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 Smithsonian Institution

Revitalization of the Historic Core  
**CONSULTING PARTIES MEETING #13**

May 24, 2023

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Q&A

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Smithsonian Institution

Revitalization of the Historic Core  
**CONSULTING PARTIES MEETING #13**

May 24, 2023

# PANEL OF SPEAKERS

## MODERATOR

**Carly Bond**, Historic Preservation Specialist

## PRESENTERS / PANELISTS

**Brenda Sanchez**, FAIA, Sr. Design Manager

**Christopher Lethbridge**, Architect/Program Manager

**Lauren Brandes**, RLA, ASLA, Smithsonian Gardens

**Matthew Chalifoux**, FAIA, Sr. Historic Preservation Architect, EYP-Loring, LLC

**Anthony Bochicchio**, AIA, Project Manager, EYP-Loring, LLC

**Faye Harwell**, FASLA, Landscape Architect, RHI (Rhodeside and Harwell)

# AGENDA

- **Updates**
- **Review Phase 2 Items**
  - **Roof Modifications**
  - **Emergency Egress**
    - **East Range**
  - **Fall Protection**
  - **Roof Access**
  - **South Entry Ramp**
  - **Southwest Areaway Modification**
- **Next Steps**

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# RoHC Revitalize Castle – Status of Design Review Items



RoHC Revitalize the Castle- Phase 2 Section 106 Consultation Design Issues				
Topic	Key Design Issues	Status	Proposed Effect Determination	CP Meeting
<b>SITE AND LANDSCAPE</b>				
New Landscape Planting Plan	Planting Plan Paving Systems	Reviewed and accepted	No Adverse Effect	CP 11
Perimeter Security	Overall layout Bollards Hardened furnishings and signs	Reviewed and accepted		CP7, CP8
Site Lighting	Jefferson Drive- Olmsted Fixtures Layout	Options reviewed		CP4
Seismic Control Joint - Finishes	Metal Finish Infill- Stone, Concrete, Pavers	Options reviewed Options reviewed - Olympic Black selected	Adverse Effect	CP8 CP8, CP12
South Entrance	Plan Layout Materials Kick Rail	Options reviewed- preferences provided Preliminary presentation Preliminary presentation		CP11, CP13 CP11, CP13 CP11, CP13
North Entrance	Plan Layout Materials Railings	Reviewed and accepted Preliminary presentation Preliminary presentation	Adverse Effect	CP7, CP8 CP11
<b>ROOF AREA</b>				
South Tower Elevators- Exterior	Overrun penthouses	Reviewed and accepted	Adverse Effect	CP10
South Tower Elevators- Interior Effects	Narrowing of the center corridor North wall of Children's Room Elevator doors and devices Mosaic Tile Floor at Regents' Room Entry	Preliminary presentation Preliminary presentation Reviewed - preferences provided Preliminary presentation	Adverse Effect	CP11 CP11 CP11 CP11
Replacement of Roof Materials	Slate- match for existing (historic?)	Preliminary presentation		CP12
Roof Modifications- Energy Improvements	Dimensional changes at edges due to roof	Preliminary presentation		CP13
Rooftop Mechanical Penthouses	Location and sizes Visibility	All presented- north penthouses not resolved All presented- north penthouses not resolved	Adverse Effect	CP10, CP11, CP12 CP10, CP11, CP12
East Wing 4th Floor Egress	Guardrail Changes to existing windows (East and West)	Preliminary presentation		CP13
Lightning Protection	Layout Device details	Reviewed and accepted Reviewed and accepted	No Adverse Effect	CP10, CP11 CP10
Fall Protection	Layout Device details	Preliminary presentation		CP13

# RoHC Revitalize Castle – Status of Design Review Items

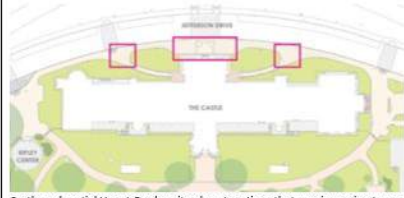
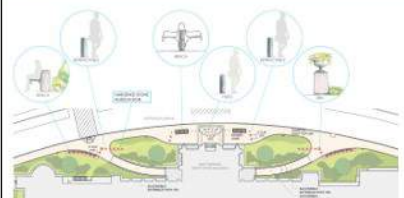
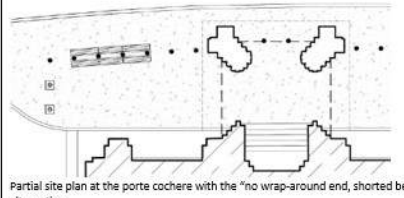
RoHC Revitalize the Castle- Phase 2 Section 106 Consultation Design Issues				
Topic	Key Design Issues	Status	Proposed Effect Determination	CP Meeting
<b>EXTERIOR WALLS</b>				
Replacement and Restoration of Windows	Replacement- visual appearance, details Restoration- interior safety panels- details			
Replacement of Windows- Interior Effects	Impacts to interior historic finishes (plaster)			
Exterior Masonry Restoration	<b>Replacement material - St. Bees Sandstone</b>	<b>Reviewed and accepted</b>	<b>No Adverse Effect</b>	<b>CP10</b>
New Basement Windows	Location and size Window style Effect on exterior sandstone	Preliminary presentation		CP4
Basement Egress Doors	Location and size Door style Effect on exterior sandstone	Preliminary presentation		CP4
Basement Level Interior Alterations (Effects)	Impacts to interior historic finishes			
Exterior Lighting (Building)	Visual effect Location of light sources			
<b>AREAWAYS AND WINDOW WELLS</b>				
Areaways and Window Wells- Finishes	Below Seneca sandstone Flooring and seismic joint Concrete retaining wall Stairs			CP14
Emergency Generator	<b>Visibility</b>	<b>Reviewed and accepted</b>	<b>Adverse Effect</b>	<b>CP10</b>

# RoHC Revitalize Castle – Status of Design Review Items


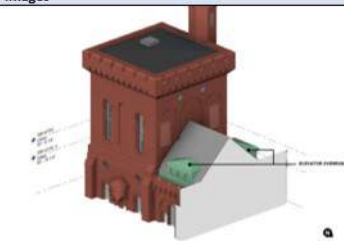
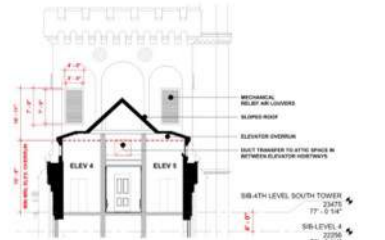
- Assessment of Effects Report to be updated as we move through consultation and reach consensus on design actions
- Updated AOE sections will be appended to the Meeting Minutes after each Consulting Parties Meeting and posted to the project webpage.

RoHC Revitalize Castle Assessment of Effects on Historic Resources	
April 2023	
<b>Assessment of Effects on Historic Resources – Phase 2</b>	
The following provides an assessment of effects of each feature or action of Phase 2 of the RoHC Revitalize Castle. The effect determination is based on the criteria of adverse effect. For more images and information on each action and assessment, please refer to the presentation materials from past Section 106 Consulting Parties meetings available on the project webpage. Phase 2 contains the remaining design actions for consultation to complete the RoHC Revitalize Castle project. Certain design actions were determined to have an adverse effect during Phase 1 consultation, with additional consultation required on minimization measures during Phase 2 consultation.	
Site	Design Details
<b>Feature/Action</b> New Landscape Planting Plan  Existing landscape character, south of the Castle.	<ul style="list-style-type: none"> <li>- Hardscape displaced by the project limit of disturbance will be replaced in-kind.</li> <li>- Paths and sidewalks adjacent to Jefferson Drive will have aggregate concrete to match the National Mall standard.</li> <li>- Paths within the Haupt Garden and Folger Rose Garden will have red brick. Granite pavers will be used at the north entrance landings.</li> <li>- Character of the landscape will be maintained, through the same diversity of plant typology and heights and number of trees.</li> <li>- Tree plantings will be slightly setback to prevent biological growth and damage to the Castle's sandstone. This setback will be minimal enough to maintain the character of the landscape setting.</li> </ul>
Images	Additional Information
 Final landscape plan – To be updated in Phase 2 consultation.	<ul style="list-style-type: none"> <li>- Setting of the Castle is a character defining feature.</li> <li>- Haupt Garden is documented in the National Mall Historic District nomination as part of the landscape setting, not as a contributing element.</li> <li>- Current tree plantings are immediately adjacent to and touch the Castle. This results in dense shade conditions causing biological growth on the Seneca sandstone. Setting the trees back slightly from the Castle eliminates dense shade conditions against the stone.</li> <li>- Landscape setting features a mix of large structural trees (evergreen and deciduous), large shrubs/small trees, low shrubs, and groundcover. Diversity and hierarchy of plantings will be maintained.</li> <li>- Refer to "Accessible Walkways at the North Entrance" and "Alterations at the South Entrance to Improve Accessibility" for related changes.</li> <li>- Changes to the landscape and replacement of hardscape will not alter the character of the Castle's setting.</li> </ul>

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RoHC Revitalize Castle Assessment of Effects on Historic Resources	
April 2023	
Site	Design Details
<b>Feature/Action</b> Perimeter Security  Castle and partial Haupt Garden site plan. Locations that require perimeter security are noted with pink outlines.	<ul style="list-style-type: none"> <li>- Secure perimeter is required at building entrances and visitor queuing areas.</li> <li>- Design is a combination of hardened metal bollards (fixed and retractable), landscape wall features, and benches.</li> <li>- Two fixed bollards will be aligned with the second colonnette of the porte cochere arch.</li> <li>- Design alternatives are in development for Phase 2 of consultation, including: size and placement of the integral bollard benches; bollard finish; granite material; integral bollard bench designs; placement of bollards within the porte cochere piers; and size of wall benches adjacent to the accessible walkways.</li> </ul>
Images	Additional Information
 Proposed perimeter security elements at north entry along Jefferson Drive.   Partial site plan at the porte cochere with the "no wrap-around end, shorted bench" alternative.	<ul style="list-style-type: none"> <li>- Setting is a character defining feature.</li> <li>- Castle porte cochere is less than 4' from the roadbed curb.</li> <li>- At the beginning of consultation, perimeter security proposed a continuous line of bollards and site walls to create a barrier along the Jefferson Drive curb. This design had significant adverse effects on the Castle and National Mall settings, and was revised to focus on three building entrance locations on Jefferson Drive and minimize the use of bollards.</li> <li>- Phase 1 of Section 106 consultation considered various combinations of hardened metal bollards (fixed and retractable), landscape wall features, and benches. There was consensus for the length, size, and placement of the integral bollard benches adjacent to the porte cochere; and for the length of benches adjacent to the accessible walkway entrances.</li> <li>- Retractable and fixed bollards measure 30" in height and 8" in diameter for visual continuity between the two types.</li> <li>- Contributes to the cumulative adverse effect on the Setting of the Castle and the National Mall Historic District.</li> </ul>

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RoHC Revitalize Castle Assessment of Effects on Historic Resources	
April 2023	
Smithsonian Institution Building	Design Details
<b>Feature/Action</b> South Tower Elevator – Exterior Alterations  Existing condition of the South Tower peaked roof and mechanical bulkhead to be removed, and the blind arches infilled with brick masonry.	<ul style="list-style-type: none"> <li>- Two new elevators replace an existing non-code compliant elevator and stair in the Castle's South Tower.</li> <li>- Proposed elevators are accessible and code compliant, and will be the primary vertical circulation for the public for all levels of the Castle.</li> <li>- Each new elevator requires a visible overrun.</li> <li>- Overruns are 3'7" above the parapet, with a hipped roof, arched detailing, and copper cladding.</li> <li>- Mechanical relief is accomplished with through wall louvers at blind arches at the north elevation of the South Tower. Louvers will require the removal of historic brick. Louvers will be finished to match the brick. Louvers cannot be centered within the blind arches due an existing stair and proposed ductwork.</li> </ul>
Images	Additional Information
 Partial axonometric view of the South Tower.   Section elevation depicting the size of the through wall louvers and extent of brick removal.	<ul style="list-style-type: none"> <li>- Roof Profile is a character defining feature. South Tower has a steep peaked roof clad in slate shingles.</li> <li>- Proposed work enables the removal of the existing non-code compliant elevator and its visible elevator overrun from the North Tower.</li> <li>- Existing elevator mechanical relief bulkhead is visible from the east and west of the South Tower.</li> <li>- Proposed elevators use Machine Room Less technology, which does not require overhead mechanical equipment above the elevator shaft. If this technology was not used, the elevator overruns would be significantly taller.</li> <li>- Alternate locations for these public elevators cannot be considered to avoid adverse effects to the South Tower exterior and interior. This is because the Adolf Cluss modifications inserted additional levels creating quarter level height differences between the finish floors of the South Tower and the Main Building.</li> <li>- Phase 1 of 106 consultation included a significantly taller mechanical relief bulkhead than the existing condition, found to have significant visual impact and adverse effect. Phase 1 of 106 consultation produced a through wall louver design, with consensus that this solution minimized adverse effect by eliminating visibility of the mechanical relief bulkhead.</li> <li>- Proposed elevator overruns will be visible from the east and west of the South Tower.</li> <li>- Proposed exterior changes have an adverse effect on the Castle's roofline, South Tower massing, and</li> </ul>

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# RoHC Revitalize Castle – Status of Design Review Items

## Assessment of Effects on Historic Resources Report - Updates

Feature/Action	Summary	Proposed Effect Determination
New Landscape Planting Plan	<ul style="list-style-type: none"> <li>Displaced hardscape replaced in-kind</li> <li>No changes to existing paths and sidewalks</li> <li>Landscape character maintained</li> </ul>	No Adverse Effect
South Tower Elevators – Exterior Alterations	<ul style="list-style-type: none"> <li>Through-wall louvers</li> <li>Two elevator overruns clad in copper with hipped roof and arched detailing</li> </ul>	Adverse Effect
Emergency Generators	<ul style="list-style-type: none"> <li>Two gas generators in the SE areaway</li> <li>Maximum height of equipment will not exceed areaway wall</li> </ul>	No Adverse Effect (Does not intensify the adverse effect from the new areaways)
Installation of Lighting Protection	<ul style="list-style-type: none"> <li>10" air terminals above rooftop features</li> <li>Grounding cables in discreet locations</li> </ul>	No Adverse Effect
Exterior Masonry Restoration	<ul style="list-style-type: none"> <li>Salvaged Seneca sandstone</li> <li>St. Bees sandstone back-up</li> </ul>	No Adverse Effect

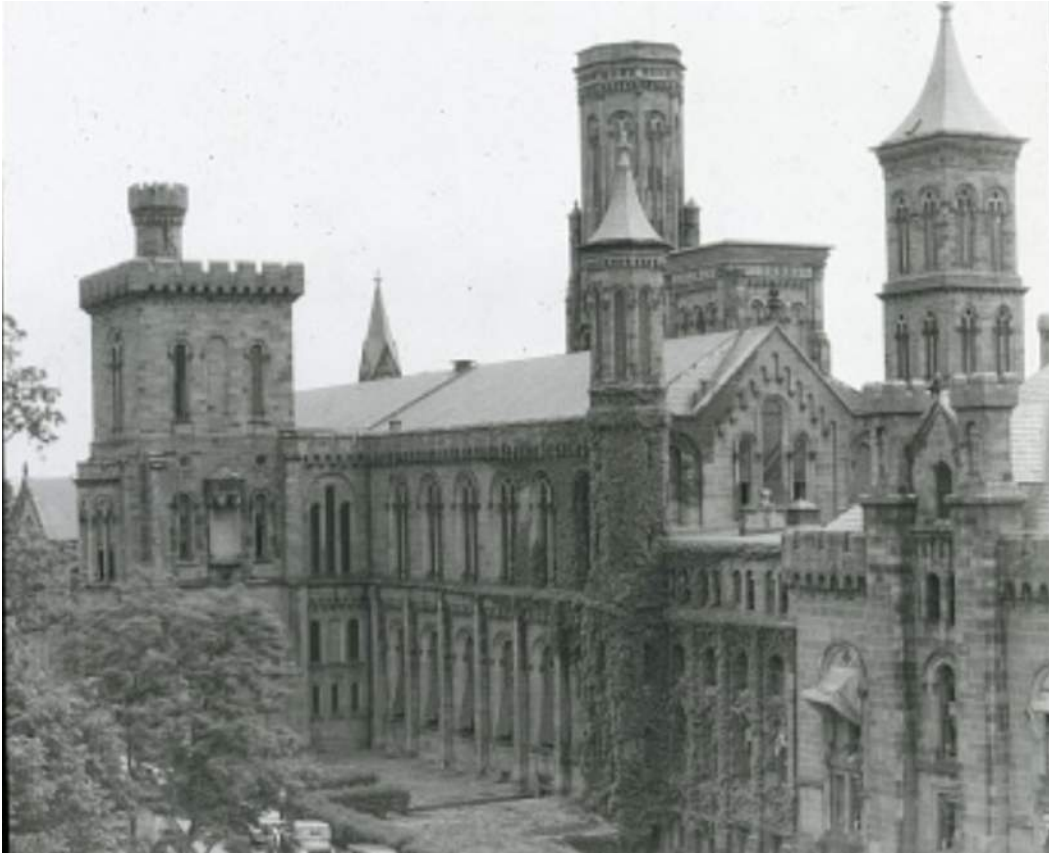


# Comments from Consulting Parties



Existing ramp and door at the southeast corner of the Main Building.

# Comments from Consulting Parties



c. 1920



International Exchange Service Deliveries, 1910

- Large portions of the International Exchange Service moved to the basement of the Castle's Main Building, East Wing, and Range beginning in 1870
- In 1871 the loading ramp and door were installed

# Comments from Consulting Parties



1972

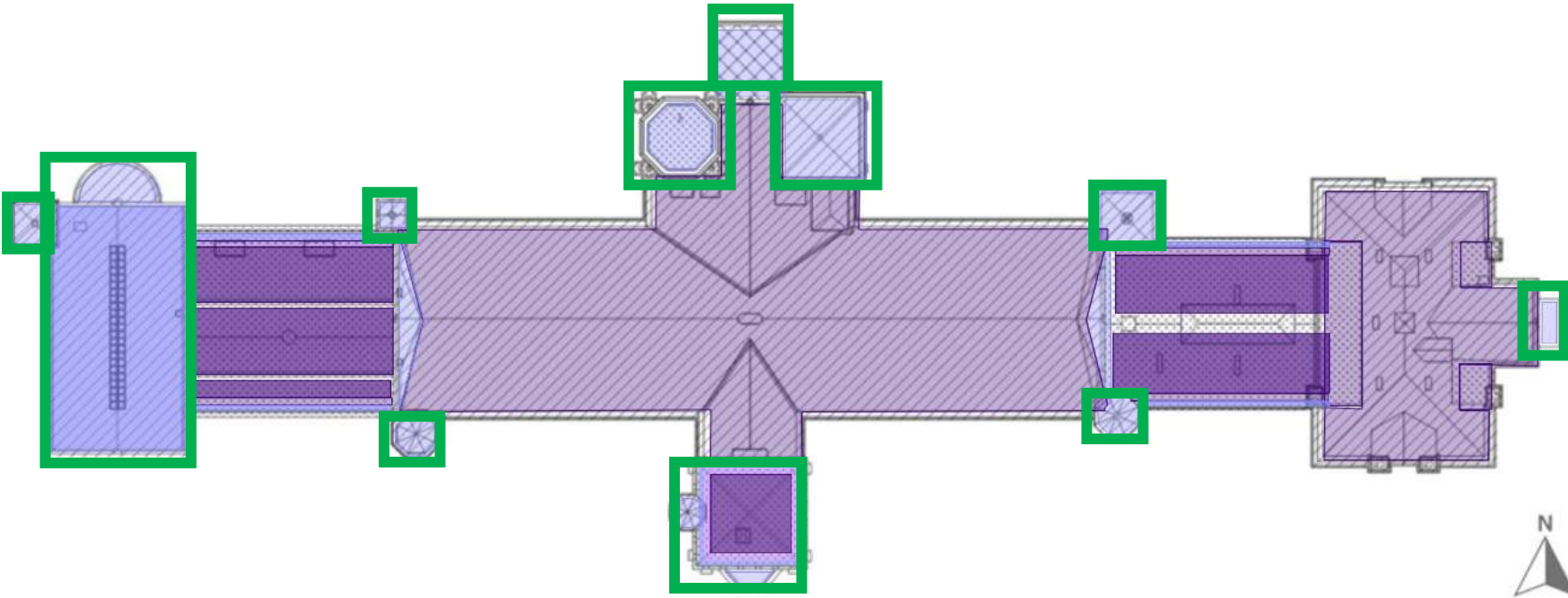
## Renwick's 1847 Design Specifications:

“All remaining roofs (i.e., of the towers, &c.) above excepted, will be made of the best Welsh slate of large size, and laid in the best manner, according to the directions of the architect.”

# ROOF MODIFICATIONS

# SMITHSONIAN INSTITUTION BUILDING (SIB)

ROOFING | PROPOSED  
THICKNESS VISUALIZATION



### LEGEND

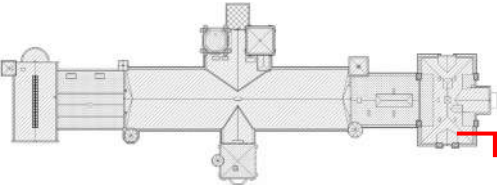
#### Roofing Type

- Modified-Bitumen Roofing
- Slate Roofing
- Copper Roofing

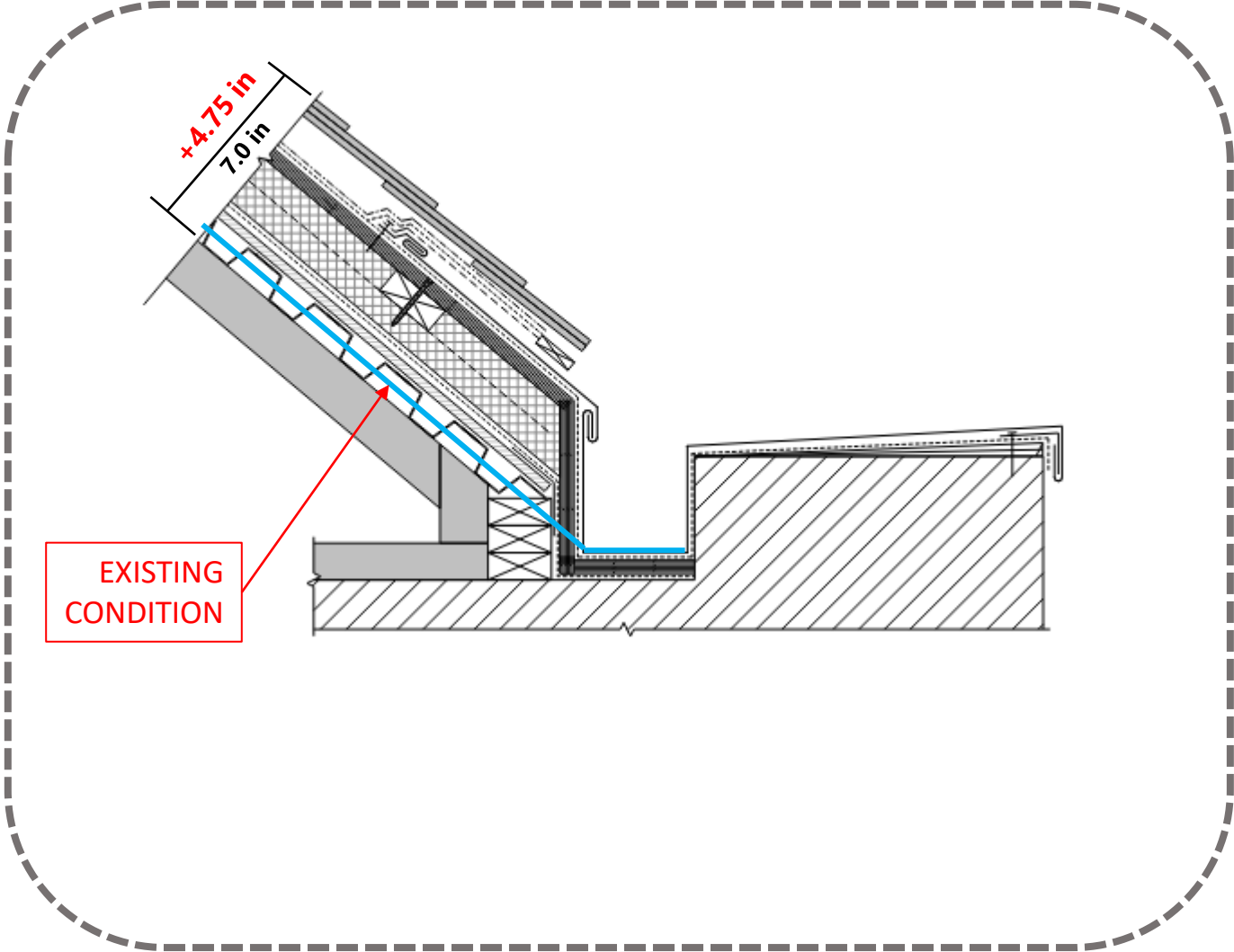
- < 1 in. Net Increase in Roof Thickness
- > 1 in. and < 3 in. Net Increase in Roof Thickness
- > 3 in. and < 5 in. Net Increase in Roof Thickness
- 5 in. Net Increase in Roof Thickness
- No Impact to Existing Thickness/Edge Detail Which Would be Visible from Grade

