PORTFOLIO

Designing in Flux: Imagining Structures That Adapt

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Master of Science in Advanced Architectural Design

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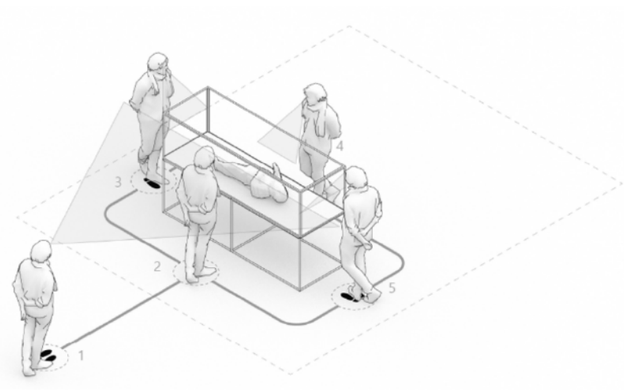
The Exhibition of Pompeii

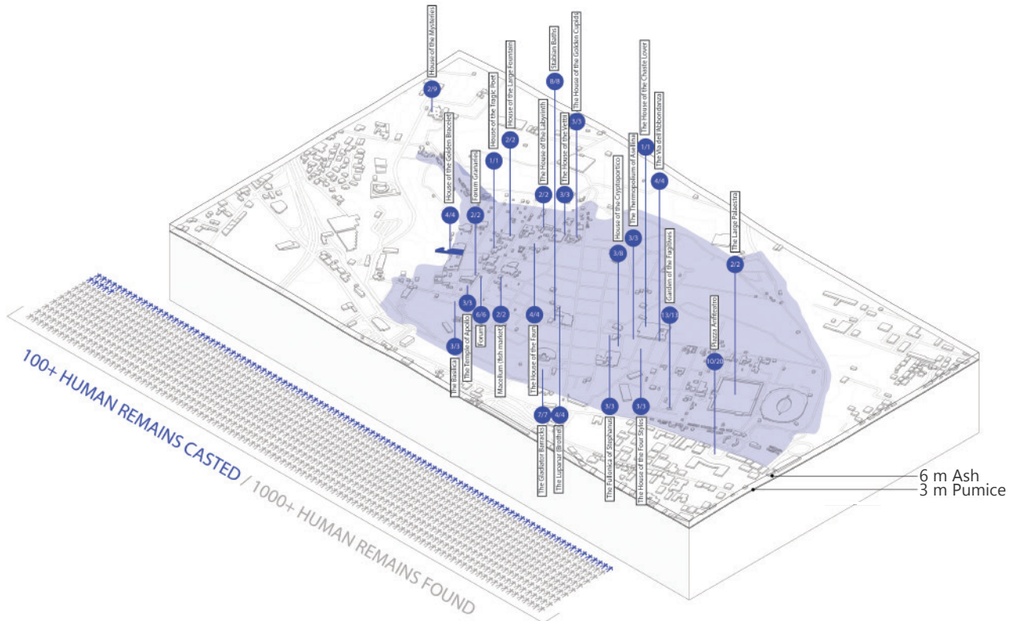
Studio / Hotspots: Architectures of Cultural Geology

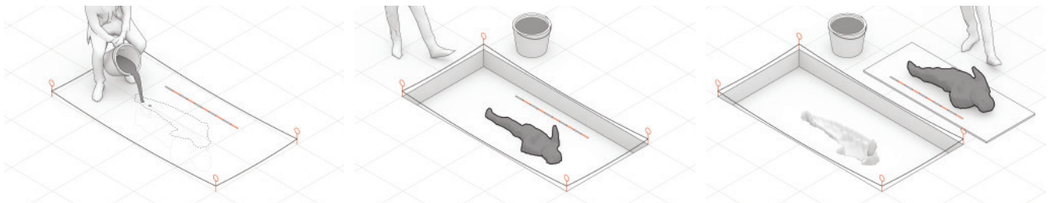
Exhibition

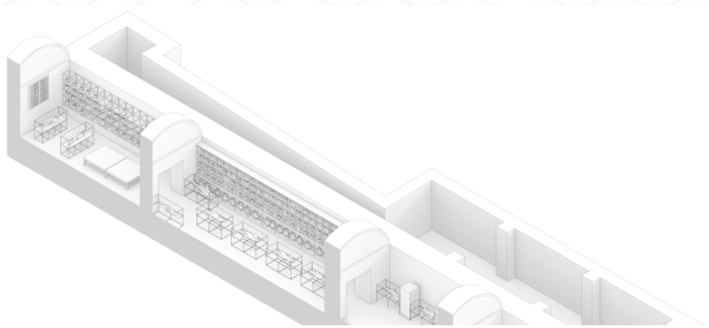
Pompeii is one of the most significant archaeological sites in the world, largely due to the castings of human bodies. Among these displays is a group of four individuals once believed to be a family and thus exhibited together. However, forensic analysis later revealed that they were not related. This raises important ethical questions: how should these bodies be exhibited, not only because we are aware that they are no longer related, but also because of the curious and complicated status of the castings.

The project explores the relationship between artifacts on display and their role within a system of discovery, excavation, analysis, organization, presentation, and observation. It views archaeology as a series of decisions that lead to speculation—such as the choice to present the cast bodies together as a single family. The project proposes a model of a contingent, flexible system, as opposed to one that solidifies and fixes narratives and histories.

