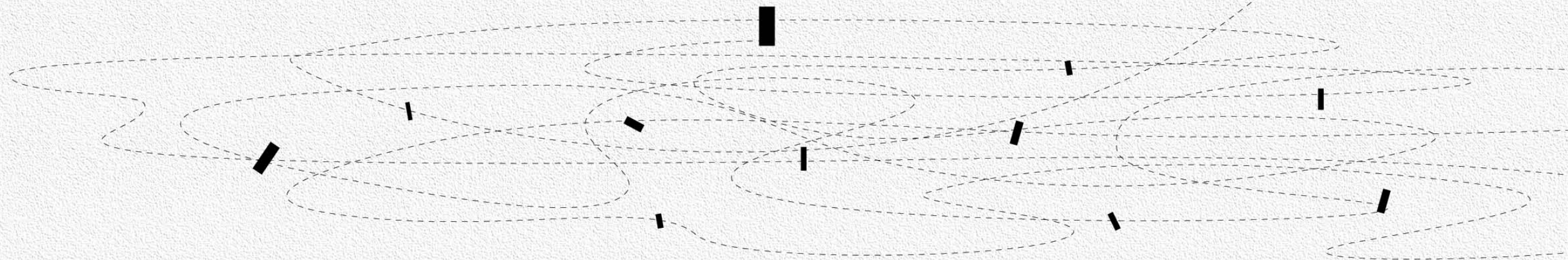# [Labyrinthine Clarity]

Junjie Zhang Portfolio
GSAPP MS.aad, 2024-2025

▲'The screen': Photographed in GSAPP, New York,2025

Contents

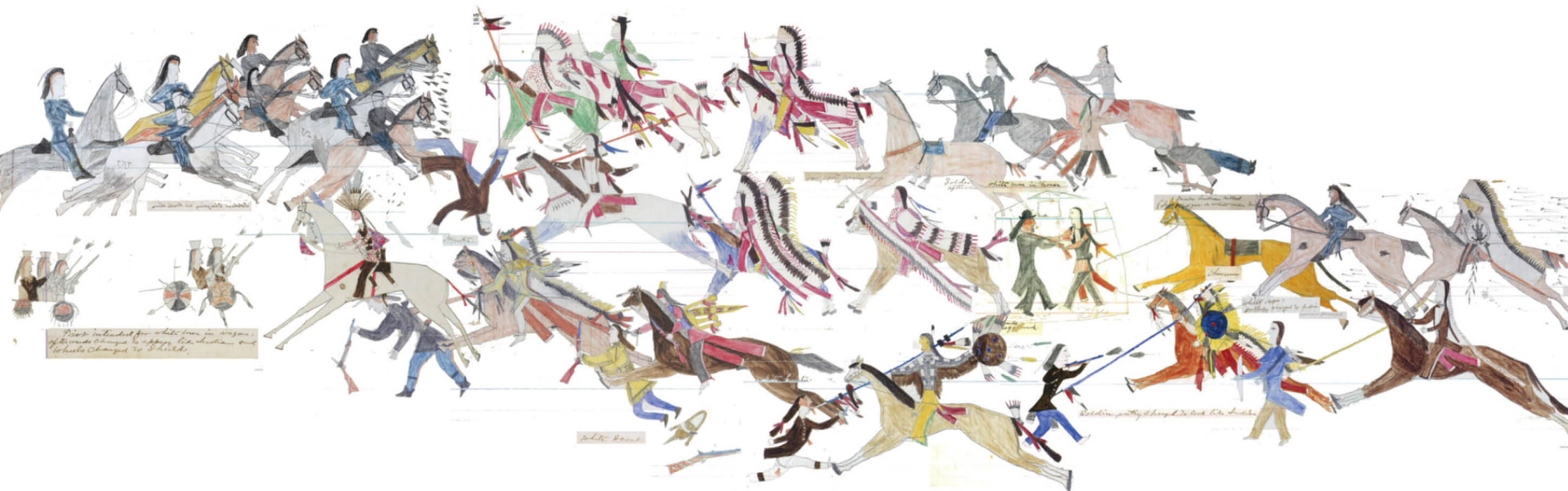# [Paper Trace]

Dual Narrative in Ledger Art

Individual Video Project
GSAPP Studio: ARCHIVES OF RESISTANCE:
A LOUDREADING takeover of historical narratives
Advisor: Cruz Garcia , Nathalie Frankowski
July 2024

[Video]   [Website]

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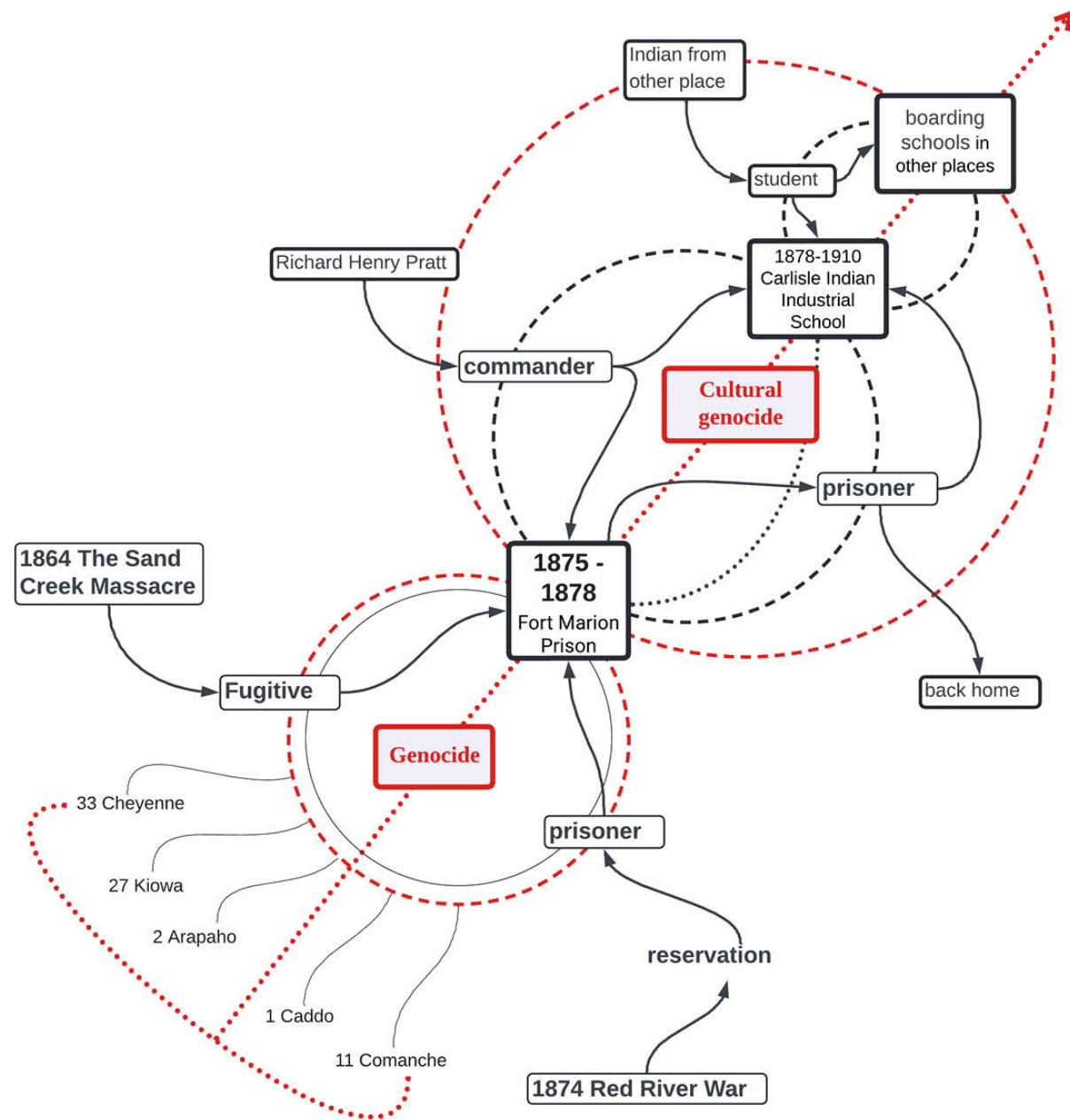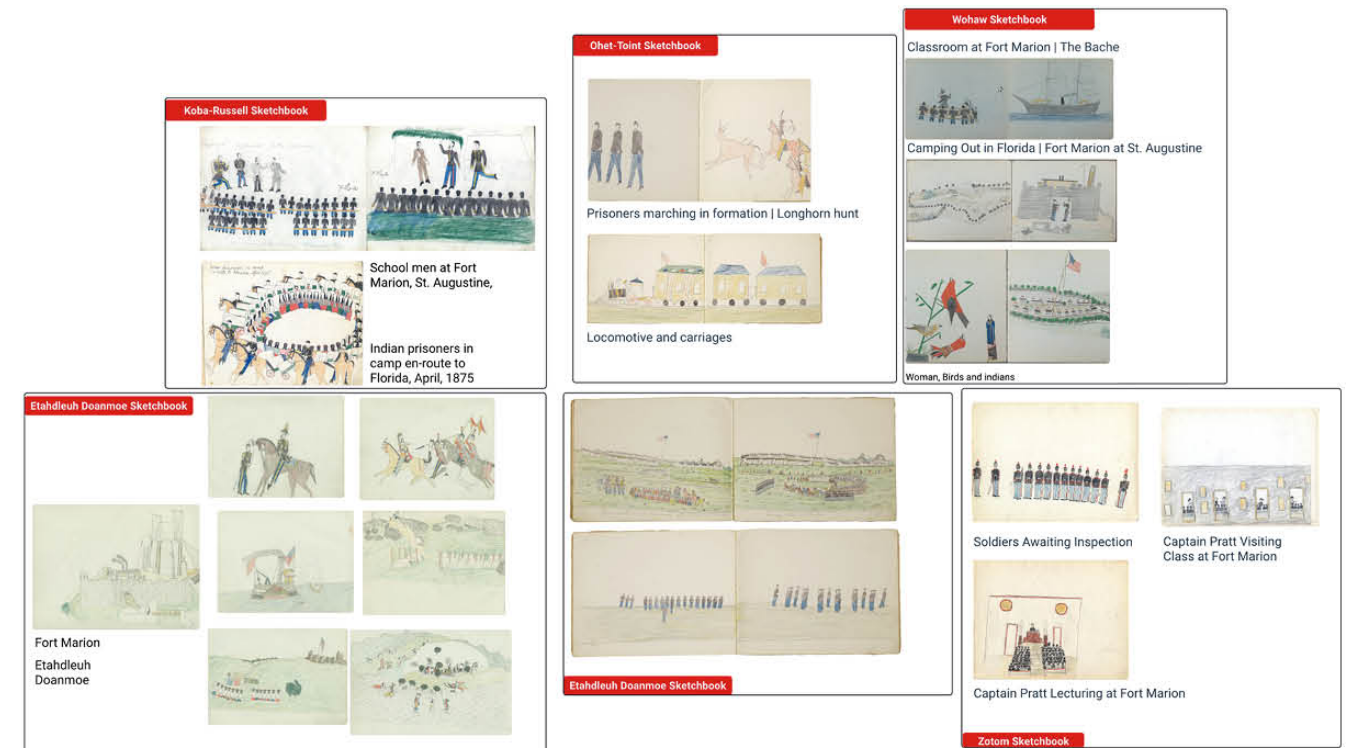
▲From genocide to cultural genocide

[Paper Trace]

"Paper Traces: Dual Narrative in Ledger Art" looks at the complex and hidden stories found in Ledger Art. This art form mixes the tales of Indigenous people and colonizers, where both these stories are told and uncovered. It challenges viewers to find the true histories and understand the layers in these artworks.

In this project, I use ledger art as a research matrix to question the narrative logic and devices of non-native artifacts in museums such as the MET and the Brooklyn Museum. By tracing back the information on their labels, such as the collector and date, I reorganize and re-position them in the local perspective, connecting them to the colonial footprints and resistance history of the Indigenous people that has been intentionally hidden in the course of history, and thus formulating a critique of colonialism.

