Revitalization of the Historic Core (RoHC)
Revised Concept Review Submission
U.S. Commission of Fine Arts
17 February 2022
EYP-Loring LLC
SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE

PROJECT OVERVIEW  CFA COMMENTS

US Commission of Fine Arts  
Concept Review Comments June 17, 2021

Castle- Rooftop Mechanical Elements
- Interventions should not detract from the existing character of the buildings
- Concerns about the rooftop mechanical structures in the center part of the building - requested more detail about the design and visual impact

Castle- East Wing 4th Floor Egress
- Strongly questioned the design of the large connecting monitor structure on the roof of the East Range
- Suggested further study to minimize the size of the connector, possibly cladding it entirely in copper
- Possible alternate to find a location within the existing building to accommodate the necessary egress

Castle- Areaway Finish Treatment
- Requested further consideration of how the new areaway walls would be finished, both in the building yard and above the building’s new foundations

SIB- South Entrance Accessibility
- Noted that the ramps and landing on Independence Avenue would create an undesirable constrained condition in the public sidewalk - recommended refining the design to limit the impact on public space while creating a welcoming entrance
- Suggested that the composition of other elements - streetlights and trees - may help to make an appropriate frame for this entrance

Landscape- Integration of Interventions
- Requested further study of proposed redesign around both buildings, particularly integration of egress paths, access ramps, perimeter security, and areaways

Landscape- Fountain Garden in Haupt Garden
- Recommended further study of the design for reconstructing the fountain garden

Cooling Towers
- Requested more information about the design
- Recommended that this environmental strategy needs to be considered more carefully in the context of the sustainable planning for the Mall
PROJECT OVERVIEW

OBJECTIVES

Smithsonian Institution Building (SIB) – “The Castle”:
- State-of-the-art visitor services and amenities
- Restoration of exterior and rehabilitation of significant historic interiors
- Life safety and security upgrades
- Installation of energy efficient building systems

Arts and Industries Building (AIB):
- Reopen building to the public full-time
- Rehabilitation of significant historic interiors
- Life safety and security upgrades
- Installation of energy efficient building systems

Central Utility Plant (CUP):
- Capacity for the entire South Mall Campus
- High efficiency and sustainable systems
- Self-sufficiency, redundancy, and resiliency
- Service and support to maximize public use of historic spaces
The “Historic Core” is comprised of the Smithsonian Institution Building (the “Castle”) and the Arts and Industries Building. These buildings are the two oldest in the Smithsonian portfolio located on the National Mall.
A primary objective of the RoHC project is to utilize the buildings as much as possible for public activities. The new below grade construction is critical to “freeing up” space and preserving the character of the historic buildings.
SMITHSONIAN INSTITUTION BUILDING
“THE CASTLE”
Longitudinal and transverse sections through the building illustrate the areas devoted to Public functions and Smithsonian Institution activities. The East Wing and East Range (shown in blue) have traditionally housed leadership offices for the Institution and will continue to do so.
SMITHSONIAN INSTITUTION BUILDING (SIB)

GREAT HALL ROOF

EXISTING

PROPOSED

1.5 in

+4.75 in

1 in

+2.25 in

+2.25 in

3.25 in

SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 9
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST WING ROOF

EXISTING

PROPOSED

1.75 in

+4.75 in

6.25 in

+2.25 in

4 in
SMITHSONIAN INSTITUTION BUILDING (SIB)

MECHANICAL SYSTEMS - OUTSIDE AIR AND EXHAUST

Overall roof plan, existing Conditions.

Overall roof plan, proposed outside air and exhaust.

Great Hall roof louvers.  East Wing roof louvers.  East Range roof louvers.

Great Hall roof louvers.  East Wing roof louvers.  West Range roof louvers.
SMITHSONIAN INSTITUTION BUILDING (SIB)

MECHANICAL SYSTEMS

Existing copper clad elevator penthouse behind the North Tower viewed from the northeast.

Existing louvered penthouse located behind the South Tower viewed from the southwest in the Haupt Garden.

