Influence of Technology on Atmosphere and Experience of Built Spaces

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Technological influence on Atmosphere and Experience of Built Spaces

ABSTRACT AND PAPER



Abstract

Technological advancements and its inexorable penetration in our ubiquitous life are constantly affecting our everyday experiences and behavioral patterns. Technology has a profound impact on nearly all aspects of contemporary social infrastructure. Its far-reaching effects shape architectural design and space-making. The incorporation of technological factors into contemporary architecture has redefined the meaning of designed space. While technology can be destructive, it also can provide newer experience and new modes of perception. It is, therefore, necessary to understand the process and extent of technological effect, both on the designed atmosphere and on the process of perceiving that atmosphere. Additionally, having a deeper understanding of the elements that technology manipulates to influence experience and ambiance of space will help determine the extent of the influence and its practical use in space designing of the contemporary world.

Keywords: Ambience, Atmosphere, Experience, Digital Media, Technology.

Introduction

In the film 'The Matrix', released in 1999, the Wachowski siblings brought in a concept of a world of virtual illusion generated by computer simulation that is fed into the human brain directly, so that people would believe the simulated world to be a real while, in reality, they remain only in captivity of the machines. The CGI presented the audience an unreal reality in such an authentic way that immediately engaged them in that reality as well as confounded them about the definition of reality. Today, going beyond TV-screens, numerous technologies are changing our experience of surroundings in a way that was unimaginable before.

This paper will deal with atmospheric quality, human perception of surroundings, and technological effect. As technology, this investigation only takes account of different technology that directly affect human perception and experience of the surrounding atmosphere. It can be called media technology, which includes digital and virtual media, kinetic mechanisms, or any other interactive media.

Media technology provides us a unique situation and novel experience and perception. With endless possibilities, digital media can change the way of perceiving and generate new sensory and physical experiences. In today's world, reality and illusion coexist in our experience, often not bound by the natural elements or the physical definition of space. This hybridity is part of the new reality. On the other hand, overuse of visual-centric digital media, ubiquitous portable devices, and captivating virtual content often tries to captivate us in solipsistic virtuality, disconnecting from the physical surroundings. Plus, the sheer speed of modern life is disengaging our body and mind from the surroundings, leaving them disconnected and isolated from each other. We are losing touch with not only the people around us but also the atmosphere that surrounds us. This might cause not only sensory deprivation but a lack of empathy for the natural surroundings. Thus it is necessary to reconnect people to the physical surrounding, especially in distracting digital era. And that is possible by incorporating newer experiences rather than denying the effect of media technology.

By investigating technological influences on atmosphere and perception, the thesis aims to explore how a hybrid atmosphere can create a more meaningful and engaging experience? And how to achieve a balance between natural and artificial, digital, and non-digital in a hybrid atmosphere?

Scope/aim

Juhani Pallasmaa, in his book '*The Eyes of the Skin,*' suggests that the dominance of the visual world distances us from other senses (Pallasmaa,1996, pg 19-23). He quotes anthropologist Ashley Montagu and says, "We in the Western world are beginning to discover our neglected senses. This growing awareness represents something of an overdue insurgency against the painful deprivation or sensory experience we have suffered in our technologized world." (Pallasmaa, 1996, pg 37). Captivating visual media suppresses other senses and disconnects the body from the surrounding. Technology has made us faster by providing us with advanced high-speed transportation and mass production. Modern spaces of capitalistic economy promote rapidity. Rapid pace causes disengagement and alienation. The mind or body cannot comprehend things without engaging for a natural amount of time. As a result, in today's technology-driven modern lifestyle, we do not get the time to perceive our atmosphere correctly. As architecture deals directly with experience, the influence of media technology is important as an architectural study. The subtlety of architectural experience of space often collides with gaudy digital media.

As technology development is an undeniable part of our lives, it is not possible to ignore it from our perceptual experience. It is not necessary either. It is not the technology to blame, rather than the use and intention, which causes the problem of disconnection. Technology has always been providing newer modes of perception. It offers such experience, which was unperceivable before. This potential can help to make an even better connection with the surrounding and unique experiences. Gernot Böhme thinks with mechanical labor, we now have had returned our body. He points out transportation did not reduce with the advent of telecommunication. While apparently telephone or video

conference make physical presence functionally irrelevant, people rather crave for more bodily existence. Bohme used the expansion of tourism with advanced transportation as an example(Böhme,2017,pg 82). The solution would lie withing accepting technology as a part of the experience and find a balance between natural and artificial modes to create a contemporary experiential world. To investigate the ways of balance is the aim of this thesis.

Methodology

This paper first investigates the nature or surrounding space and how people perceive it. Through a theoretical framework, it will try to define an atmosphere as a holistic mood separate from mere spatial quality. Also, this essay will discuss components of atmosphere and translation to a perceiving architecture. Then, by comparing case studies, it will investigate the effect of various technology on perception and how the effect shifts from before.

1. Literature review: Following Merleau-ponty's works, this paper will first discuss how people perceive and have experience. It will discuss the relationship between mental and bodily perception. Here the term 'atmosphere' is different from mere weather conditions and describes a holistic mood of an environment or situation. Theoretical works by Gernot Böhme, Tonino Griffero, and Peter Zumthor are discussed. Further, the paper will discuss the phenomenology of technology based on Stephane Vial's argument.

2. Case studies: The literature review will lead to an investigation of the related works of several architects and artists. The studies will help to clarify the theoretical concepts of the atmosphere and to analyze user perception. Design works of Peter Zumthor and Carlo Scarpa are discussed as traditional examples of Merleau-Ponty's idea of engaging the mind and the body with the atmosphere. Japanese digital media art group, teamLab, and James Turrell's works are discussed to understand the technological influence of space design. Through case studies, the essay will investigate how media technology changes the nature of perception.

Definitions and characteristics

Experience happens through interaction or engagement between perceiver and his surrounding space. How we perceive and what we perceive is important to assess the experience.

Our experience depends on our perception. In his book Phenomenology of Perception Merleau-Ponty differentiates perception from experience. For him, we live in the world as a perceptual field. We cannot separate ourselves from the perception of the world. Perception acts as a background of conscious experience. Conscious experience cannot be reduced to the body or mind but requires both. We use our senses to sense our surroundings and analyze them with the mind. Moreover, our body has a separate consciousness and is a different medium of perception. Perception meaningful whole requires both psychological and physiological aspects. Furthermore, we cannot separate any specific senses or bodily reactions from experience. Any particular sense is just an extension of other sensory experiences. Like Pallasmaa writes, touch as unconscious of vision.(Pallasmaa,2005,pg 10). All experiences are cross-sensory. Pallasmaa argues against ocular centrism of present media-induced world, neglected other senses and bodies with dominating visual imagery. This domination of one sense creates an imbalance. The experience remains incomplete and unreal. People lose their grasp on their senses and cannot position their physical body in the experience. So, it is essential to create space for a meaningful, engaging experience, which is phenomenologically rich for psychological and physiological counterparts.

The meaningful surrounding, that we perceive can be called an atmosphere. Extending from Merleau-Ponty’s idea of atmosphere Tonino Griffero in his book, titled Atmospheres: Aesthetics of Emotional Spaces, defines the atmosphere as an all-encompassing omnipresent field of meanings. He writes, ‘’Atmospheric perception is, therefore, a holistic and emotional being-in-the-world” (Griffero, 2016, pg 15). For Griffero ‘the

atmosphere shapes and defines a situation, providing the context and frame for how we respond to that situation' (Trigg, 2016). He suggests atmosphere as having bridge-qualities, which is founded on corporeal communication. It connects perceiver and perceived and extends beyond them into the inter-subjective sphere. "Atmospheric affordances, as Griffero suggests, entail an evaluative aspect that extends beyond the pairing between a perceiver and a perceived and spreads into the inter-subjective sphere more broadly" (Trigg, 2016). For him consists of different modalities, the atmosphere is an all-inclusive result of all of them. It is impossible to rationalize what we perceive to anything specific. Gernot Böhme writes, "Atmospheres shape a person's being-in-the-world as a whole: the relationships to environments, to other people, to things, and to works of art. That is why atmospheres are extraordinarily significant for the theory and practice of architecture." (Böhme, 1993, p.70)

Architect theorists discuss the components of creating a meaningful atmosphere. Peter Zumthor tried to identify the objective elements of a designed atmosphere. In his book Atmospheres, he discusses the body of architecture, materiality, sound, light, temperature, movement in space, tension between interior and exterior, intimacy, surrounding objects, and form, as the constituents of the designed atmosphere (Zumthor, 2003). The interplay of these elements allows the architecture to bring the atmospheric mood to the objective world.