# SMITHSONIAN INSTITUTION BUILDING (SIB)

ROOF | PROPOSED  
DIMENSIONAL CHANGE TO ACCOMMODATE INSULATION



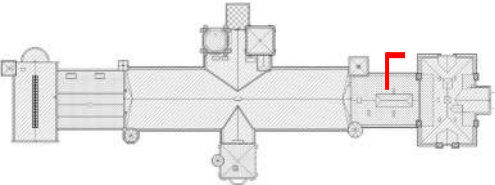
## EAST WING ROOF



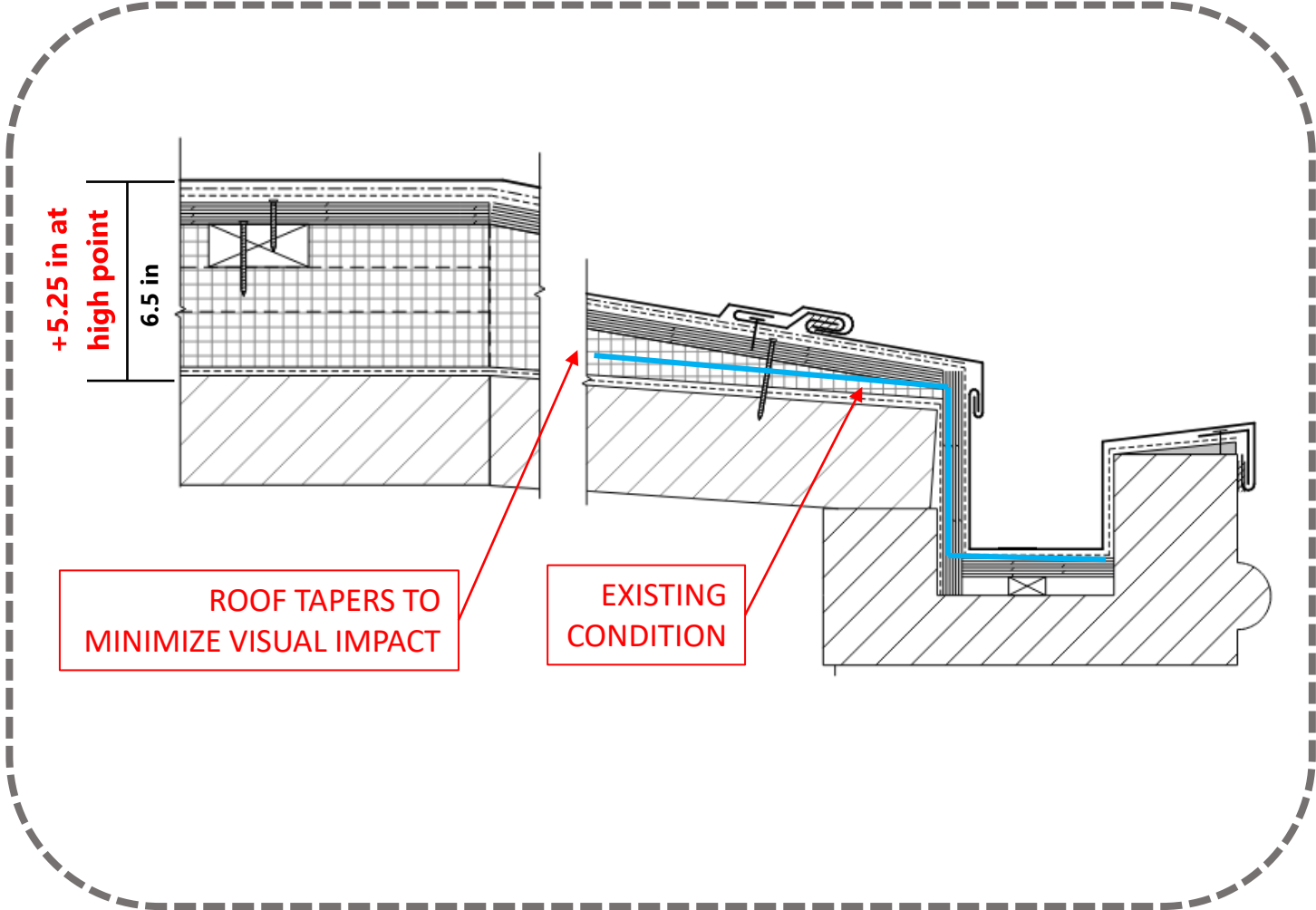
EAST WING – SOUTHEAST CORNER OF THE ROOF

# SMITHSONIAN INSTITUTION BUILDING (SIB)

ROOF | PROPOSED  
DIMENSIONAL CHANGE TO ACCOMMODATE INSULATION



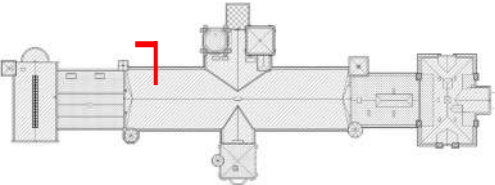
## EAST RANGE ROOF



EAST RANGE – ROOF LOOKING NORTHEAST

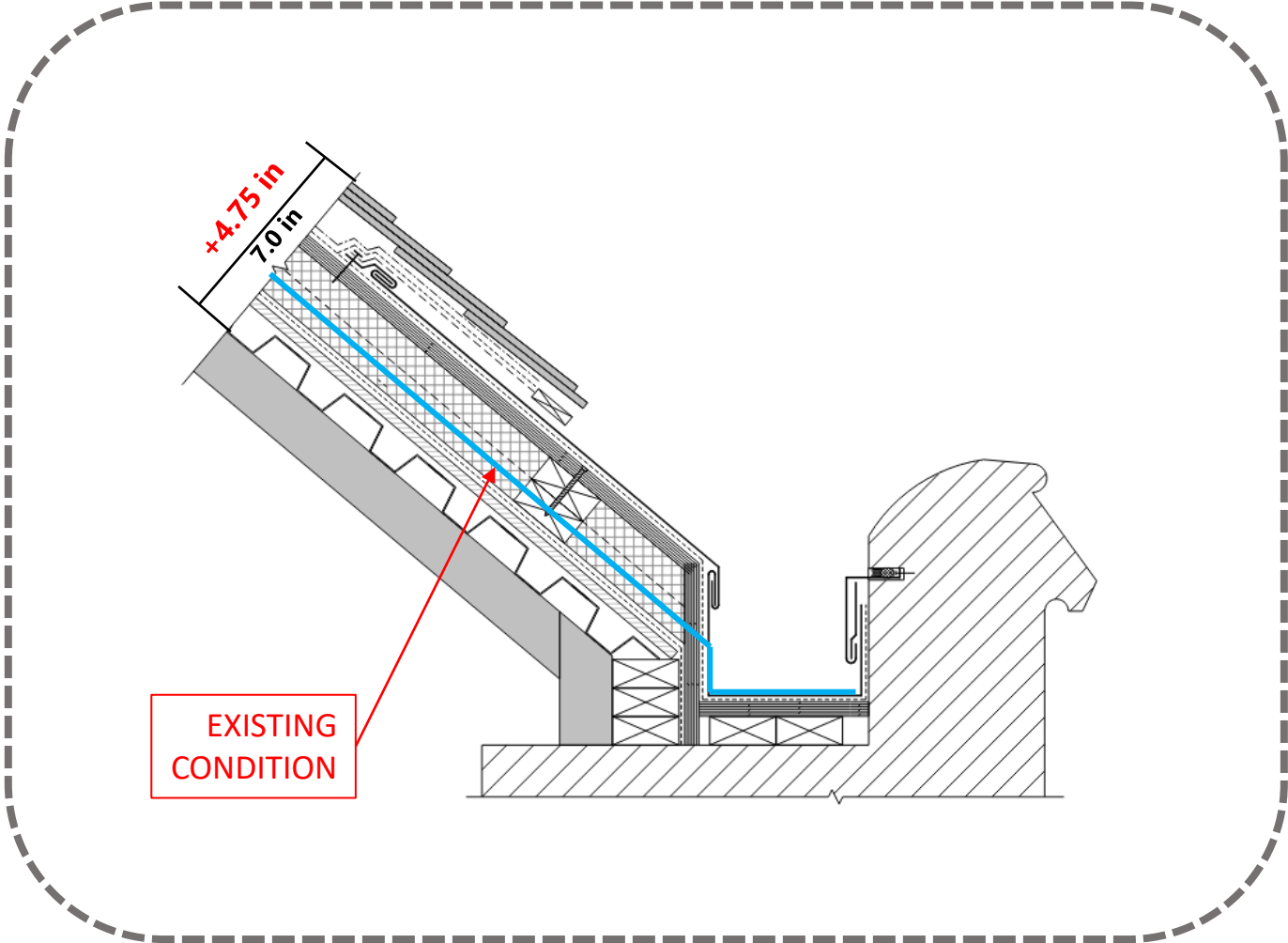
# SMITHSONIAN INSTITUTION BUILDING (SIB)

ROOF | PROPOSED  
DIMENSIONAL CHANGE TO ACCOMMODATE INSULATION



MAIN HALL – NORTH ELEVATION ROOF LOOKING WEST

## GREAT HALL ROOF



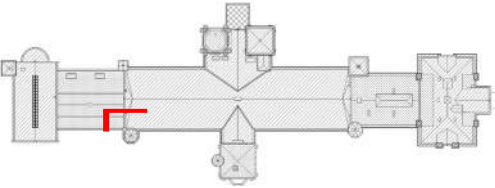


# SMITHSONIAN INSTITUTION BUILDING (SIB)

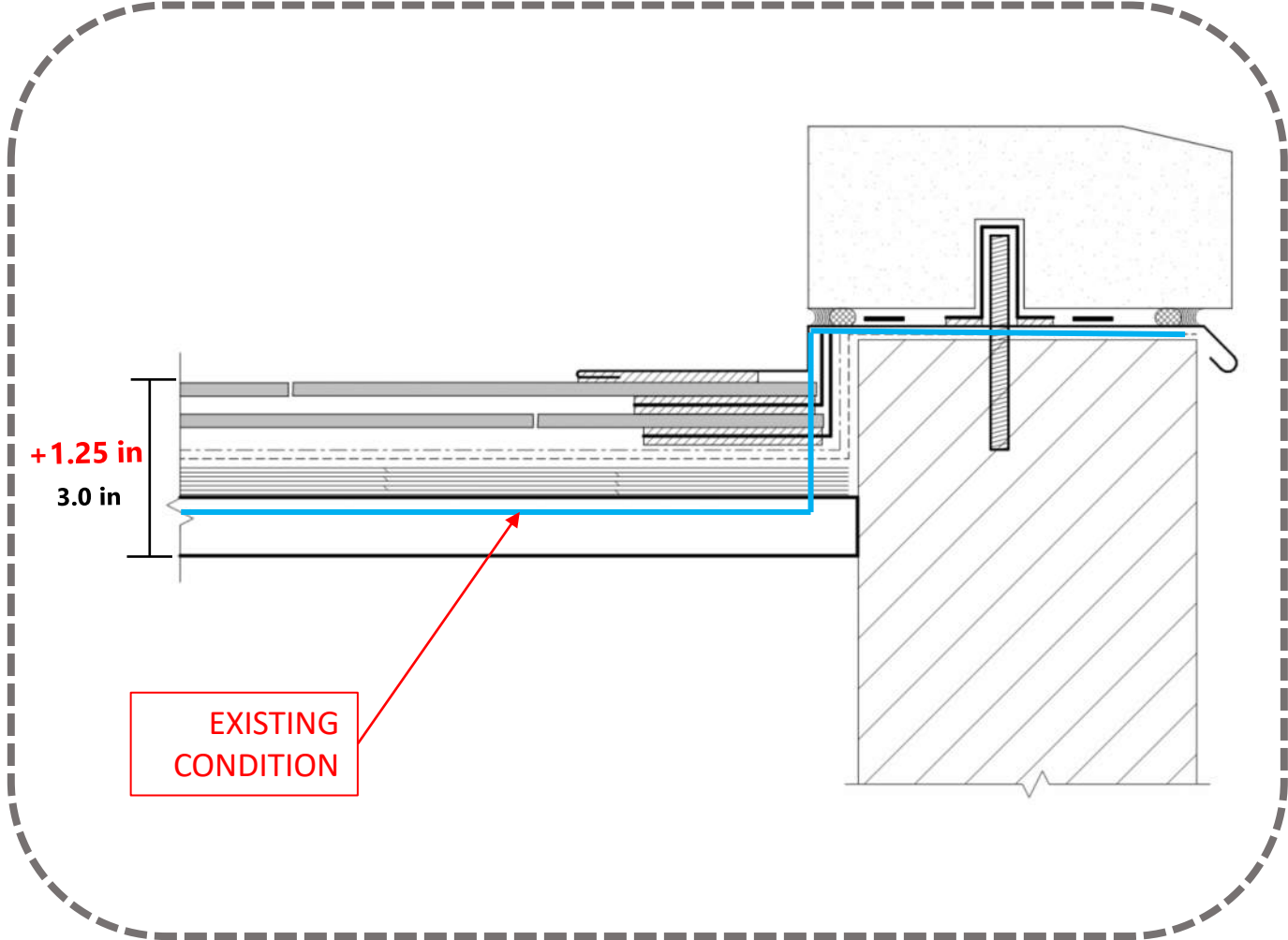
ROOF | PROPOSED  
DIMENSIONAL CHANGE TO ACCOMMODATE INSULATION



MAIN HALL – WEST END OF NORTH ELEVATION ROOF

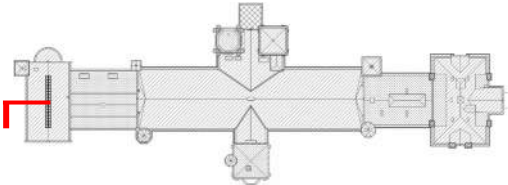


## GREAT HALL ROOF



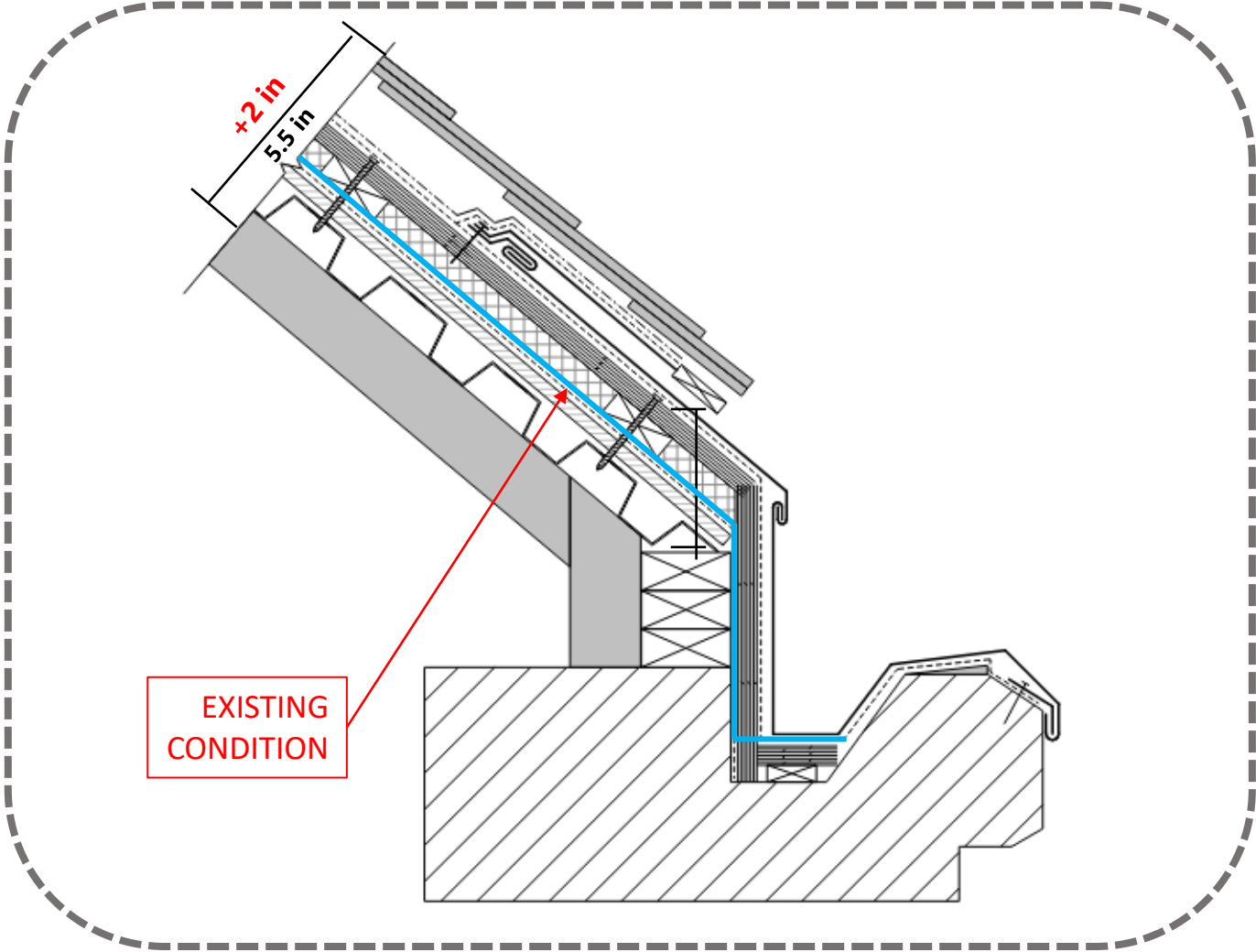
# SMITHSONIAN INSTITUTION BUILDING (SIB)

ROOF | PROPOSED  
DIMENSIONAL CHANGE TO ACCOMMODATE INSULATION



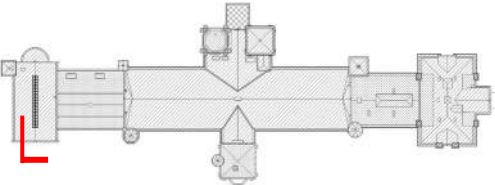
WEST WING – SOUTHWEST CORNER OF THE ROOF

## WEST WING ROOF



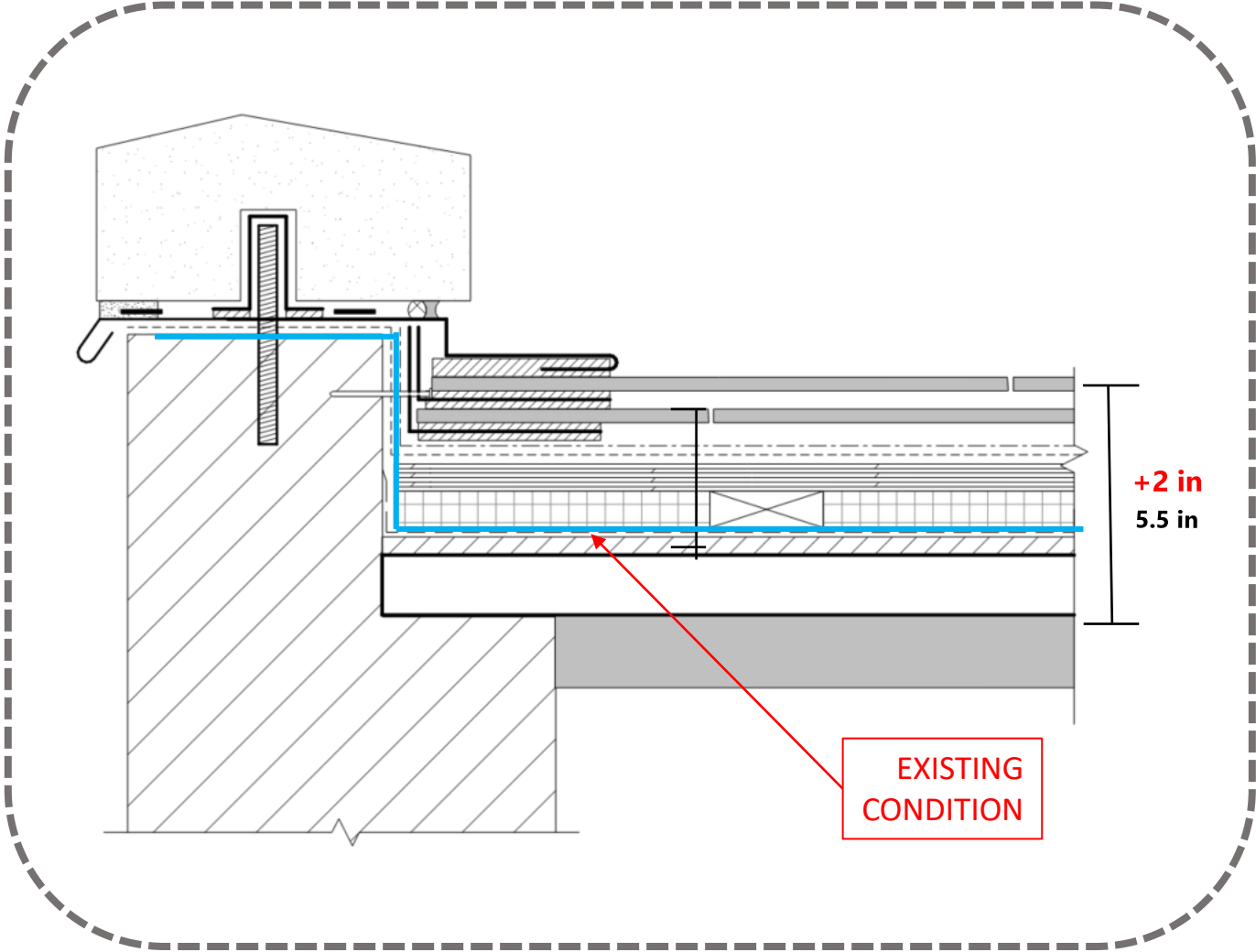
# SMITHSONIAN INSTITUTION BUILDING (SIB)

ROOF | PROPOSED  
DIMENSIONAL CHANGE TO ACCOMMODATE INSULATION



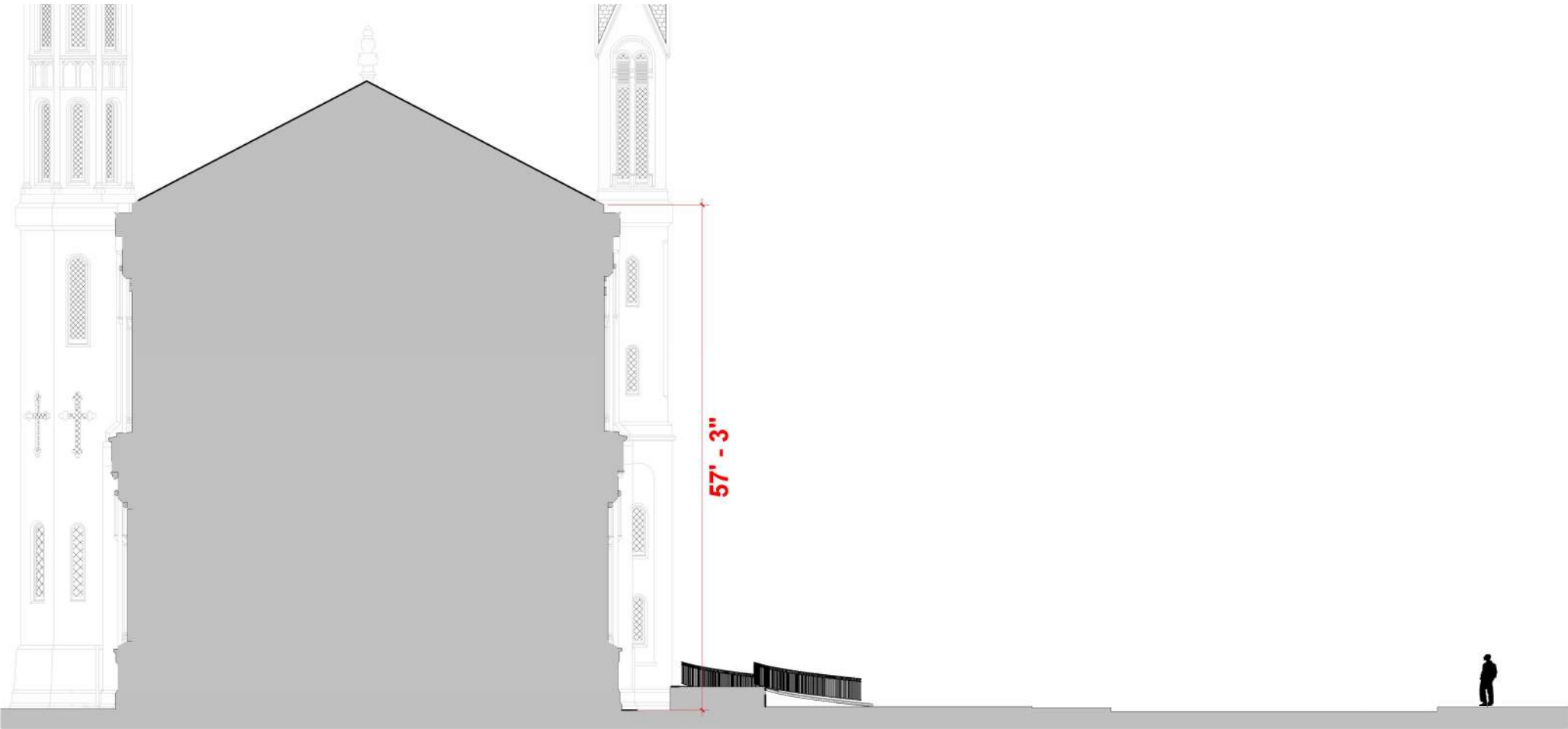
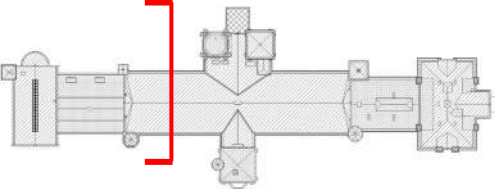
WEST WING – SOUTHWEST CORNER OF THE ROOF

## WEST WING ROOF



# SMITHSONIAN INSTITUTION BUILDING (SIB)

ROOF | PROPOSED SECTION



**CROSS SECTION**  
HEIGHT OF ROOF FROM GRADE

# SMITHSONIAN INSTITUTION BUILDING (SIB)

## REPLACEMENT MATERIALS | ROOFING SLATE TEST RESULTS OF EXISTING SLATE

- Performance of existing slate varied greatly
  - 1 of 4 samples do not meet the maximum ASTM Absorption requirement (0.25%)
  - 2 of 4 samples do not meet the minimum breaking load (575 lb-force)
  - 3 out of 4 sample areas did not meet the minimum historic ASTM Modulus of Rupture requirement (9,000 psi)\*
- Due to large variation in quality and color, as well as increased risk of breakage, it is recommended that all roofing slate be replaced
- Complete replacement results in uniform color and extended surface life

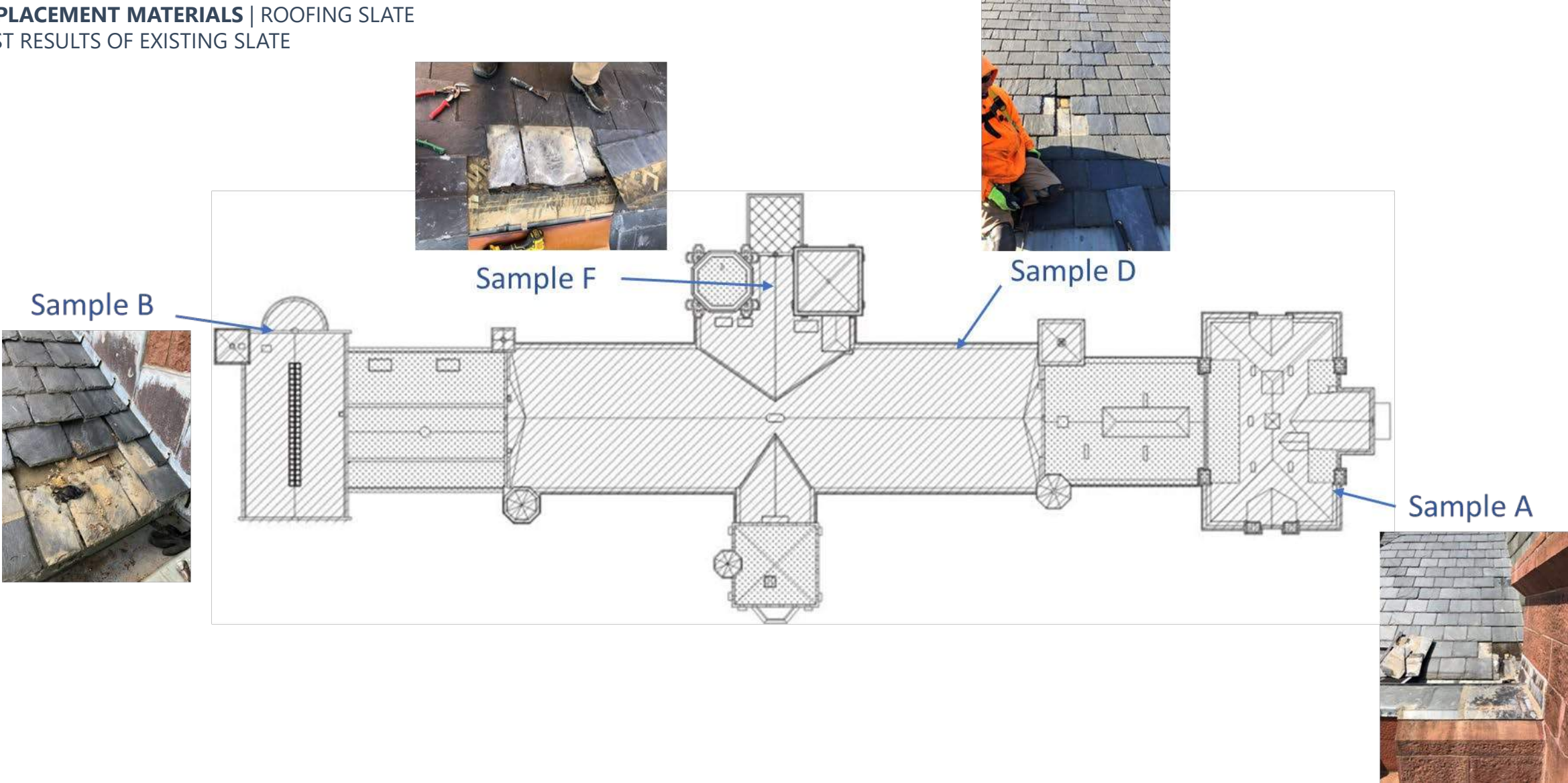
	ASTM C406 Requirements			Test Results of Slate from The Castle			
	Grade S1	Grade S2	Grade S3	Sample A** (East Wing)	Sample B** (West Wing)	Sample D** (Main Building)	Sample F** (Main Building)
Anticipated Service Life	Over 75 Years	40 – 75 Years	20 – 40 Years				
Absorption (% max.)	0.25	0.36	0.45	0.21	0.13	0.84	0.10
Depth of Softening (in., max.)	0.002	0.008	0.014	0.0020	0.0005	0.0004	-0.0024
Breaking Load (lb-force, min.)	575	575	575	383	716	285	663
Modulus of Rupture (psi, min.)*	9,000	9,000	9,000	7,878	7,881	4,840	11,052

\*Modulus of Rupture is no longer part of the ASTM Standard and is reported for information purposes only. The Modulus of Rupture strength requirement was replaced with a breaking load strength requirement when the standard was changed in 2005.