Existing louvered penthouse located behind the South Tower viewed from the southeast in the Haupt Garden.

Smithsonian Institution
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST WING ELEVATOR ROOF IMPACT
PREVIOUS DESIGN

Southeast roof. Existing elevator penthouse to be removed (shown in dashed red lines).

Southeast roof. New rooftop penthouse required for elevator overrun (shown in blue).

East wing from Haupt Garden.

Southeast roof. Existing elevator penthouse to be removed (shown in dashed red lines).

Southeast roof from Haupt Garden. New rooftop penthouse required for elevator overrun.
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST WING ELEVATOR ROOF IMPACT
PROPOSED DESIGN

• Minimal penthouse apparent on the roof.

• Centered in the center of the roof to avoid impact to historic chimneys at the roof level.

• Existing elevator hoistway popup to be removed. Internal portion of hoistway can be used as utility riser.
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE 4TH FLOOR CORRIDOR – EXISTING CONDITIONS

1. Existing condition of the windows.
2. Overview of the East Range 4th floor corridor.
3. Close-up of a window.

Diagram showing:
- Stair 3
- Stair 2
- Measurement of 10'-2" and 32'-10"

Smithsonian Institution
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE 4TH FLOOR CORRIDOR – PROPOSED DESIGN
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE 4TH FLOOR CORRIDOR – PROPOSED DESIGN

Southeast roof, existing egress path.

Southeast roof, proposed new egress connection.
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE 4TH FLOOR CORRIDOR – PROPOSED DESIGN

Line of railing of preferred egress connection.
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE 4TH FLOOR CORRIDOR – PROPOSED DESIGN

Line of railing of preferred egress connection.
SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE 4TH FLOOR CORRIDOR – PREVIOUS DESIGN STUDY
SMITHSONIAN INSTITUTION BUILDING (SIB)

AREAWAYS - EXISTING

EXISTING AREAWAY
EXISTING APRON

SMITHSONIAN INSTITUTION BUILDING

Existing Southeast areaway.
Existing Southwest areaway.
Existing window well.
Existing exterior window well.
SMITHSONIAN INSTITUTION BUILDING (SIB)

AREAWAYS - PROPOSED

- PROPOSED AREAWAY
- PROPOSED APRON
- PROPOSED SEISMIC JOINT 6” +/-
- PROPOSED SEISMIC JOINT COVER

Salt Lake City County Building, seismic joint cover.

San Francisco City Hall, seismic joint cover.

Seismic joint cover detail example.
SMITHSONIAN INSTITUTION BUILDING (SIB)

SEISMIC BASE ISOLATION

Integrated seismic joint cover examples.

Project Scope

- Seismic joint cover will be visible at grade, but there are a variety of options to minimize the visual impact and incorporate it into the site conditions.
- Many joint cover examples shown are for areas of the country that experience a large amount of seismic movement.
- The RoHC project will only require a 6-inch seismic joint.
SMITHSONIAN INSTITUTION BUILDING (SIB)

AREAWAYS – PROPOSED SECTIONS

Project Scope

- The floor of the areaway is the roof of the new B1 level below grade.
- Areaway retaining wall flush or stepped.
- Railings for fall protection.
- Daylight studies will be done to show the impact of natural light in the basement.
- Seismic joint is conceptually incorporated into the areaway wall – there are a variety of ways to integrate and conceal the joint that will be studied in future phases.

Material Legend

<table>
<thead>
<tr>
<th>Color</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Parged Concrete (Color TBD)</td>
</tr>
<tr>
<td>Brown</td>
<td>Soil / Landscaping</td>
</tr>
<tr>
<td>Gray</td>
<td>Existing Seneca Sandstone</td>
</tr>
<tr>
<td>Green</td>
<td>Base Isolation</td>
</tr>
<tr>
<td>Yellow</td>
<td>Cast Stone</td>
</tr>
</tbody>
</table>
SMITHSONIAN INSTITUTION BUILDING (SIB)

NEW BASEMENT EGRESS DOORS

Plan of egress doors at basement.

Existing window in south areaway.