▲Scans Juxtaposition of by different authors in the same period

▲collage of Fort Marion

Tracing map of leger art from the Fort Marion period

Etahdleuh Doanmoe Sketchbook

Etahdleuh Doanmoe Sketchbook

Koba-Russell Sketchbook

Ohet-Toint Sketchbook

Wohaw Sketchbook

Zotom Sketchbook

Kiowa Sketchbook

Rice County Historical Society, Faribault, MN

Bonhams auction

Plains Ledger Art Digital Publishing Project (PILA)

Donald Ellis Gallery

Missouri Historical Society

The Taylor Museum

Davis Museum

1940-2023

1935

1930

1925

1920

1915

1910

1905

1900

1895

1890

1885

1880

1875

1870

Timeline

Transferred by Bishop Whipple's niece

acquired from the estate

Roy H. Robinson
passion for collecting Native American artwork
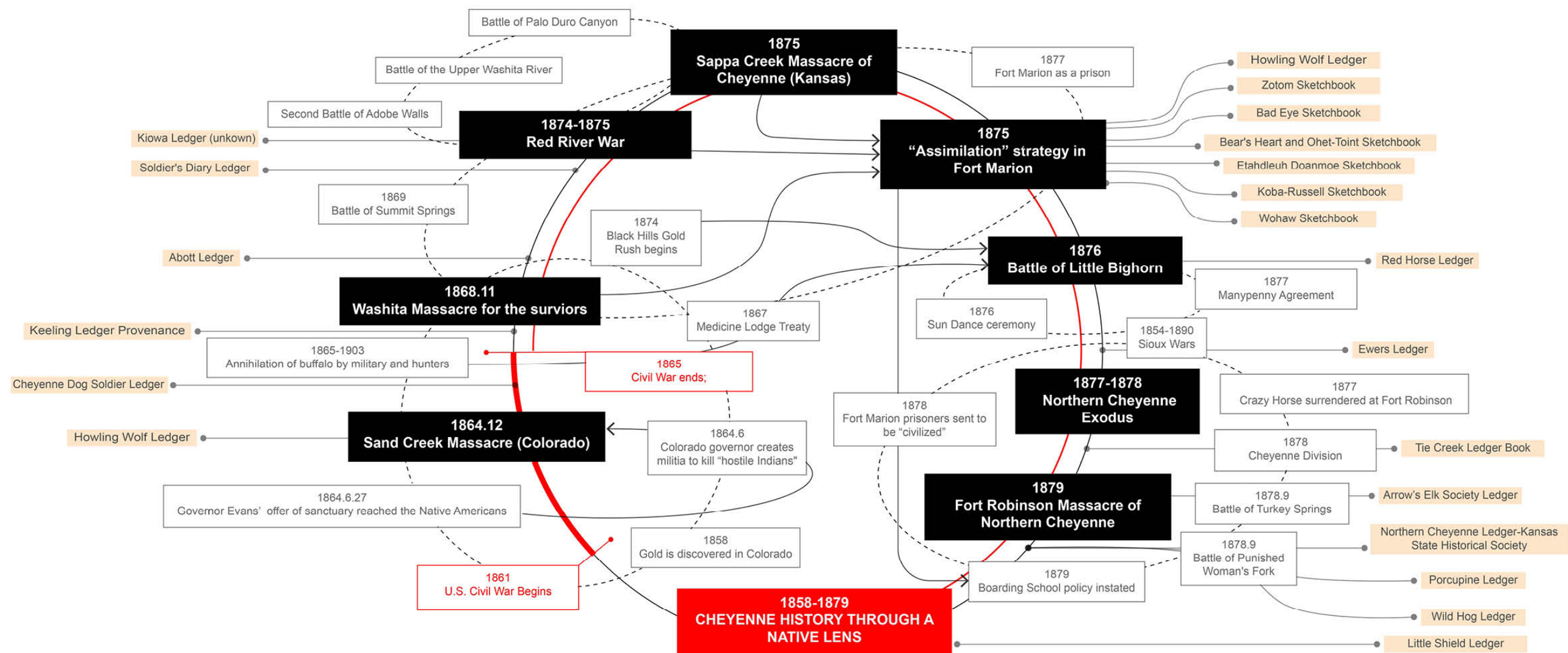
descendants of Miss Russell

school: St. Mary's Hall

Evangeline Marrs Whipple
(Evangeline Simpson Whipple)
American philanthropist and author

wife

Karen McManus

? ? ?

Carlisle Indian Industrial School
first school for the Indians

Henry Benjamin Whipple
Espicopal leader in Minnesota
bishop helping Indian

her husband's grandfather

cultural genocide

headmaster

Clarence M. Schultz

student

Miss Josephine Russell
providing instruction for the Plains Indian

Fort Marion Prison

Richard Henry Pratt
military officer against Indian

Frances Grady

mother

Mrs. James Brady

purchase

purchase

officer charge/commander

volunteer school-mistress

prisoner

indian artist

03

Battle of Palo Duro Canyon

Battle of the Upper Washita River

Second Battle of Adobe Walls

Kiowa Ledger (unkown)

Soldier's Diary Ledger

**1875
Sappa Creek Massacre of
Cheyenne (Kansas)**

**1874-1875
Red River War**

1869
Battle of Summit Springs

1877
Fort Marion as a prison

**1875
"Assimilation" strategy in
Fort Marion**

Howling Wolf Ledger

Zotom Sketchbook

Bad Eye Sketchbook

Bear's Heart and Ohet-Toint Sketchbook

Etahdleuh Doanmoe Sketchbook

Koba-Russell Sketchbook

Wohaw Sketchbook

Abott Ledger

1874
Black Hills Gold
Rush begins

**1868.11
Washita Massacre for the surviors**

1867
Medicine Lodge Treaty

**1876
Battle of Little Bighorn**

Red Horse Ledger

1877
Manypenny Agreement

Keeling Ledger Provenance

1865-1903
Annihilation of buffalo by military and hunters

1865
Civil War ends;

1876
Sun Dance ceremony

1854-1890
Sioux Wars

Ewers Ledger

Cheyenne Dog Soldier Ledger

**1877-1878
Northern Cheyenne
Exodus**

1877
Crazy Horse surrendered at Fort Robinson

Howling Wolf Ledger

**1864.12
Sand Creek Massacre (Colorado)**

1864.6
Colorado governor creates
militia to kill "hostile Indians"

1878
Fort Marion prisoners sent to
be "civilized"

1878
Cheyenne Division

Tie Creek Ledger Book

**1879
Fort Robinson Massacre of
Northern Cheyenne**

Arrow's Elk Society Ledger

1864.6.27
Governor Evans' offer of sanctuary reached the Native Americans

1878.9
Battle of Turkey Springs

1878.9
Battle of Punished
Woman's Fork

Northern Cheyenne Ledger-Kansas
State Historical Society

1861
U.S. Civil War Begins

1858
Gold is discovered in Colorado

1879
Boarding School policy instated

Porcupine Ledger

**1858-1879
CHEYENNE HISTORY THROUGH A
NATIVE LENS**

Wild Hog Ledger

Little Shield Ledger

▲ Collage of Cheyenne History 1858-1879

▲ Collage of Cheyenne History 1858-1879 (ledger art source)

Labels within the collage:
- Howling Wolf Ledger
- Etahdleuh Doanmoe Sketchbook
- Red Horse Ledger
- Red Horse Ledger
- Soldiers attack
- modern transportation
- Sun Dance ceremony
- prisoner
- "Assimilation" strategy in Fort Marion 1875
- Sand Creek Massacre (Colorado) 1864.12
- modern transportation
- Officer Pratt
- Battle of Little Bighorn 1876
- prison castle
- modern transportation
- Koba-Russell Sketchbook
- Wohaw Sketchbook
- Ohet-Toint Sketchbook
- fight with settler
- hunt
- Custer's last stand
- boarding school
- Battle of Summit Springs 1869
- Zotom Sketchbook
- Porcupine Ledger
- soilder traces
- Red River War 1874-1875
- Fort Robinson Massacre of Northern Cheyenne 1879
- modified soilder
- Cheyenne Dog Soldier Ledger
- Abott Ledger
- Kiowa Sketchbook
- Arrow's Elk Society Ledger
- Black Horse Ledger

▲ Collage of Cheyenne History 1858-1879

▲ Scene cut

[Ash, echoes]

an Archaeology of Pink Floyd at Pompeii

Individual Project
GSAPP Studio: HOTSPOTS:
ARCHITECTURES OF CULTURAL GEOLOGY
Advisor: Mark Wasiuta
May 2025

▲ *Echoes in 1971*

▲ *Echoes in 1972*

Pink Floyd's performance at the ancient amphitheater of Pompeii transformed the ruinous arena into a site of sound and imagery, where progressive rock merged with the historical aura of the Roman ruins. The band's use of the amphitheater as a vast, echoing chamber not only altered the acoustic dynamics of their music but also highlighted the intersection of history, space, and sound. This event was not merely a concert but a spatial and temporal dialogue, connecting ancient history with modern cultural expression.

Ash, Echoes draws on this profound interplay between music, space, and history, proposing a series of architectural interventions that capture and manipulate sound as a spatial experience. By integrating reflective surfaces, responsive materials, and strategically placed speakers, these interventions create a dynamic environment where sound waves form visual patterns, embodying the echoes of Pink Floyd's performance. This project transforms the static ruin into a living, sonic space, where past and present converge.
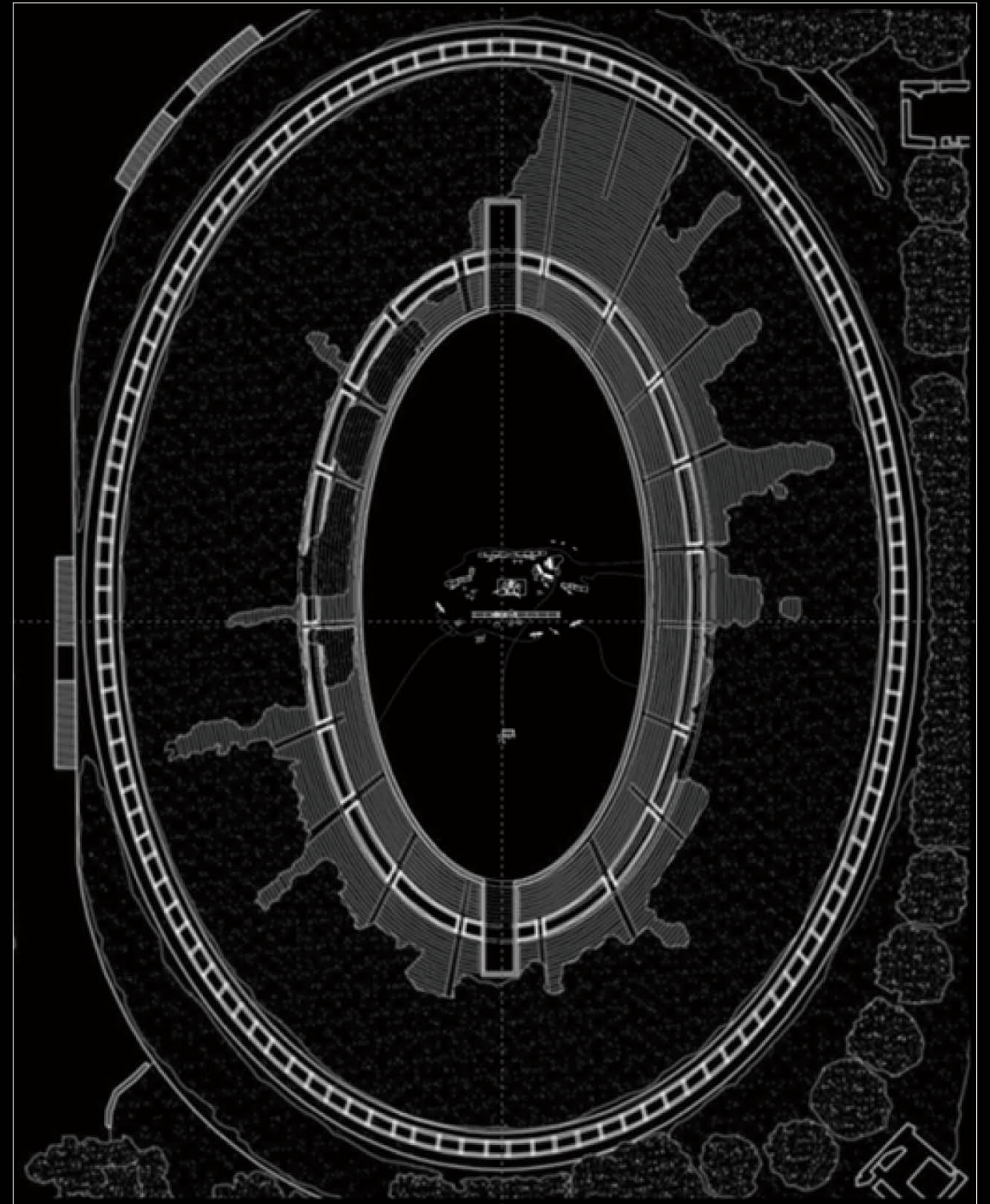
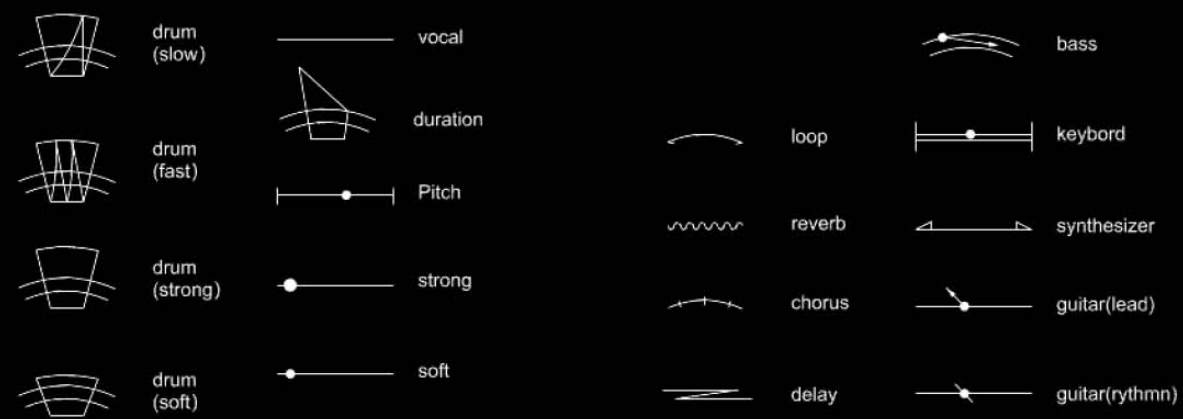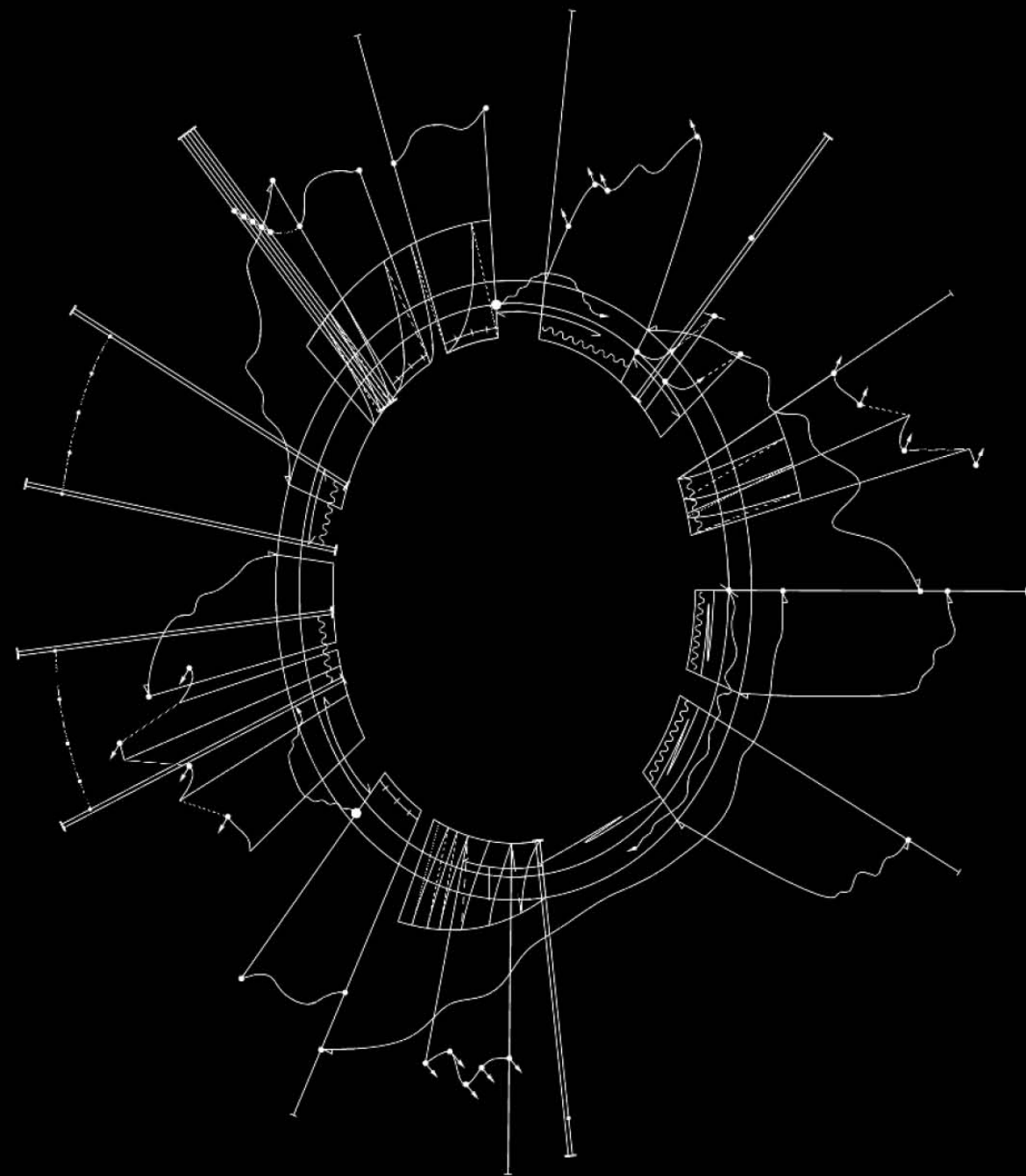▲ *plan of pink floyd at pompeii*
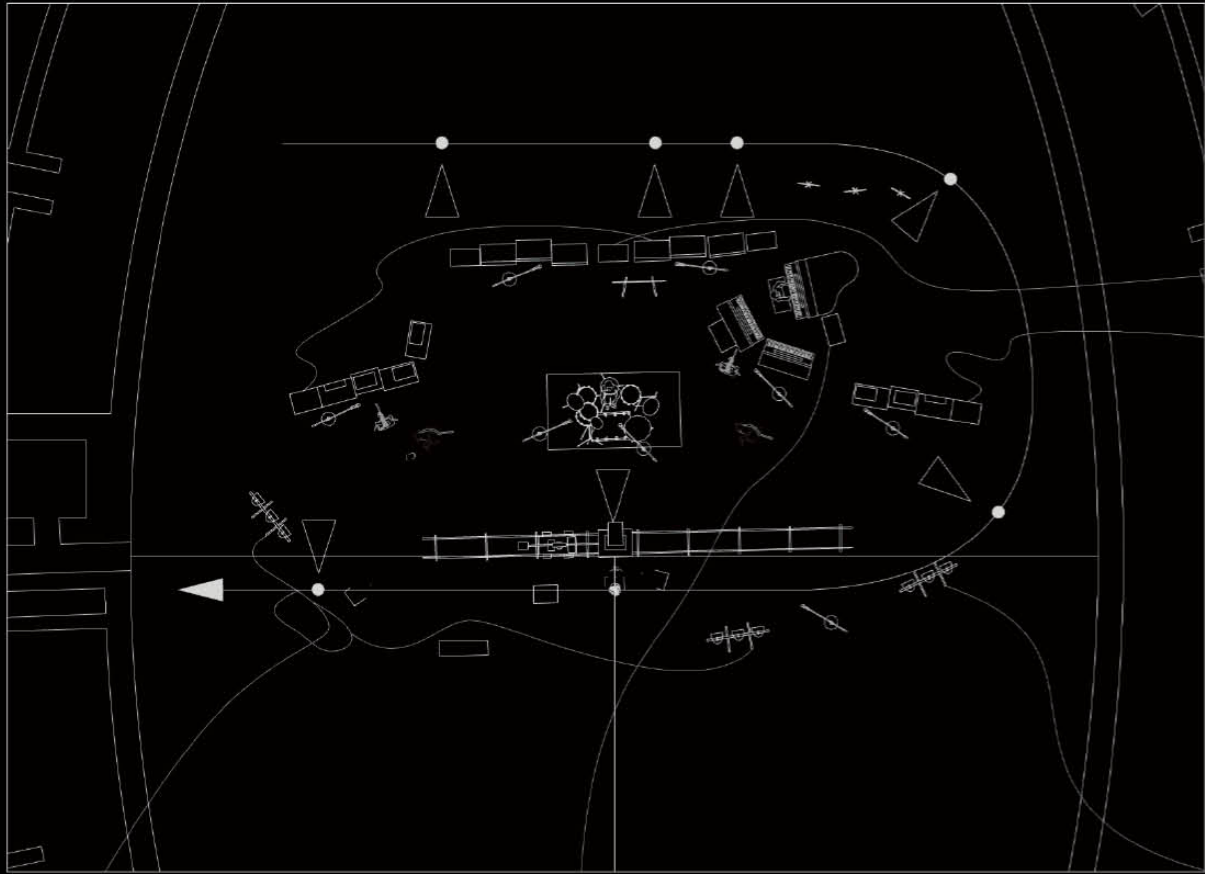
▲ Study of Echoes (original plan overlayed)