\*\* Results represent testing of a single slate shingle and may not be representative of the slate on the roof as a whole.

# SMITHSONIAN INSTITUTION BUILDING (SIB)

REPLACEMENT MATERIALS | ROOFING SLATE  
TEST RESULTS OF EXISTING SLATE



# SMITHSONIAN INSTITUTION BUILDING (SIB)

## REPLACEMENT MATERIALS | ROOFING SLATE

### HILLTOP SLATE



8 AM  
UPPER: **UNFADING GRAY**



12 PM  
UPPER: **UNFADING GRAY**

### VERMONT STRUCTURAL SLATE CO.



8 AM  
RIGHT: **HENDRICKS SLATE**



12 PM  
RIGHT: **HENDRICKS SLATE**

### EVERGREEN SLATE CO.



8 AM  
LEFT: **VERMONT BLACK**



12 PM  
LEFT: **VERMONT BLACK**

# SMITHSONIAN INSTITUTION BUILDING (SIB)

## REPLACEMENT MATERIALS | ROOFING SLATE

### BUCKINGHAM SLATE

In 1847 slate quarries were open in the US in the following locations:

- **Vermont/New York** line (Fairhaven/Granville Area) – since 1839
- **Pennsylvania** (Lehigh area and Peachbottom area) – since 1808 and 1734
- **Virginia** (Buckingham) -since 1700's

- **The Buckingham Slate Company**

- NOT a good candidate for SIB
- NOT producing roofing slate in foreseeable future; only flagstone, decorative stones, etc.
- Prior test data revealed that the properties of their roofing slate was insufficient

- **The James River Slate Company**

- Located in Buckingham County, Virginia
- Quarries and fabricates an excellent quality, highly durable roofing slate - "Grayson Slate"
- tested by SGH and found to have excellent technical properties



BUCKINGHAM SLATE



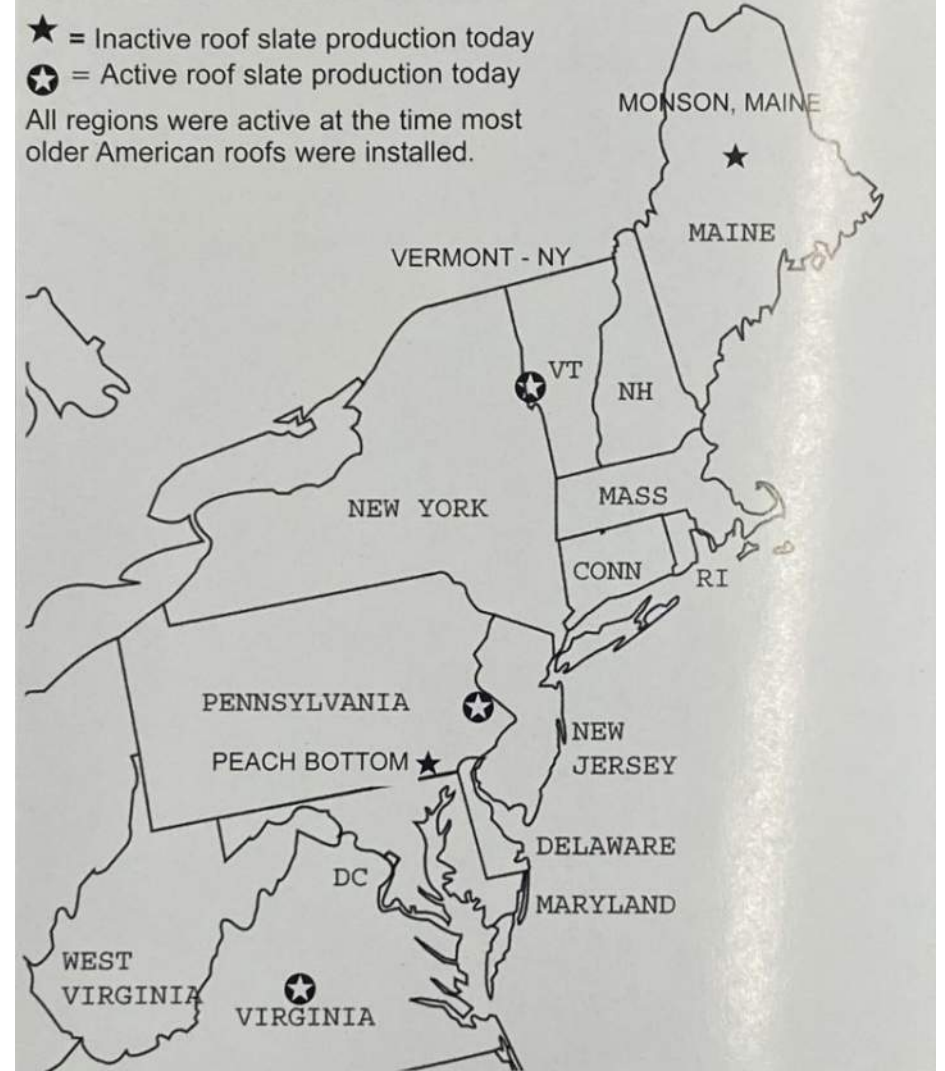
GRAYSON SLATE

## WHERE DO AMERICAN ROOF SLATES COME FROM?

★ = Inactive roof slate production today

⊛ = Active roof slate production today

All regions were active at the time most older American roofs were installed.



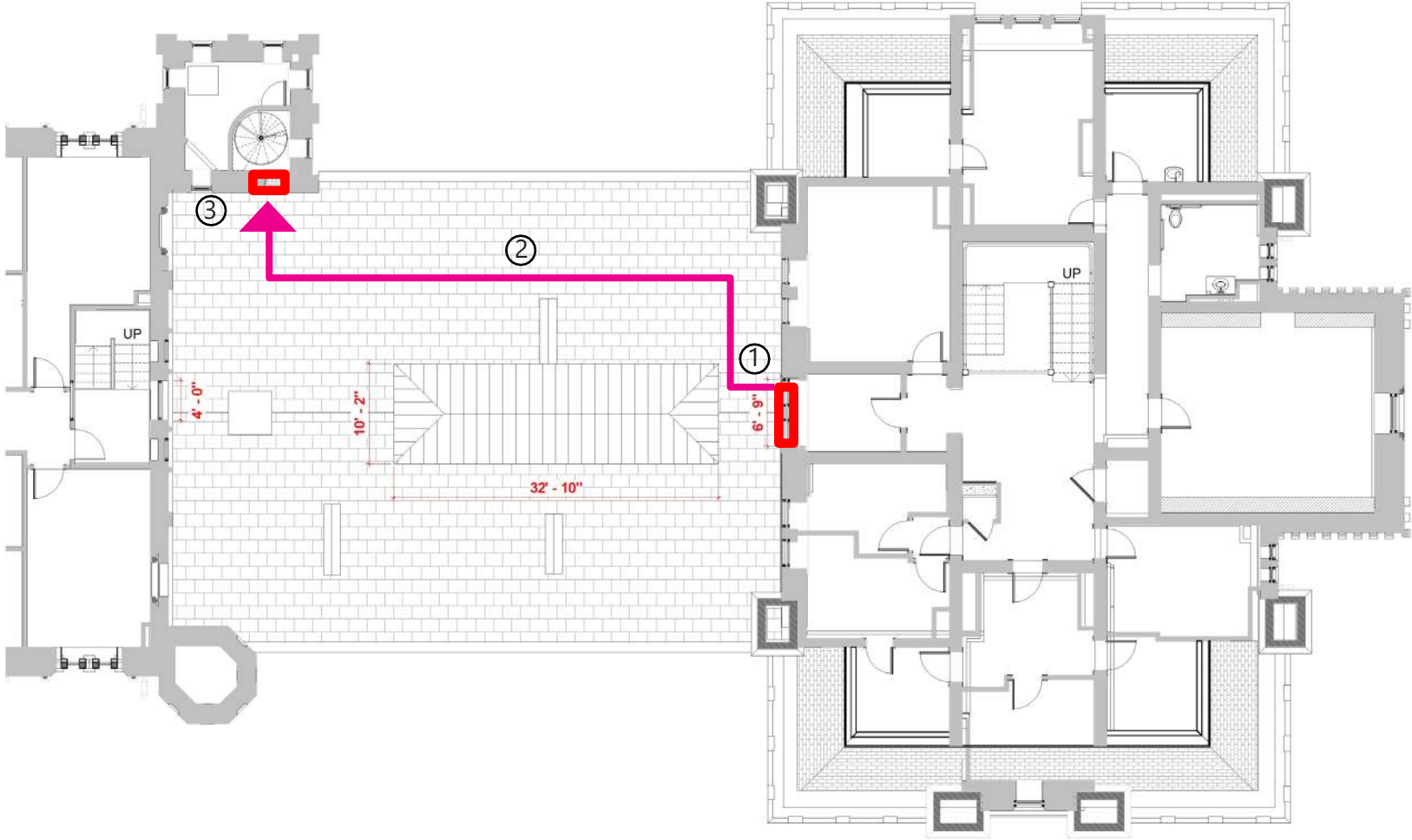
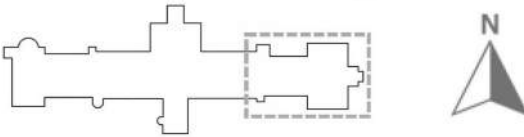
LOCATIONS OF AMERICAN ROOF SLATES



# EMERGENCY EGRESS EAST RANGE

# SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
EXISTING CONDITIONS



# SMITHSONIAN INSTITUTION BUILDING (SIB)

## EAST RANGE

### 4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS

PREVIOUS DESIGN STUDY – PRESENTED CP4



**Existing** Louvered Penthouse

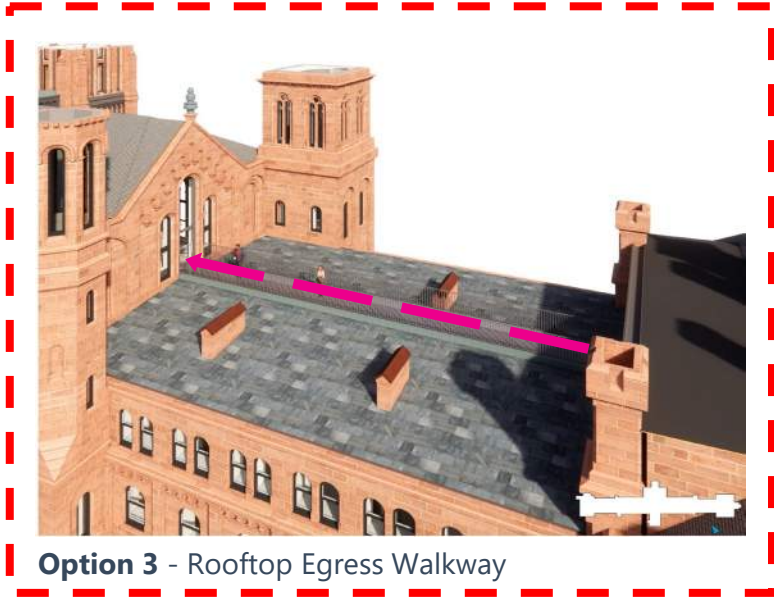


**Option 1** - Historic Rooftop Connector



**Option 2**- Modern Rooftop Connector

*\*APPROVED BY CFA AND NCPC*



**Option 3** - Rooftop Egress Walkway

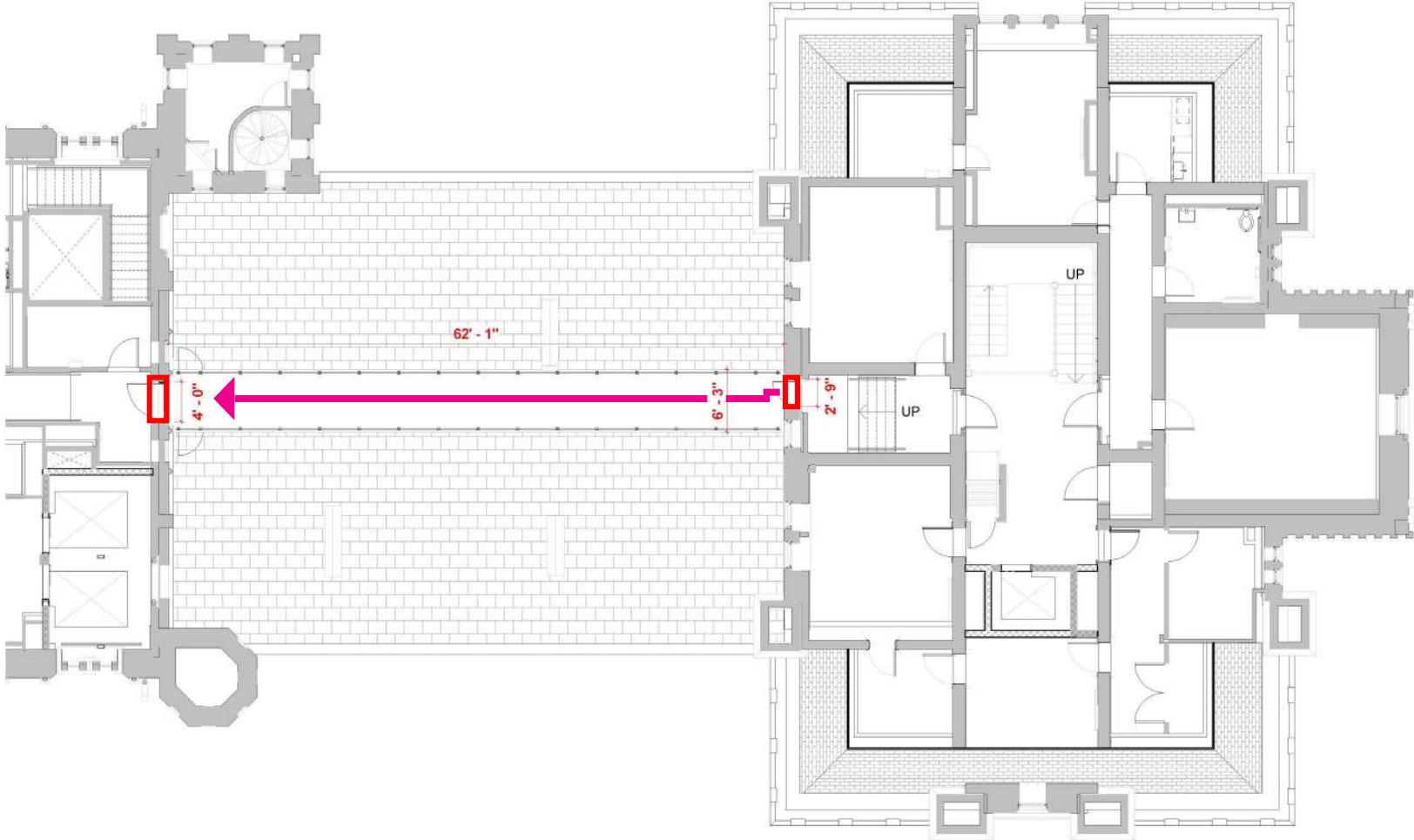
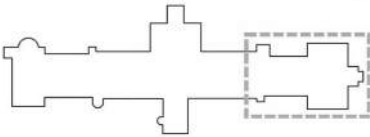
# SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
UPDATED APPROACH



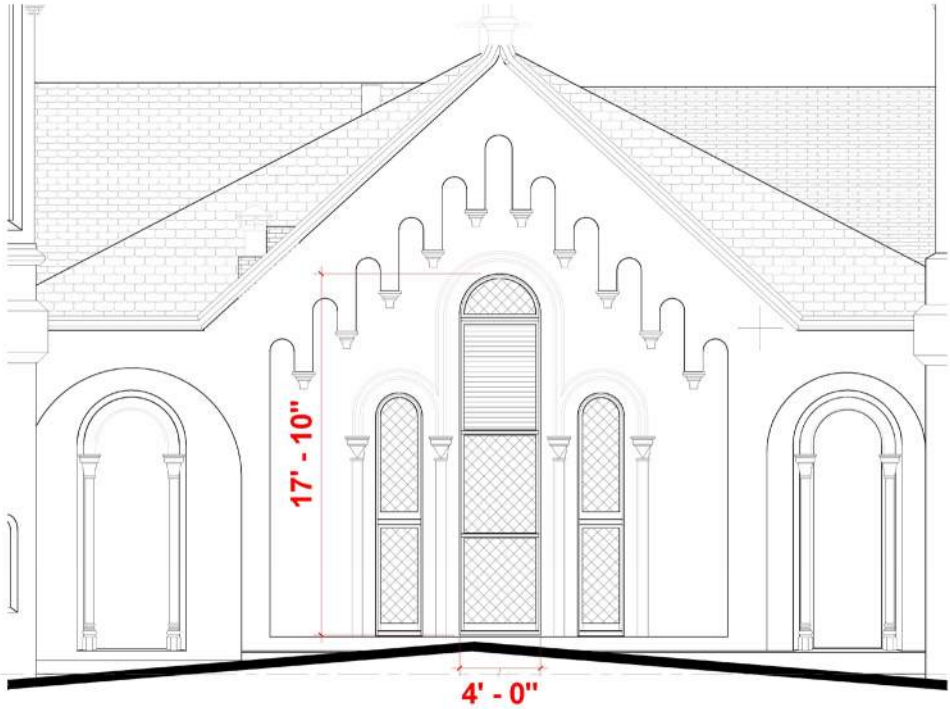
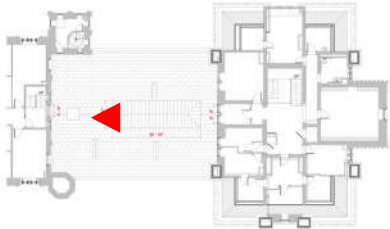
# SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
PROPOSED PLAN



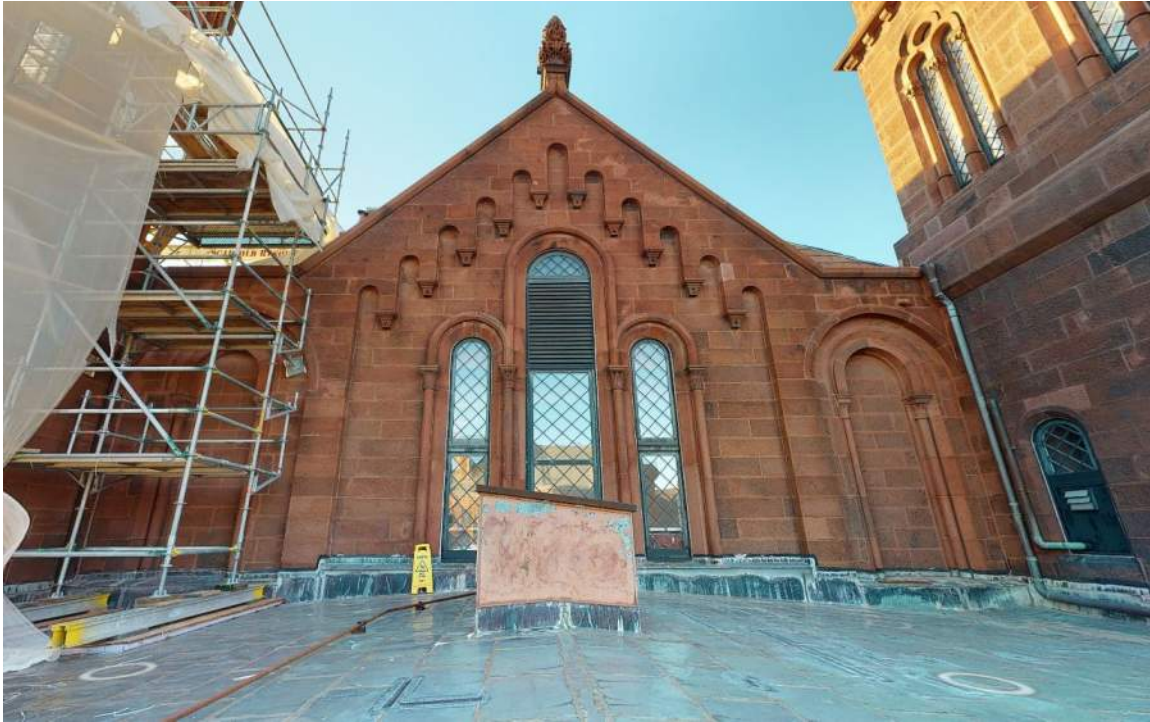
# SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
MAIN BUILDING ELEVATION (EAST)  
INSERTION OF DOOR AT EXISTING WINDOW



SIB-LEVEL 4 EAST WING  
21671  
71' - 1 1/4"

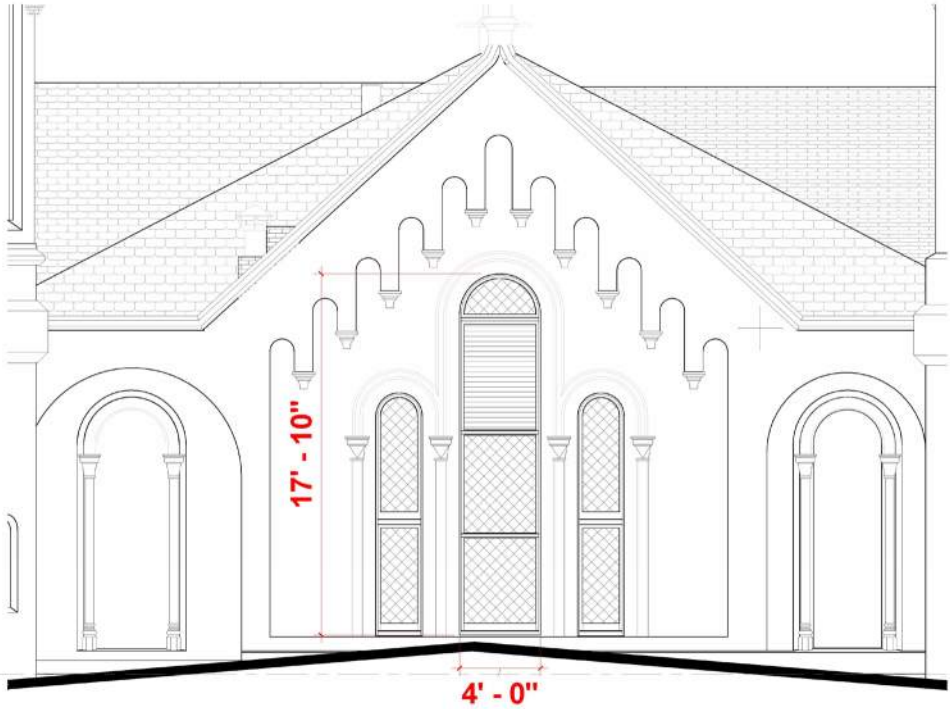
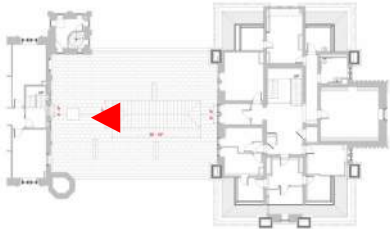
EXISTING



EXISTING

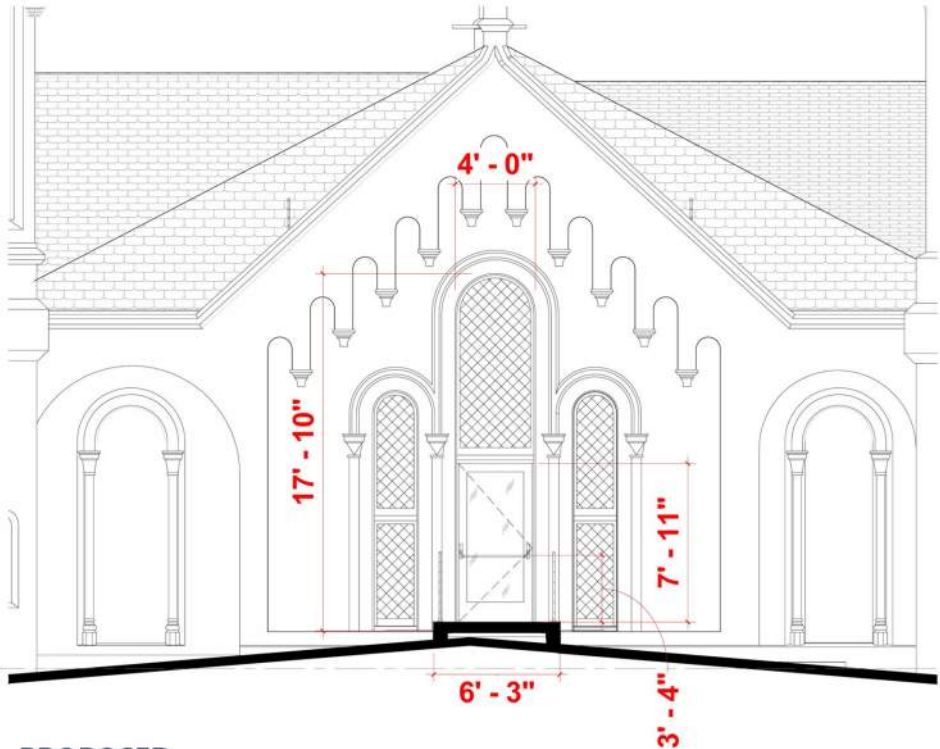
# SMITHSONIAN INSTITUTION BUILDING (SIB)