Existing window in south areaway converted to a door.

Project Scope

• Several egress doors will be required at the basement level of the SIB. Exact locations are still pending.
• Windows on the building have been converted to doors through past projects. We anticipate following the same strategy for any new egress doors on the SIB.
• Treatment of the exterior wall will be reviewed at the next submission.
AREAWAYS – NORTH ELEVATION AT EAST RANGE

Existing windows.

New egress door at proposed areaway.
SMITHSONIAN INSTITUTION BUILDING (SIB)

AREAWAYS – SOUTH ELEVATION AT WEST RANGE

Existing windows and areaway door.

New door at existing door opening - opening has been modified (lowered) to match level of proposed areaway.
SMITHSONIAN INSTITUTION BUILDING (SIB)

AREAWAYS – EXISTING

South elevation of Great Hall showing existing areaways.

South elevation of East Range from Haupt Garden.

South elevation of SIB from Haupt Garden.
SMITHSONIAN INSTITUTION BUILDING (SIB)

AREAWAYS - PROPOSED

South elevation of Great Hall showing proposed areaways.

Project Scope

• Multiple smaller areaways combined to regularize the existing areaways along the south side of the building.

Landscape at West Range screening existing areaways.

Smithsonian Institution
As originally envisioned the Arts and Industries Building (AIB) had an open plan, allowing a visitor to create their own path through the building. The galleries were added to provide critically needed exhibit space. In the later 20th century modifications were focused on creating office space, resulting in the loss of many of the grand, open spaces.
Below-grade section - Quad, CUP, and AIB connection.
ARTS & INDUSTRIES BUILDING (AIB)

MECHANICAL SYSTEMS – LOUVERS
EXISTING CONDITIONS

Project Scope

- The building has louvers in historic window openings for air intake/exhaust (indicated in red).
ARTS & INDUSTRIES BUILDING (AIB)

MECHANICAL SYSTEMS – LOUVERS
PROPOSED OUTSIDE AIR INTAKE/EXHAUST

Project Scope

- We will be using the same strategy, but the louvers will be grouped in the SE and SW Courts (indicated in red).
ARTS & INDUSTRIES BUILDING (AIB)

MECHANICAL SYSTEMS

AIB Roof plan.

INDEPENDENCE AVENUE

Section at AIB South-East Range- Emergency generator exhaust.

View looking at the roof of the AIB South-East Range from Independence Avenue.
SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE

ARTS & INDUSTRIES BUILDING (AIB)

MECHANICAL SYSTEMS – AREAWAYS

PROPOSED OUTSIDE AIR INTAKE/EXHAUST
ARTS & INDUSTRIES BUILDING (AIB)

EXISTING FOUNDATION CONDITIONS AT GRADE

Exposed AIB gneiss foundation - east elevation at South corner.

Exposed AIB gneiss foundation - South elevation (Independence Ave.) at East corner.

Apron along perimeter wall of the AIB South Ranges (Independence Ave.), varies in width to accommodate brick pilasters.
ARTS & INDUSTRIES BUILDING (AIB)

NEW EGRESS DOORS AT SOUTHWEST AND EAST FACADES

Existing condition.

Key plan of new egress door.

Partial exterior elevation at Southwest Annex.

Enlarged elevation at proposed AIB West Range areaways.

Project Scope

- Create code compliant egress with new stairs and exterior doors adjacent to the four Pavilions.
- Create the door openings below the decorative banding.

Smithsonian Institution
NEW EGRESS DOOR AT NORTHWEST ANNEX

Existing door, NW Pavilion.

Key plan of new egress door.

Partial exterior elevation at Northwest Annex.

Project Scope

- Create code compliant egress with new stairs and exterior doors adjacent to the four Pavilions.
- Create the door openings below the decorative banding.
UNDERGROUND CONSTRUCTION
UNDERGROUND CONSTRUCTION

PREVIOUS CONCEPT DESIGN

B1 Level

B2 Level

B3 Level

Smithsonian Institution
SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE

UNDERGROUND CONSTRUCTION

SCHEMATIC PHASE

B2 LEVEL FLOOR AREA REDUCTION OF 17,700 SF
UNDERGROUND CONSTRUCTION

SECTION THROUGH SIB B0, B1 AND EXTENSION/CONNECTOR ROAD
COOLING TOWERS
COOLING TOWERS

NMNH site showing potential cooling tower location.

