

THE COIN, THE CRACK and THE CISTERN

Senior Honors Thesis
University of Houston
College of Architecture and Design
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The Coin, The Crack And The Cistern

by
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To my Mother and Father
for their incredible sacrifice

To Gaston, Delfina, and Sharon
for their love and support

To Rosemarie
so that she keeps guarding the light for us

To Sharon Chapman
who showed me what architecture can be

To Nora Laos
who knew what I wanted to say
even when I didn't

To Rafael Beneytez-Duran
who never stopped inspiring
and motivating me

and

To Professor Burrow
who taught me that
life isn't just
spectacle

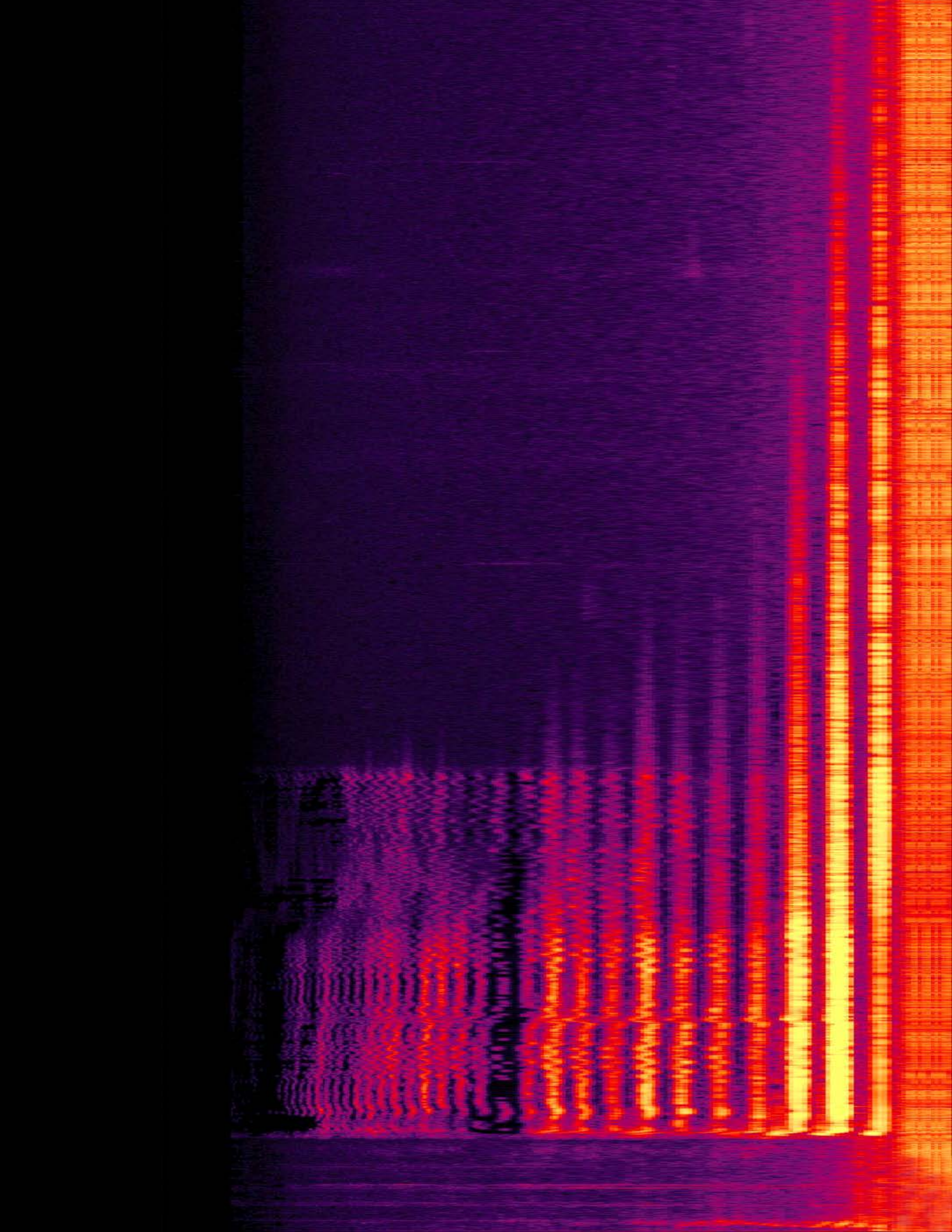
Abstract

“On Tuesday, X crosses a deserted road and loses nine copper coins. On Thursday, Y finds in the road four coins, somewhat rusted by Wednesday’s rain. On Friday, Z discovers three coins in the road. On Friday morning, X finds two coins in the corridor of his house. [...] It is logical to think that they have existed - at least in some secret way, hidden from the comprehension of men – at every moment of those three periods.”

Tlön, Uqbar, Orbis Tertius by Jorge Luis Borges. Pg 9.

Borges describes the distance between our realist world and the idealist planet Tlön as incalculable. However, he identifies objects that operate as fragments that connect the two worlds. His encyclopedia, where the world of Tlön is described, is one of these objects. A crack in a utilitarian structure constitutes much more than a link, it is a door that allows us to step into a mysterious reality. The crack dared to create a space that exists contingent on perception and idea, as a fragment of Tlön in our own world. A drawing describing how to slice monoliths exists as another link, as Robin Evans articulates in *The Projective Cast*, by binding the architect's world of ideas and the stone cutter's world of building together. Two disparate elements, a crack and a drawing, allow both worlds to exist simultaneously. **This thesis makes manifest the forces that make up that utilitarian structure: a past of service, an unhealed wound, and a new idealist identity, in order to diminish, however slightly, the distance between Tlön and our world.**





C O N T E N T S :

Prospectus

The Coin, the Crack and the Cistern
Objective Consciousness
The Crack
Compounding Identity
The Gatekeeper and the Engineer
Repair

Precedents

Treasury of Atreus
Commodification
Field Conditions

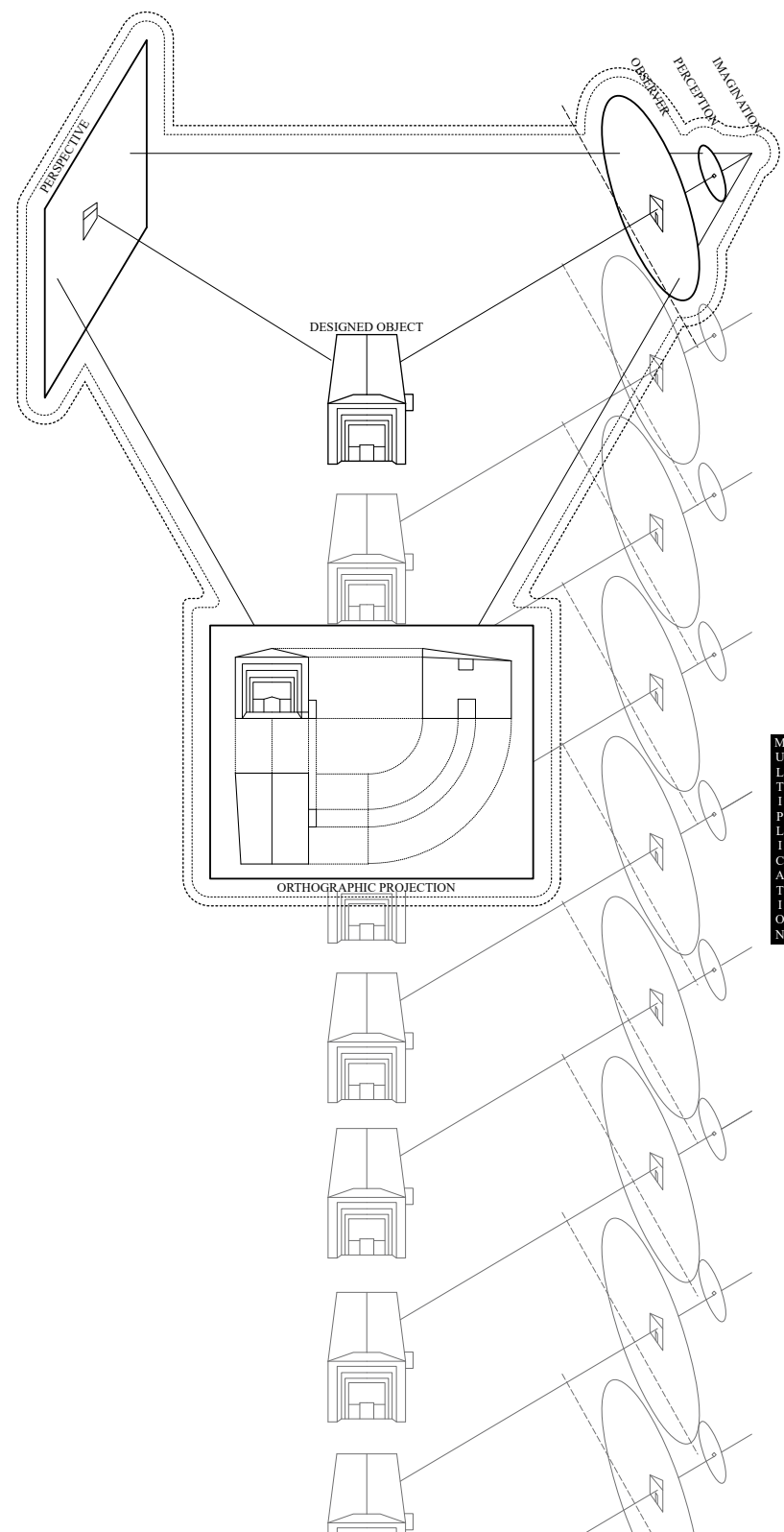
Analysis

Broken Networks

Design

The Channel
The Tunnel
The Bridge

Bibliography



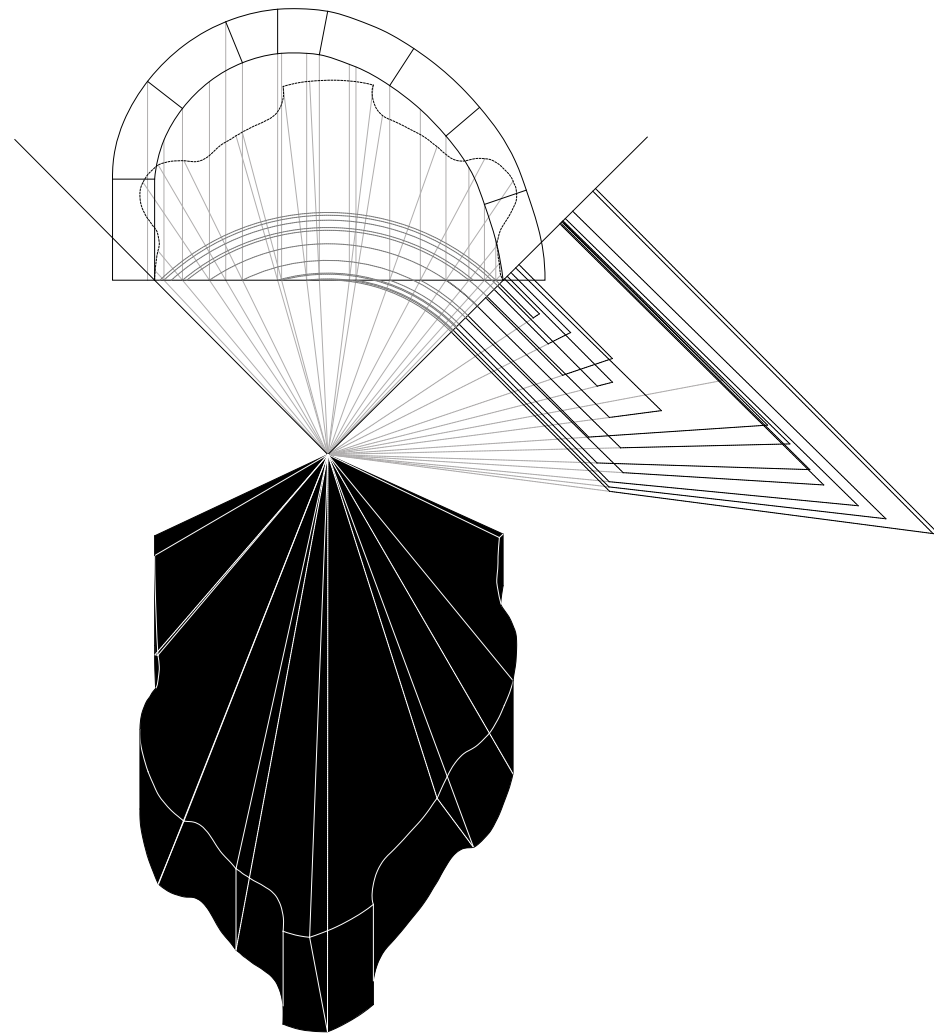
MULTIPLICATION

Tlön But what is Tlön like? There is an evident futility in describing it because in doing so one is falsifying it, or recreating it. It is the planet that Jorge Luis Borges describes in his short story *Tlön, Uqbar, Orbis Tertius*. Tlön is a congenitally **idealist** world, meaning that there, reality is dependent on and shaped by perception. Their language is reflective of this reality: in Tlön nouns don't exist, because they imply that objects have a singular identity. If matter is shaped by perception, a wise man from Tlön would explain, then it is recreated with each Tlönite that perceives it. Instead, nouns are replaced by a combination of adjectives and verbs that subjectively describe a universal, passing reality.

"For example: there is no word corresponding to the word "moon," but there is a verb which in English would be 'to moon' or 'to moonate'." Pg. 6

In this way every person holding, smelling, and seeing Borges' coins, is reinventing them, gifting them a new identity.

It is by revisiting Robin Evans' *Arrested Image* under this new optic that the diagram requires the addition of this new dimension: the multiplication of the designed object, prompted by a multiplicity of perspectives. Each perspective gives birth to a new object, in the same way that Borges' lost coins were not the same as those that were found.



Stone-cutting

During the fifteenth century the process of stone-cutting was facilitated by the creation of *traits*. These were orthographic drawings drafted by architects and mathematicians that instructed masons on how to cut component masonry blocks into complex forms. Traits were employed only in exceptional circumstances, when conventional illustrative methods were incapable of representing such processes. They yield no information to the casual observer and as a result, they became profoundly esoteric documents, only understood by the architect and the stonecutter.

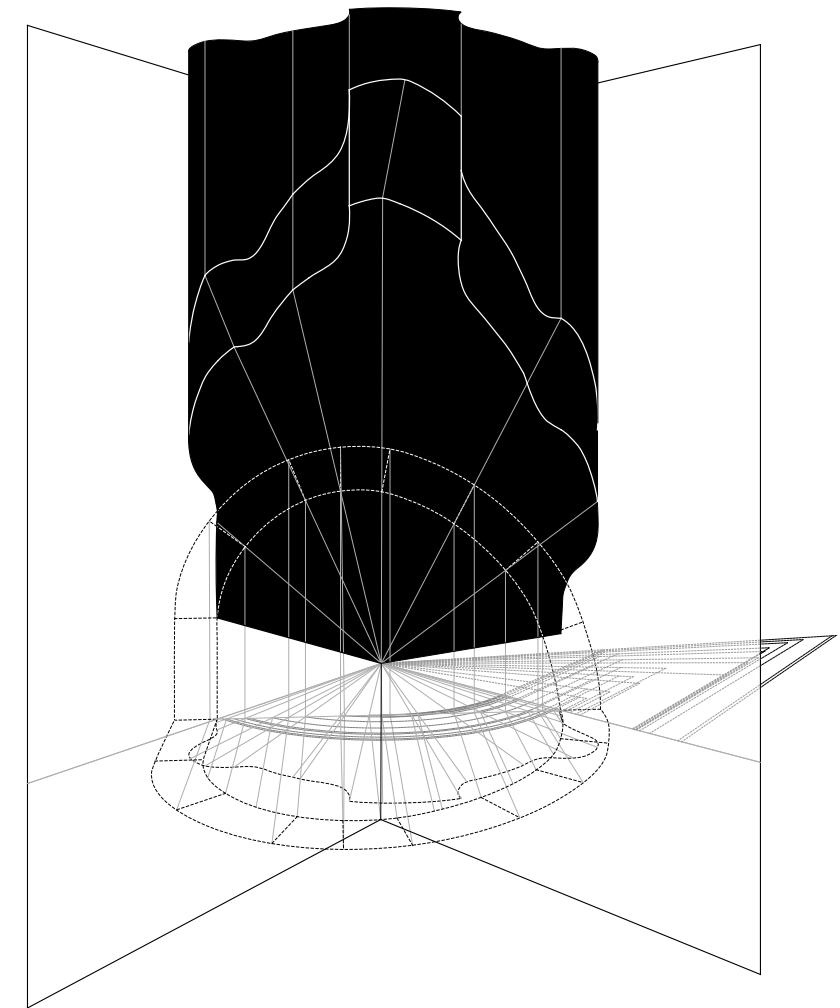
The type of architecture they made possible is best exemplified by the *trompe*. A *trompe* is

a conic surface of masonry developed during the fifteenth century, similar to a trumpet, that supports a projecting volume. *Trompes* were not only facilitated by *traits*, they were generated by them. *Traits* fundamentally represent an extension of the architect's imagination and memory into reality, linking the architect's mind and the mason's hand, and idealism and realism, together.

"Of all man's instruments, the most wondrous, no doubt, is the book. The other instruments are extensions of his body. The microscope, the telescope, are extensions of his sight; the telephone is the extension of his voice; then we have

Left: Generative Drawing, Trompe d'Anet and Trait, redrawn by author

Right: Trompe d'Anet and Trait, redrawn by author.



the plow and the sword, extensions of the arm. But the book is something else altogether: the book is an extension of memory and imagination". J.L.B.

For the architect, the extension of his consciousness is not the book which he reads, but the one onto which he draws.

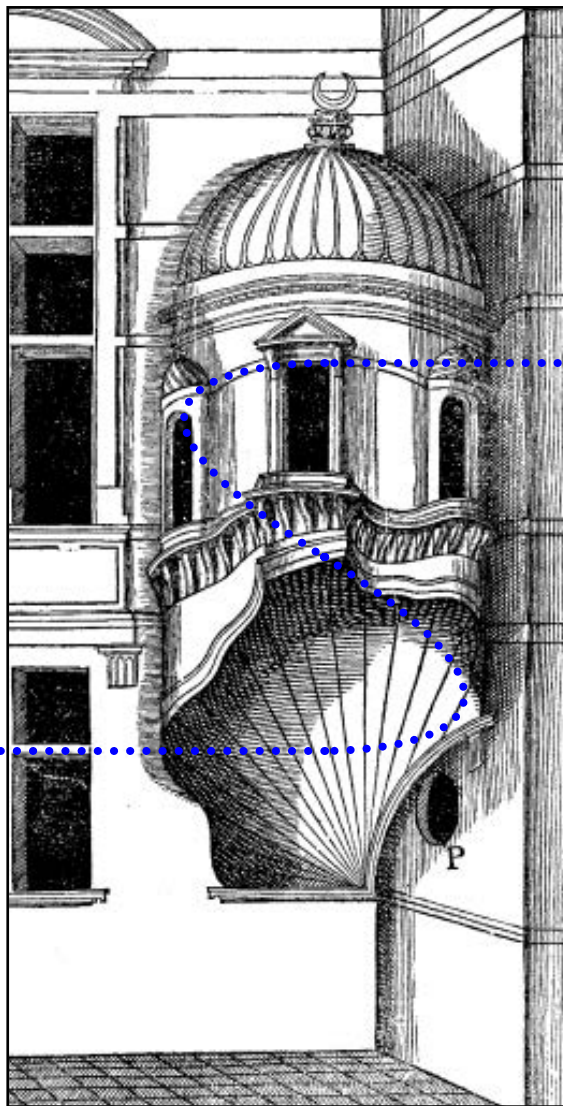
Sixteenth century French architect Philibert de l'Orme is perhaps the most famous mediator of these two disparate idealist and realist worlds. His *trompe* at Anet was commissioned by King Henry II of France, who required the addition of a hidden room in his Chateau d'Anet. In this case, the volume would be a concealed room that fulfilled the

desire for a secret encounter between the adulterer and mistress, and made physical and material the intangible feelings they had for each other.

The structure, like Borges' coins, shifts identities with each new observer. For the two complicit lovers, the *trompe* was the encapsulation of their secret relationship; for de l'Orme, it was the ultimate opportunity to display his talent and establish himself as a prominent mathematician and architect; for us, it is a beautifully crafted architectural peculiarity. The *trompe*, then, is a fundamentally idealist structure, facilitated and generated by an idealist document.