**EAST RANGE**  
**4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS**  
 MAIN BUILDING ELEVATION (EAST)  
 INSERTION OF DOOR AT EXISTING WINDOW



SIB-LEVEL 4 EAST WING  
 21671  
 71' - 1 1/4"

EXISTING



SIB-LEVEL 4 EAST WING  
 21671  
 71' - 1 1/4"

**PROPOSED**

\*NO ALTERATION TO HISTORIC SANDSTONE

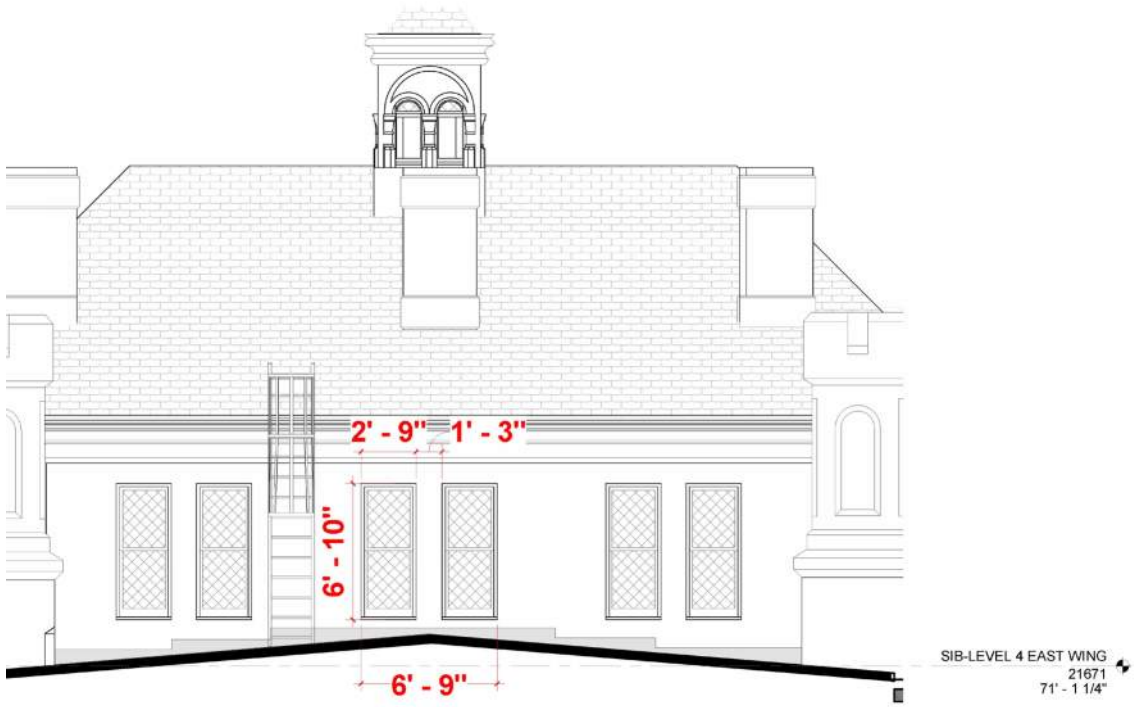
# SMITHSONIAN INSTITUTION BUILDING (SIB)

## EAST RANGE

### 4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS

EAST WING ELEVATION (WEST)

INSERTION OF DOOR IN EXISTING WINDOW OPENING



EXISTING



EXISTING



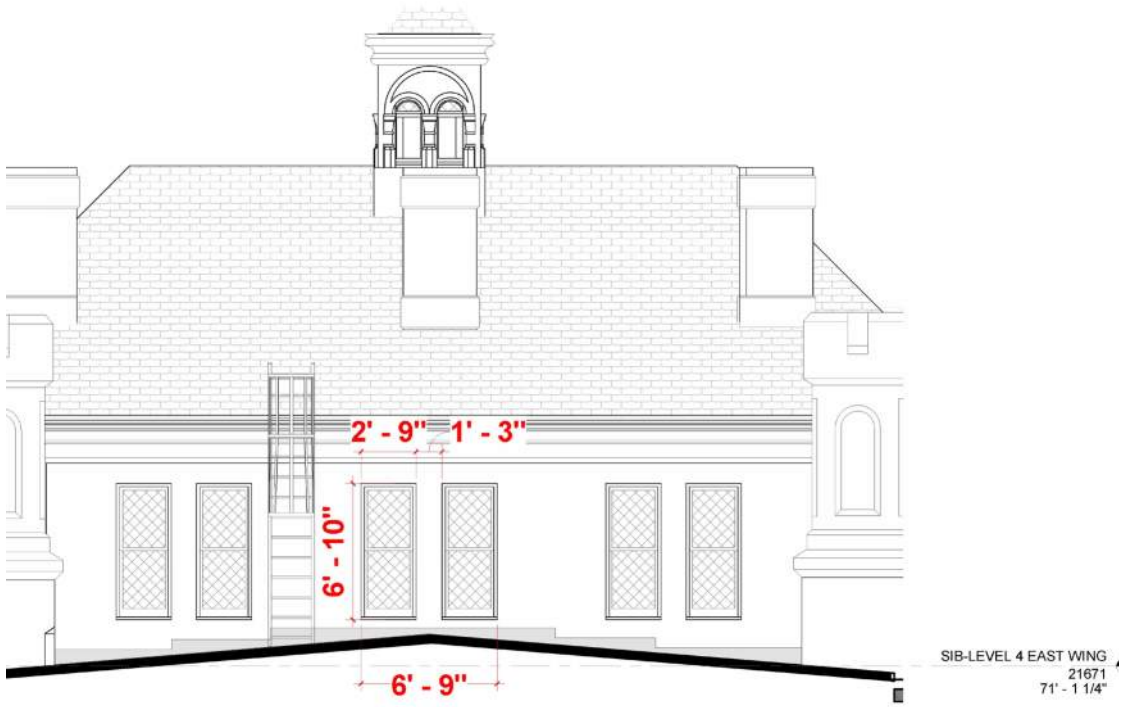
# SMITHSONIAN INSTITUTION BUILDING (SIB)

## EAST RANGE

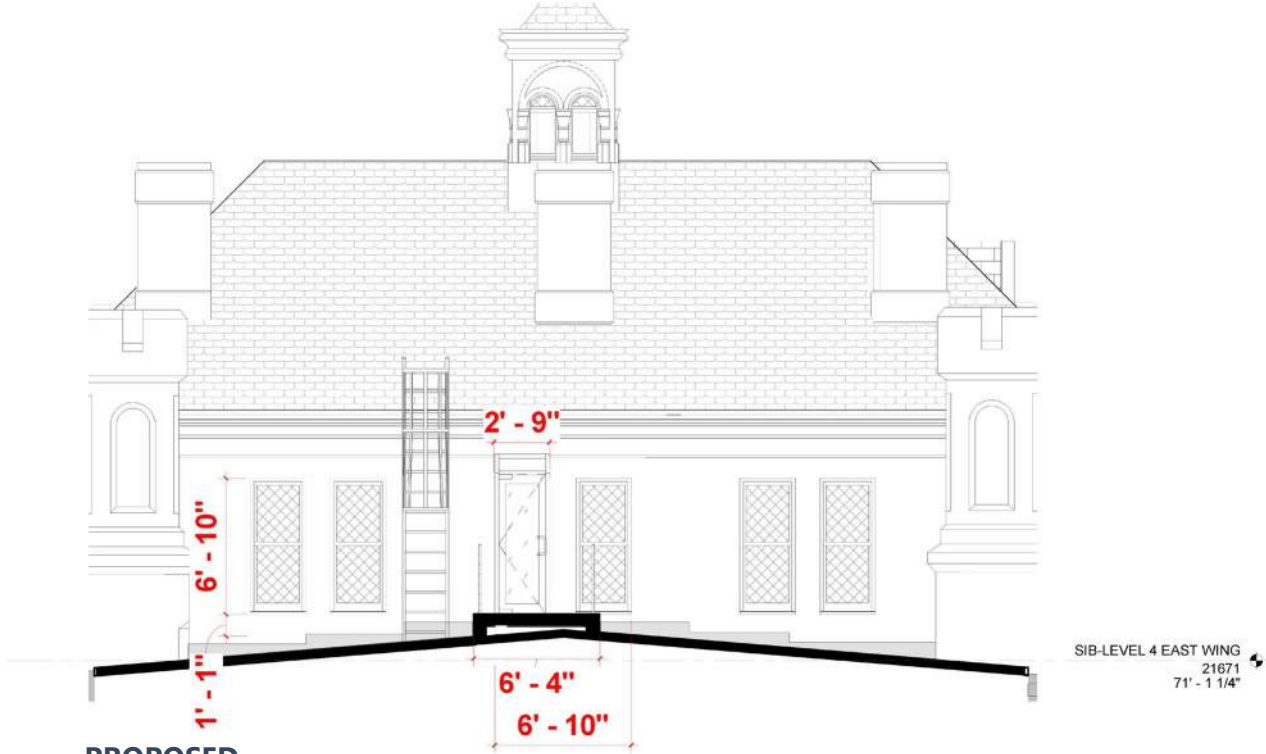
### 4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS

EAST WING ELEVATION (WEST)

INSERTION OF DOOR IN EXISTING WINDOW OPENING



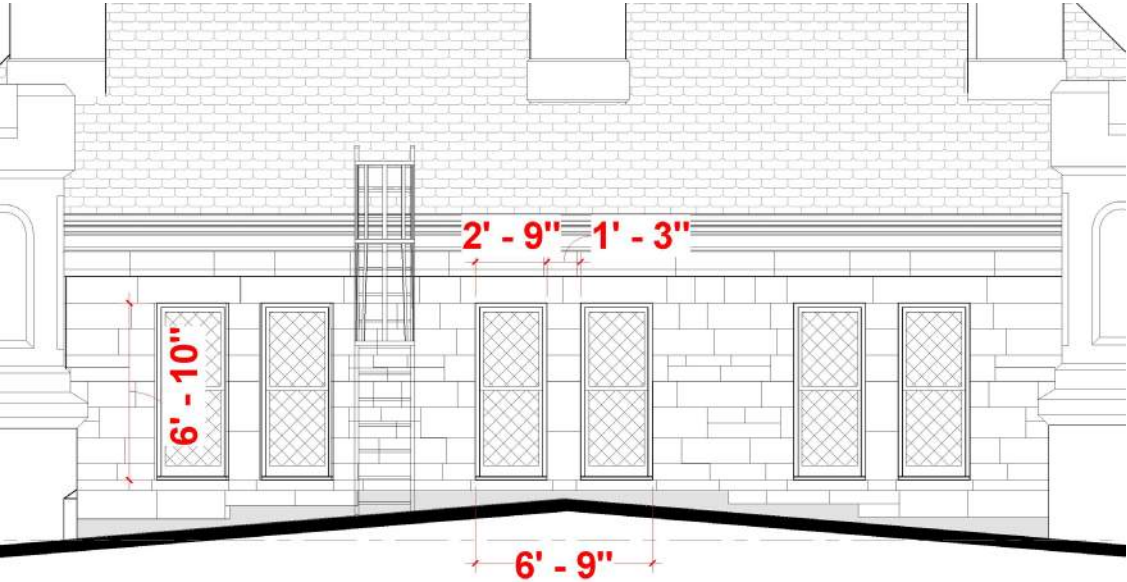
EXISTING



PROPOSED

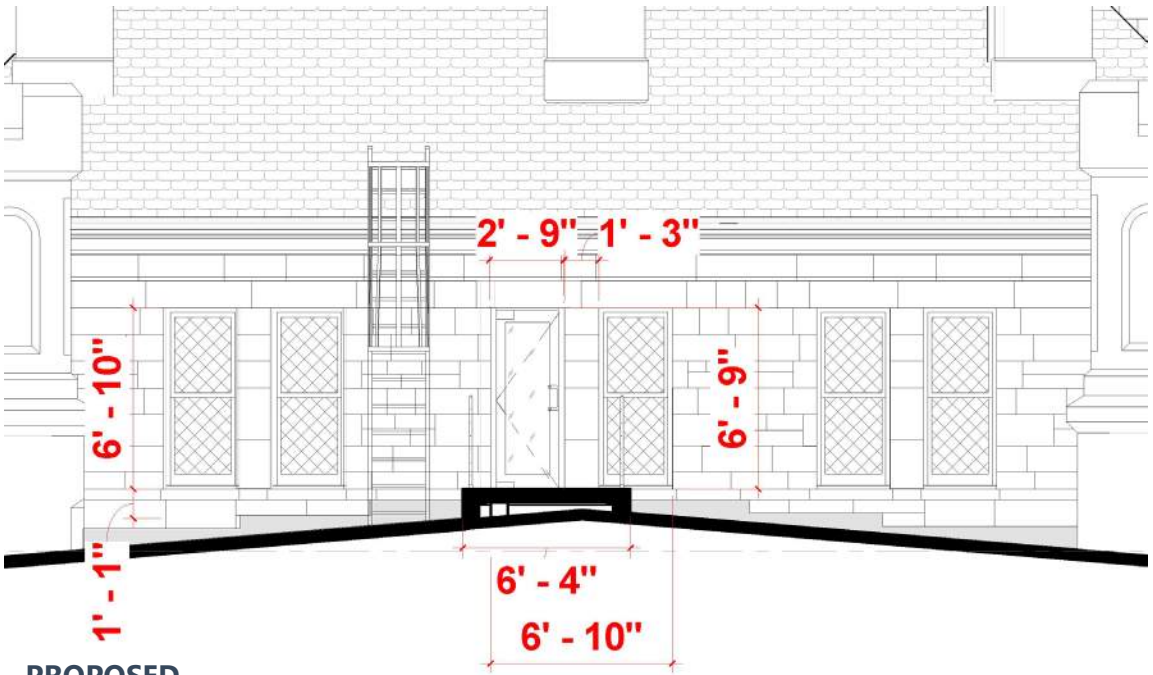
# SMITHSONIAN INSTITUTION BUILDING (SIB)

**EAST RANGE**  
**4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS**  
 ELEVATIONS – MASONRY ALTERATIONS



EXISTING

- EXISTING SENECA SANDSTONE UNIT
- EXISTING FLASHING

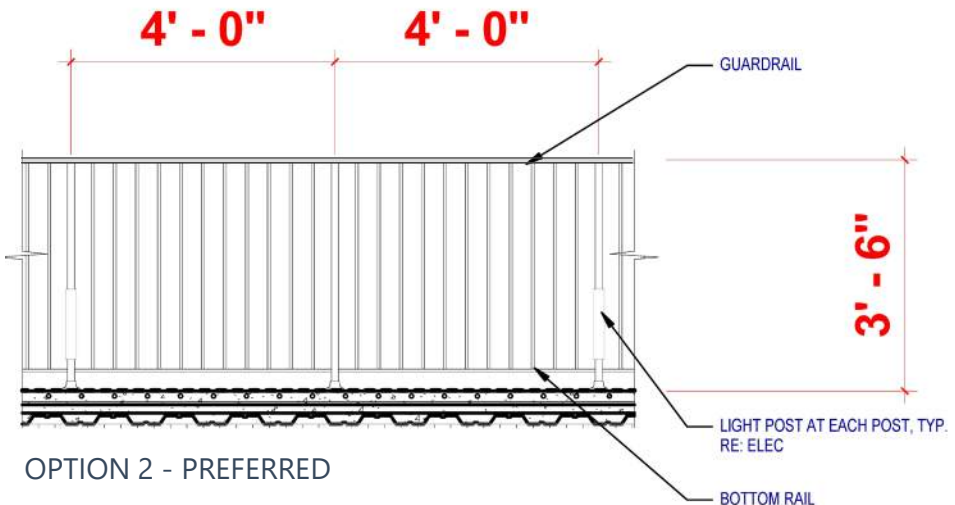
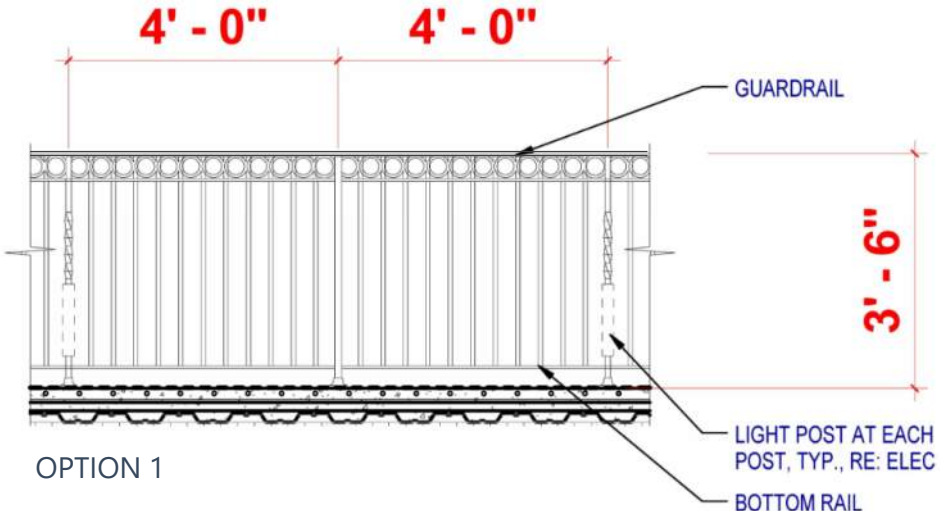


PROPOSED

\*NO ALTERATION TO HISTORIC SANDSTONE

# SMITHSONIAN INSTITUTION BUILDING (SIB)

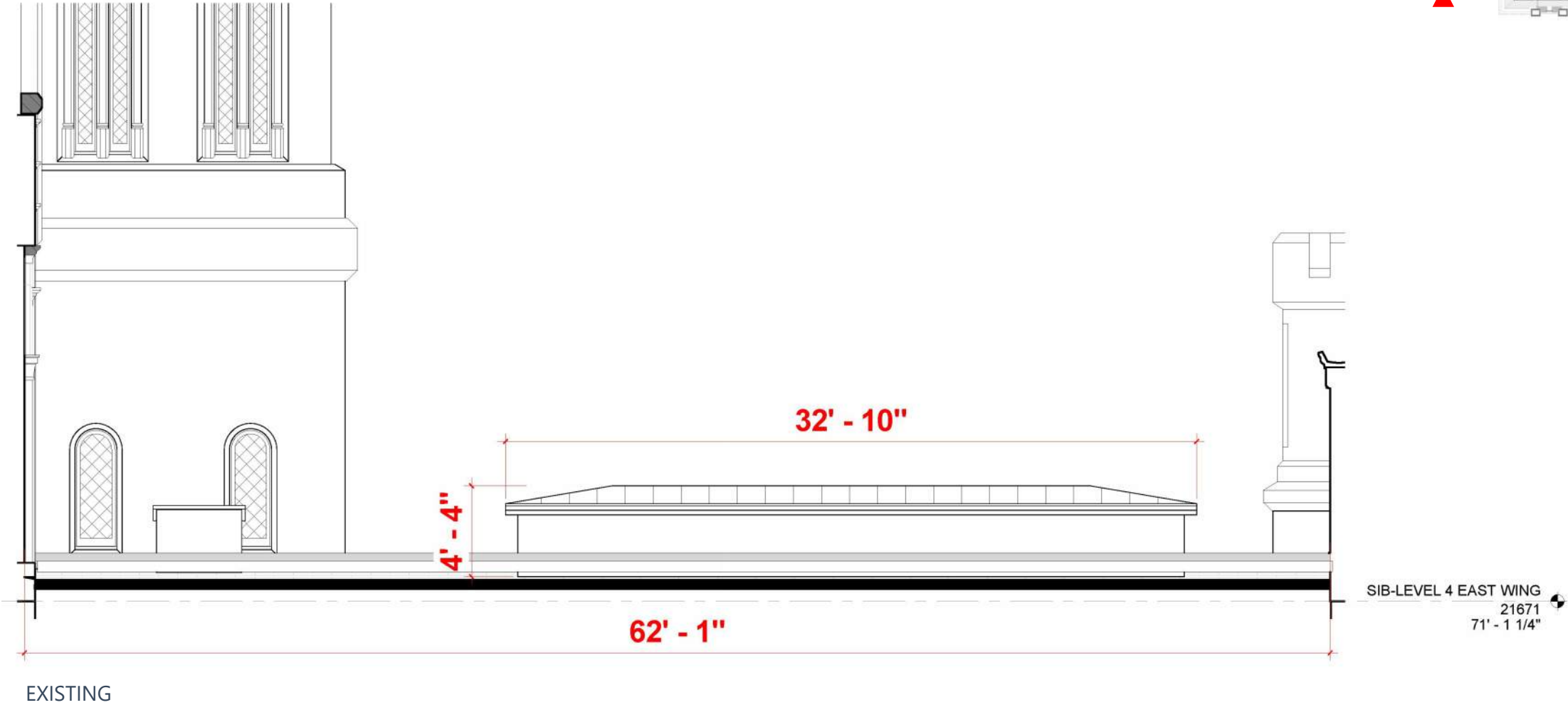
## EAST RANGE 4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS



INTEGRATED LIGHT POST  
\*LIGHTING ON EMERGENCY CIRCUIT ONLY

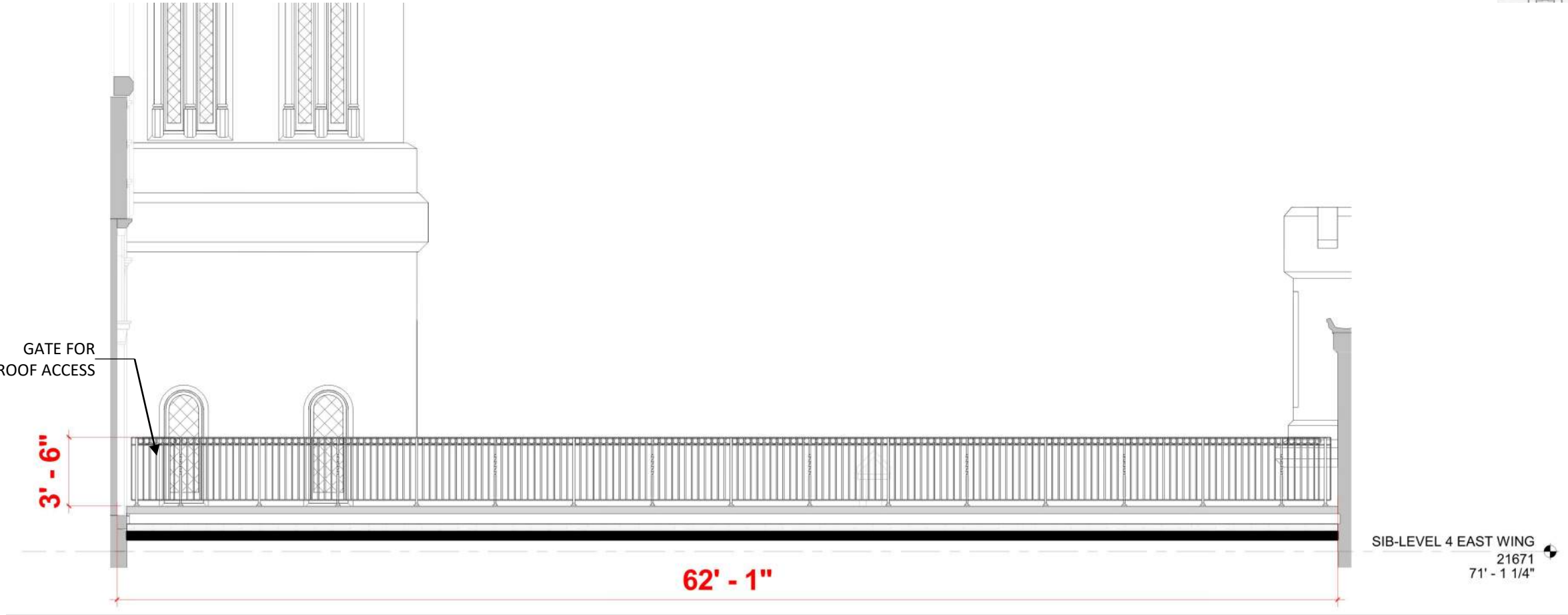
# SMITHSONIAN INSTITUTION BUILDING (SIB)

EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
EXISTING ELEVATION



# SMITHSONIAN INSTITUTION BUILDING (SIB)

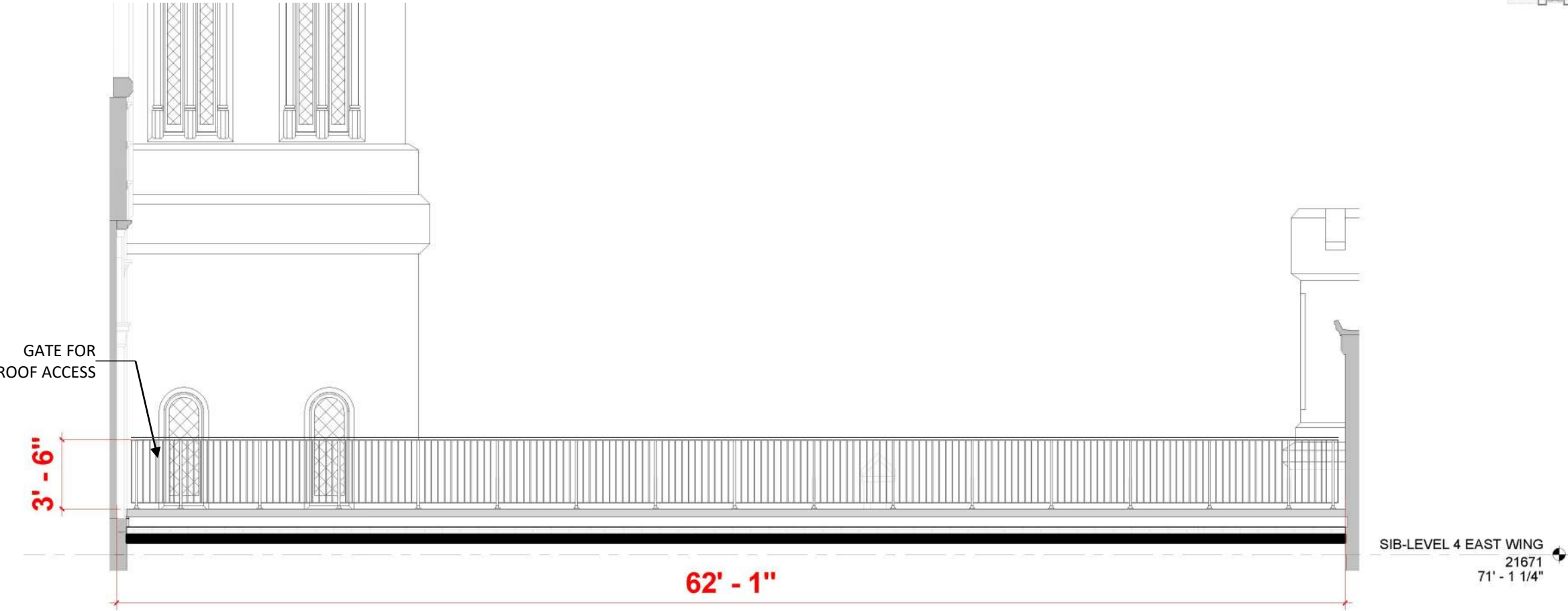
EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
PROPOSED ELEVATION  
OPTION 1