**Design Objectives**

- Building cooling towers across the National Mall at Southwest corner of National Museum of Natural History site.
- Location resolves difficult site constraints on South Campus.
- Reduces visual and noise negative impacts to Haupt Garden, Ripley Garden, and the historic buildings.
- Design of the new cooling tower enclosure would mimic the existing enclosure at the southeast corner of the site.
COOLING TOWERS

CONNECTION OPTIONS
DIRECT BORE AND EXISTING TUNNEL

1. New cooling tower plant to serve South Campus
2. Direct bore for condenser water routing from Cooling Towers to SIB
3. Existing steam tunnel. Potential route for condenser water piping - Cooling Towers to SIB

Design Objectives

- Connect to the South Campus CUP under the National Mall. This can be done in an existing steam tunnel or with a new direct bore.
COOLING TOWERS

PROPOSED DIRECTIONAL BORE

- COOLING TOWER
- MADISON DR
- NATIONAL MALL
- JEFFERSON DR
- CUP/CONNECTOR RECEIVING PIT

DIRECTIONAL BORE 9'-8"
COOLING TOWERS

PROPOSED COOLING TOWERS

A - EXISTING VIEW WEST

A - PROPOSED VIEW WEST

B - EXISTING VIEW NORTH

B - PROPOSED VIEW NORTH
COOLING TOWERS

PROPOSED COOLING TOWERS

C - EXISTING VIEW EAST

C - PROPOSED VIEW EAST

D - EXISTING VIEW SOUTH

D - PROPOSED VIEW SOUTH
COOLING TOWERS

EXISTING COOLING TOWER PLANTING

1. Cleyera japonica ‘Cherry Ruffles’
2. Prunus caroliniana ‘Cherry Ruffles’, Callicarpa americana, Ilex glabra
3. Ilex glabra, Callicarpa americana, Morella cerifera
4. Ilex opaca ‘Maryland Dwarf’, Viburnum opulus var americanum, Ilex glabra
5. Perennials
6. Ilex coriacea ‘Rotunda’
COOLING TOWERS

EXISTING COOLING TOWER PLANTING

1. VIEW FROM 12TH ST NW

2. VIEW INTO PARKING LOT FROM 12TH ST NW

3. CONCRETE SWALE & PLANTING FROM PARKING LOT

4. VIEW SW TOWARDS 12TH ST NW FROM PARKING LOT

5. VIEW SE FROM 12TH ST NW

6. VIEW NORTH ON 12TH ST NW

Smithsonian Institution
COOLING TOWERS

PROPOSED COOLING TOWER PLANTING

LEGEND

- LARGE DECIDUOUS TREE 25-35 HT
- MEDIUM TO SMALL UNDERSTORY TREES DECIDUOUS & EVERGREEN 12-20 HT
- SHRUBS 4-10 HT
- GROUNDCOVER 1-4 HT
- RETAINING WAL
- 42’HT GUARDRAIL (FALL PROTECTION)

SCALE IN FEET

SCALE IN METERS

Smithsonian Institution
COOLING TOWERS

PROPOSED COOLING TOWER GRADING, WALL HEIGHT AND PLANTING CHARACTER

SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 53
SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE

PROPOSED COOLING TOWER
GRADING, WALL HEIGHT AND
PLANTING CHARACTER

COOLING TOWERS

1. ELEVATION LOOKING WEST TOWARDS 12TH STREET
   NOT TO SCALE

2. SECTION D (WEST WALL)
   NOT TO SCALE

3. SECTION E (WEST WALL)
   NOT TO SCALE

4. SECTION F (WEST WALL)
   NOT TO SCALE

Smithsonian Institution
GARDENS AND GROUNDS
GARDENS AND GROUNDS

AS-BUILT SASAKI / LESTER COLLINS
PLANTING PLAN(1987)
GARDENS AND GROUNDS

EXISTING PLANTING PLAN
GARDENS AND GROUNDS

Castle and Haupt Garden, facing Northeast.

