupt Garden, would also provide natural light. From here, the Castle would also provide a direct

connection to the Smithsonian Associates facilities, the National African Art Museum and the Sackler Gallery.

SI is also evaluating opportunities to better protect the Castle from seismic activity. The specific measures and implementation will be developed at the project level, which will also include additional studies and engineering. Potential strategies could include base isolation, as well as structural bracing. The outcome of these additional studies will help inform the detailed designs of the related projects, and will not be identified at the master plan level. The strategies under consideration will not impact the proposed program or site layout of the master plan.

### Arts and Industries Building

The Arts and Industries Building (AIB) is a National Historic Landmark that is recognized for its architectural style and role in initiating one of the greatest museum complexes in the world. The building has large open spaces on a cross-axis with an exposed structure, illuminated by natural daylight. The Smithsonian seeks to complete a restoration of the building as funding becomes available. As such, staff recommends the **Commission support the restoration of the Arts and Industries Building to its period of significance, including removing non-historic walls and other contemporary interventions, to allow the building to return to its original grandeur and use as an exhibition hall with voluminous spaces and a clear expression of structure when a full revitalization is undertaken.**

The building has been used for a variety of events since the completion of the shell revitalization project and installation of basic mechanical, electrical and plumbing systems. In 2016, Director was appointed to plan and manage the programming of the building and to help secure funding for the restoration of the building. Over the last two years, SI has held a number of events at the building, including as part of the Folklife Festival. The campus does not have other large-scale spaces in the campus that can accommodate such events. As such, staff recommends the **Commission find the Smithsonian Institution has a need for large-scale event and exhibition space that does not exist elsewhere on the campus, and further the Arts and Industries Building can provide that space in a way that is consistent with its historic use and character.** At the same time, while the space exists in the building to accommodate other uses, like a visitor center, they would like impact the character and feeling of the dramatic spatial volumes and exposed structure. As such, staff recommends the **Commission find that adding a visitor center and related uses into the building would require adding new walls, rooms and other elements that would be inconsistent with the goals of the building restoration.**

### Quadrangle Building Improvements

The Quadrangle Building includes 345,000 square feet on three floors located below grade between the Castle, Freer Gallery and AIB. As such, it occupies an important location in the campus, providing an opportunity for connectivity both above and below grade. Today, the Sackler Gallery and National African Art Museum are accessed through the two pavilions that are an above-grade extension of the Quadrangle Building. They include stairs and elevators, as well as

exhibition space. The Haupt Garden forms the roof of the building. While the Quadrangle and Pavilions are contributing elements within the National Mall Historic District, the Quadrangle Building itself was found not eligible for individual listing in the National Register. The Quadrangle Historic District has been identified at the local level.

SI seeks to increase the functionality of the Quadrangle. Today, it is challenged by confusing access, disconnected public spaces, and a lack of sufficient daylighting. In addition, the roof is leaking and nearing the end of its lifespan. The master plan proposes to improve the functionality of the Quadrangle by consolidating entrances, co-locating public spaces, improving access and daylighting. A series of conceptual floor plans have been provided to indicate how the Quadrangle could be better configured and better serve the visitors to the many programs and events it hosts. As such, staff recommends the **Commission support improvements to the Quadrangle Building, including increased public access, expanded amenities and programming, and improved daylighting that will enhance the visitor experience and help the Smithsonian Institution meet its needs.**

Part of the reconfiguration of the Quadrangle includes relocating the above-grade pavilions for the Sackler Gallery and National African Art Museum. Because the pavilions provide public access and circulation, their location directly impacts how the below-grade spaces can be configured. The Smithsonian's studies show that moving the pavilions north allow the various public spaces below grade to be better connected, and further connect to the Castle below grade. As such, staff recommends the **Commission find the relocation of the pavilions will help improve the functionality of the below-grade Quadrangle Building spaces, and notes that the exact location, size and design of new pavilions will be determined at the individual project stage.**

In response to previous comments, as well as those provided through the Section 106 process, SI has provided additional drawings and analysis regarding the size and location of the proposed pavilions. Reference drawings have also been included that show the existing pavilions and their relationship to the Freer Gallery, AIB and the Castle. The plans and elevations indicate that the existing pavilions currently have impacts on these building due to the size and location. The proposed pavilions would be located further to the north. However, they would also be reduced in size and height, and the potential exists to design them in a way that further reduces their visibility. The new pavilion locations would allow for more open views of the Freer Gallery and AIB facades as viewed from the Haupt Garden. It would also open the campus to Independence Avenue.

The new pavilion locations, in conjunction with the removal of the Ripley Pavilion would also allow views from the National Mall into the Quadrangle gardens. SI has indicated that allowing visitors to see the presence of the National African Art Museum and Sackler Gallery is important, as these are some of the lesser-known and less-visited museums across the National Mall. While the existing pavilions serve to block views from the south, SI believes that relocated pavilions could be smaller and less intrusive, and allow for more expansive views of the Castle from the south, including 10<sup>th</sup> Street, SW and Independence Avenue. Therefore, staff recommends the **Commission find the relocation of the pavilions opens up the Haupt Gardens, the Smithsonian Castle, and the National Mall to Independence Avenue and the rapidly evolving southwest neighborhood.**



New ramps and skylights would provide additional daylighting to the Quadrangle Building. The new ramps would provide the additional benefit of an additional entry to the Castle visitor center and the underground spaces. Larger groups and tour buses would be able to park along Independence Avenue, where visitors would disembark and enter the Haupt Garden. From there, large tour groups would then descend to the visitor amenities, and further disperse to the various museums. Today, the South Mall Campus does not have the potential to support large visitor groups in this fashion. In general, addition pedestrian access can help improve the visitor experience in balance with a sensitivity to potential impacts to the setting of the Castle. As such, staff suggest the **Commission recommend that at the time of individual project design, the Smithsonian evaluate the size and scale of any proposed ramps or stairs to help minimize their impact on the setting of the Castle while balancing circulation and access needs.**

#### Haupt Garden

As described previously, the Haupt Garden form the roof of the Quadrangle Building. The roof is over 30 years old, and nearing the end of its life. The master plan includes additional photographs that highlight some of the current measures SI has undertaken to address the leaks and water infiltration. For example, make-shift pans have been installed beneath the ceiling to capture and redirect water. Because the roof will need to be repaired, the garden will need to be removed and replaced.

Throughout the engagement process, many members of the public have expressed their support for preserving the garden. In fact, a majority of the comments received during the DEIS public comment period advocated retaining the garden in its current form. Staff concurs that all the gardens within the South Mall Campus are exemplary, and they create a beautiful setting for the various buildings, and a positive experience for all visitors. As such, staff recommends the **Commission find the garden provides a view to and setting for the Castle as seen from the south; and further, the intimate character and scale of the existing garden is a beloved component of the South Mall campus, and are an important counterpoint to the scale and openness of the National Mall.**

The Haupt Garden has also evolved over time. Plant materials, art pieces and other elements are continuously changing, and they will continue to be altered to response to changes in aesthetics, functionality, and climate. Smithsonian Gardens is responsible for seasonal changes, replacing specimens and keeping the gardens in the condition that makes them beloved today.

While replacing the garden in-kind could retain the existing configuration, it may also preclude some of the improvements that the Smithsonian is trying to achieve to improve the visitor experience within the Quadrangle Building. The relocation of the pavilions and the addition of new skylights will necessitate some changes to the garden design. Staff notes the Smithsonian has committing to retaining the parterre, although the exact design and layout of the garden will be determined at the individual project stage. Further, the Smithsonian has committed to maintain the high quality landscape of the garden, along with its intimate character. Most importantly, SI is no longer pursuing the large, open lawn that was initially conceived early in the master plan process.

The draft master plan includes an analysis of the characteristics of the existing gardens, and some examples of how they can be sustained in the future. A series of vignettes highlights these characteristics as guidance for a future design. While these additional studies are helpful, SI should consider some additional steps to retain the characteristics of the gardens. Staff suggests the **Commission request the Smithsonian Institution consider opportunities to reuse existing garden elements, where appropriate to provide a link between the history of the garden and its future iterations.** The reuse of materials, art or other elements, where feasible, would help tell the store of the gardens through time. In addition, staff suggests the **Commission request the Smithsonian Institution evaluate opportunities to save, store and replant trees and other plantings after construction has been completed; and further, request the gardens continue to accommodate a variety of native plants as well as those that will help support pollinator health.** Finally, because shade is important to a successful and sustainable setting for visitors, staff suggests the **Commission request that at the time of garden design, tree replacement should prevent net loss of tree canopy in accordance with the policies set forth in the *Comprehensive Plan for the National Capital*.**

#### Hirshhorn Museum and Sculpture Garden

The master plan proposes to restore the Hirshhorn Museum building. In addition, it seeks to improve connectivity between museums across the campus. Currently, there is no direct pedestrian connection between AIB and the Hirshhorn Museum. A perimeter wall surrounds the site, with large openings located to the north and south from Jefferson Drive and Independence Avenue, respectively. A small accessible entrance is located at the northwest corner of the museum grounds. The master plan proposes to add a small opening in the western site wall to allow for a direct pedestrian access from the east doors of AIB to the Hirshhorn Museum site. The elimination of the AIB loading area will also allow facilitate this connection and expansion of the Ripley Gardens. In conjunction with the new Freer Gallery entrance, the wall opening would permit a complete pedestrian route across from the Freer Gallery to the Hirshhorn Museum. Previous alternatives had proposed more significant changes to the site wall, but a more modest opening would achieve SI goals and minimize impacts to historic fabric. As such, staff recommends the **Commission supports restoration of the museum and only a limited open in the perimeter wall surrounding the site to provide a direct pedestrian connection to the Arts and Industries Building.**

Other improvements to the Hirshhorn include restoration and re-establishment of the below-grade tunnel that links the museum building and the sculpture garden. This connection passes below Jefferson Drive, and any changes will require further coordination with the National Park Service. Staff recommends the **Commission support the reestablishment of the existing below-grade connection between the Museum and Sculpture Garden** as it will help improve access between the two areas.

Finally, the master plan proposes more substantial alterations to the sculpture garden as well as new below-grade gallery space. At concept review, the Commission requested SI provide additional details, including sections, to further explain any proposed changes. The submission

shows the sculpture garden will remain below the level of the National Mall to preserve their visual relationship. Further, the garden may be modified to accommodate new sculptures and viewing opportunities. Art continues to evolve, as does its relationship with the viewer and participant. As such, the Smithsonian Institution may seek to alter the sculpture garden response to contemporary needs related to the function and display of art. Staff therefore recommends the **Commission request that future project submissions for the sculpture garden should describe the proposed program needs, the existing and proposed functionality of the space, and how the project might affect the garden's original design intent.**

#### Consolidation of Loading Areas

Currently, the campus is served by several loading areas, each accessed from Independence Avenue, SW. The Quadrangle loading area is located below-grade, just east of the Freer Gallery. The entrance ramp descends between the Freer Gallery and Haupt Garden, creating a barrier between the building and garden. Another loading area and surface parking for AIB is located just east of that building, and immediately south of the Ripley Garden. Finally, the Hirshhorn Museum loading area is accessed by a ramp located along 7<sup>th</sup> Street, SW. SI seeks to consolidate loading where possible to meet contemporary facility needs, and to eliminate ramps and parking areas that break up the campus visually.

A new underground loading area would be accessed from a ramp located just west of the Freer Gallery, with a ramp descending along the 12<sup>th</sup> Street, SW tunnel. The loading area would be located at a sub-basement level below the west end of the Castle. At a minimum, the Quadrangle and AIB loading areas would be removed and the ramps and parking areas converted to garden space. SI recently received concept approval for the new curb cut from the District's Public Space Committee. Additional coordination will also be necessary with the District Department of Transportation (DDOT) to address traffic and intersection impacts related to the new loading operation.

#### New Central Utility Plant

The master plan includes the creation of a new underground central utility plant to serve the campus. The new facility will be modern and more energy efficient. It will also allow for SI to better control climate systems and services for visitors, staff, and the critical museum collections. Underground utilities across the campus would also be upgraded.

#### Freer Gallery Entrance

One of the goals of the master plan is to increase connectivity across the campus, and to help increase general accessibility for those of all mobility levels. Currently, the Freer Gallery is the only museum without an entrance facing the Quadrangle garden. In addition, the wheelchair-accessible entrance for the Gallery is located off Independence Avenue. Currently, those using this entrance must ring a bell to gain entry. The master plan proposes to add another accessible pedestrian entrance on the east façade of the Freer Gallery, facing the Quadrangle. With removal of the Quadrangle loading area and ramp, as discussed previously, this new entrance would allow

direct access between the Freer Gallery and Haupt Garden. In addition, it will allow for the establishment of a west-east connection that would lead from the Gallery to AIB and further east to the Hirshhorn Museum.

Perimeter Security Improvements – The master plan also calls for updates and improvements to perimeter security. The details will be developed with the design of the individual project or projects. Jefferson Drive will remain in its current alignment.

## **CONFORMANCE TO EXISTING PLANS, POLICIES AND RELATED GUIDANCE**

### **Comprehensive Plan for the National Capital**

Staff has reviewed policies from the Urban Design, Historic Preservation, Parks and Open Space, and Visitors & Commemoration Elements, and the analysis and recommendations are intended to support consistency with the Comprehensive Plan.

### **SW Ecodistrict Plan**

As noted previously, SI has considered the future implementation of the SW Ecodistrict Plan when considering the future context of the campus. The SW Ecodistrict Plan seeks to achieve a revitalized, mixed-use neighborhood and cultural destination; a well-connected community; a high performance environmental showcase, and an economically successful partnership for the area located just south of Independence Avenue, SW.

### **National Historic Preservation Act**

Pursuant to Section 106 of the National Historic Preservation Act, SI convened consulting parties to identify historic properties and assess adverse effects for the EIS alternatives. Ten meetings have been held, and input from the public has informed the alternatives. Many comments and concerns have focused on protecting the gardens and pavilions, as well as understanding the future of the AIB. As many effects from implementation of the master plan will not be identified until the individual projects are developed, a Programmatic Agreement will be prepared that will describe the process and steps necessary for addressing the specific impacts for those individual projects at the time of their implementation. Additional Section 106 consultation will be required throughout the life of the master plan.

### **National Environmental Policy Act**

NCPC has approval authority over the individual projects included in the master plan and therefore NCPC is the lead federal agency for compliance with the National Environmental Policy Act (NEPA). NCPC has worked with SI to prepare a Draft Environmental Impact Statement (DEIS) to evaluate the potential environmental impacts resulting from implementation of the Master Plan. NCPC acts as lead federal agency for NEPA compliance and SI is the project owner. SI works with federal agencies on NEPA compliance when, as here, an SI project requires federal agency

approval. The DEIS was available for public comment for a period of 60 days, ending on January 16, 2018. A number of public comments were received, many of which focused on retaining the Haupt Garden. In response, SI has provided supplemental information for inclusion within the master plan that highlights the current issues with the Quadrangle Roof. In addition, a series of garden imagery has been prepared that describe the expected design characteristics that would be employed when the project is developed. Following the Commission's action and selection of the preferred alternative, a Final EIS will be prepared and released for 30 days. A record of decision will subsequently be prepared.

## **CONSULTATION**

### **Coordinating Committee**

On March 14, 2018, the Committee reviewed the concept master plan. Without objection, the Committee forwarded the proposed comments on the draft master plan to the Commission with the statement that the proposal has been coordinated with all participating agencies. Participating agencies included the District Department of Transportation (DDOT), the Department of Energy and Environment (DOEE), the Office of Planning, the Washington Metropolitan Area Transit Authority, the National Park Service, the General Services Administration and the State Historic Preservation Office. The SHPO is coordinating on this project subject to satisfactory completion of a Section 106 Programmatic Agreement. DDOT noted that it will continue to work with SI on mitigation for the new curb cut, which will include, among other things, elimination of the lay-by located along Independence Avenue in front of the Freer Gallery.

### **U.S. Commission of Fine Arts**

The Commission of Fine Arts (CFA) reviewed the South Mall Campus Master Plan at an information presentation on January 22, 2015. Subsequently, the CFA reviewed the master plan at its January 18, 2018 meeting. At that time, CFA expressed support for the goals of the master plan and requested additional consideration of several issues. They requested AIB be integrated into the master plan in a meaningful way, and suggested further study of the pavilion locations. Regarding the gardens, CFA requested "requested that the Smithsonian instead develop a design that honors deeper issues of the Smithsonian's legacy and culture—such as the collection of botanical specimens, the aesthetic tradition of the Gardenesque, and the advancement of scientific knowledge."

## **ONLINE REFERENCE**

The following supporting documents for this project are available online:

- Project Summary
- Project Submission

Prepared by Matthew Flis  
03/29/2018

**POWERPOINT (ATTACHED)**

# NCPC File #7630

## South Mall Campus Master Plan

National Mall

Washington, DC

---

Smithsonian Institution

Draft Master Plan

**Commission meeting date:** April 5, 2018

**NCPC review authority:** Approval of comments on draft master plan pursuant to 40 U.S.C. § 8722 (a) and (b)(1))

**Applicant request:** Review of Draft Master Plan

**Delegated / consent / open / executive session:** Open Session

**NCPC Review Officer:** M. Flis

**NCPC File number:** 7630

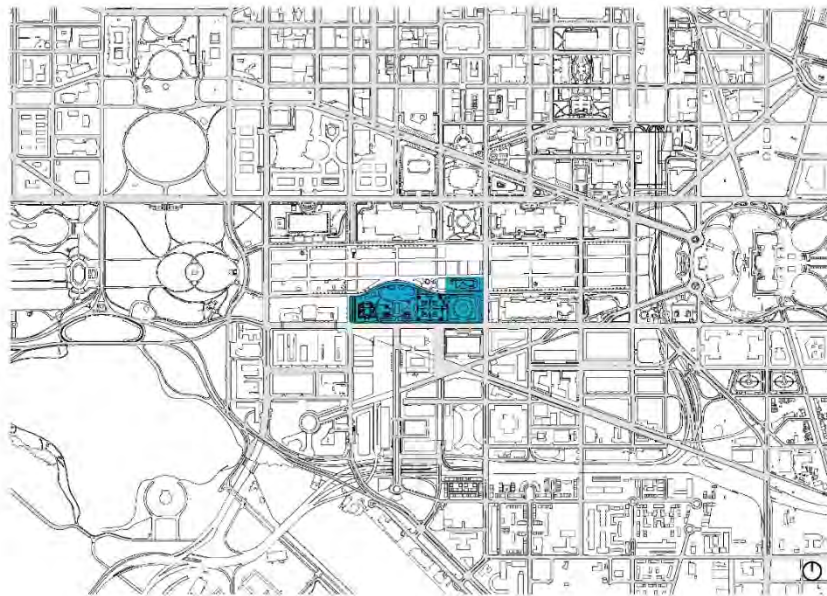
**Project summary:**

The Smithsonian Institution has submitted its draft master plan for the South Mall Campus Master Plan for Commission review and comment. The purpose of a proposed South Mall Campus Master Plan is to guide future short-term and long-term renovation and development of a 17-acre area known as the South Campus, which includes the Smithsonian Institution Building (the Castle), the Quadrangle Complex (the Ripley Center, the Arthur M. Sackler Gallery, the National Museum of African Art, and the Enid A. Haupt Garden), the Freer Gallery of Art, the Arts and Industries Building, the Hirshhorn Museum and Sculpture Garden, the Kathrine Dulin Folger Rose Garden and the Mary Livingston Ripley Garden. The Smithsonian proposes the Master Plan to meet the its long-term space requirements and to address physical and operational deficiencies across the campus that impact visitor use and experience as well as the Smithsonian's ability to effectively and safely implement its programs. The Commission provided comments on the concept master plan in January 2018.

The Master Plan includes goals to revitalize and seismically upgrade the Castle; repair and replace building systems; improve accessibility; improve circulation and museum visibility throughout the campus; centralize visitor services; provide new education, museum and event space; create a new central utility plant and related infrastructure; expand loading and delivery facilities; and update security measures.

A Draft Environmental Impact Statement (DEIS) was prepared with a 60 day public comment period with two public meetings planning. A draft programmatic agreement will also be prepared that address the process and procedures for implementation of specific projects identified as part of the master plan, recognizing they will be implemented over 20 years or more.





**PROJECT NAME:**

South Mall Campus Master Plan

**LOCATION:**

South Mall Campus

Smithsonian Institution Building  
1000 Jefferson Dr SW  
Washington, DC 20560

Arts and Industries Building  
900 Jefferson Dr SW  
Washington, DC 20560

Freer Gallery of Art  
1050 Independence Ave SW  
Washington, DC 20560

Hirshhorn Museum and Sculpture Garden  
Independence Ave & 7th St SW  
Washington, DC 20560

Quadrangle Building  
1000 Independence Ave SW  
Washington, DC 20560

INTRODUCTION  
PROJECT AREA





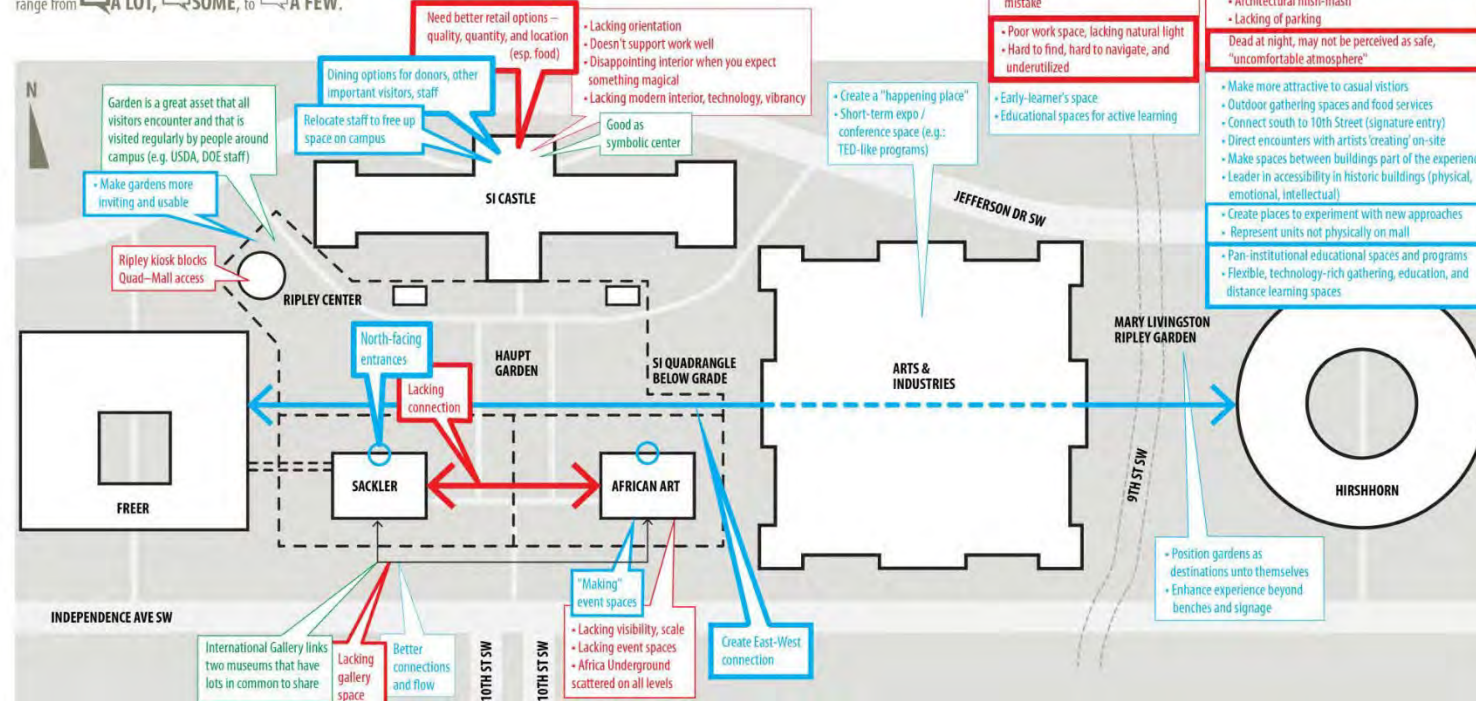




## PLANNING PROCESS / PLANNING POLICIES

### SMITHSONIAN SPACE USE INTERVIEW COMMENTS - SPRING 2012

The text below is color coded to show comments from leadership about campus features that are **working well**, **not working so well**, or **thoughts and ideas about the future** of the campus. The talking bubbles are weighted to represent how many times a comment was expressed. They range from **A LOT**, **SOME**, to **A FEW**.