ELEVATION – OPTION 1

# SMITHSONIAN INSTITUTION BUILDING (SIB)

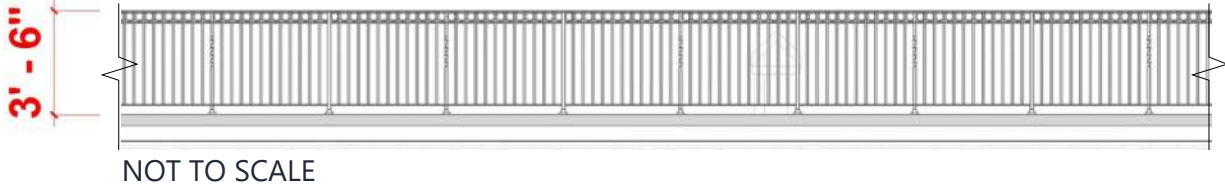
EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
PROPOSED ELEVATION  
OPTION 2 - PREFERRED



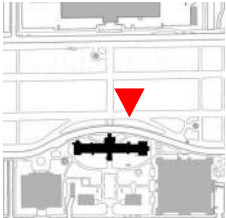
ELEVATION - OPTION 2

# SMITHSONIAN INSTITUTION BUILDING (SIB)

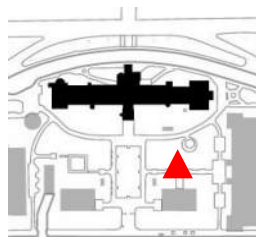
EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
RAILING DESIGN  
OPTION 1



VIEW FROM NATIONAL MALL

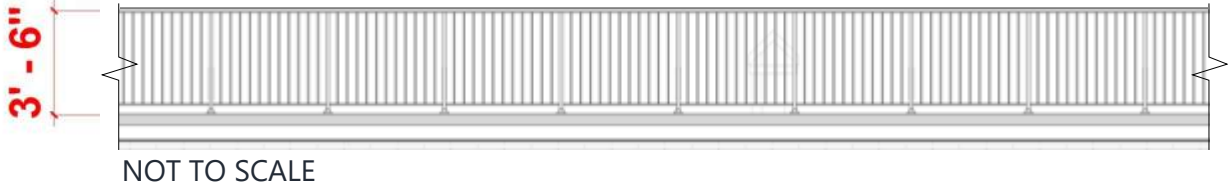


VIEW FROM HAUPT GARDEN

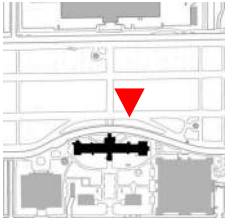


# SMITHSONIAN INSTITUTION BUILDING (SIB)

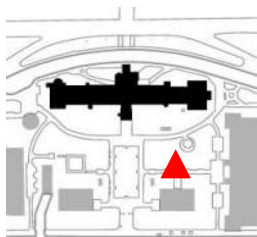
EAST RANGE  
4<sup>TH</sup> FLOOR - SECOND MEANS OF EGRESS  
RAILING DESIGN  
OPTION 2 - PREFERRED



VIEW FROM NATIONAL MALL



VIEW FROM HAUPT GARDEN





# Questions or Comments

## MODERATOR

**Carly Bond**, Historic Preservation Specialist

## PRESENTERS / PANELISTS

**Brenda Sanchez**, FAIA, Sr. Design Manager

**Christopher Lethbridge**, Architect/Program Manager

**Lauren Brandes**, RLA, ASLA, Smithsonian Gardens

**Matthew Chalifoux**, FAIA, Sr. Historic Preservation Architect, EYP-Loring, LLC

**Anthony Bochicchio**, AIA, Project Manager, EYP-Loring, LLC

**Faye Harwell**, FASLA, Landscape Architect, RHI (Rhodeside and Harwell)



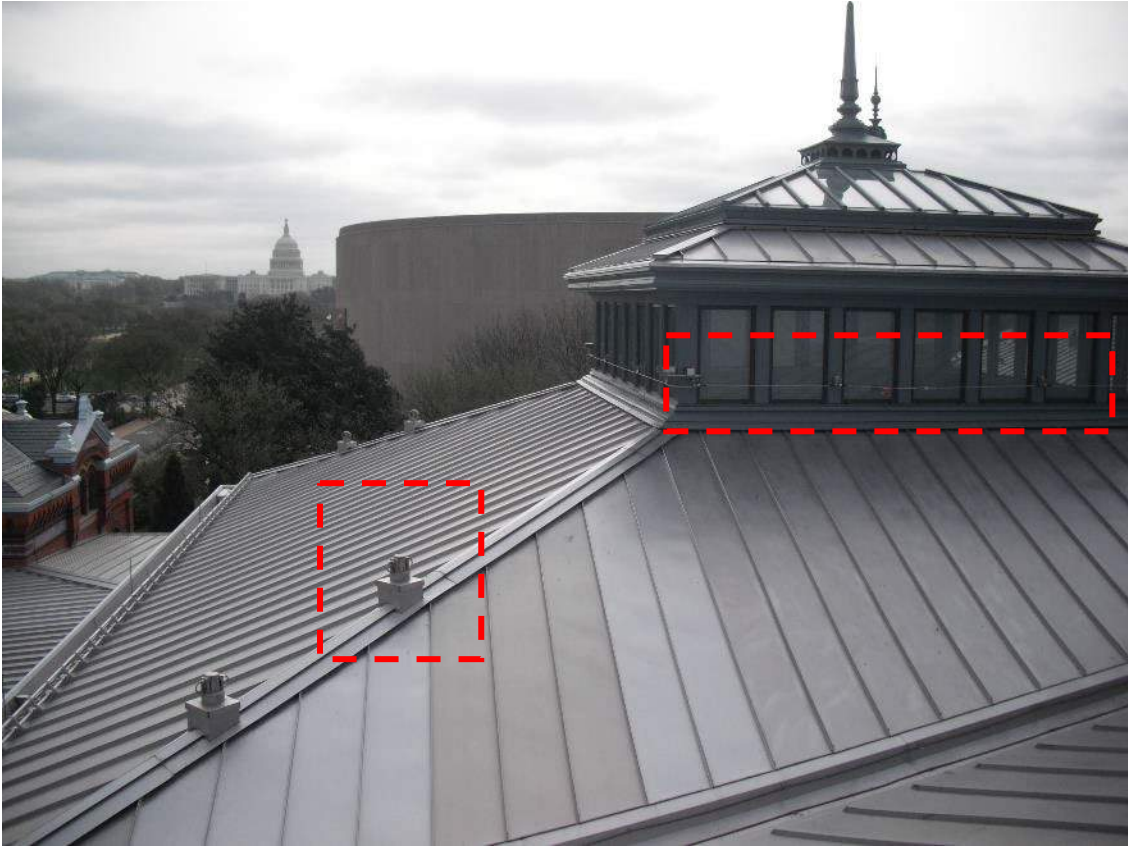
# FALL PROTECTION

# SMITHSONIAN INSTITUTION BUILDING (SIB)

FALL AND LIGHTNING PROTECTION | PROPOSED  
INSTALLATION EXAMPLE AT AIB



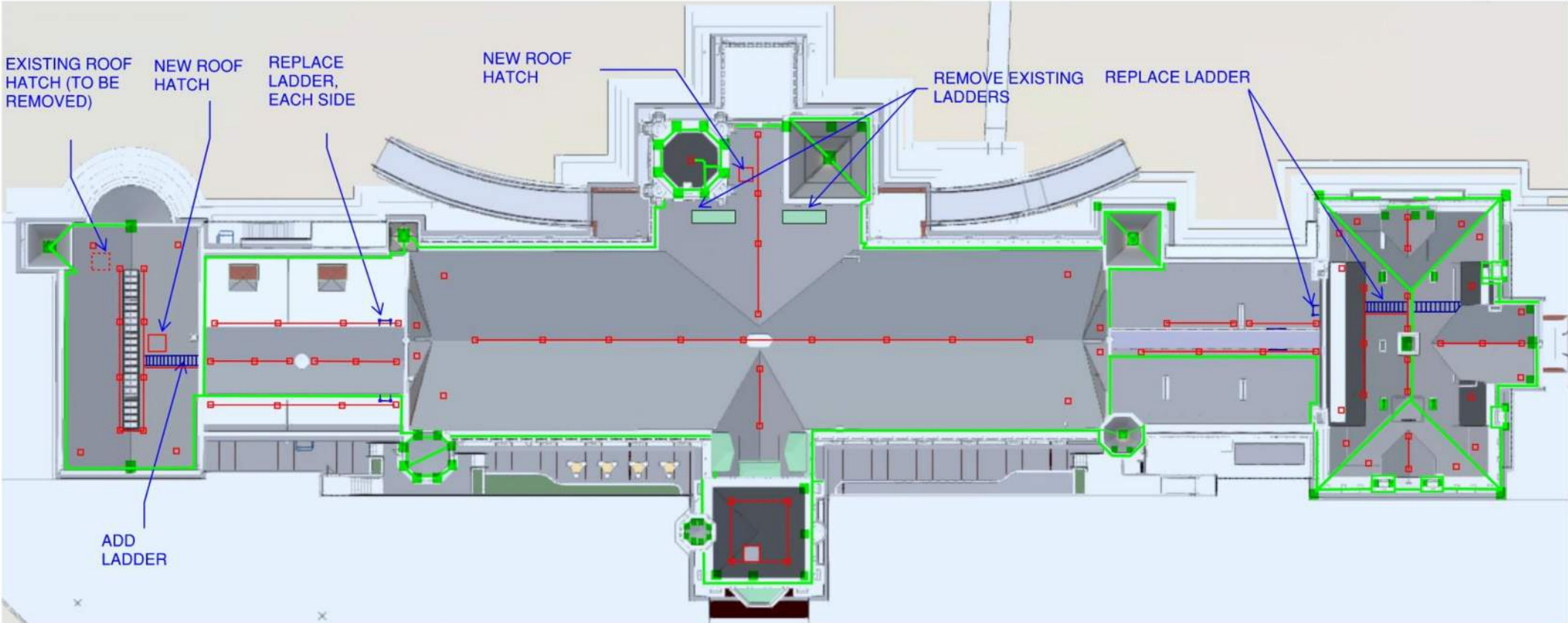
EXAMPLE OF REDIRECT STANCHION









EXAMPLE OF REDIRECT STANCHION AND HORIZONTAL LIFELINE

# SMITHSONIAN INSTITUTION BUILDING (SIB)

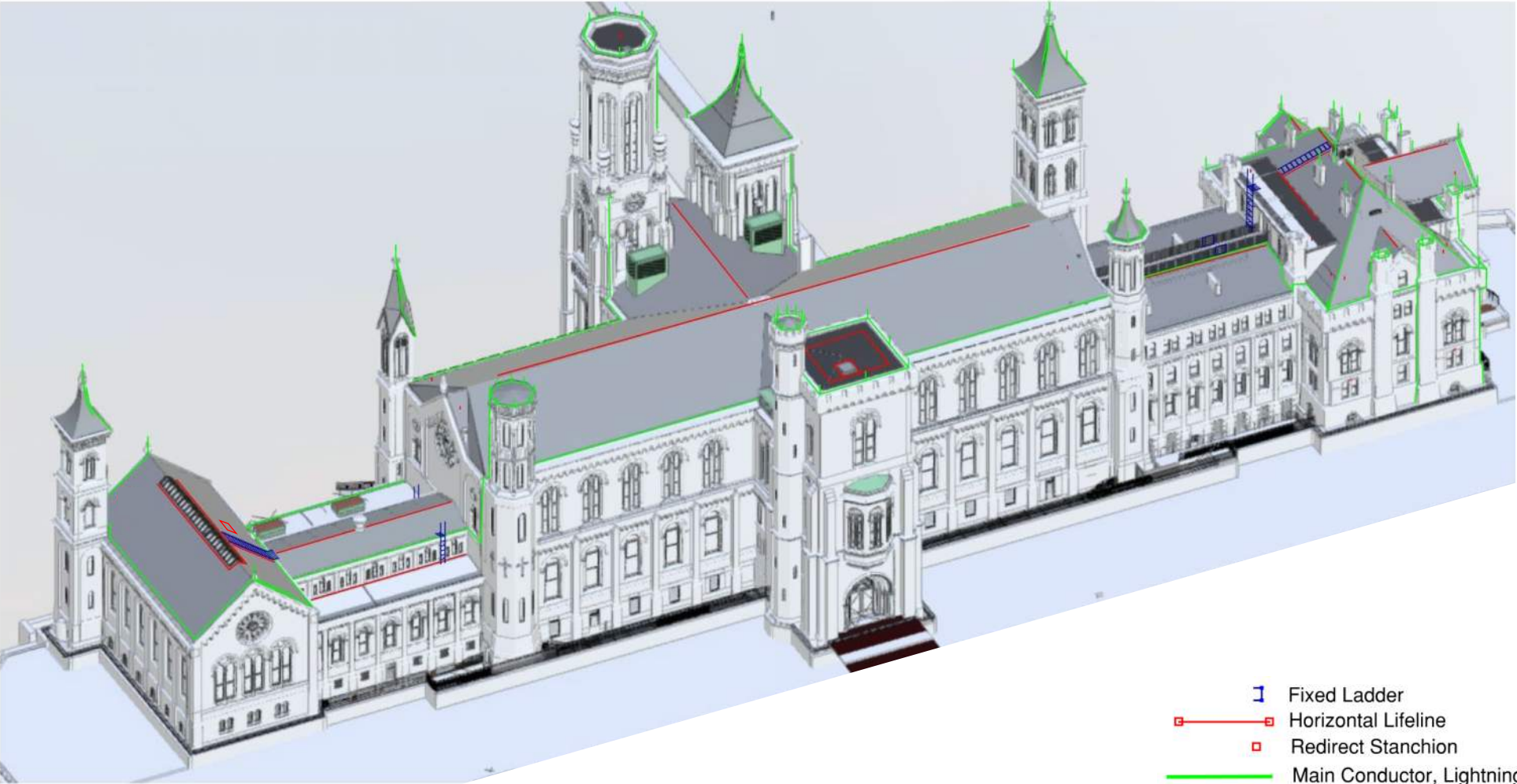
## FALL AND LIGHTNING PROTECTION | PROPOSED ROOF PLAN









-  Fixed Ladder
-  Horizontal Lifeline
-  Redirect Stanchion
-  Main Conductor, Lightning Protection
-  Air Terminal, 1/2" Cu, Lightning Protection
-  Ladder along slope of roof

# SMITHSONIAN INSTITUTION BUILDING (SIB)

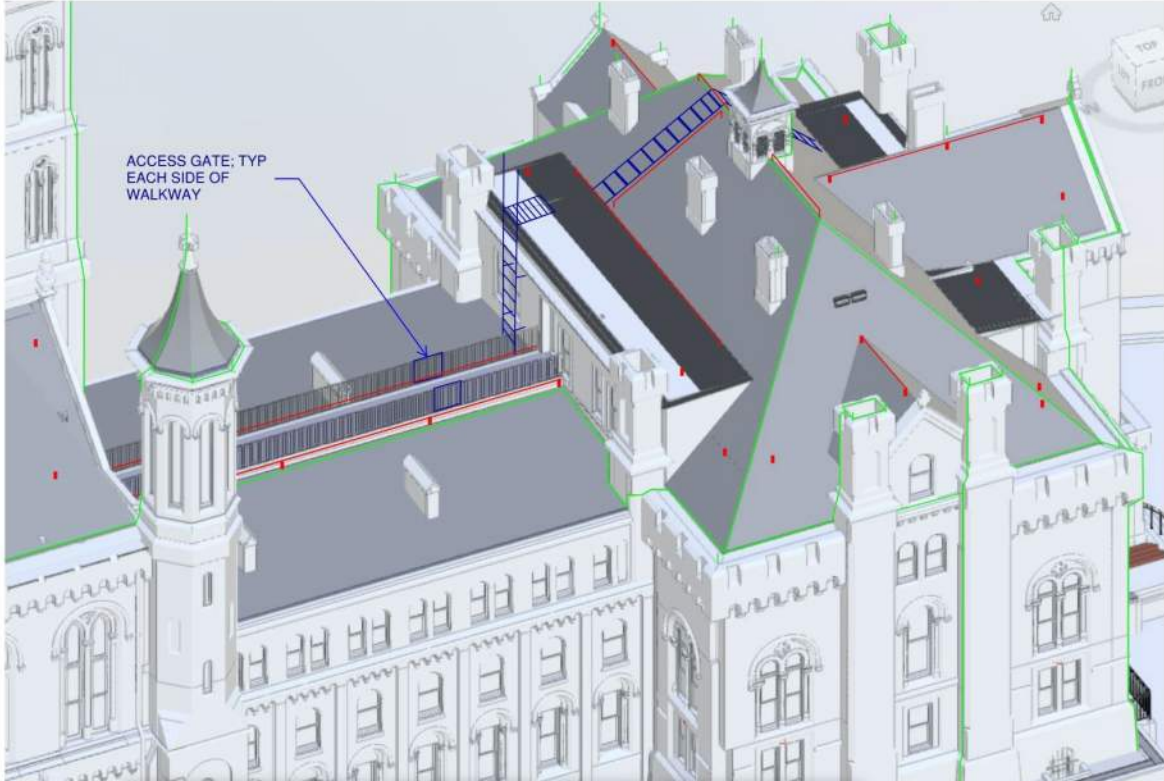
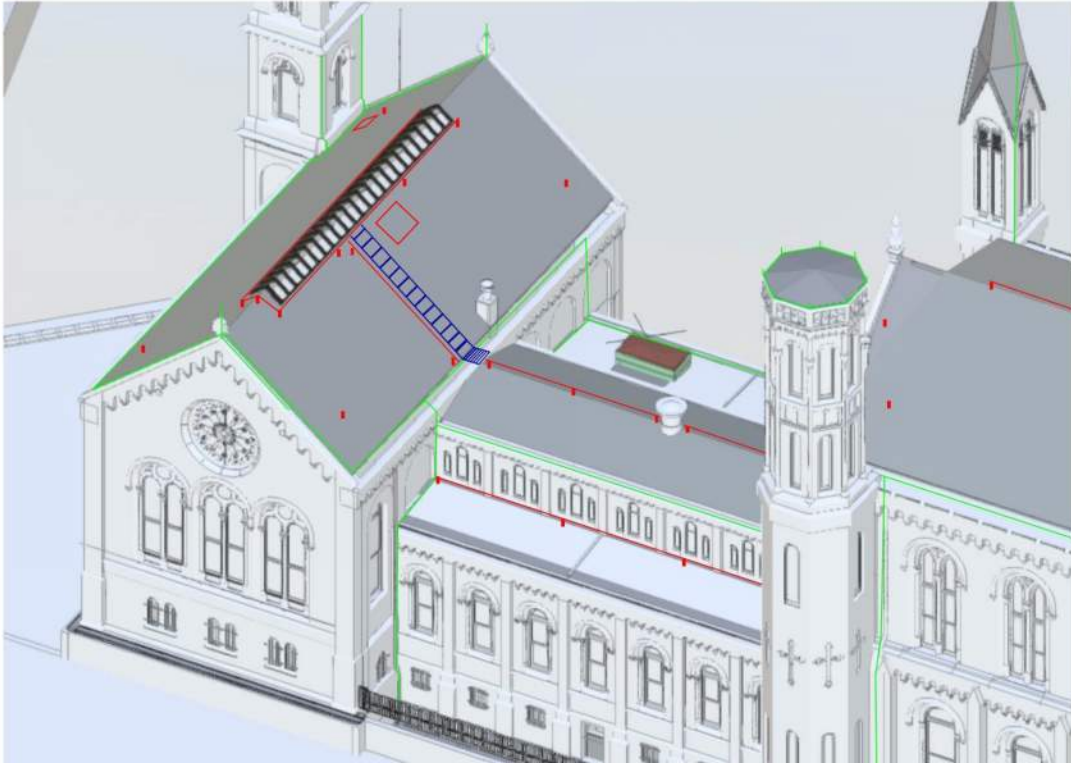
## FALL AND LIGHTNING PROTECTION | PROPOSED ROOF PLAN









-  Fixed Ladder
-  Horizontal Lifeline
-  Redirect Stanchion
-  Main Conductor, Lightning Protection
-  Air Terminal, 1/2" Cu, Lightning Protection
-  Ladder along slope of roof

# SMITHSONIAN INSTITUTION BUILDING (SIB)

## FALL AND LIGHTNING PROTECTION | PROPOSED ROOF PLAN



-  Fixed Ladder
-  Horizontal Lifeline
-  Redirect Stanchion
-  Main Conductor, Lightning Protection
-  Air Terminal, 1/2" Cu, Lightning Protection
-  Ladder along slope of roof