To design in physical world understanding of these qualities or elements is necessary. However, one needs to be careful to deal with these elements, as none of them can take as a definite structure. Like mentioned before atmosphere is a holistic phenomenon. Instead Bohme compares atmosphere as a bodiless space which still can be felt. He emphasizes the presence of body in atmospheric space to feel it. He discusses three broader generator of a particular mood. 'Movement impressions,' goes beyond geometric structures and includes spatial qualities like volume, load, tightness or vastness of space. Next synesthesia, a sensory quality from multiple sensory fields. For example, warm light, cold blue color etc. The final generator is social character, which defines mood in different social context. For example feeling of coziness is not same in every context. (Böhme, 2017, pg 92-94)

Stéphane vial refers to the phenomenology of technology as an approach to how devices as phenomena appear to us or influence our perception. Referencing Bachalard's term 'Phenomenotechnique,' he argues technological devices have the capability to generate 'phenomenality' or what we perceive as real. (Vial, 2018, pg 3-4) For example, the atomic nucleus would be only a hypothesis without technological devices to prove it. Through the devices it became real. Thus the technological device creates an unprecedented phenomena. Vial mentions Bachelards statements, "A measuring instrument always ends up as a theory; one must understand that the microscope prolongs the mind, and not the eye" (Bachelard, 1938, p. 242) "The phenomenon is sorted, filtered, purified, cast in the instruments' mould, produced in the instruments' terms. Yet, instruments are no more than materialized theories, from which phenomena emerge bearing the theoretical hallmark. True scientific phenomenology is therefore essentially Phenomenotechnique.'' (Bachelard, 1934, p. 16-17). Going further Stephane states that similarly digital devices modifies our perceptual habits and creates a new phenomenal soap bubble. (Vial, 2018, pg 10-11). Different eras have different bubbles within which people perceive. So, he argued, as we gradually learned to perceive digital components and their meanings, it is a part of our reality. So phenomenal reality of this era is essentially hybrid, made up of virtual and real, digital and nondigital, natural and artificial.

To summaries, a meaningful space engages our senses by providing a balanced cross-sensory experience. Furthermore, it helps our body to a position in it as a preceptory medium. The qualities of a meaningful space or the mood they create can be called an atmosphere. The atmospheric perception and the way of perceiving are inherently multi-dimensional and ambiguous. They are difficult to define with specific structures.

Yet it can be transformed through abstract spatial, sensory and social qualities. We

perceive spatial quality (movement impressions) by positioning our body in the space. Our body is the measurement of the space. Also through our senses of sight, smell, touch, taste or hearing, we feel different sensory qualities of the space. But overlapping of these senses is essential for a holistic atmosphere or experience of the space. Social characteristics influence our thoughts and physical reaction. As a result considering specific social and cultural context is essential for creation of a engaging atmosphere. Finally as Zumthor mentions the most important aspect of architect is how people feel in it, in the end all the atmospheric elements interact with body and mind to create a singular engagement. With the introduction of digital, our perception was affected in new ways. The atmosphere of cyberspace has different qualities than the one existing in physical world. It is virtual , Unstable reproducible, destructible, programmable, to name a few.(Vial, 2018, pg 11-14) While digital experience holds lots of potential within technical devices, as an architectural thesis, this paper focuses on the relation of digital and architectural components for a hybrid atmosphere. This thesis aims to use these digital qualities to help architecture to enhance the perception of physical world and avoid the solely device-oriented digital experience.

Case studies

Designed space is dependent on the natural constituents of the atmosphere. The elements of the atmosphere spill their 'aura' into space, and the body reacts to them (Bohme, 2017). This 'aura' of surrounding objects overlaps and mixes to create the whole atmosphere. That is how the presence of an atmosphere is felt. The more diverse elements an atmosphere contains, the more detailed and affecting it becomes. In nature, the details are countless, and the variety of combinations is infinite. That is why it is so easy to immerse in the ambiance of a forest. In a forest, our primal bodily senses are all spontaneously activated. Our body becomes fully conscious. Color, texture, sound, and terrain altogether immerse the mind in nature.

While the atmosphere is ever-present, by manipulating the surrounding elements, architecture can transform the quality of the atmosphere to generate the desired ambiance. Successful architecture, with its spatial ambiance, engages the body and mind and gives some experiential message. The language may differ according to the intention of the architects and their perceptual journey. Architect Glenn Murcutt, with his minimalist and straightforward architecture, creates spaces to comprehend the surrounding ambiance, rather than creating any new ambiance of the designed space. Through 'touching the ground lightly', his works leave the natural surroundings undisturbed and enhance the notion of infinite vastness and its sublime ambiance. In contrast, Louis I Kahn's carefully planned spaces create the perception of otherworldliness with the scale, weight, materiality, and, most of all, interplay of light and shadow within the architecture itself. By secluding from the surroundings, his architecture evokes spirituality with the help of timeless elements such as lights and shadows, massive volume, and enormous scale. Interestingly, both architects successfully displayed a similar feeling using very different techniques. Similarly, other phenomenologist architects have created successful, engaging atmosphere with versatile approaches.

Engagement of the mind through senses



Fig. 1. Therme Vals by Peter Zumthor. Source: Archdaily

Peter Zumthor in his Therme Vals spa (Figure 1) successfully created a rich phenomenological experience. The building is situated on a natural hot stream. The design becomes successful for its minimum intervention to capture most of the surrounding atmosphere. The building

becomes a spontaneous extension of the surrounding natural setup through its local stone walls and the incorporation of the exiting water as a constituting element. For minimum, from the building, the existing natural atmosphere directly engages the senses and thus creates a rich experience.

An excellent example of using the artificial element to create an immersive atmosphere are the works of James Turrell. His famous light installations give the feeling of a bodiless, borderless space. In Turrell's words, "My work has no object, no image, and no focus.… What is important to me is to create an experience of wordless thought". With the exploration and use of light, Turrell creates spaces that are intended to slow down the audience. In his works, the meaning is abstract, but the presence of the meaning is quite clear. It engages people and forces them to slow down in order to explore their inner feeling consciously. One of his notable techniques is using unstructured, uniform light over a volume, which creates an effect of hallucination, called the 'Ganzfeld effect'. He uses high-intensity projector and contrasting LED lights in a completely enclosed space to create a controlled atmosphere (Figure 2).



Fig. 2. Roden Crater by James Turrell. Source: (http://rodencrater.com/, 2019)

Using technology to manipulate human mood is best used in the set design of live performances. As the stage is only a mere built space, it is bound by its material, construction, and detail. The need for creating a different mood with the narrative of the stage performance to engage the audience is fulfilled with the help of artificial elements, such as props, lights, background sound, or fog. The ambiance of the set influences the total ambiance of the theater hall.



Fig. 3. teamLab Borderless. Source: *(https://borderless.teamlab.art/ , 2018)*

A recent example of the digital atmosphere is the works of 'teamLab', a Japanese digital media art group. They use virtual 360 degrees animated projection mapping to create an interactive immersive atmosphere. They created the first digital museum 'teamLab Borderless', in Tokyo, Japan, where they filled the 10000 square meter space with digital projections, and interactive elements to create a surreal environment (Figure 3). The works extensively explore human perceptions and manipulate images with the use of technology. For example, in their exhibitions they use vibrant light projections in a dark room in a way that the perception of scale changes with the projected imagery, and are no longer dependent on the physical shape of the room. When in the art space, the colorful imagery and sound guide the senses. The moving images create a surreal feeling of moving surroundings when the body itself is still. This type of use of technology enables us to experience a new kind of atmosphere which was nonexistent before. Moreover, it frees the experience from the existing boundaries of built space, creating a possibility of endless atmospheric conditions. Nowadays projection mapping is used in various sound and light shows, where large scale projections typically uses landmark architecture as canvas and project dynamic animations. This engages the audience to an otherwise static façade in various dimensions.

Engagement of Body

Through his mysterious mechanisms and details, Carlo Scarpa explored the idea of the engaging body in space. In his architecture, the body movement merges with the architectural elements, such as the travertine door in Fondazione Querini Stampalia evokes questions and confusion in mind. Eventually, one has to engage his body with the door to solve the mystery. The hidden mechanism waits to be discovered through the touch on texture, the push to feel the weight that expresses gravity until it opens to lead to a new space (Figure 4).



Fig. 4. Hidden door in Fondazione Querini Stampalia. Source: (The Experience in Architecture, 2016)

Another example from Carlo Scarpa of bodily engagement to the designed space is his Olivetti Showroom Stair. The body becomes conscious of the staircase through different types of treads (Figure 5), which leads to the details of the stair, which expresses the honesty of construction. The engagement of the body with space reaches a different level with the use of an interactive environment.

The use of motion trackers, sensors, and various mechanisms turn a spatial atmosphere into a more engaging one. teamLab, in their 'Forest of Life and Future Park', provides an interactive environment, where the environment interacts with the body movement and activity pattern (Figure 5.6). Moving through the environment or touching any object results in a change of light and color, with sound and movement of the objects affecting the mood of the total space. One user's interaction affects all the other user's perceptions. This kind of interactive design enables more control in bodily engaging experience.

Apart from the illusion of animation, intricate technologies are embedded in homeostatic façades that enable them to react to temperature change, such as the mechanically moving shading devices that enable buildings like the Al Bahar tower or 'Windswept' façade of Randall Museum to interact with the surrounding atmospheric qualities such as light, wind, and temperature.