North Speaker
dramatic, spatial effects

Pickup Microphone
(amp)

Camera
director

Drums
Nick Mason

Guitar
David Gilmour

Sound mixing desk
immersive audio

Reflectors

Front Stereo PA
main band sound

Camera
Close shot

Fill Light

Pickup Microphone
(environment)

Keyboard
Richard Wright

Bass
Roger Waters
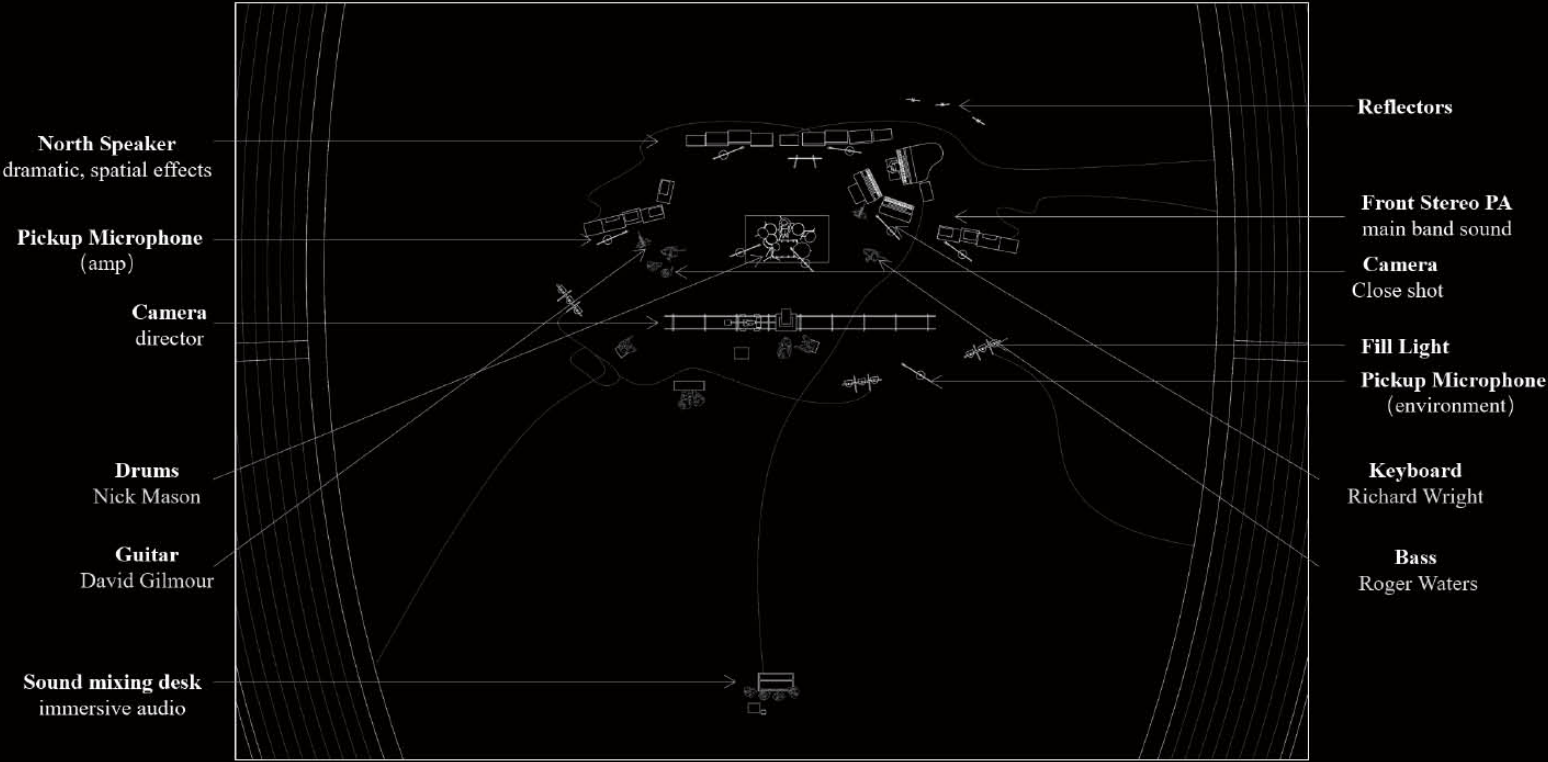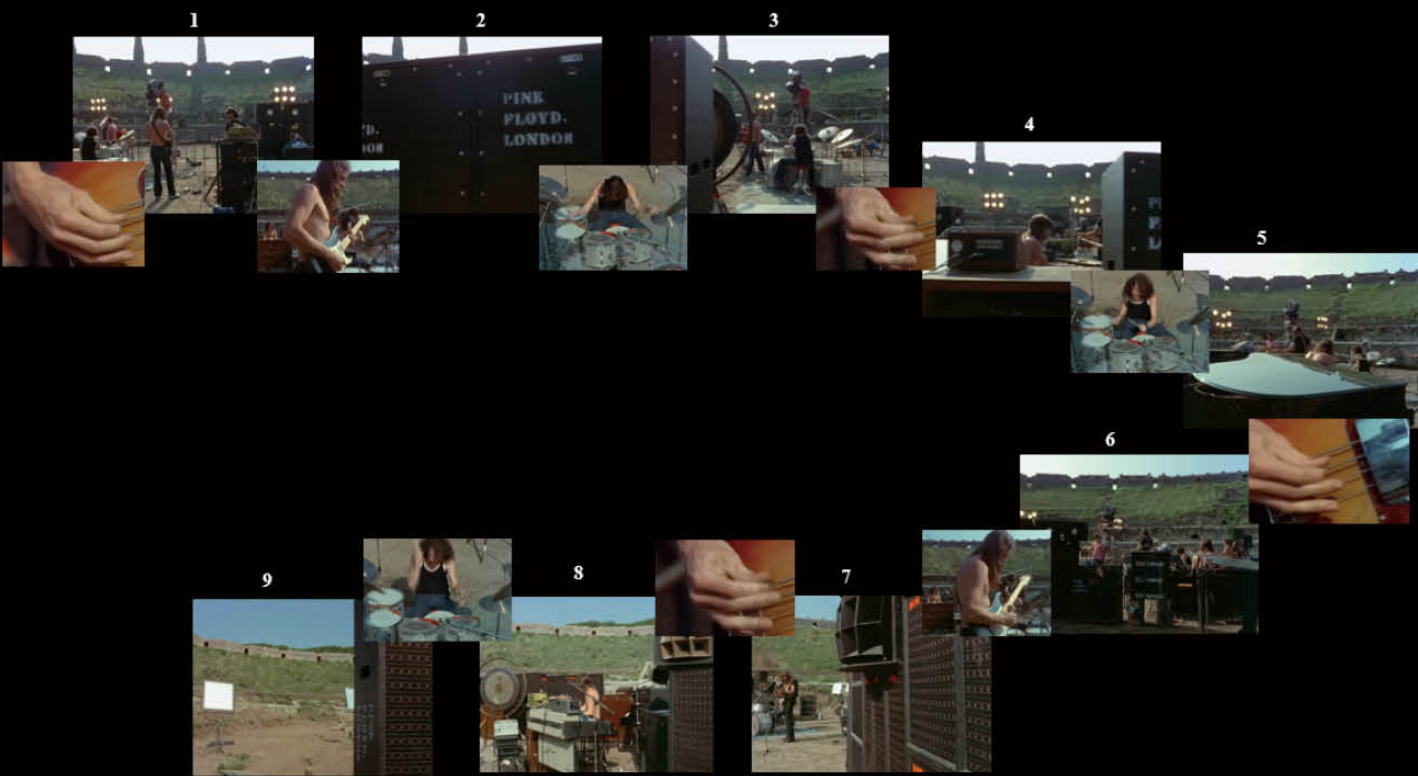
▲ Study of Echoes (original plan overlayed)