King Henry II
of France



Trompe d'Anet,
by Philibert d'Orme

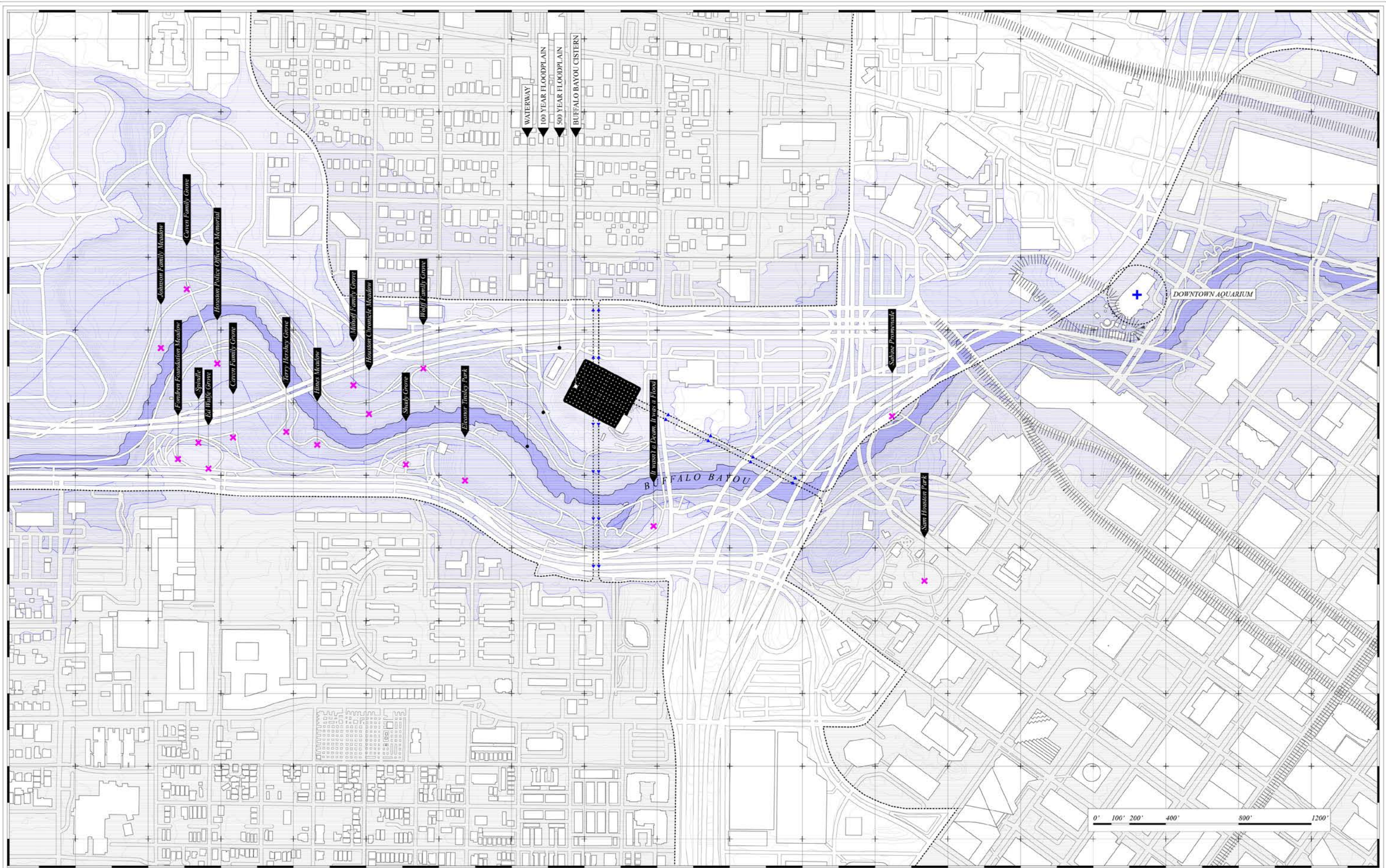


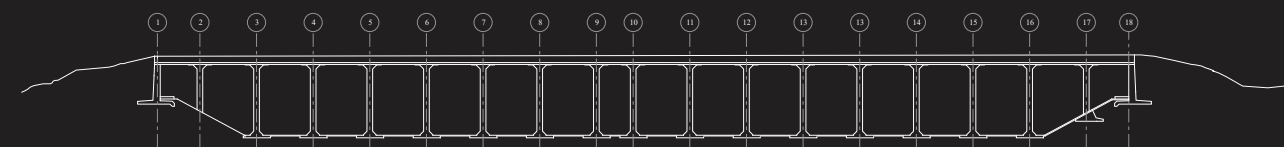
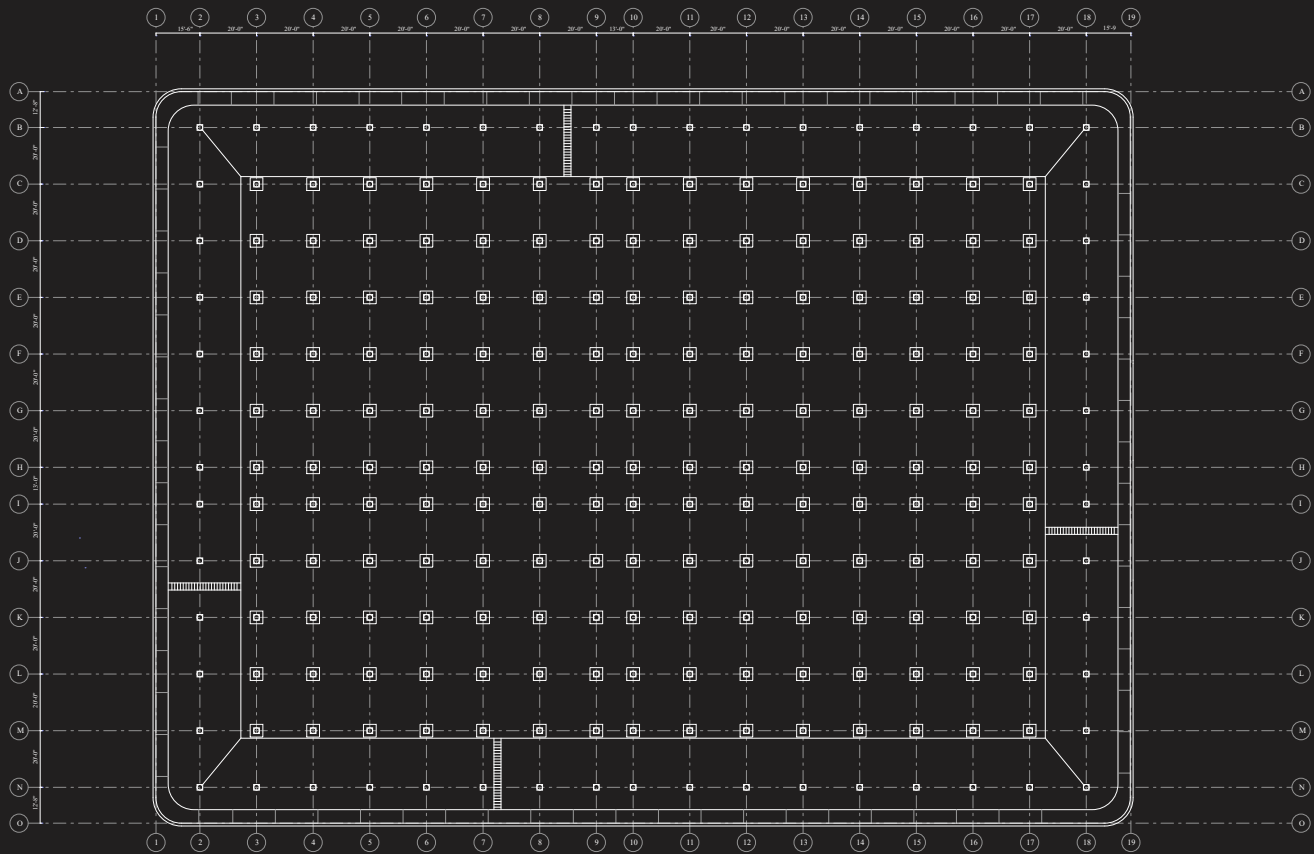
Diane de Poitiers

Trompe d'Anet

The *Trompe d'Anet* is essentially an element that reconnects. On one hand, it binds idealism and realism together. On the other, it is a bridge that reconnects two lovers whose relationship was unfulfilled. King Henry II and Diane de Poitiers, secret lovers, were physically separated, their relationship broken, because their chambers at the Anet castle were located on separate floors. As a result, when the two lovers met, they would inevitably be seen by the servants when they traveled through the public stairs to reach their counterpart's chamber.

Philibert de l'Orme's solution was the *trompe*, a volume that hides a secret spiral stair connecting the rooms of the two lovers. The *trompe* then is the link, the physical manifestation of the reconnection between King Henry II and Diane de Poitiers.





Utilitarianism & Realism

The Buffalo Bayou cistern was constructed as a drinking water reservoir for the city of Houston in 1926. Its role in providing potable water and acting as a fire suppression reservoir made it an indispensable piece of infrastructure for the city. It has the size of 1.5 football fields and the volume to hold 15 million gallons of water when functioning at capacity. The structure is composed by 221 round concrete columns with a diameter of 2', and retaining walls that are 18" at their thickest and 6" at their thinnest.

It is located on the edge of the Buffalo Bayou, buried about 4' underground. By being concealed, its identity remained hidden from the public domain and its only physical manifestation became the service it provided. During its 81 years of activity, it served millions of residents living in and around Downtown Houston.

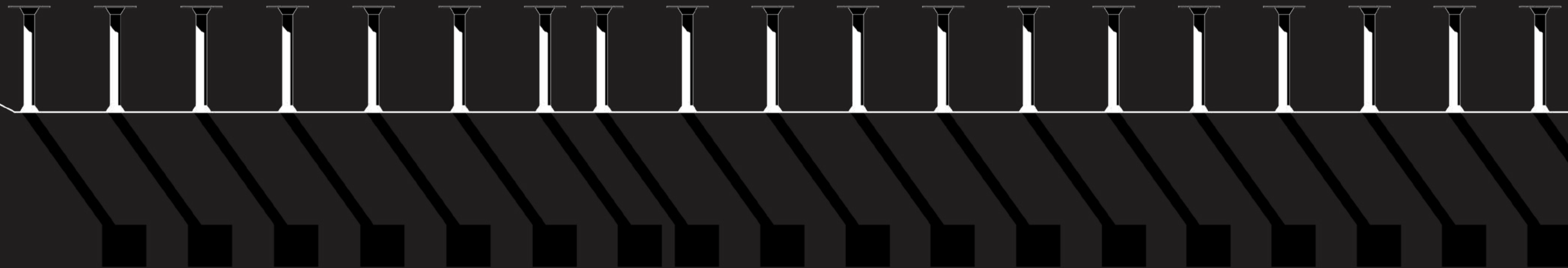
The cistern was a not a space, but a service. It was created in order to provide drinking water, and its identity relied on its ability to do so. The cistern had no dependence on perception, making it a **realist, utilitarian** structure.

"The creed which accepts as the foundation of morals, Utility, or the Greatest Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness." Utilitarianism, by John Stuart Mill, Pg. 10.

John Stuart Mill would characterize the Buffalo Bayou Cistern as a utilitarian structure because its essential function was to promote happiness through a service. This framing shifts the purpose of the structure from just utility and pragmatics to a humanitarian one.



1926



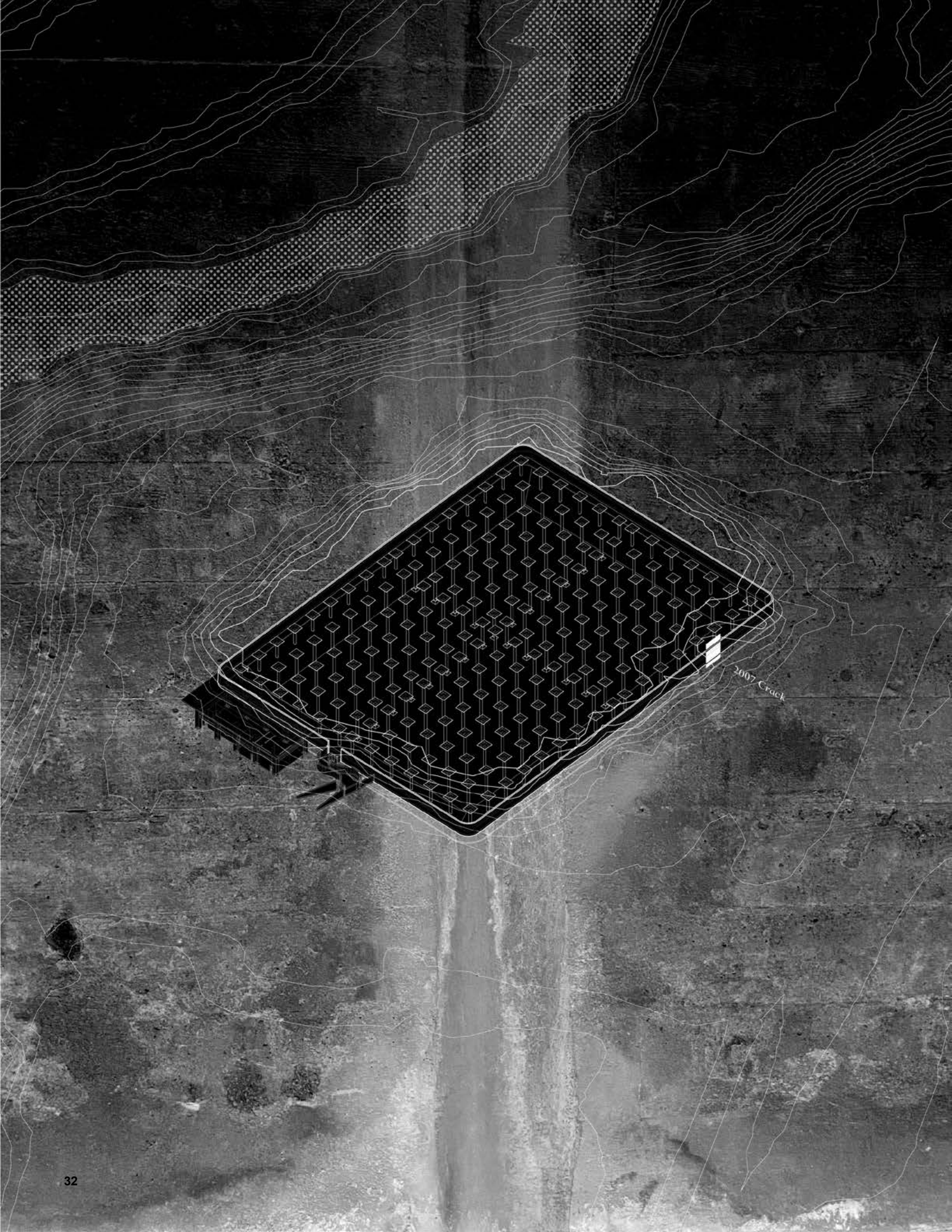
2007

An Unattainable Past

Furnaces, cooling towers, dams, silos. The identity of these utilitarian structures and many more becomes so entwined with the function they perform that their purpose and identity become effectively inseparable. And it is this very function that guarantees the universality of their identity. Their identity is bound to a world of realism and rationalism. Utilitarian structures exist as singular

entities, unaltered by our comprehension or interpretation. And it is because of this very tight relationship between identity and function, that certain events that would be considered harmless to other structures constitute death sentences for them because they interfere or impede them from fulfilling their purpose. Such an event took place in 2007, when a

crack developed in one of the retaining walls of the cistern. The fracture was discovered after some efficiency studies revealed water had been escaping the space for some time. The character of the fracture was definitive and of such irreparable nature that the structure could not fulfill the essential function for which it was created. This crack was the cistern's death sentence.



The Crack

After futile attempts to repair the wound, the cistern effectively became an obsolete structure. Stripped from its function, all that was left was a skeleton devoid of purpose. Its aspirations and purposes, however noble, became stories only the forsaken structure would remember.

*“While Bradley negates the future, one school of Indian philosophy negates the present as unattainable. The orange is about to fall from the branch, or else it lies on the ground, these curious simplifiers affirm. No one sees it fall.”
A History of Eternity, by J.L.B. Pg. 124.*

The crack put the cistern in a moment of suspension where it stood mid-air after falling from the branch. It stretched that moment, while the cistern awaited to meet the ground.

Eventually, the crack would create an immense distance between its past of utilitarianism and realism, where the identity of the cistern was single and indisputable, and a future that would transform the cistern as a fundamentally disparate structure.

Measuring nine feet in height, the crack is located in the northern wall of the structure. Despite its imposing presence, the mark created in the wall by the unsuccessful efforts to repair the failure goes unnoticed.

It appears as a subtle painting on the wall, almost mistakable for ornamentation, that only gains its incredible weight and presence once one is made aware of the significance of this mark.

Significance

With time, the crack would come to represent so much more than just an unattainable past. The multiple significances of the crack may even become paradoxical. In a literal way, the crack is the culprit for the demise of the cistern, the fatal blow. Simultaneously, while it acts as gatekeeper of the past, keeping the past on one side and the present on the other, it serves as a visual and tangible reminder of the history of the space.

A crack evokes fundamentally contradicting notions. While it has a deeply ephemeral character, it nevertheless evokes notions of perpetuity, fate and permanence. It incarnates a moment in time, the moment all tensions and stress converged, and the exact moment when the retaining wall was overwhelmed and gave in. This collaboration of agents is immortalized in a physical feature that will exist in eternity.

The crack is also a catalyst for change. It is the agent that precipitated a fundamental shift in identity that granted the obsolete structure a new life and a place in the consciousness of the public. How ironic that such thing as a crack, with its inherent connotations of decay and obsolescence, was the element that immortalized the cistern and gave it a place in our collective memory.

Étant donnés

Marcel Duchamp's last known work titled *Étant donnés* is perhaps his most enigmatic. He secretly worked on it for 20 years, knowing it would be made public only after his death. The piece occupies an inaccessible room, guarded by two aged wooden doors with a pair of inviting peepholes placed at eye level. Once you look through the doors a shockingly crude scene is revealed, where a nude female body lies in a bucolic landscape, her left hand raised holding an electric lamp. The meaning of the mysterious work has been the subject of endless speculation. With every glance the piece acquires new meaning. Are we looking at the aftermath of a rape? Is the work tied to post WWII horrors? Is it religious, as New York Times writer Holland Cotter points out in his article on the piece? "*A profane update of Bernini's 'Ecstasy of St. Teresa'?*"

However, what Duchamp essentially gave us is a glimpse into his fascinations and obsessions, his memory and his spirit. By peeping through the looking holes we see an homage to two of the most important women in Duchamp's life, who made an impression on him and on the way he lived his life. The act of secretly looking into a space evokes sensations of violation of intimacy and privacy. At the same time, it grants the onlooker a glimpse into something secret and concealed, as if we were awarded the privilege of hearing someone's deepest thoughts. By attempting to interpret and decode the work, we inadvertently project ourselves onto it, like in a Rorschach test. How astounding it is then that by looking through this crack we begin to look inwards, and that by learning of someone we learn of ourselves. The peeping hole is not only a portal, it is also a mirror.

Marcel Duchamp, *Étant donnés*, 1946 - 1966, Philadelphia Museum of Art, Philadelphia





*Anish Kapoor, Descent
Into Limbo, 1992, Porto,
Portugal.*

The Aleph

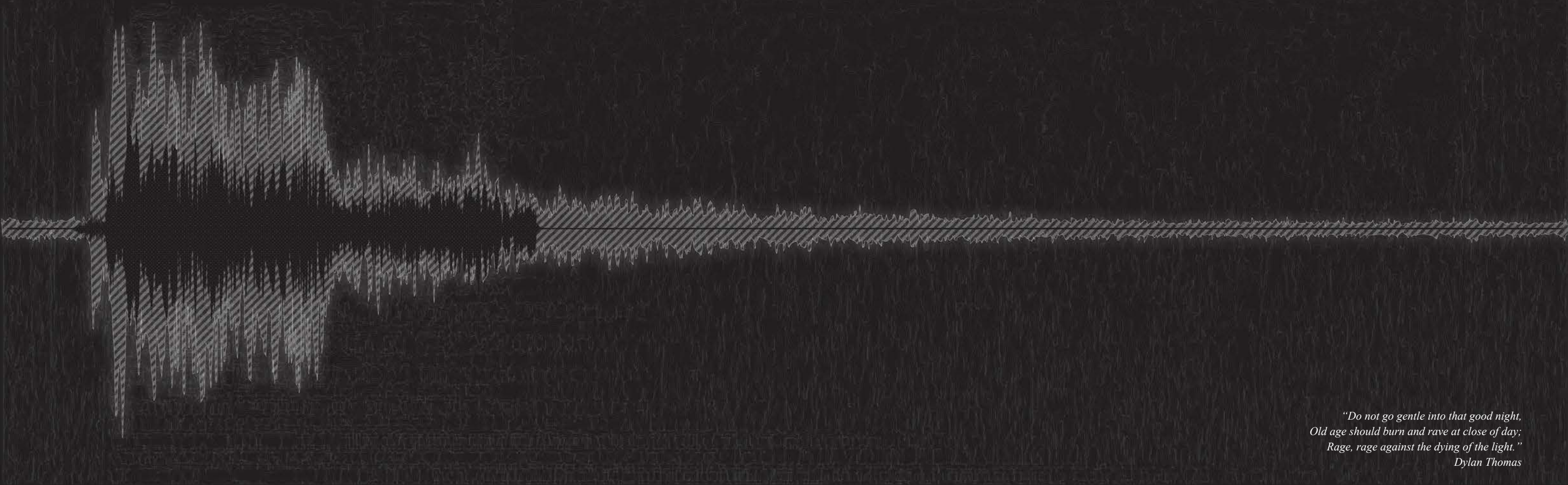
*“O God, I could be bounded in a nutshell and
count myself a King of infinite space.”*

Hamlet, Act II, scene 2.