Fig. 5. Hyposurface in BIO 2007 exhibition in Boston. Source: (Mark Goulthorpe, 2016)

This changes the qualities of the exterior and the interior spatial ambiance with time and function. Interactive kinetic facades, such as 'Hyposurface' by Deco, that interact with the passersby go beyond visual senses and allow the engagement of the 'body' with the surface (Figure 5.8). Thus, architecture itself becomes the more dynamic influencer of the atmosphere.

Immersive virtual experience devices, like Oculus Rift, allows a real-time simulated experience which moves like the real world with the movement of the body. In this way, it generates a realistic feeling of being in the simulated world. Users can go in any direction and can even interact with objects with their body parts. This kind of simulated environment previously was used for vehicle simulation during training sessions for practicing pilots, which moves with the navigational commands and shows a virtual simulation of the real world. The availability of technology now

makes it a lot more common and flexible. It is a tool for the disconnection between the body and the real atmosphere, which was not thought of before. Although it still doesn't control many factors such as temperature, smell, and touch, the addition of those senses will be able to completely disconnect the body from the surrounding reality and transport it to a new reality, regardless of physical boundaries of the real world.

Conclusion

Technological development has a profound effect on the spatial experience. Our psychological and physiological perception is influenced by digital media technology. Numerous technological interventions are creating new atmospheric experience. Space is not restricted to physical form through manipulation of the sense of scale, movement, and stability. Along with engaging the mind, interactive technology can now be used to enhance architecture elements to engage the body more effectively than ever before. Architects have always tried to exploit a natural atmosphere to create the desired ambiance as designers of space. However, we can now use technology to augment the architectural design space and make the experience more vivid. Moreover, more control over the atmosphere is possible by incorporating technology to the designed space. The effect, while opening up a vast possibility of new experiences and unprecedented quality of the atmosphere, also has a paradoxical relation to the atmosphere. The resulting unnatural rapidity and dominance of visual sense often disengages the body and mind from the atmosphere and reduces the perceiving act. This imbalance of natural and artificial must be investigated and attempted to be mitigated using architecture intended to reconnect people with the natural harmony of their environment.

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ADDENDUM

The previous paper attempted to define atmosphere and perception, and the technological influence upon them. It tried to illustrate how we perceive a holistic atmosphere through theoretical discourse. Furthermore, with case studies, it tries to investigate how media technology can modify atmospheric elements and influence our perception. Through the discourse, the aim was to establish a framework for designing a hybrid space.

However, illustrating the myriad ways in which technology influences our perception was still a work in progress during the previous discussion. Also, the various case studies were inconclusive, as they did not provide any clear argument on the nature of the atmosphere in a digitally mediated environment. I was still grappling with demonstrating the nature of 'atmosphere' and 'engagement'. Atmosphere is neither subjective nor objective. Rather, it is an overall perceptible, yet a very abstract, feeling. This vague nature required further reading and several in-depth case studies.

In the paper, the case studies were categorized as engagement with body, and engagement with the mind or 'sensory engagement'. This categorization is faulty. Human perception requires the participation of both body and mind. While they might have a different reaction to a particular situation, the perception of that situation is a holistic phenomenon. For instance, watching a horror film requires vision, hearing, or sensory input. The mind reacts by analyzing the sensory data as a perception of fear, while the body reacts by shivering. But it is a singular experience. A more comprehensible analysis criterion would be what makes the atmosphere engaging, and what differences are there between the traditional and hybrid approaches.

Lastly, the thesis did not have any clear hypothesis on a framework of a balanced hybrid atmosphere.

Reaching a hypothesis

Digital media is often used to grab attention. It is unfortunate that in today's culture, in general, digital media tends to capture the audience only in itself, within the perimeter of the digital device. However, it has the potential to go beyond its device to interact with the surrounding environment. This does not suggest large scale projections on any irregular surface, but this relationship needs to be both subjective and objective.

For digital components, this interaction depends not only on the physical interface but also on its digital content. The content has an ethical dimension. It is imperative that designers who work within the realm of digital media consider more meaningful content instead of simply competing for attention. The content of digital media has to be empathetic to the physical context. Additionally, subtlety in such design is crucial. Digital elements in any context often are ostentatious, always attempting to dominate the surroundings. But to establish an organic connection, a balanced coexistence should be the goal of a designer.

With a view to illustrating this essential balance, the thesis looks into Robert Irwin's site conditioned works as case studies. His works are subtle yet holds rich experience. With his site conditional art, he tries to open the viewer's eyes to the beauty that's already there, yet so often overlooked. Site conditioned works consider the site from a multifaceted viewpoint. It takes into account all the physical and metaphysical relations, all the variables of different phenomena and people before carefully intervening to enhance that existing experience. Irwin's approach inspires a sensitive design approach, standing in stark contrast to the prevalent distractive media culture. Thus, to re-engage people around the design we should begin with a careful consideration and an objective perception of the existing contextual qualities, before developing, framing, or enhancing that perception through subtle interventions.

All of the disparate elements in nature juxtapose, overlap, and blend to create an encompassing atmosphere. Steven Holl states it as 'intertwining'. Physical and metaphorical, time and space, form, and concept, subjective and objective enmesh together. Yet, instead of merging into a singularity, intertwining is an in-between state. This in-betweenness is vital in order to generate a synesthetic experience.

Following the idea of site conditioned intervention and intertwining, artificial or digital

can find a place into a hybrid environment. With new possibilities, technology can offer a unique phenomenological experience while remaining connected to the site or context. New technology should also intertwine with an existing situation to enrich it, rather than dominate as an isolated autonomy. That way, the experience will be complete and balanced.

To summarize, a hybrid environment consisting of digital and non-digital is a part of our reality. Yet it is connected to and dependent on our pre-existing physical reality. New techniques generate new perceptions, but human perception still relies upon the mind, body, and cultural context. For an engaging experience of place, there needs to be a balance and coordination between the digital and the non-digital. A hybrid experience should aim for cross-sensory experience and bodily engagement, avoiding isolated sensory experiences.

Consequently, the following design begins with careful consideration of the surrounding qualities, elements, and activities. Non-digital architectural determinants provide a rich physical framework, while digital constituents play a supportive role. The technology and content of digital components are designed to be closely related to the context, and not something separate. Finally, since an atmosphere is neither purely sensory nor physical, for a truly engaging atmosphere, all of the elements are designed to intertwine naturally and create a meaningful whole.

Design review reflection

The first challenge in refining the hypothesis was to narrow down the scope of technology. Eventually, the principle focus of the thesis was placed upon only the technology that has a direct effect on perception. This was reinforced through discussions and further case studies reflecting upon the nature of the atmosphere. For the site, an abandoned subway station in Cincinnati was selected, as it provided a stronger rationale to house a hybrid atmosphere. The site selection process is explained in-depth in the attached site selection documents. It was challenging to create a rich phenomenological engagement as the site is situated underground of a major road in an urban downtown. Based on site conditioned design and the concept of 'Intertwining' the location was analyzed to parse out its many layers such as natural qualities, urban connection, historical references, analogical layers, events and activities, edge conditions, urban expectations, etc. Along with investigating recorded documents, physical site surveys were conducted at different times, weather conditions, and urban events like the Blink festival.

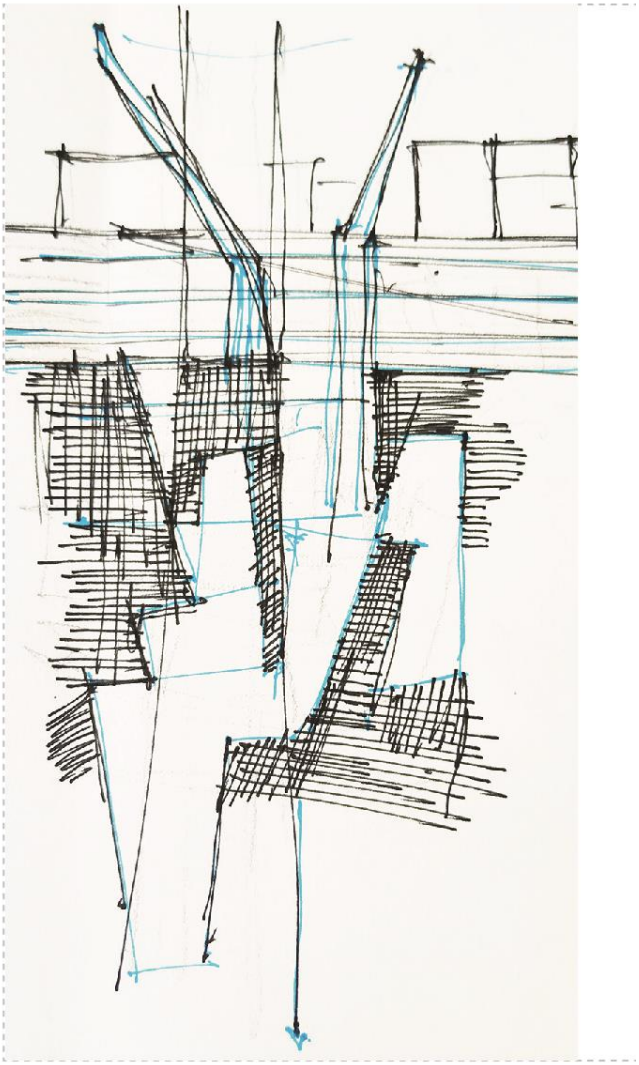
This was followed by formulating a cohesive program closely related to the site and the aim of the thesis. As part of the program, in addition to an experiential journey to reveal hidden urban qualities, the site accommodates a film space and a performative space. For the particular site, these functions provide a direct connection to the familiar urban events like Cincinnati film festival and Fringe festival (annual performative art festival). Additionally, film and set designs for performative art inherently use technology to create artificial atmospheric mood and evoke emotion. The idea was to incorporate these activities into the overall site experience. To further test my thoughts on site-specific film experience, and demonstrate the intentions of the thesis, a short film was also made.