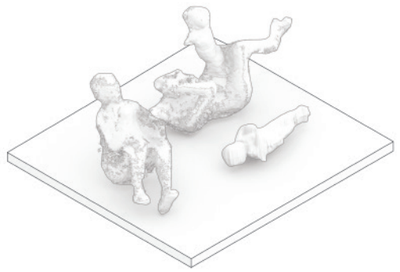


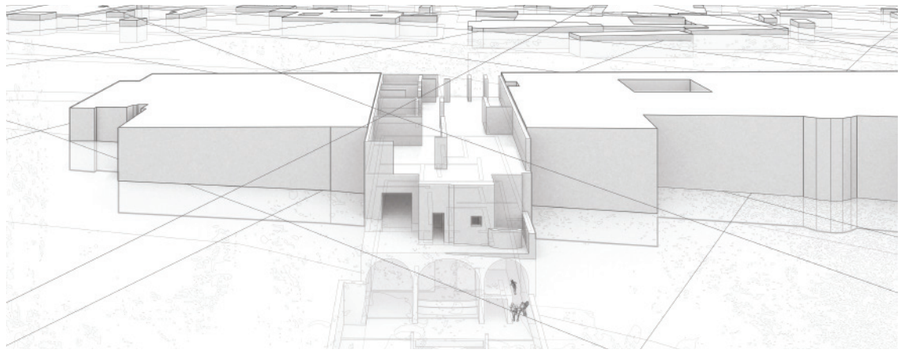


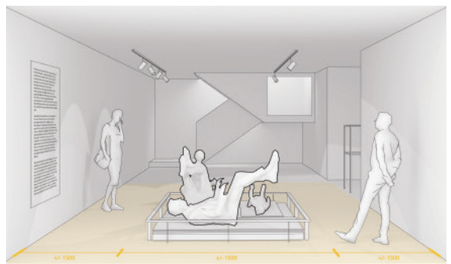


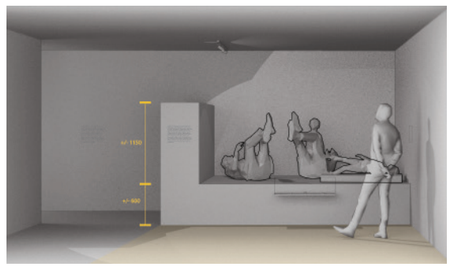


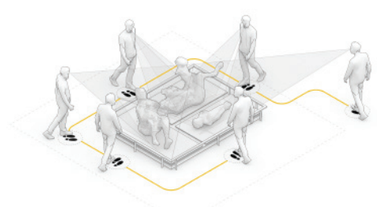
Voids in Pompeii formed when people and animals were buried in volcanic ash during the 79 AD eruption of Mount Vesuvius. As their bodies decomposed, they left hollow cavities in the hardened ash, which archaeologists later filled with gesso to create detailed body casts. These casts were displayed in vitrines at the Antiquarium in 1863.

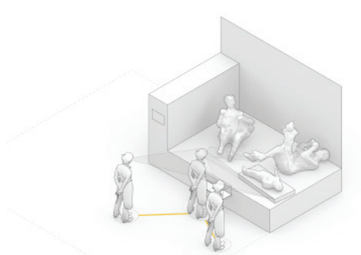




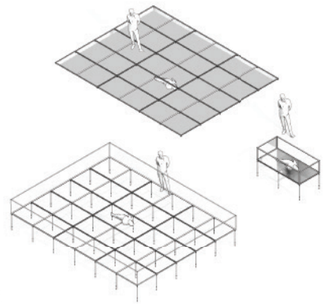








Two children and two adults were discovered in the House of the Golden Bracelet and were originally presumed to be a family. This assumption led to their remains being displayed together in Pompeii and in museums around the world. However, recent forensic DNA analysis has confirmed that all four individuals were male and unrelated.



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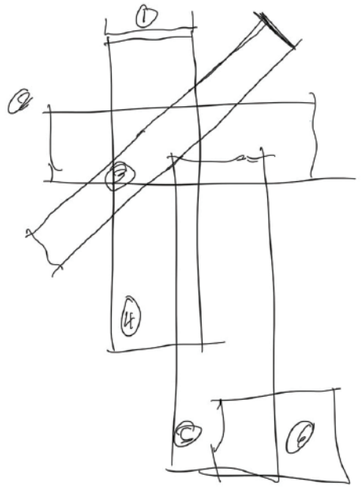

1. Pompeii Park
2. Process of Excavation
3. Process of Casting
4. Laboratory
5. Storage Archive
6. Archaeological Park

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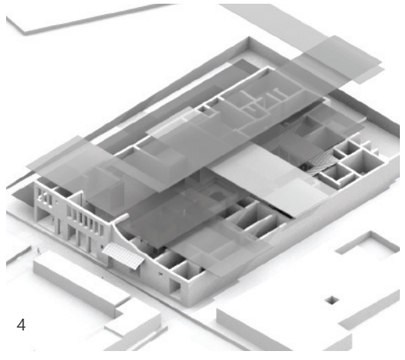

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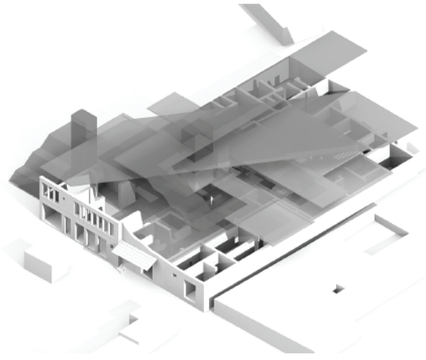

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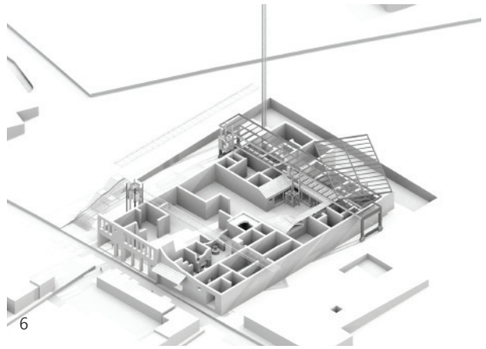

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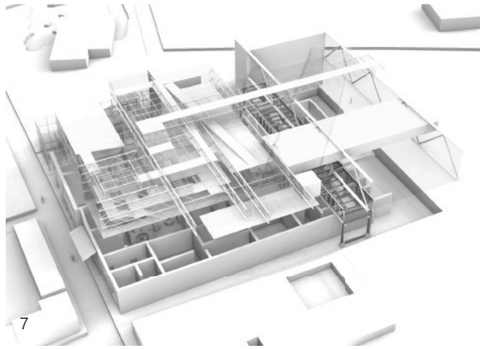

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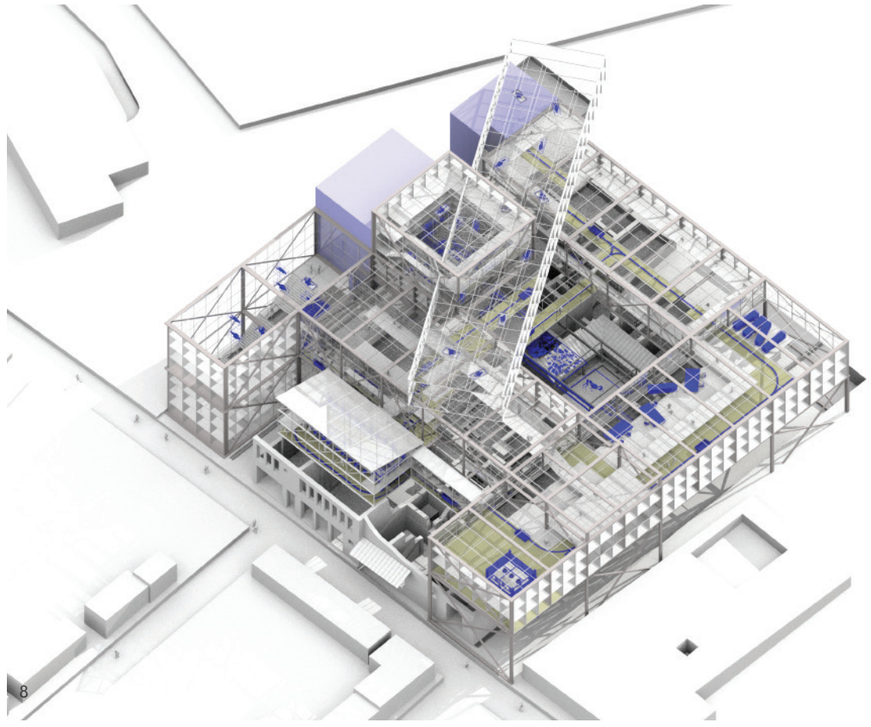