In *El Aleph* Borges describes an object that contains everything that ever existed, material and immaterial. The Aleph is a repository of infinite depth, inescapable and inconceivable. It is not coincidental that Borges chose to place the Aleph underground, in the basement of a fellow writer’s house. The Aleph is a point in space that contains all of the points. As a container of all of human wisdom and experiences, as well as fears and nightmares, the Aleph is rightfully placed in a space that is associated with terror. In order to enter, we must conquer our own fears. We must confront the absolute darkness in an act of courage, before we can reach the awaiting Aleph.

If the cistern is the Aleph, as a repository of

memory and experience, then the crack is the door that leads to the basement. It is a portal into Tlön.



Discovery

In 2010, three years after the discovery of the crack and since the last time water was pumped from the cistern, plans for the demolition of the space were being finalized and a proposal to convert the space into a **parking lot** had been approved. As a part of this process, a group of engineers was instructed to survey the cistern and take some important measurements, a routine step in the procedure. The engineers arrived with their hard hats, flashlights and measuring tapes, ready to climb down an inconspicuous hatch into the world below. It was at that moment that the transformation occurred. For the very first time, the Buffalo Bayou Cistern was interpreted not by its ability to provide a service, but as a space with a physical presence and character. The engineers found themselves lost in a maze of memories, reflections and reverberations,

one that remained dormant awaiting their descent, or maybe never really existed and only their imaginations created. The cistern was born again, this time not as a structure of utility, but as a dreamlike cave that multiplied itself through its echo and reflections, as well as through its visitors. For one of them, the space became a disorienting labyrinth of echoes that multiplied every step he took. The more observant one of the group became hypnotized by the endless mirrored columns that seemed to extend the physical space deep into the earth. The textures, sounds, temperatures all became actors in producing wildly different impressions and identities of the space on the engineers. One common thread among them was a subtle but certain fear, one that in some indescribable way felt archaic, as if they were stepping into an obscure, archetypal space,

Idealism

one that perhaps Dylan Thomas had dreamt about many decades before. After their dramatic experience the engineers understood unanimously that they were now responsible for ensuring the survival of the cistern. They contacted the park authorities and effectively, after they visited the space too, the plans for demolition were scrapped. The Buffalo Bayou Partnership acquired the cistern in 2012 and developed plans for its renovation. It was decided that the most meaningful way to honor the cistern's memory and celebrate its re-discovery was to open it for the public and promote it as a cultural attraction. The cistern was transformed into an experience, where guided tours would show visitors the incredible qualities of the space and its history. The new Buffalo Bayou Cistern Park opened

*“Do not go gentle into that good night,
Old age should burn and rave at close of day;
Rage, rage against the dying of the light.”
Dylan Thomas*

its doors to the public in 2016 and since then, it has become a well known attraction in Houston. Multiple artists have been invited to re-imagine the space through their installations, and thousands of visitors have experienced the structure's ineffable character. The cistern's days of utilitarianism and realism were gone. From that moment on, the cistern would operate as an attraction, an aesthetic experience, a space contingent on the perception and comprehension of its visitors. It is reinvented, falsified, recreated with every new perspective. The cistern morphed into an idealist structure, like de l'Orme's Trompe, or Borges' coins.



The Projective Cast

“Attention shifted, at first slowly and cautiously, from the object per se to its images: shadows, maps, or pictures. It is easy to appreciate intuitively that any rigid object will propagate a variety of possible images of itself in space.”The Projective Cast by Robin Evans, Pg 32.

In the introduction to *The Projective Cast* Robin Evans describes the relationship between classical, Euclidean geometry and architecture. He explains that for a long time we have expected to find geometry in the places where we have placed it: in composition, in the form of two-dimensional geometric figures, and in construction, as three-dimensional volumes. But, he argues, there is an area in which a different kind of geometry is present that has gone unnoticed. This is the area where a body propagates

images of itself in space, as Evans explains, by interacting with the physical world and its properties. This is the area of *projective geometry*.

Evans dedicates his book to exploring this premise, but there is arguably yet another type of projection that arises when we consider the propagation of a body in space. This is the projection resulting from the propagation of a body into a conscience. In the same way that an object casts shadows onto a plane, the cistern projects itself onto the venturing mind that wanders into it. The factors that provide fluctuation and variety in physical projections, such as the angle of the light or the distance between the object and the projection plane, are transferred to the mind of the observer in the case of the cistern.

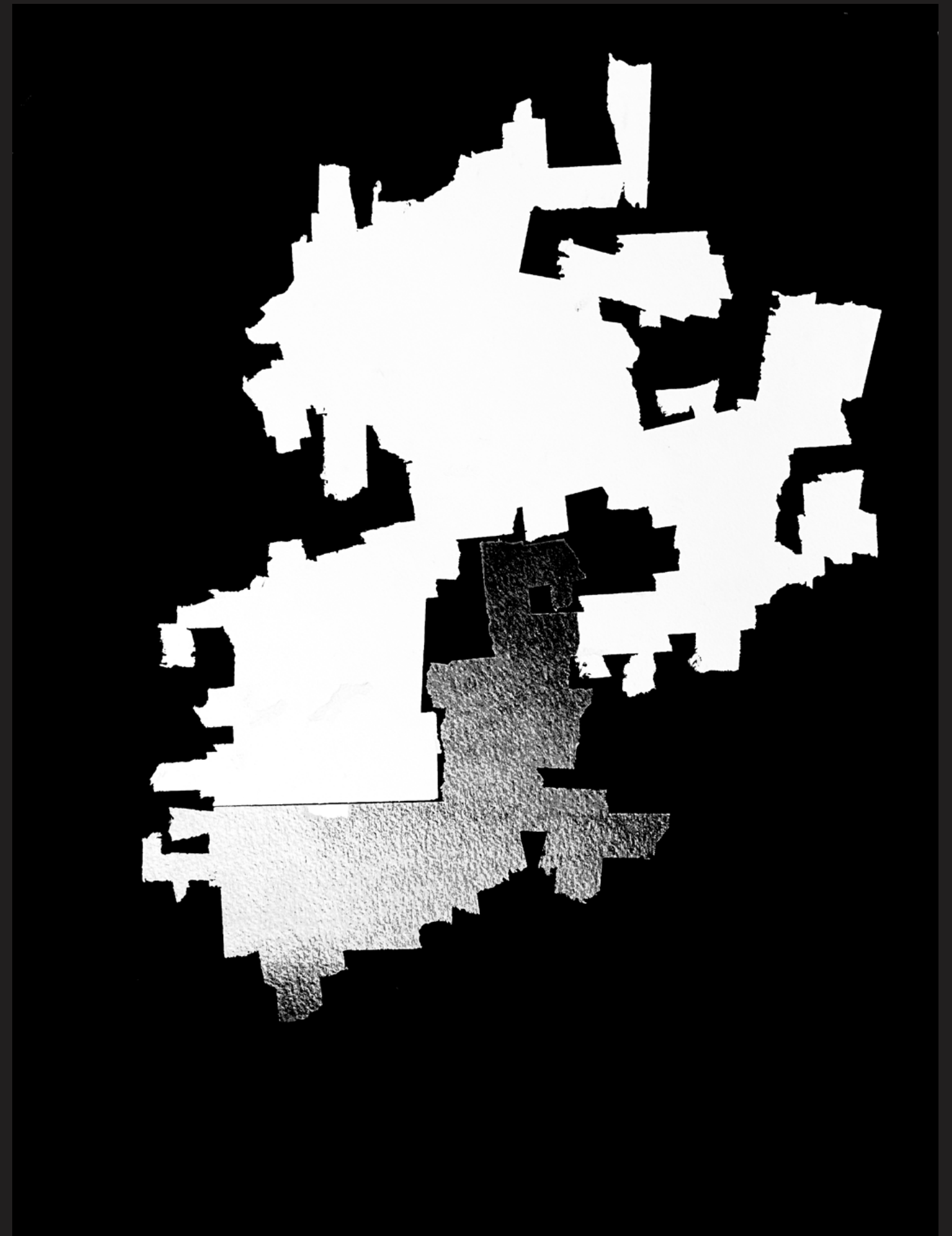
*Left:Engineer 1, Idealist
Drawing, Projections of
the Cistern*

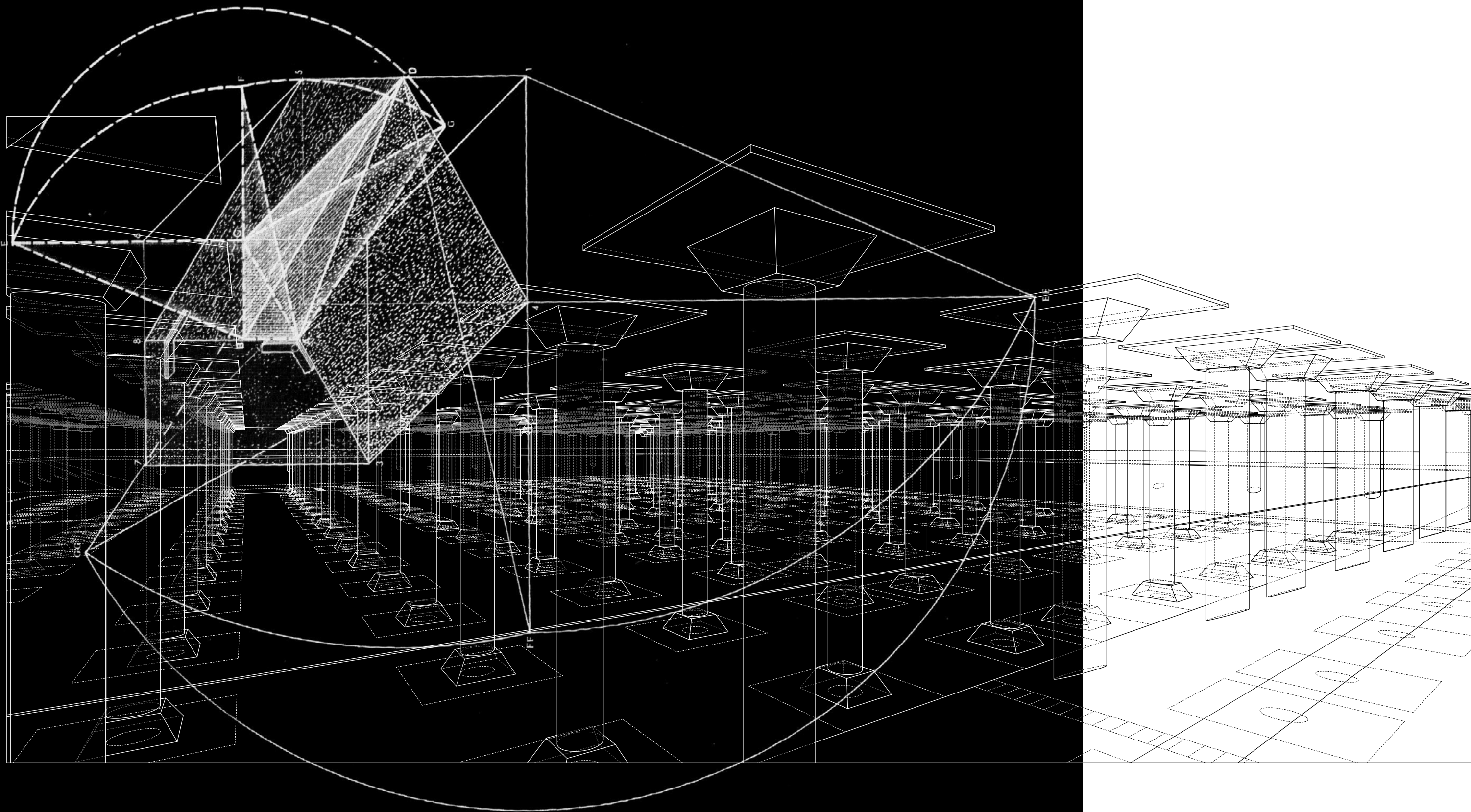
How can we represent the projection a body has casted in us? Any type of literal representation would fall short. Words are too suggestive, and graphic descriptions can become transfixed with accuracy.

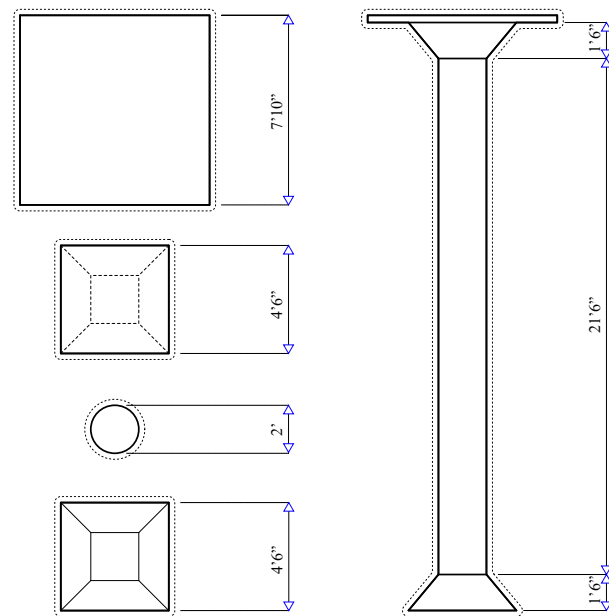
In order to remember, we must forget. We must forget the details and the peculiarities, so that we can distill the essence of our memory. These portraits are idealist descriptions of the cistern. Idealist because they have transformed the space, but also because they are transformed each time we attempt to understand them. They are maps, cracks, spaces and bodies, many things more, perhaps, that the engineers projected onto the

page in an effort to describe an extraordinary experience.

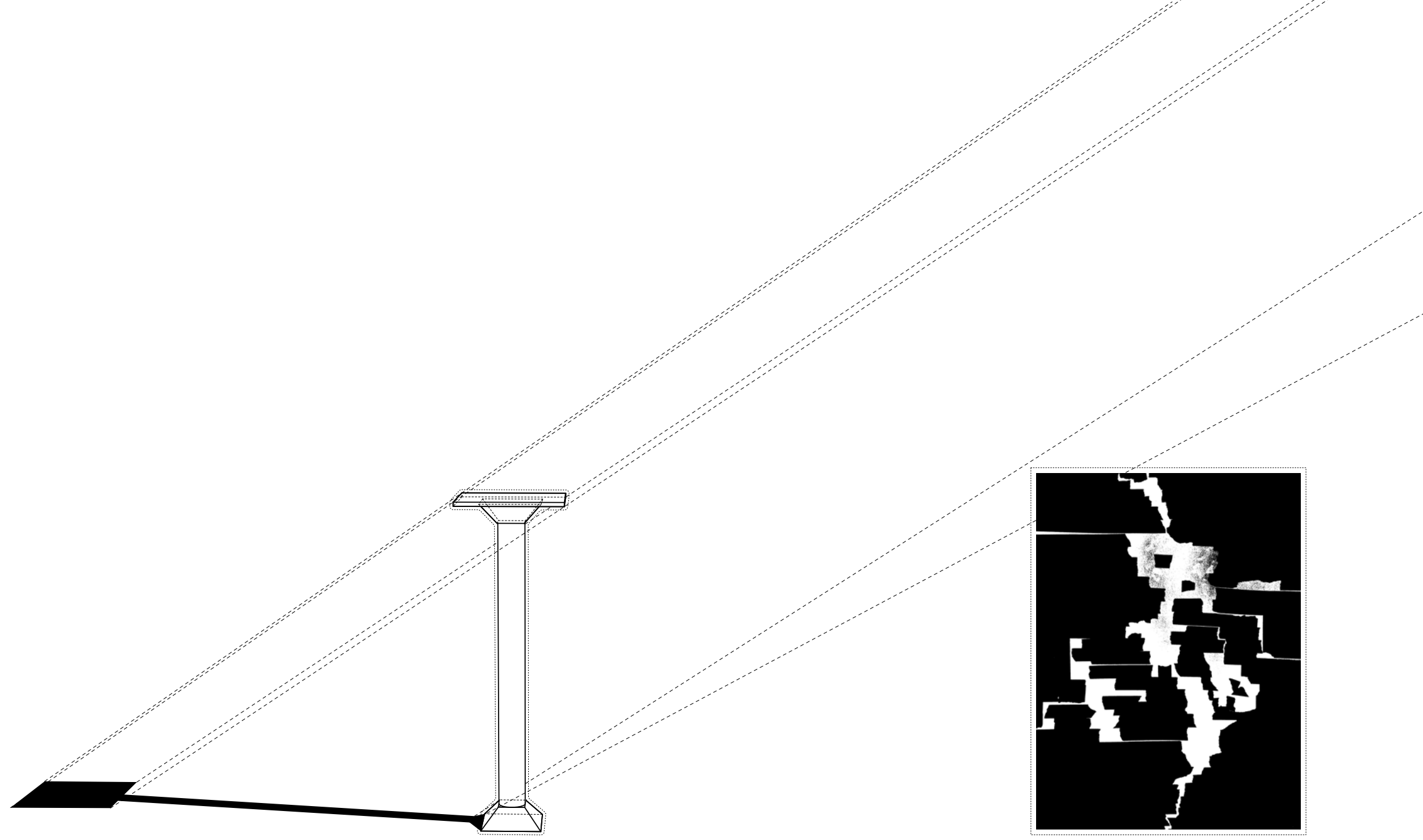
*Below: Engineer 2,
Idealist Drawing,
Projections of the Cistern
Right: Engineer 3,
Idealist Drawing,
Projections of the Cistern*



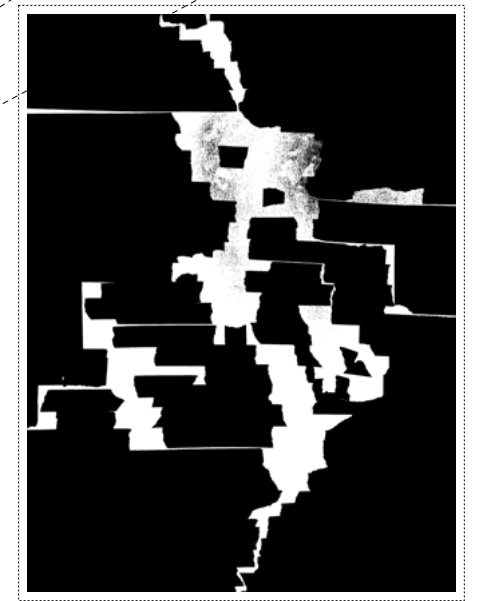




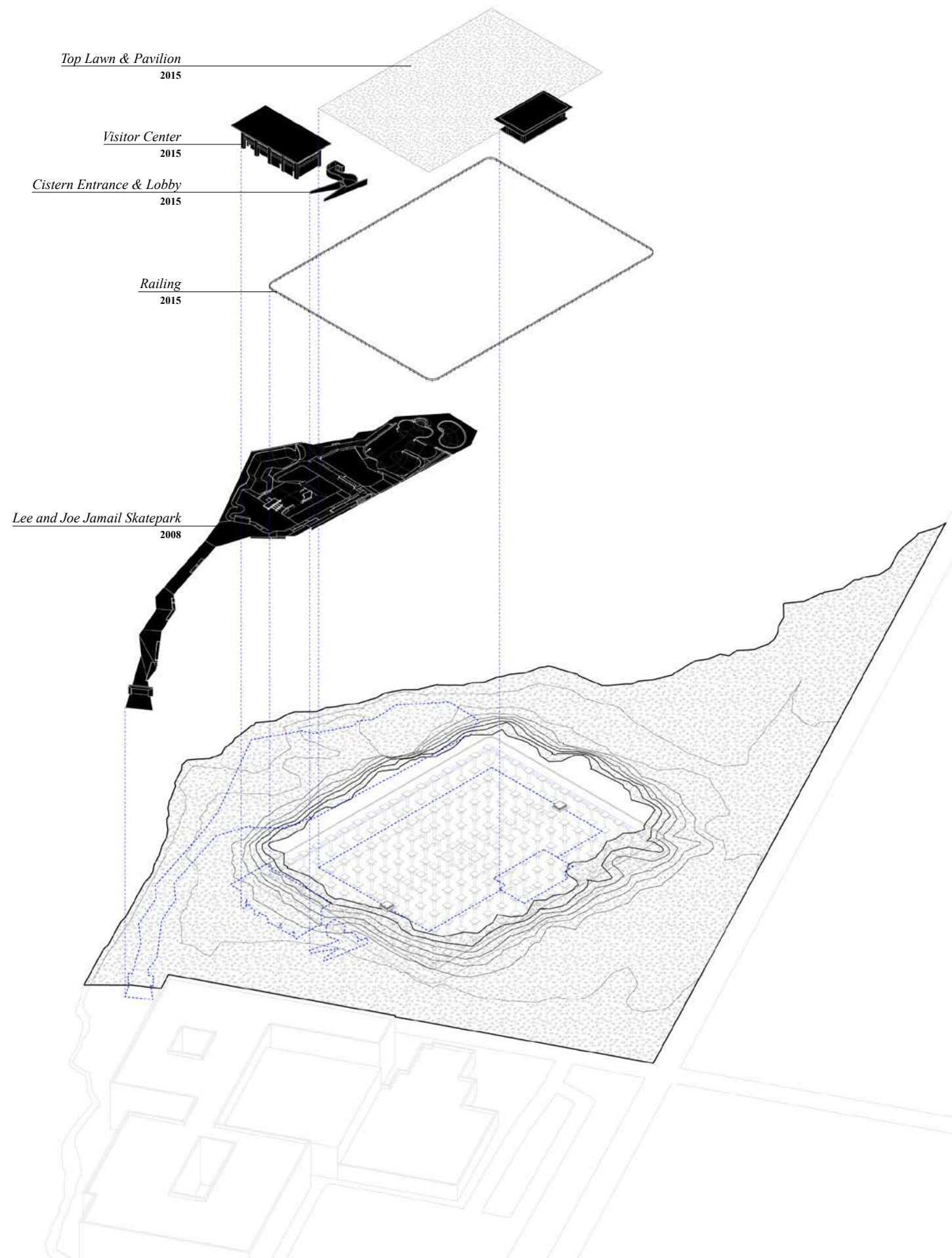
Euclidean Geometry



Projective Geometry



Projective Idealism



Transformation

Although the transformational process of the cistern began at the moment it was re-discovered by the group of intrepid engineers, the physical transformation, with all its additions and adaptations, was only completed in 2016.