[Overall Rendering]

Pink Floyd's Live at Pompeii is more than a concert film—it is a cultural geography in action. By performing in the empty ruins of a Roman amphitheater, the band transformed a historic site of ancient spectacle into a temporal, sonic landscape. The performance merged ancient and modern, history and music, stone and sound. The amphitheater became a vast, resonant instrument, where echoes of progressive rock intertwined with the silence of ruins. This unique interplay of space, history, and sound underscores how cultural geography can transform places into immersive, layered experiences.
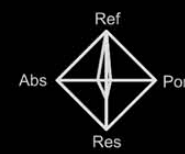
drum (slow)　　vocal

drum (fast)　　duration

drum (strong)　　Pitch

drum (soft)　　strong

　　soft

loop　　bass

reverb　　keybord

chorus　　synthesizer

delay　　guitar(lead)

　　guitar(rythmn)

▲ Study of Echoes

Instrumental Bridge

Verse

intro(pin sound)

repeat rythm

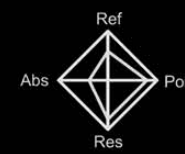fade part

Noise silence part

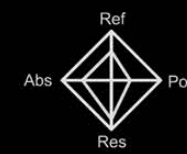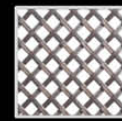verse

instrument back
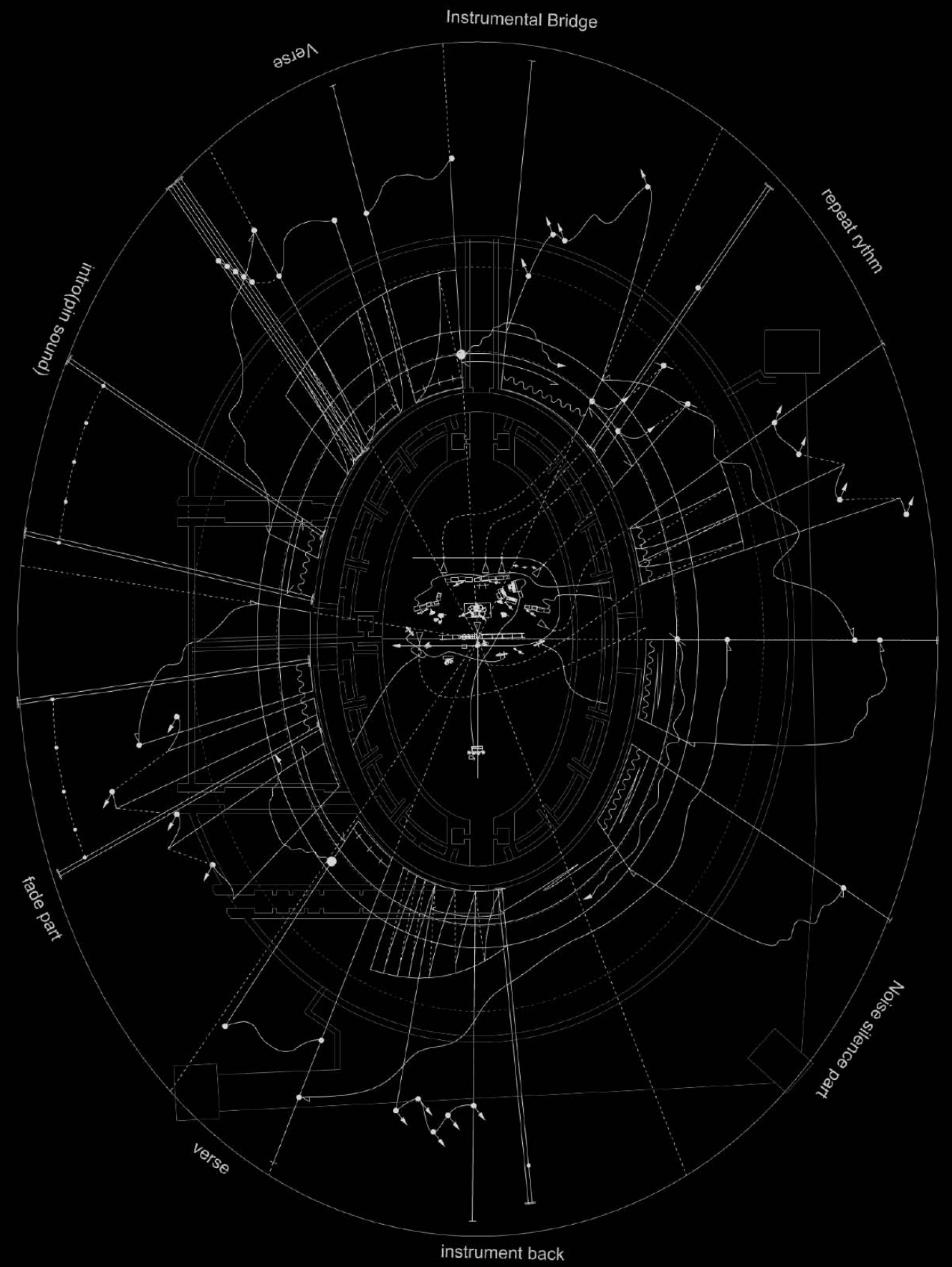
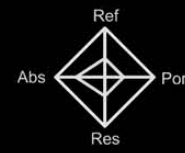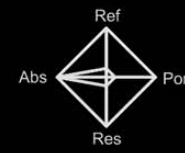▲ Study of Echoes (original plan overlayed)
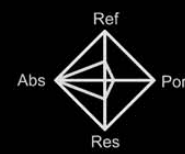
Volcanic Tuff

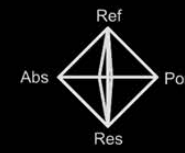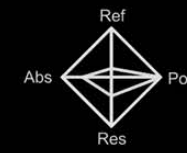Polished Marble

Metal Mesh

Wood

Crushed gravel

Fabric / Felt

Metal Sheet

Stretched Membrane

Air cavity (deep)

Air cavity (shallow)

Air cavity (surround)

space (wide)

Space (open)

Space (close)

Space (high)

Space (low)

Mic Pickup (Ceiling/environment)

Mic Pickup (Floor/foot/bass)

Mic Pickup (Wall/vibration)

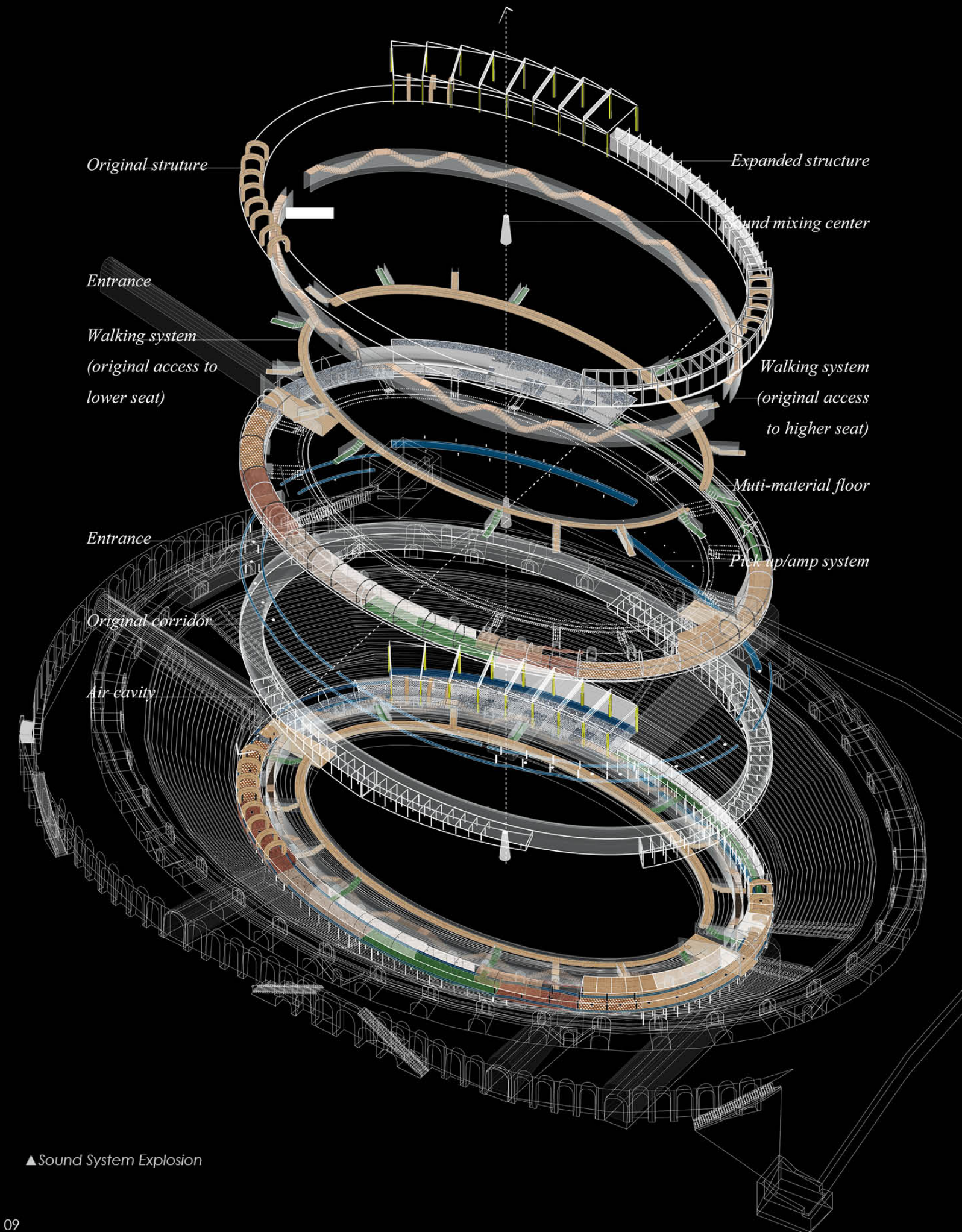Mic Pickup (Wearable/mobile)

Amp (delay)
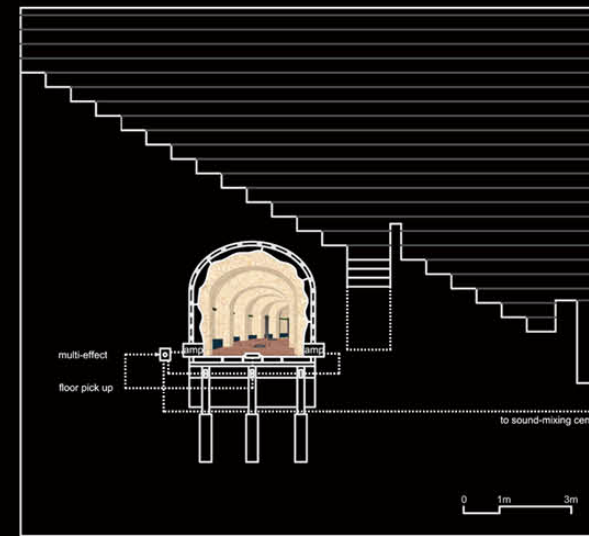
Amp (reverb)

Amp (loop)

Amp (Chorus)

▲ *Sound Vocabulary*

Original struture

Expanded structure

Sound mixing center

Entrance

Walking system (original access to lower seat)

Walking system (original access to higher seat)

Muti-material floor

Entrance

Pick up/amp system

Original corridor

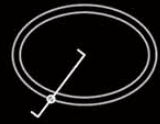*Air cavity*

▲ *Sound System Explosion*

09

marble
reflection/
air cavity reverb

sound-producing corridor

sound-mixing center

ceiling pick up

multi-effect

wall pick up

multi-line in

multi-line in

0   1m   3m
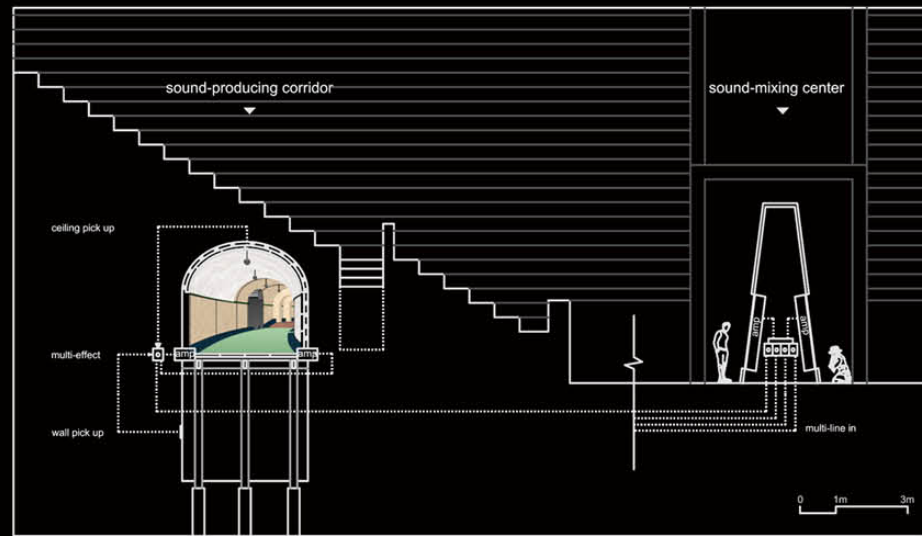
volcano tuff
Irregular shape/porous/
acoustic absorption

multi-effect

floor pick up

to sound-mixing center

0   1m   3m
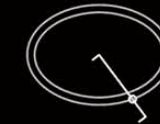
gravel
sound producing/
slope slope/