AIB and Ripley Garden, facing Southwest.

Haupt Garden and AIB, facing Southeast.

Smithsonian Castle, facing West.

Downing Urn in the Haupt Garden, facing South.
SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE

GARDENS AND GROUNDS

GOALS AND DRIVERS - REHABILITATION

NOTE: ANY AFFECTED HARDSCAPE AND VEGETATION TO BE REPLACED IN KIND TO THE EXTENT PRACTICABLE

AFRICAN PAVILION GARDEN ELEMENTS TO BE SALVAGED AND REINSTALLED
GARDENS AND GROUNDS

PLANTING STRATEGY – SIB GARDENS

DECIDUOUS TREE

EVERGREEN TREE

EXISTING GINKGO TO REMAIN

SHRUBS (4-10’HT)

GROUND COVER (1-3’ HT)

LAWN / STEPABLES (<1’ HT)

PROPOSED VIEWS THROUGH VEGETATION
GARDENS AND GROUNDS

PLANTING STRATEGY – SIB AREAWAYS
GARDENS AND GROUNDS

HAUP GARDEN - REHABILITATION OF CHARACTER DEFINING FEATURES

- Plantings to be replaced in kind to the extent practicable given new on-structure condition
- Downing urn to be returned to this or nearby location, in coordination with NPS
- Fountain garden to be rehabilitated
- Paving to be rehabilitated, typ.

Legend:
- Area of potential disturbance
- Quadrangle historic district
- Haupt garden
GARDENS AND GROUNDS

HAUPT GARDEN – EXISTING VEGETATION

Design Objectives

• Replace existing vegetation in the spirit of the existing character while accommodating new below-grade improvements.

• Coordinate tree plantings adjacent to the Castle for improved façade maintenance.

• Coordinate with NPS on the eventual siting of the Downing Urn.
Freestanding granite clad wall in the Haupt Garden.
GARDENS AND GROUNDS

RIPLEY GARDEN – EXISTING CONDITIONS

[Diagram showing existing conditions of Ripley Garden with labels for various features such as exposed aggregate sidewalk, wood fence, guard booth, concrete walkway, lift, asphalt parking lot, work yard, water feature, bench, typical brick paving, typical brick curbwall, and Hirshhorn Museum.]
GARDENS AND GROUNDS

RIPLEY GARDEN - PROPOSED
RIPLEY GARDEN – PROPOSED EGRESS

SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE 69
GARDENS AND GROUNDS

AIB EAST PARKING LOT – EXISTING CONDITIONS

1. LOOKING SOUTH TO INDEPENDENCE AVE
2. CORNER OF BUILDING
3. LOOKING NORTH

SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE
GARDENS AND GROUNDS

AIB EAST PARKING LOT – PROPOSED
GARDENS AND GROUNDS

FOLGER ROSE GARDEN

Existing Folger Rose Garden plan.

Proposed Folger Rose Garden plan.
GARDENS AND GROUNDS

AFRICAN ART MUSEUM PAVILION FOUNTAIN GARDEN

Design Objectives

- Carefully document Fountain Garden hardscape and water features; salvage and rehabilitate after insertion of CUP
- Replace existing vegetation in the spirit of the existing character while accommodating new below-grade improvements
PERIMETER SECURITY

Background

• 2004 Mall-Wide Perimeter Security Concept Design developed by Beyer Blinder Belle.
• 2018 South Mall Campus Master Plan recommended following guidance from 2004.
• Smithsonian Institution and A/E Team collaborating to establish requirements and scope of perimeter security for the RoHC project.