The new park would include a visitor center, which would house administrative offices and a bicycle rental storage, and two pavilions open for public use.

In addition to these, a few alterations were made to the cistern itself, such as the creation of a new lobby and entrance to the space. A lead designer in charge of the project described the process as an “**exercise in code,**” meaning that the main alterations consisted in ensuring the space complied with the appropriate safety regulations. For example, a six foot wide pedestrian platform was installed on top of the existing three

foot ledge originally created to accommodate the workers who serviced the space. Additionally, a handrail was installed, and access to the bottom of the water collection area was prohibited.

The design team’s overall philosophy was to intervene in the space as minimally as possible, in order to preserve its character as much as possible.



Rosemarie

The cistern conceals something precious within. It is a place where we go to confront darkness and the abyss, and what they bring out from us. We stand up and measure ourselves to it, maybe even shout to it, only to hear the abyss shout back. We know of the danger in this, and so did Nietzsche, so we are only willing to take on this excursion if we are guaranteed a touch of safety. We will only walk into the darkness if we do so holding onto a comforting guiding light. This guiding light and guardian of the darkness is the gatekeeper of the cistern, Rosemarie.

Through her work, Rosemarie has developed a unique intimacy with the cistern and the darkness it contains. Her official duties initially consisted in maintaining the space and conducting guided tours, but with time their relationship evolved into a reciprocal one, one where Rosemarie gives but also

"And if you gaze for long into an abyss, the abyss gazes also into you."

Beyond Good and Evil: Prelude to a Philosophy of the Future, by Friedrich Nietzsche. Pg.146

receives. The cistern has gifted Rosemarie meaning and purpose.

"Everything you give the cistern, it gives back. Like its echo."

Rosemarie.

During her tours, Rosemarie leads us while narrating the cistern's history and pointing her light at the endless columns. She talks about the millions of people to whom the steel pipes delivered water, while pointing at the fracture that changed everything. But behind the objective historical narrative she uses for her tours lies a personal significance. She is the cistern's gatekeeper, yes, but also its first idealist.



The Engineer

One could argue that empirical sciences are what keep Tlön and our planet separate.

By studying mathematics, physics, and engineering, we are tacitly agreeing that there are measurable, exact about which we can all agree. These are independent from perspective or opinion, they are unchanged by them. They are the very foundation of our realism.

The Engineer who climbed down the hatch did so as a realist on an empirical mission. What provoked him to descend into the darkness? Perhaps he did not see it as such, clouded by his realist perspective. Or maybe, he dove into the abyss in search for light, because at some level, he understood that idealism and realism are incompatible but inseparable. Something compelled him to go searching for the light, and he needed to find it, as much as King Henry IV needed the love

of his life. Possibly, he *jumped* into the hatch, desperately searching for Rosemarie.

Carl Jung's archetypes provide order in a world of disorder. They are figures that describe all of us, while describing none of us. Rosemarie and the Engineer could be such figures. We could all be a mixture of engineers and Rosemaries, looking for each other in the abyss.

Repository
from Latin *repositōrium*
a place,
a building,
or receptacle,
where things are stored.

Water

The relationship between the Buffalo Bayou Cistern and water is quite complicated. On the one hand, the cistern owes its existence to our need of water. On the other hand, water caused the crack in the retaining wall that nearly destroyed the cistern. And, finally, water is the reason why we can visit the cistern today, since the reflections created by the thin layer of water are part of what motivated the engineers to save the space from demolition.

The presence of water throughout the cistern's history ties its many identities together, like a thread that stitches fragments of a fractured memory into a whole. It has become part of its DNA and physical presence through the darkened walls that evidence the height it reached and how it moved inside.

It is important that this relationship is not destroyed. They are vessel and substance,

collaborators and enemies, and still, they cannot exist without each-other.

At this moment, as we know, water is ensuring the survival of the cistern as an attraction. However, the dignity of the relationship can be restored by re-establishing a collaboration between water and cistern that serves utilitarian as well as idealist purposes. In doing so, a past of realism and a present of idealism could finally be consolidated to fulfill the cistern's original utilitarian aspirations and its newly found idealist character.

Geometry

Utilitarian structures are interesting examples of buildings that are planned and built only to perform a function. Whereas buildings such as a church or a museum are prime examples of Vitruvius' Three Principles of Architecture (beauty, stability and utility), structures like silos or oil platforms show little interest in appearing beautiful. Utilitarian structures are planned with the purpose of fulfilling a function as efficiently as possible, with almost complete disregard for how humans would inhabit them.

It is this need for reliability and utility that has established Euclidean geometries as the "official" geometries employed in utilitarian structures. Euclidean geometries could be described as "simple" forms, such as circles, squares and triangles, projected on a two-dimensional plane, or euclidean plane. Robin Evans explains that since interest in

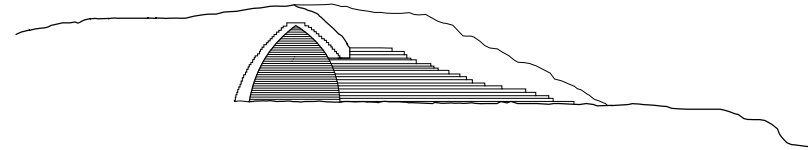
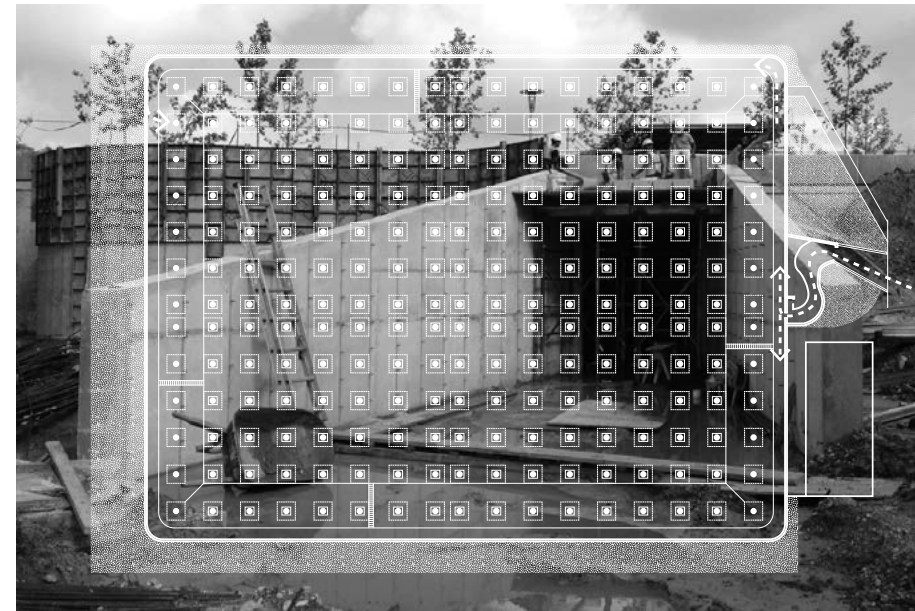
Euclidean geometries has subsided, their value in specific situations, such as the Buffalo Bayou Cistern, has risen because of their reliability and safety.

There is a strong bond between realism and Euclidean geometries. The Euclidean shapes deployed to form the plan (circular columns, square footings, etc) are what enable the cistern to perform as efficiently as possible.

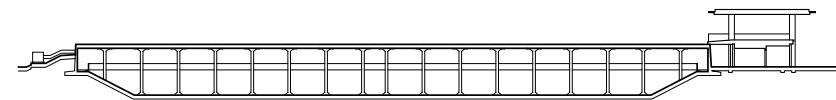
Once the crack appeared, the question then became, how did that relationship change, after realism was replaced by idealism?

The composition of the cistern is so far well suited for its current use, but what changes will a consolidation of idealism and realism warrant? Perhaps non-Euclidean geometries will provide a path forward by relinquishing the stability of the circle and the square in exchange for a more ambiguous, flexible and exciting space.





*Treasury of Atreus,
Mycenae, Greece. 1250 BC*



Treasury of Atreus

The Treasury of Atreus is a large tomb in Mycenae, Greece, built for King Agamemnon's remains around the year 1250 BC. In addition to the burial chamber where the King lays, a *tholos* chamber was included, where offerings for the Greek King were stored.

The space has an incredible presence because of its formal characteristics and its spiritual significance, and it is in these areas where we find that the Treasury of Atreus and the Buffalo Bayou Cistern are connected.

From the exterior, the cistern's entrance bears a striking resemblance to the Greek king's tomb *dromos*, which is the long passageway that culminates in the buried volume. The resemblance is such that it raises the question whether the tomb served as inspiration for the cistern's renovation. Additionally, both structures appear to have been built

underground, conceptually charging the two because of the spiritual implications this entails.

However, once we look past the surface in comparing the two, we see that the relationship between them is not so simple after all.

The *dromos* at the Treasury of Atreus is 118' long because that was the distance from the foot of the hill to its center, where the tomb was located, and is lined by two retaining walls made of stone that hold the weight of the earth. The cistern, on the other hand, is accessed through a 30' long, cast-in-place concrete *dromos*. While the entrance at the Buffalo Bayou Cistern is part of the narrative crafted to create an attraction intended to create mystery and sell an experience, the Greek *dromos* was created as a necessity, as that was the only viable solution to access

the tomb. Under this light, it would be easy to dismiss the cistern's *dromos* and its renovations as post-modern and superficial because they borrow cross-cultural symbols while disregarding their meaning or origin. However, if a tomb is defined as a space for remembrance and ritual, one might argue that the cistern is as much a tomb as the Treasury of Atreus is. The cistern is, in a way, the tomb for a space, a service and rituals that have ceased to exist. It is a container that stores memory and time, in very much the same way the Treasury of Atreus does. When we visit the space, we are remembering what once was and reflecting the passage of time, as we would by visiting a burial place.



From Russia With Love, by Terence Young. 1964



Basilica Cistern, Istanbul, Turkey. Sixth century.

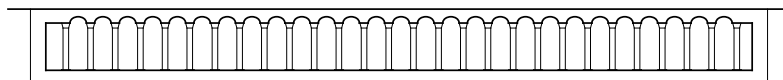
Commodification

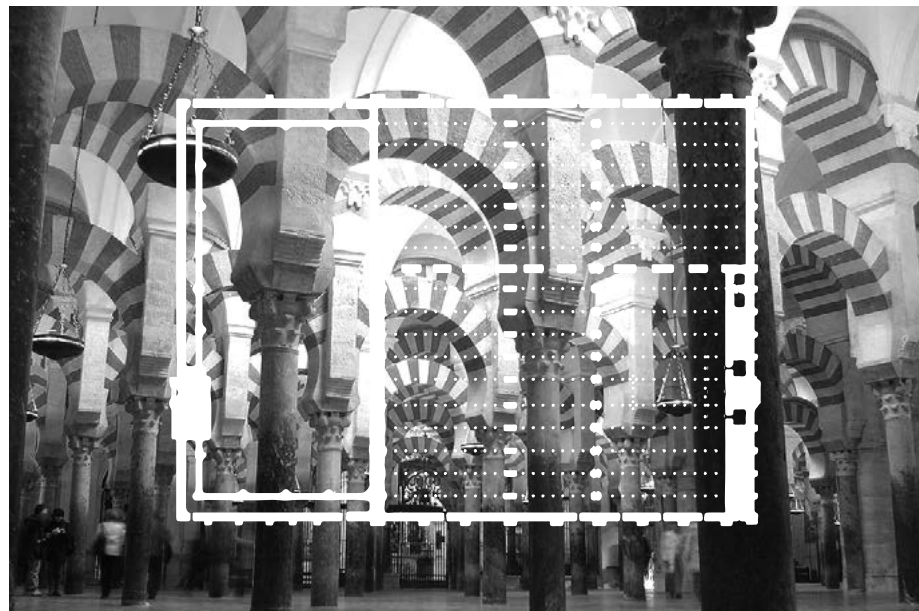
The Basilica Cistern in Turkey, very much like the Buffalo Bayou Cistern, was built in the sixth century with the purpose of providing the city of Istanbul with a commodity: water. However, in 1987, when the Basilica Cistern was re-purposed as a touristic attraction, the commodity it used to provide was replaced by a different one: culture and capital, embodied by the cistern itself.

The Basilica Cistern acquired a place in popular culture that reached its peak when it was featured in a famous scene of *From Russia With Love*, when James Bond and Kerim paddle through it to reach the Russian consulate. Since then, the Basilica Cistern has been commodified and promoted as simply an “interesting space”, one where the memory and history are overlooked by visitors who are just interested in the photogenic qualities

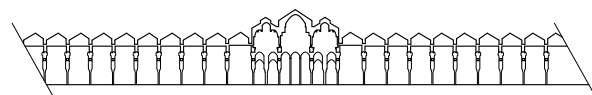
of the place. Its interior is evidence of the desecration for monetary gain that has taken place. Today, there’s a “Cistern Cafe”, where one can purchase drinks and snacks, where the light stands and inevitable chatter from customers contaminates the precious atmosphere of the space. There is also a stage where plays completely unrelated to the history of the structure are staged. The Basilica Cistern has maintained its physical beauty, although it has lost its memory and character.

Although the Buffalo Bayou Cistern has not reached this point of commodification yet, it is important to identify the Basilica Cistern as a cautionary tale that shows the extent to which a space might be altered and their identity obliterated for the sake of cultural capital.





*Great Mosque of Córdoba,
Córdoba, Spain.
Eighth century.*



From Object to Field

*Field conditions are bottom-up phenomena, defined not by overarching geometrical schemas but by intricate local connections. Interval, repetition, and seriality are key concepts. Form matters, but no so much the forms of the things as the forms **between** things."*

Field Conditions, by Stan Allen. Pg 2.

In *Field Conditions*, Allen articulates the difference between objects and fields by contrasting the Great Mosque of Córdoba to Alberti's axiom on geometry, which stresses the importance of relationships among parts for maintaining the unity of the whole.

The Great Mosque, Allen argues, offers an instructive counterexample to Alberti's philosophy because the geometric relationships between the parts is the protagonist, not the object resulting from said relationships.

The mosque is composed by a field of columns. Each of the columns emerge from the intersection of two vectors: the walls and the arches. This results in a compelling effect of cross-views and complex parallax effects. Even after the mosque was enlarged several times (four in total), the geometric relationship among the parts has remained fixed, resulting only in the scaling up of the structure. This is because the parts in the field are only that: parts.

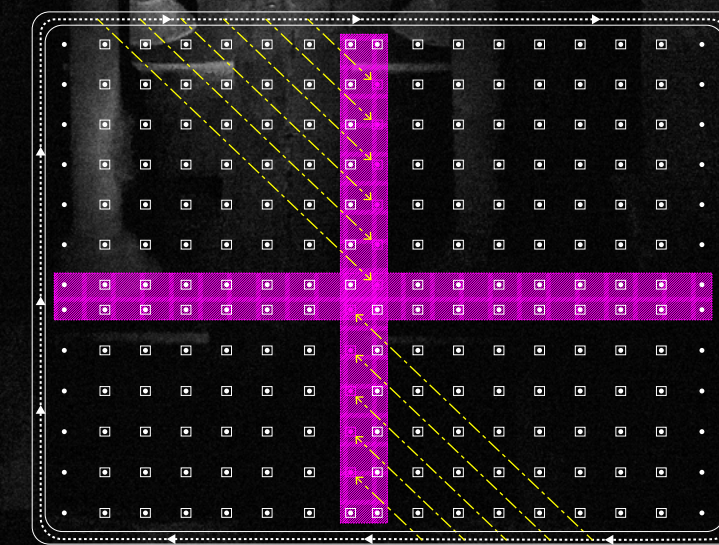
The Buffalo Bayou Cistern is an interesting case to study under this light. While the vectors that determine the relationship between the parts of the mosque derive from the religious traditions and rituals that would take place within it, in the case of the cistern these vectors derive from structural and performative necessities. These necessities include enough structural support to withhold

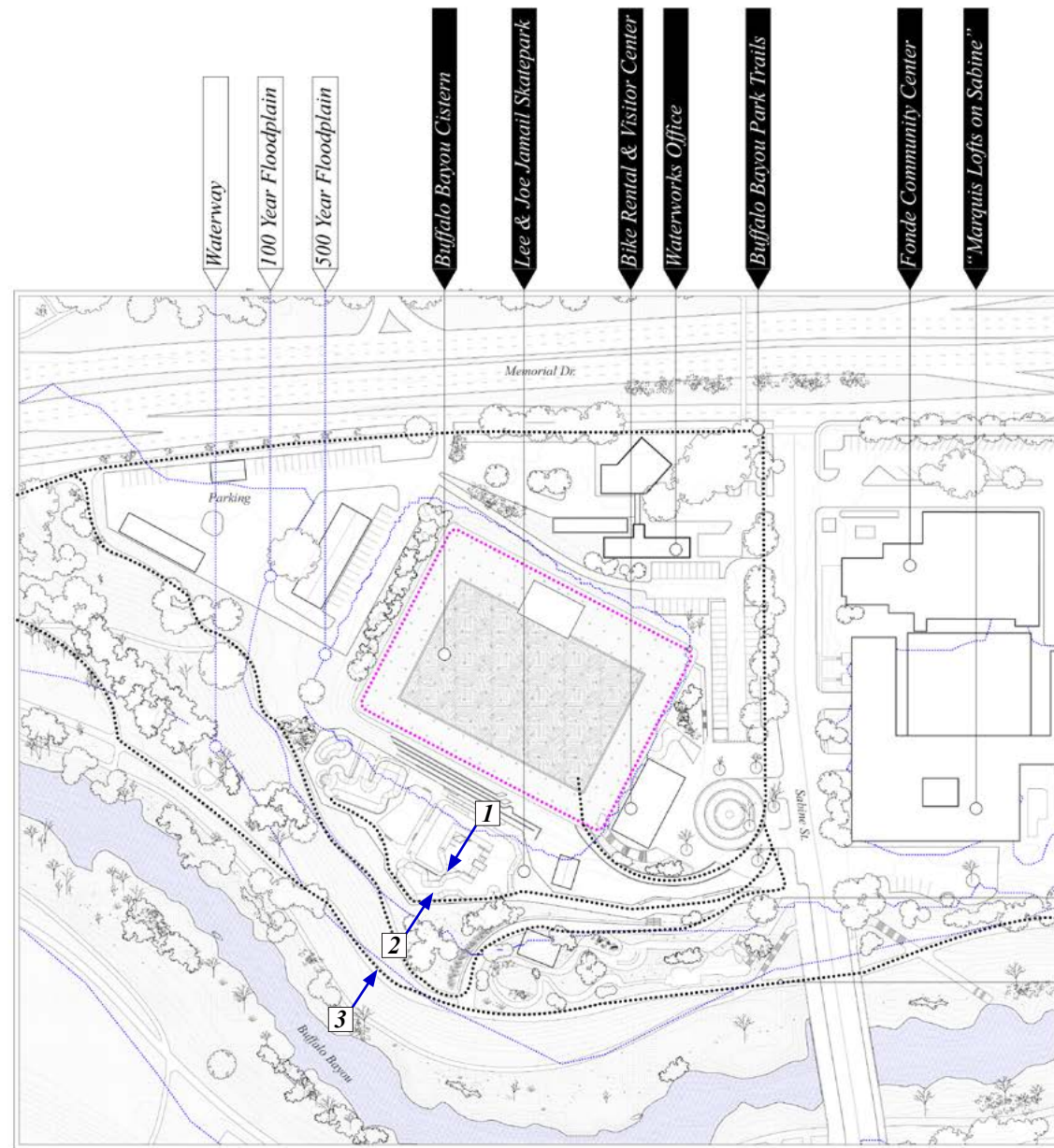
the volume of water the cistern was planned for, plus resisting the weight of the earth above and around the structure. However, these necessities have also produced some anomalies in the field they generate. Every column is spaced 20 feet apart, except for four rows that are spaced 13 feet apart, two of them running from East to West and the other two from North to South. This is due to the presence of two expansion joints running in both directions, which demand more structural support.