Finally, through reviews, design interventions were developed and refined. The design draws its reference from the city, its history, and its present activities. The plan was careful to avoid any alienating experience and frame the existing richness. The journey below ground was made diverse yet continuously integrated with the city above. It exploits only urban unused or open spaces for minimum yet powerful intervention. Thus, the site retains its original qualities, while accommodating subtle technological and spatial changes, creating a sensory-rich atmosphere. The experience also changes with time and urban activities. The site showcases an alternate use of media technology that offers the urban inhabitants a meaningful experience, remaining familiar yet enriched. Through the sensitive intertwining of architectural and technological intervention, the design achieves an ‘in-betweenness’.

Design Thesis

Hybrid Atmosphere: Experiencing Invisible Cities

Site analysis, Study and Final Design

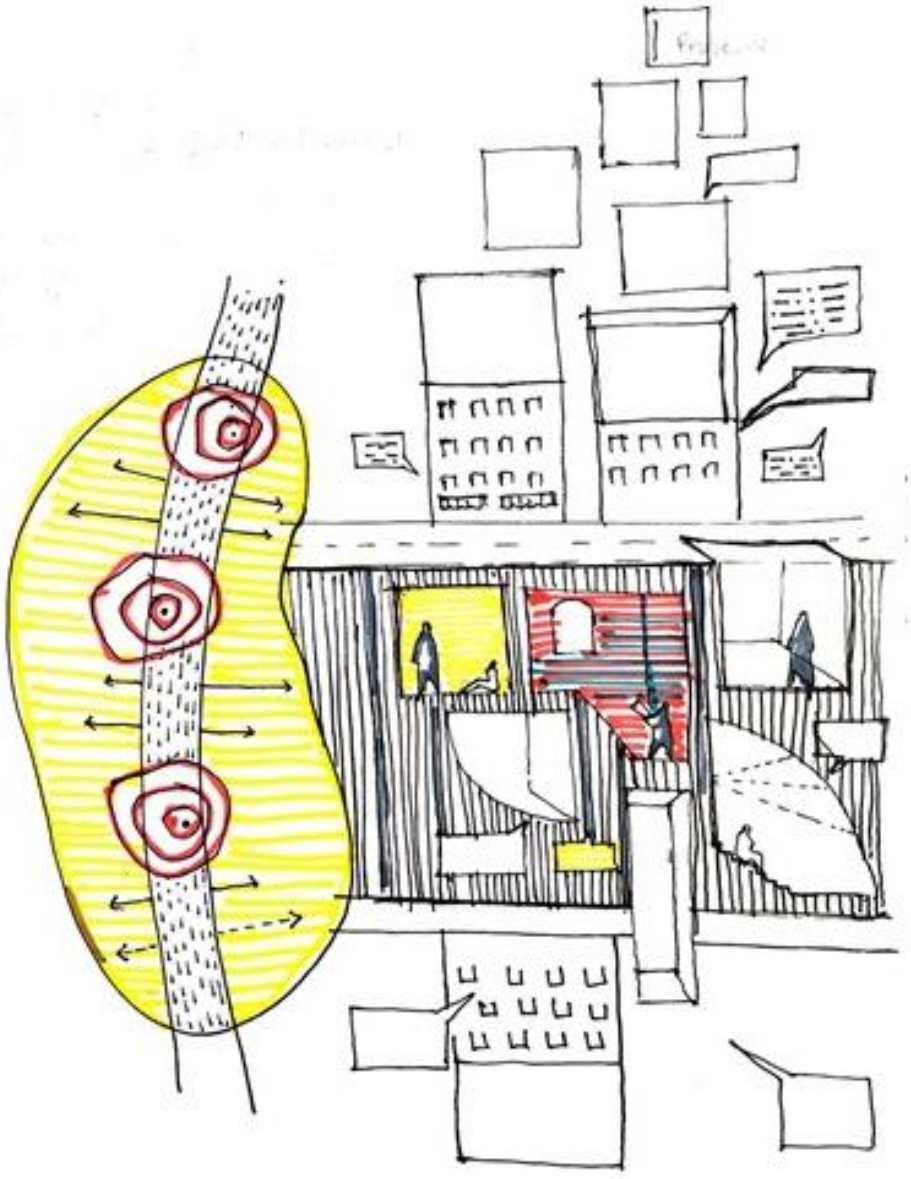


Design Framework

The experience should be continuous in different layers to be engaging. These layers would overlap each other for a complete experience

The experience should be anchored in physical reality.

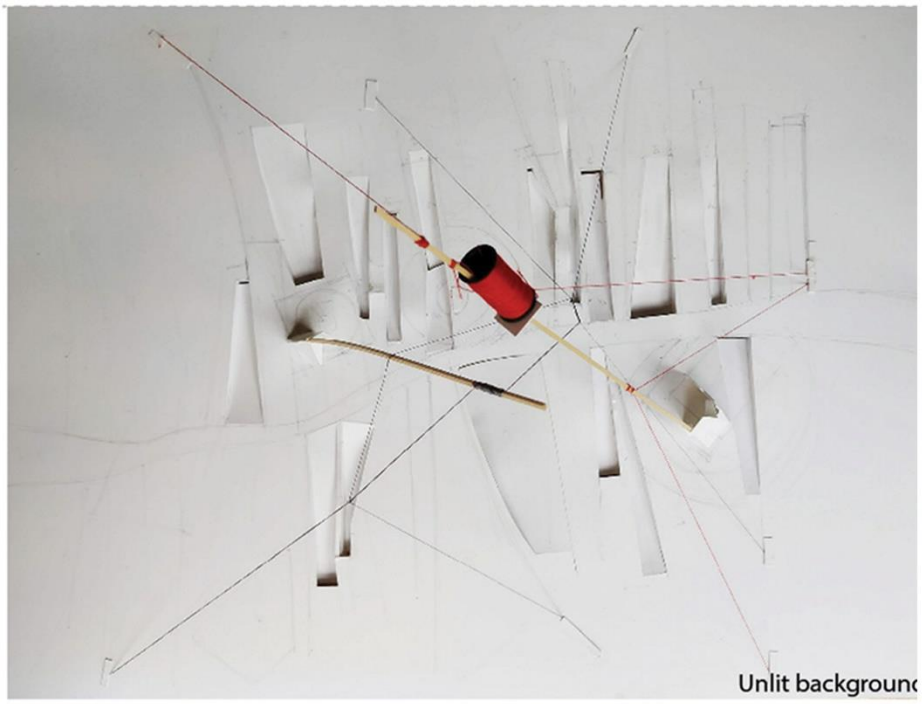
The digital part of the experience should enhance the existing richness of the place. Digital components of the experience should help focus on reality rather than robbing attention to itself.



Conceptual Study : Model

Idea of generating engagement

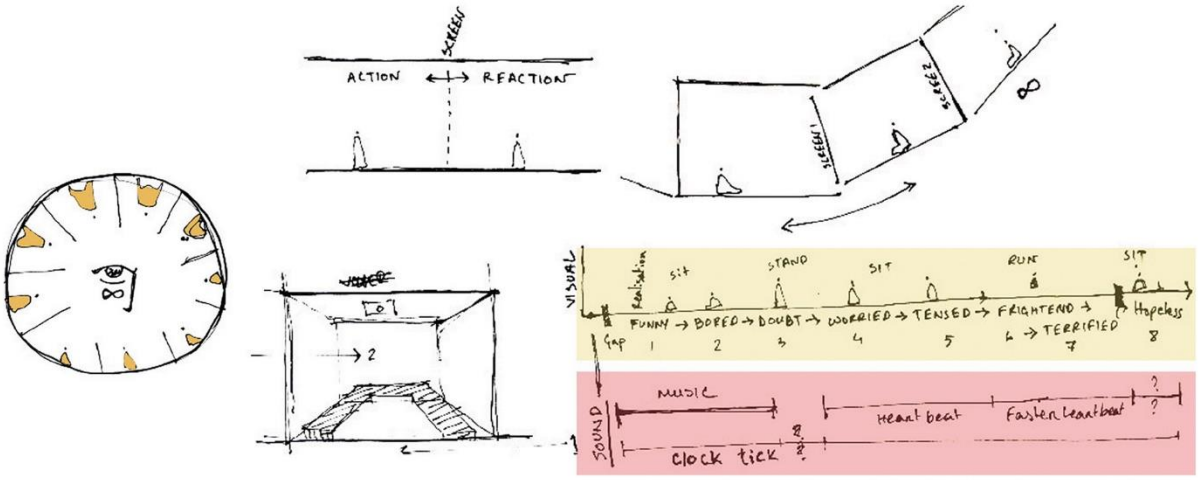
The goal of making this model is to create an object that requires human interaction to perceive. The design would generate activity that transforms with the surrounding atmospheric situation. There are multiple layers of the model that reveal themselves as they communicate with light, view angles, and push-pull of the strings, etc.