A series of work sessions were held among the Smithsonian South Campus stakeholders. These sessions outlined the issues impacting the campus and potential directions for addressing the future.

## PUBLIC REALM AND VIEWSHEDS CASTLE AS HUB

### NATIONAL MALL



### CULTURAL/ MUSEUMS



88% OF PEOPLE WORLD-WIDE ASSOCIATE THE CASTLE WITH THE SMITHSONIAN, WHICH IN ADDITION TO ITS CENTRAL URBAN LOCATION, IS THE NATURAL LOCATION FOR THE VISITOR CENTER. THE CREATION OF THE VISITOR CENTER ENHANCES THE PHYSICAL CONNECTION TO THE QUAD MUSEUMS, PROGRAMMING AND AIB

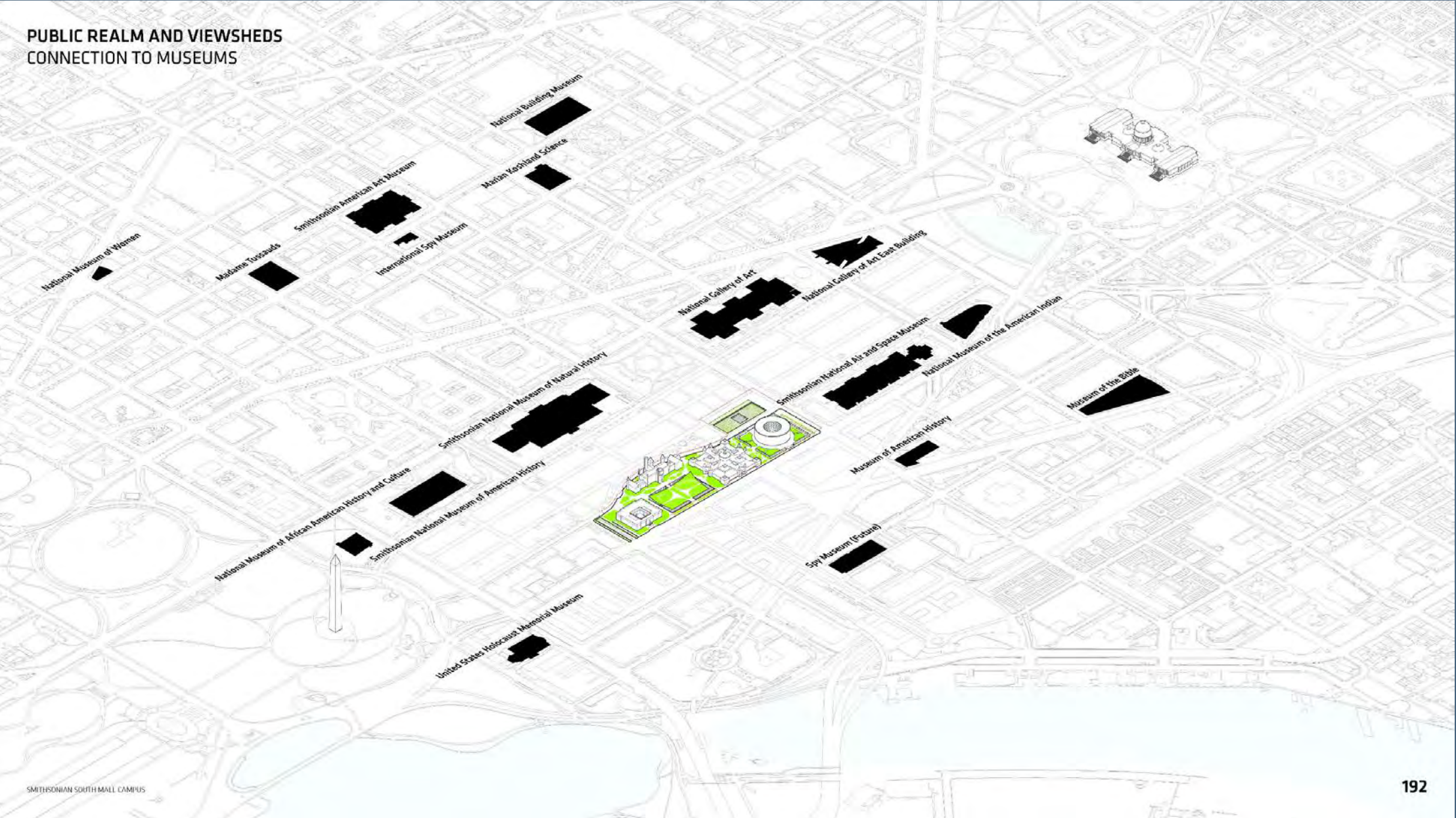


### WATER FRONT / THE WHARF



### GREEN OPEN SPACE /SW ECODISTRICT





## GOALS AND OBJECTIVES



**Restore and Renovate**  
Restore and renovate historic buildings



**Accessibility**  
Improve access for persons with disabilities



**Connect**  
Improve circulation and connectivity within campus and to adjacent context



**Gardens**  
Provide diverse gardens for visitor recreation and education



**Visibility**  
Improve visibility of below grade museums



**Education**  
Increase education spaces



**Events**  
Provide additional museum and event space



**Visitor Services**  
Create and expand visitor services



**Activate**  
Ensure that the campus can be active from morning to night.



**Loading**  
Improve and expand underground loading space



**Security**  
Update perimeter and building security



**Sustainable Systems**  
Establish a central utility plant to reduce GHG emissions and energy costs



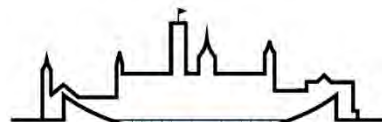
**Museums**  
Improve facilities and accommodate growth

## PROPOSED DEVELOPMENT / LAND USE PLAN

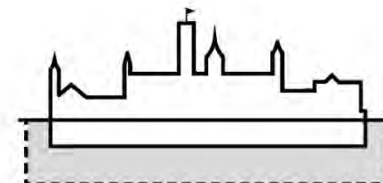
### ALTERNATIVE D COMMENTS



**CHARACTER OF GARDENS**  
The Haupt Garden appears too park-like.



**HISTORICAL SETTING OF CASTLE**  
Sloped grade at visitor entry creates the impression of the Castle sitting on a glass plinth.



**EXTENT OF EXCAVATION**  
Two levels of excavation beneath the Castle that extend towards Jefferson and the Quad.



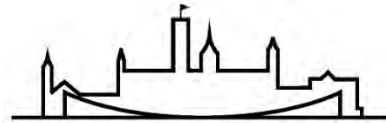
## PROPOSED DEVELOPMENT / LAND USE PLAN

### ALTERNATIVE F STRATEGIES



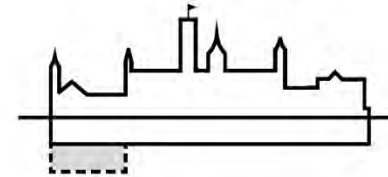
#### CHARACTER OF GARDENS

Updated gardens take inspiration from the intimate characteristics of the existing gardens.



#### HISTORICAL SETTING OF CASTLE

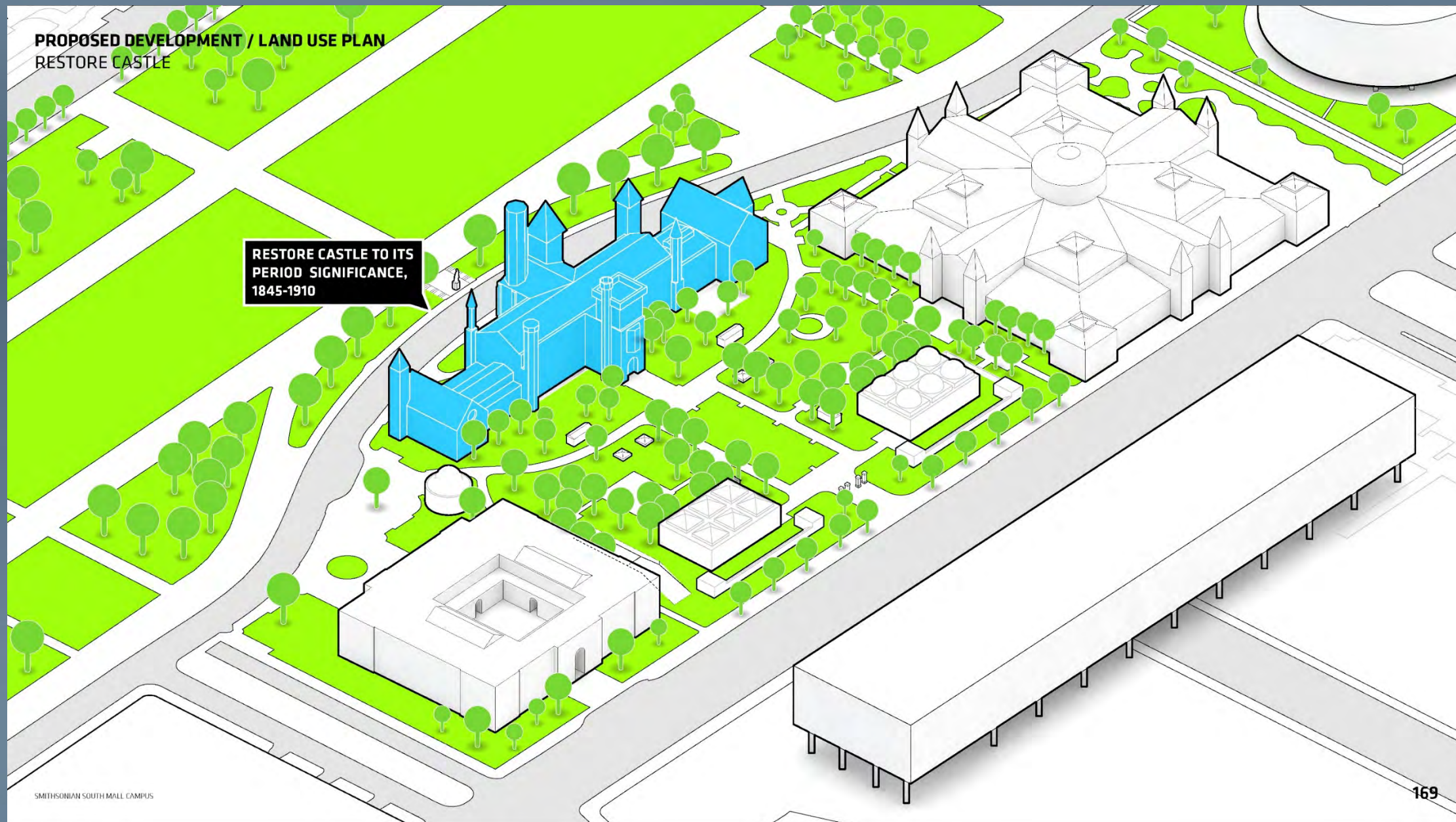
Haupt Garden retains a level relationship to the Castle.



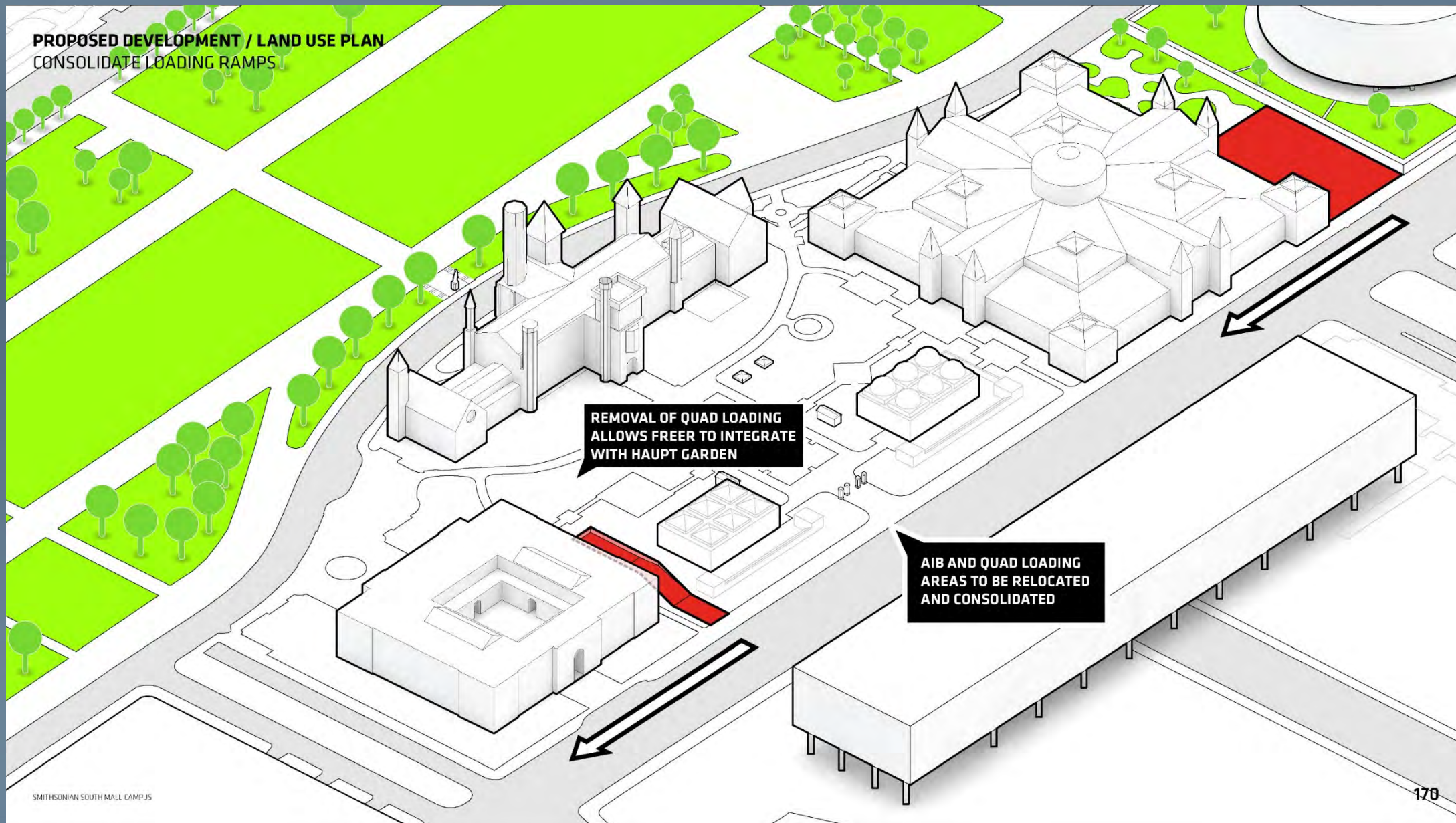
#### EXTENT OF EXCAVATION

Limited excavation beneath the Castle.