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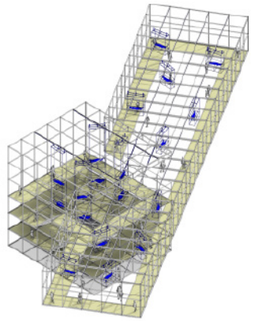
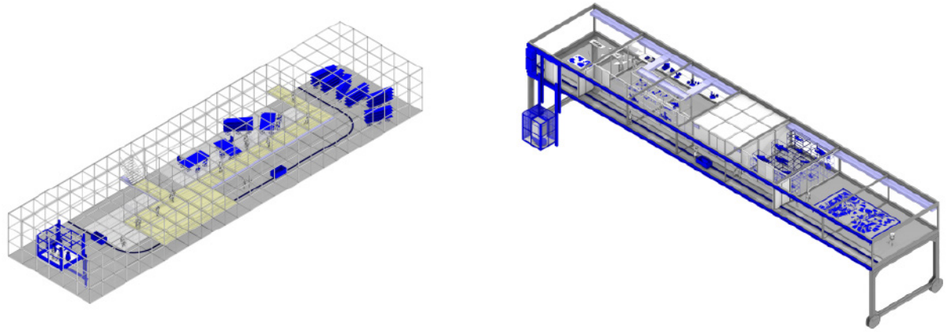
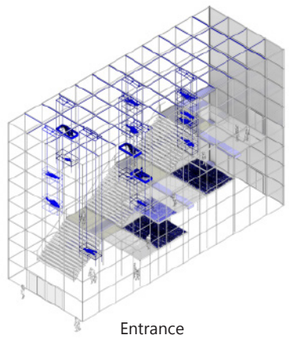