multi-effect

floor pick up

to sound-mixing center

0   1m   3m
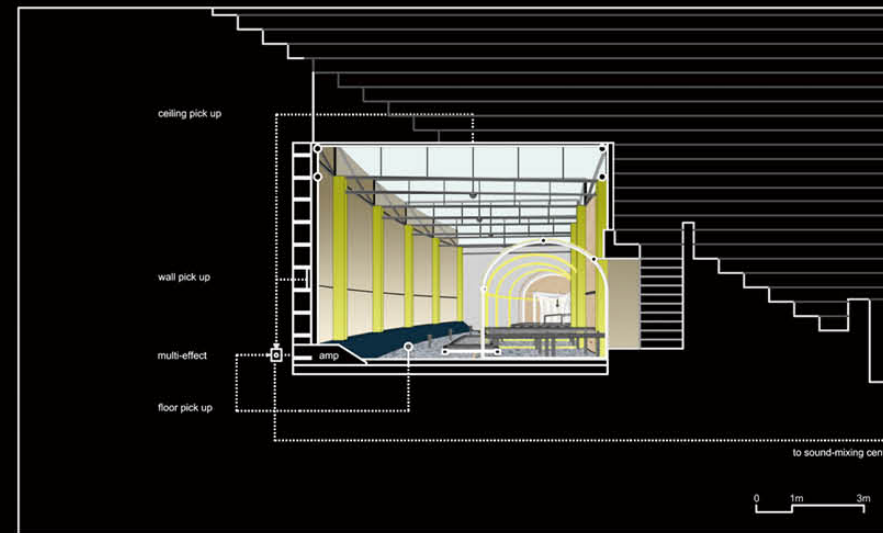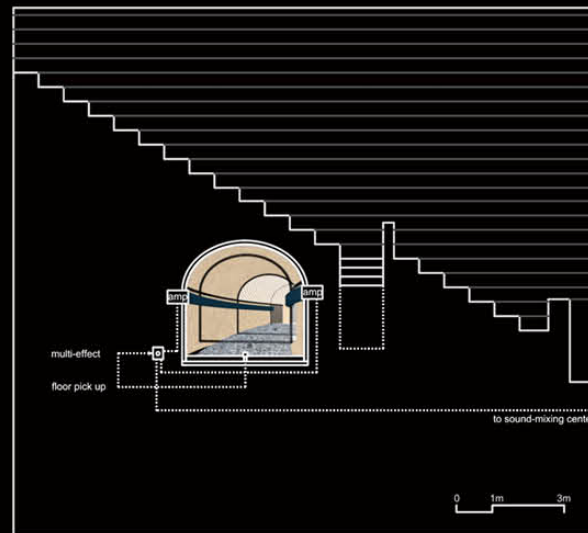
metal
resonate/
hall reverb/delay

ceiling pick up

wall pick up

multi-effect

amp

floor pick up

to sound-mixing center

0   1m   3m
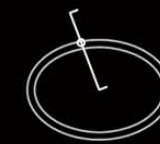
membrane
porosity/
air cavity reverb

ceiling pick up

multi-effect

marble

wall pick up

to sound-mixing center

0   1m   3m

wood
air cavity reverb

wall pick up

multi-effect

floor pick up

to sound-mixing center

0   1m   3m
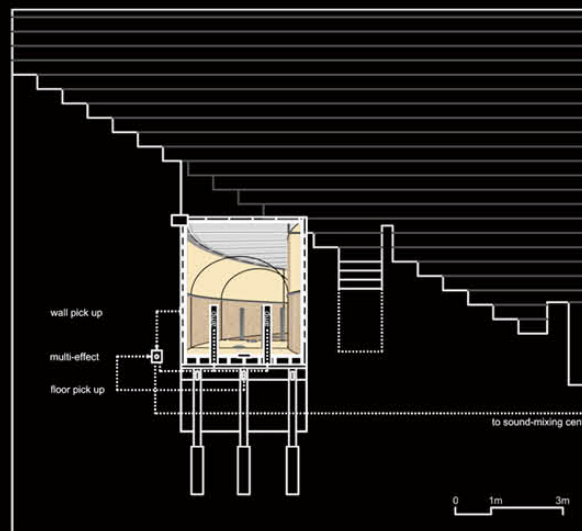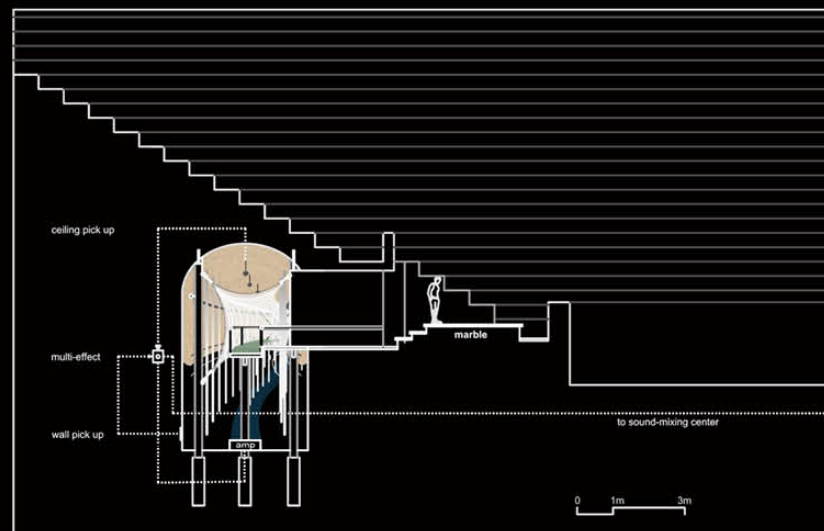
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"Paper Traces: Dual Narrative in Ledger Art" looks at the complex and hidden stories found in Ledger Art. This art form mixes the tales of Indigenous people and colonizers, where both these stories are told and uncovered. It challenges viewers to find the true histories and understand the layers in these artworks.

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[Sacred Turn]
September 11th Cenotaphs Design

Group Project
Collaborator: Angela Chiesa
GSAPP Studio: Sacred Turn: Investing in architecture's unstable,
yet persistent, notion of the sacred
Advisor: Ziad Jamaleddine
November 2024

CUXA CLOISTER
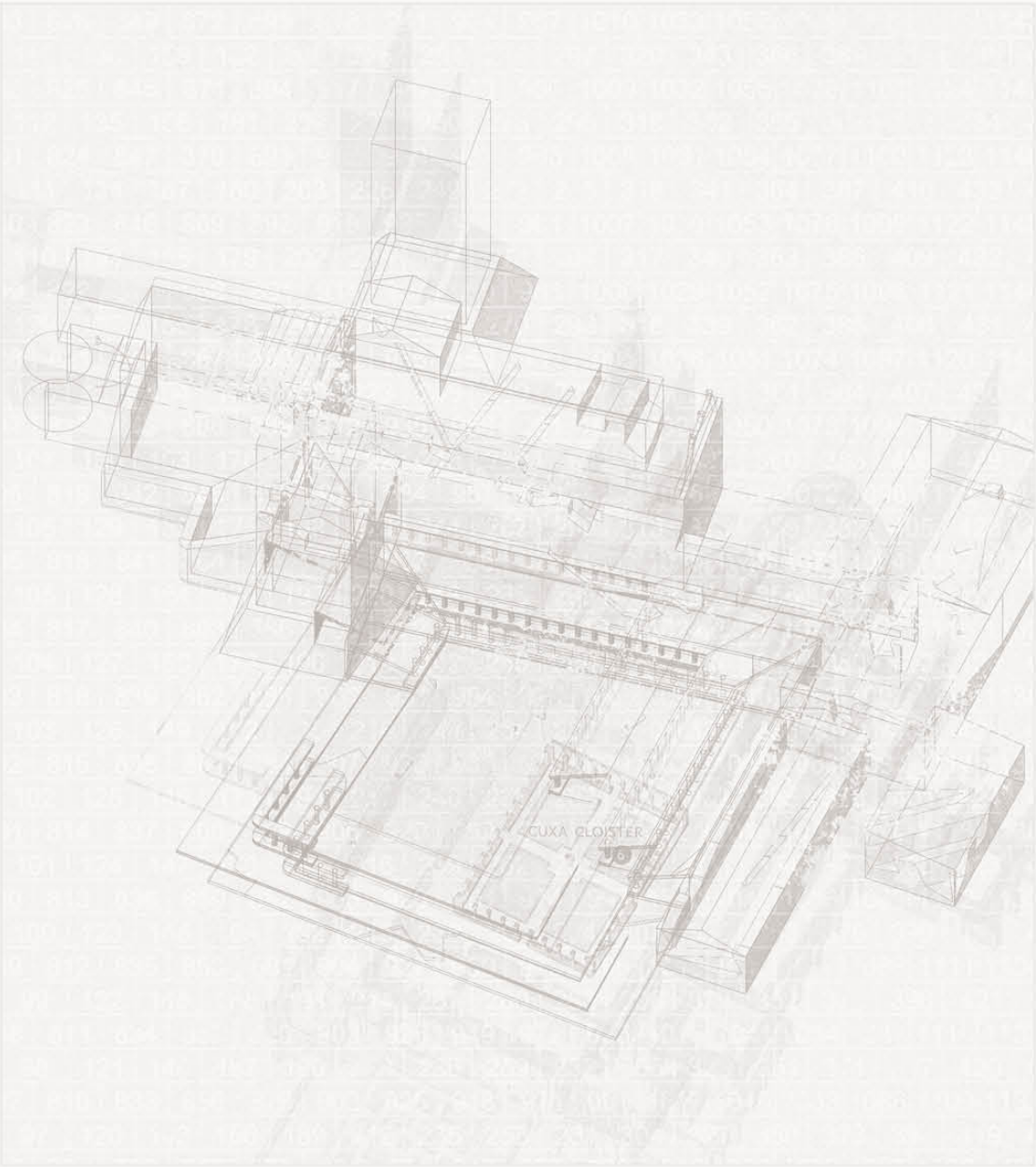
This project creates Cenotaphs at Freshkills Park to honor the sacred 9/11 debris relocated from Ground Zero. Designed for victims' families, it offers spaces for reflection, mourning, and gathering across four typologies: Sound, Giving, Calm, and The Collective. Emphasizing sustainability, the memorials use eco-friendly materials that wil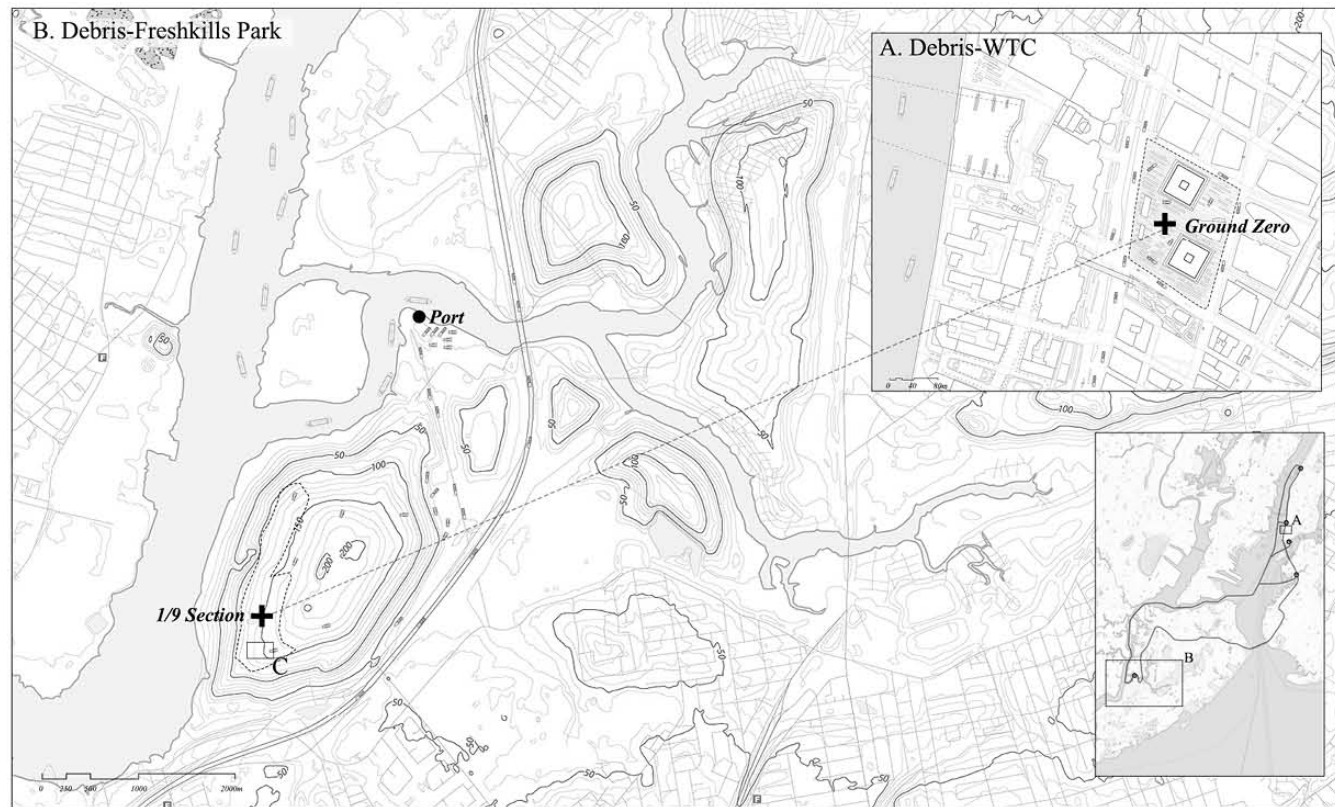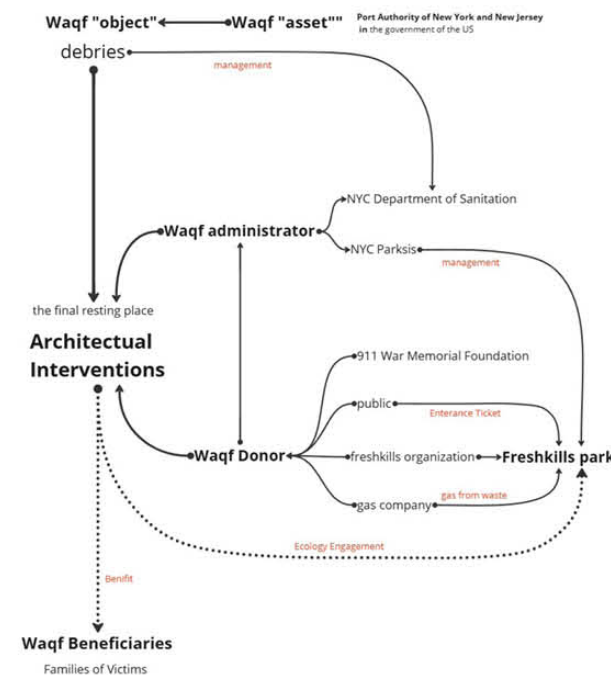l be dismantled after three generations. Maintenance is funded by the park's methane gas revenue, blending memory, ecology, and cultural heritage in a lasting tribute.