When these anomalies are coupled with the way visitors circulate inside of the cistern, the seemingly predictable field manages to surprise and disorient. The pedestrian platform visitors are relegated to only travels around the perimeter of the field. This way, visitors are only able to observe it, not inhabit it like they would at the mosque. However,

when the field is observed from a distance the anomalies become much more apparent. As one circulates around the space, the shifts in perspective reveal and conceal parts of the field, the anomalies cause to columns abruptly appear out of nowhere, seeming to completely violate the logic of the field, only to vanish behind it as the eye moves.

--- Sight Lines
..... Circulation
..... Field Anomalies





Existing Conditions

Broken Networks

Because the Buffalo Bayou Cistern was built as a utilitarian structure, it was situated practically and pragmatically. Once the structure was opened to the public as a cultural attraction, the repercussions of the lack of planning began to make themselves apparent. Access and exposure to the cistern

is limited, and there is minimal integration of the park with the surrounding context. This keeps the inhabitants of each element unaware of each other. The cyclist, the skateboarder, the tourist, and the curious pedestrian are uncommunicated, despite being a few steps away from each other.



1 Top of Cistern



2 Lee and Joe Jamail Skatepark



3 Buffalo Bayou Park Trails



Interventions

Interventions

This thesis emerges as a series of interventions that repair the networks between these disparate elements. Meaningful events along these interventions appear as fragments of an untold story. They become characters of an overarching narrative, but in their own right, they each represent a different way of

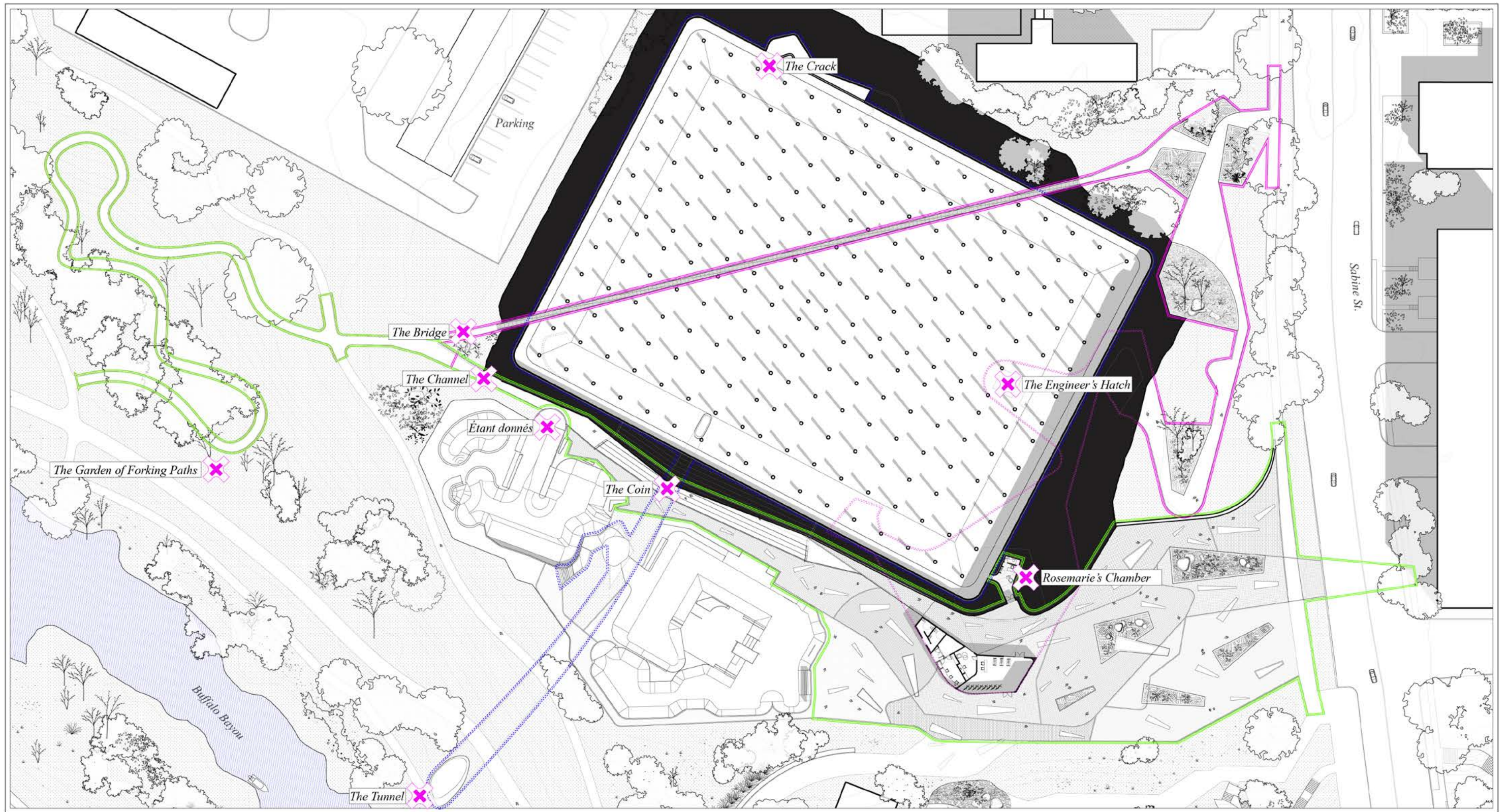
interacting with the cistern. Each event creates a new face of Borges' coin, multiplying the number of cisterns in our consciousness.



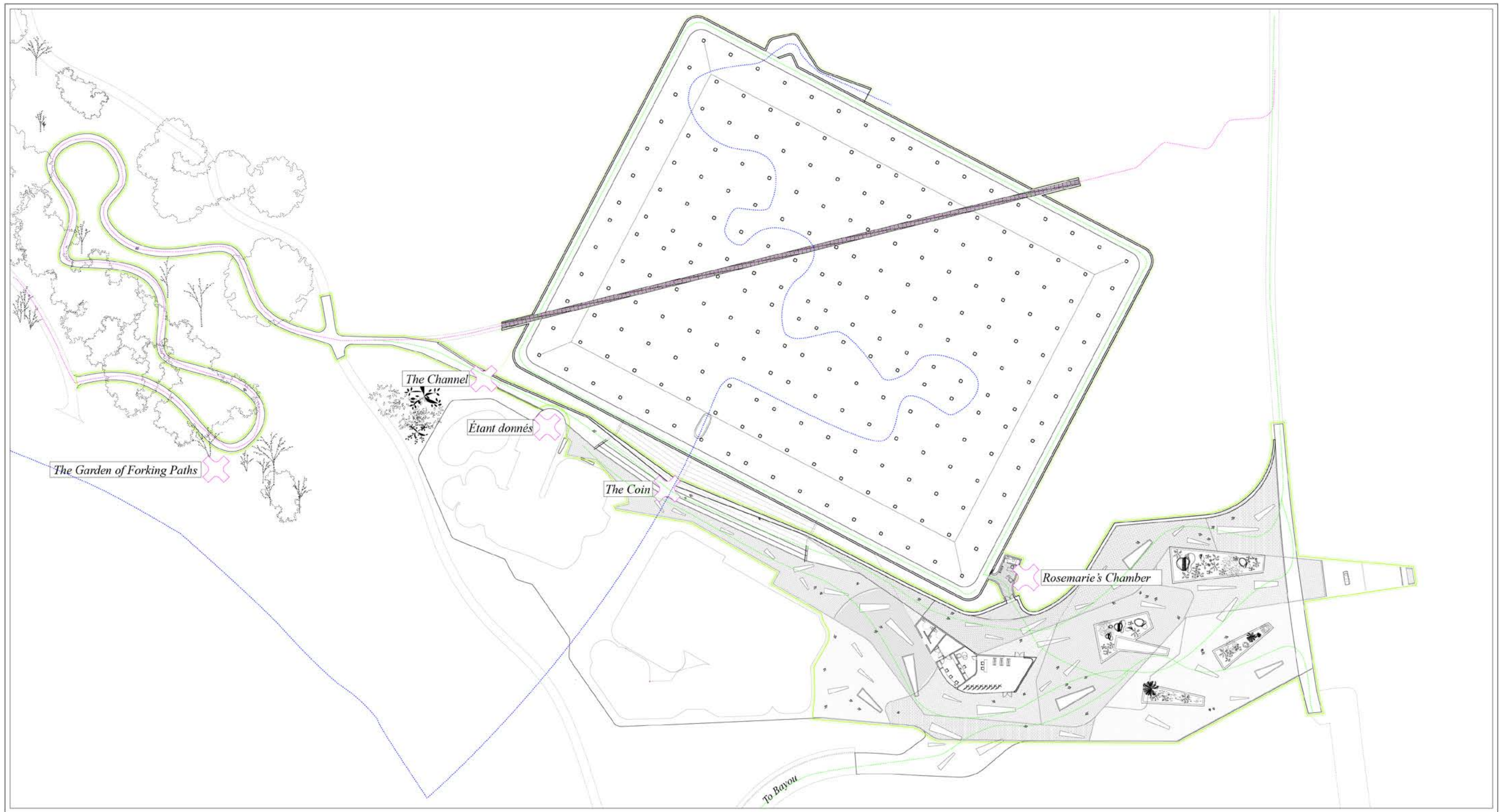
Events

There are three main, overarching interventions. These are The Channel, The Tunnel and The Bridge. Points of intersection between these are meaningful for the project, as they become nodes of spillage of realms. The realm of the skateboarder and the path of the cyclist, or the route of the tourist and

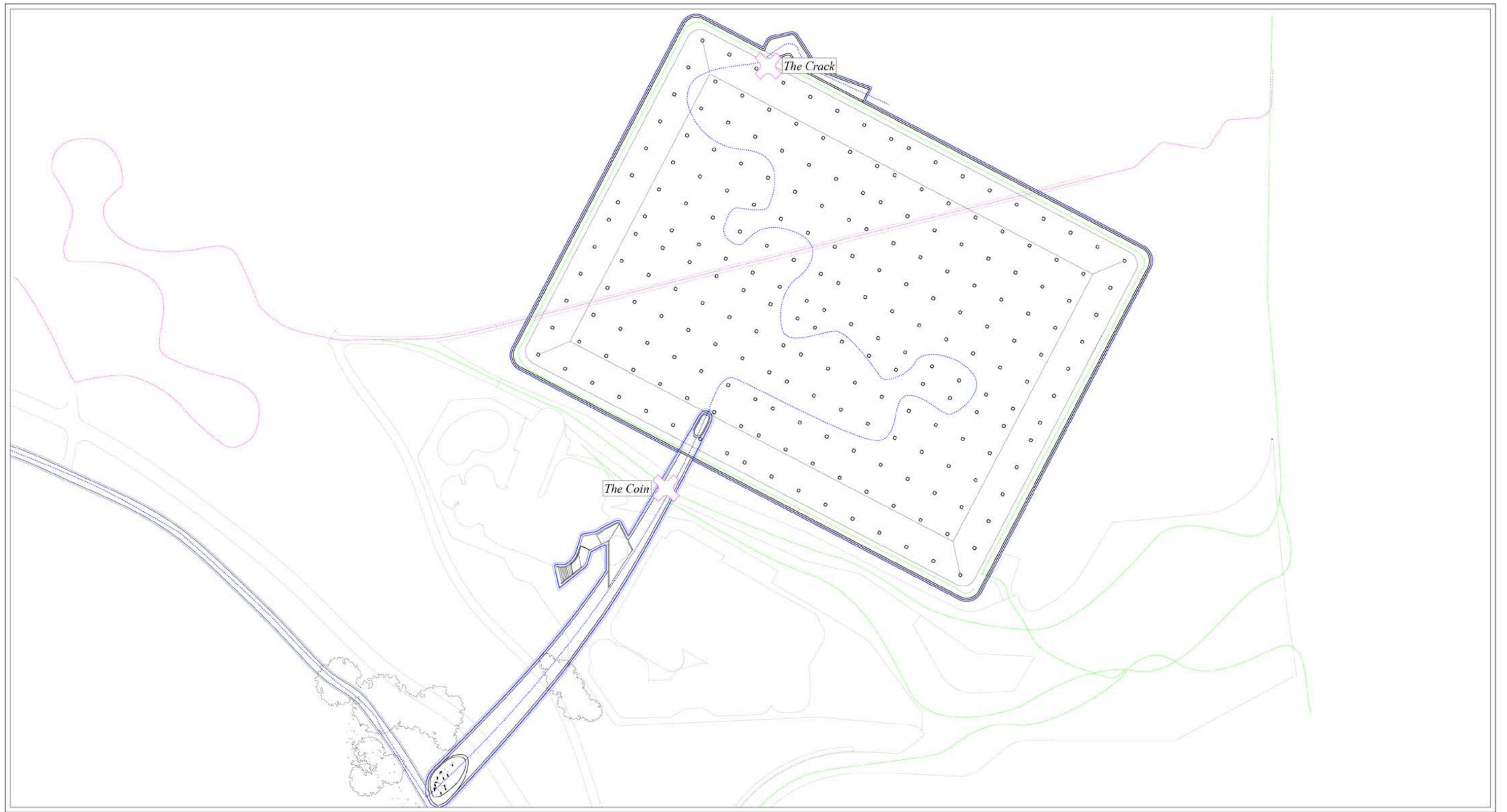
the bleachers where moms who are looking after their skateboarding kids are territories that at the moment have no connection, but that deserve to become aware of each other.