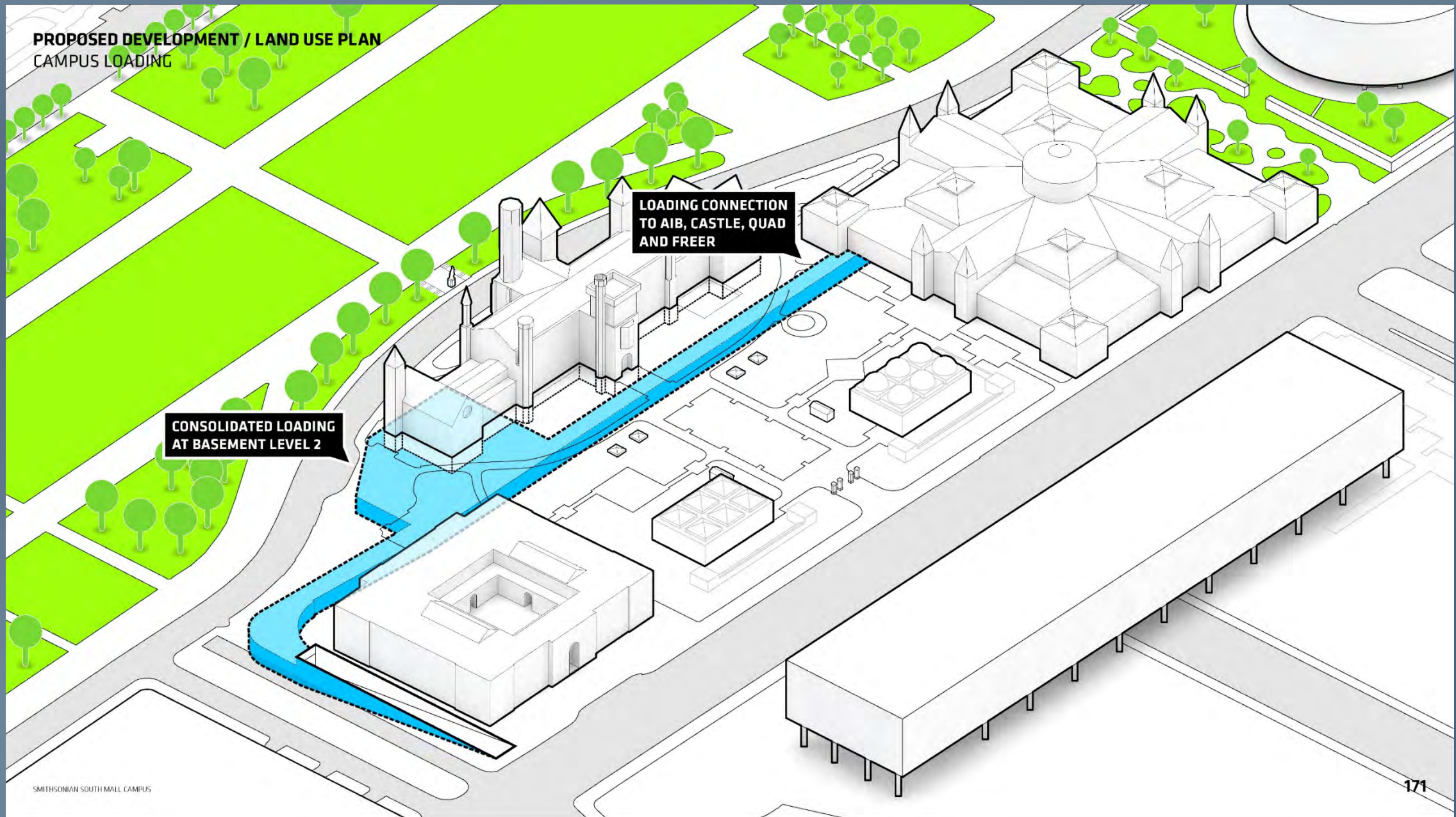
**PLANNING CONCEPT  
ALTERNATIVE F**



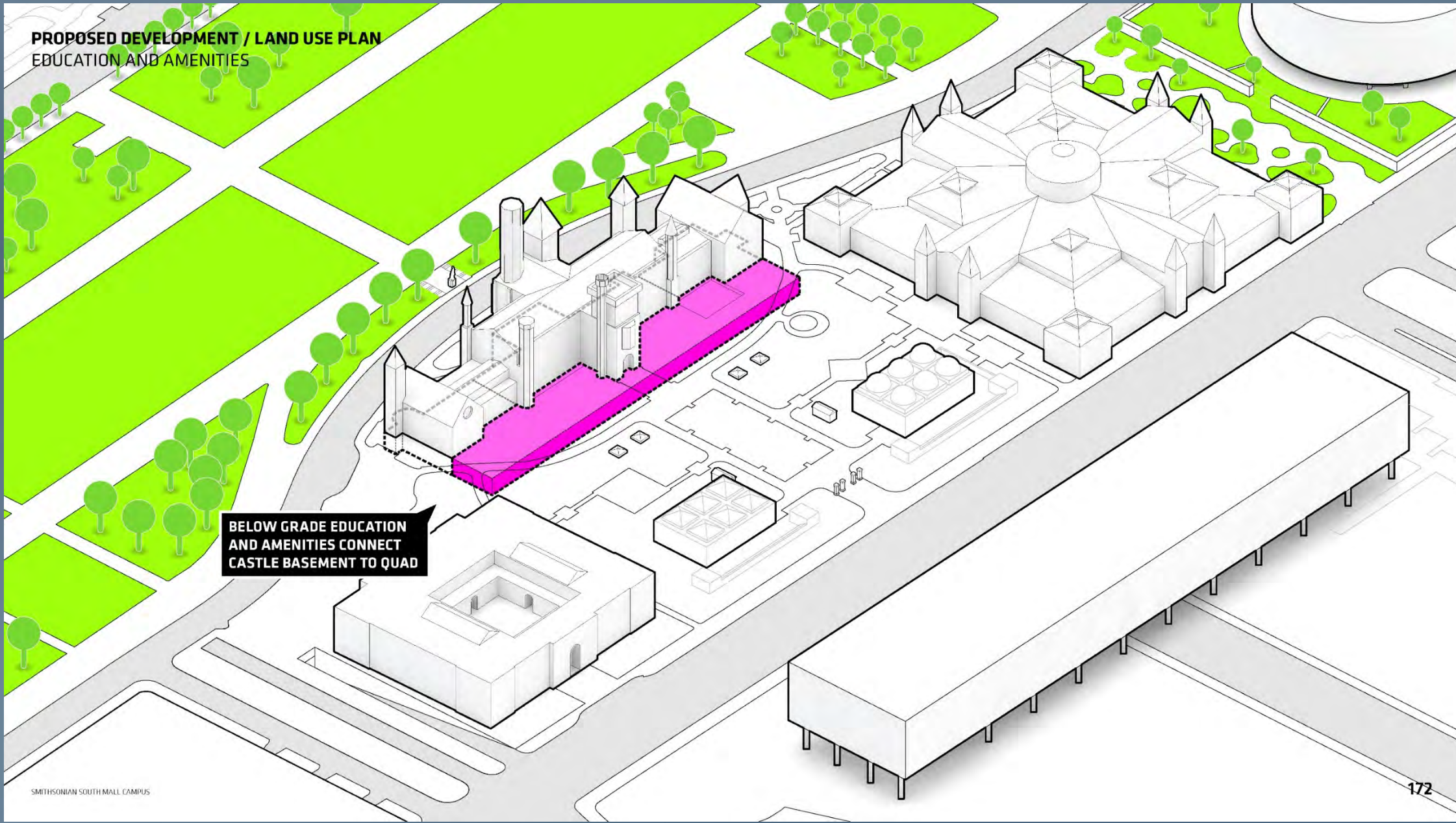




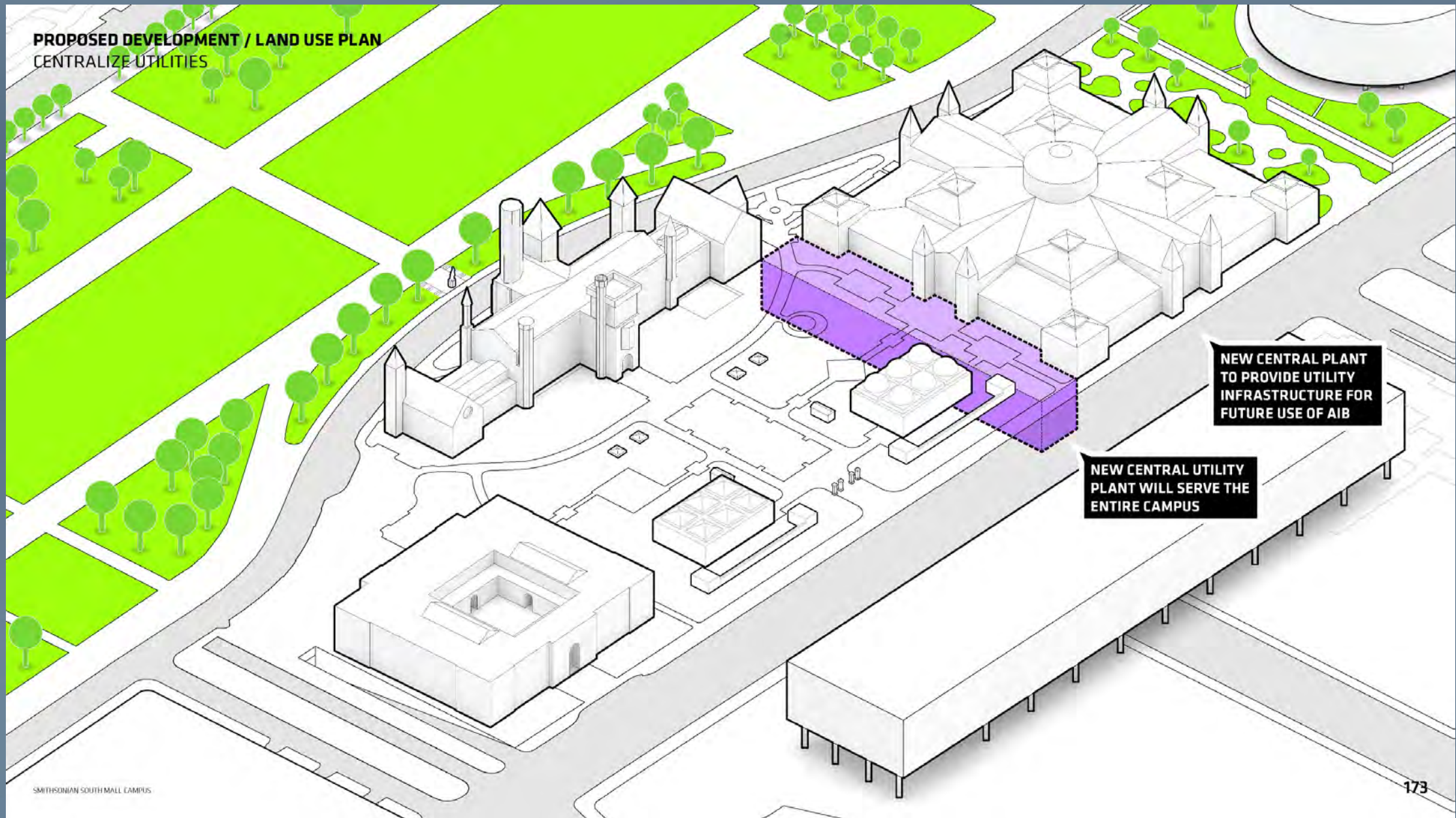




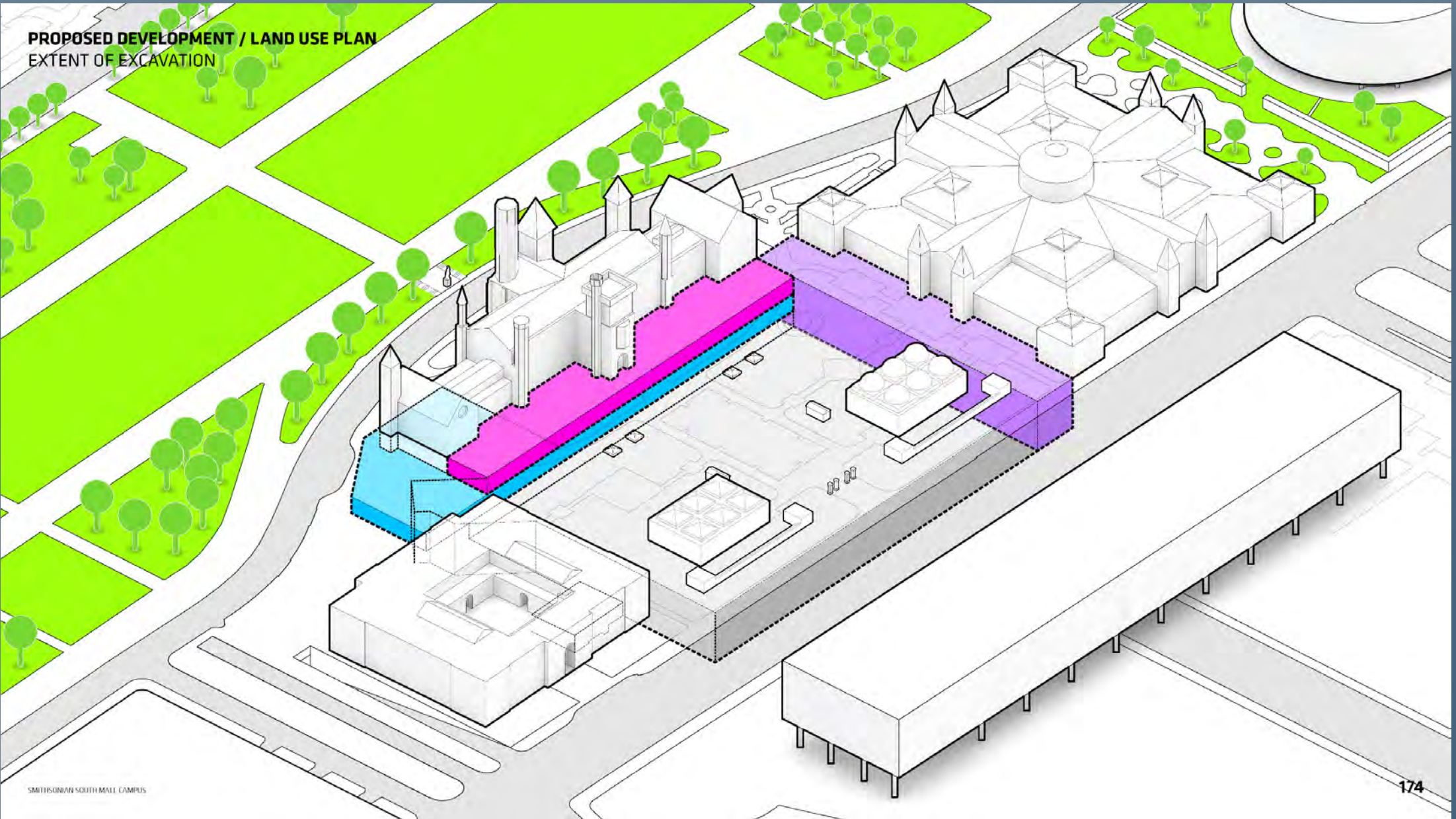




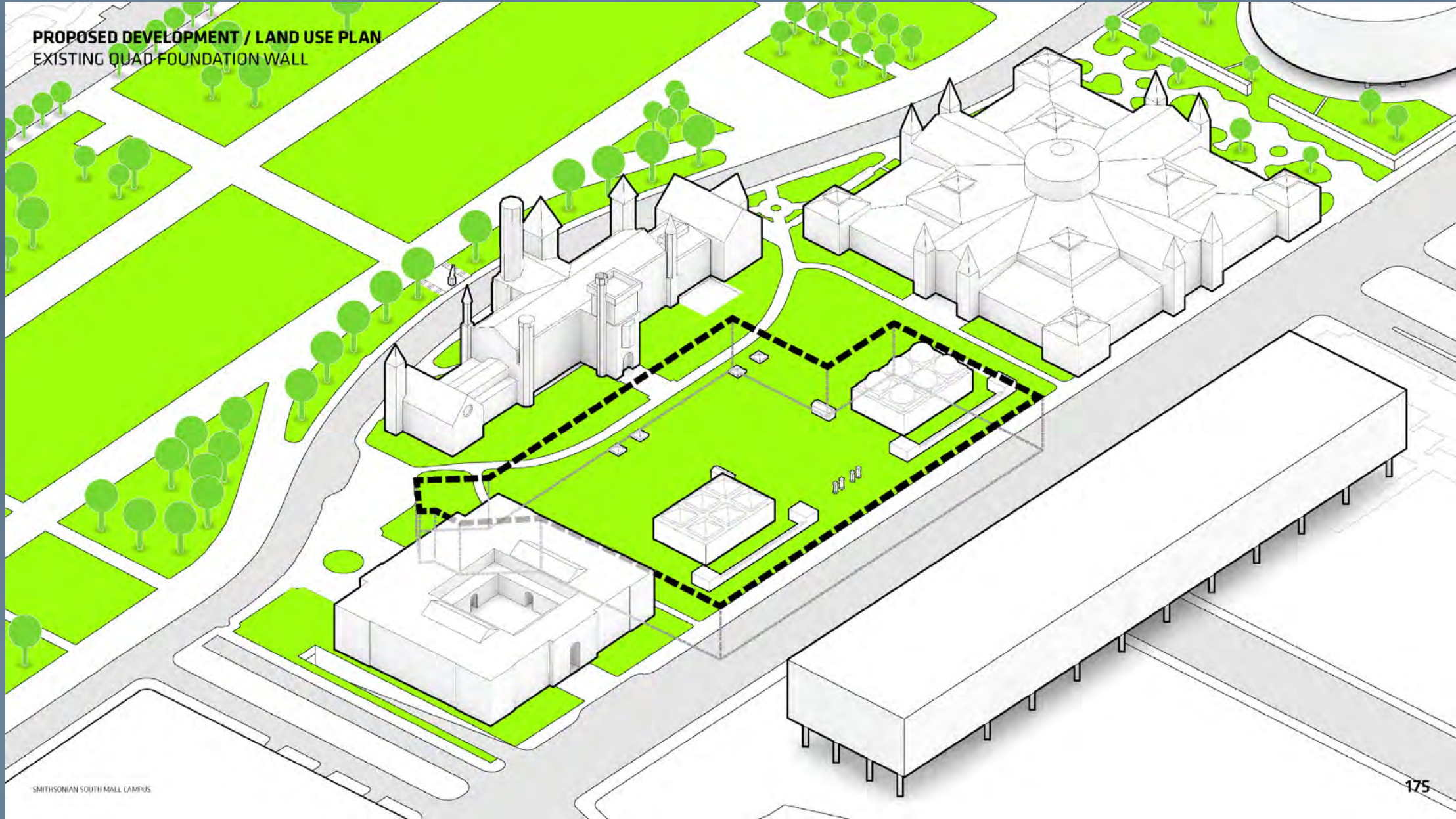




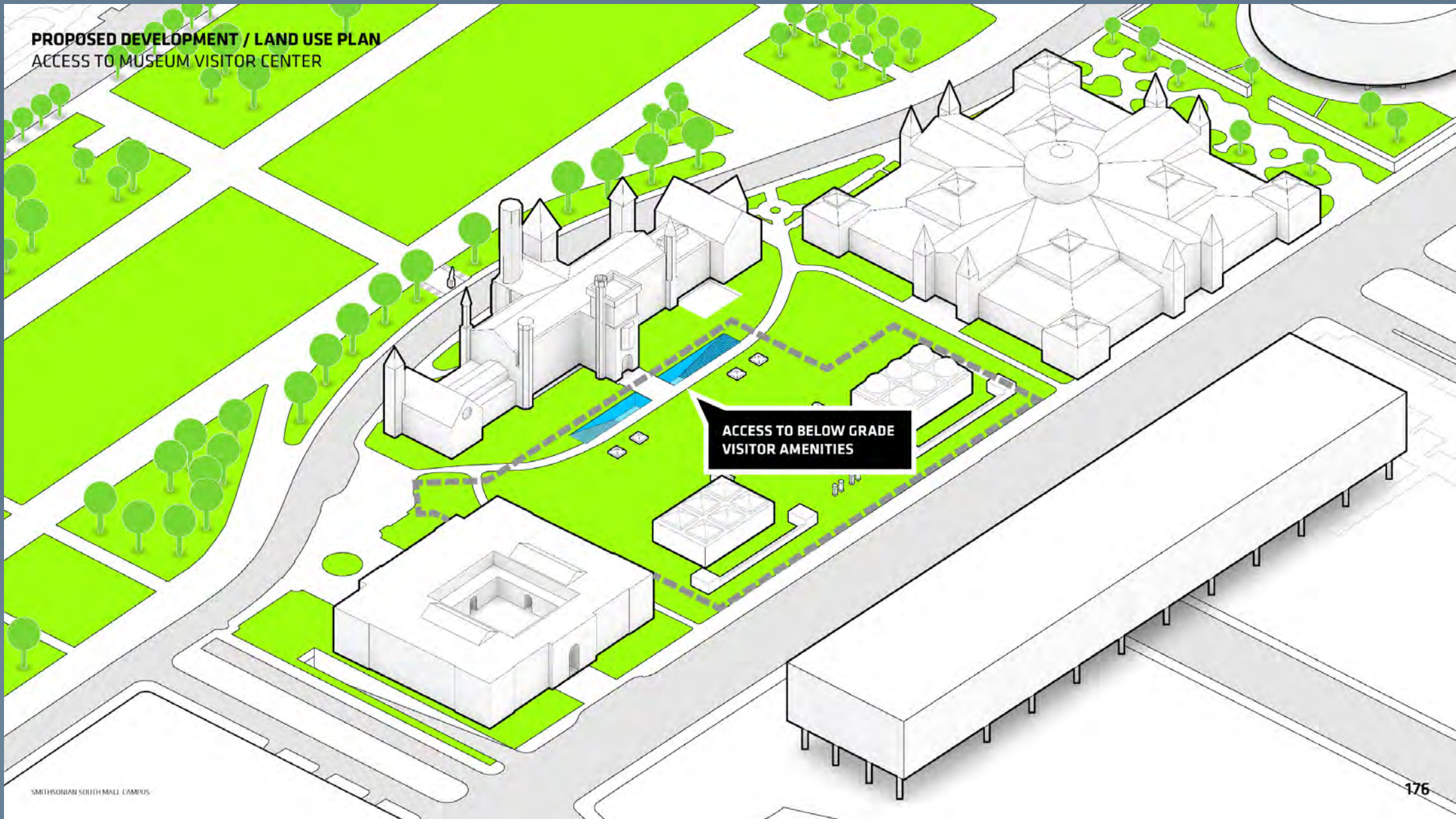




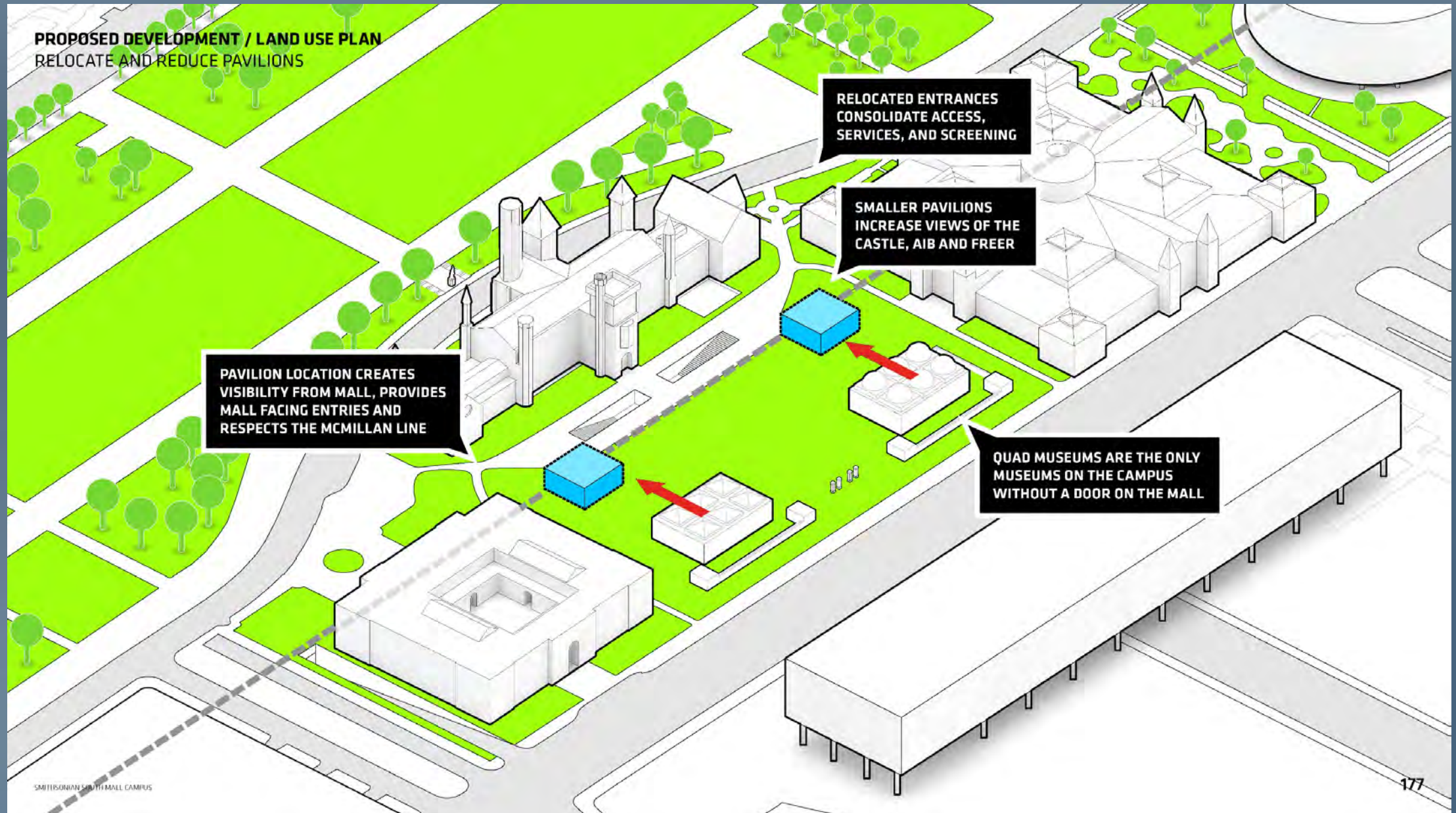




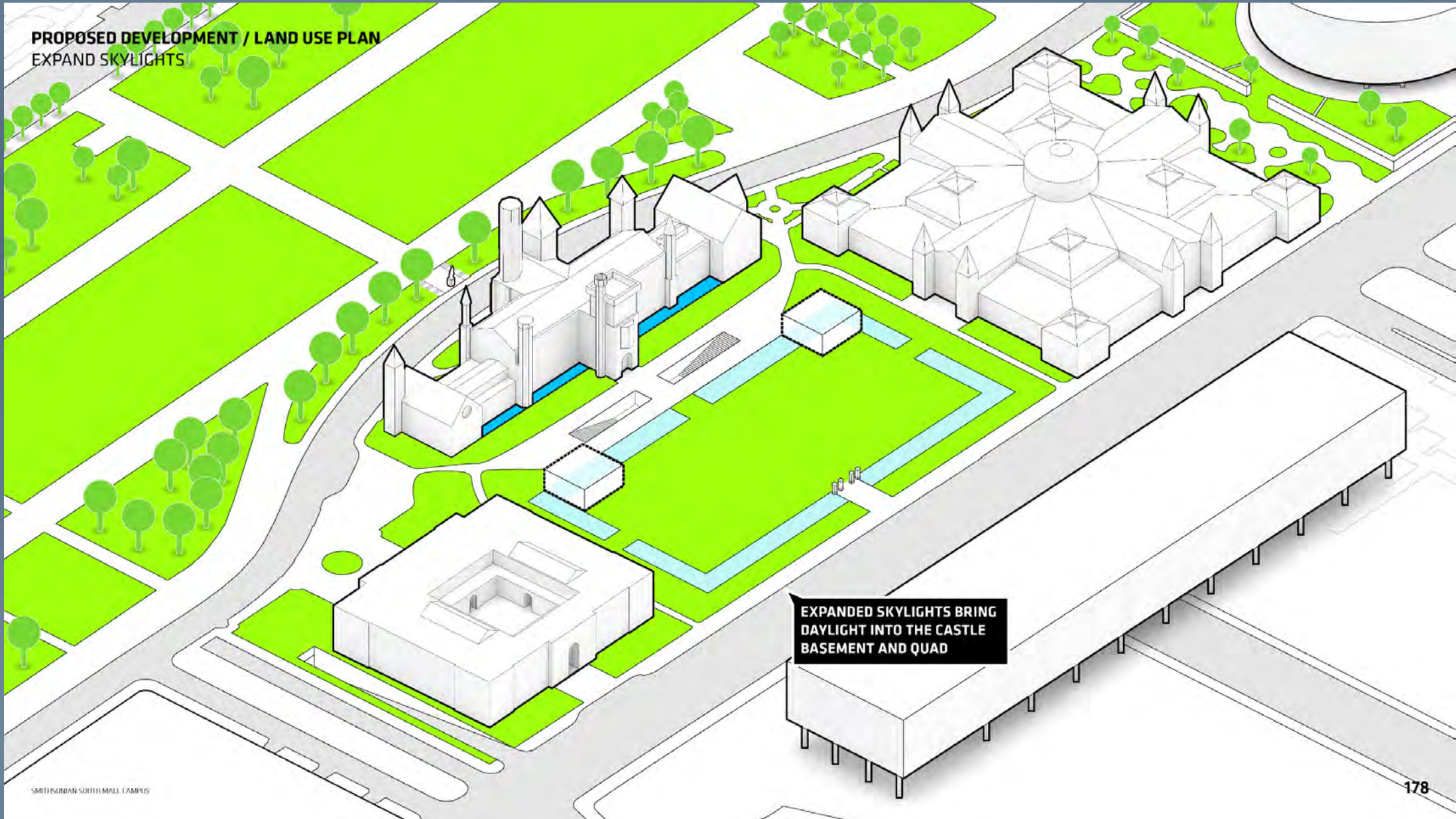




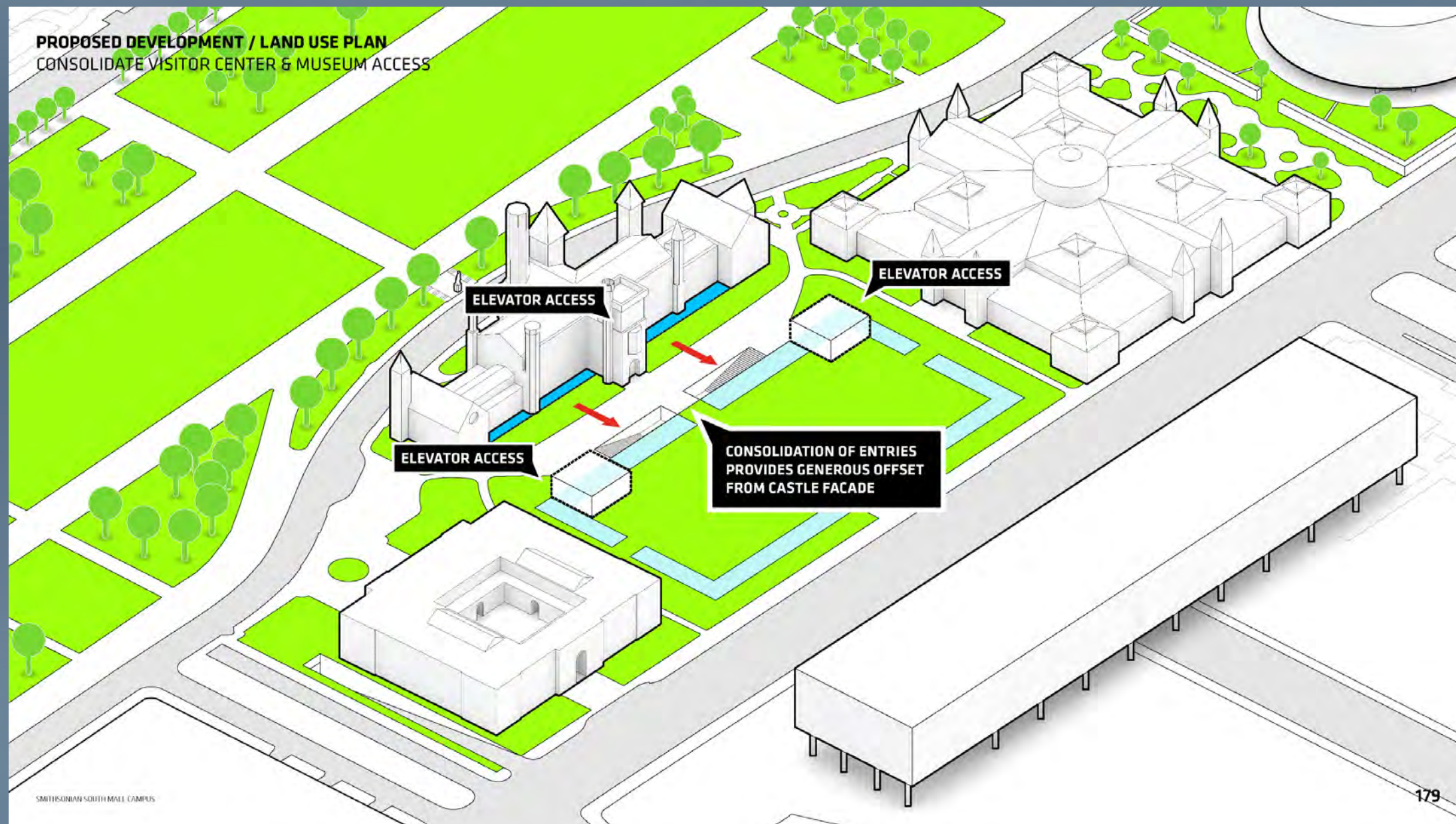




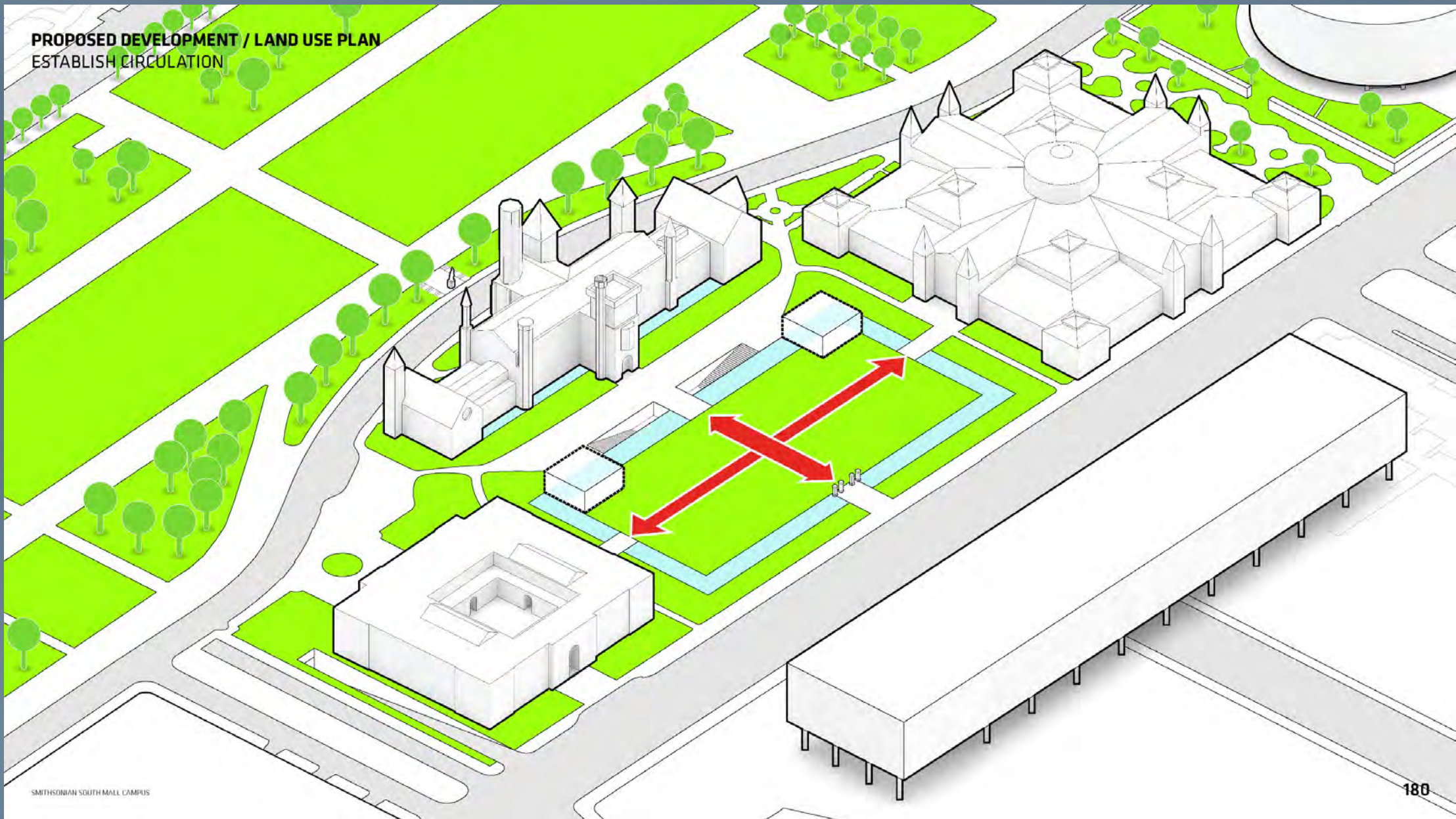




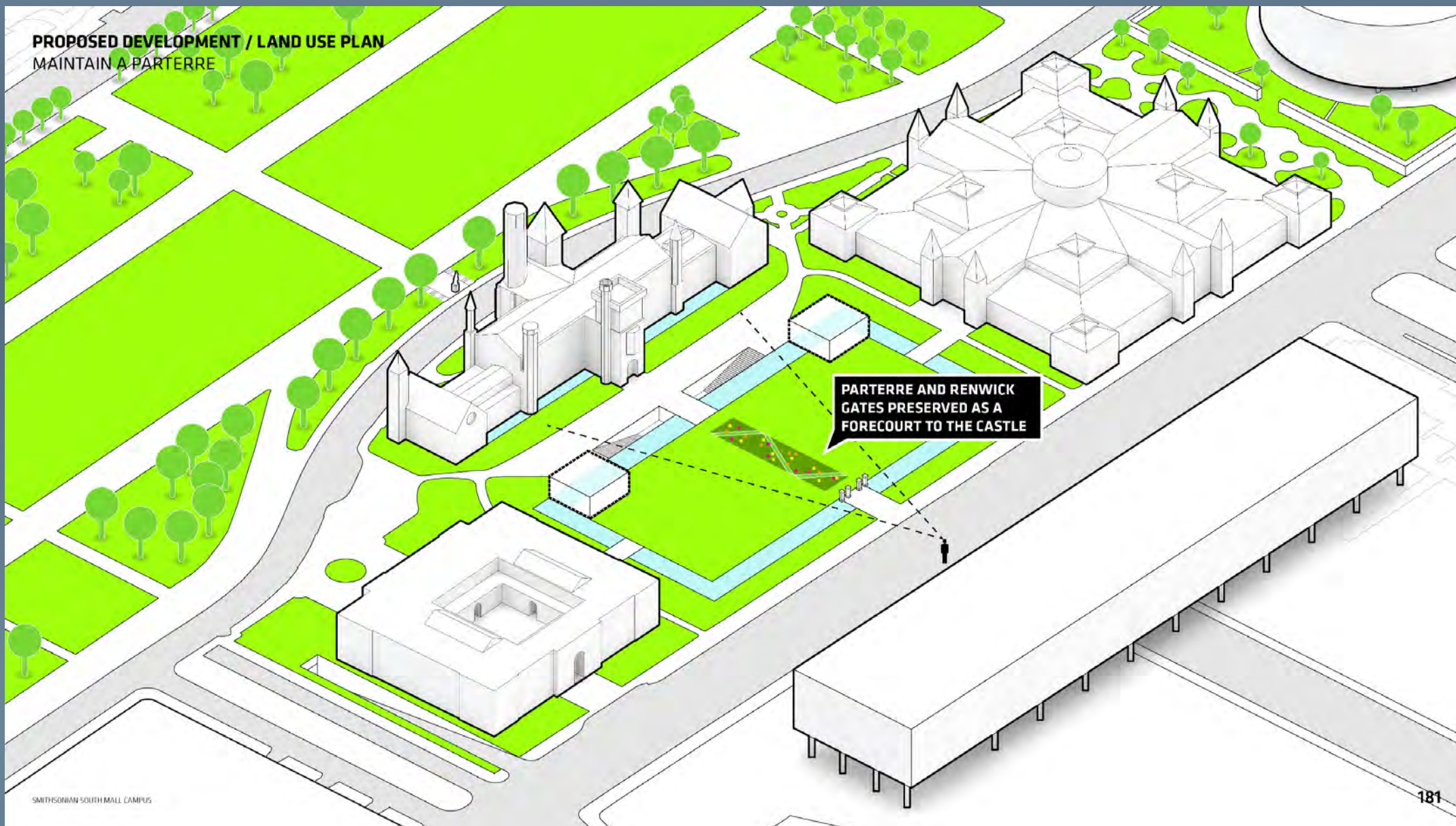




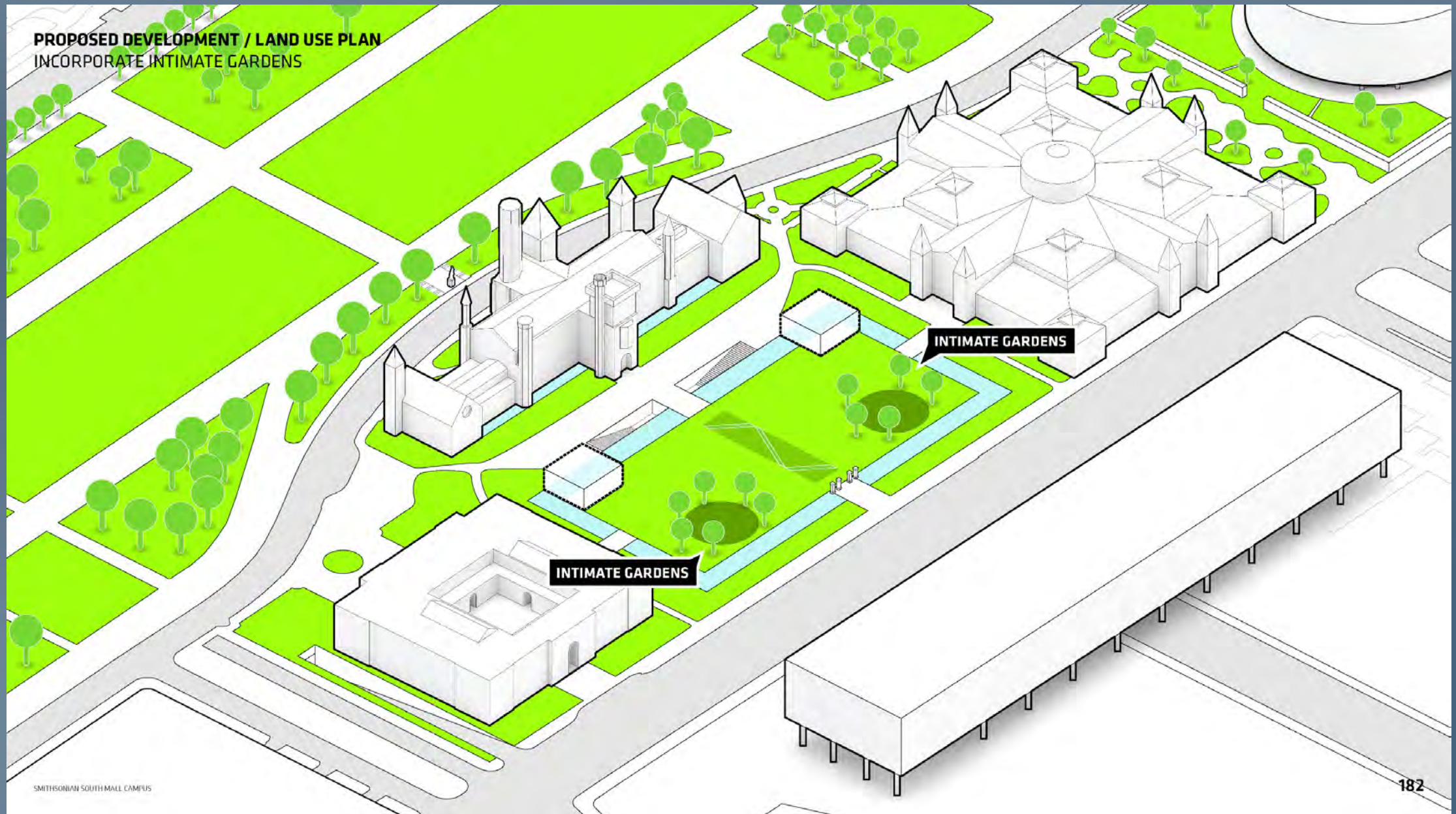




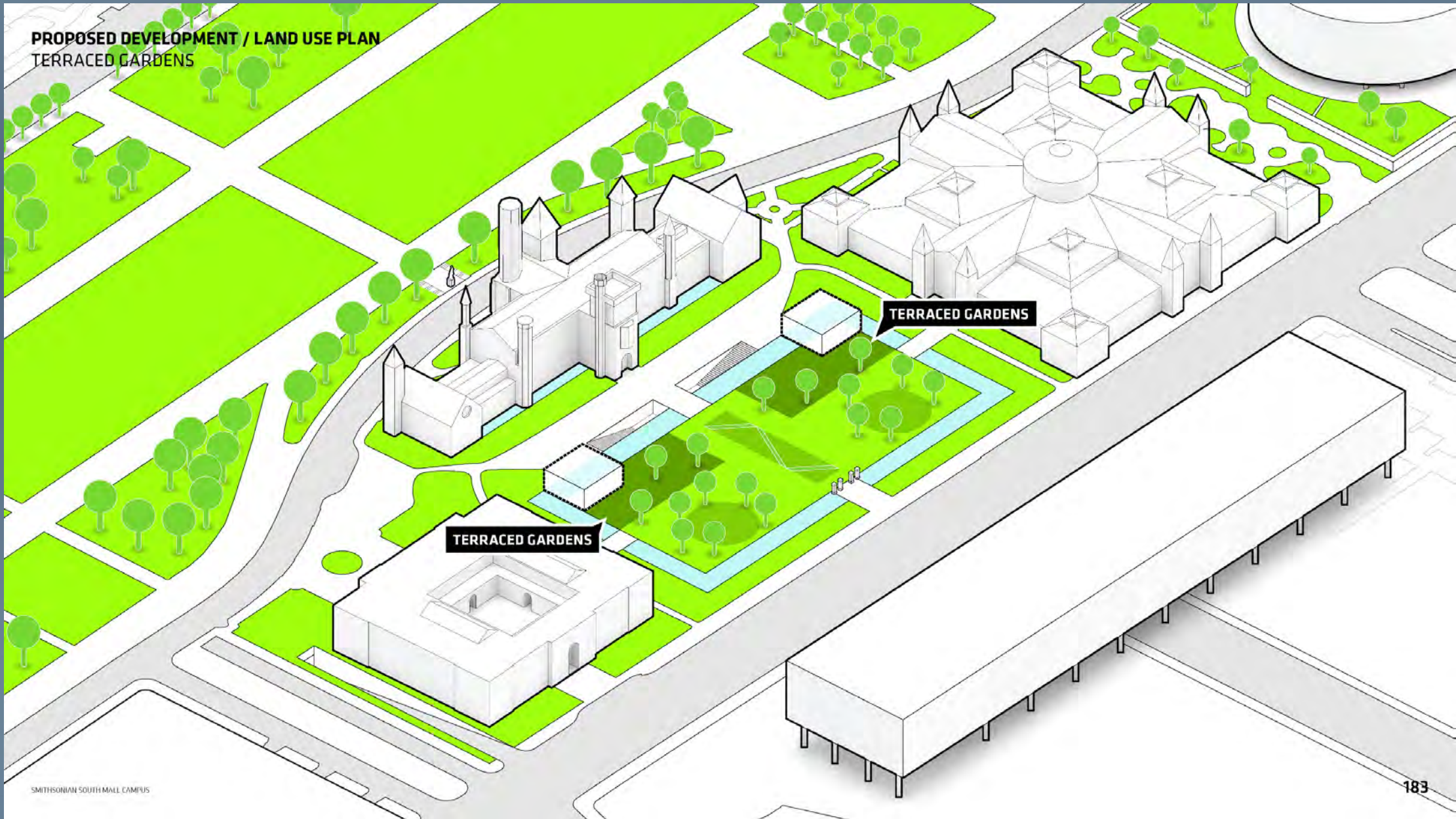