[Saint-Michel de Cuxa (old)]

1. [Saint-Michel de Cuxa (old)]
Decline and Ruin

16th: The monks begin living separately, and the abbey is divided into "offices."
1789: The French Revolution leads to the nationalization of church property.
1790: Monastic orders are abolished, and the abbey's valuable items are inventoried and sold.
1825: Part of the church collapses, and the northern bell tower falls in 1839, further damaging the abbey.
1833-1837: Columns and capitals from the cloister are sold off and repurposed.

Sacred Shift in connection

The relationship between the Abbaye Saint-Michel-de-Cuxa and the Santiago de Compostela represents the abbey's role as part of the pilgrimage network during the Middle Ages. The transatlantic relocation of parts of the abbey's architectural elements to The Cloisters museum in New York represents the relationship between indigenous artifacts and the postcolonial and modern globalization contexts. Both of these relationships reflect a sacred shift and share a connection.

2. [The MET Cloister]
Sale and Dispersal

1862: The abbey is classified as a Historic Monument.
1907: The American artist George Grey Barnard acquires several sculptures and columns, eventually forming the basis for The Cloisters museum in New York.

3. [Saint-Michel de Cuxa (new)]
20th Century Restoration

1919: The abbey is sold and returned to monastic use, though only the church and some parts remain intact.
1932-1934: Archaeological interest in the abbey renews under Josep Puig i Cadafalch and Henri Nodet.
1950s: Architect Sylvain Stym-Popper reconstructs parts of the cloister using original elements brought back to France.
1957: The church is fully roofed, and Pablo Casals establishes a famous music festival at the abbey.
1969: The first Romanesque Days dedicated to medieval art studies are held.
1970-1980: Further reconstruction efforts restore additional parts of the cloister.

Sacred Shift (space)
Sacred Rebuilt (time)

[The MET Cloister]

[Saint-Michel de Cuxa (new)]

▲ *Case Study: Sacred turn³, transition of cuxa*

B. Debris-Freshkills Park
A. Debris-WTC

✚ Ground Zero

● Port

1/9 Section ✚

C

A

B

▲ 'The screen': Photographed in GSAPP, New York, 2025

Waqf "object" ◄── Waqf "asset"" Port Authority of New York and New Jersey
In the government of the US

debries ─────── management

Waqf administrator

NYC Department of Sanitation

NYC Parksis ─ management

the final resting place

Architectual Interventions

911 War Memorial Foundation

public ── Enterance Ticket

Waqf Donor ◄── freshkills organization ──► **Freshkills park**

gas company ── gas from waste

Ecology Engagement

Benfit

Waqf Beneficiaries
Families of Victims

▲ the Structure of Waqf

[Waqf as a design tool]

Waqf, as a design tool, transforms architecture into a medium for memory, healing, and ecological stewardship. By defining specific uses, beneficiaries, and temporal frameworks, Waqf establishes a sacred site where space is endowed with spiritual, social, and ecological significance. In this context, architecture is not merely a static form but an evolving sanctuary that respects historical trauma while adapting to the needs of future generations. The Waqf framework allows for dynamic interactions, from spaces for mourning and spiritual cleansing to areas supporting biodiversity. It ensures that architecture serves as a living testament to memory, community, and environmental continuity.

Waqf

The purpose of this Waqf is to create a series of Cenotaphs for the debris and human remains of 911, which were relocated to Freshkills Park in Staten Island from Ground Zero.

[1] This Waqf states that the debris from the Twin Towers is sacred. First being rubble at Ground Zero, and later transported to Freshkills Park, formally Freshkills Landfill. The 1.4 million tons of debris is sitting in the final resting place, a 48-acre area in Section 1/9 at Freshkills. The travel and the grounds of the park shall remain sacred and, therefore, remain buried and untouched. This shall serve as a site for families to come to mourn in private as it is secluded from the public, both from its location and entrances. This will be created by a series of Cenotaphs and be located in different areas within the debris remains within Freshkills Park.

[2] The financial donation for the construction of the Cenotaphs shall be from the 911 Memorial Foundation.

[3] All remaining financial assets shall be managed by NYC Parksis and Freshkills Park. The park shall use the profits generated by the extraction of methane gas which is completed by the New York City Department of Sanitation. Methane is produced from the decomposing waste that was buried at Fresh Kills landfill. This methane is harvested and sold to the National Grid which generates an annual revenue of 12 million dollars from the sale of gas. This shall cover any maintenance required.

[4] The beneficiaries of the Cenotaphs will be the families of the victims of 911. For the existing families, their children, and their children's children. This place shall remain sacred and only for the families for three generations down. After the third generation, the waqf shall stay, but the Cenotaphs shall be taken down, as the memories of the relatives will fade among these generations. Therefore, the assembly of the Cenotaphs shall not be made of permanence and shall be disassembled when the time comes.

[5] There will be four Cenotaph typologies that will be added to the site to create relics.

[5.1] "Sound" will be a space to provide a secluded and private area for grieving. The space will be enclosed and spatially designed to reduce sound and give families the ability to grieve.
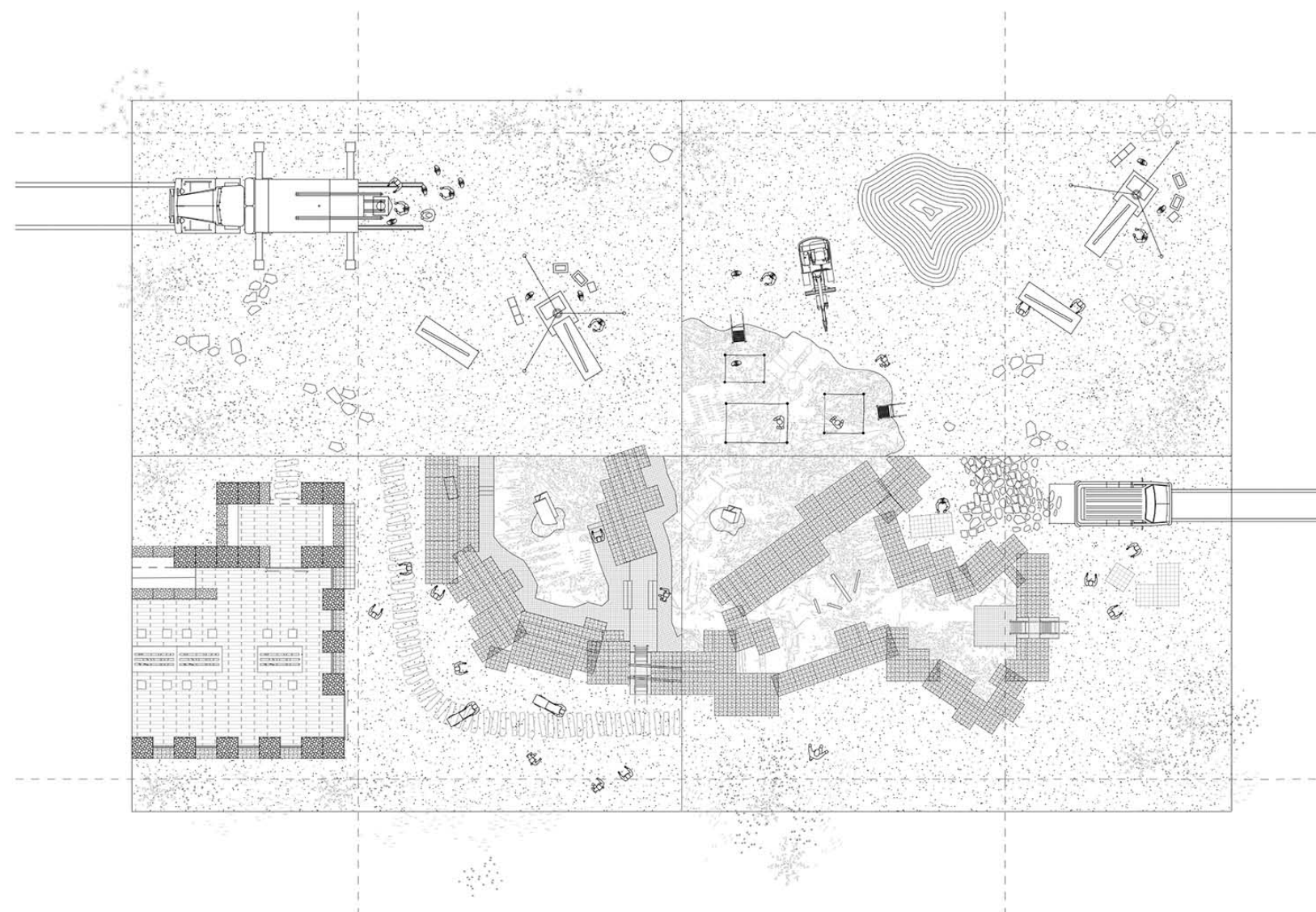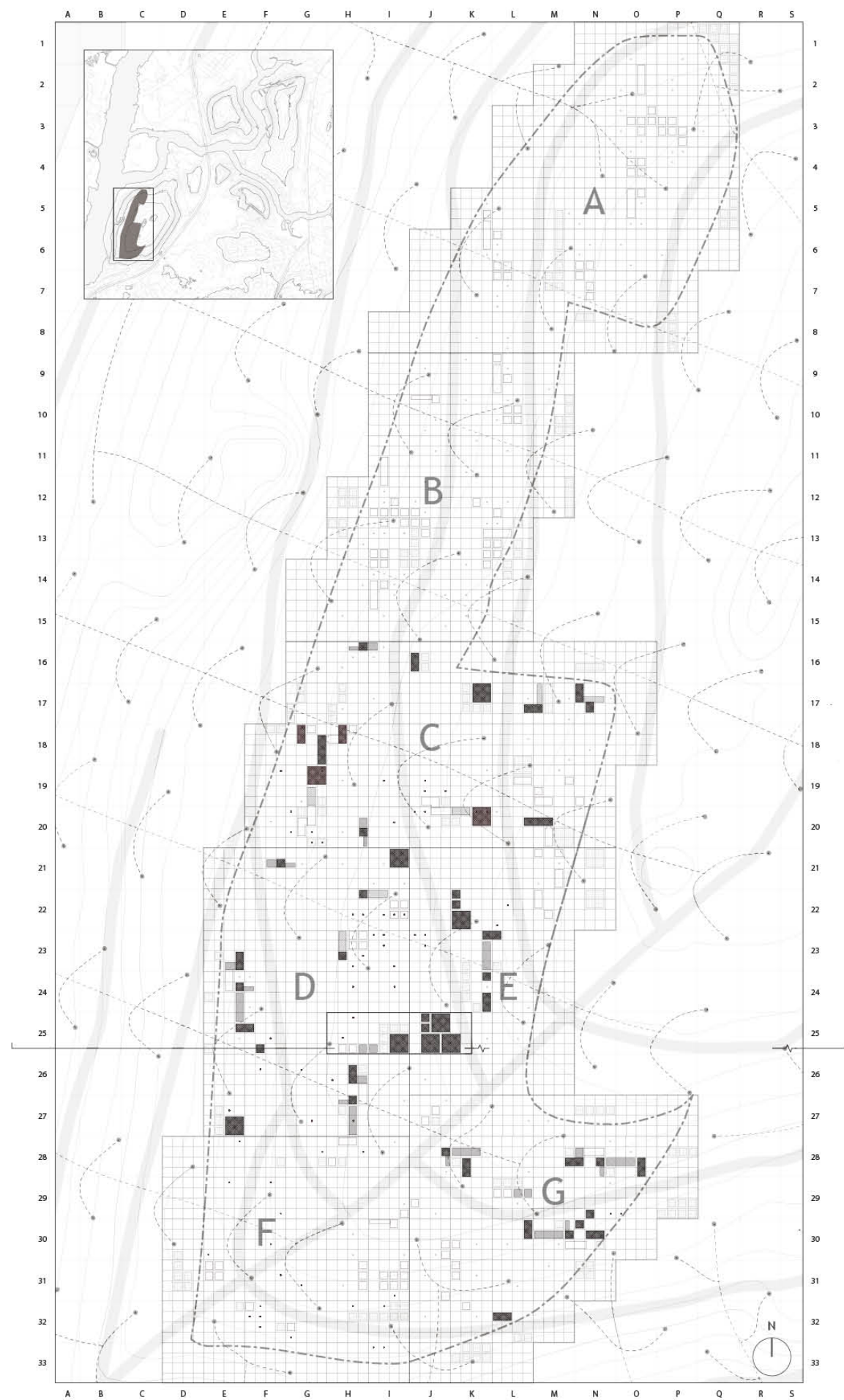
[5.2] "Giving" will be sections of the gabion wall which will allow individuals to bring rocks as memento. There will also be sections throughout the relics that allow individuals to bring or plant flowers. The flowers are required to support future pollinators. These flowers include but are not limited to Black-eyed Susan's, Common Milkweed, Fleabane or Tickseed Sunflowers.

These flowers can be interchanged based on the existing needs of the ecology. The Cenotaphs shall consider the habitants for current and future organisms. This includes providing food for bees, wasps, flies, butterflies, hummingbirds, and bats by planting the local flowers. This shall act as a way of giving back to the park thus creating a cycle where the site gives a place for the family to grieve, and for the architecture to give back to the site as a place of habitat and food.