# SMITHSONIAN INSTITUTION BUILDING (SIB)

FALL AND LIGHTNING PROTECTION | PROPOSED  
INSTALLATION EXAMPLE AT AIB



VISIBILITY OF FALL PROTECTION - FROM GROUND



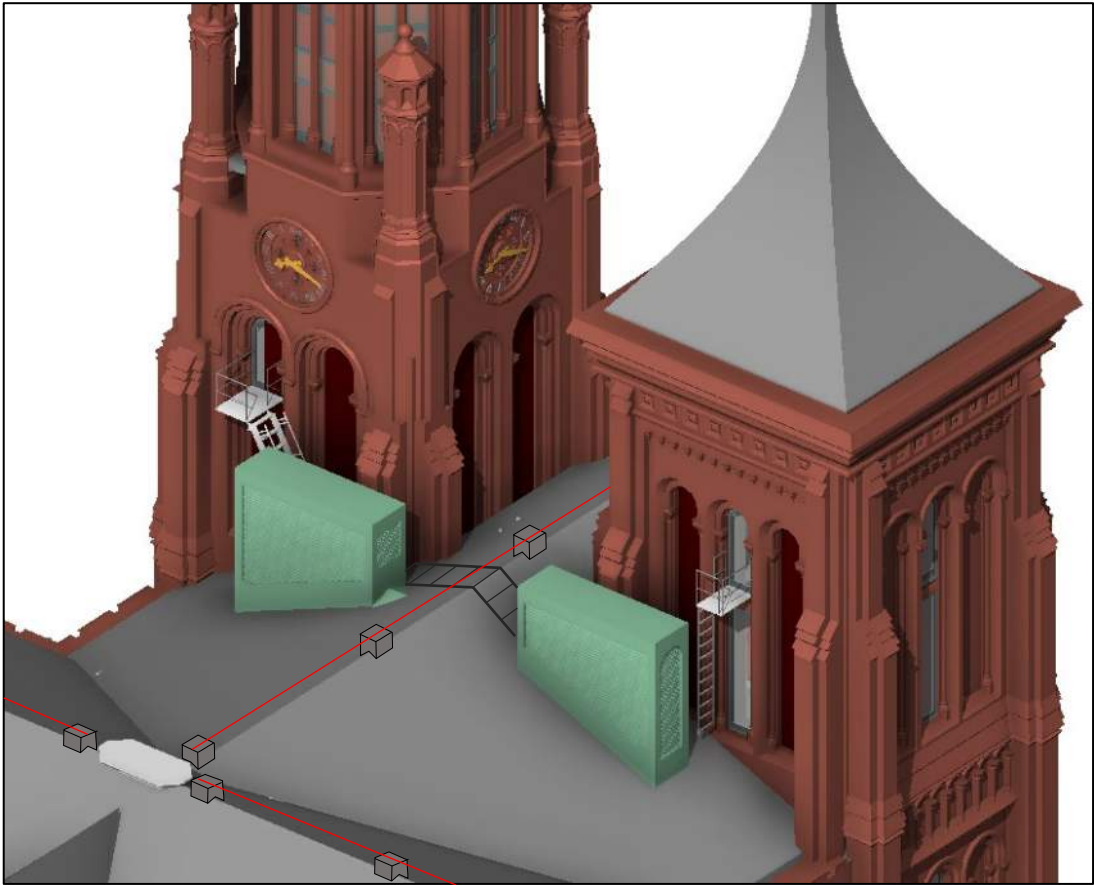
VISIBILITY OF FALL PROTECTION - BIRDSEYE

# ROOF ACCESS

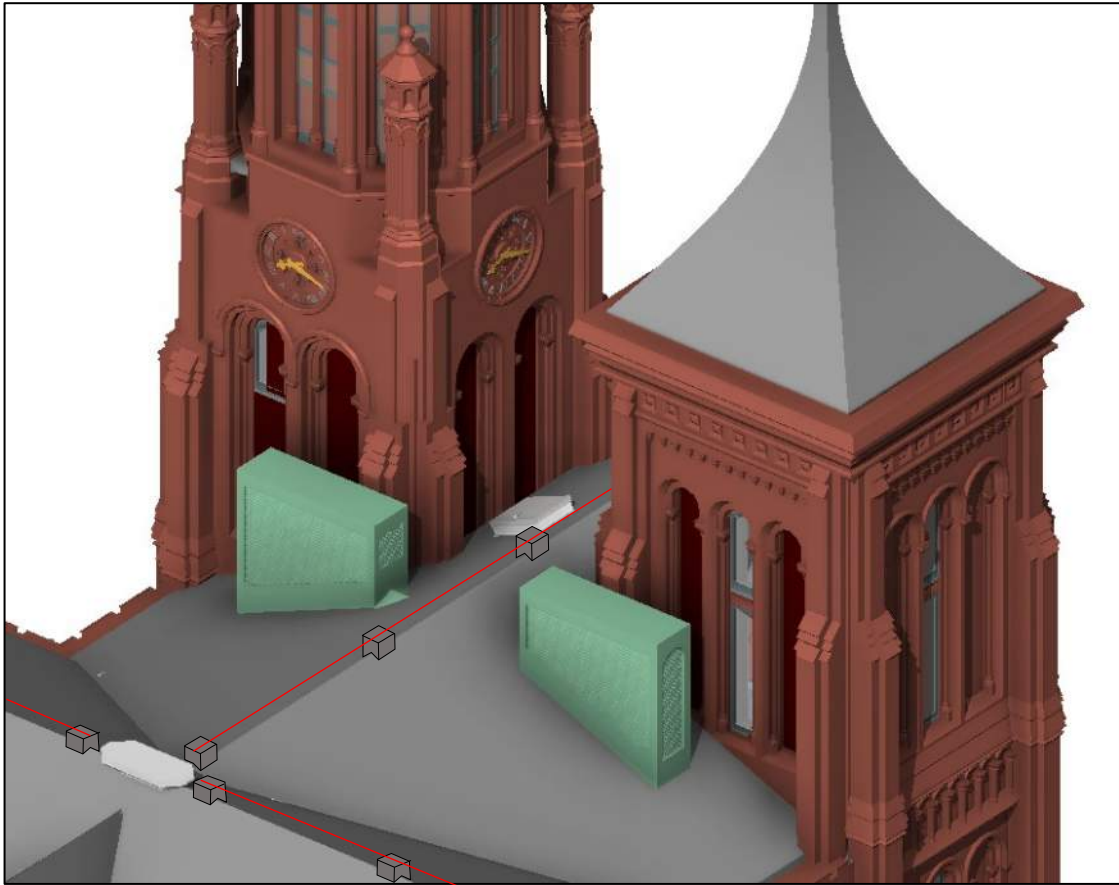


# SMITHSONIAN INSTITUTION BUILDING (SIB)

## ROOF ACCESS | MAIN BUILDING VISUALIZATION



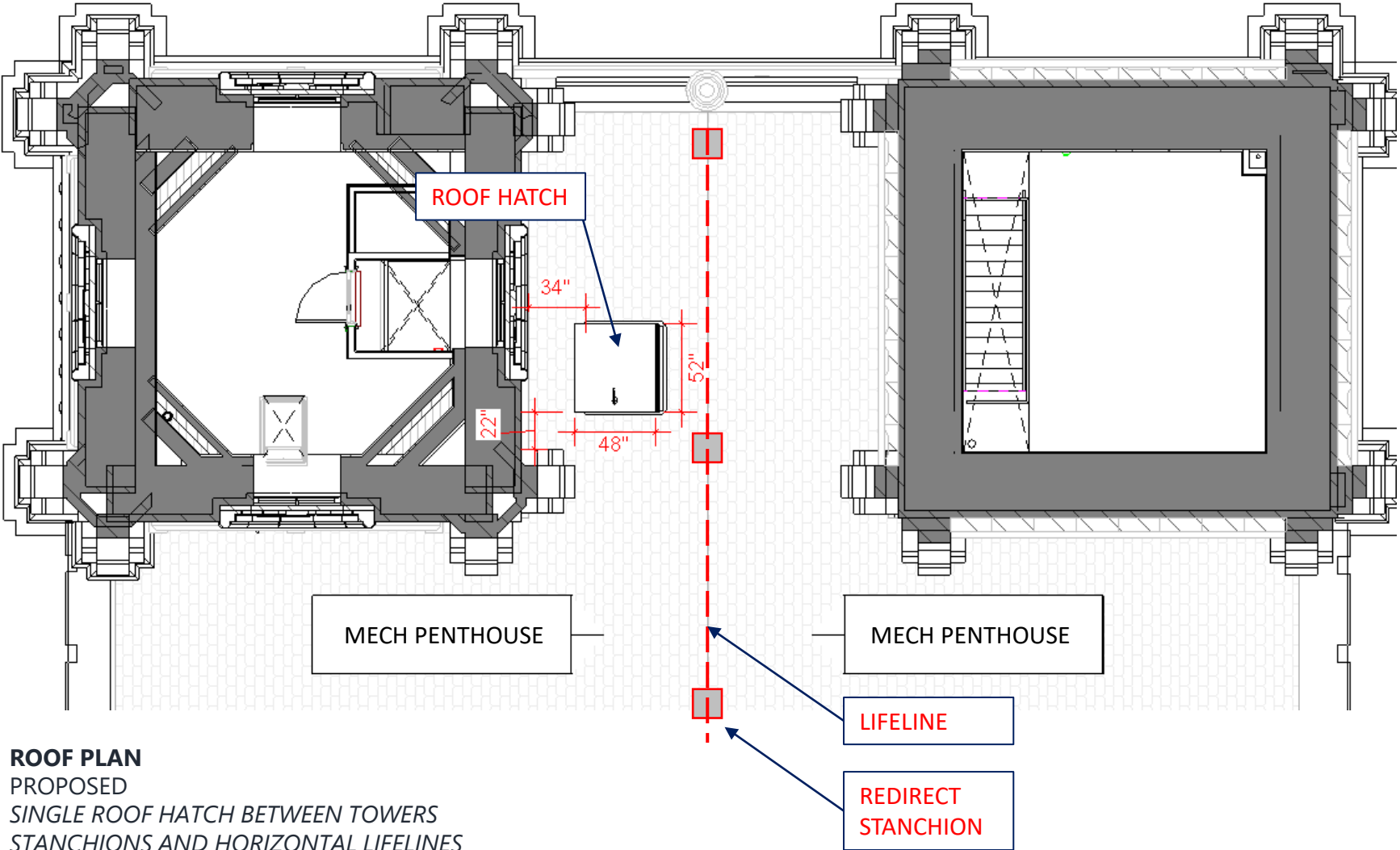
**ROOF ACCESS – OPTION A**  
*PLATFORM AND LADDER FROM FLAG AND NORTH TOWER  
STANCHIONS AND HORIZONTAL LIFELINES*



**ROOF ACCESS – OPTION B (PREFERRED)**  
*SINGLE ROOF HATCH BETWEEN TOWERS  
STANCHIONS AND HORIZONTAL LIFELINES*

# SMITHSONIAN INSTITUTION BUILDING (SIB)

## ROOF ACCESS | MAIN BUILDING ROOF PLAN



- Hatch location is determined by:
- existing elements and waterproofing requirements (buttress, wall, and roof ridge)
  - location of attic level equipment hoist

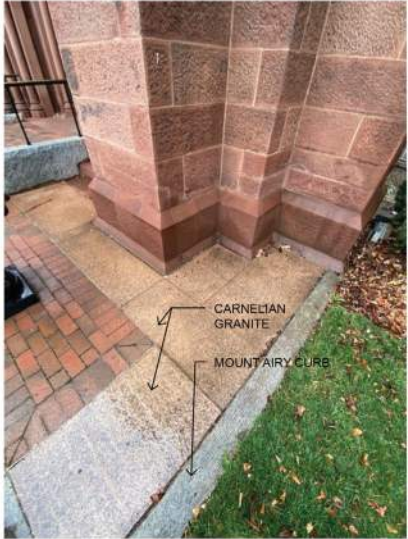
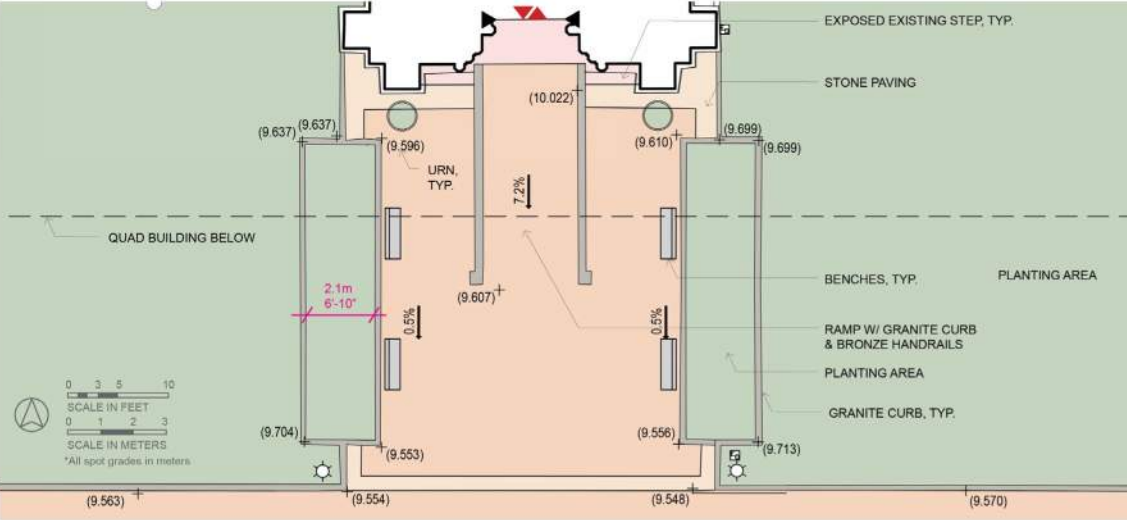
**ROOF PLAN**  
PROPOSED  
SINGLE ROOF HATCH BETWEEN TOWERS  
STANCHIONS AND HORIZONTAL LIFELINES

# **SIB SOUTH ENTRANCE**

## PAVING, CURB, AND RAILING OPTIONS

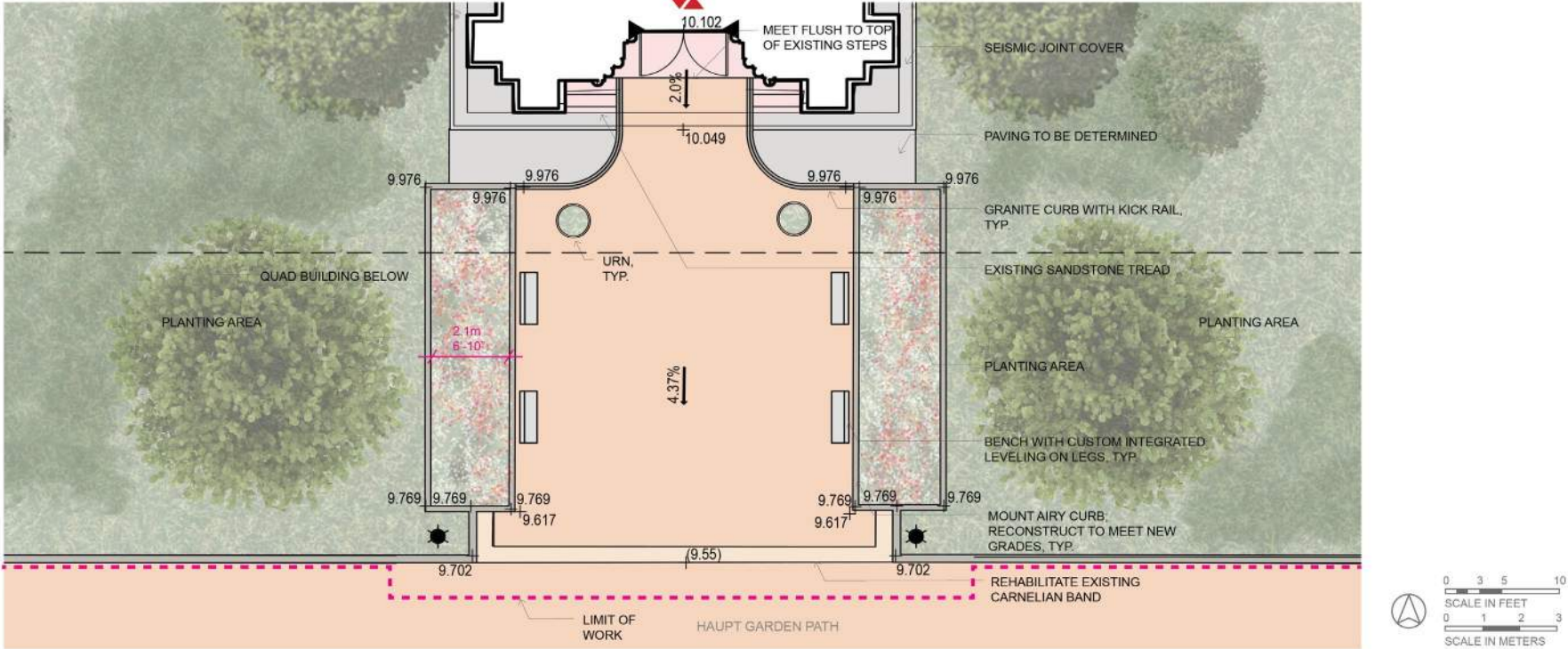
# SMITHSONIAN INSTITUTION BUILDING (SIB)