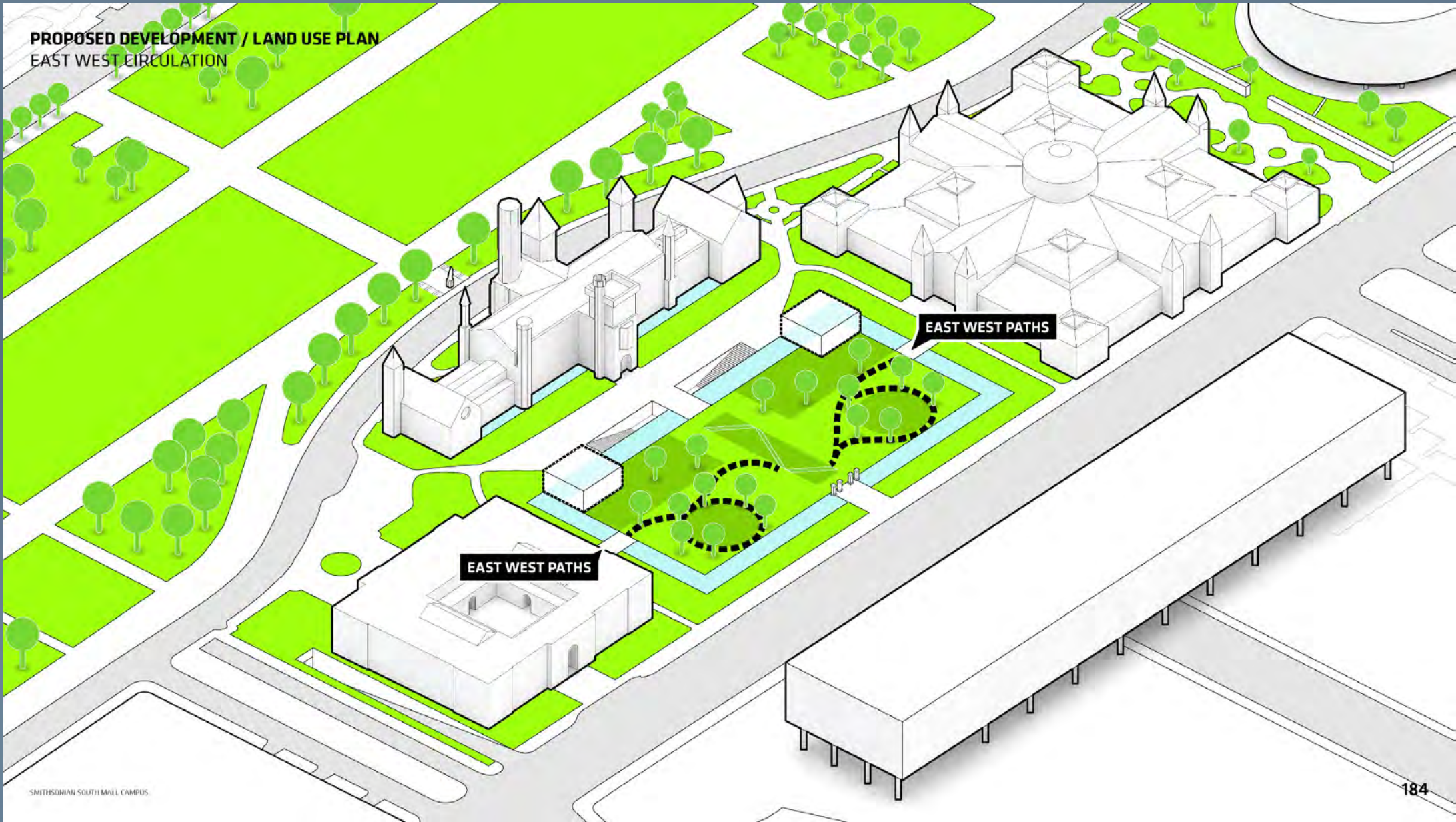




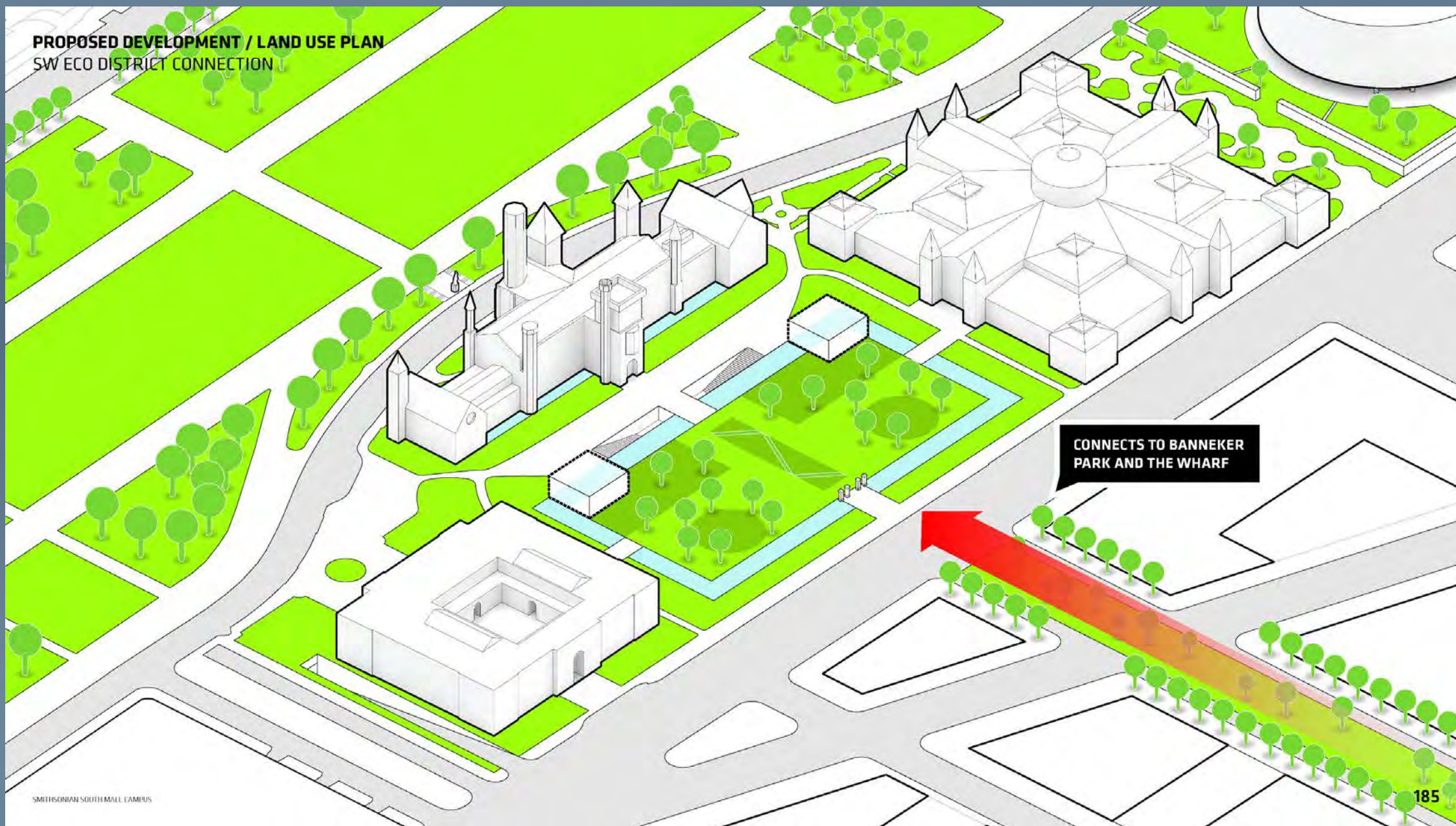




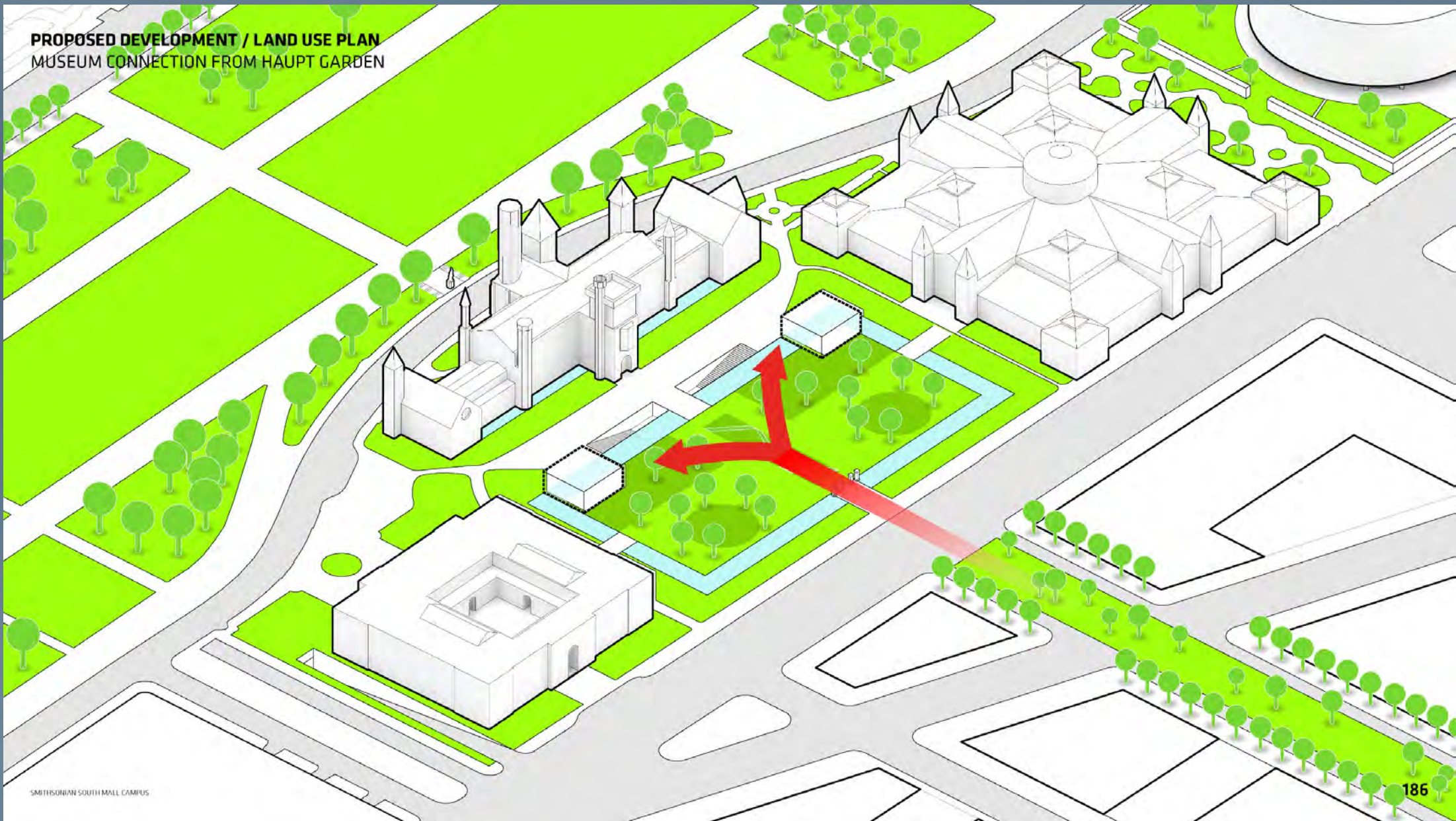




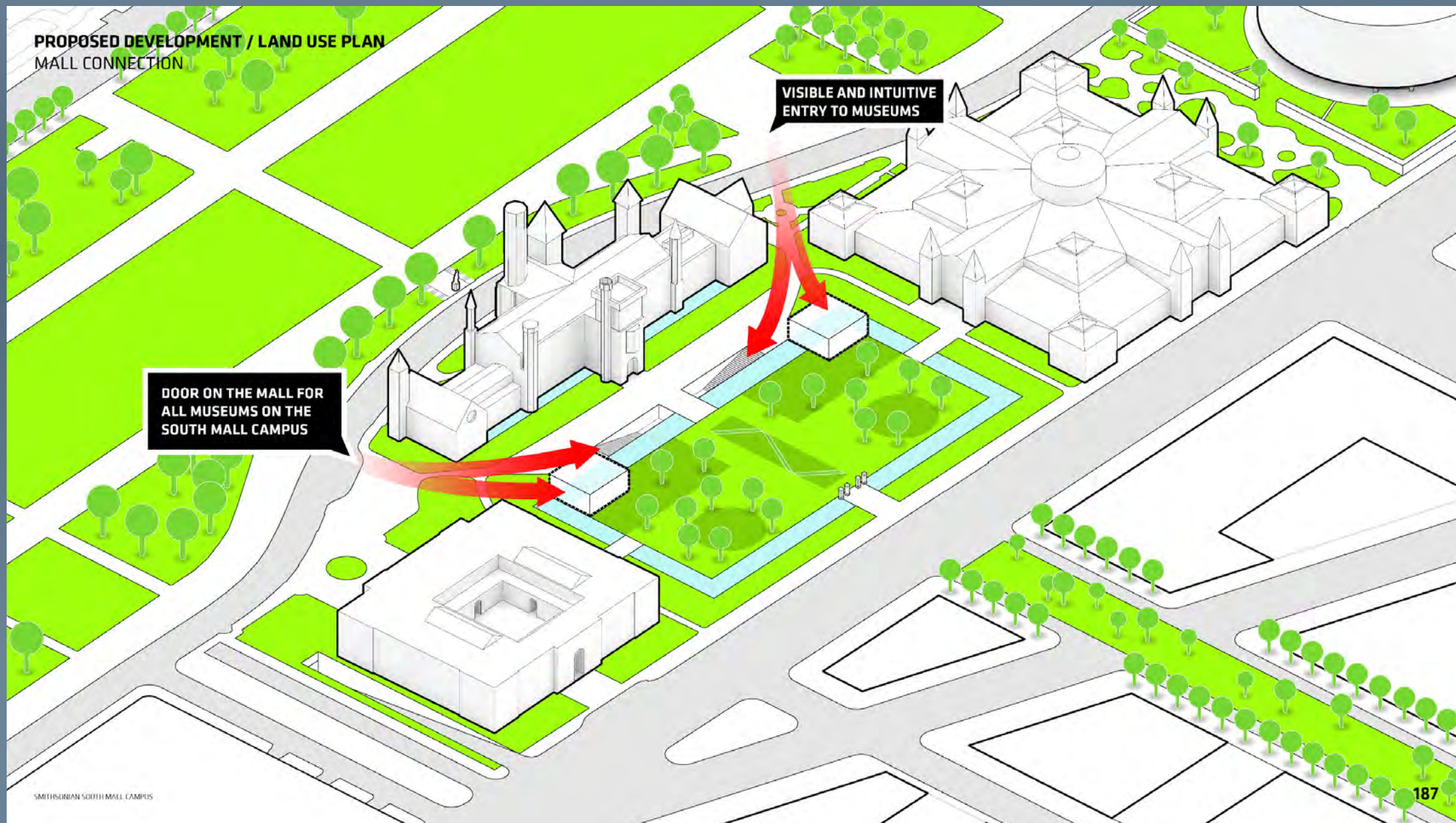














## PUBLIC REALM AND VIEWSHEDS

ACCESS AND VISIBILITY FROM NATIONAL MALL - APPROACH FROM METRO STOP

REMOVAL OF THE RIPLEY PAVILION  
INCREASES VISIBILITY OF THE  
HAUPT GARDEN AND OF THE AIB



SMITHSONIAN SOUTH MALL CAMPUS







## PUBLIC REALM AND VIEWSHEDS

ACCESS AND VISIBILITY FROM NATIONAL MALL - APPROACH FROM METRO STOP

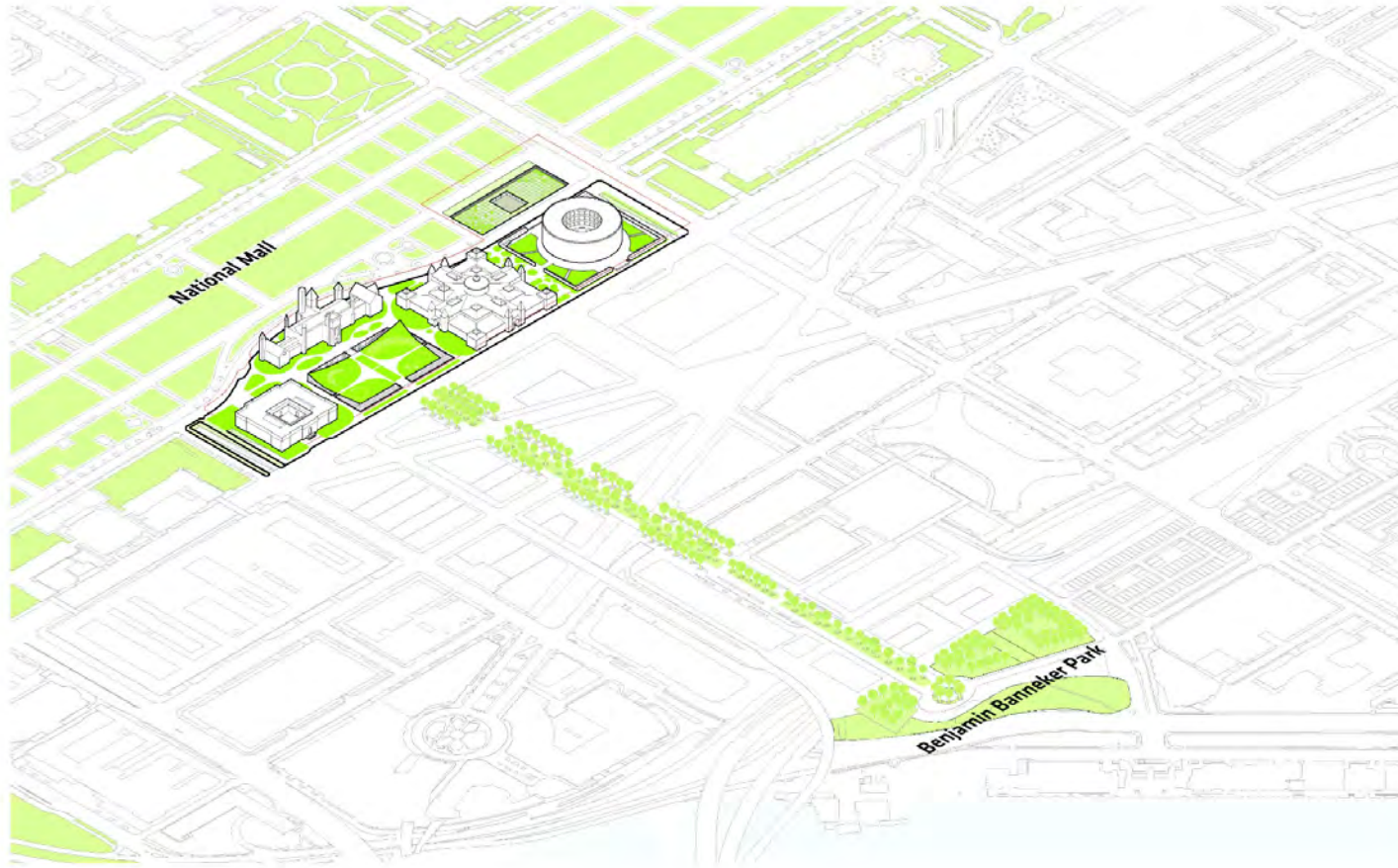








## PUBLIC REALM AND VIEWSHEDS SOUTH MALL CAMPUS AND SW ECDISTRICT



**PUBLIC REALM AND VIEWSHEDS**  
EXISTING VIEW FROM INDEPENDENCE AVE