Antiquarium

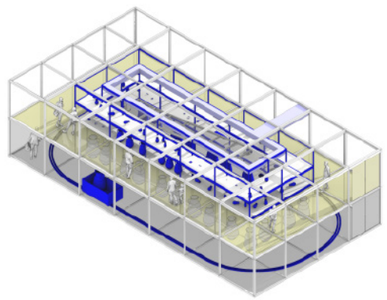


Administration and Docking

Laboratory/Gantry

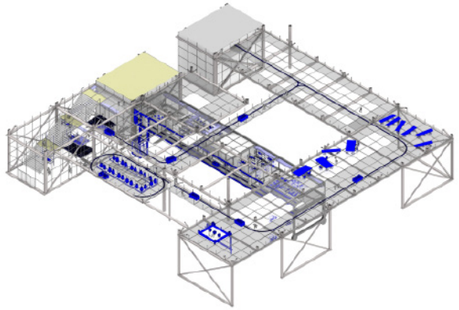


Entrance

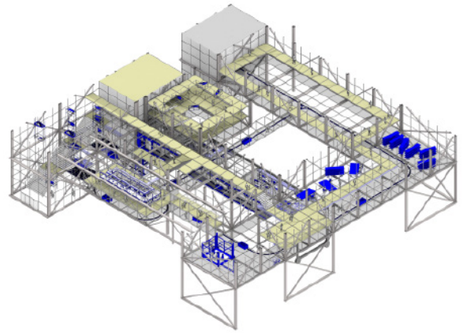


Artifact Storage

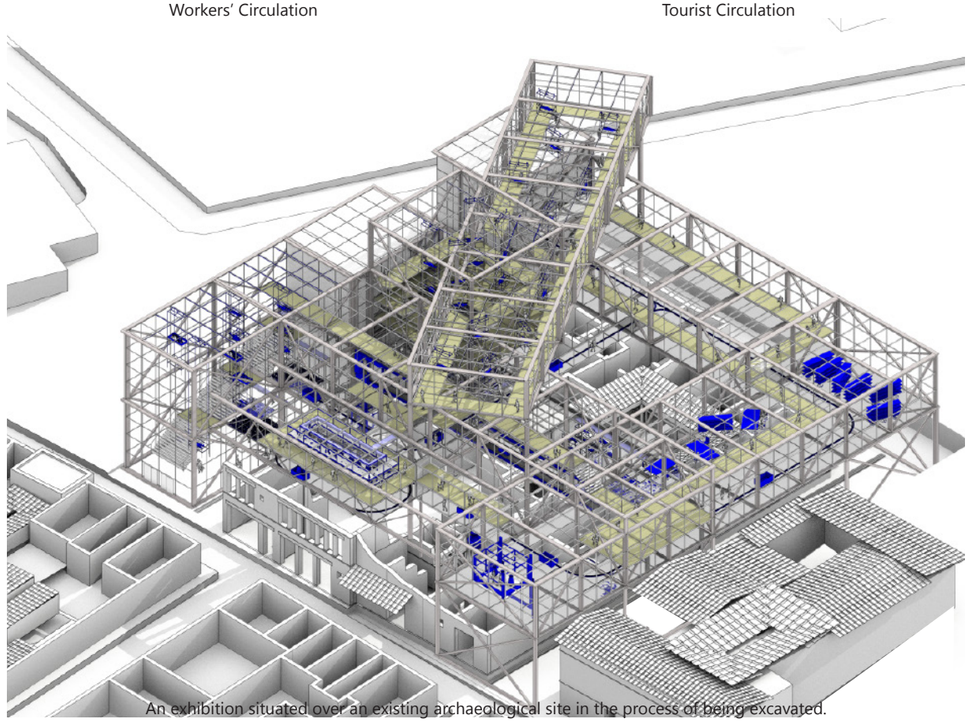
Artifacts Tourism Workers HVAC



Workers' Circulation

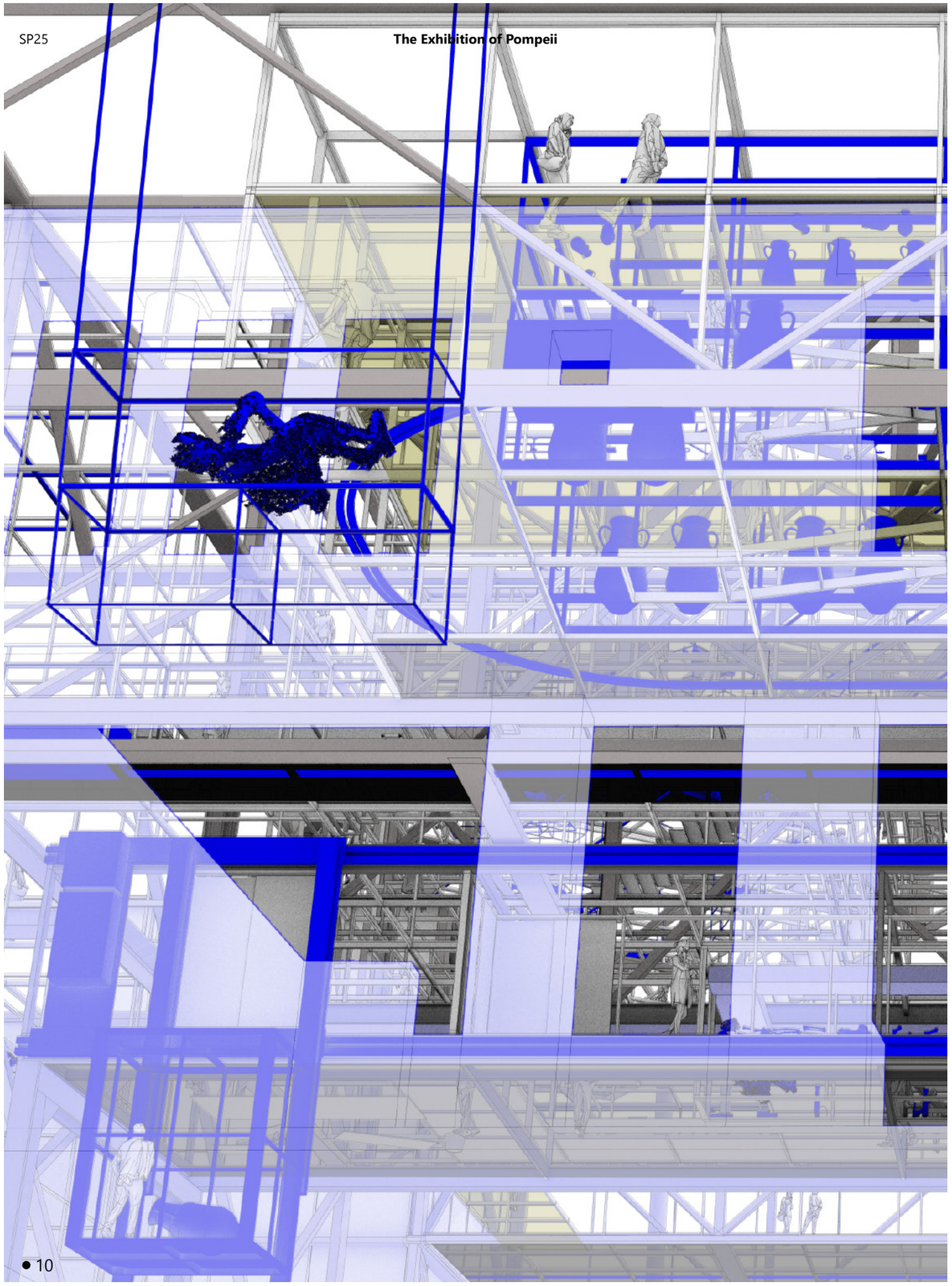


Tourist Circulation



An exhibition situated over an existing archaeological site in the process of being excavated.

The project functions like a vitrine of Pompeii, showcasing it as an archaeological machine. It does so by bringing together Pompeii's various programs within a single building. The project exhibits the processes of excavation, casting, archaeological restoration, laboratory and forensic analysis, geological storage, and the display of castings in an antiquarium.



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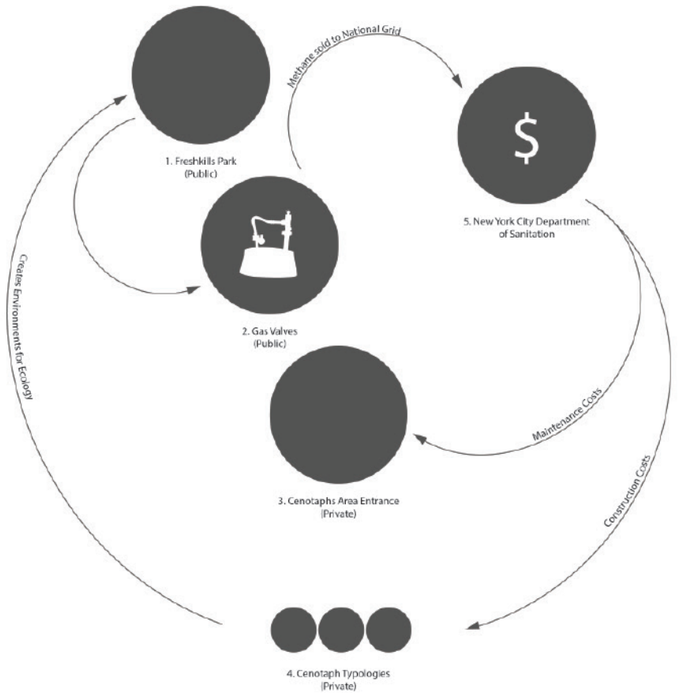
September 11th Cenotaphs

Studio / Sacred Turn

Cenotaph

In response to the devastation of World War II, Rothko responded with a form of "nothingness." His nothingness took the form of abstract, large-scale color paintings, serving as his way of expressing tragedy. After the terrorist attacks of 9/11, Michael Arad and Peter Walker also proposed "nothingness." They responded with two vast voids where the World Trade Center once stood.

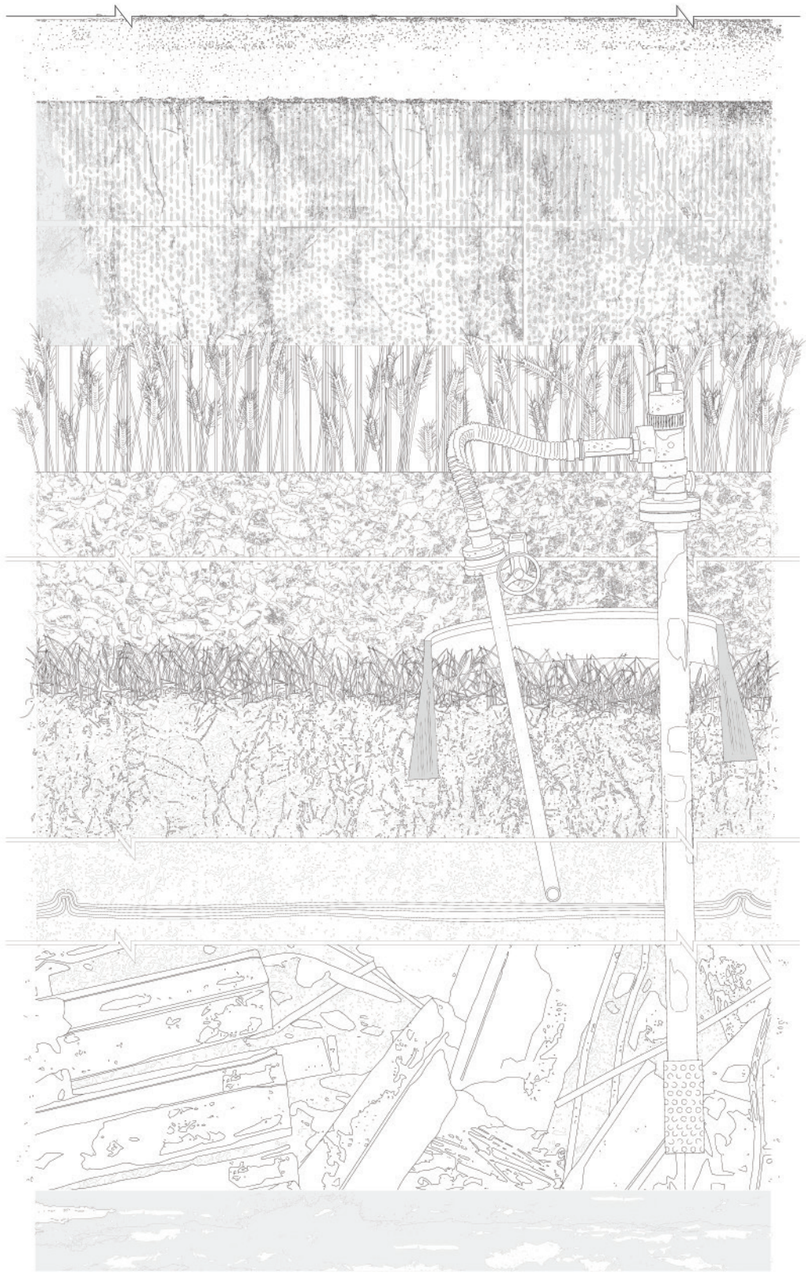
The project is a series of cenotaph typologies for the human remains and debris relocated from Ground Zero to Freshkills Park after 9/11. Inspired by Rothko and Reflecting Absence, the typologies use gabion walls and roof structures to create voids intended for grieving, calming, and visitation. After three generations, the cenotaphs will be disassembled, as the memories of the victims will fade with time.