[5.3] "Calm" is the space that covers the debris and is meant to be silent where people can pay their respects.

[5.4] "The Collective" will be a place of gathering. This area is meant to allow families to come and celebrate together to reflect these traditions.

[6] The architectural elements shall use materials that minimally impact the sacred and impact the environment. It shall lay overtop of the landfill and proposed landscape. After the third generation of the families of the victims, the materials used shall be disassembled and returned to its surrounding context.

▲ *Process Plan*

◀ *Site Plan: planning of excavation*

CONTOUR INTERVAL 10 FEET
GAS LINES
GAS WELLS
OUTLINE OF DEBRIS LOCATION
ROADS
PROBES
PHASE 1 EXISTING EXCAVATION
PHASE 2 CURRENT EXCAVATION
PHASE 3 PROPOSED EXCAVATION
STAGING

25 FEET

100 FEET

[Excavation and Construction]

In the Waqf's execution, the debris area will be divided into a grid for precise analysis and systematic excavation. Each section will be carefully examined, and any discovered debris will be documented and preserved, treating each fragment as a sacred trace of history. This approach transforms the site into an active archaeological field.

As excavation progresses, temporary structures will be built over the uncovered debris. Initially serving as protective shelters, these structures will gradually transform into commemorative spaces. This transition marks a shift from active excavation to a place of reflection and remembrance, connecting archaeological discovery with architectural memory.
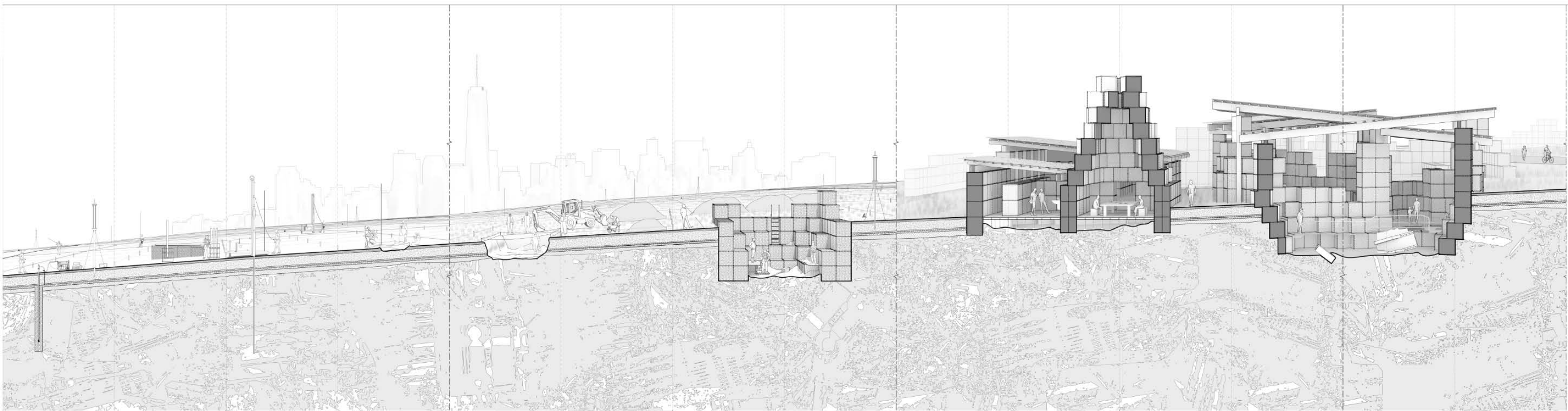
▲ *Sacred Journey: route of construction*
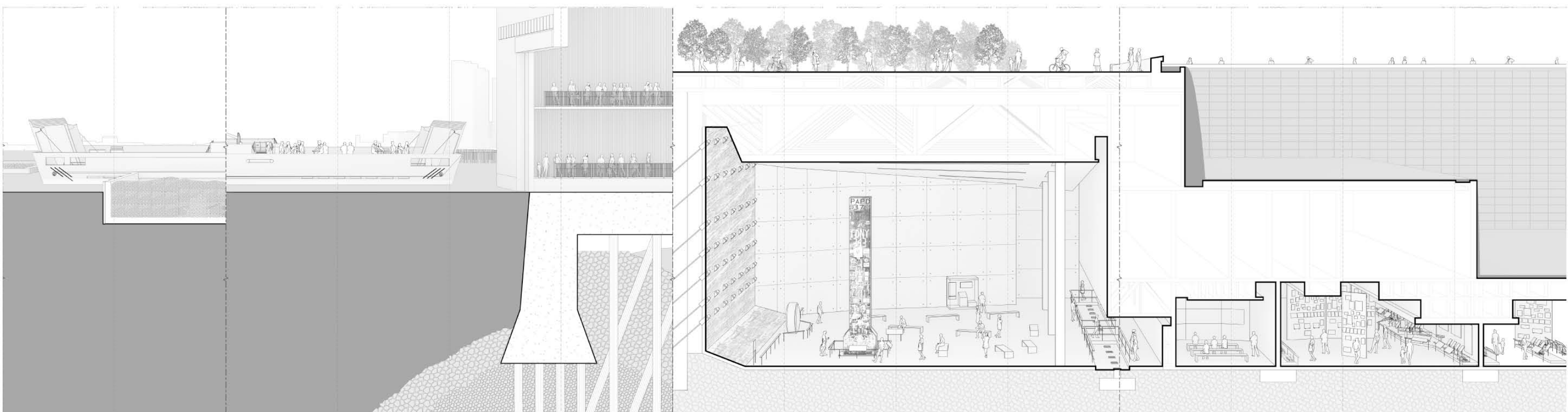
▲ *Sacred Journey: route of memory*

MASTER PLAN

N

1:100
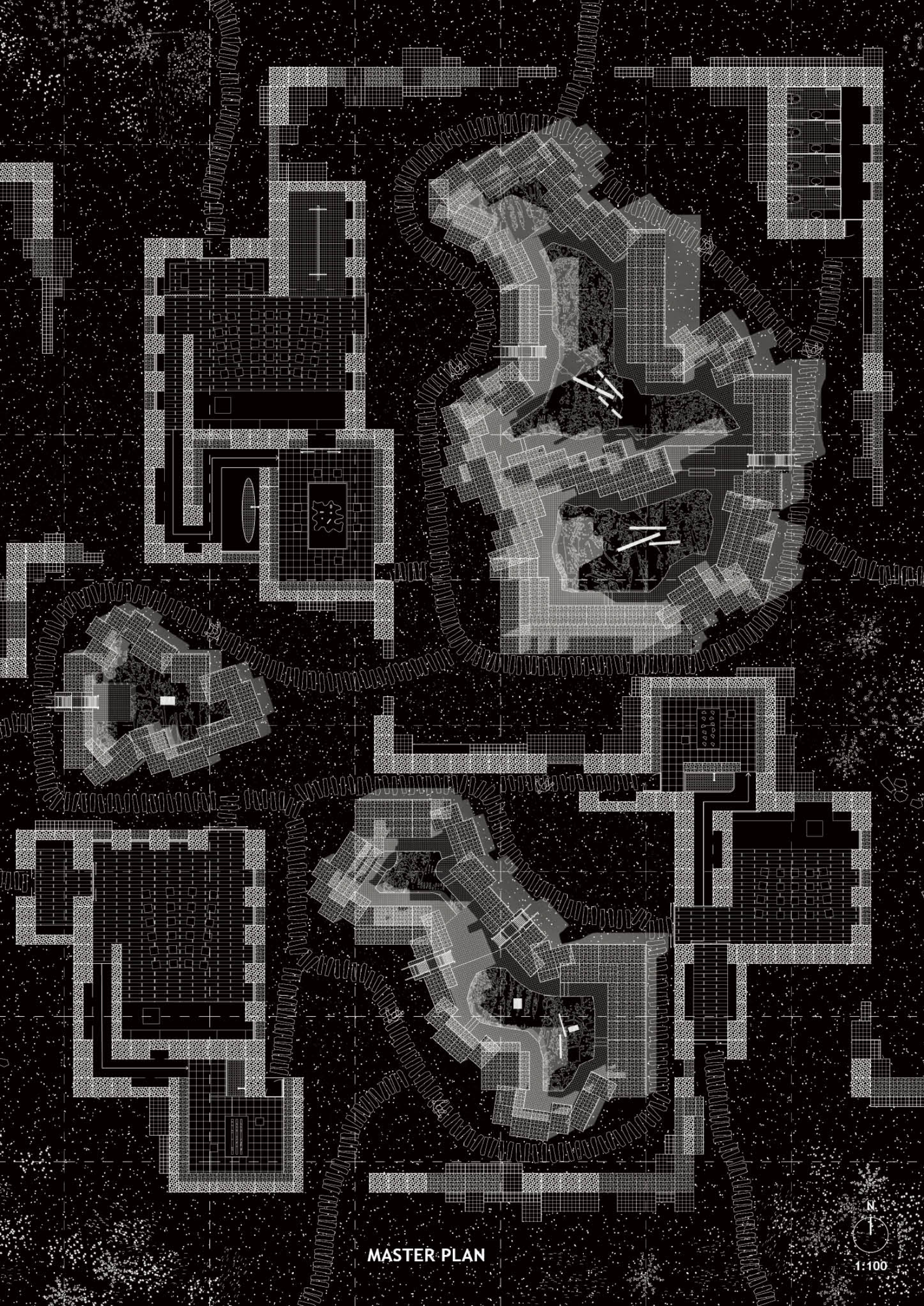
▲"Sound" will be a space to provide a secluded and private area for grieving.

▲"Giving" will be sections of the gabion wall which will allow individuals to bring rocks as memento.

▲"Calm" covers the debris where people can pay their respects.

3 Points Between Suneil Sanzgiri's Project and Mine:
A Cultural Reflection on Post-colonialism

In this semester's argument course, we did a seminar on the different guest speakers. Among these guests, I was particularly impressed by the lecture of Suneil Sanzgiri. This is not only due to his presentation of postcolonial issues in his lectures, but also to his narrative using diverse media in the context of postcolonialism in the films he has produced. This semester my studio selection is also situated within the broader context of postcolonialism, and the outcome of the project is also a film, so I would like to use this essay to talk about the similarities and differences I see between our projects, and what I have learned from his film.

Suneil Sanzgiri is an artist, researcher, and filmmaker. His work spans experimental video and film, animations, essays, and installations, and contends with questions of identity, heritage, culture, and diaspora to structural violence. In his film "At Home But Not At Home" produced in 2020, he returns to his father's youth and retells his father's story through various mediums such as film, photography, and oral narratives. The film situates this narrative in the context of Portuguese and British colonial history of India, thus linking memory and history strongly in the film. This leads to his reflections on identity, colonial resistance history, and the movement of people through space and time. [1]

This film, the first in his trilogy, is also my favorite because of the straightforward editing and the clash of objects and images that give the film its rustic texture. Various objects, such as old photographs, are referenced in the narrative, giving the film a poetic and nostalgic tone. Its also inspired me a lot during the making of my project's short film. Before the comparative analysis I would like to talk about the short film of my project which called 'Paper Traces'. In this project, I use ledger art as a research matrix to question the narrative logic and devices of non-native artifacts in museums such as the MET and the Brooklyn Museum. By tracing back the information on their labels, such as the collector and date, I reorganize and re-position them in the local perspective, connecting them to the colonial footprints and resistance history of the Indigenous people that has been intentionally hidden in the course of history, and thus formulating a critique of colonialism.

1.Start with micro-objects

Here I would like to quote Susan Schuppli, another of our speakers, in one of her dialogues about projects starting with micro-objects. In her view, this approach allows her not to look down on the earth as if it were a Creator's perspective, but rather to start from subtle personal experiences such as materials. Often, she starts with certain artifacts, entities, or events. She then unfolds them in order to understand how these things exist in a multifaceted world. [3] This detective-like method of piecing together clues to form a strung-out history is very appealing to me, and is the method of research that I think I have undertaken in Paper traces. In this project, I kept collecting ledger art objects from different museums, trying to rearrange them in time to find potential connections. I think Suneil Sanzgiri's film, which begins with an email conversation with his father, interspersed with photographs of his father as a young man, is a more immersive narrative, and Suneil's film

reminds me of why I chose ledger art as the vehicle for this critical project: one day a Brooklyn museum's In a corner of the Brooklyn Museum one day, I found a simple painting of an artifact that looked like a child's drawing. It had no background, only characters, and actions, like a movie director's subplot before shooting. This wonderful association made me realize that perhaps this painting was also part of a coherent narrative.

2.Parallel narrative

In Suniel's film At Home but not at home, the father's story parallels the historical events of Portugal's withdrawal from the Goa colony in India as two narrative threads. The film repeatedly switches back and forth between historical films and old photographs, suggesting the relevance of the two, and the way in which Suneil shifts between the two scales of the family's history of resistance and the struggle of the nation. These historical events are brought to life through personal experience. And in my project paper traces, ledger art, as a homegrown archive of graphic historical records, indirectly engages in a confrontation with the dominant American narrative through its display in museums. As Jacinda Tran argues, this antagonism of "your history" against "my memory" also resonates deeply with the continual production and consumption of colonial narratives of conquest we are witnessing today. In the course of my research I have found that the vehicle of ledger art and the subsequent traces of revision allude to the juxtaposition of these two traces in the ledger art is itself a parallel narrative. It is this parallel narrative that reveals the contradictions and correlations.

3.Mixed mediums

At home not at Home combines 16mm footage with drone videography, montages from the "Parallel cinema" movement in India, desktop screengrabs, and Skype interviews with my father, the resulting film utilizes various methods and modes of seeing at a distance to question the construction of artifice, memory, and identity through the moving image. [1] In his lecture, he mentions that formally his exposure to these emerging technologies became a tool for its creation, and in another of his films, it was created using the same technologies of surveillance that mining companies use to map locations for iron ore in the region. A tool for extraction and exploitation becomes a method for preservation. [1] This reversal shows Suneil's intention to seek deeper into the empire and re-examine it externally. In my project, I drew on some of its media inspirations, such as inserting the process of searching for the archives on a computer into the film by recording it on screen. In addition, I have created some collage images to visualize the conflict between the local narrative and the museum narrative, and finally made ledger to tell stories by itself.