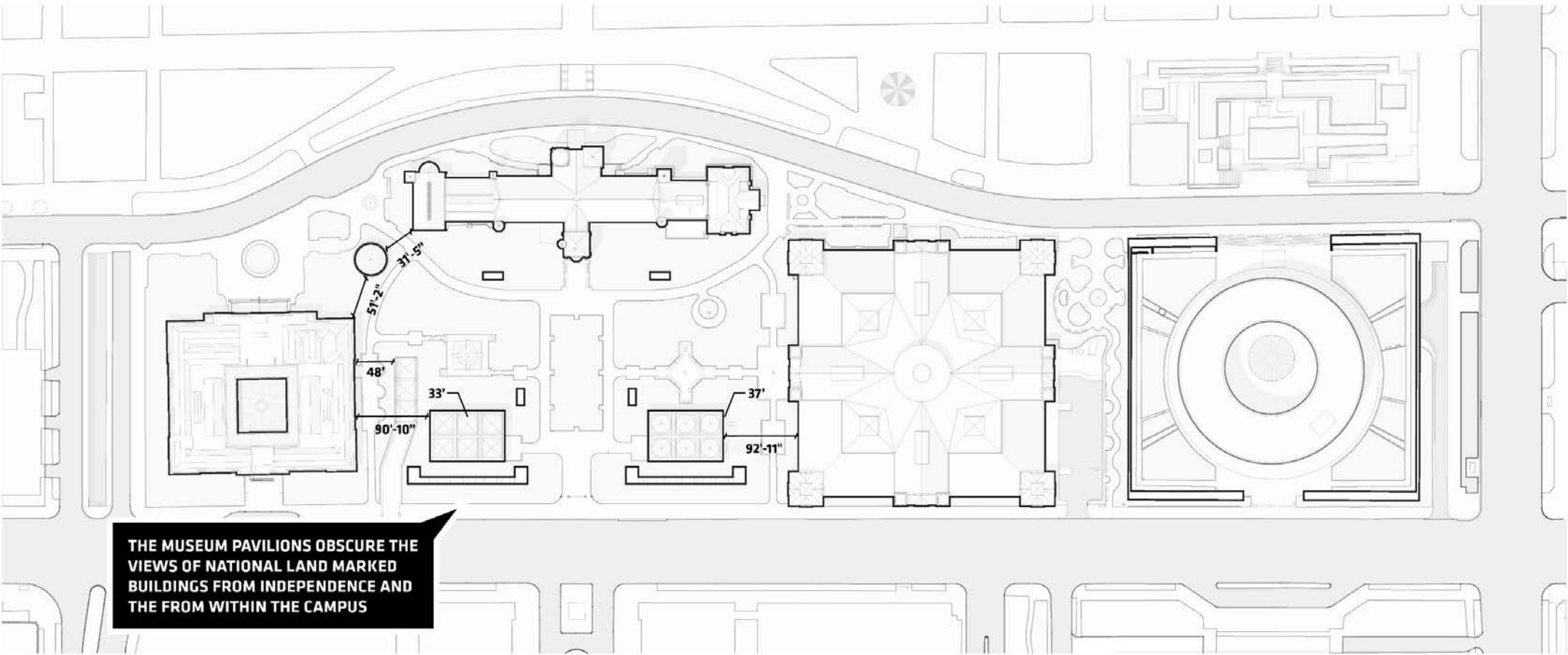








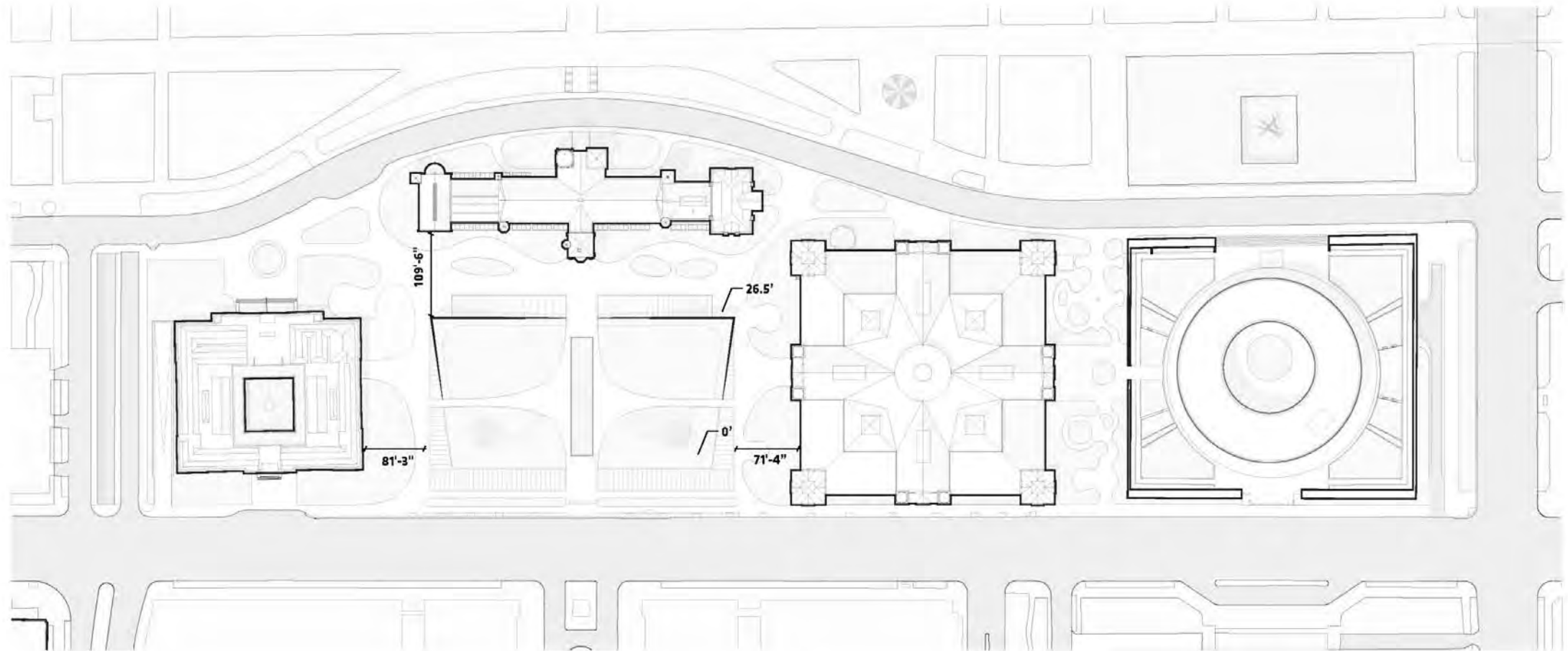
## PUBLIC REALM AND VIEWSHEDS DISTANCES BETWEEN PAVILIONS AND HISTORIC FACADES



EXISTING

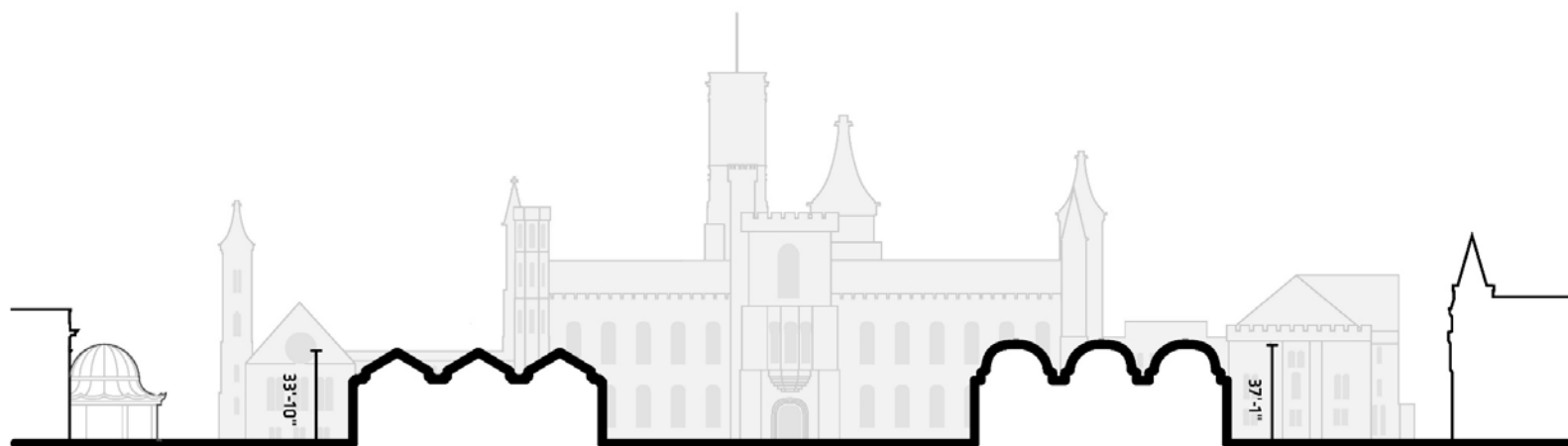


## PUBLIC REALM AND VIEWSHEDS DISTANCES BETWEEN PAVILIONS AND HISTORIC FACADES



**PROPOSED**

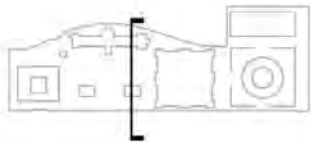
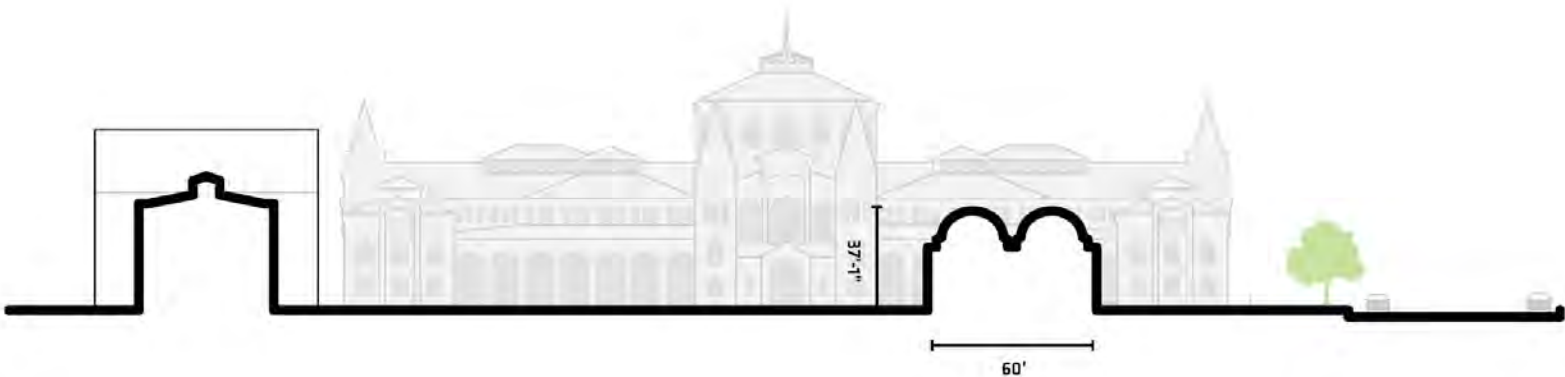
## PUBLIC REALM AND VIEWSHEDS PAVILIONS AND HISTORIC FACADES - CASTLE



EXISTING

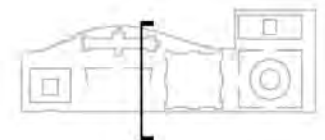
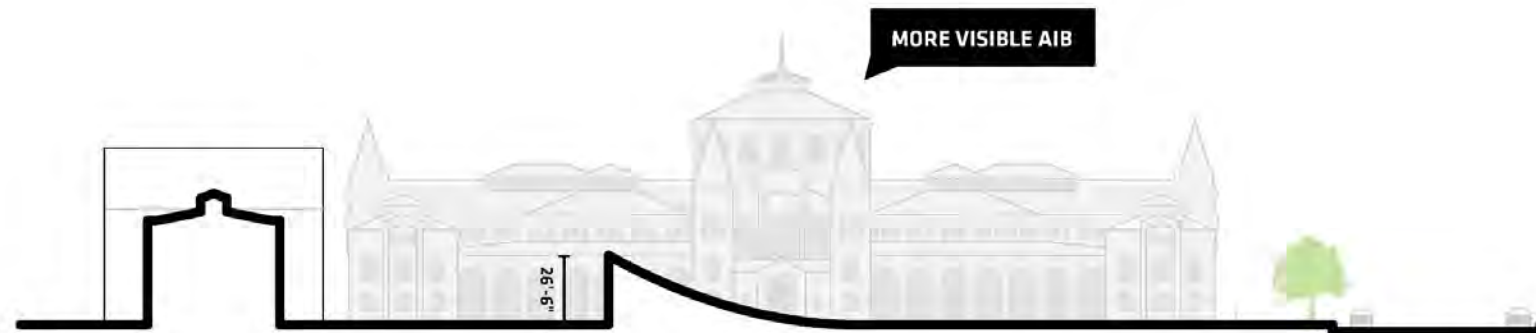