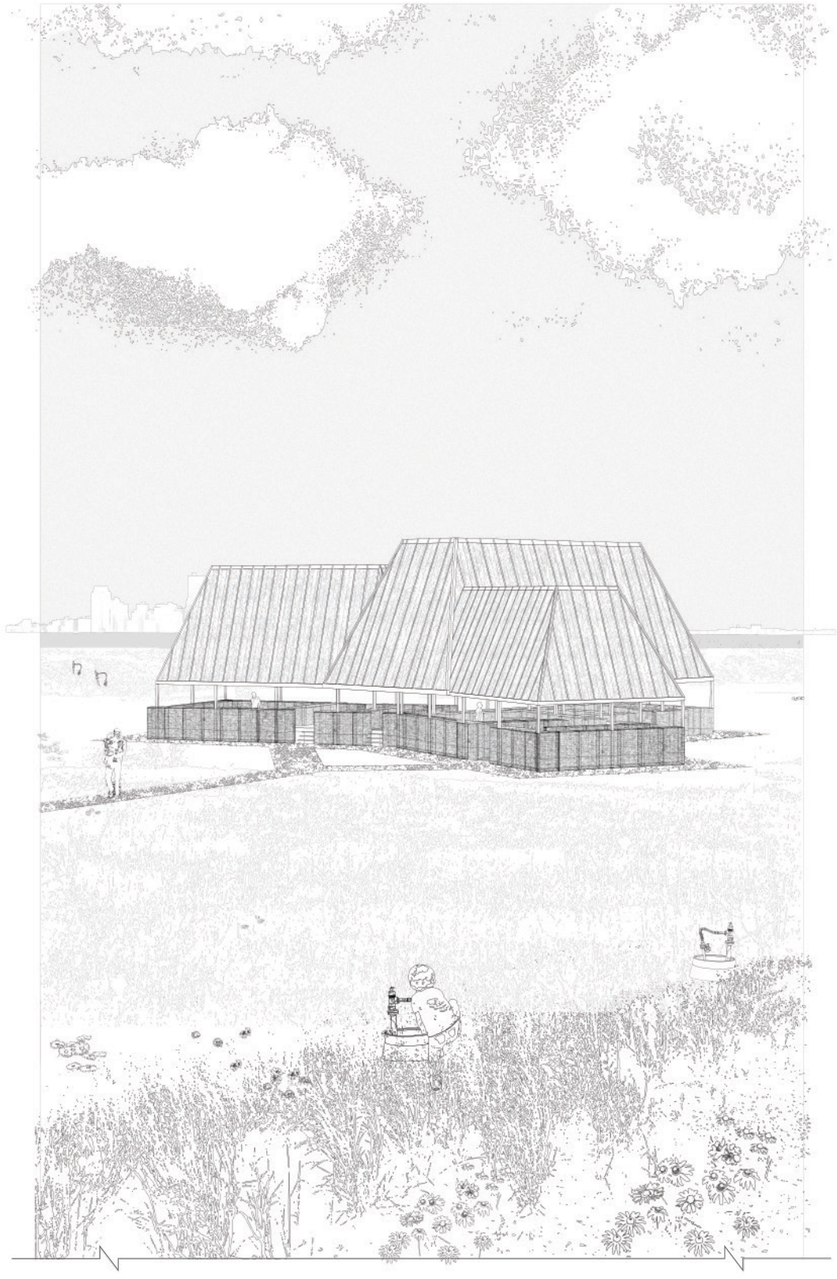
The primary beneficiaries will be the victims' families and their descendants for three generations. Methane produced by the decomposition of buried waste is harvested by the New York City Department of Sanitation and sold to National Grid, generating annual revenue. All proceeds will go toward maintenance costs, construction, and support for the victims' families.