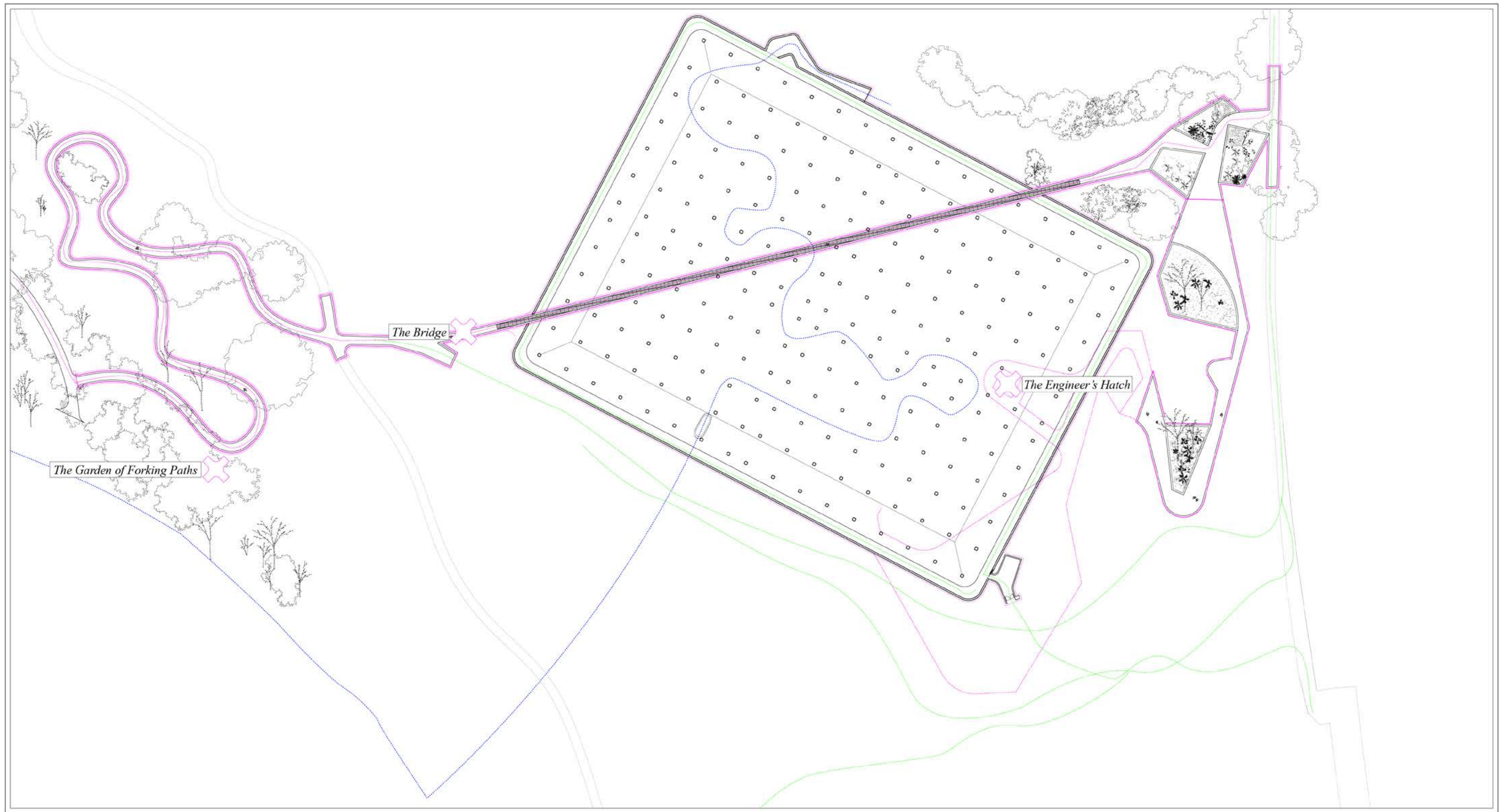
Siteplan



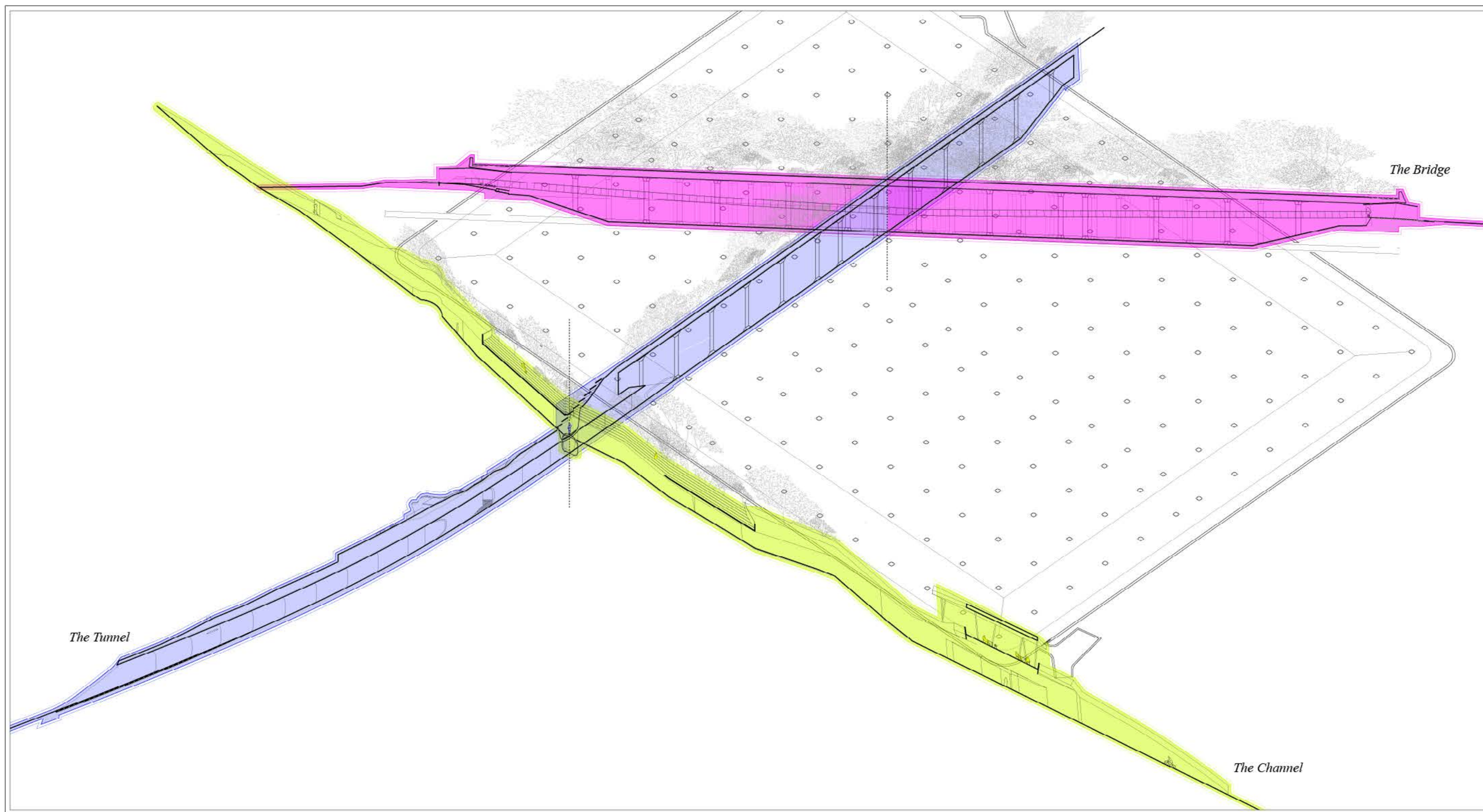
The Channel



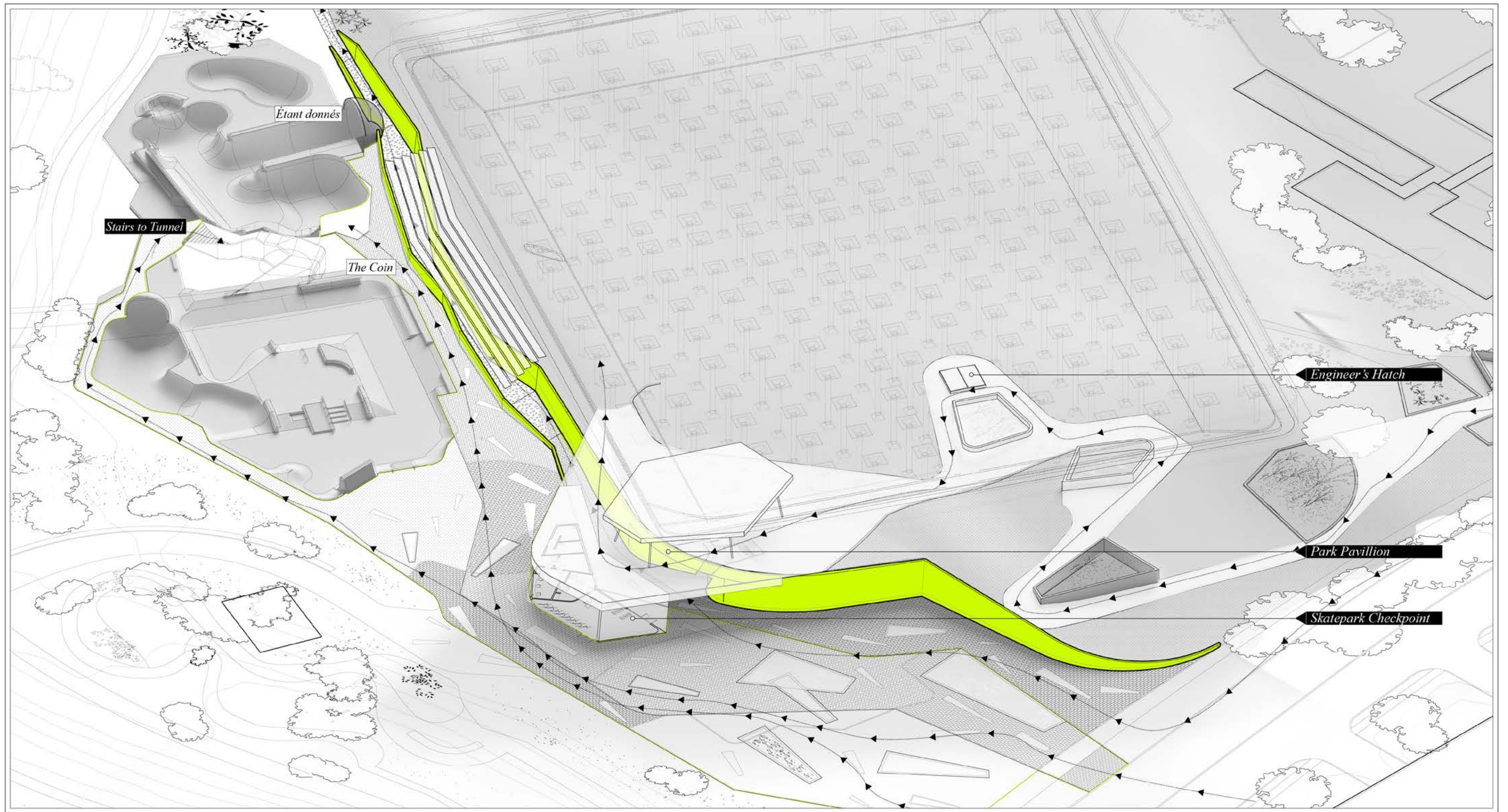
The Tunnel



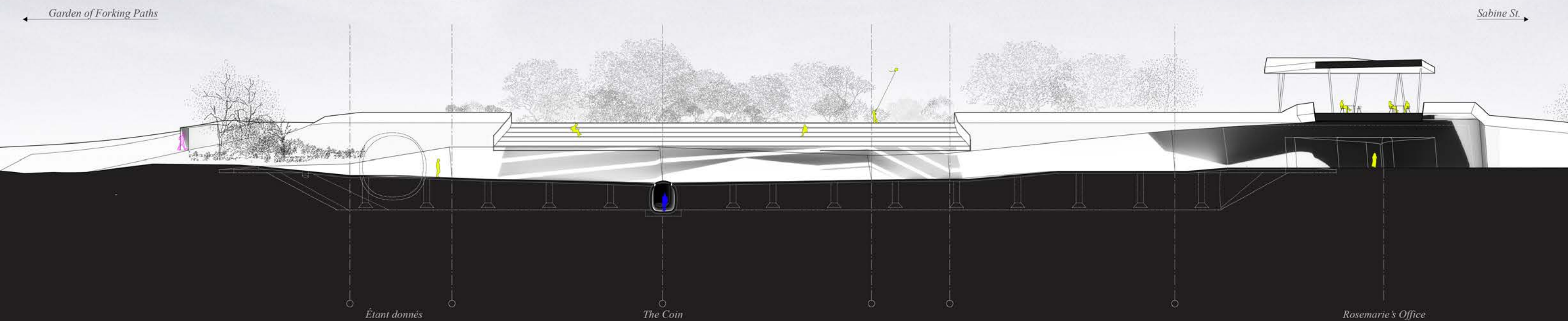
The Bridge



Intersections

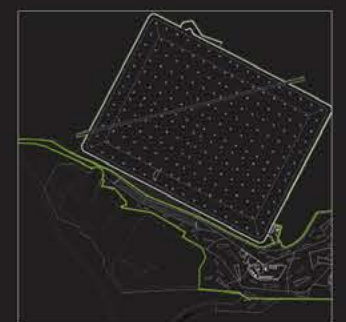


The Channel



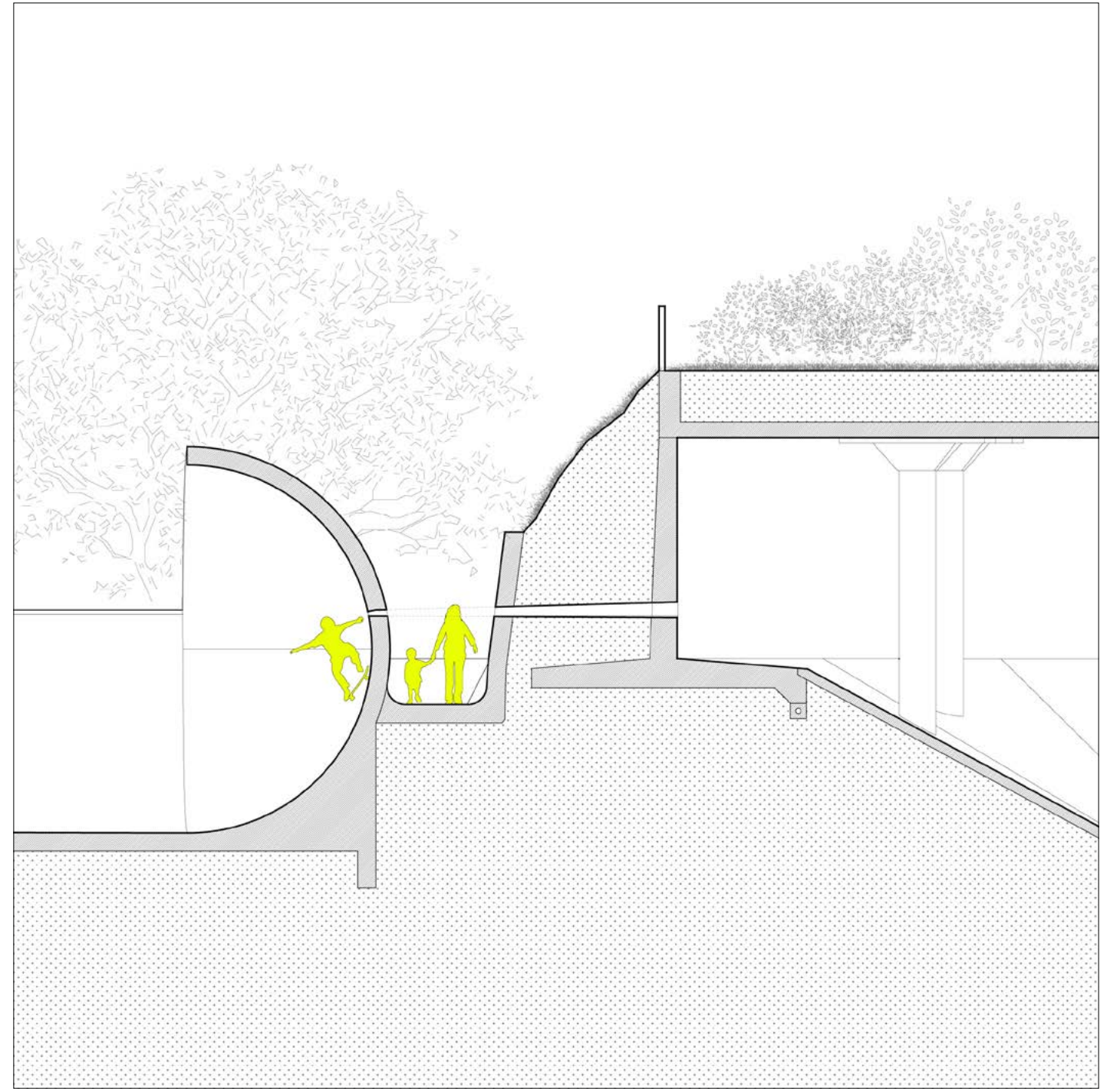
The Channel is a restructuring of the entry sequence leading to the skatepark and cistern. A series of elements are introduced, such as a promenade that provides access to the top of the cistern and a bike rental and public restrooms, which create new trajectories.

The section reaches to connect Sabine St. with The Garden of Forking Paths. Through the trajectory, the cistern, the tunnel and the skatepark are revealed in a series of meaningful points of contact.



