

PROJECT	<b>Smithsonian Institution- Revitalization of the Historic Core (RoHC)</b>	MEETING DATE	9/28/2022
ORGANIZER	<b>Smithsonian Institution, Carly Bond (moderator)</b>	TIME	2:00-4:00pm
LOCATION	Virtual/Zoom		
PANELISTS	Carly Bond- Smithsonian Institution Sharon Park- Smithsonian Institution Christopher Lethbridge- Smithsonian Institution Brenda Sanchez- Smithsonian Institution Lauren Brandes- Smithsonian Institution Matthew Chalifoux, EYP-Loring Faye Harwell, RHI (Rhodeside and Harwell) Anthony Bochicchio, EYP-Loring		
SUBJECT	<b>Consulting Parties Meeting #6</b>		

## MEETING MINUTES

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**Purpose – This was Consulting Parties Meeting 6 for the Revitalization of the Historic Core (RoHC) project of the Smithsonian Institution. The meeting was held in compliance with Section 106 of the National Historic Preservation Act.**

**In Consulting Parties Meeting 4 (June 15, 2022) the Consulting Parties were informed about the resequencing of the RoHC project, to first focus on the Smithsonian Institution Building (“Castle”). The Arts and Industries Building and the Central Utility Plant may be a future project. Starting with Consulting Parties Meeting 5 the meeting schedule has been revised to hold meetings monthly, allowing each meeting to cover a limited number of issues to offer the Consulting Parties greater opportunity for input as the design is being developed. Consulting Parties Meeting 6 focused on the following design issues:**

- **Extent of Excavation**
- **Areaways**
- **Seismic Joint Cover**
- **Perimeter Security Alternatives**
- **Landscape**
- **Hardscape**

**The meeting was assembled virtually and included a slide presentation, which has been posted on the RoHC project website. Attendees were asked to post questions or comments in the chat during the presentation. The majority of questions and comments were reviewed and responded to verbally during breaks in the presentation. The following is a list of the questions and comments with a summary of the responses.**

## Questions and Comments

### Written

1. Q: *(Note- this question included a number of separate but related questions. For clarity we have lettered each to correlate with the responses below.)*
  - A. How wide are the existing areaways on average?
  - B. What is the widest existing areaway?
  - C. Are the proposed areaways any wider - especially on the SW side of the Castle?
  - D. Are any new areaways proposed in undisturbed areas?
  - E. Photographs/renderings/site plans comparing the existing and proposed conditions would be helpful to evaluate the effects of the new areaways on the Castle.
  - F. Also, are any new windows or other openings proposed to provide additional light or will only existing openings be utilized for that purpose?

#### **R:**

- A. The existing areaways and lightwells vary significantly in plan dimensions and depth. The largest existing areaway is on the south side of the East Range. It is the full length of the East Range- 50 feet, and projects out from the face of the building 22 feet. It is 6 feet deep. The smallest of the existing areaways/lightwells are on the east side of the East Wing. These are lightwells at individual windows and are 4.5 feet wide, project from the face of the building 1.5 feet , and are 5.5 feet deep.
  - B. The largest existing areaway in plan is the areaway on the south side of the East Range.
  - C. In the presentation slide 17 provides the plan dimensions of the proposed areaways and lightwells.
  - D. Yes some of the proposed areaways are in undisturbed soil or incorporate an existing areaway into a larger or deeper areaway.
  - E. We have shared some comparative studies of existing conditions with the proposed designs with photographs of existing conditions over the course of the Consulting Parties Meetings. We will compile comprehensive dimensioned plans comparing the existing to the proposed with photographs of existing conditions and share in at the October Consulting Parties Meeting.
  - F. There are new windows proposed to provide light to the basement. These are on the south side of the building in the area under the Main Building.
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2. Q: For the unknown worst case of an earthquake, would one want to have a bit more horizontal space for the building's movement in the midst of an earthquake? Say a couple of more inches? Within human memory I wonder if we really know what is the worst case in terms of an earthquake. Mother nature and her earth's mantle of rock and its various cracks and vaults are not fully understood by humans. Who knows if we will ever have a fully comprehensive knowledge.

*NOTE: This written question which was submitted during the course of the meeting was augmented with additional detail via e-mail after the meeting. The content of the e-mail is included here for clarity.*

Thank you for the invitation to this afternoon's Section 106 briefing on the Castle project. I hope you will post the rest of my typed question about the seismic moat and the amount of "inches" proposed to be provided for the Castle's movement in the event of a future earthquake.

The response from the design team representative was that the moat would be “designed to code” considering what are the seismic risks “known today” in the Washington, DC earthquake zone.

The phrase “designed to code” is too often times as a set of words that has been regretted by design professionals. My point is that the Mineral, VA earthquake was a great surprise to many people along the Eastern Seaboard and I think particularly in Washington, DC. My thoughts continue in that I wonder how much more is unknown about the rock faults and potential of such faults and their intersecting faults to cause more and possibly more forceful earthquakes in the future that could impact Washington, DC?

I am thinking that western US earthquakes have been a much more constant and reoccurring risk factor in that the scientific and geological background knowledge has a significantly “deeper” historical record to consider.