PUBLIC REALM AND VIEWSHEDS  
PAVILIONS AND HISTORIC FACADES - AIB



EXISTING

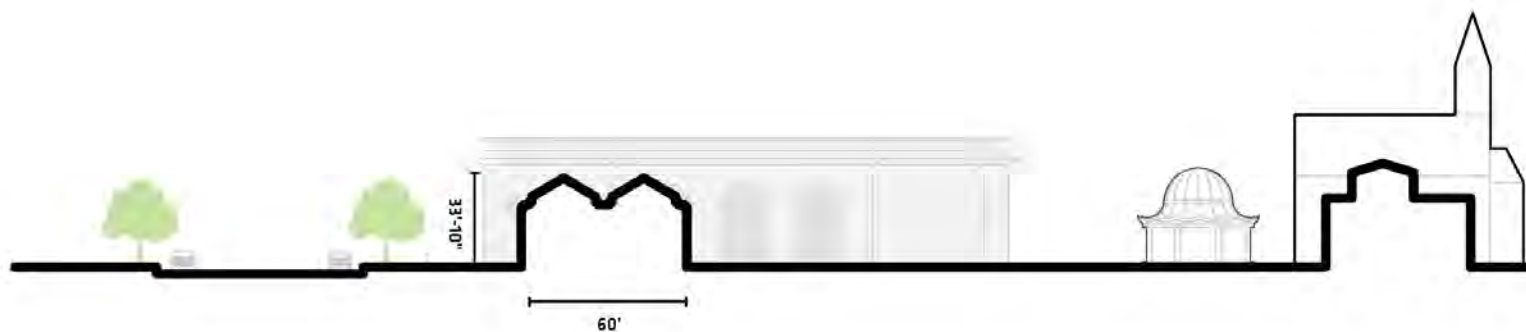
PUBLIC REALM AND VIEWSHEDS  
PAVILIONS AND HISTORIC FACADES - AIB



PROPOSED

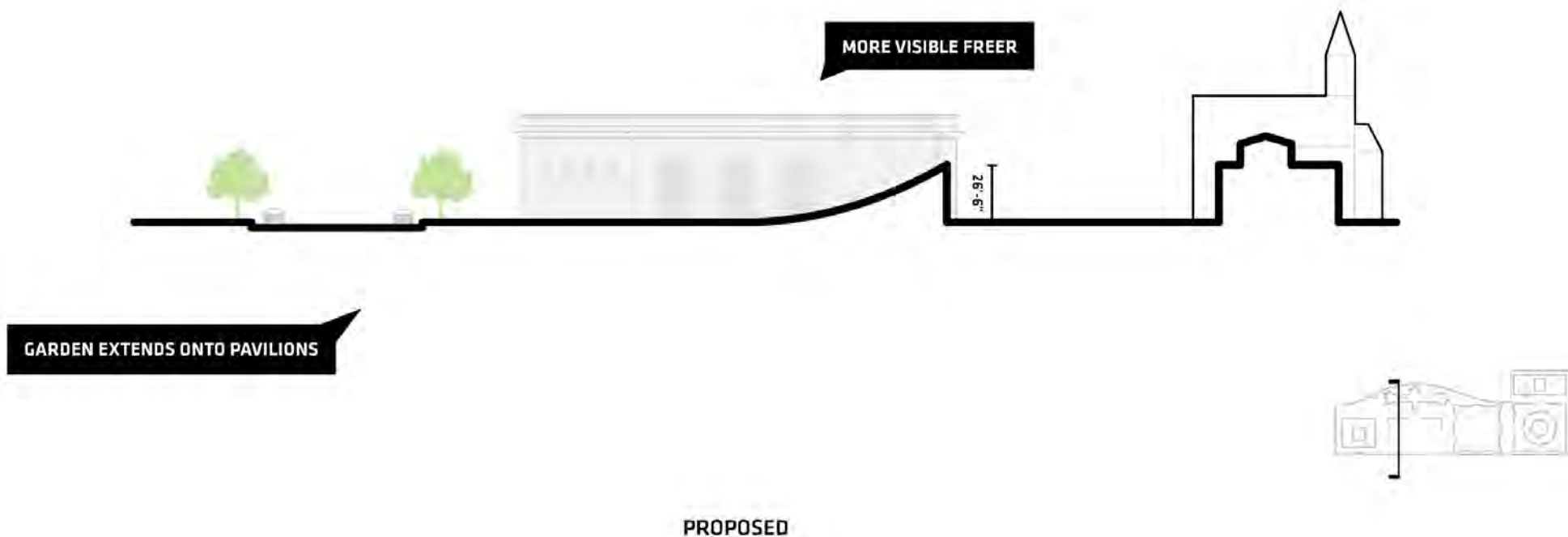


**PUBLIC REALM AND VIEWSHEDS**  
**PAVILIONS AND HISTORIC FACADES - FREER**



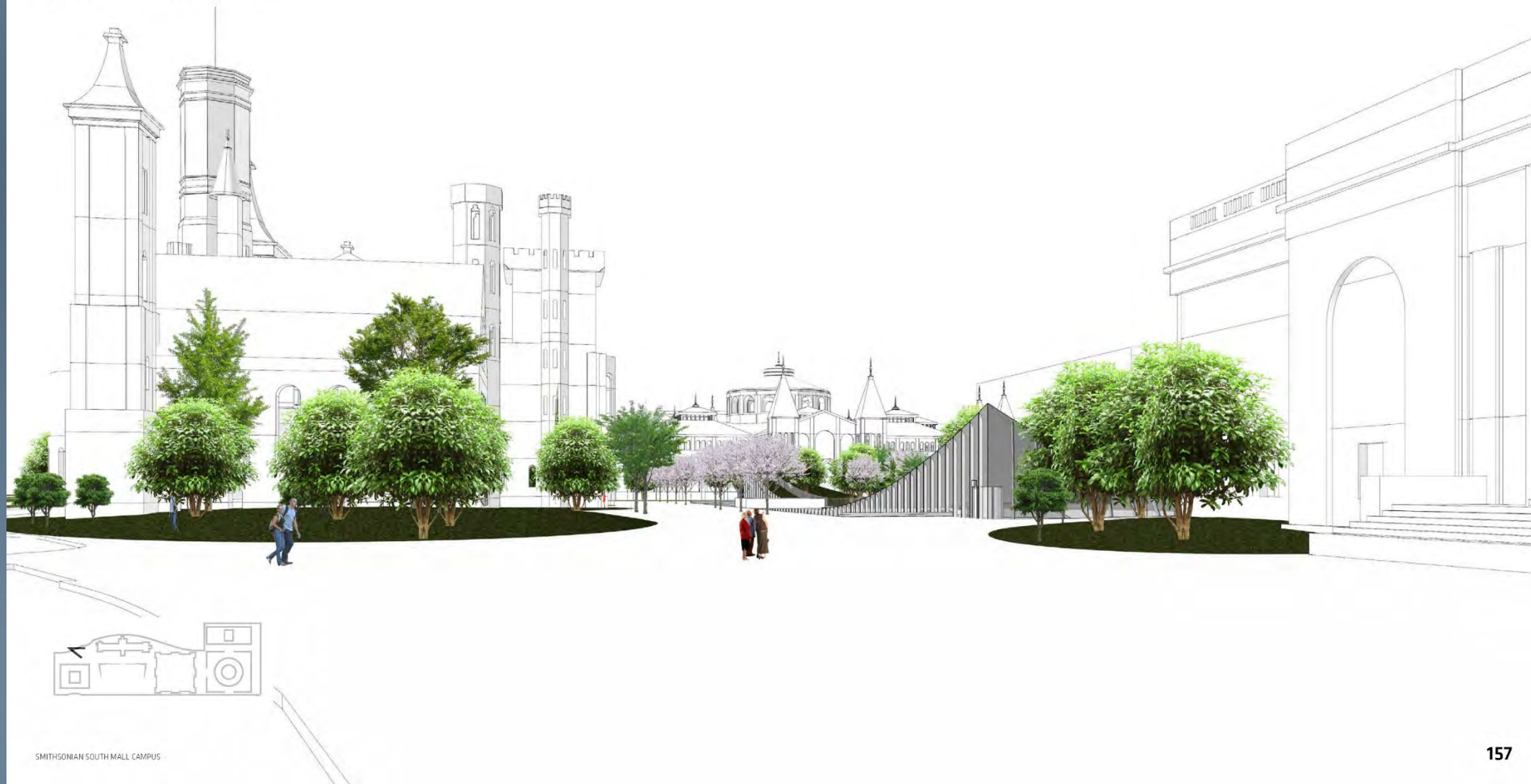
EXISTING

PUBLIC REALM AND VIEWSHEDS  
PAVILIONS AND HISTORIC FACADES - FREER





**MASTER PLAN DEVELOPMENT**  
ALTERNATIVE F - VIEWSHED A



**MASTER PLAN DEVELOPMENT**  
ALTERNATIVE F - VIEWSHED B

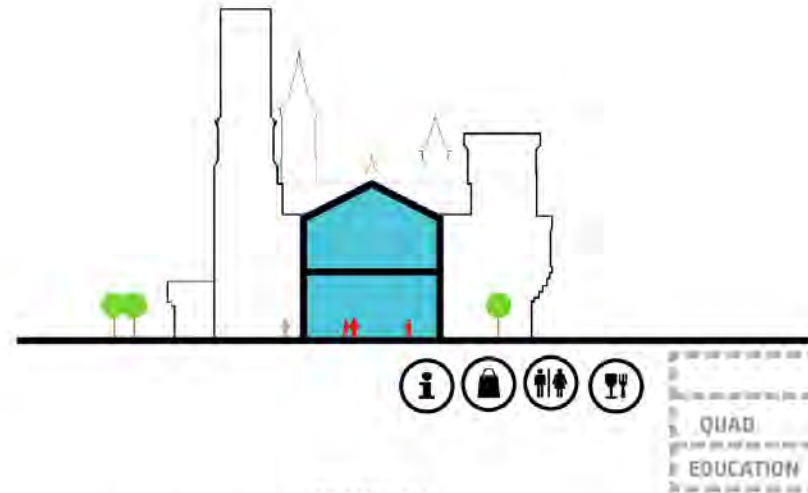




**MASTER PLAN DEVELOPMENT**  
ALTERNATIVE F - VIEWSHED C



## CASTLE RESTORATION GREAT HALL



### GREAT HALL

The master plan allows for the relocation of the gift shop, cafe, and restrooms, to the basement level, allowing the Great Hall to be restored and returned to exhibition space as part of the Visitor Center.

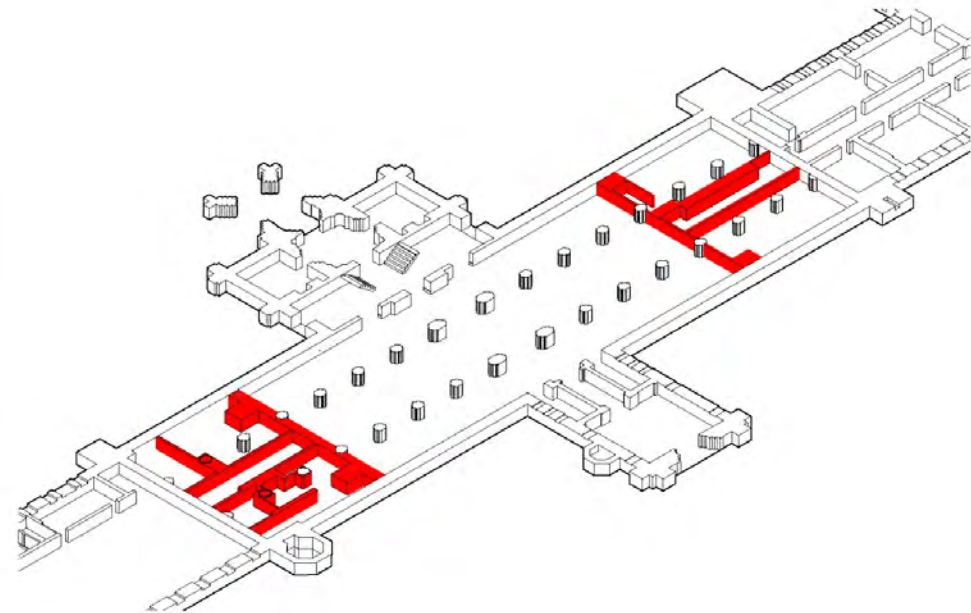


## CASTLE RESTORATION GREAT HALL



### EXISTING

Great Hall has been subdivided to house visitor amenities: shops, food service, and restrooms, diminishing the presence of the space.



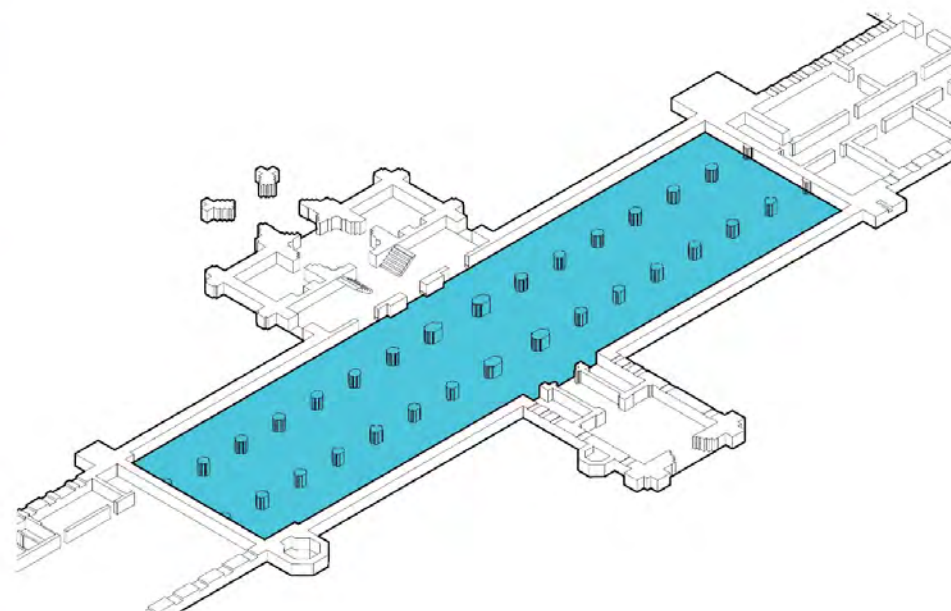
### PARTITIONS REMOVED

Partitions built after the period of historic significance to be removed restoring the Great Hall to its original size.

## CASTLE RESTORATION GREAT HALL



**PERIOD OF SIGNIFICANCE**  
Great Hall hosted exhibitions and featured double height space.



**GREAT HALL SIZE RESTORED**  
The more intrusive element and clutter of the current program including visitor restrooms, cafe, kitchen, and retail store can be relocated to allow the Great Hall to function for visitor orientation and welcoming, Smithsonian history exhibits and special events.