Excavation Plan

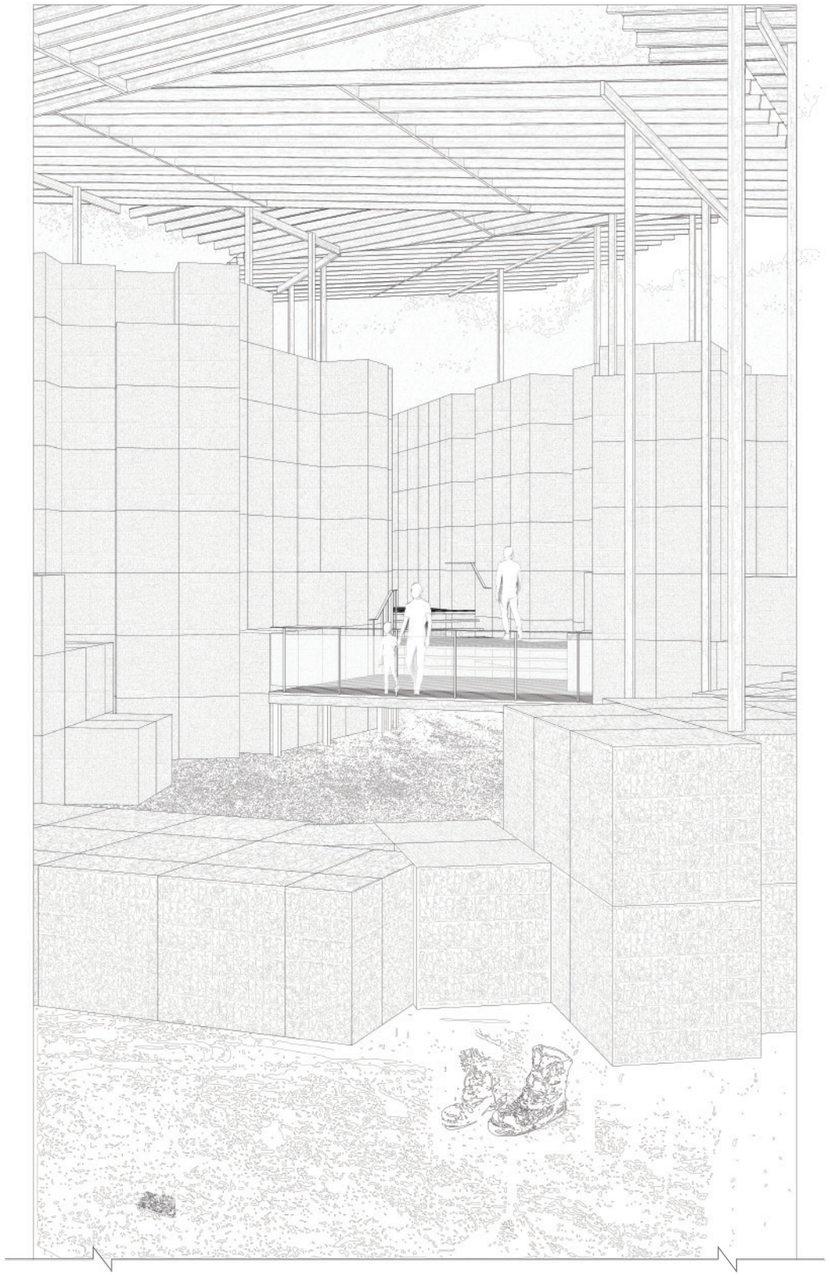
Excavation Sequences



Non-linear Narrative Section of the WTC's Site.
Dust - Memorial - Wheat field - Battery Park - Freshkills Park - Debris - Hudson River