Conceptual Study : Short Film

In this project I explored two ideas. One is idea of a film that is specific to the site where it is shown. And the idea of interchange between audience and performer. The actor reacts to the audience's reaction. Also, the audience connects to the world inside the screen as they both share the same elements ...same chair, table, materials etc. The idea of time comes from shooting the film almost as the same time it will be shown. And acted in real continuous time in a single shot. The music, sound and color would flow between inside and out of the screen to connect the two atmospheres into one.





Site Selection

From three potential sites the final site was selected as most rational location for implementing an hybrid atmosphere.

	Panam Nagar	Peter Cartrige	Subway Cincinnati
Location	- Sonargaon, Dhaka, Bangladesh	- Little Miami, Cincinnati	- Central Parkway, Downtown, Cincinnati
Back-ground	- The ruin of an ancient city which produced of Muslin, the famous cloth. The unique handicraft was destroyed because of industrial cotton mills of Britain.	- Abandoned Gunpowder factory with rich historic background.	- Largest abandoned subway in USA. No potential proposal for revival
Potential approach	- The site has the potential of reviving the craft and culture. I imagined the project as a place of engagement ,so it would have a transformed meaning in the machine age.	- The site can be a reversal of the previous function of producing gun equipment. Instead, being a place to connect people to meditate and slow down instead of causing agitation.	- The project can reintroduce the previous Rhine as a catalyst of slowness in the dense urban situation
Possibili-ties	- Archaic quality, existing situation. Surrounding urban growth and possibilities to integrate hybrid environment.	- Industrial ruin,Surrounding natural calm setup. iconic quality	- Almost a non-place. Yet existing in taxpayers' bills. Buried underground without any connection with the upper level. Film and cultural connection of the city and OTR
Summary	- It has an existing ambiance. The integrated hybrid situation would transform the existing one.	- Already under development. It has an existing ambiance. The integrated hybrid situation would transform the existing one. Even use of Hybrid might not be rational	- Using a hybrid atmosphere feels natural and rationale for the underground situation. Potential to connect with big city activity.

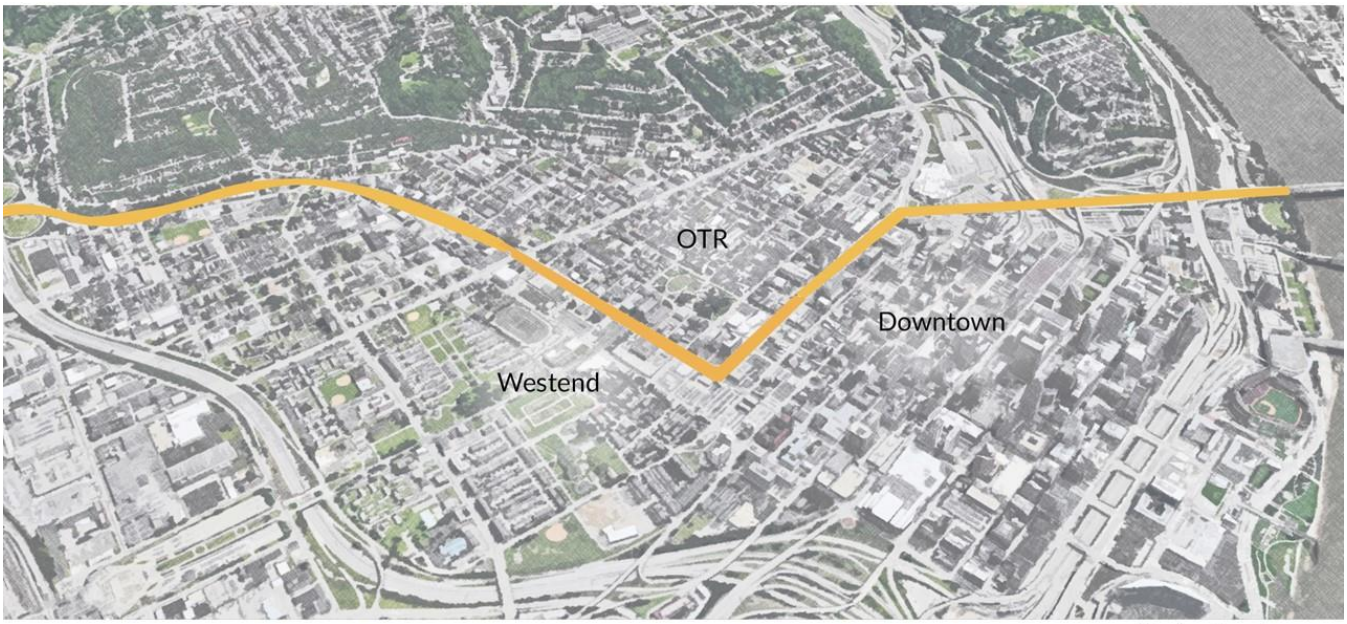




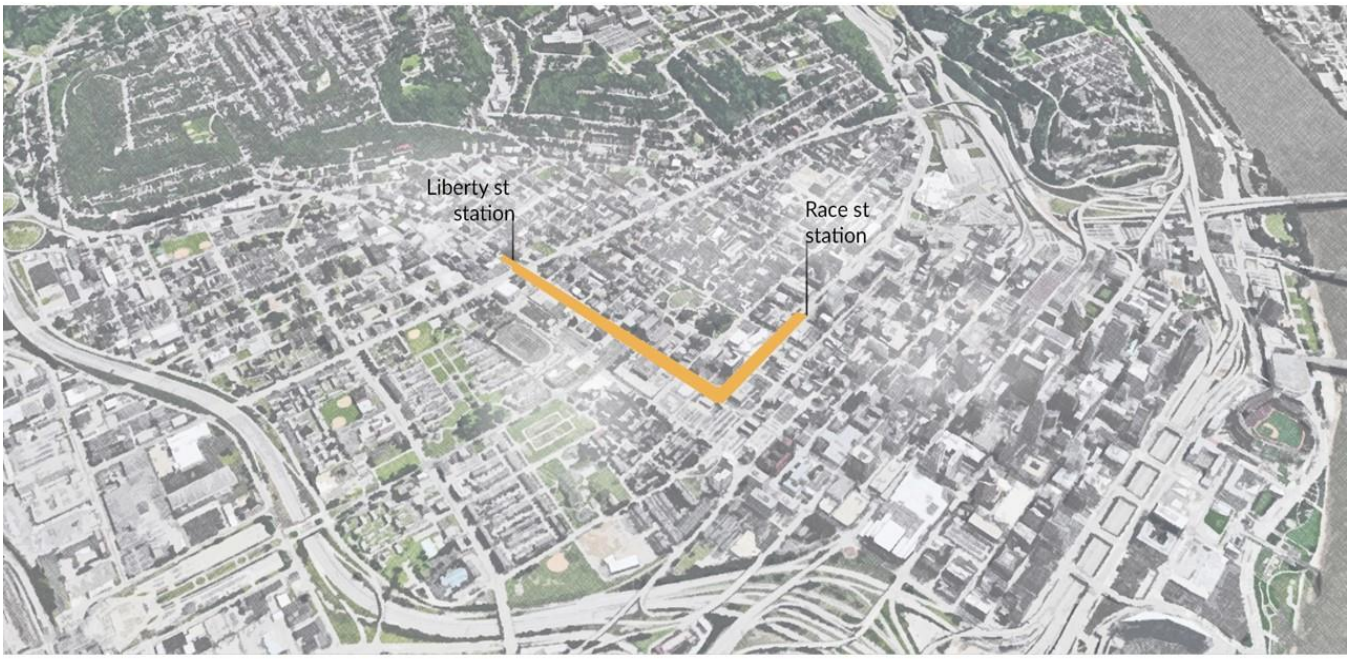


Site Analysis

A portion between Race street station and Liberty street station was selected for design implementation.