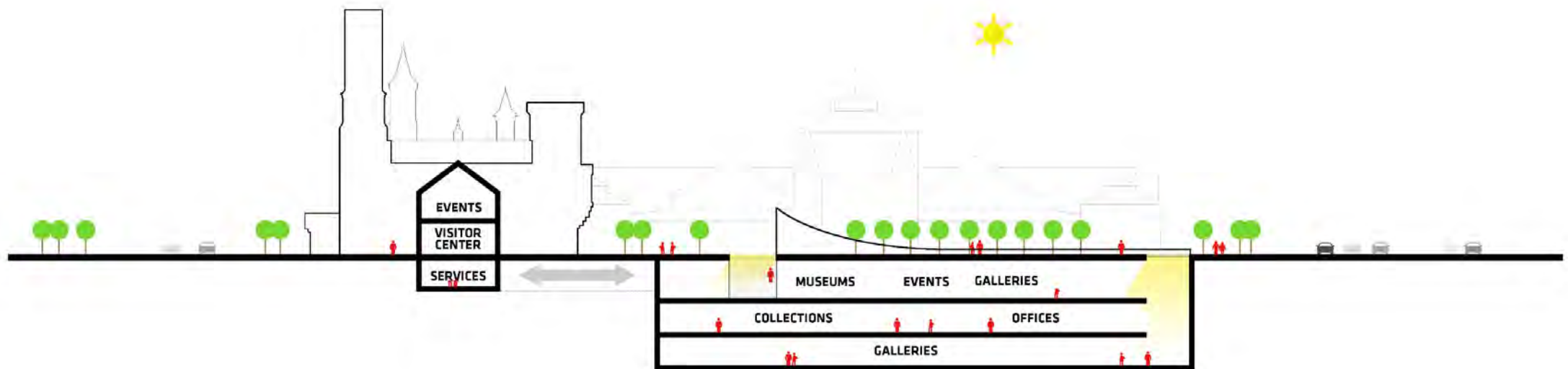


CASTLE RESTORATION  
GREAT HALL RESTORED AND EXPANDED

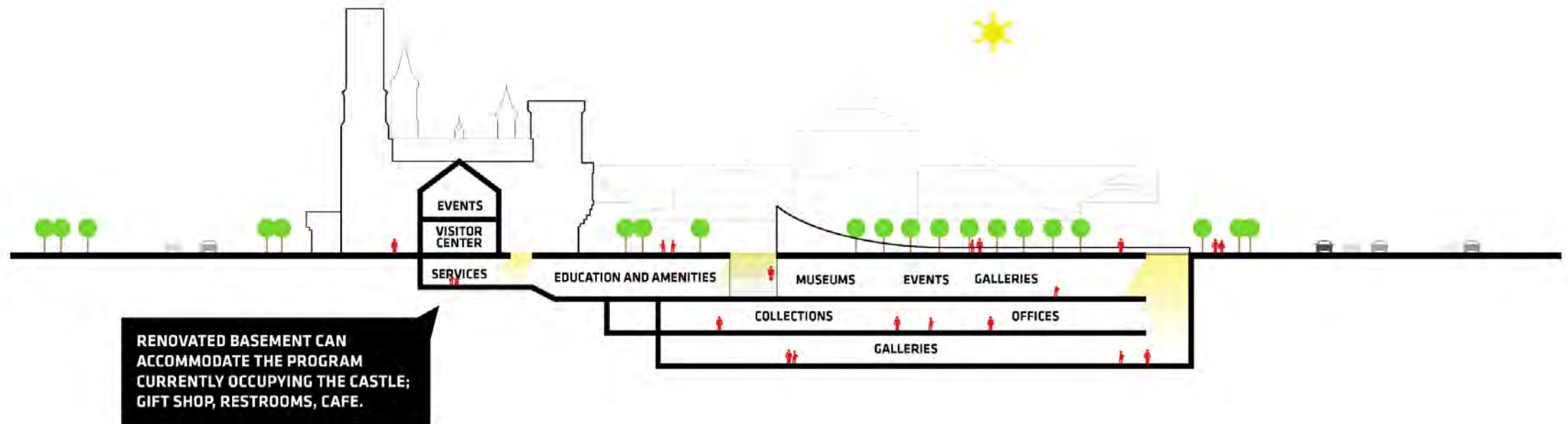




## CASTLE BASEMENT AND QUAD BASEMENT RENOVATION



## CASTLE BASEMENT AND QUAD DAYLIGHT AND ACCESS





## CASTLE BASEMENT AND QUAD DAYLIGHT AND ACCESS





CASTLE BASEMENT AND QUAD  
EDUCATION AND AMENITIES

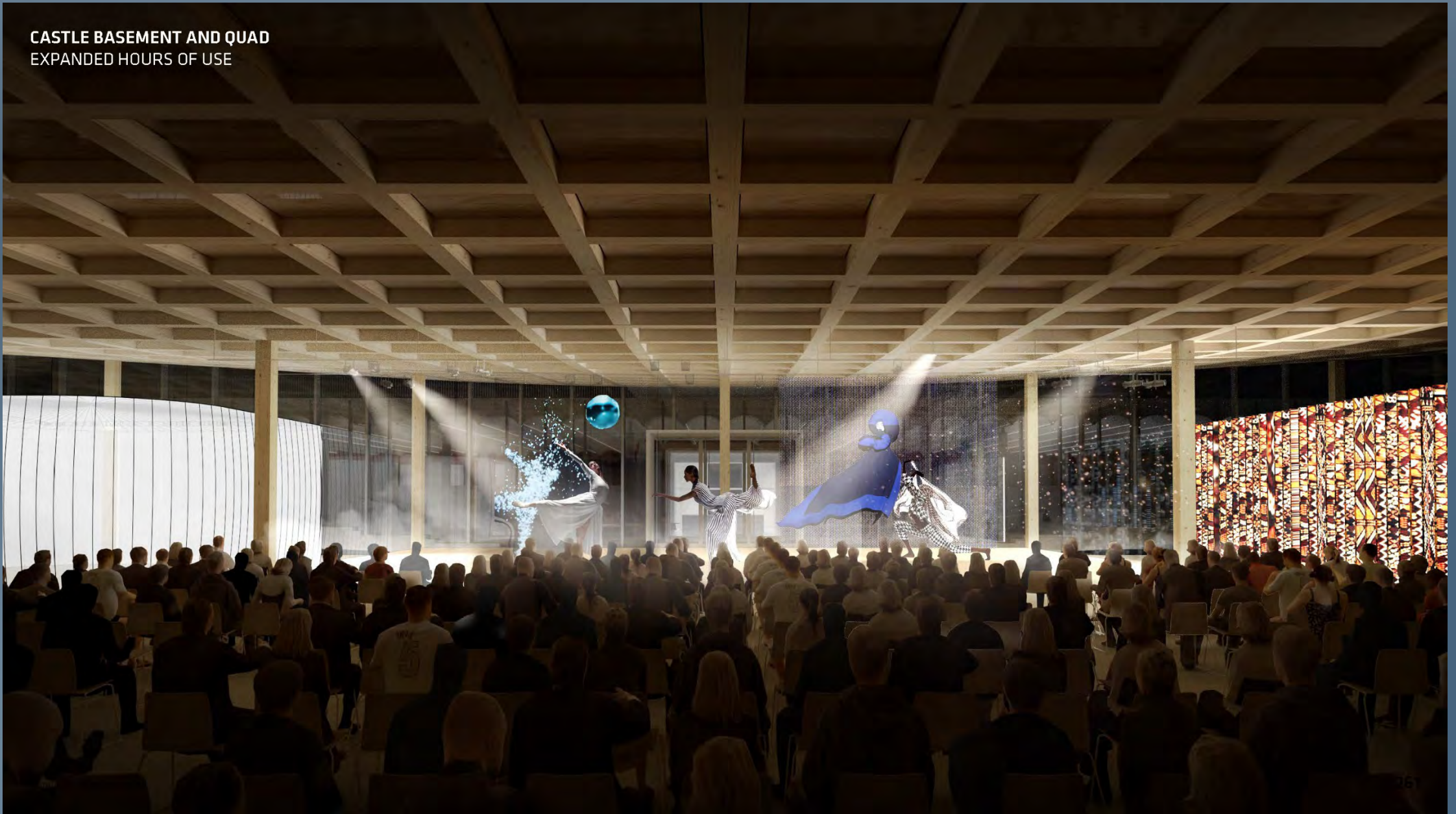






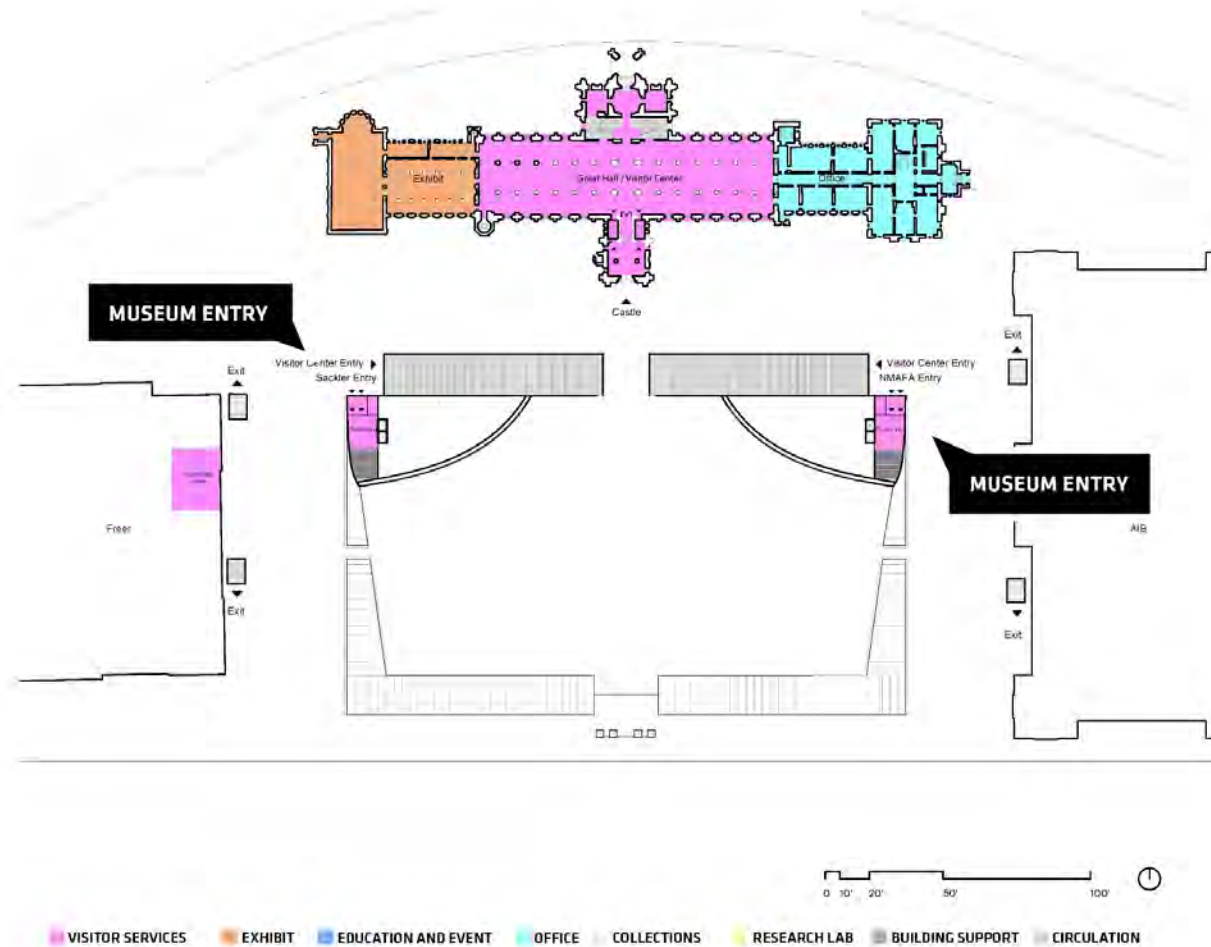


CASTLE BASEMENT AND QUAD  
EXPANDED HOURS OF USE



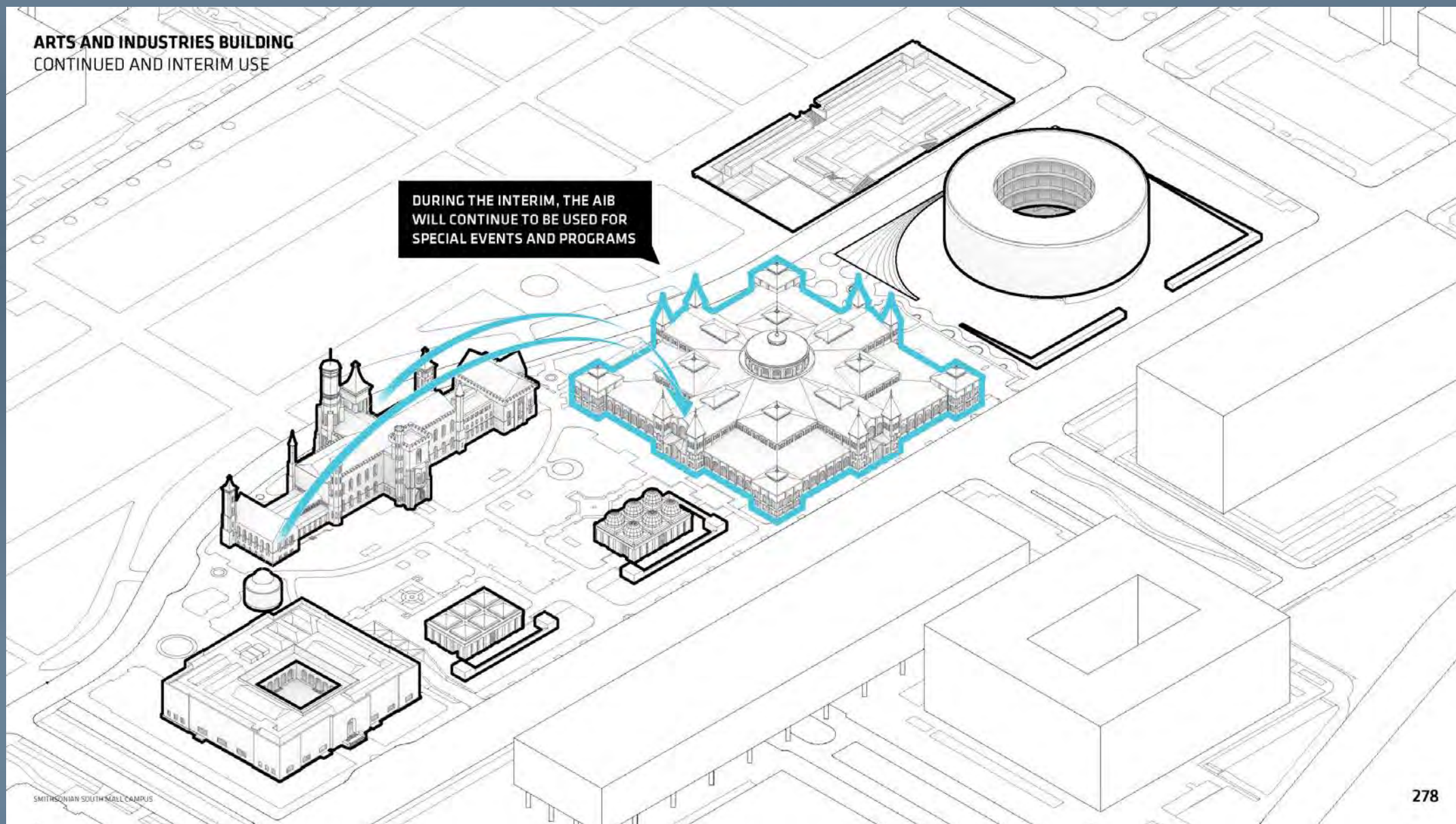


## CASTLE BASEMENT AND QUAD CONCEPT GROUND FLOOR



### BENEFITS:

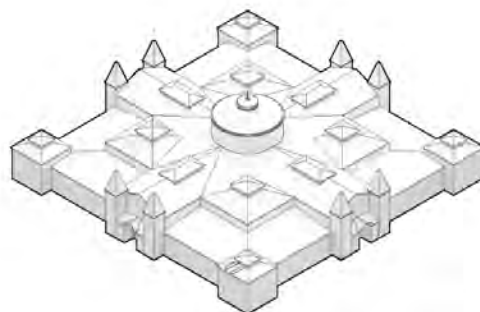
- Great Hall restored
- Museum Entries are more identifiable
- Visitor Center entry is near museum entries
- Quadrangle roof replaced
- Accessible Freer entrance



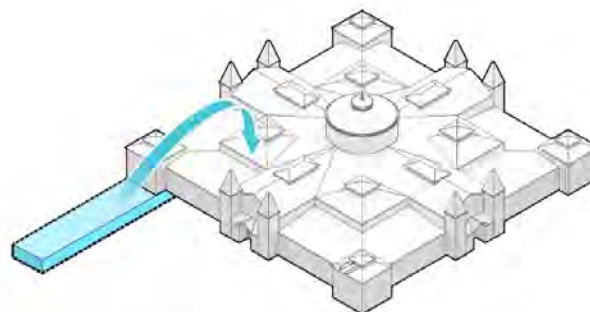


## ARTS AND INDUSTRIES BUILDING CONTINUED AND INTERIM USE

A FULL EXTERIOR RENOVATION OF THE  
AIB HAS ALREADY BEEN COMPLETED



BELOW GRADE ACCESS TO AIB  
FOR STAFF AND LOADING



THE AIB WILL HAVE ROBUST, EFFICIENT  
BUILDING SYSTEMS TO SUPPORT  
PUBLIC PROGRAMS



## ARTS AND INDUSTRIES BUILDING CONTINUED AND INTERIM USE

ADOLF CLUSS AND PAUL  
SCHULZE ORIGINAL  
DESIGN CONCEPT- 1878



SMITHSONIAN FOLKLIFE  
FESTIVAL - 2015



SMITHSONIAN LONG  
CONVERSATION EVENT - 2017





## ARTS AND INDUSTRIES BUILDING CONTINUED AND INTERIM USE

WITH A COMBINED EXTERIOR AND INTERIOR RESTORATION AND RENOVATION, THE AIB WILL BE ABLE TO HOST A WIDE VARIETY OF INSTITUTIONS AND PROGRAMS