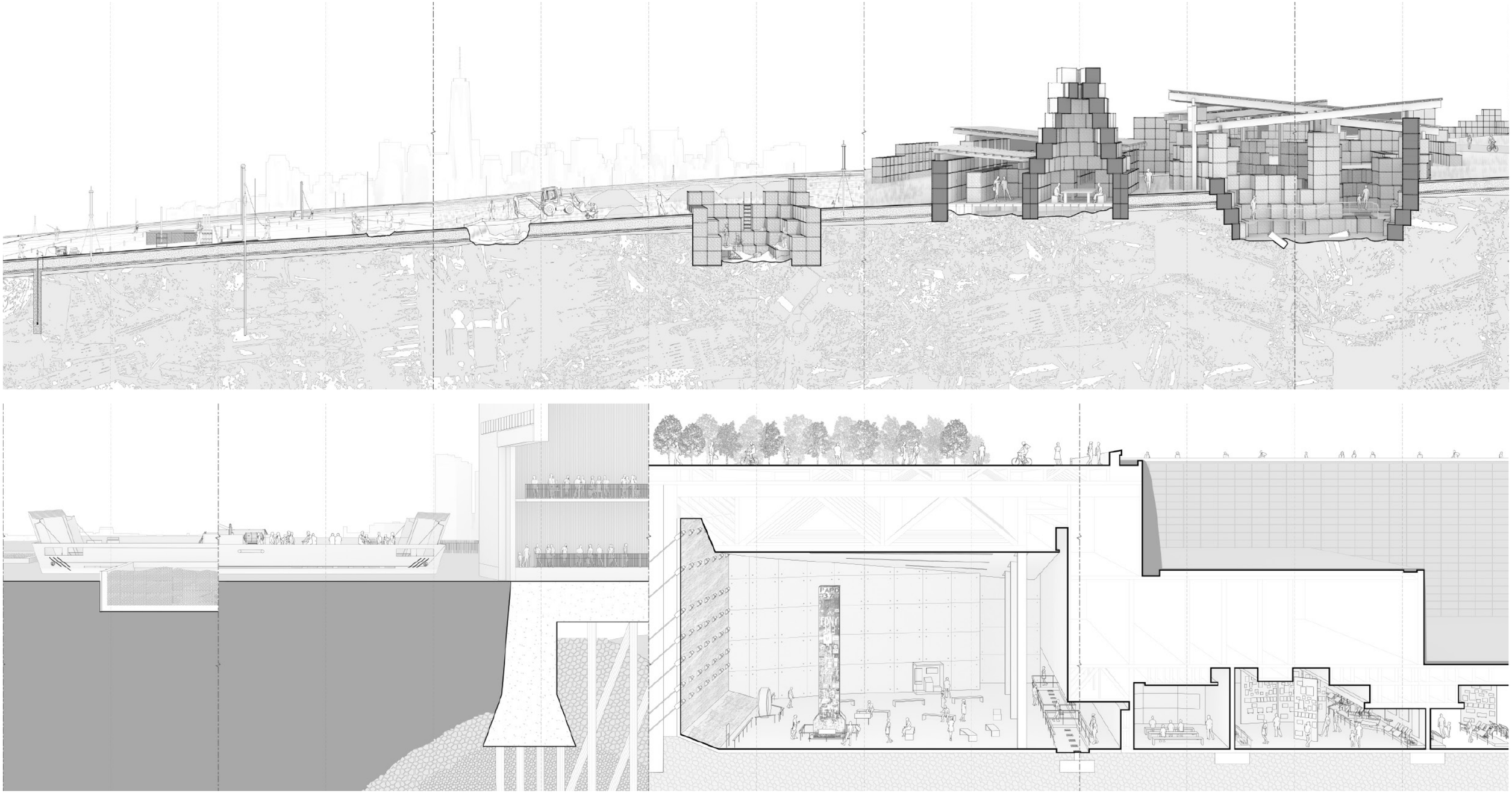


"Calm"
Open Space
Silence



"Collective"
Void
Visitation

September 11th Cenotaphs FA24



Top Section
The Process of Constructing the Cenotaphs

Bottom Section
Travel from Ground Zero to Freshkills Park

3

Infrastructure for Indeterminacy

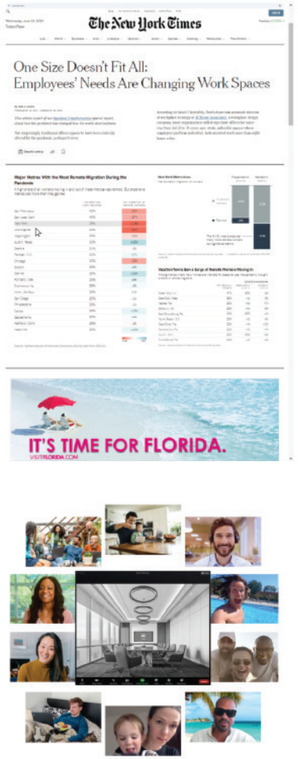
Studio / Re: Park Ave

Office

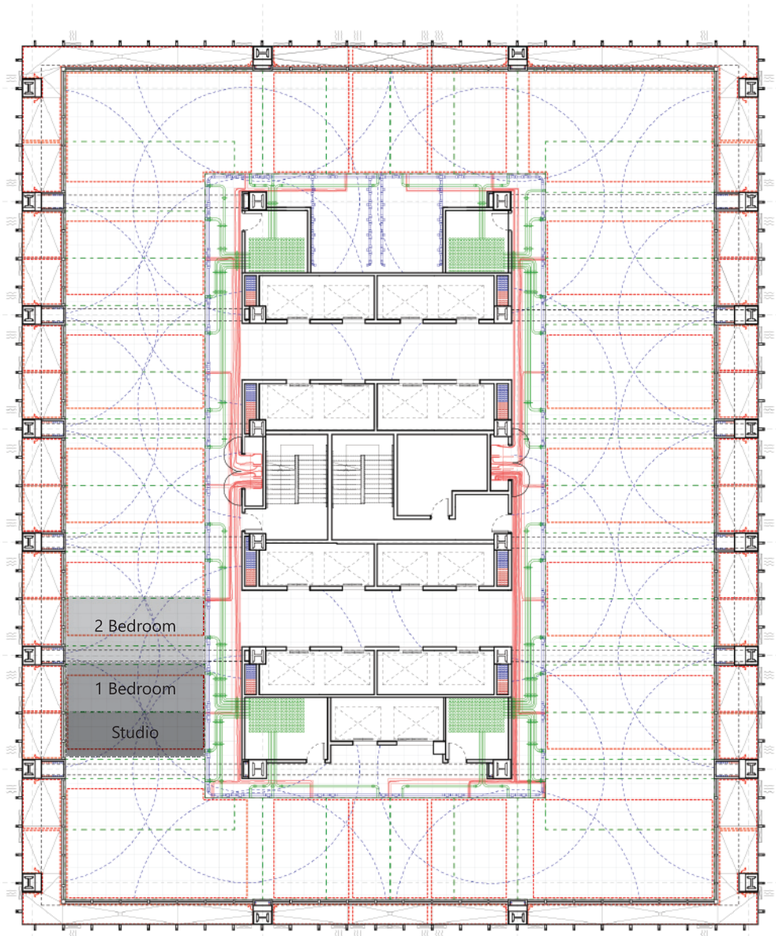
This project examines the Union Carbide Building at 270 Park Avenue, the largest building ever voluntarily demolished, to propose an adaptable alternative for its future. Our project goes beyond the original office program, exploring the potential for creating a flexible, constantly adaptable space.

By updating the building's infrastructure and adding a raised, flexible floor, the systems are adjusted to run beneath the floor, allowing tenant adaptation without disruption. This project proposes preparing the building for the future, enabling future owners to determine the use of the space.

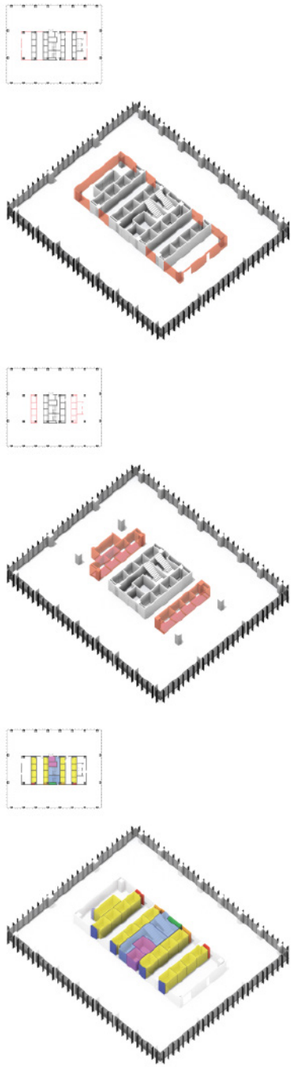
Office Space 1960s

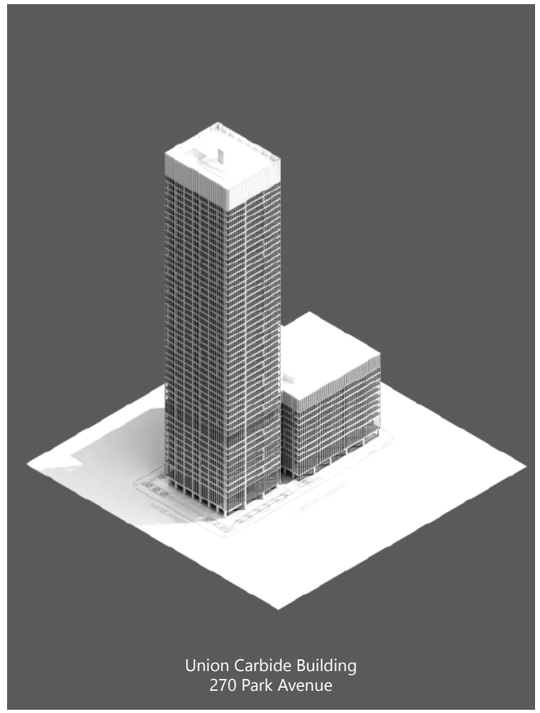


Office Space 2020s

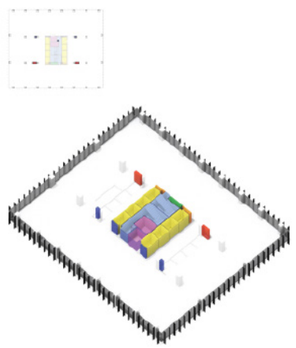


The project outlines designated zones using a series of lines to support the integration of building systems, allowing for the flexible adaptation of spaces into domestic living areas, offices, and more.