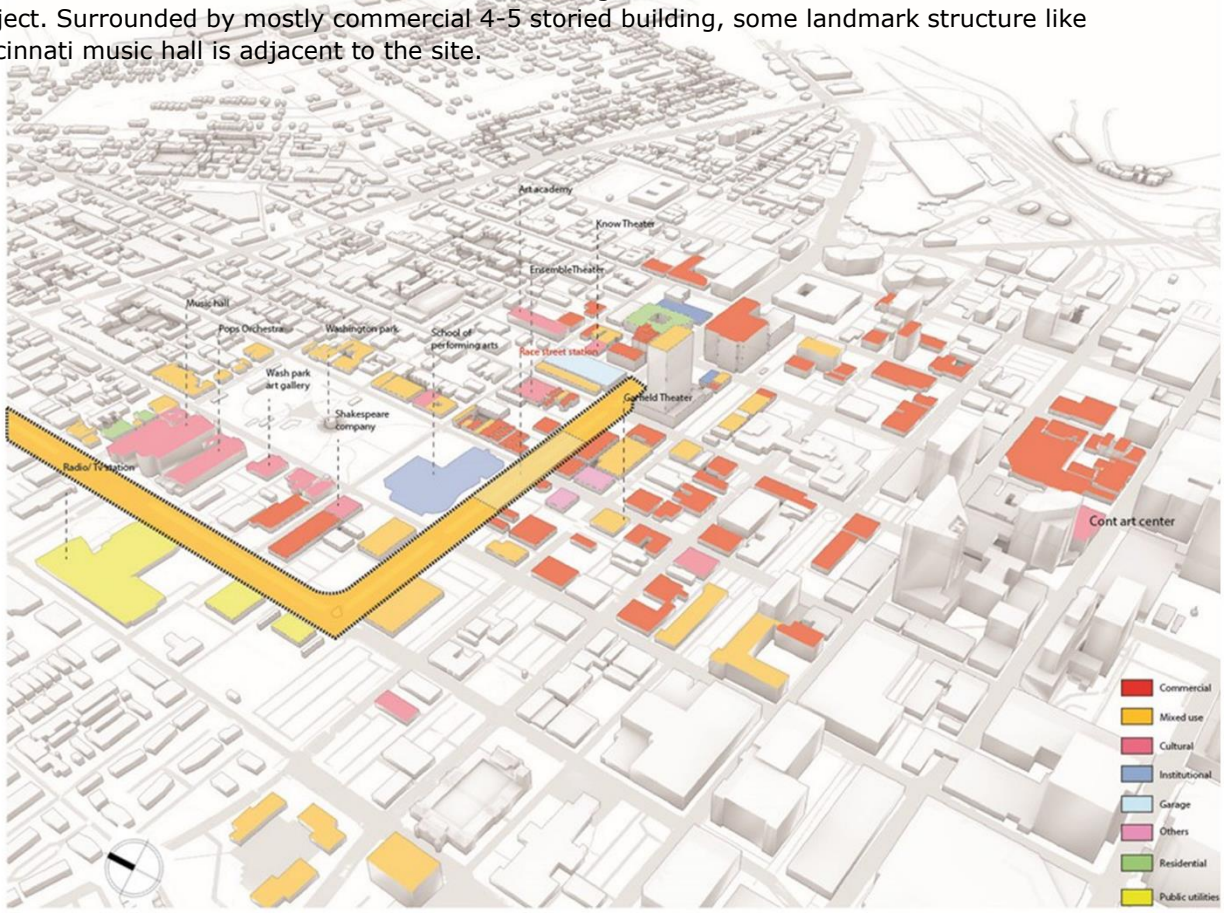
- 9 km long tunnel
- 4 stations existing



Site Analysis

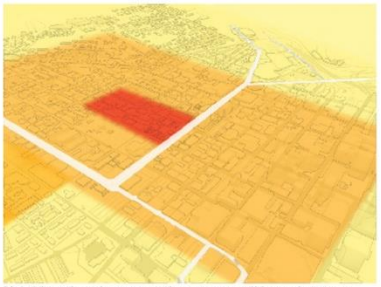
Landuse and Urban Surrounding

The site is located between downtown and contrasting but historic Over The Rhine conservation project. Surrounded by mostly commercial 4-5 storied building, some landmark structure like Cincinnati music hall is adjacent to the site.

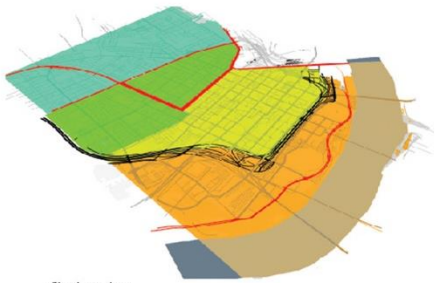




Neighbourhoods



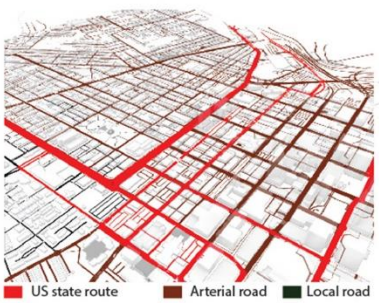
Neighbourhood center and compact walking urban area



Clty Layering

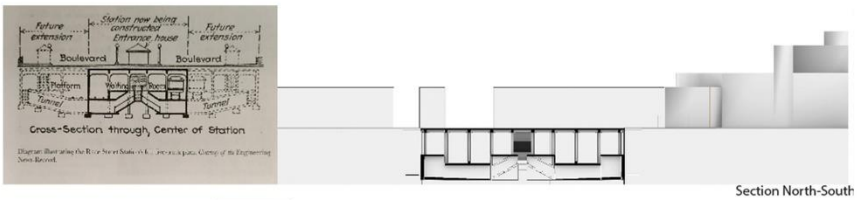


Topography

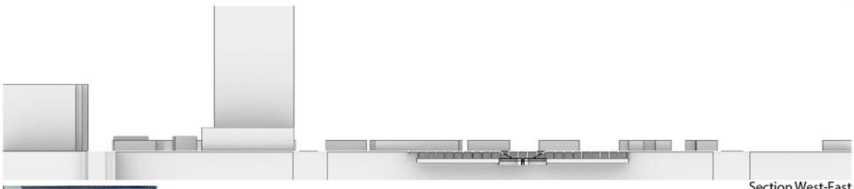


Site Analysis

Site Sections



Section North-South



Section West-East

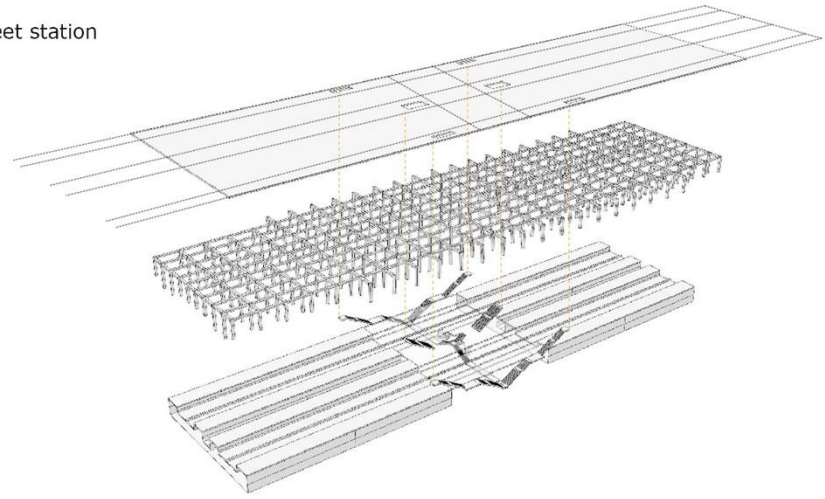




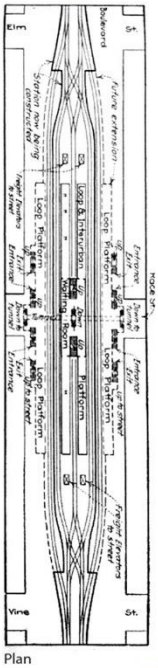
Section East-West



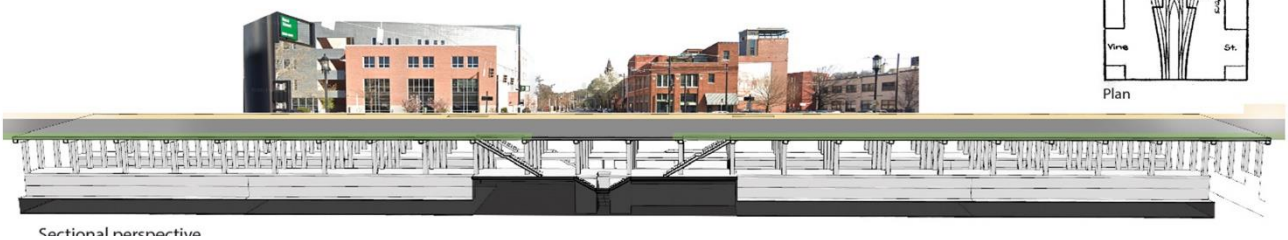
Existing race street station



Exploded diagram



Plan



Sectional perspective

Site Analysis

Historic Transformation and Existing Photos

Historic



Canal



Subway



Central parkway

Existing



Tunnel



Race st. station



Water main

Program Generation

The programs were selected based on the events and activities around the cities. With personal and collaborative experience a film space, a performative space and a meditative garden will connect people with the city through activity .The design will remain open for mass visitor during events, except some controlled portion for specific performances.

Blink

-Blink Is an yearly festival happening for several year. It usually happens on October and stays for 3-4 days. It is a light Festival.