## SIB SOUTH ENTRANCE | EXISTING CONDITIONS



# SMITHSONIAN INSTITUTION BUILDING (SIB)

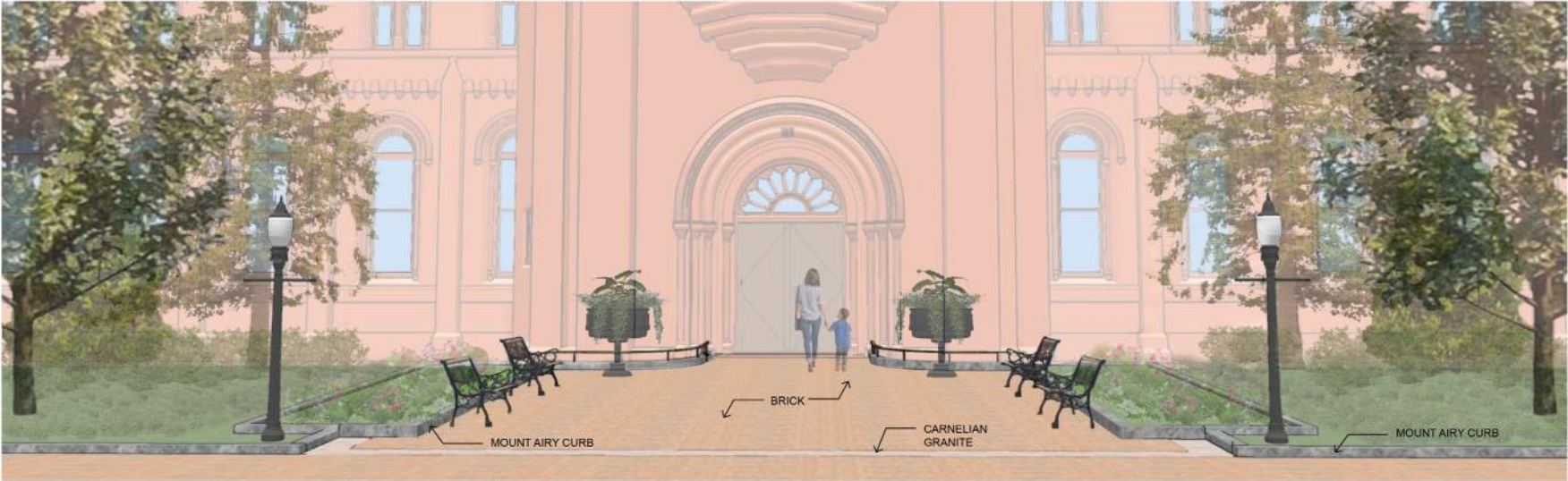
## SIB SOUTH ENTRANCE | PROPOSED PLAN



PLAN AS SHOWN IN CP12

# SMITHSONIAN INSTITUTION BUILDING (SIB)

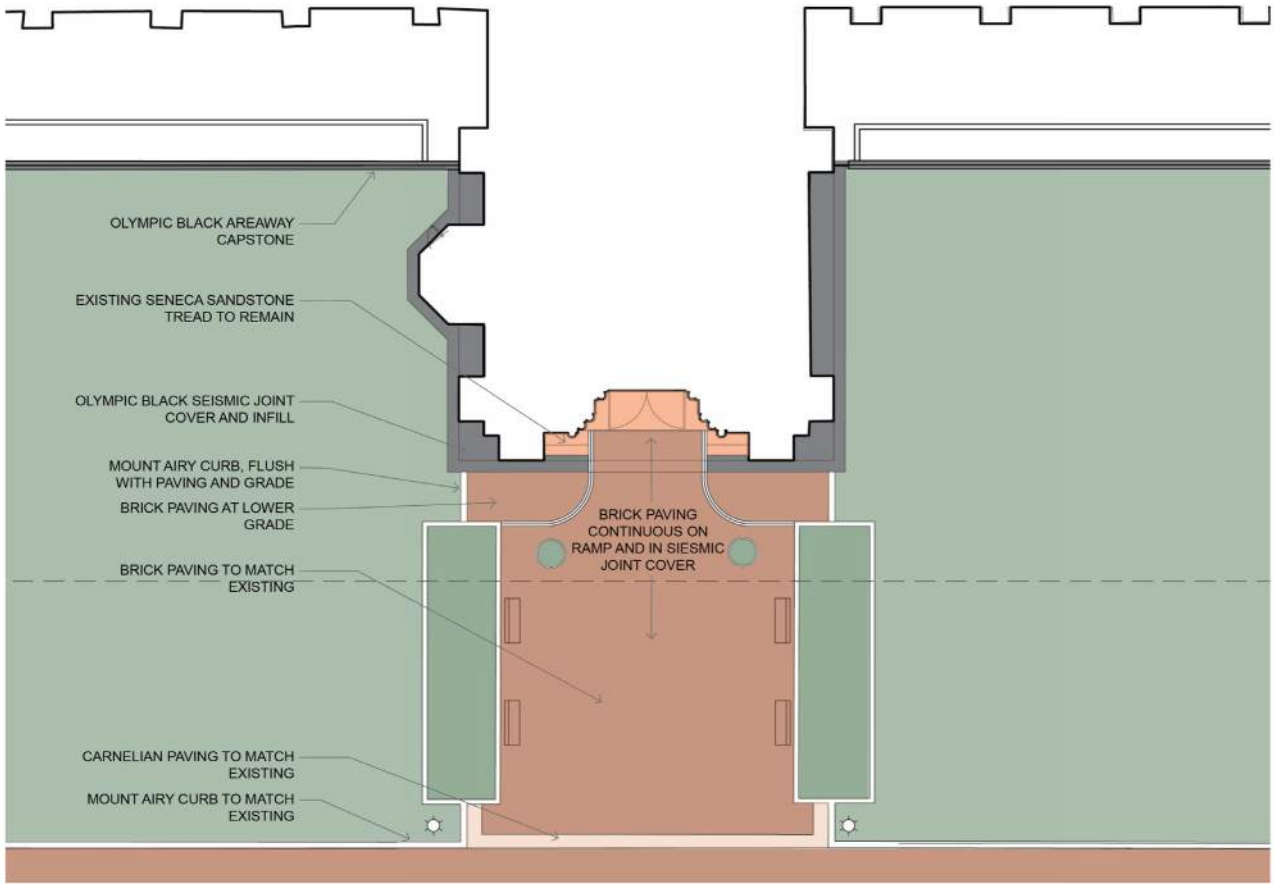
## SIB SOUTH ENTRANCE | PROPOSED PLAN



# SMITHSONIAN INSTITUTION BUILDING (SIB)

## SIB SOUTH ENTRANCE | PAVING MATERIAL

### OPTION A – OLYMPIC BLACK SEISMIC JOINT COVER AND BRICK PAVING



OLYMPIC BLACK



CARNELIAN\* AND HAUPT BRICK



MOUNT AIRY



SENECA SANDSTONE FACADE

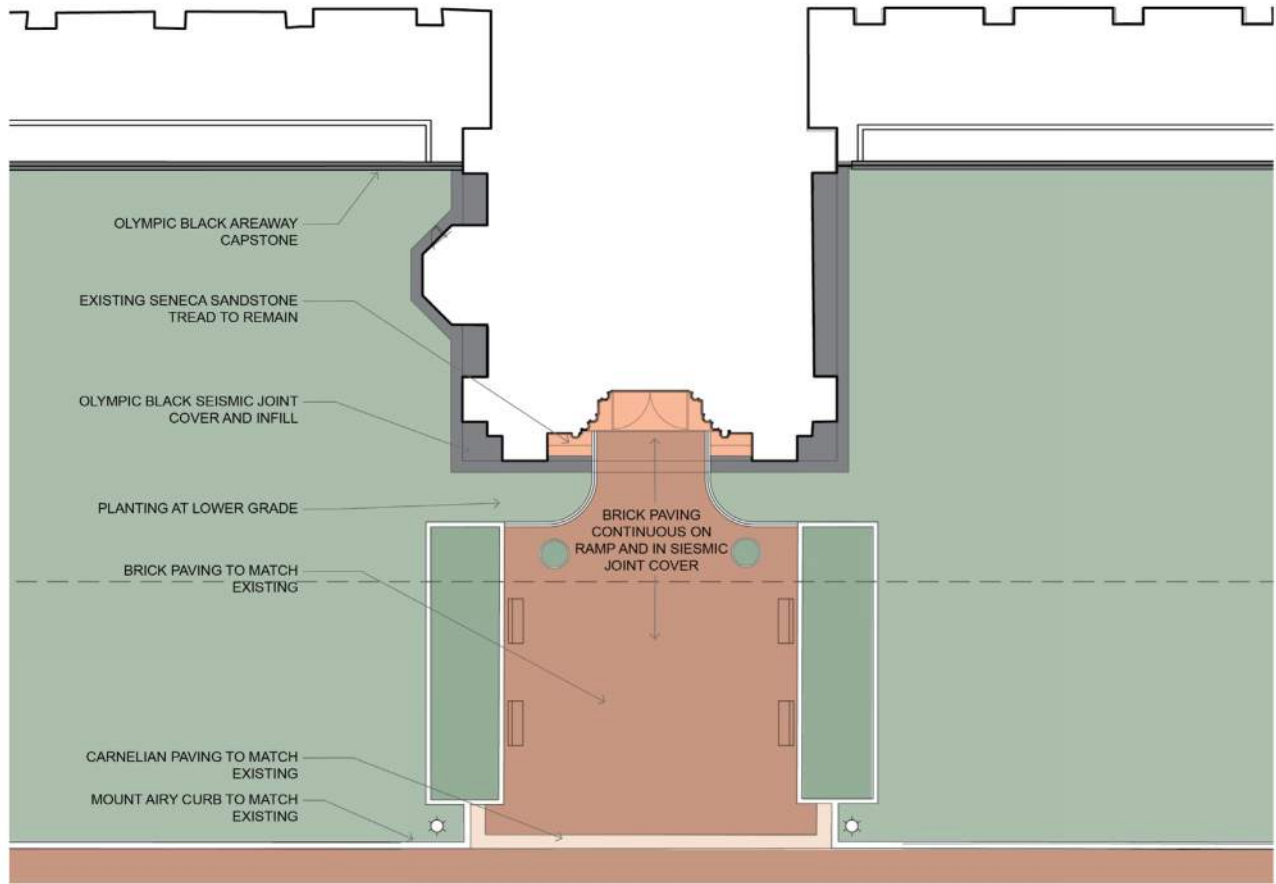


SENECA SANDSTONE STEP

# SMITHSONIAN INSTITUTION BUILDING (SIB)

## SIB SOUTH ENTRANCE | PAVING MATERIAL

### OPTION B – OLYMPIC BLACK SEISMIC JOINT COVER AND PLANTED AREA



OLYMPIC BLACK



CARNELIAN\* AND HAUPT BRICK



MOUNT AIRY



SENECA SANDSTONE FACADE



SENECA SANDSTONE STEP

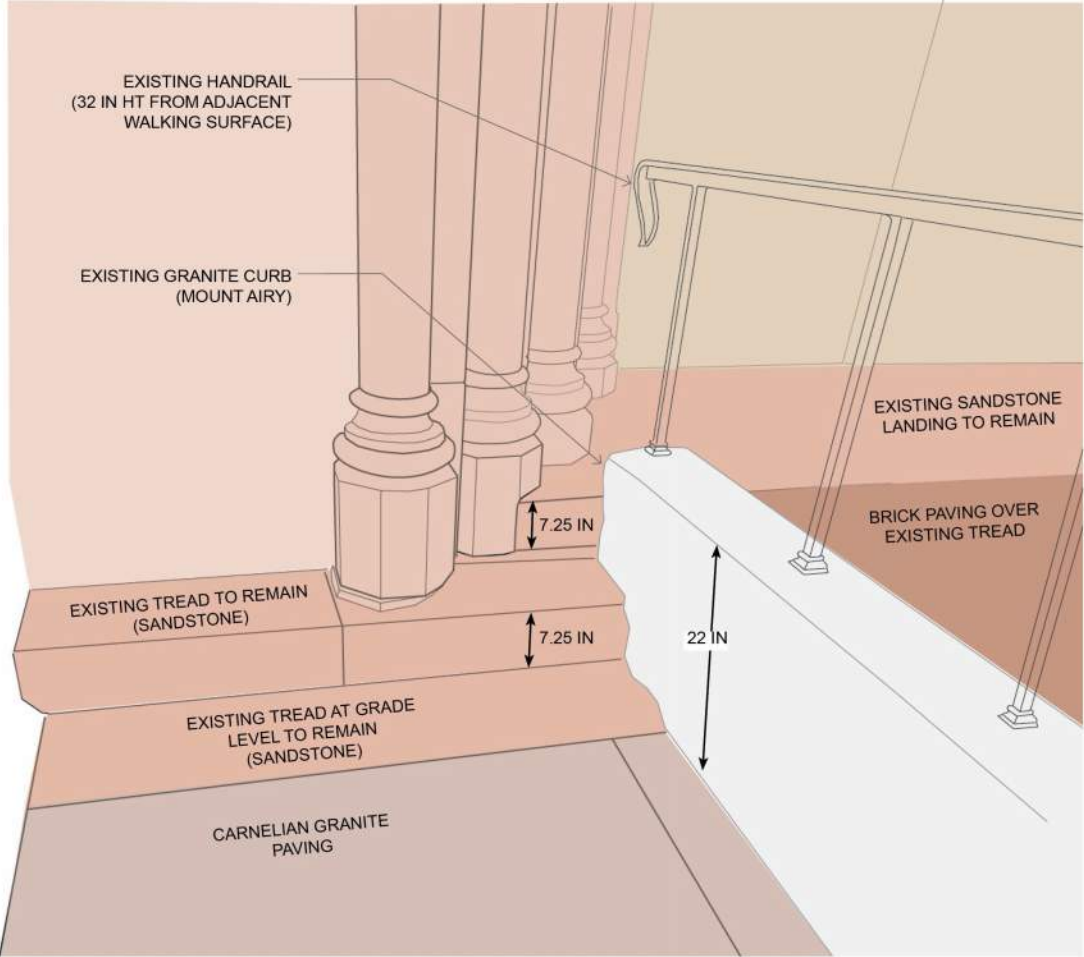


# SMITHSONIAN INSTITUTION BUILDING (SIB)

## SIB SOUTH ENTRANCE | CURB & RAILING STUDY EXISTING CONDITIONS



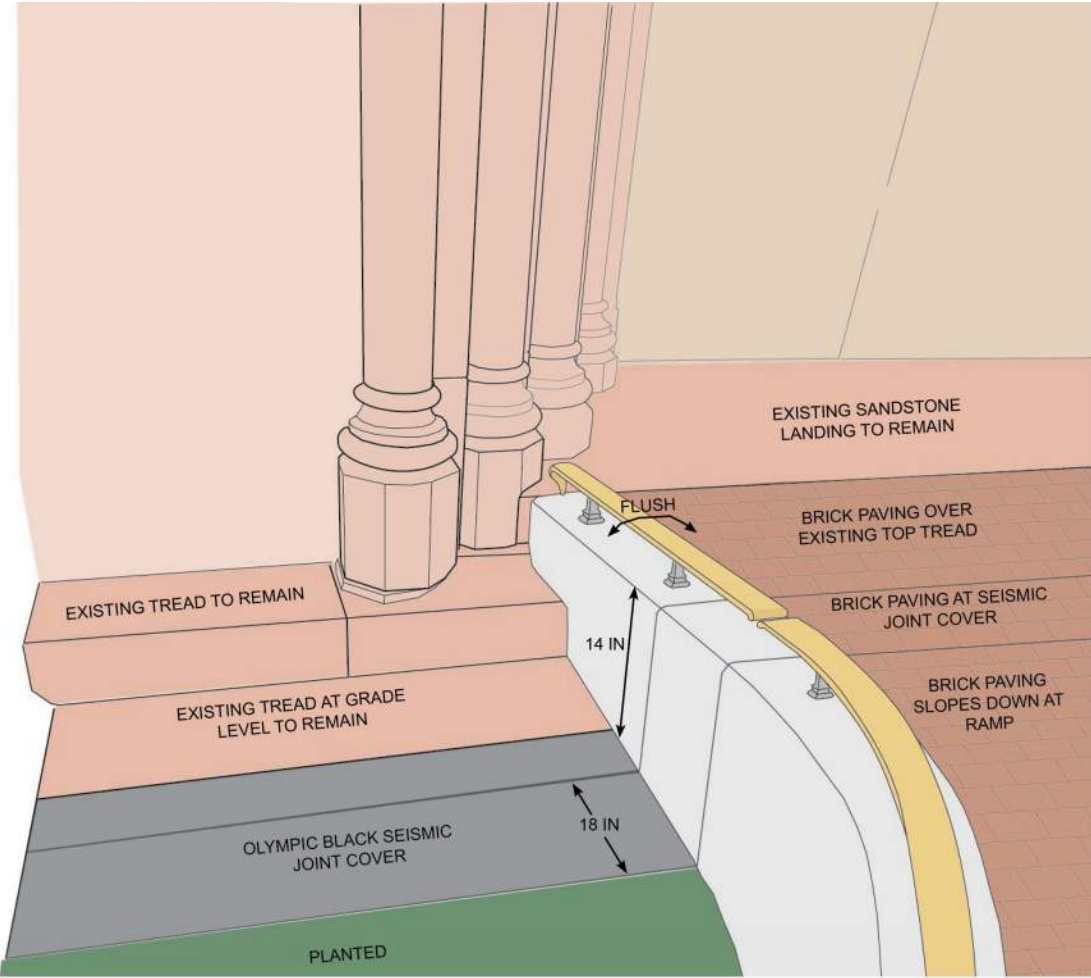
EXISTING CONDITIONS



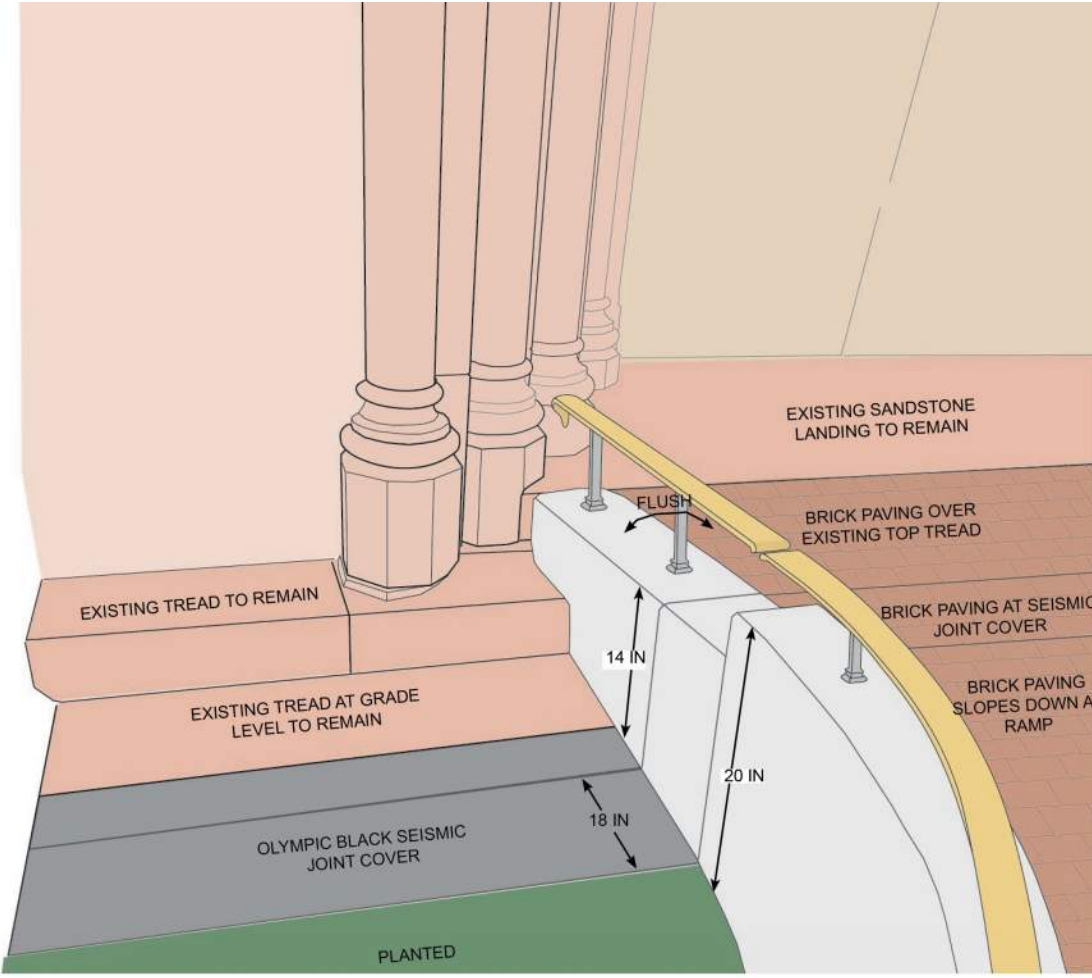
EXISTING CONDITIONS

# SMITHSONIAN INSTITUTION BUILDING (SIB)

## SIB SOUTH ENTRANCE | CURB & RAILING STUDY CURB HEIGHT



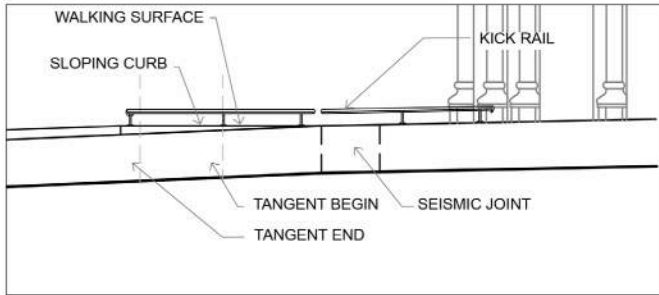
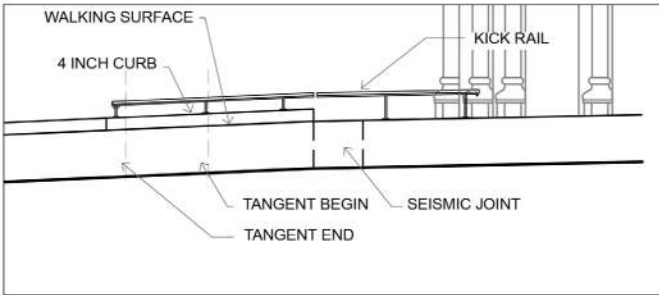
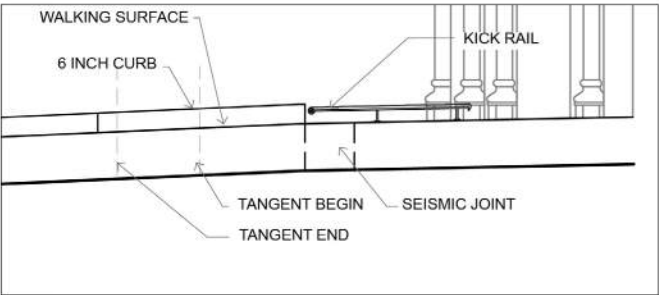
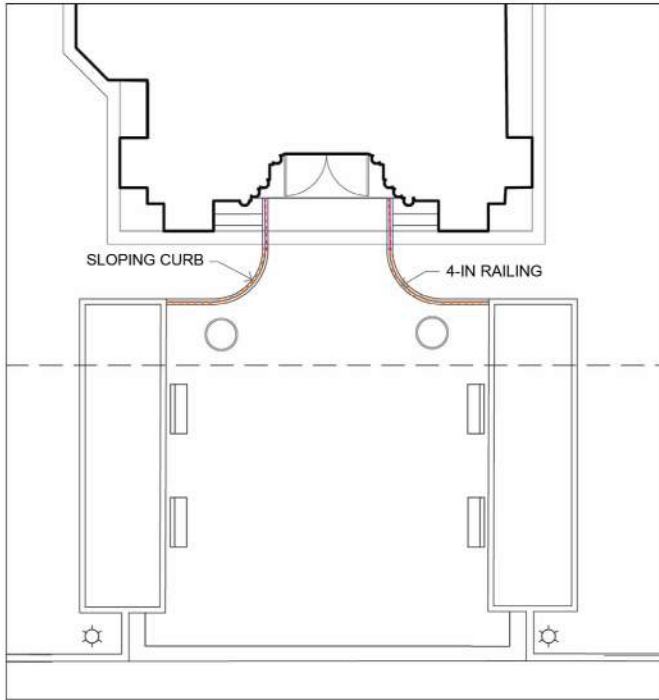
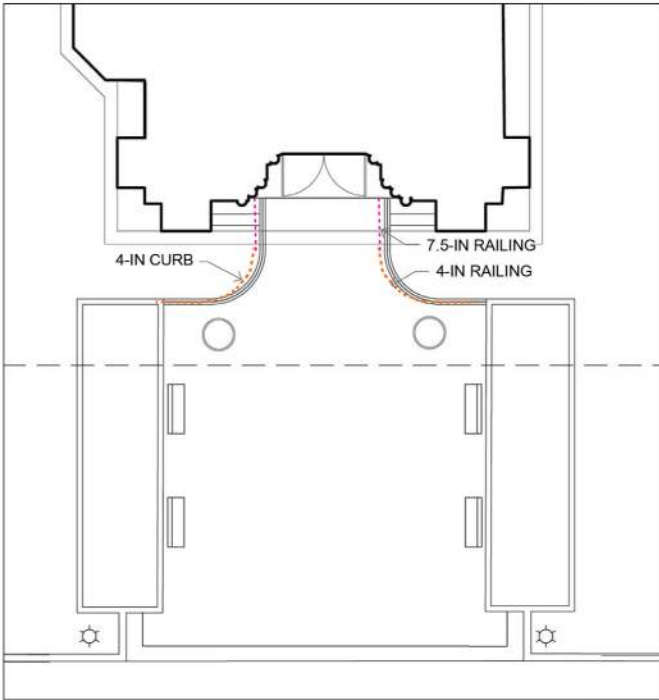
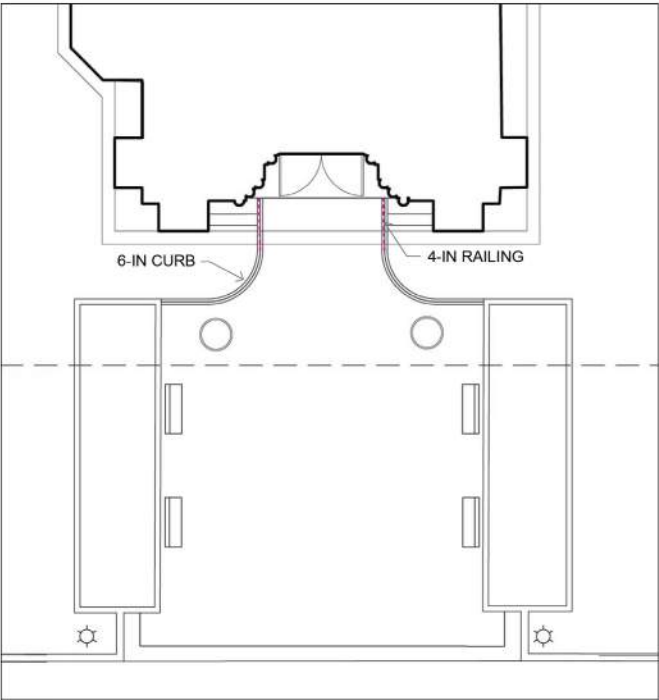
CURB HEIGHT LEVEL WITH ADJACENT WALKING SURFACE FROM SIB TO SEISMIC JOINT, THEN STAYS LEVEL AS WALKING SURFACE SLOPES AWAY



CURB HEIGHT LEVEL WITH ADJACENT WALKING SURFACE FROM SIB TO SEISMIC JOINT, THEN STEPS UP TO MATCH HEIGHT OF CURB AT PLANTER

# SMITHSONIAN INSTITUTION BUILDING (SIB)

## SIB SOUTH ENTRANCE | CURB & RAILING STUDY



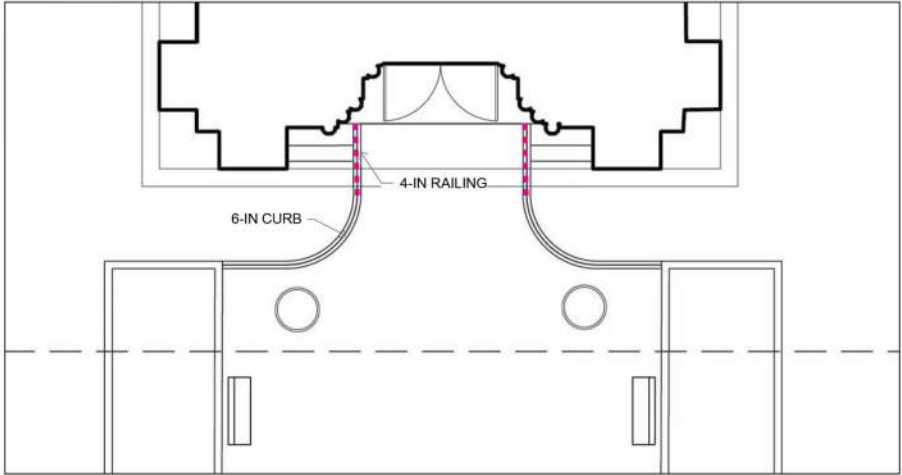
OPTION 1 - PREFERRED

OPTION 2

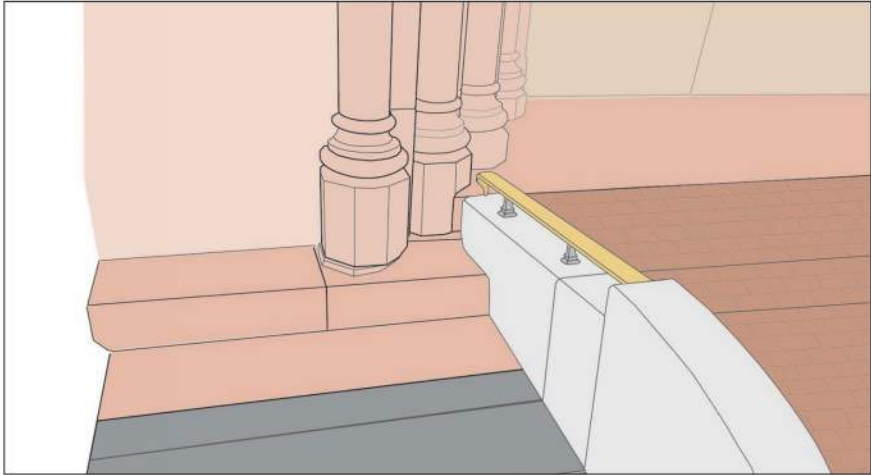
OPTION 3

# SMITHSONIAN INSTITUTION BUILDING (SIB)

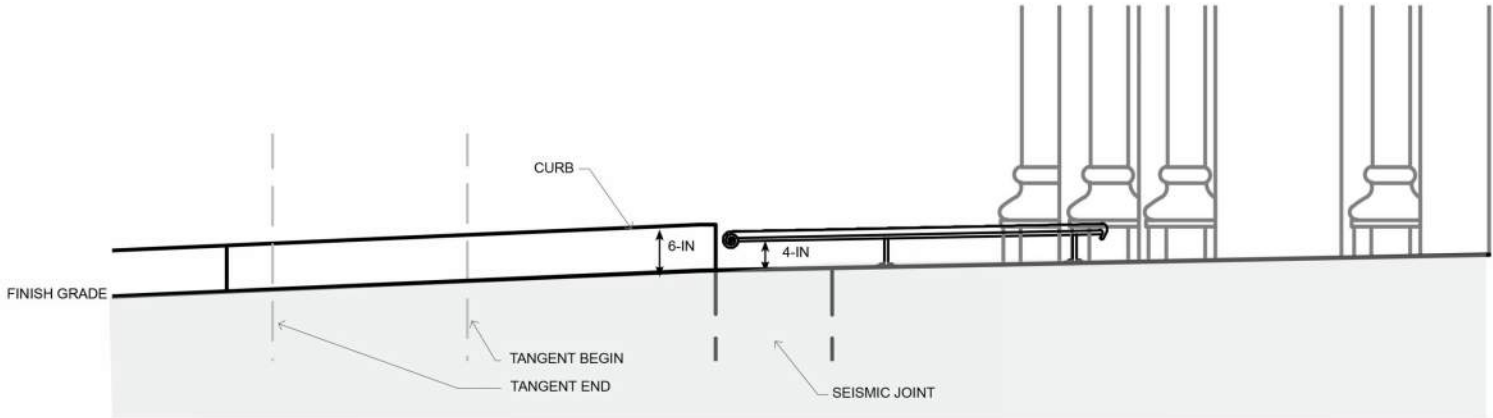
## SIB SOUTH ENTRANCE | CURB & RAILING STUDY OPTION 1 - PREFERRED



PLAN



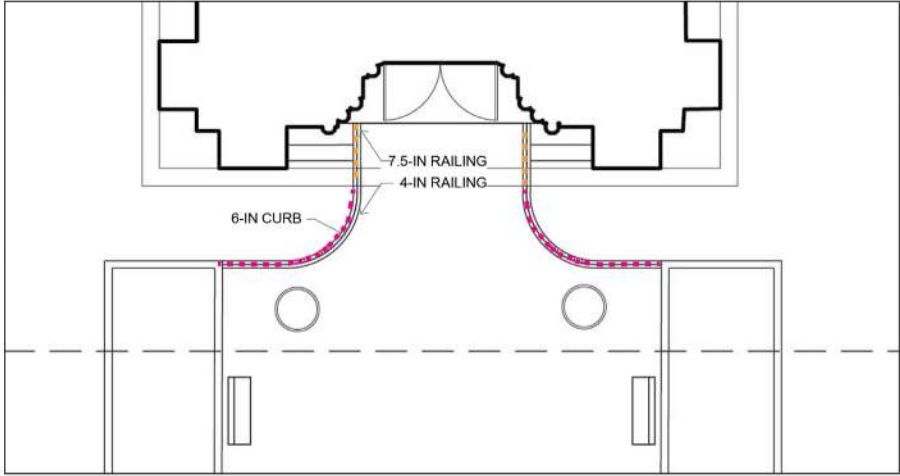
AXON LOOKING NORTH AT SOUTH ENTRANCE LANDING AND WESTERN CURB



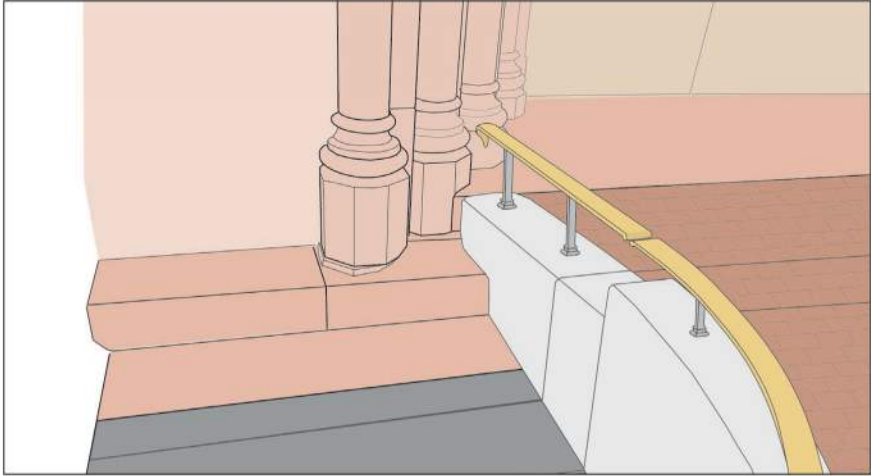
SECTION FROM WALKING SURFACE LOOKING WEST

# SMITHSONIAN INSTITUTION BUILDING (SIB)

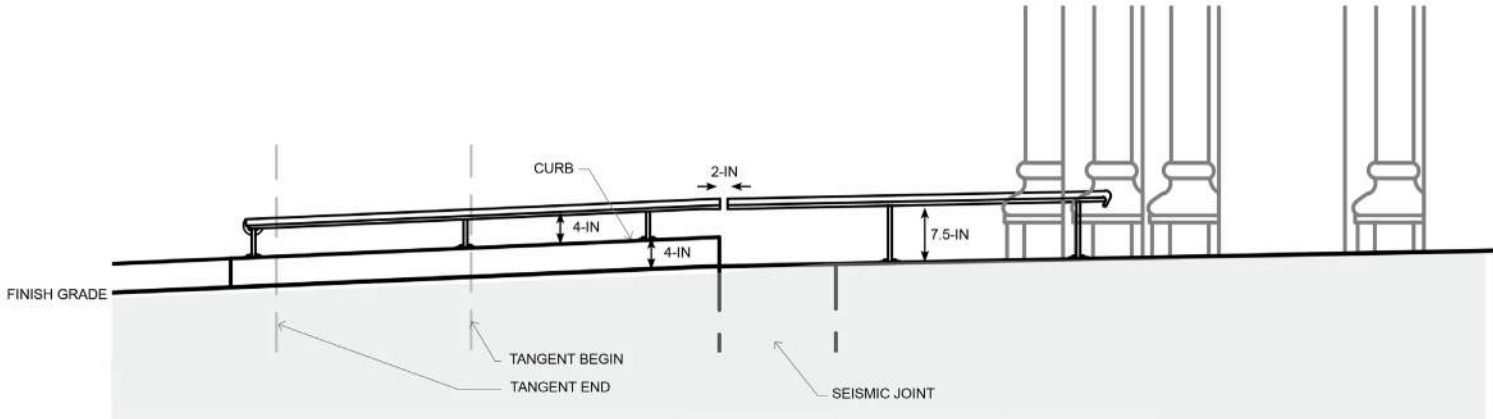
## SIB SOUTH ENTRANCE | CURB & RAILING STUDY OPTION 2



PLAN



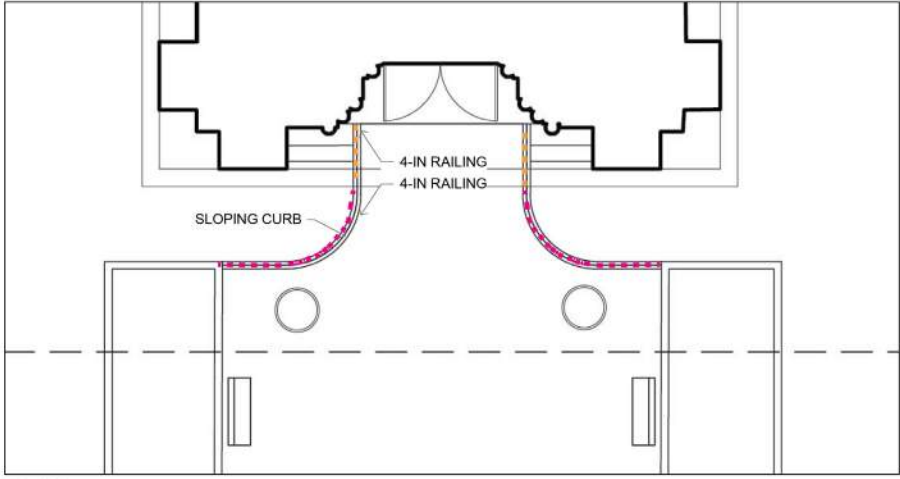
AXON LOOKING NORTH AT SOUTH ENTRANCE LANDING AND WESTERN CURB



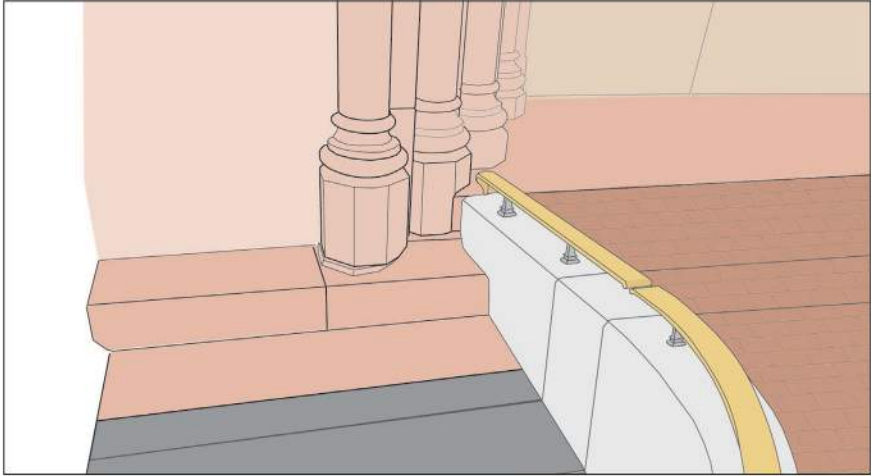
SECTION FROM WALKING SURFACE LOOKING WEST

# SMITHSONIAN INSTITUTION BUILDING (SIB)

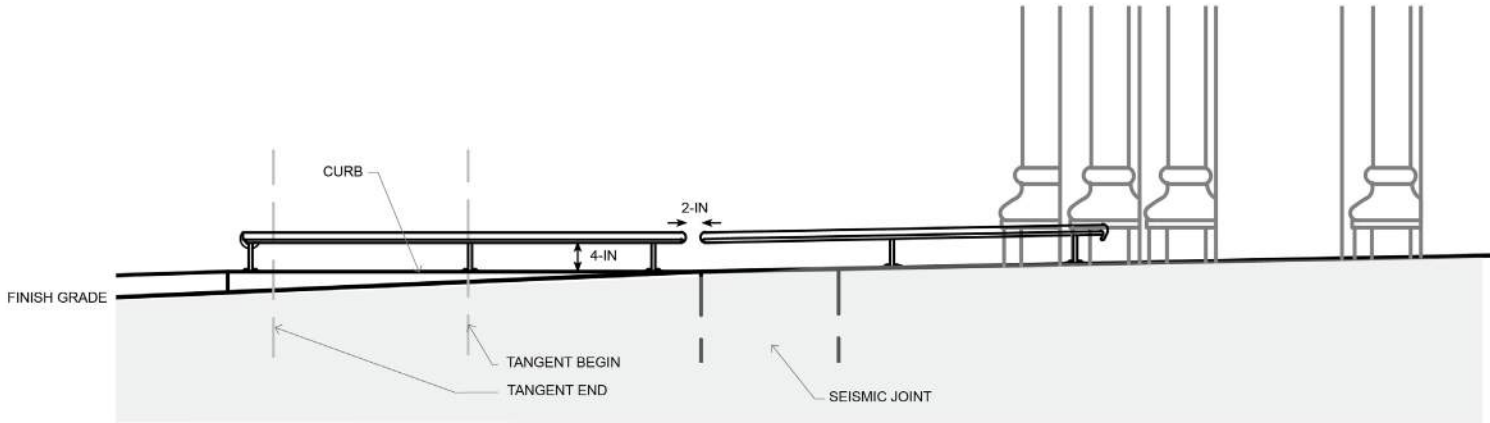
## SIB SOUTH ENTRANCE | CURB & RAILING STUDY OPTION 3



PLAN



AXON LOOKING NORTH AT SOUTH ENTRANCE LANDING AND WESTERN CURB



SECTION FROM WALKING SURFACE LOOKING WEST

# **SOUTHWEST AREAWAY MODIFICATION**

# SMITHSONIAN INSTITUTION BUILDING (SIB)

## SOUTHWEST (W) AREAWAY | MODIFICATION CURRENT PROPOSAL

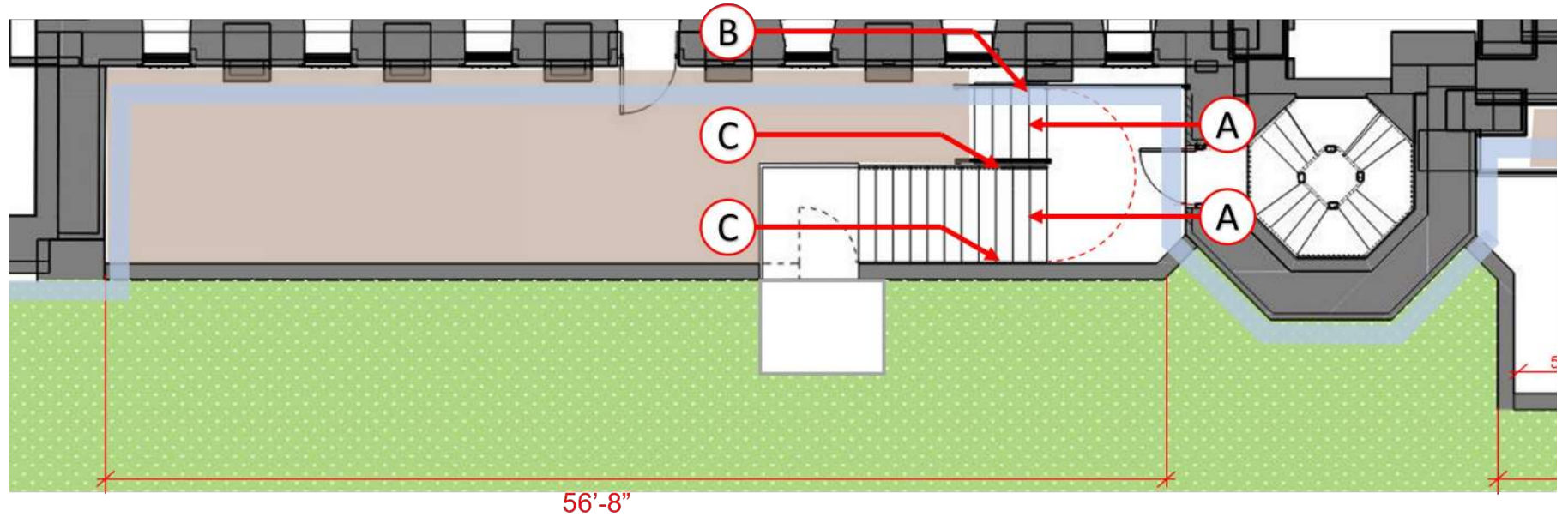
Original proposal based on 2" concrete formliner, available information regarding joint cover clearance, and schematic calculated egress widths