Design Objectives

• Enhance Perimeter Security along Jefferson Drive and Independence Ave within RoHC project area.
• Follow Contextual and Unified Approach as recommended by the 2004 Mall-Wide Perimeter Security Concept Design.
• Integrate and conceal perimeter security measures within the site’s existing features and landscape to the extent possible.
• Envision design approach as an extension applied Mall-Wide.
GARDENS AND GROUNDS

HISTORICAL ARCHITECTURAL DETAILS
INFORM PERIMETER SECURITY FEATURES

Fence at Rose Garden.

Fence at Haupt Garden.

Cast stone lighting base.

Entryway arch at AIB.

Black metal settee.

Metal arbor at Rose Garden.

Typical granite curb.

Granite-clad site wall at NMAFA.

Smithsonian Institution
GARDENS AND GROUNDS

MATERIALS AND FORMS

Site bollard concept diagram.

- **6" Metal Bollards:** Bronze color to match mullions or black to match metal site furnishing
- **10" Stone Clad Bollards:** With rounded top and reveal
- **6" Metal Bollards**

Plan view not to scale.

METAL BOLLARD

RETRACTABLE BOLLARD AT LINCOLN MEMORIAL

Smithsonian Institution
Site wall concept diagram.
GARDENS AND GROUNDS

PERIMETER SECURITY – JEFFERSON DRIVE AT THE CASTLE(SIB)

PREFERRED OPTION
GARDENS AND GROUNDS

PERIMETER SECURITY – JEFFERSON DRIVE AT THE CASTLE(SIB)

PREFERRED OPTION

Proposed Castle north entrance visualization.
GARDENS AND GROUNDS

PERIMETER SECURITY – JEFFERSON DRIVE AT THE CASTLE(SIB)

BOLLARDS AT CURB
GARDENS AND GROUNDS

PERIMETER SECURITY – JEFFERSON DRIVE AT THE CASTLE(SIB)

BOLLARDS AT CURB

Proposed Castle north entrance visualization – bollards at curb.
GARDENS AND GROUNDS

PERIMETER SECURITY – JEFFERSON DRIVE AT THE CASTLE(SIB)

ADDITIONAL PLANTING
GARDENS AND GROUNDS

PERIMETER SECURITY – JEFFERSON DRIVE AT THE CASTLE(SIB)

ADDITIONAL PLANTING

Proposed Castle north entrance visualization – additional planting.
GARDENS AND GROUNDS

PERIMETER SECURITY – INDEPENDENCE AVENUE
GARDENS AND GROUNDS

ACCESSIBILITY IMPROVEMENTS – SIB NORTH ENTRANCE

EXISTING CONDITIONS
GARDENS AND GROUNDS

ACCESSIBILITY IMPROVEMENTS – SIB NORTH ENTRANCE

PROPOSED CONCEPT
GARDENS AND GROUNDS

ACCESSIBILITY IMPROVEMENTS – SIB SOUTH ENTRANCE

EXISTING CONDITIONS

1. RAMP TO BUILDING ENTRANCE
2. EAST CORNER DETAIL AT RAMP
3. WEST CORNER DETAIL AT RAMP
4. PLANTING AREA

Smithsonian Institution
GARDENS AND GROUNDS

ACCESSIBILITY IMPROVEMENTS – SIB SOUTH ENTRANCE

PROPOSED CONCEPT
GARDENS AND GROUNDS

ACCESSIBILITY IMPROVEMENTS - AIB NORTH ENTRANCE

EXISTING CONDITIONS
GARDENS AND GROUNDS

ACCESSIBILITY IMPROVEMENTS – AIB NORTH ENTRANCE

PROPOSED CONCEPT

SMITHSONIAN REVITALIZATION OF THE HISTORIC CORE
GARDENS AND GROUNDS

ACCESSIBILITY IMPROVEMENTS - AIB SOUTH ENTRANCE

EXISTING CONDITIONS

1. SIDEWALK VIEW TO EAST

2. ENTRANCE GATE

3. ENTRANCE STEPS

4. VIEW FROM INDEPENDENCE AVE
GARDENS AND GROUNDS

NEW EGRESS – AIB WEST

EXISTING CONDITIONS
GARDENS AND GROUNDS

NEW EGRESS – AIB WEST

PROPOSED CONCEPT