- It Transform the local neighbourhood with light installation nd projection. the building facades become engaging screen.

-Involves local artists and communities. They share their message through artwork.

- The community involves in large to small temporary business and activity. And visitor from all over the world also connect through light.



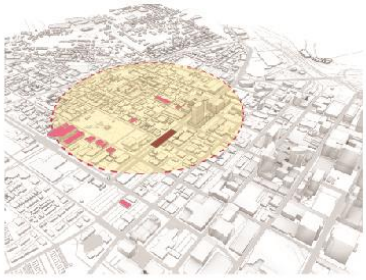
Cincy Fringe

-The Cincinnati Fringe Festival (Cincy Fringe), produced by Know Theatre of Cincinnati, is now Ohio's largest Performing Arts festival. It consists of 13 days of theatre, art, music, dance, and everything between and always begins the day after Memorial Day since 2004.

-Cincy Fringe uses over a dozen venues in the heart of the Over-the-Rhine neighborhood to present independently produced works from local, national, and international artists.

- Scattered location connects the whole neighbourhood through activity.

- Performative art is very interactive and engaging with surrounding environment.



Film fest

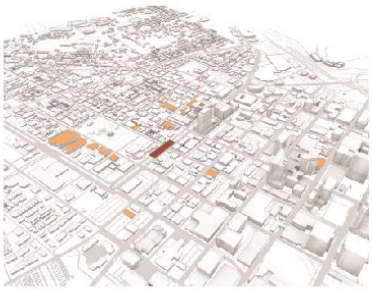
-The Cincinnati Film Festival, is a yearly cultural event and international film competition supporting surrounding tri-state region.
-Since 2010, the all-volunteer staff had screened over 1000 submitted films from 36 countries.

-The 2012 festival screened over 100 films September 6–13, 2012at various locations around the city.

- Includes an international competition, the 48 Hour Film Project.

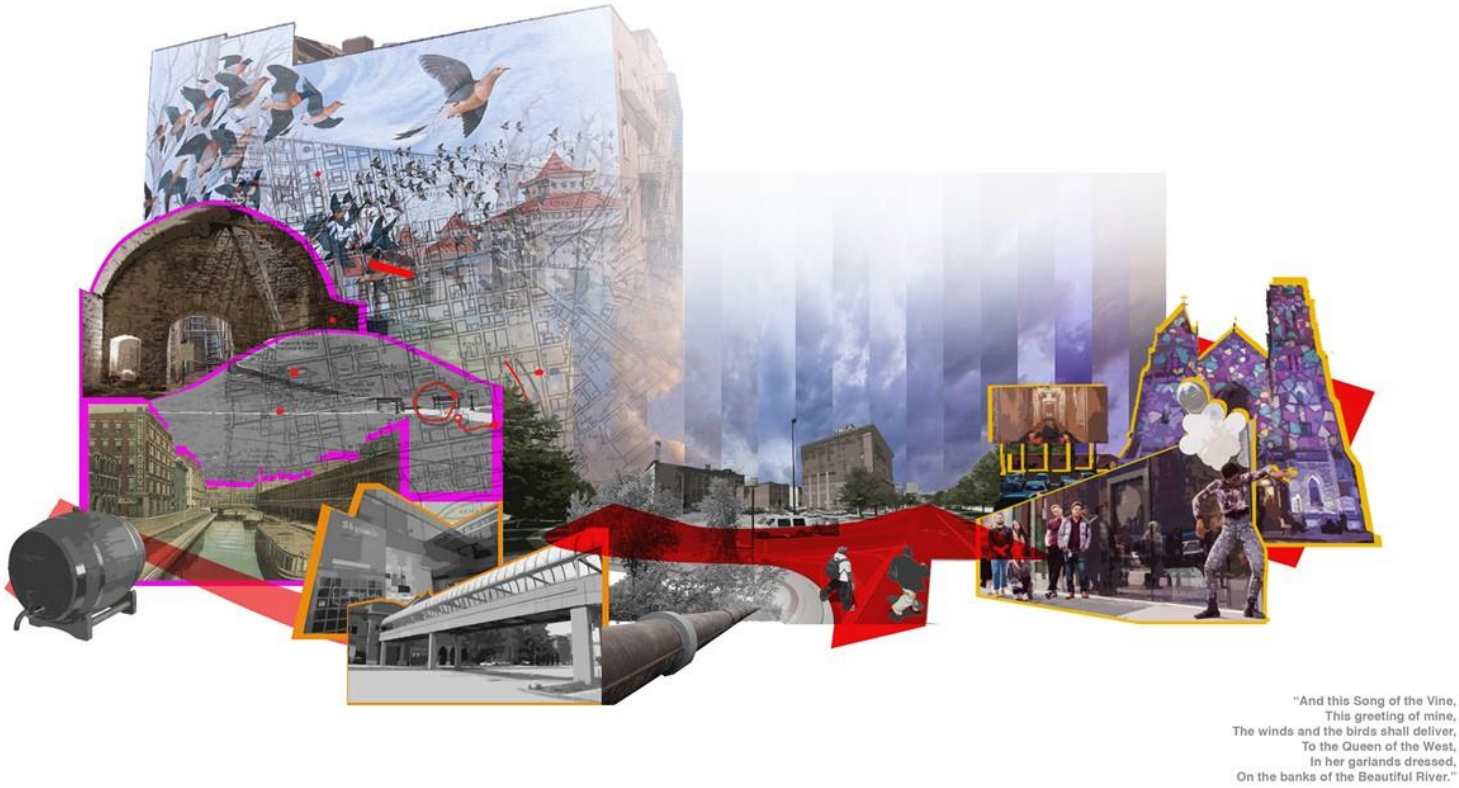
-This Film Festival also includes several question and answer sessions, panels and filmmaker workshops led by industry professionals.

- The film movements and festival give the site a potential premise for a film related space.



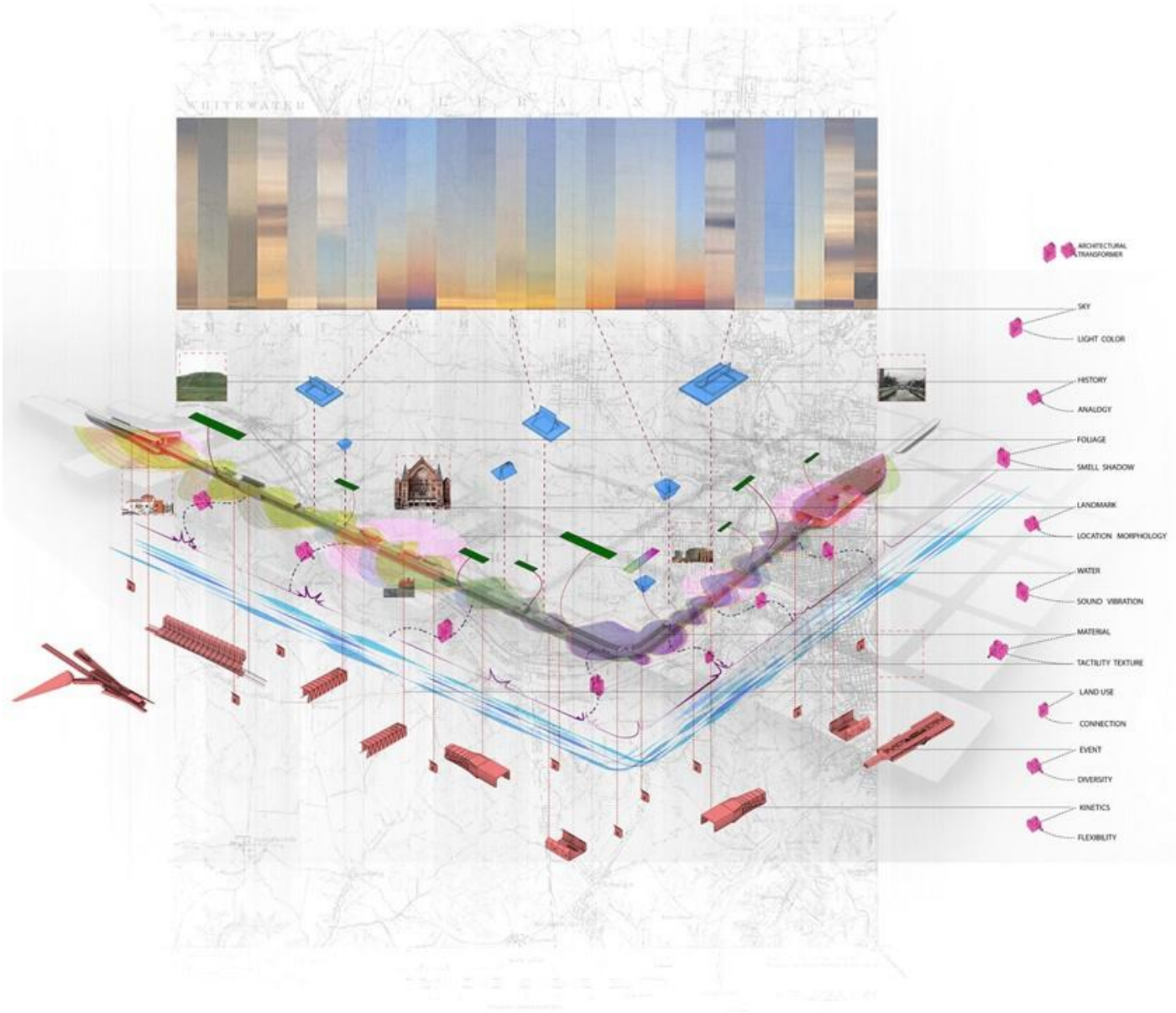
Enmeshing of Various Layers

Various environmental qualities, historical reference, cultural issues, social demands, urban events and activity are considered and taken into account for a holistic experience.