Continued CD development and updated information requires additional clearances for:

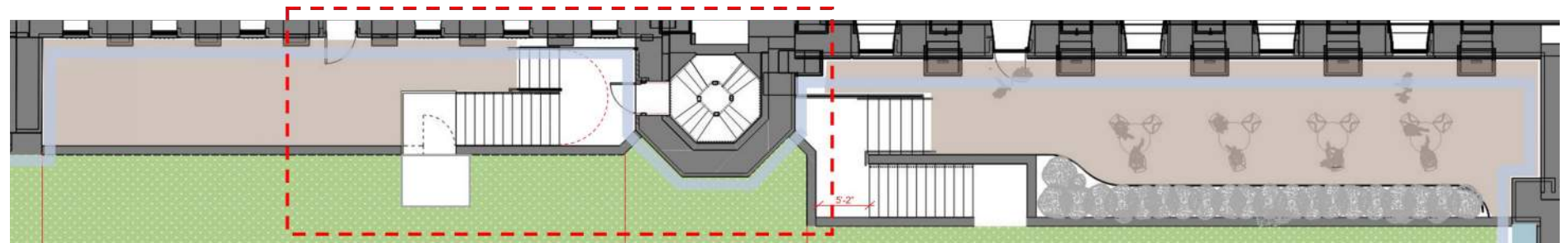
- A. **Converging egress point; critical to maintain required egress width (46")**
- B. Seismic joint cover movement (18" joint + 6" movement = 24")
- C. Tolerance for areaway finish materials (pending future Consulting Parties review; allocating 5" for material)

Modifications result in 2" remaining space for joint cover movement; 24" joint cover movement is required

- **Requires stair to shift 22" south**



PARTIAL PLAN | SOUTHWEST AREAWAY (CP8)





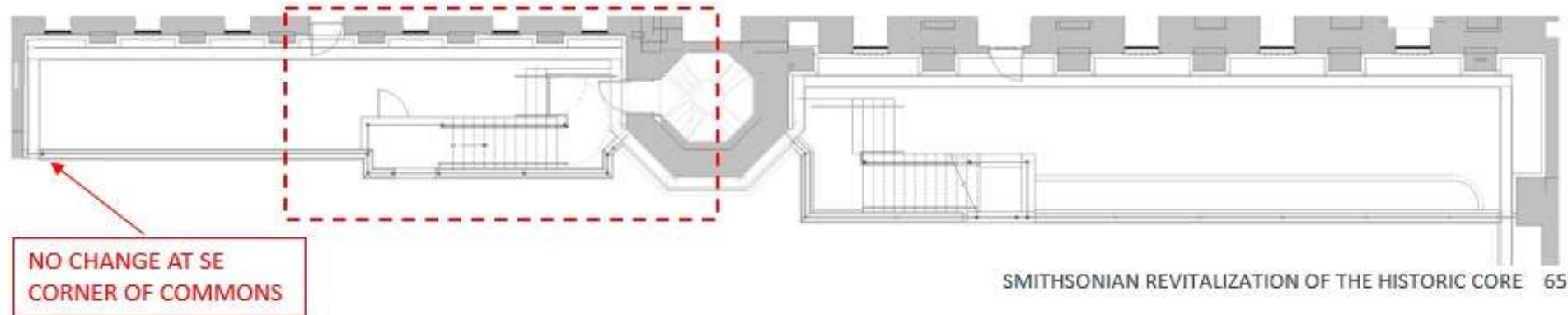
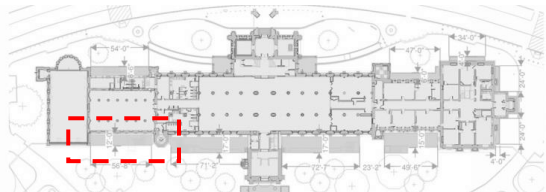
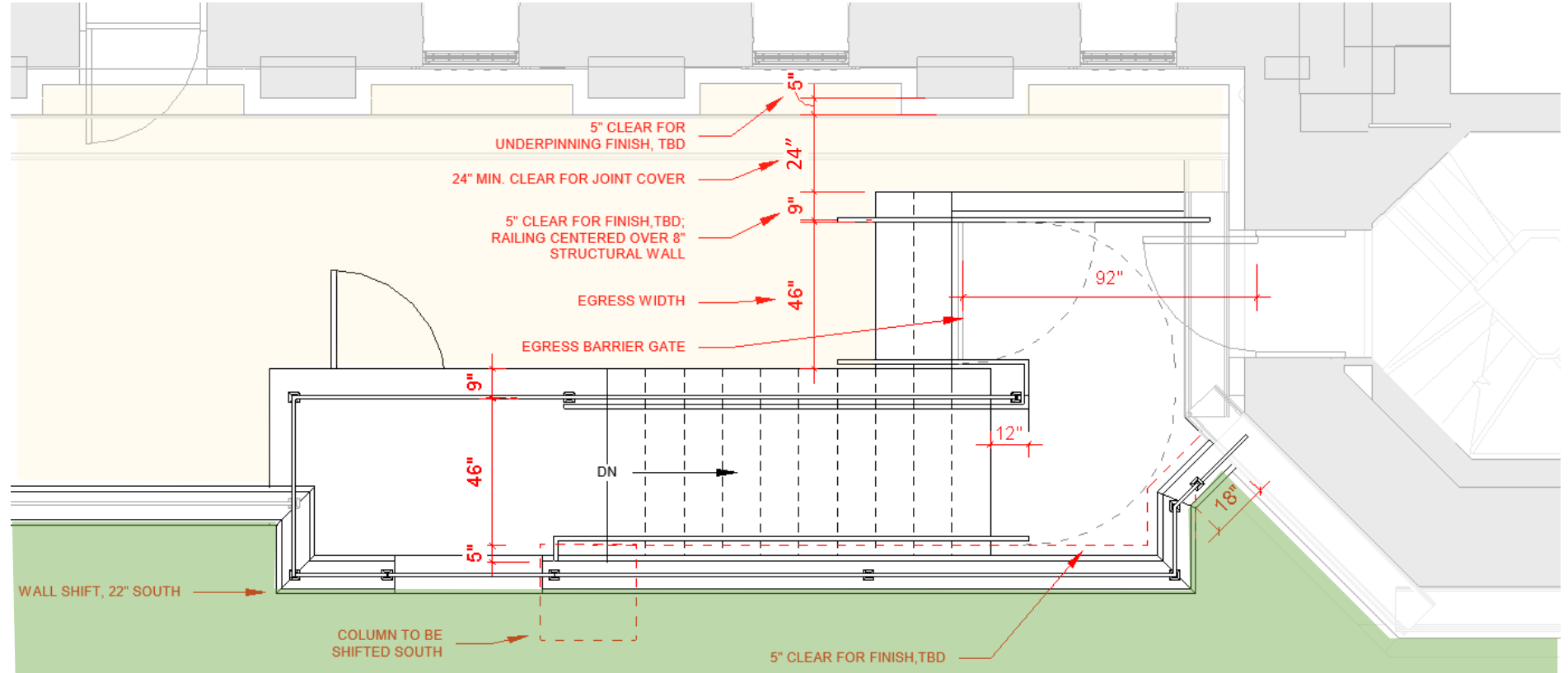
# SMITHSONIAN INSTITUTION BUILDING (SIB)

## SOUTHWEST (W) AREAWAY | MODIFICATION UPDATED PROPOSAL

### Changes:

- Increased space for facing material to 5"
- Retaining wall at stair shifted 22" south
- Stair landing extended 14" west

\*Retaining wall intersection at building does not change

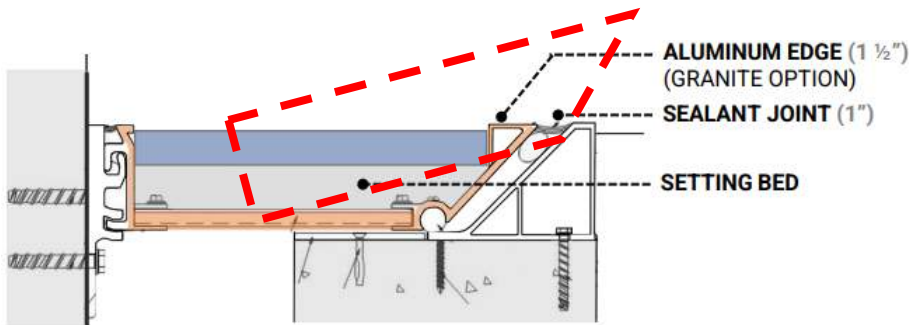


# SMITHSONIAN INSTITUTION BUILDING (SIB)

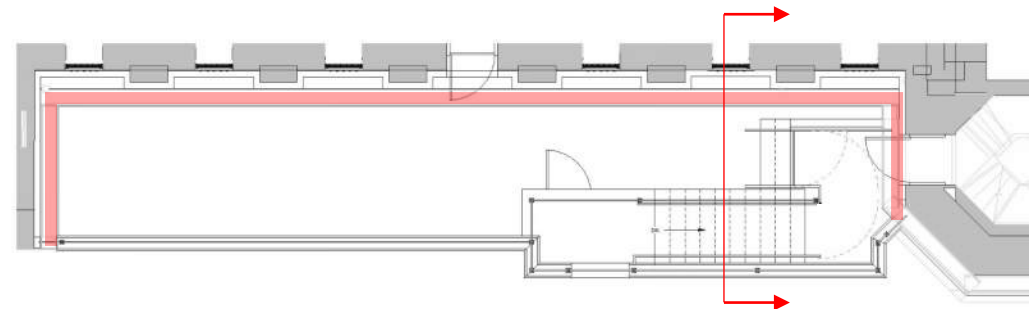
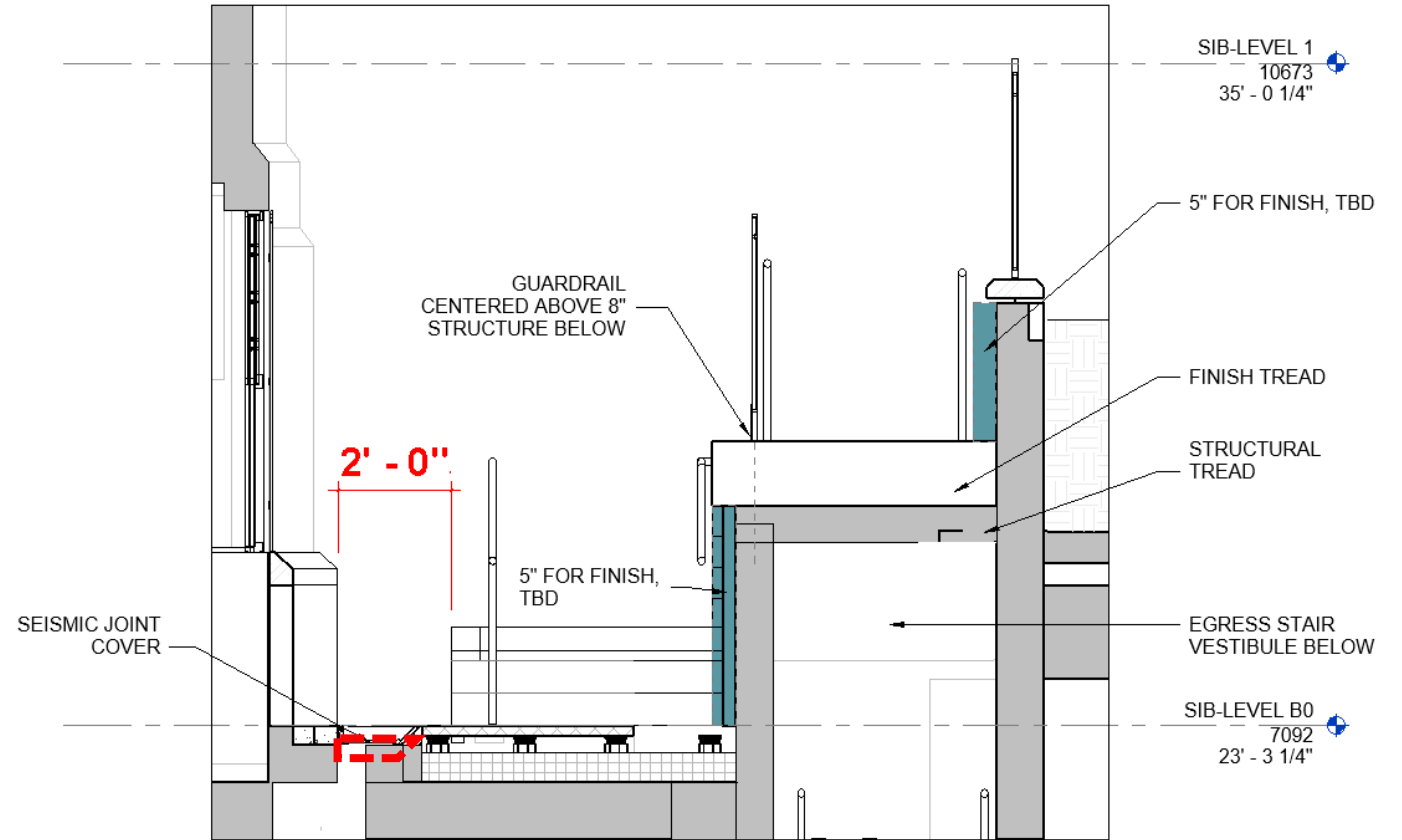
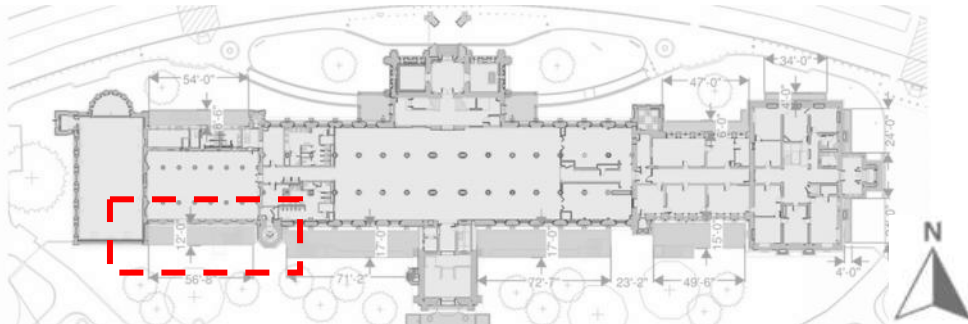
## SOUTHWEST (W) AREAWAY | MODIFICATION UPDATED PROPOSAL

### Section Details:

- Finish materials TBD, pending future CP review
- 5" of depth allocated for finish wall material (TBD)
- Minimum 24" clearance at seismic joint
- Minimum 46" egress clearance
- Guardrail centered over structure below

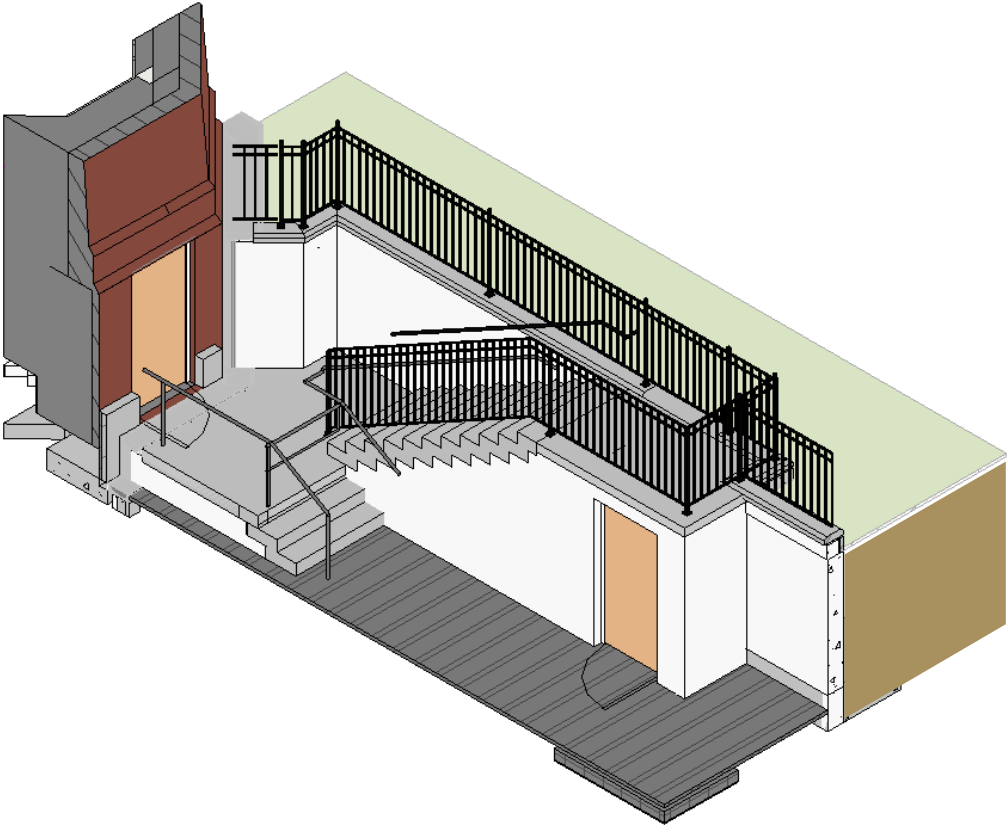


TYPICAL SEISMIC JOINT COVER



# SMITHSONIAN INSTITUTION BUILDING (SIB)

SOUTHWEST (W) AREAWAY | MODIFICATION  
UPDATED PROPOSAL



AXON (PROPOSED MODIFICATION)



ELEVATION (CURRENT)



ELEVATION (PROPOSED MODIFICATION)

# SMITHSONIAN INSTITUTION BUILDING (SIB)

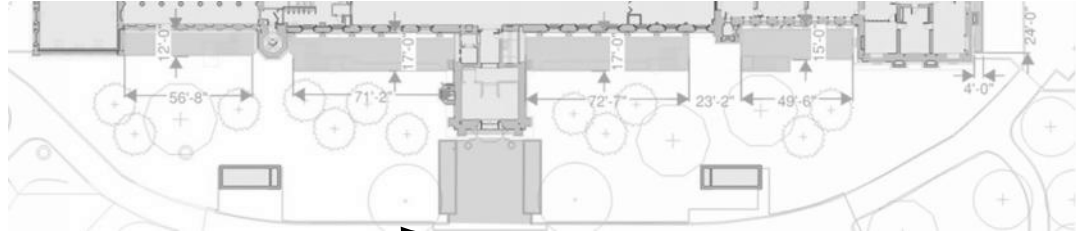
SOUTHWEST (W) AREAWAY | MODIFICATION  
VISUALIZATION (LOOKING NW)



CURRENT DESIGN



PROPOSED MODIFICATION



EXISTING CONDITION

# SMITHSONIAN INSTITUTION BUILDING (SIB)

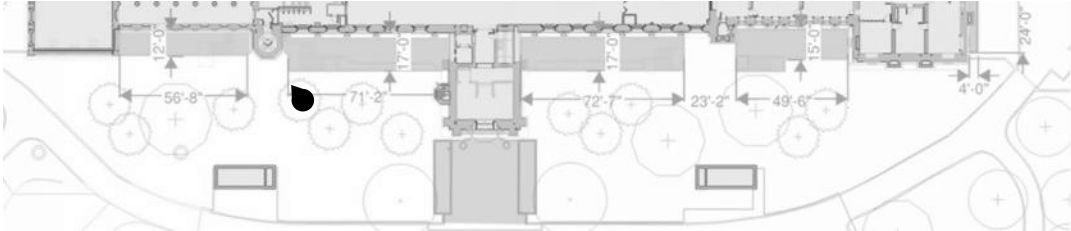
SOUTHWEST (W) AREAWAY | MODIFICATION  
VISUALIZATION (LOOKING NW)



CURRENT DESIGN



PROPOSED MODIFICATION



# SMITHSONIAN INSTITUTION BUILDING (SIB)

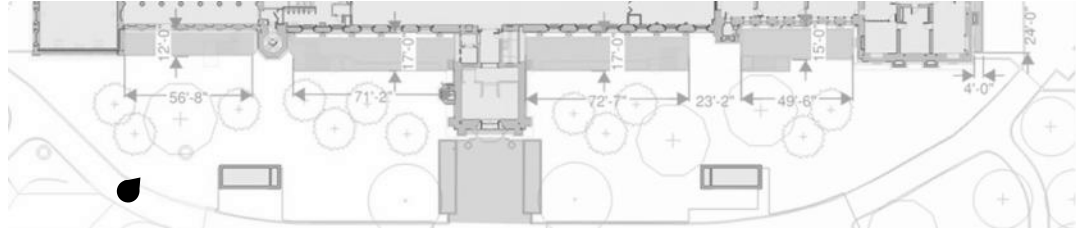
SOUTHWEST (W) AREAWAY | MODIFICATION  
VISUALIZATION (LOOKING NE)



CURRENT DESIGN



PROPOSED MODIFICATION



EXISTING CONDITION

# SMITHSONIAN INSTITUTION BUILDING (SIB)

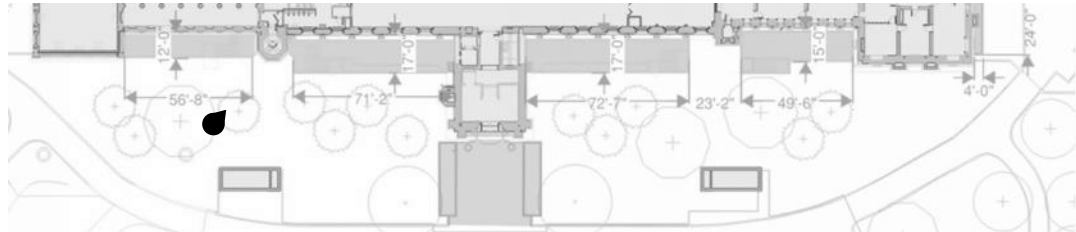
SOUTHWEST (W) AREAWAY | MODIFICATION  
VISUALIZATION (LOOKING NE)



CURRENT DESIGN



PROPOSED MODIFICATION



# Upcoming Section 106 Consultation Meetings

\* Subject to Change

Milestone	Date	Meeting Content *
Consulting Parties Meeting #14	June 28, 2023	<ul style="list-style-type: none"> <li>• Final Planting Plan</li> <li>• Perimeter Security- Jefferson Drive                             <ul style="list-style-type: none"> <li>• All hardened elements</li> </ul> </li> <li>• North Ramps/ Sloped Sidewalks</li> <li>• Exterior Signage                             <ul style="list-style-type: none"> <li>• Appearance only, not content</li> </ul> </li> <li>• Areaway Finishes                             <ul style="list-style-type: none"> <li>• Includes final layouts/dimensions</li> </ul> </li> <li>• Exterior Lighting                             <ul style="list-style-type: none"> <li>• Jefferson Drive Olmsted fixtures</li> <li>• Building lighting including location of fixtures</li> </ul> </li> </ul>
Consulting Parties Meeting #15	July 26, 2023	<ul style="list-style-type: none"> <li>• Basement Windows and Doors                             <ul style="list-style-type: none"> <li>• Including Interior Effects</li> </ul> </li> <li>• Window Replacement                             <ul style="list-style-type: none"> <li>• Exterior Appearance/ Detailing</li> <li>• Anchorage Details</li> <li>• Interior Effects</li> </ul> </li> </ul>

## Phase 2 Section 106 Consultation Continues through 2023

*Assessment of Effects on Historic Resources Report will be revised through consultation for Phase 2 actions*





## RoHC Revitalize Castle – Next Steps

- Programmatic Agreement executed March 29, 2023
- Thank for your support and assistance with this critical project!
- Comments are welcoming in writing anytime to: [BondC@si.edu](mailto:BondC@si.edu)
- Contact Carly with questions or any trouble with the recurring Zoom Webinar.



Please visit the project webpage:

<https://www.sifacilities.si.edu/historic-core>

# Questions or Comments

## MODERATOR

**Carly Bond**, Historic Preservation Specialist

## PRESENTERS / PANELISTS

**Brenda Sanchez**, FAIA, Sr. Design Manager

**Christopher Lethbridge**, Architect/Program Manager

**Lauren Brandes**, RLA, ASLA, Smithsonian Gardens

**Matthew Chalifoux**, FAIA, Sr. Historic Preservation Architect, EYP-Loring, LLC

**Anthony Bochicchio**, AIA, Project Manager, EYP-Loring, LLC

**Faye Harwell**, FASLA, Landscape Architect, RHI (Rhodeside and Harwell)





Smithsonian Institution