Bibliography
[1] "Suneil Sanzgiri." Suneil Sanzgiri, www.suneilsanzgiri.com.
[2] "Paper Traces" Junjie Zhang, 849462.cargo.site.
[3] "November: Susan Schuppli." www.novembermag.com/content/susan-schuppli.

[Sacred Turn (pt2)]

Computational design and planning of archaeological workspaces

Individual Project
GSAPP Elective: DESIGN INTELLIGENCE
Advisor: Danil Nagy
December 2024

[Medium]

▲Pareto Front Solutions (the last generation)

This project reimagines Freshkills Park as a memorial by exposing and preserving 9/11 debris buried beneath the restored landscape. After the 9/11 attacks, debris from Ground Zero was transported to Freshkills Park, where it was buried as part of landfill restoration. Over time, this area has been transformed into a nature park, concealing these remnants.

The project employs an archaeological approach to rediscover these buried artifacts, using a systematic grid layout (100 feet by 100 feet, further refined to 25 feet by 25 feet). Excavation areas are designed with three key functional spaces: soil piles, sorting rooms, and archive rooms. Using genetic algorithms in Rhino and Wallacei, the layout is optimized based on three criteria: proximity to excavation areas, access to roads for transportation, and maximizing usable space.

This optimization process generates multiple solutions, allowing for flexible site design while maintaining efficient workflow. The final design makes the buried debris visible, transforming Freshkills Park into a place of remembrance and reflection.
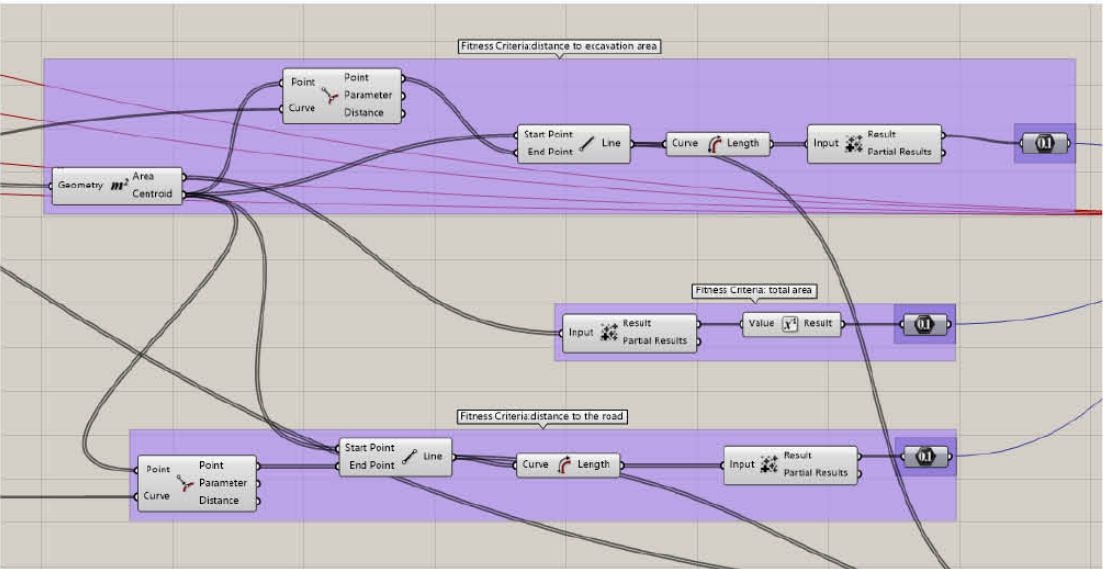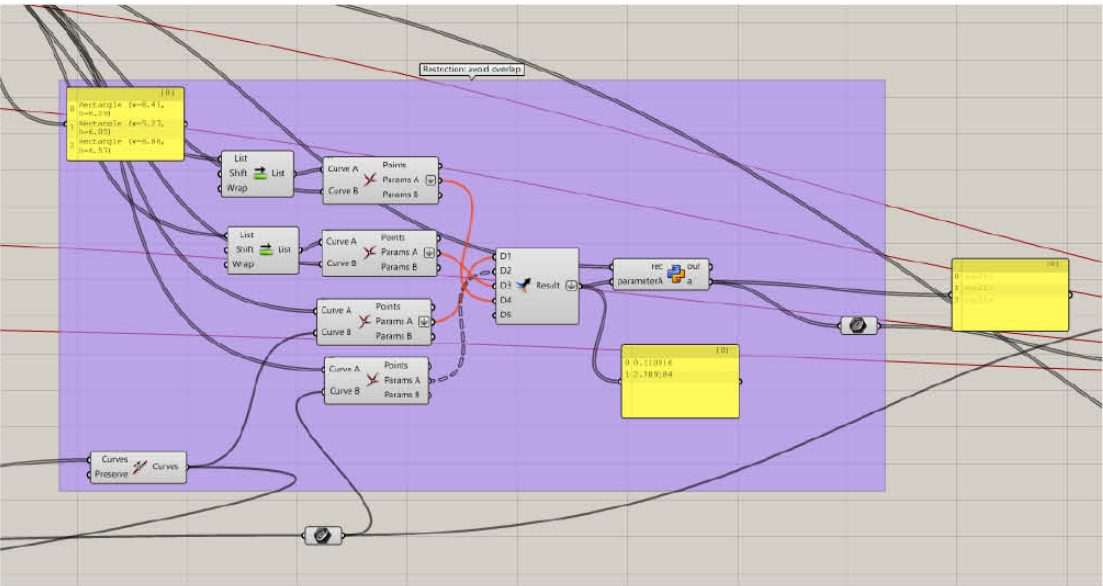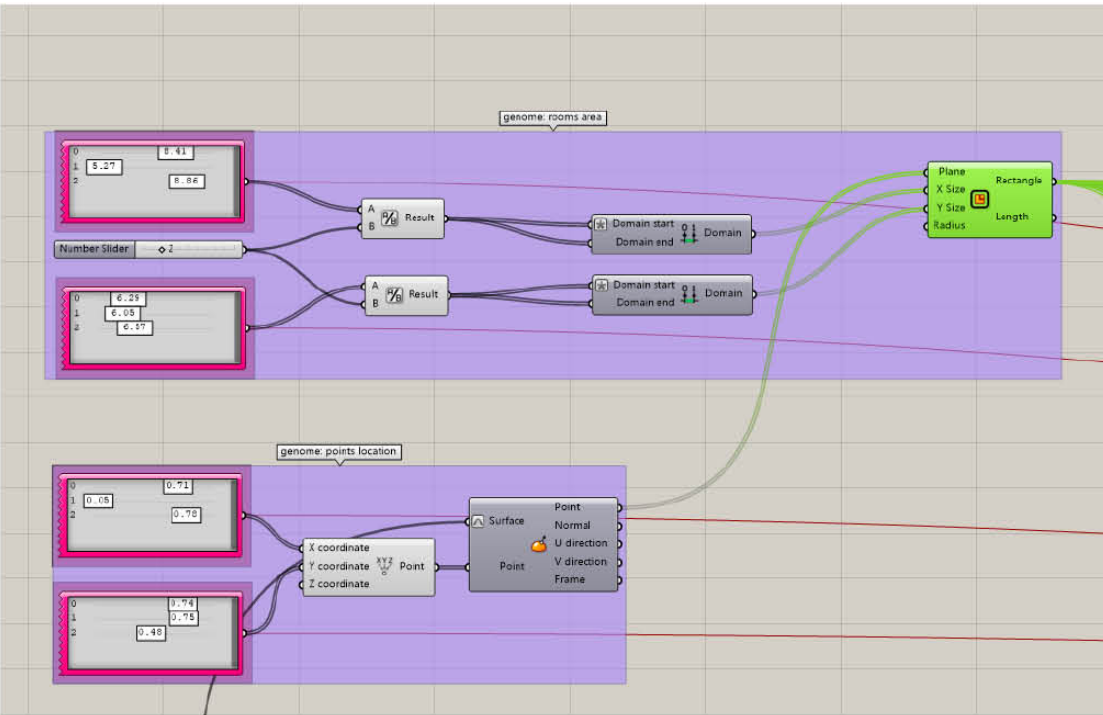
▲Genetic Algorithm Applied Grasshopper Components

[Debate Faces & Pixel Protest]

Seeing with Algorithms in political issue

Group Video Project
Collaborator: Yongzhuo Xu
GSAPP Elective: Seeing with Algorithms
Advisor: Catherine Griffiths
December 2024

[Debate Faces]

[Pixel Protest]

▲Debate Faces screen shot

▲Pixel Protest screen shot

Debate Faces analyzes how facial expressions in 2024 U.S. presidential debates convey emotions like confidence, aggression, and sarcasm, impacting candidates' perceived credibility and leadership. Using Roboflow for data annotation, we classify emotions such as confidence (smiles, direct gaze), aggressiveness (furrowed brows, intense eye contact), defensiveness (tense muscles), and contempt (smirks). Our analysis examines how facial expressions evolve during key debate moments—attacks, counterattacks, and climactic statements—revealing how candidates' reactions influence each other and viewers' perceptions. The study aims to uncover how nonverbal cues shape political narratives, offering insights for political communication, voter psychology, and AI emotion recognition.

Pixel Protest explores how computer vision algorithms shape our understanding of social phenomena, focusing on protests related to the Israeli-Palestinian conflict. Using OpenCV filters, including edge detection and contour analysis, we deconstruct visual symbols like flags and slogans, highlighting their role in conveying political messages. Our video sources, primarily from social media, capture the dynamic energy of protest scenes. Through abstracted, high-contrast visuals, we reveal the power of these symbols while questioning the algorithmic process itself. Inspired by Hito Steyerl's "The Uselessness of Images," we critically examine how algorithms may amplify certain narratives while ignoring others. This project invites viewers to reflect on the limitations of machine vision in understanding complex social issues, urging caution in interpreting algorithmically processed visuals.

```python
cap = cv2.VideoCapture(video_path)

    if not cap.isOpened():
        print("Error: Could not open video.")
    else:
        print("Video loaded successfully.")

    cap.set(cv2.CAP_PROP_POS_FRAMES, 500)
    ret, frame = cap.read()

    if ret:

        gray_frame = cv2.cvtColor(frame, cv2.COLOR_BGR2GRAY)

        print("Original Grayscale Image:")
        cv2_imshow(gray_frame)


        _, binary_image = cv2.threshold(gray_frame, 127, 255, cv2.THRESH_BINARY_INV)

        print("Original Binary Image:")
        cv2_imshow(binary_image)

        kernel = np.ones((1, 1), np.uint8)

    erosion = cv2.erode(binary_image, kernel, iterations=1)

    print("Eroded Image:")
    cv2_imshow(erosion)

    dilation = cv2.dilate(binary_image, kernel, iterations=1)

    print("Dilated Image:")
    cv2_imshow(dilation)

    opening = cv2.morphologyEx(binary_image, cv2.MORPH_OPEN, kernel)

    print("Opening (Erosion followed by Dilation):")
    cv2_imshow(opening)

    closing = cv2.morphologyEx(binary_image, cv2.MORPH_CLOSE, kernel)

    print("Closing (Dilation followed by Erosion):")
    cv2_imshow(closing)

    else:
        print("Error: Could not read the frame.")

    cap.release()
```
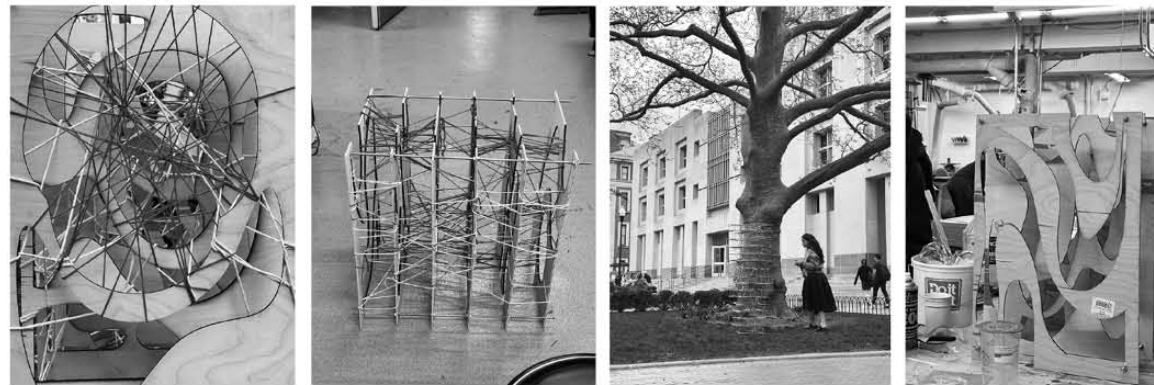
▲Morphologica's execution code

[Tension]

Trace of a Man

Group Project
Collaborator: Shuaiqin Chen; Amalia Kamien
GSAPP Elective: 1:1 Crafting and Fabrication of Details
Advisor: Zachary E. Mulitauaopele
May 2025

▲construction process

Tension: Trace of a Man is an experimental installation that explores the relationship between movement, form, and material. The project uses laser-cut wooden frames, each shaped by the abstract intersection of a moving human figure and a grid of planar segments. This intricate design is then further developed through the meticulous process of threading yarn along the laser-cut contours, creating a complex woven structure.

The resulting installation captures a sense of dynamic tension—each thread tracing the invisible movements of the human form while being bound to the rigid framework. This interplay between rigid geometry and organic weaving embodies the tension between control and freedom, structure and fluidity. Set within an industrial setting, the project's raw aesthetic emphasizes the contrast between precise digital fabrication and the tactile, handcrafted quality of the yarn. Tension: Trace of a Man invites viewers to reflect on the relationship between body, space, and the traces of human action.