Eastern US earthquakes are a much rarer event in terms of historical record. Given that potential lack of a more comprehensive knowledge of what are the outer bounds for an earthquake such as what happened in the Mineral, VA vicinity, I think it might be prudent to have a greater safety factor in terms of the Castle’s seismic moat to allow for a greater movement of the Castle. The point would be to allow the Castle to rock back and forth and not end up hitting the side walls of the moat and causing then damage to historic Castle’s material elements that could have been avoided.

The final question would be “how more would it cost for some additional inches to provide for a greater safety factor with a somewhat wider moat?” Given the historic, architectural, and cultural importance of the Castle, I would think that a somewhat greater expense today would be a prudent investment today to preclude a greater degree of future damage from an unexpected and more powerful earthquake than what current code requires. “Black swans” seem to emerge when least expected or not even considered. Human knowledge of the earth and all the elements and forces within the earth’s geological makeup is probably rather limited in terms of the full scope of knowledge needed to have a somewhat comprehensive understanding of risks and prudent actions one should take.

**R:** The Smithsonian Castle is being designed using the ASCE (American Society of Civil Engineers) 41 standard: "Seismic Evaluation and Retrofit of Existing Buildings". This is a performance-based standard that provides the opportunity for projects to be designed above minimum code requirements for seismic design. The Smithsonian made the decision to use an “Enhanced Performance Objective” in order to:

- Recognize the historic, architectural, and cultural importance of the Castle – and that significant damage to the historic fabric during an earthquake would not be acceptable.
- Acknowledge that there are fewer recorded earthquake motions for the East Coast, and that over time seismic hazards at a site tend to increase.
- Design with a timeline for serviceable life measured in centuries not decades.

The “Enhanced Performance Objective” means that the base isolators, new foundations, and existing superstructure are being designed to achieve the following:

- For a Maximum Considered Earthquake (MCE – also known as BSE-2N), one with a mean return period of 2,475 years, the Castle is intended to achieve a life safety structural performance level. This means that while there may be damage to the Castle in this extreme event there is a reduced probability of danger to life safety.
- For a Design Level Earthquake (2/3 MCE – also known as BSE-1N) the intent is to achieve an immediate occupancy performance level. During this level seismic hazard, the expectation is only light damage and that the building is usable shortly after the event.

As part of the seismic analysis the Castle has been subjected to a series of time histories, ground acceleration records from past earthquakes scaled to the site's seismicity. Calculations based on data from these events indicate that the maximum movement at the seismic joint around the building is less than 2" in any direction (4" total), which is easily accommodated by the current 6" wide joint.

3. Q: We had some discussion about the color of the seismic joint granite at the site visit--when do you anticipate further discussion of this topic?

R: At the Open House we received feedback regarding the granite samples that were proposed for the seismic joint cover and at the base of the building where the seismic joint is located away from the face of the building. The common thread in the feedback was that the grey and black samples were preferred but there were requests to see additional samples between the two colors provided. Additional samples are being ordered and will be available for review in October or November.

4. Q: Thank you for evaluating alternative approaches for the benches located at the front of the Castle. There are additional benches further to the west and east that also appear quite long and could impact the Castle setting. I don't believe there is a clear rendering of those benches. Is it possible to evaluate whether they can be broken into segments to reduce the perceived length?

R: We are reevaluating the length of the curved benches along the sidewalks on the north side of the Castle and considering a straighter end to reduce the perceived scale.

5. Q: On this topic, seems like it would make sense to have the metal be sacrificial to gardening/maintenance rather than stone.

I think it's hard to say on the [seismic control] joint edge without seeing examples.

R: This question was in reference to the options that were presented regarding the leading edge of the seismic joint cover. There are examples where the metal edge of the cover is left exposed, painted or anodized to blend in with the landscape. The outer edge can also be finished with stone trim that matches the infill in the actual joint cover. We will follow-up with the manufacturer of the joint covers regarding the potential damage to the metal edge if it is left exposed. We have received samples of the joint cover and will share them as part of the October Consulting Parties Meeting.

6. Q: I agree, I think a mockup would be helpful! With the different granite color options

R: We have received samples of the joint cover and will share them as part of the October Consulting Parties Meeting. We are working to show with the samples how the granite will fit in the covers and the “finished” appearance.

7. Q: Can the two bollards in the north arch be moved “forward” (north) slightly so the entrance doesn’t feel constricted for pedestrians, but a third bollard is not required.

R: The location of the bollards in plan is based on utilizing the stone piers of the porte cochere as part of the protection. The spacing between the piers and the bollards as shown was the amount that the security design specialists recommended to meet the protective design criteria for the project. We will review this with the design team further.

Q (follow-up): Just as a clarification, at the porte cochere, there was no intent to encourage moving the bollards out toward the curb as was mentioned in the presentation. The suggestion was only to see if they could be moved forward by a few inches.

R: The team will be continuing to refine the bollard placement and we appreciate the clarification.

8. Q: From SI to the Consulting Parties- What is the general opinion on the options presented for the seismic control joint cover, stone curb vs. metal edge?

R: Consensus that narrower is better for the width of the seismic control joint cover assembly to minimize visual impact; preference for the option with the exposed metal edge of the cover. Mock-ups of the options will be important in fully evaluating the options.

## **END OF MEETING**

The slide presentations from Consulting Parties Meeting 6 (08/24/2022) is available on the project webpage. Written comments are welcome. Please submit to [BondC@si.edu](mailto:BondC@si.edu).