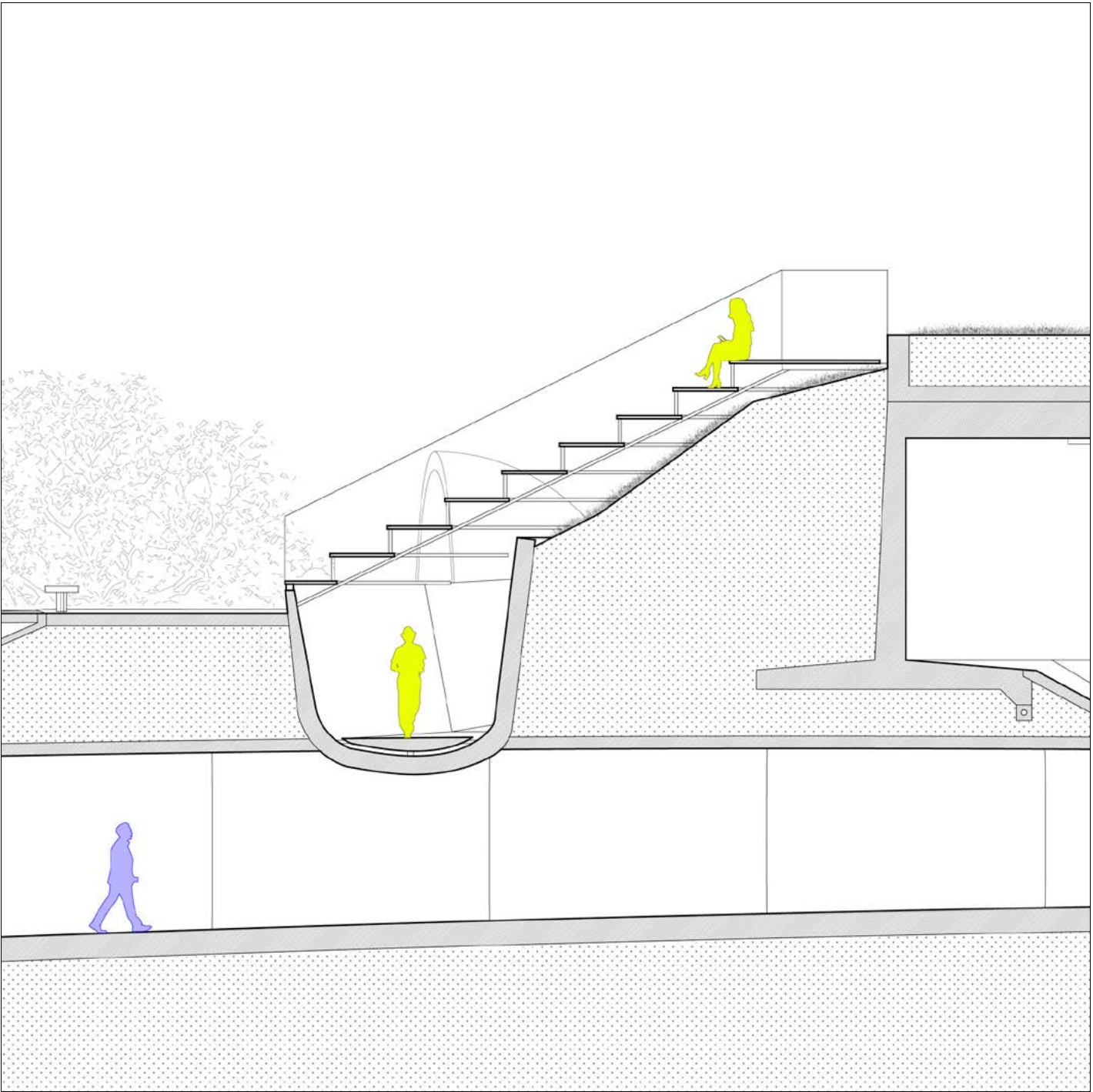


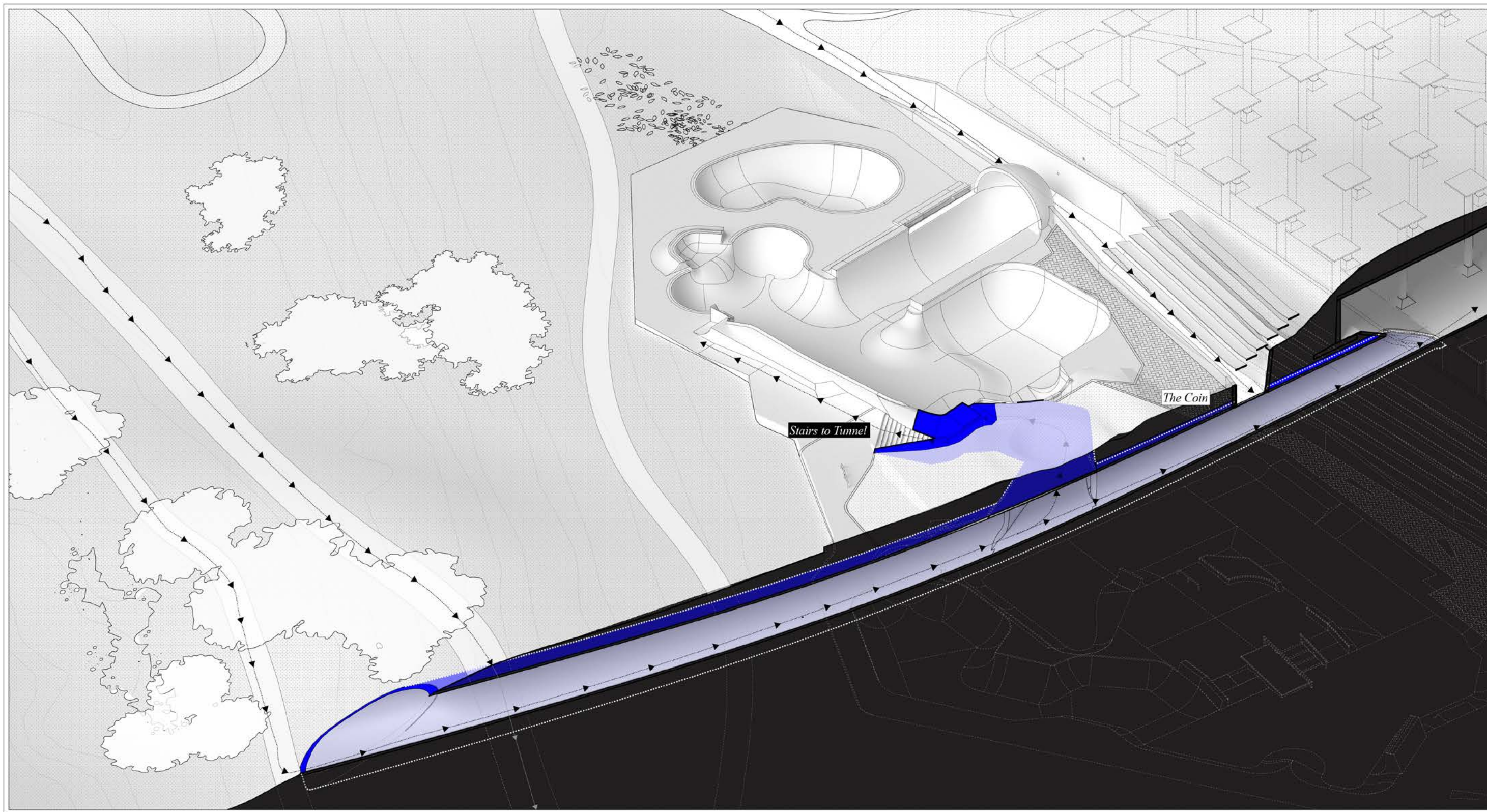
Étant donnés





The Coin



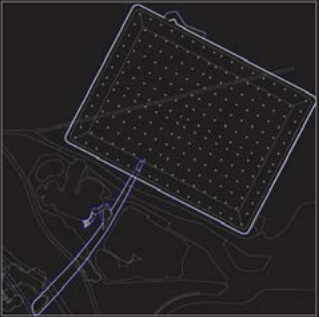


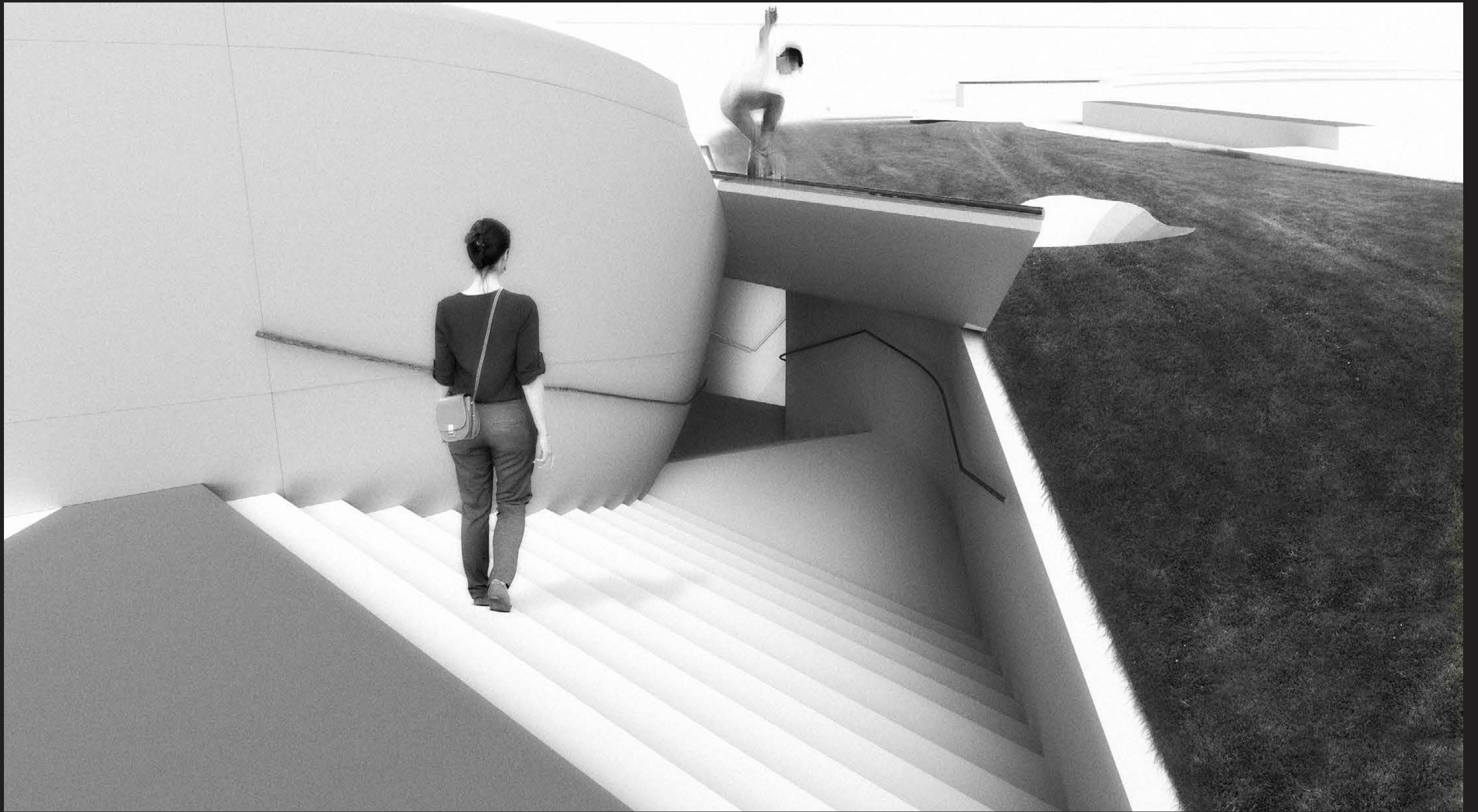
The Tunnel



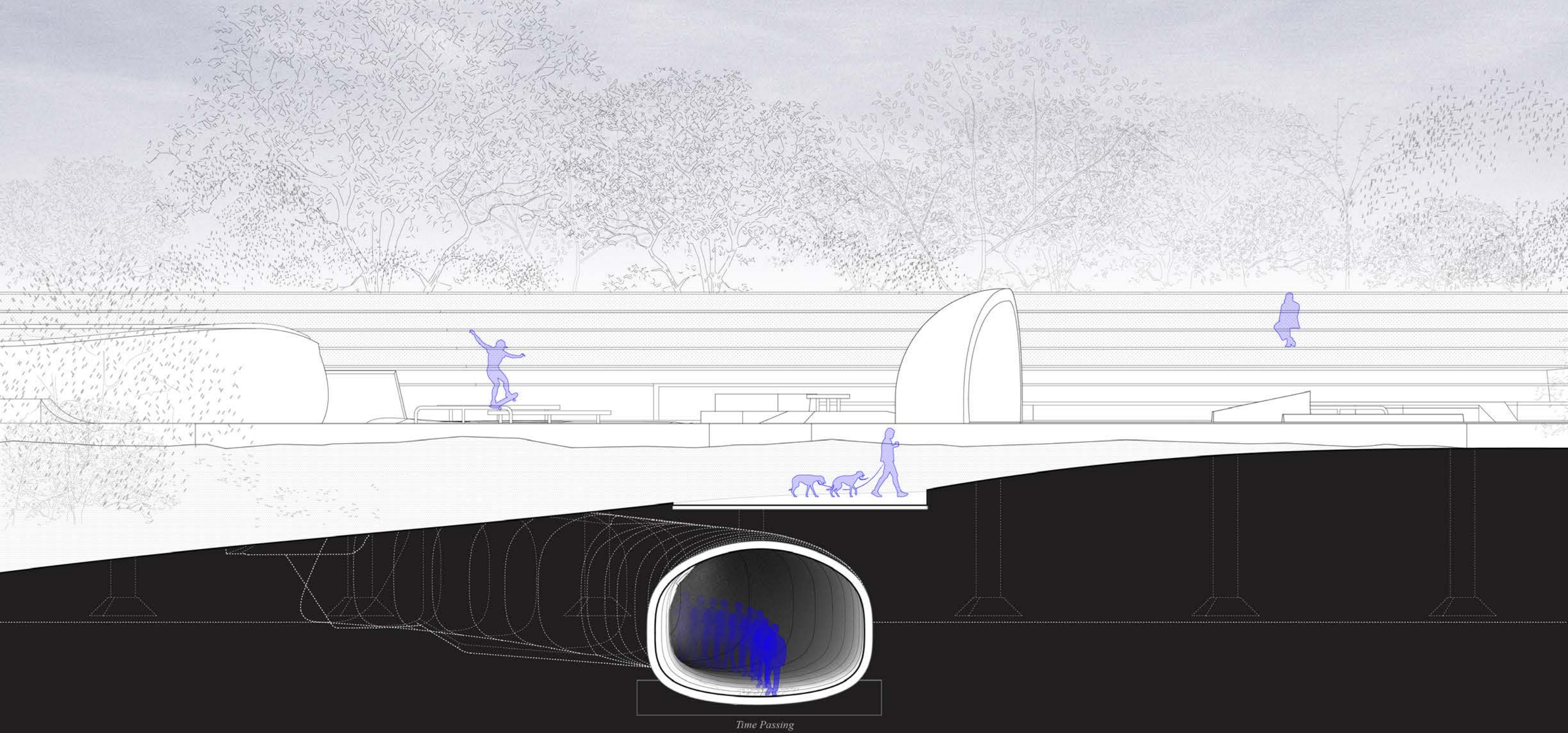
The Tunnel is an infrastructural element that allows water to flow into the cistern during flooding events. In doing so, the position of the cistern as a structure of utility is reestablished. Once water is drained from the cistern, The Tunnel serves as a pedestrian

route that connects the skatepark, the Buffalo Bayou trails and the cistern together.



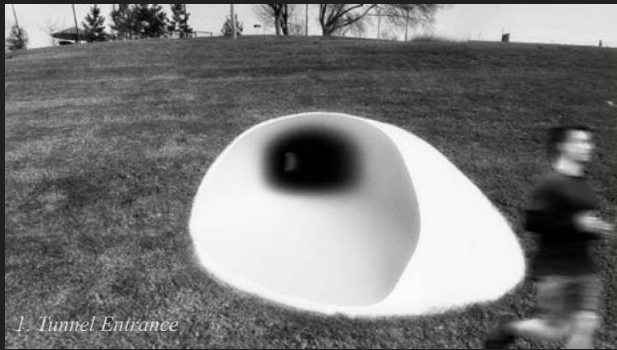


Curious Pedestrian Meets Skateboarder



The cross section of The Tunnel was informed by many factors. A flat walking surface was necessary to ease pedestrian circulation. The rounding of the corners allows for a better flow of water during flooding events. This also enables a better distribution of the load

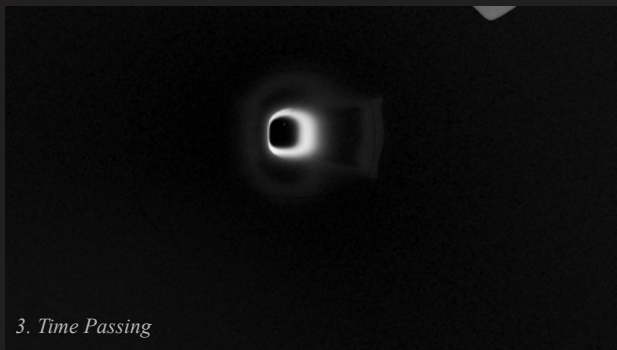
exerted by the ground. Straight corners, on the other hand, would direct pressure to the edges of the tunnel, requiring additional reinforcement in these areas.