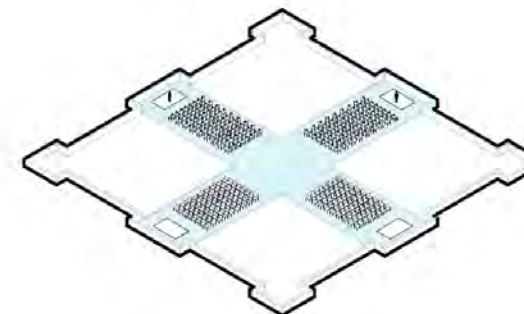
### FESTIVALS



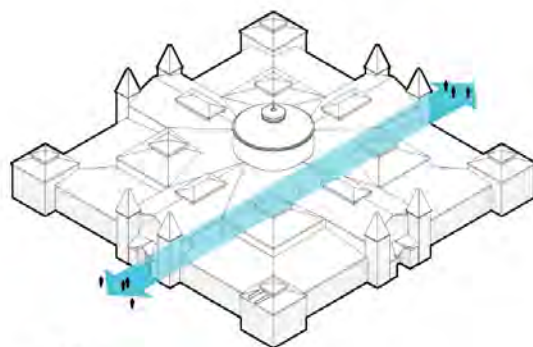
### SPECIAL EVENTS



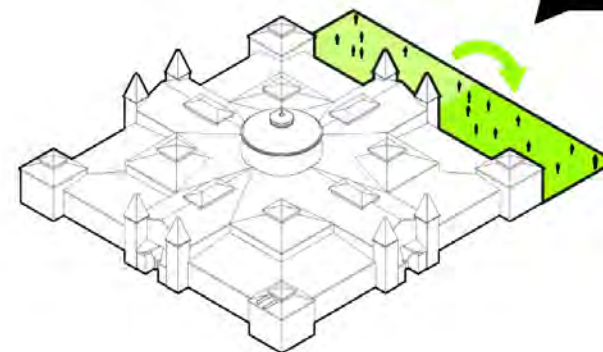
### LECTURES



## ARTS AND INDUSTRIES BUILDING CONTINUED AND INTERIM USE



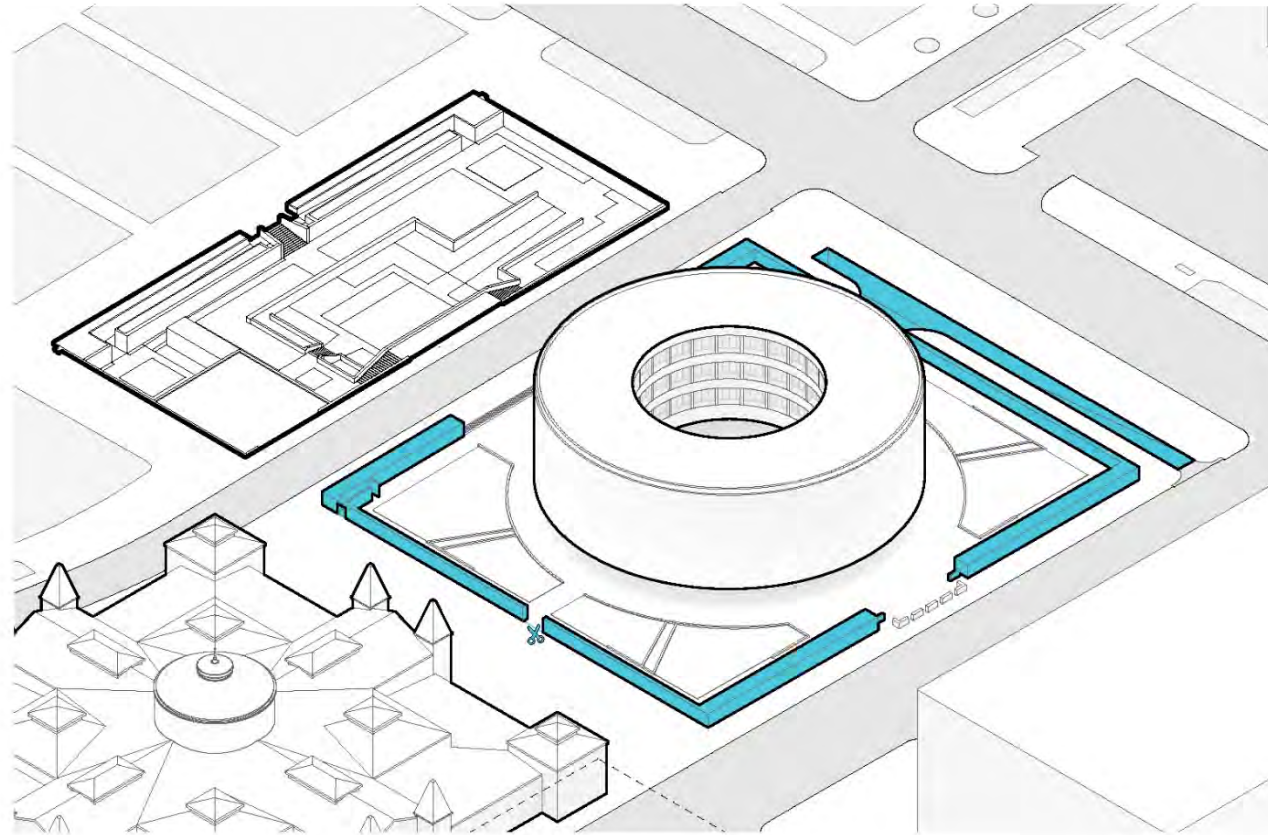
EAST WEST CAMPUS CONNECTION



GARDEN EXPANSION



## HIRSHHORN MUSEUM AND SCULPTURE GARDEN HIRSHHORN WALLS AND LOADING





**HIRSHHORN MUSEUM AND SCULPTURE GARDEN**  
HIRSHHORN WEST PLAZA WALL



SMITHSONIAN INSTITUTION

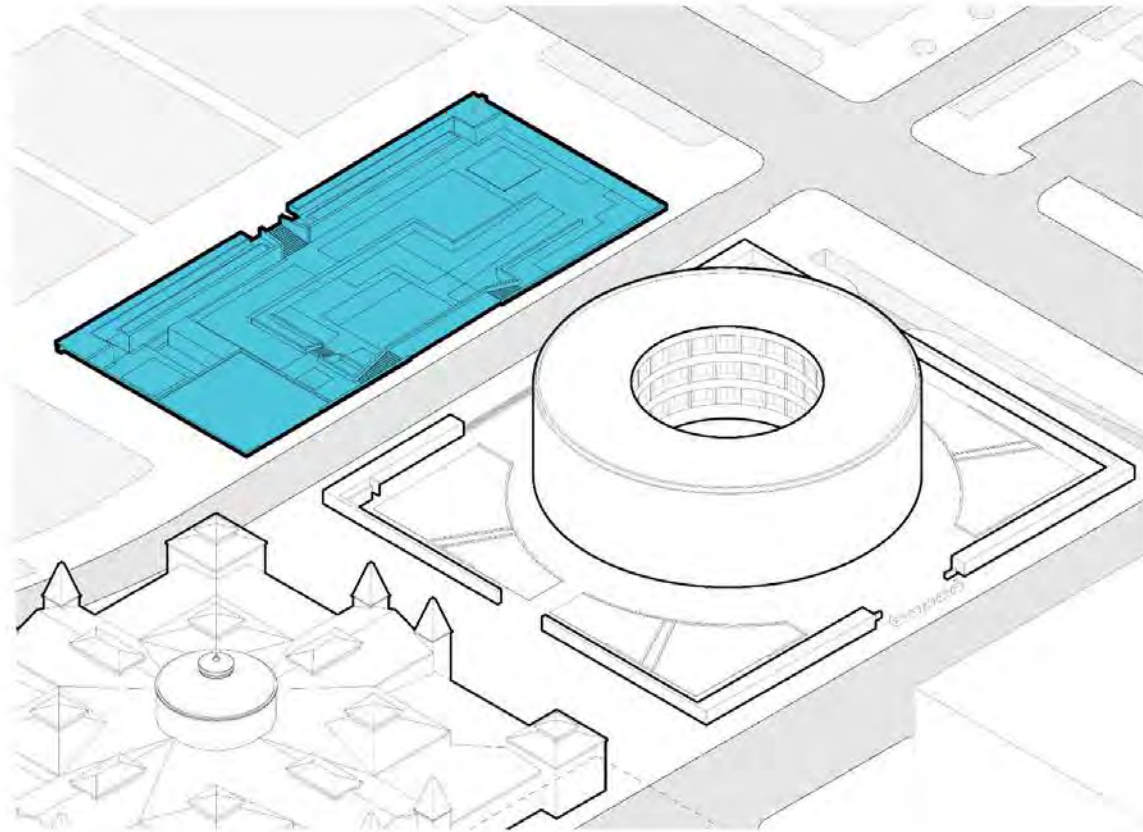


## HIRSHHORN MUSEUM AND SCULPTURE GARDEN HIRSHHORN CONNECTION TO CAMPUS



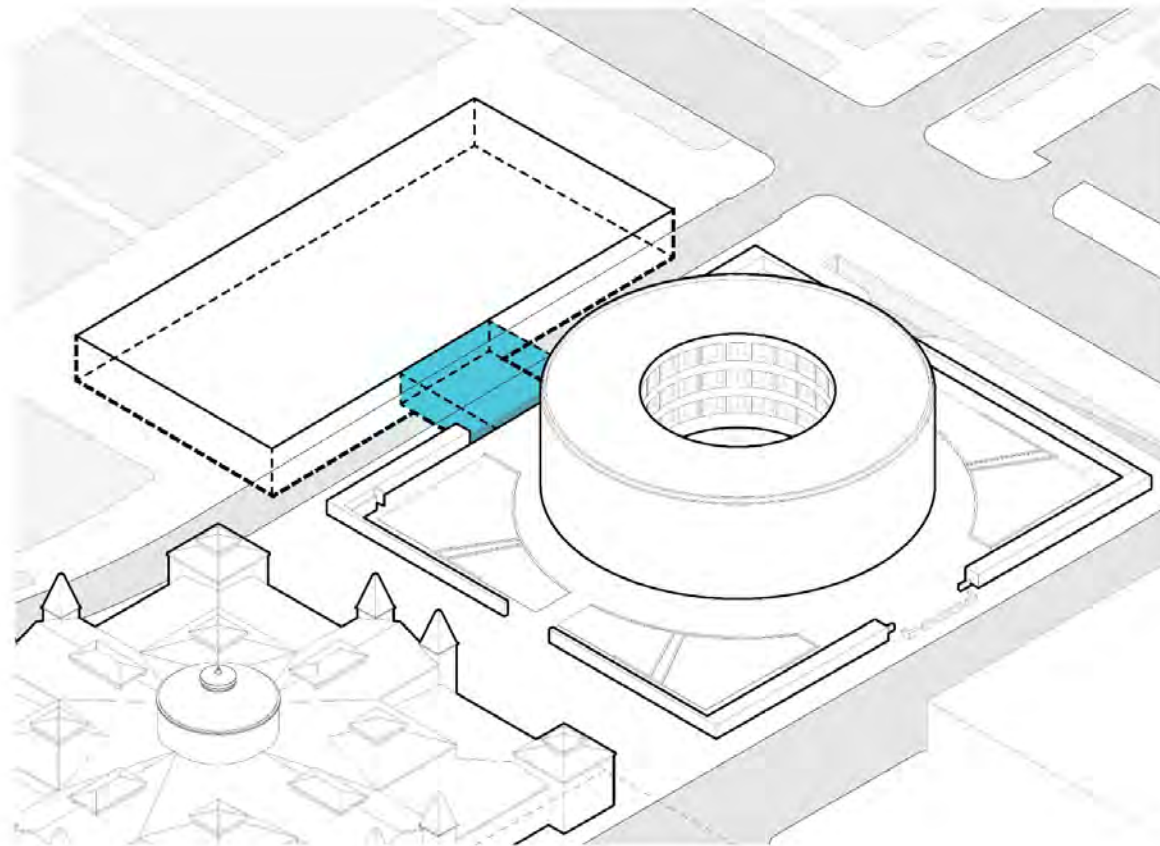
## HIRSHHORN MUSEUM AND SCULPTURE GARDEN

EXISTING HIRSHHORN SCULPTURE GARDEN

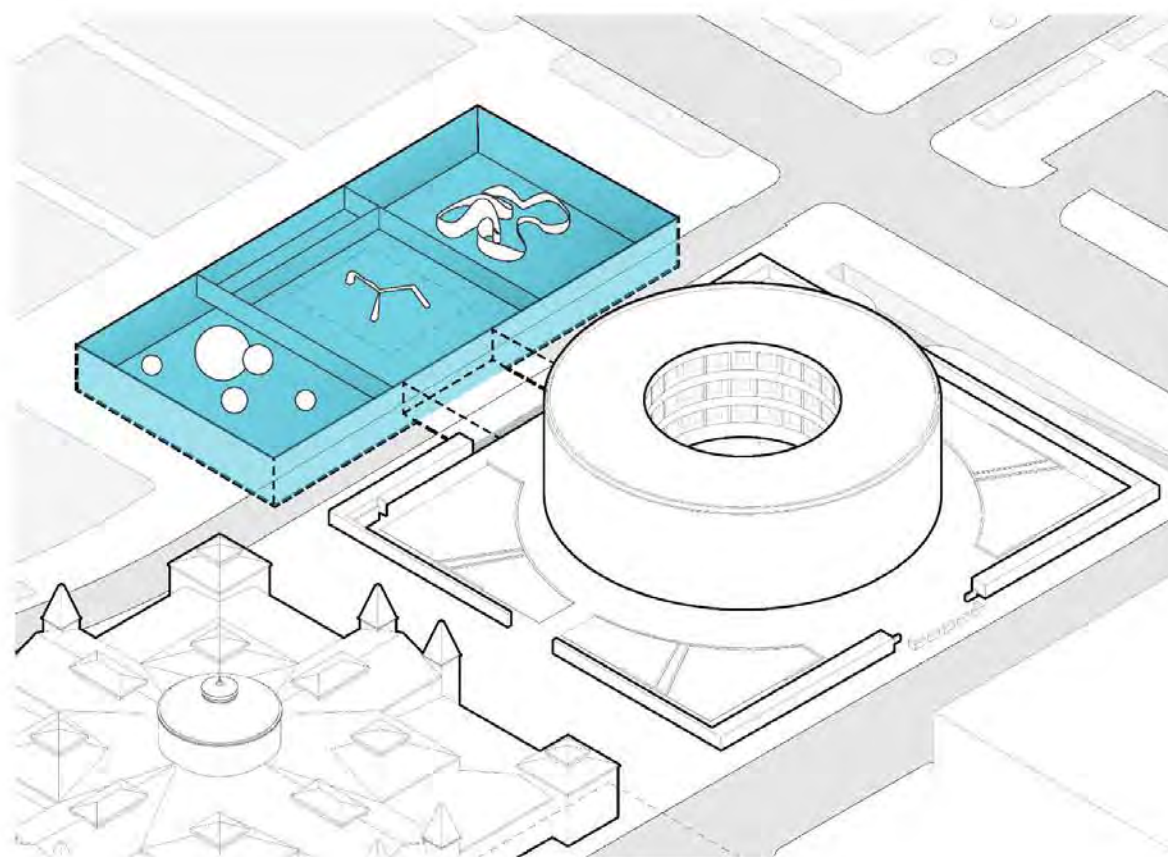




## HIRSHHORN MUSEUM AND SCULPTURE GARDEN RE-OPEN AND EXPAND TUNNEL

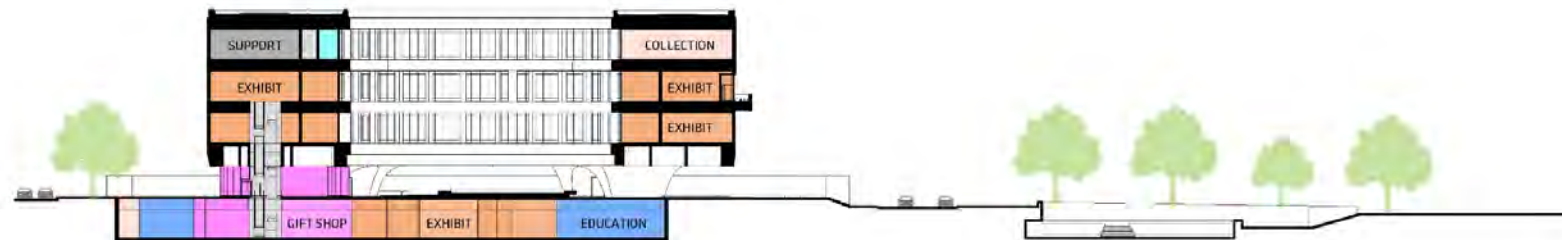


## HIRSHHORN MUSEUM AND SCULPTURE GARDEN LARGE BELOW GRADE GALLERY





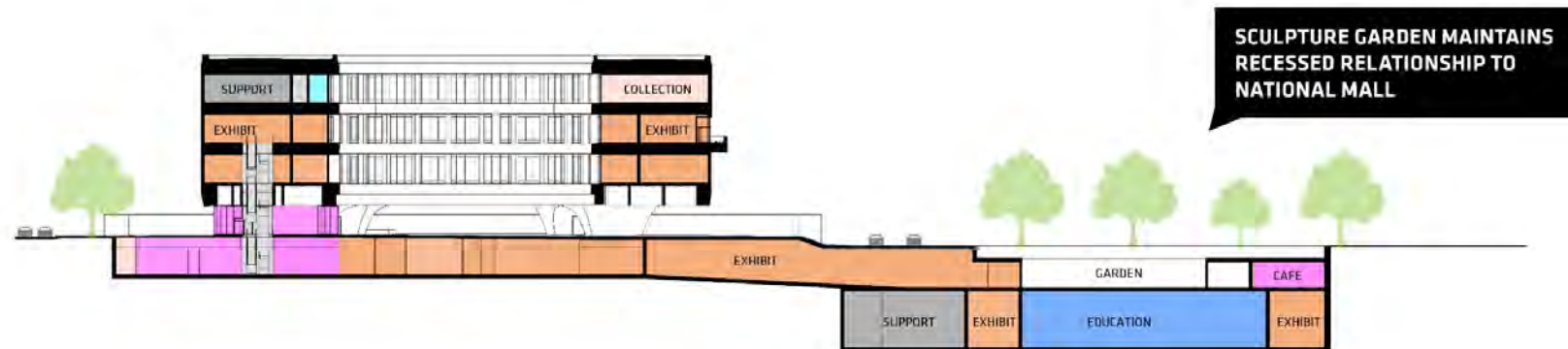
## HIRSHHORN MUSEUM AND SCULPTURE GARDEN HIRSHHORN SCULPTURE GALLERY EXISTING SECTION



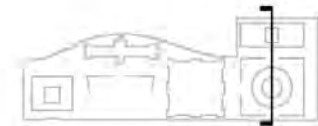
■ VISITOR SERVICES  
 ■ EXHIBIT  
 ■ EDUCATION AND EVENT  
 ■ OFFICE  
 ■ COLLECTIONS  
 ■ RESEARCH LAB  
 ■ BUILDING SUPPORT  
 ■ CIRCULATION



## HIRSHHORN MUSEUM AND SCULPTURE GARDEN HIRSHHORN SCULPTURE GALLERY PROPOSED SECTION

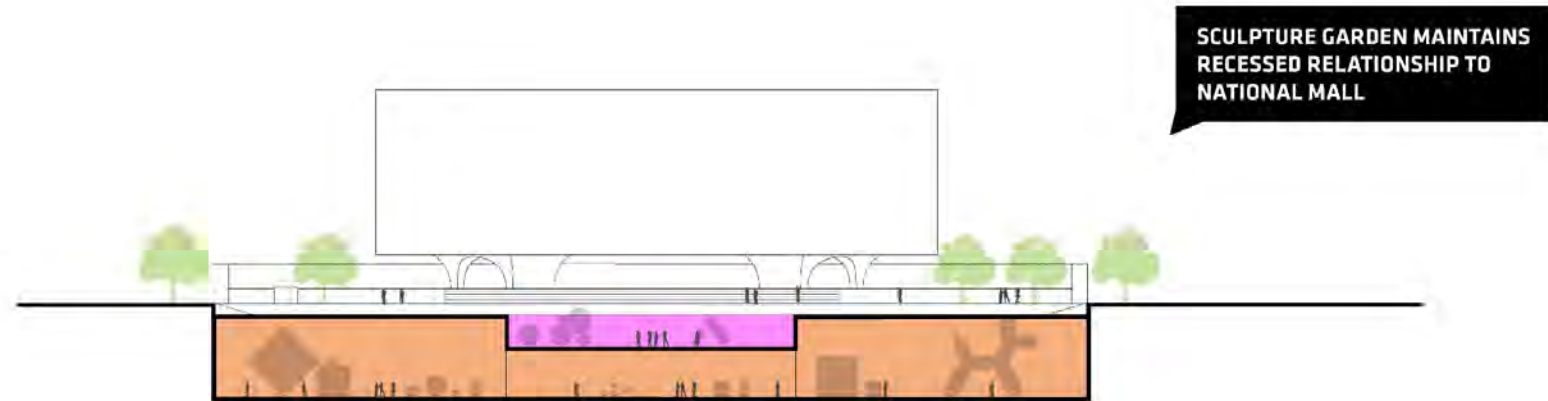


VISITOR SERVICES EXHIBIT EDUCATION AND EVENT OFFICE COLLECTIONS RESEARCH LAB BUILDING SUPPORT CIRCULATION





## HIRSHHORN MUSEUM AND SCULPTURE GARDEN HIRSHHORN SCULPTURE GALLERY



■ VISITOR SERVICES
 ■ EXHIBIT
 ■ EDUCATION AND EVENT
 ■ OFFICE
 ■ COLLECTIONS
 ■ RESEARCH LAB
 ■ BUILDING SUPPORT
 ■ CIRCULATION











HIRSHHORN MUSEUM AND SCULPTURE GARDEN  
BELOW GRADE LARGE GALLERY





## STREETSCAPE AND LANDSCAPE PLAN EXISTING GARDEN CHARACTER



### SEASONAL AND DIVERSE

Changing horticultural displays and diverse plantings provide interest at all times of year.



### SMALL-SCALE AND INTIMATE

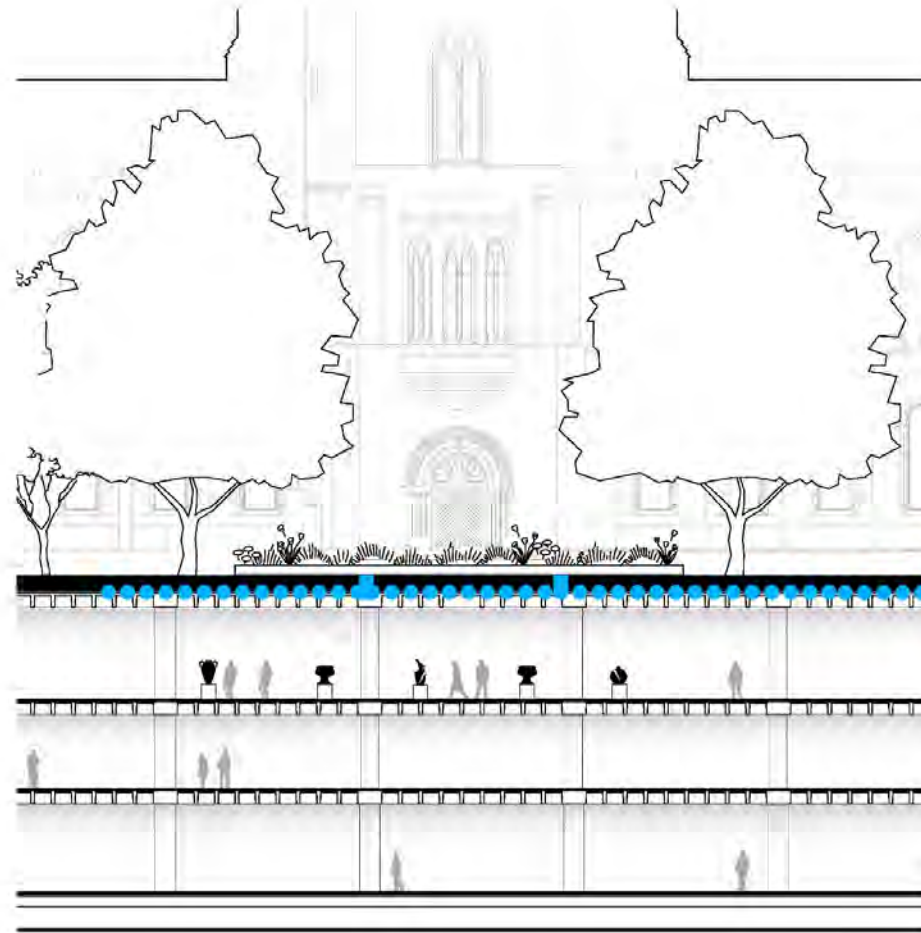
Small gardens provide shaded areas for rest and contemplation.



### EDUCATIONAL

Educational gardens provide link to museums and support Smithsonian mission.

## STREETSCAPE AND LANDSCAPE PLAN HAUPT GARDEN AND QUAD ROOF



THE QUADRANGLE ROOF MEMBRANE HAS REACHED THE END OF ITS USEFUL LIFE AND REQUIRES A COMPLETE REPLACEMENT TO PROTECT THE COLLECTIONS AND EQUIPMENT HOUSED BELOW.

SACKLER / NMAfA  
MUSEUMS



## STREETSCAPE AND LANDSCAPE PLAN HAUPT GARDEN AND QUAD ROOF



TEMPORARY PIECEMEAL SOLUTIONS  
HAVE BEEN PUT IN PLACE, HOWEVER, THE  
ENTIRE ROOF MUST BE REPLACED FROM  
ABOVE TO ENSURE THE PROTECTION OF  
VALUABLE ART AND ARTIFACTS BELOW

DRIP PANS INSTALLED TO  
CAPTURE LEAKING WATER  
FROM QUADRANGLE ROOF

## STREETSCAPE AND LANDSCAPE PLAN EXISTING





## STREETSCAPE AND LANDSCAPE PLAN ALTERNATIVE F GARDENS





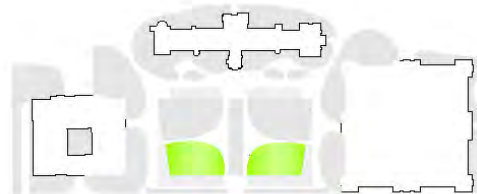
## STREETSCAPE AND LANDSCAPE PLAN PARTERRE



SMITHSONIAN SOUTH MALL CAMPUS



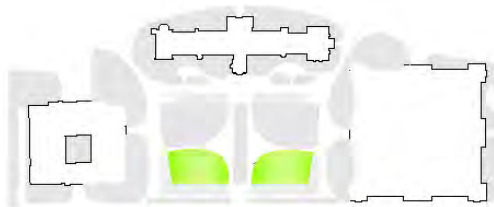
## STREETSCAPE AND LANDSCAPE PLAN SMALL-SCALE GARDENS



SMITHSONIAN SOUTH MALL CAMPUS



## STREETSCAPE AND LANDSCAPE PLAN SMALL-SCALE GARDENS





## STREETSCAPE AND LANDSCAPE PLAN INFORMAL GATHERING



SMITHSONIAN SOUTH MALL CAMPUS



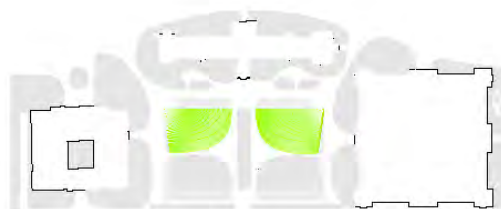
## STREETSCAPE AND LANDSCAPE PLAN INFORMAL GATHERING



SMITHSONIAN SOUTH MALL CAMPUS



## STREETSCAPE AND LANDSCAPE PLAN TERRACED GARDEN





## STREETSCAPE AND LANDSCAPE PLAN CIRCULATION



SMITHSONIAN SOUTH MALL CAMPUS



## STREETSCAPE AND LANDSCAPE PLAN EDGE GARDENS









STREETSCAPE AND LANDSCAPE PLAN  
ALTERNATIVE F GARDENS





STREETSCAPE AND LANDSCAPE PLAN  
ALTERNATIVE F GARDENS





**STREETSCAPE AND LANDSCAPE PLAN  
ALTERNATIVE F GARDENS**





## PERIMETER SECURITY PLAN MASTER PLAN CONCEPT





## PERIMETER SECURITY PLAN CONCRETE KNEE WALL WITH SOIL BERM

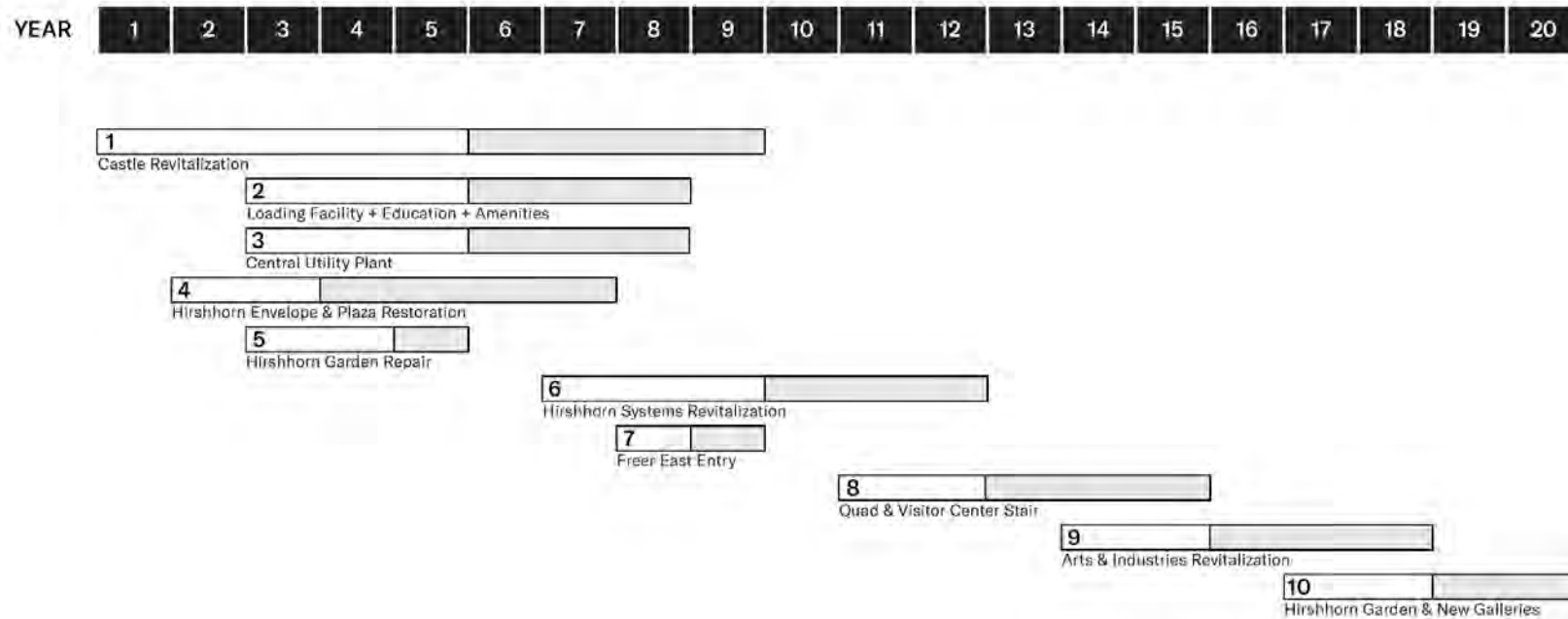


## PERIMETER SECURITY PLAN HARDENED SECURITY BENCH





## PHASING AND IMPLEMENTATION PLAN PHASING PLAN





2711 Jefferson Davis Highway  
Arlington, VA 22202  
703 253-9800  
703 413-8833 Fax

[www.hoffarch.com](http://www.hoffarch.com)

29 March 2018

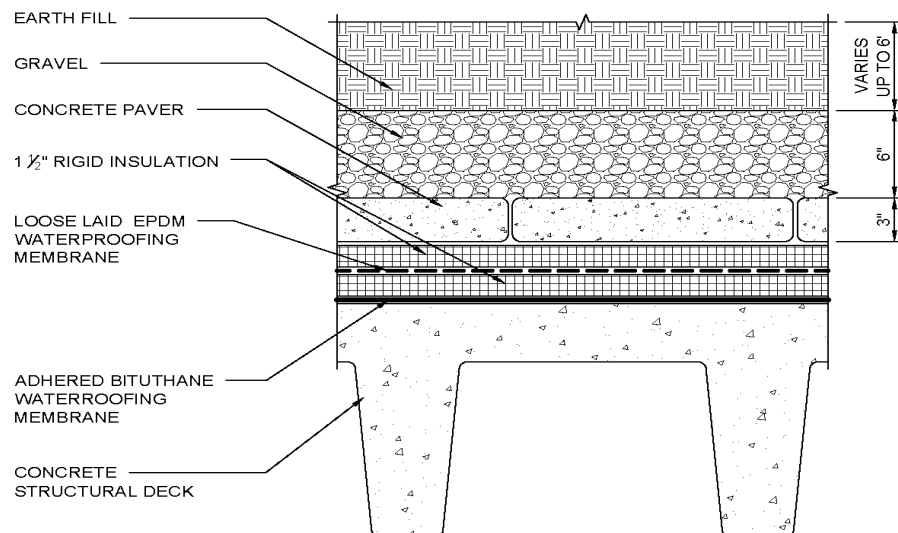
Mr. Brian Grove  
Senior Project Manager  
**Lend Lease Corporation**  
7315 Wisconsin Ave., 14<sup>th</sup> Floor W  
Bethesda, MD 20814  
VIA EMAIL: [brian.grove@lendlease.com](mailto:brian.grove@lendlease.com)

Re: 218019 - Roofing Expert Consultation  
**Smithsonian Institution Quadrangle Complex (the "Quad") –  
Washington, DC**

Dear Mr. Grove:

In reference to repairs/replacement of the Quad complex roof, I offer the following:

Completed in 1987 by the General Services Administration, the Quad Complex is a subgrade building comprising the Arthur W. Sackler Gallery, the National Museum of African Art and the S. Dillon Ripley Center. The Quad Complex has a footprint of approximately 129,000 square feet of which the roof is the substrate on which the Haupt Garden is built. The roof assembly is: the structural concrete roof slab; a rubberized asphalt waterproofing membrane adhered to the concrete; rigid insulation board; a loose laid ethylene propylene dien monomer (EPDM) sheet membrane; rigid insulation board; concrete pavers; a gravel drainage layer; and, earth overburden of 4-6 feet in depth.



**Figure 1**





Brian Grove  
29 March 2018

Page 2

Leaks within the spaces below have been recorded and addressed since as early as 1997, and the leaks have occurred in numerous isolated locations that encompass approximately  $\frac{3}{4}$  of the Complex's footprint.

Within the waterproofing industry, the typical and preferred practice of waterproofing is to provide positive-side waterproofing; this is the most effective means for preventing water intrusion. That is why all buildings have roofing membranes and foundation walls are waterproofed on the outside surface. The Quad's deck is the roof and the roofing membrane system is installed on its exterior surface. The exterior waterproofing system on the Quad protects the occupants of the building as well as the materials inside, and the structure on which it is installed. If a below-grade reinforced concrete structure were not waterproofed, moisture would migrate into the concrete, cause the concrete matrix to break down and deteriorate, expose the steel reinforcing to the moisture which will in-turn cause it to rust and deteriorate. The structure would continue to deteriorate until it is no longer sound.

Currently the 31-year-old Quad roof has failed and is allowing water to seep through its structure and into the interior spaces. Water intrusion into any interior space is not desirable, but intrusion into a museum or art gallery space is completely unacceptable. The failed roofing system allows water to seep through the EPDM membrane and saturate/fill the insulation layer between the two membranes with water. The water then travels laterally to a point where a breach in the rubberized asphalt membrane exists and then again to a location where a defect in the concrete deck such as a crack or penetration occurs and into the building. If the rubberized asphalt membrane is fully adhered to the concrete deck as intended, the defect through the deck would have to be nearby to allow water entry. If the rubberized asphalt membrane is no longer fully adhered as originally intended, the intruding water will travel laterally to an entry point in the concrete. Therefore, the entry point of water at the membrane may not be, and most likely is not near the point of entry into the building itself.

Where possible water will flow to any point where an inlet exists, and typically the point of least resistance.

In the written testimony of the National Capitol Planning Commission meeting of 4 January 2018, a comment was made that "leaking roofs below the Quad can be repaired from below. We need look no further than the remediation of the underground station ceilings now underway in Washington's Metro system". In my opinion as a waterproofing and building envelope expert with 31 years of experience, this is an incorrect statement. At the Quad, we are referring to a flat expansive roof deck; this below-grade building is in no way considered a tunnel. Tunnel ceilings are not flat, and the injection is performed to plug the hole for that specific leak through the concrete.



Brian Grove  
29 March 2018

Page 3

As we also see in the tunnels, that once one leak is plugged, the water travels to another point of intrusion which then needs to be plugged and so on. These are also considered temporary stop-gap repairs. Injection repairs are performed with precise placement of injection ports to place the injection grout at the source of the leak. The sources of the leaks at the quad are unknown.

If we apply the injection concept to the Quad roof, the injection would have to occur at every leak location. Knowingly that water will continue to flow across the deck to the next point of entry, those locations would then also have to be injected. The problem here is that the leak would have to first occur to find the next location for injection. This is a reactive response not a proactive solution. This is also an admission that the original waterproofing system has failed.

If the intent is to inject enough material to waterproof the entire deck one must understand that this blind-side waterproofing method cannot cover the entire surface of the Quad roof, voids will occur. The sheer weight of the overburden would not allow the injected material to flow any appreciable distance.

There is currently a water sandwich between the two membranes that will not dry out unless removed. Addressing the roofing from the interior would be considered a form of negative-side waterproofing. Negative-side waterproofing is attempted to prevent intrusion into the interior itself, but it does not address water seeping into the concrete deck. As discussed previously, water within the reinforced concrete deck will cause the concrete and reinforcing to deteriorate. The roof deck is the substrate on which the Haupt Garden is built upon.

It is our opinion that this roofing assembly represents a failed, unconventional approach and to provide a viable waterproof envelope for the buildings below, removals down to the deck are necessary.

The existing roofing membrane only protected the Quad for approximately 10-years over the 31 years since construction; new technologies in waterproofing available today (when this project occurs) will allow a new roofing assembly that can be designed and installed to last for much longer lifespan. Part and parcel repairs can address leaks as they occur, however, a new roofing system would resolve the problems that are now causing the leaks.





Brian Grove  
29 March 2018

Page 4

I thank you for allowing us to be a part of this very exciting project.  
Sincerely,

**Hoffmann Architects, Inc.**

Richard P. Kadlubowski, AIA  
Senior Vice President, Director of Architecture  
r.kadlubowski@hoffarch.com

RPK /rpk

P:/218019/corres/BG-SI Quadrangle 03292018.doc