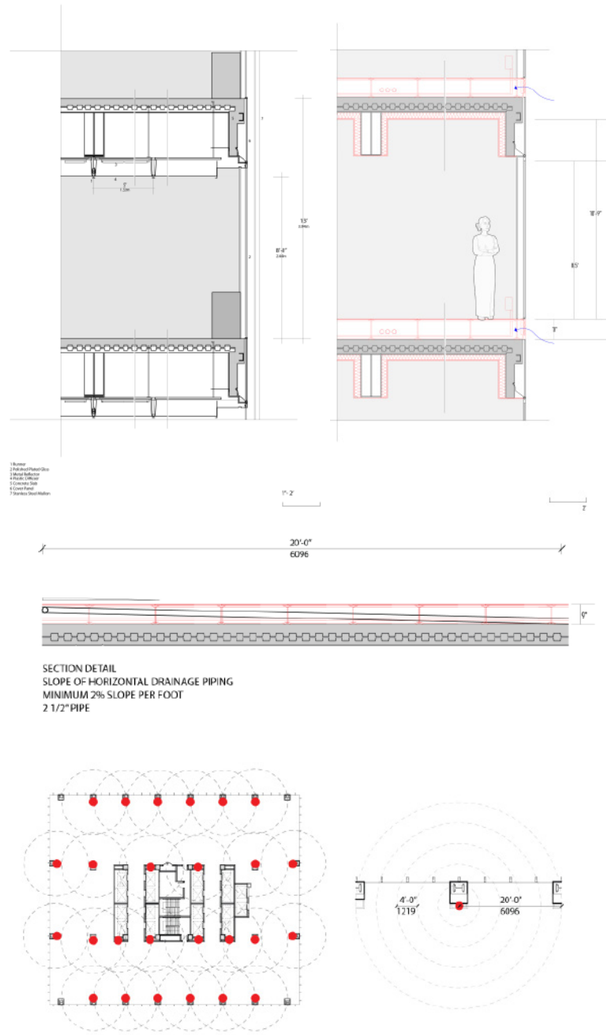


Union Carbide Building
270 Park Avenue

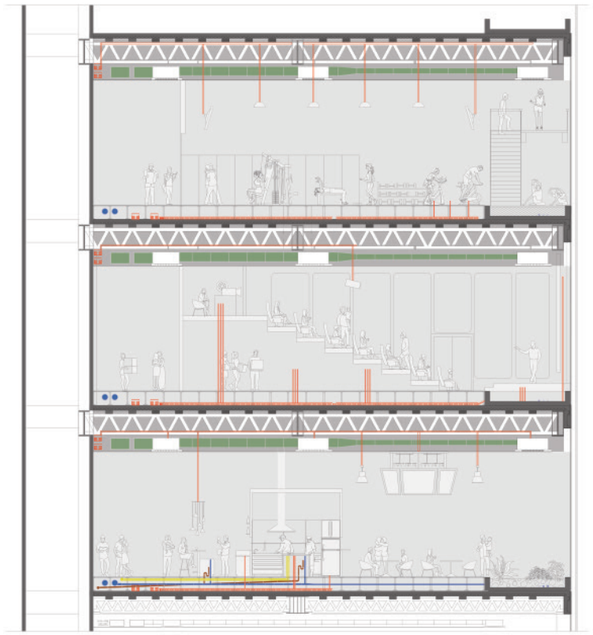


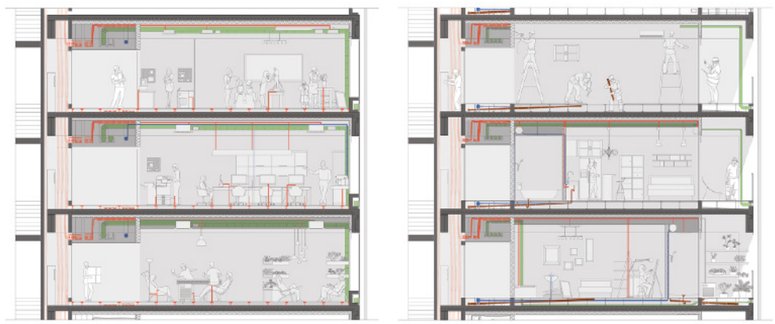
Stripping the Core

Elevator
Exit Stairs
Mechanical
Electrical Closet
Air Shafts
Shafts
Plumbing
Standpipe

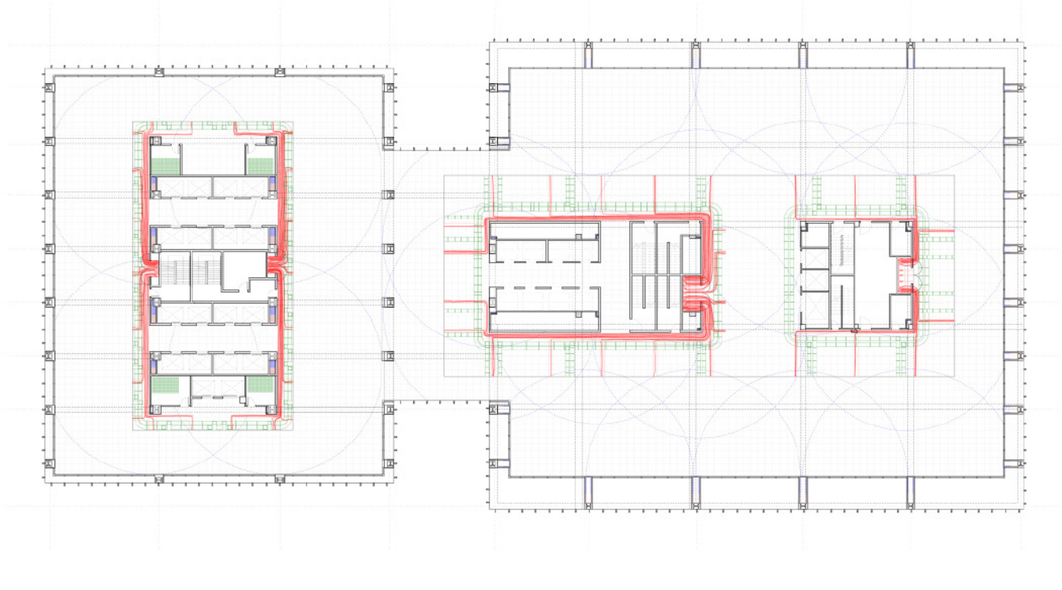


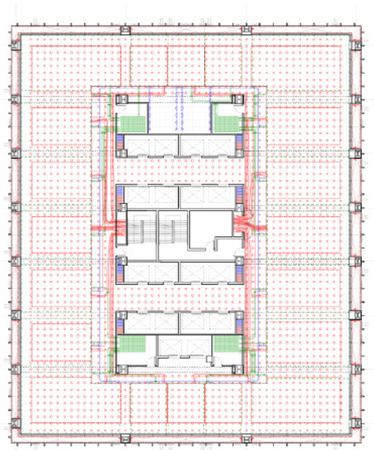
Retrofitting for Flexible Plumbing Installation

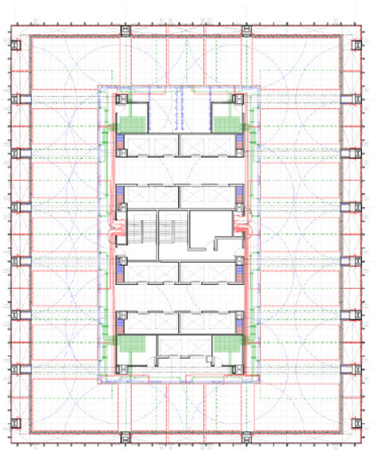




The tower is divided into three sections: Domestic, Creative, and Podium. The upper tower, with its sunlight and views, is optimized for residential use; the podium, with its street engagement, is suited for large-scale events; and the middle section falls in between.







The infrastructure is color-coded according to the boundaries of the electrical, mechanical, and plumbing systems to illustrate where systems could potentially be installed.

Columbia University's Graduate School of Architecture, Planning and Preservation