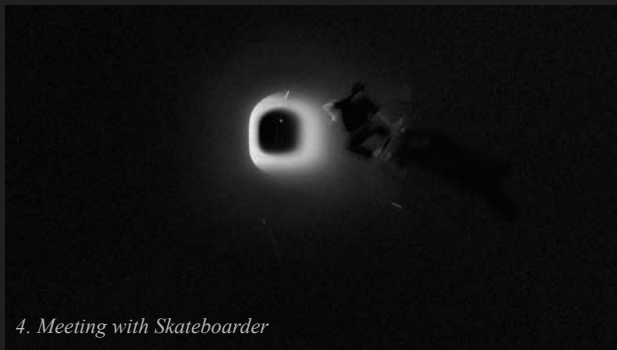
1. Tunnel Entrance



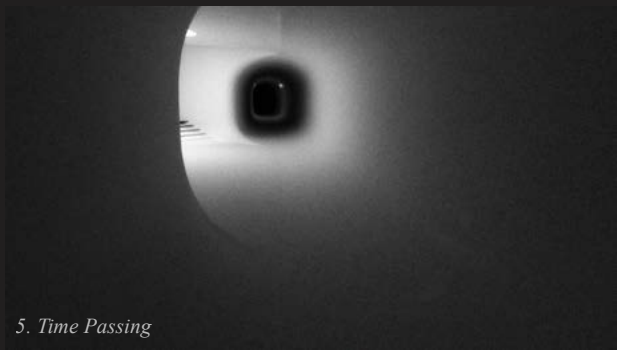
2. Time Passing



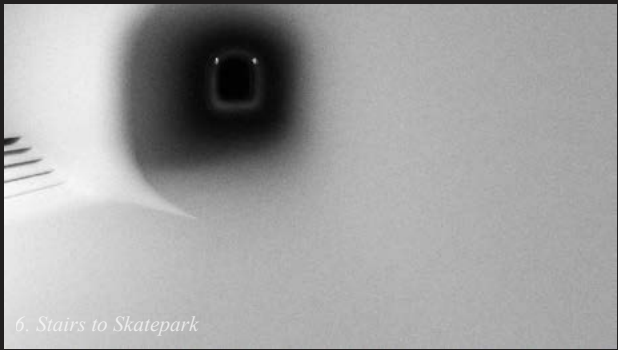
3. Time Passing



4. Meeting with Skateboarder



5. Time Passing



6. Stairs to Skatepark



7. The Coin



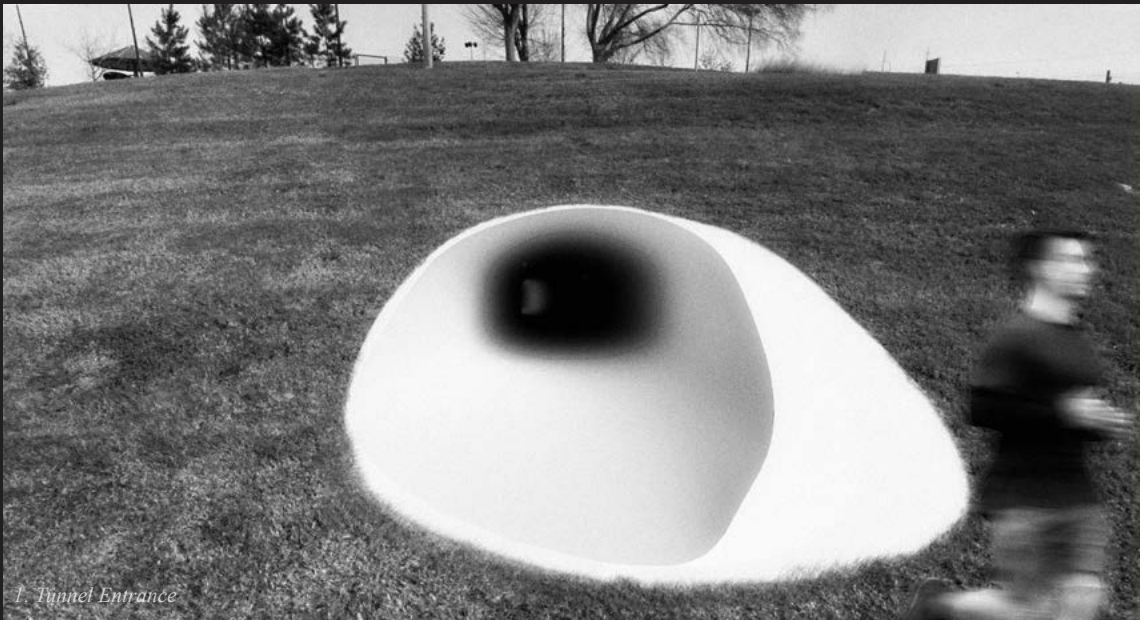
8. Time Passing



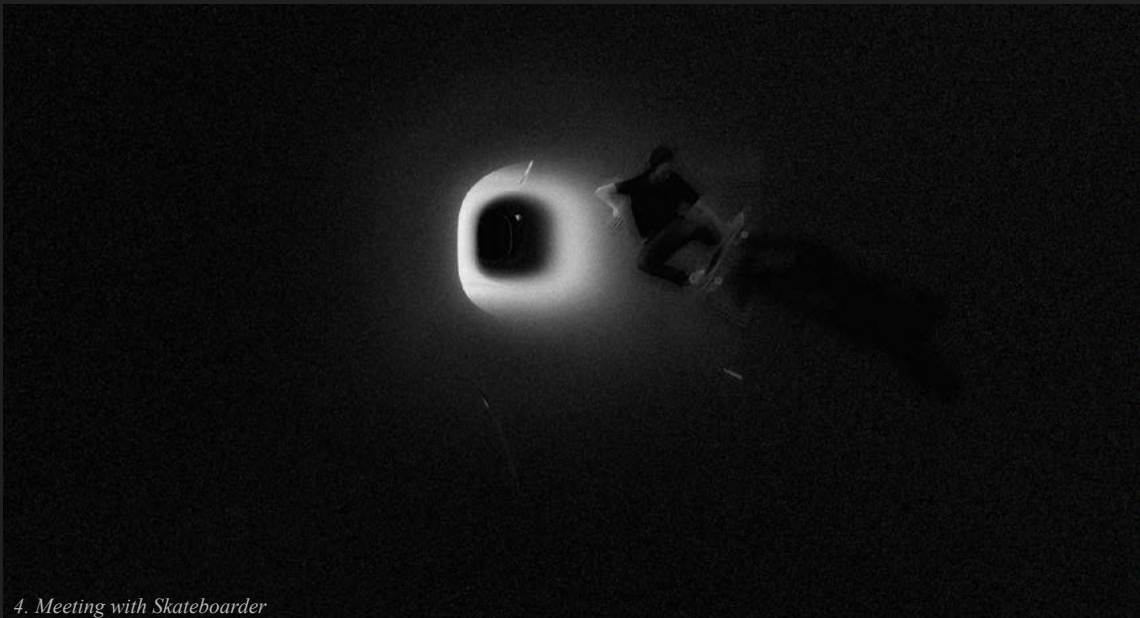
9. Time Passing



10. Rosemarie's Invitation



1. Tunnel Entrance



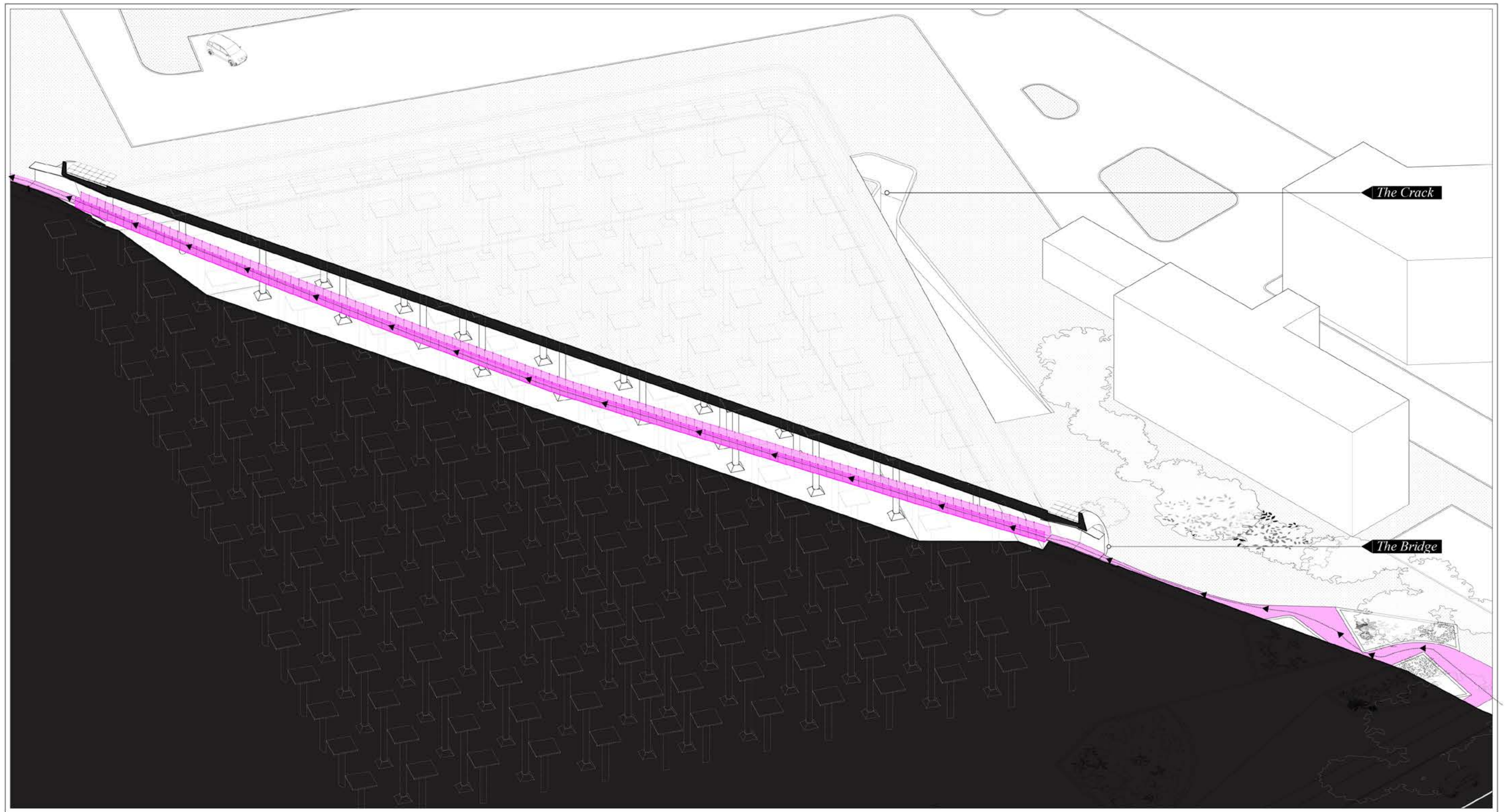
4. Meeting with Skateboarder



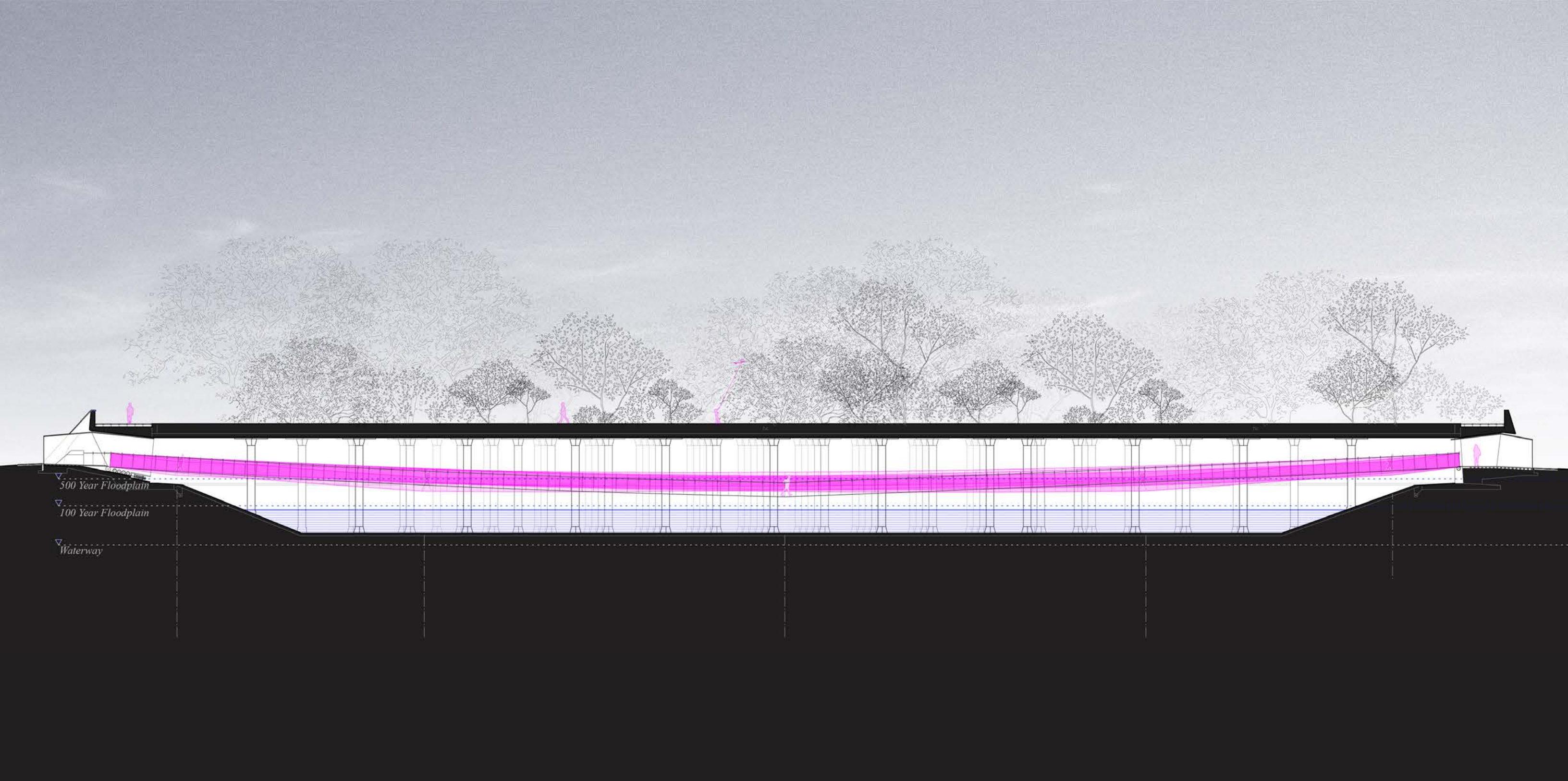
7. The Coin



Rosemarie's Invitation

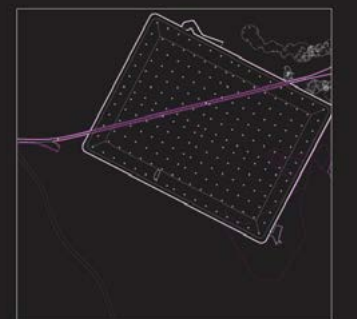


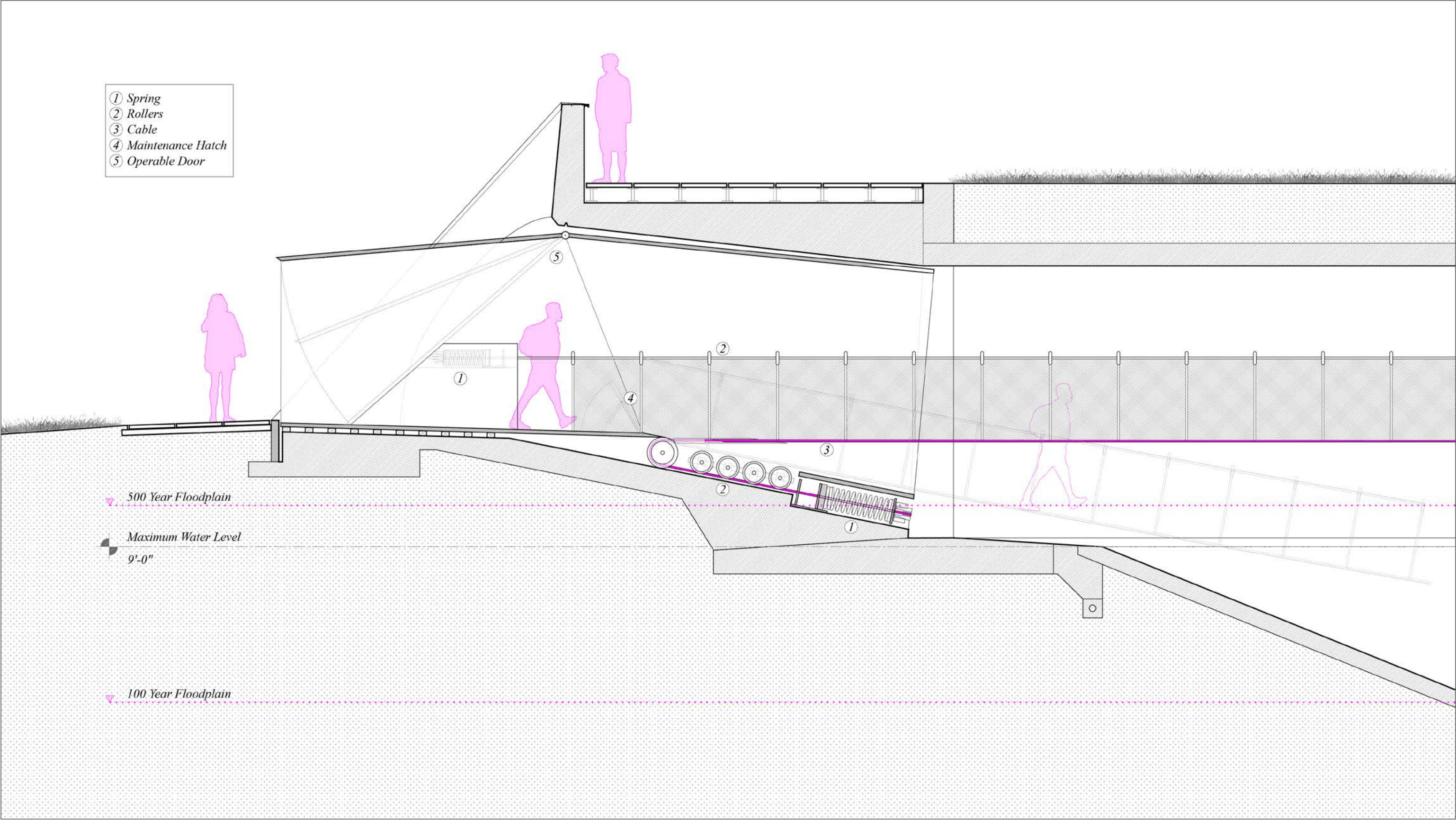
The Bridge

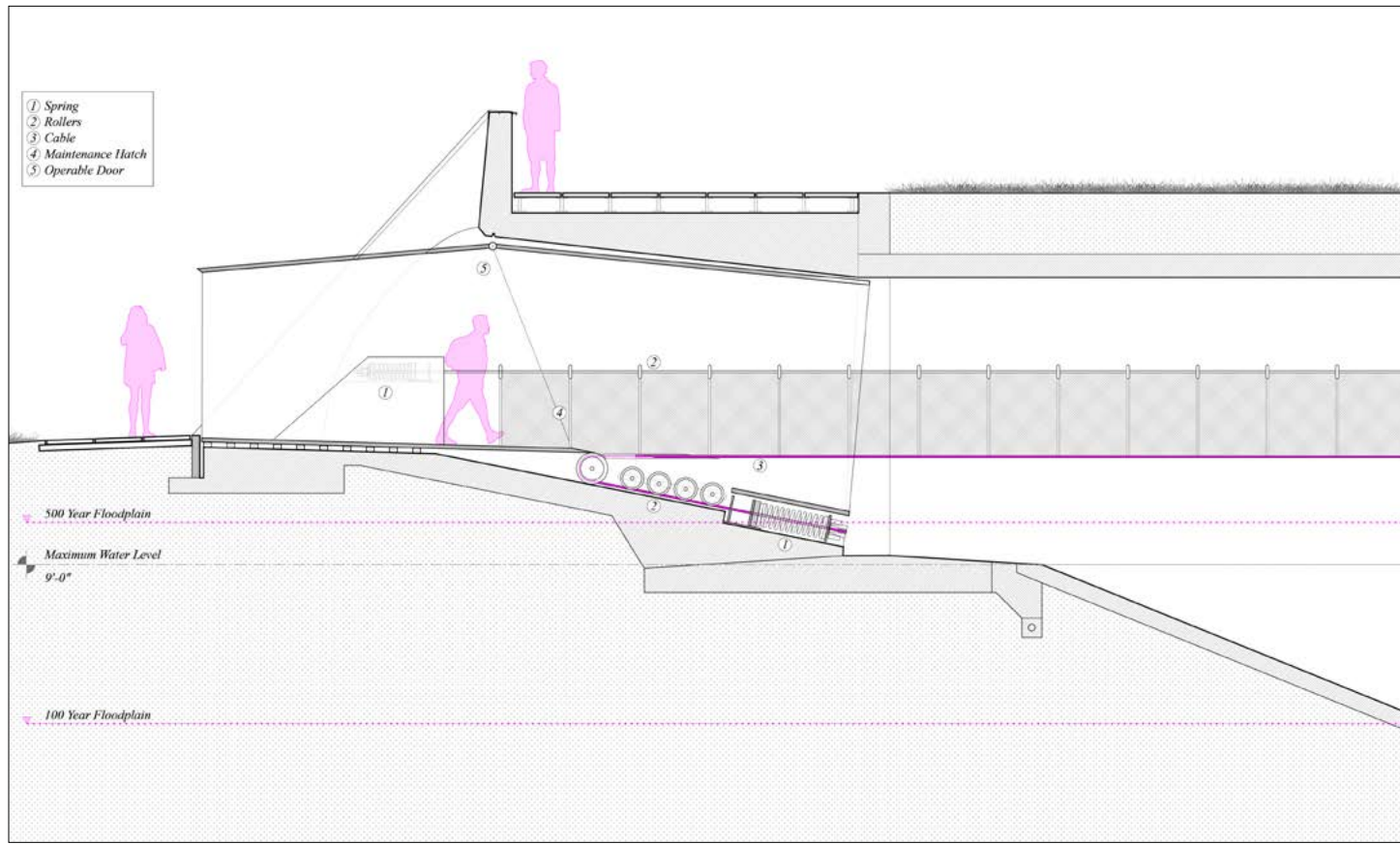


The Bridge reaches diagonally to connect the pedestrian path on Sabine Street and culminates on The Garden of Forking Paths. It crosses the cistern diagonally, from its northeastern corner to its southwestern corner. The connection is made through a

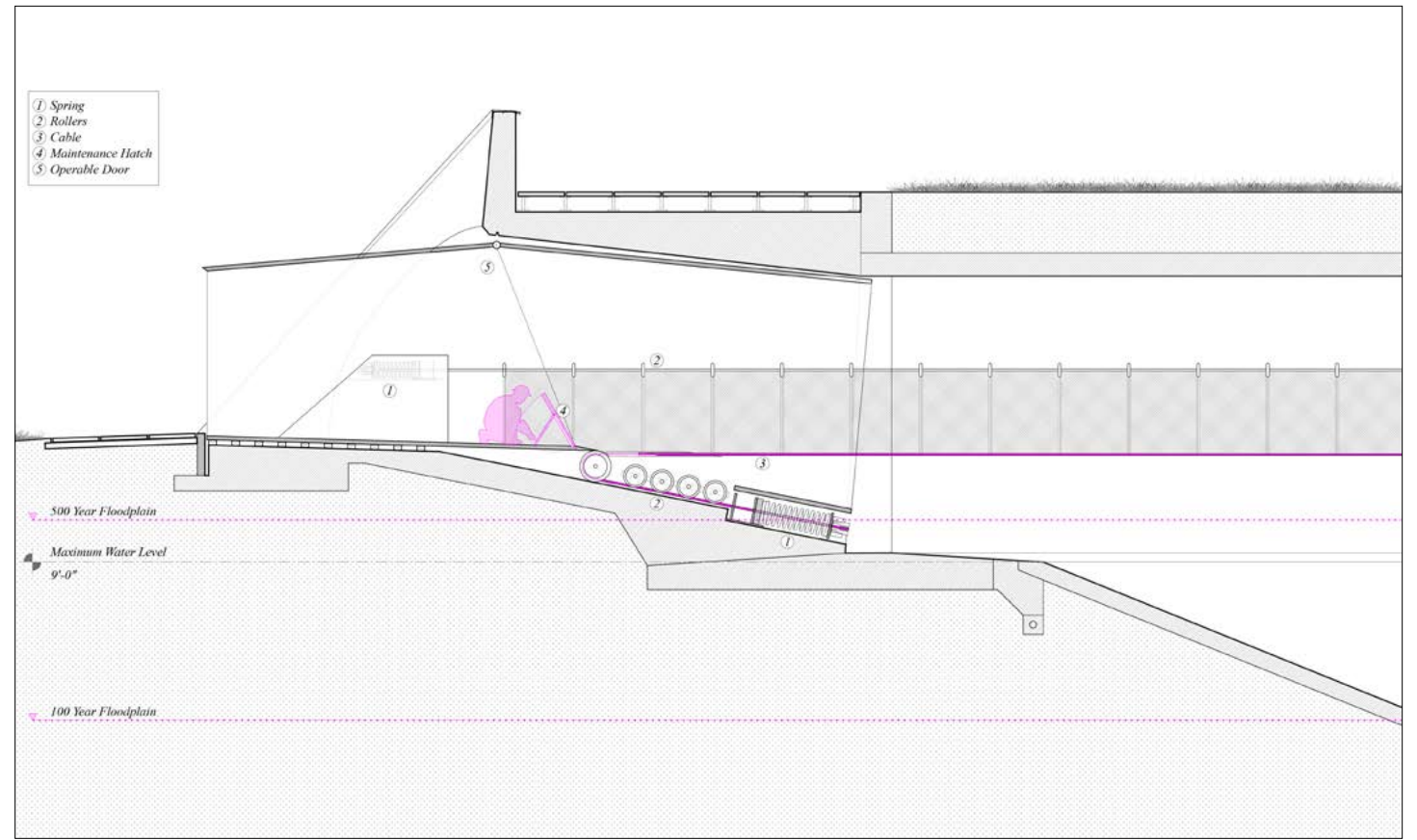
bridge that reacts to the load applied by its occupants. When a load is applied, the bridge is deflected and is brought closer to the level of the water. In doing so, The Bridge creates a moment of reflection regarding Houston's flooding conditions.



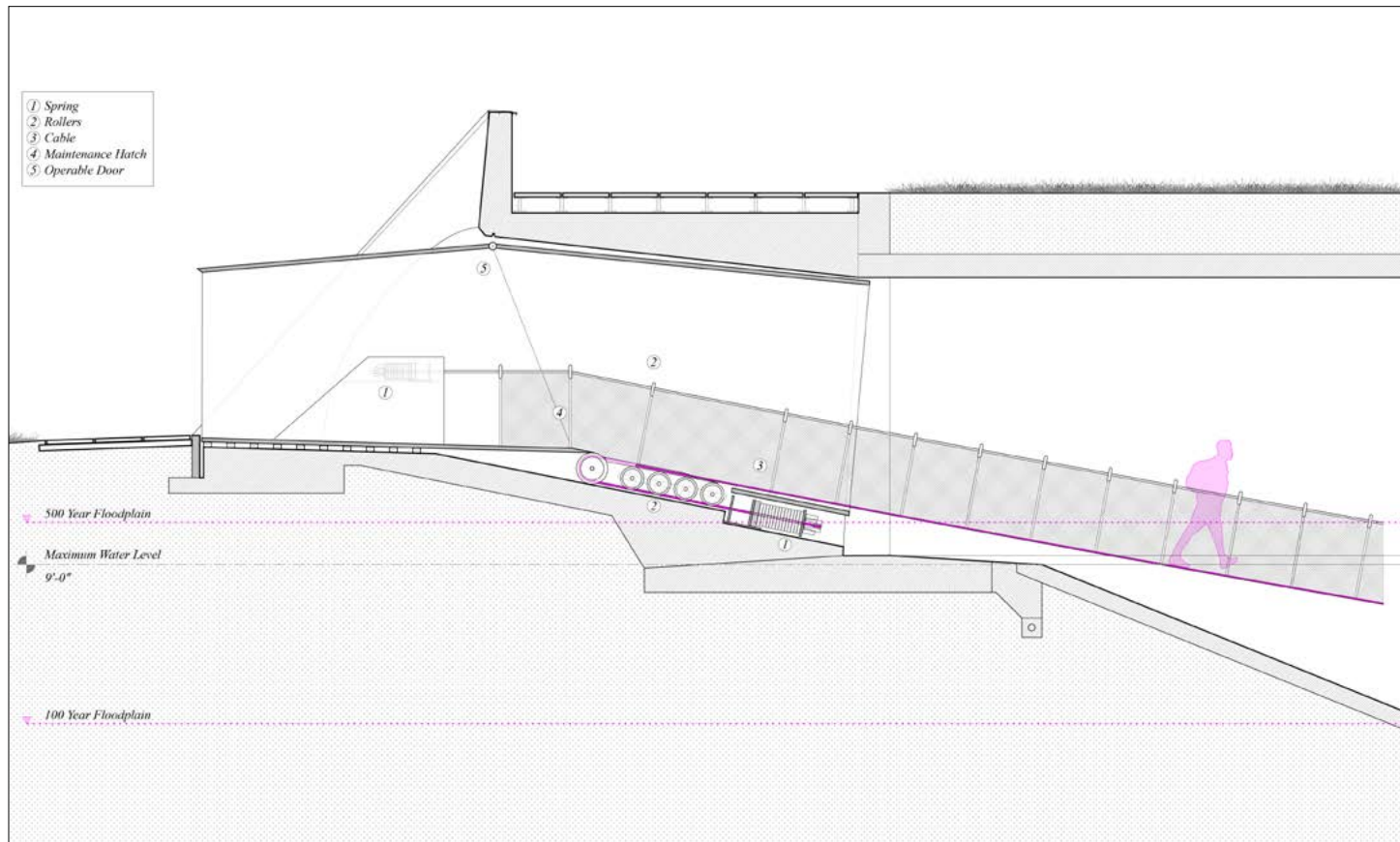




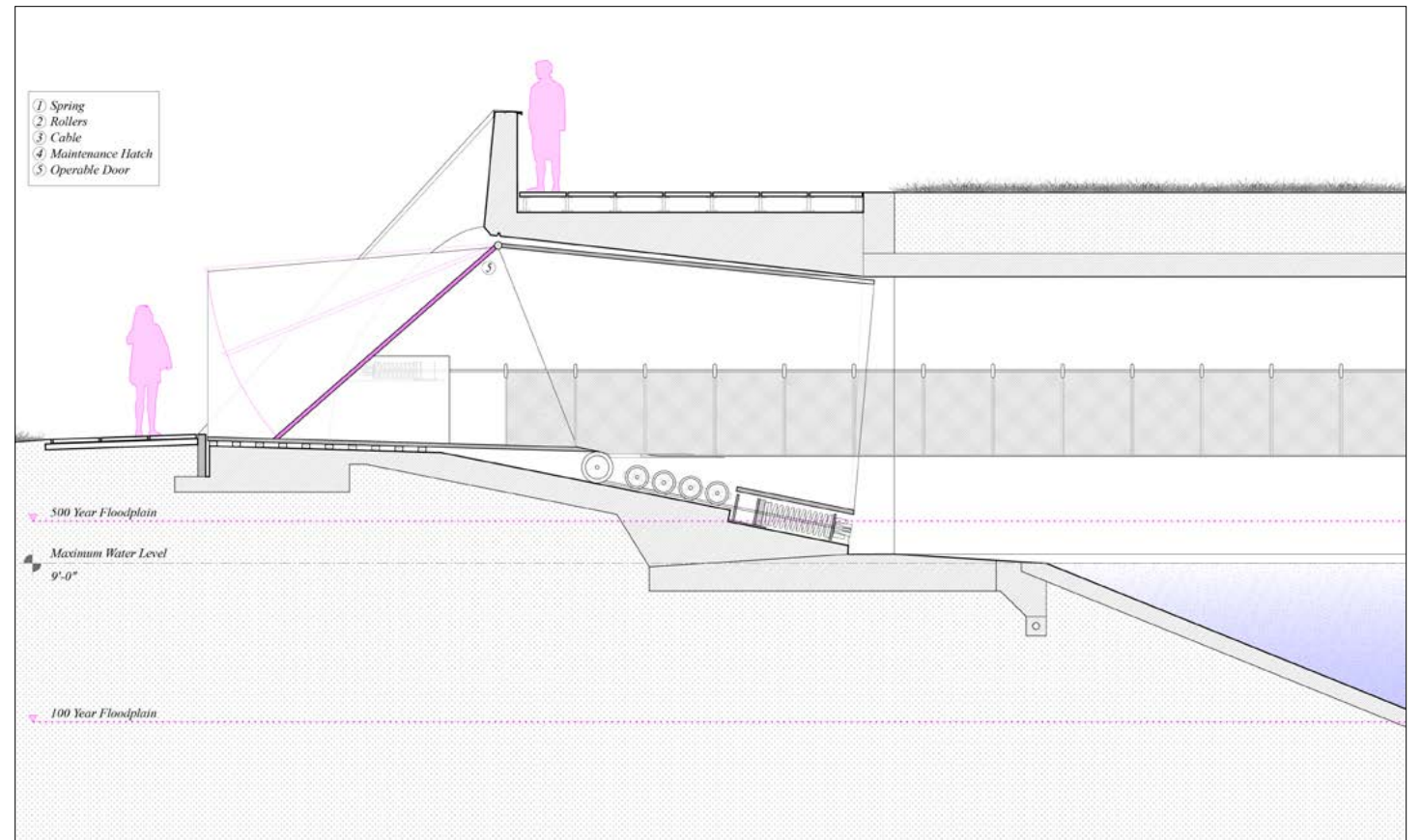
Relaxed



Maintenance



Deflected
122



Flooding Event







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