Design Diagram

Intertwining of different constituents into a meaningful whole



Race Street Station

Street Level

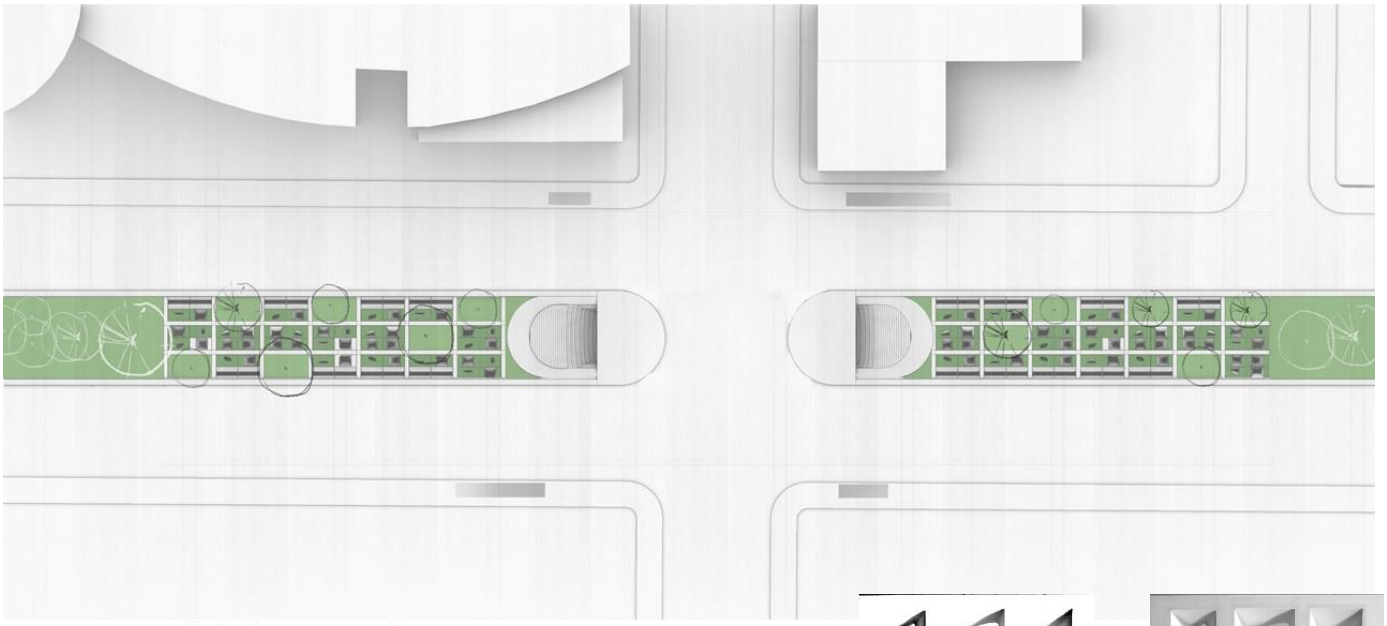


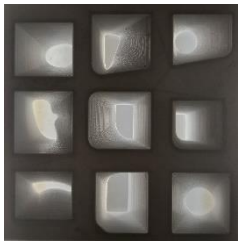


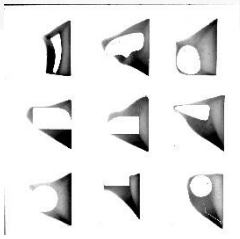
Race Street Station

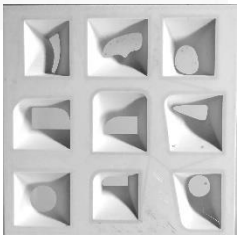
Design intervention and Physical light study model of the skylight

Urban layer layout

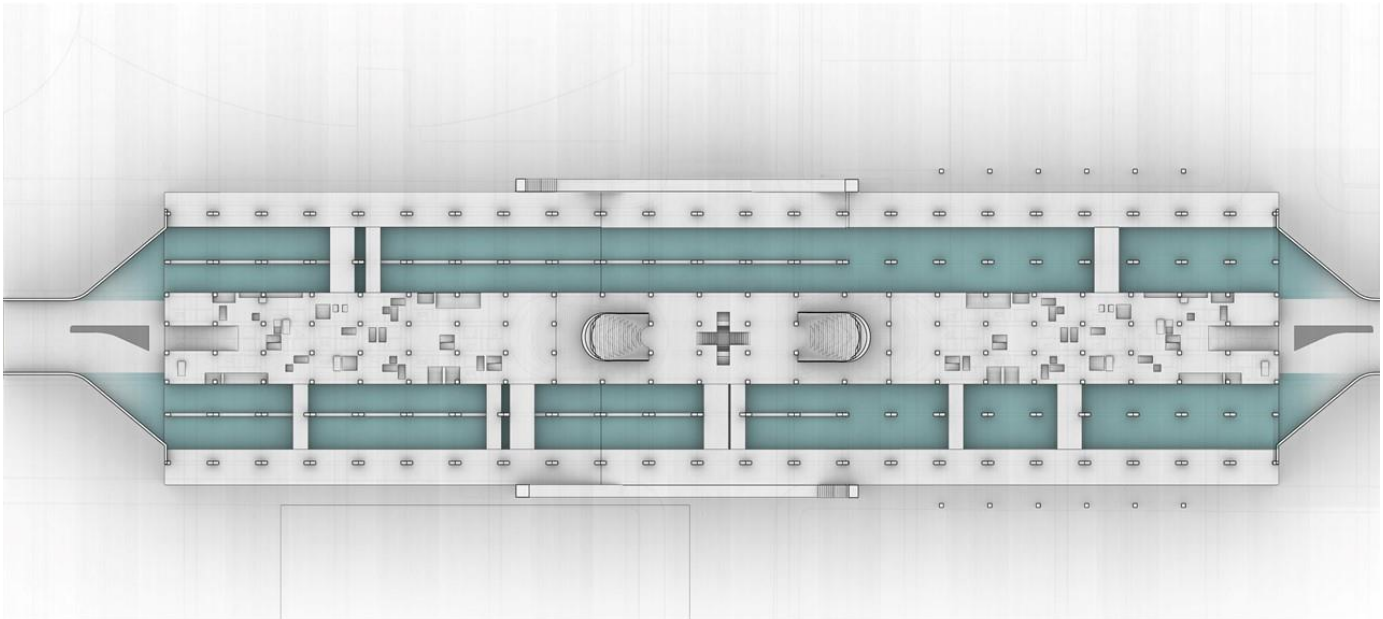






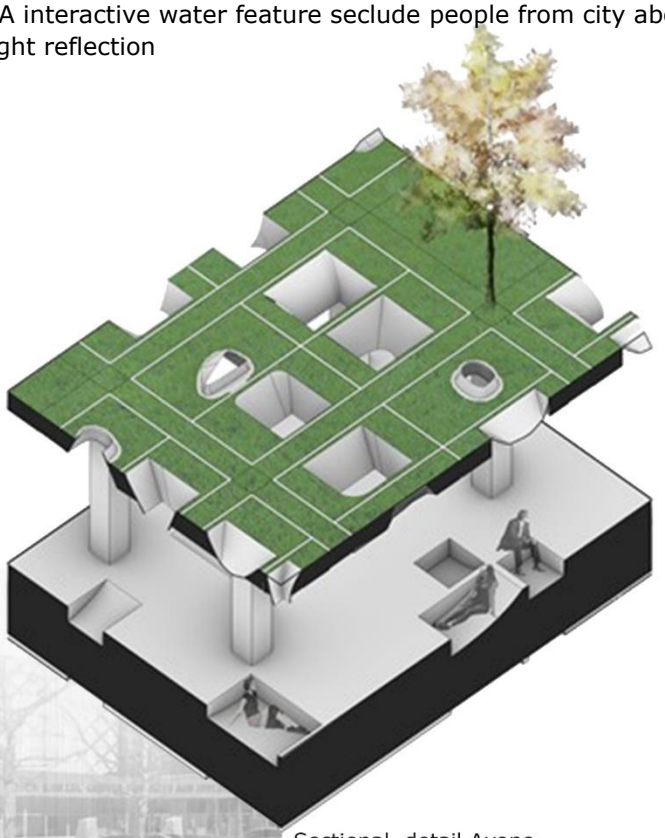


Underground layout

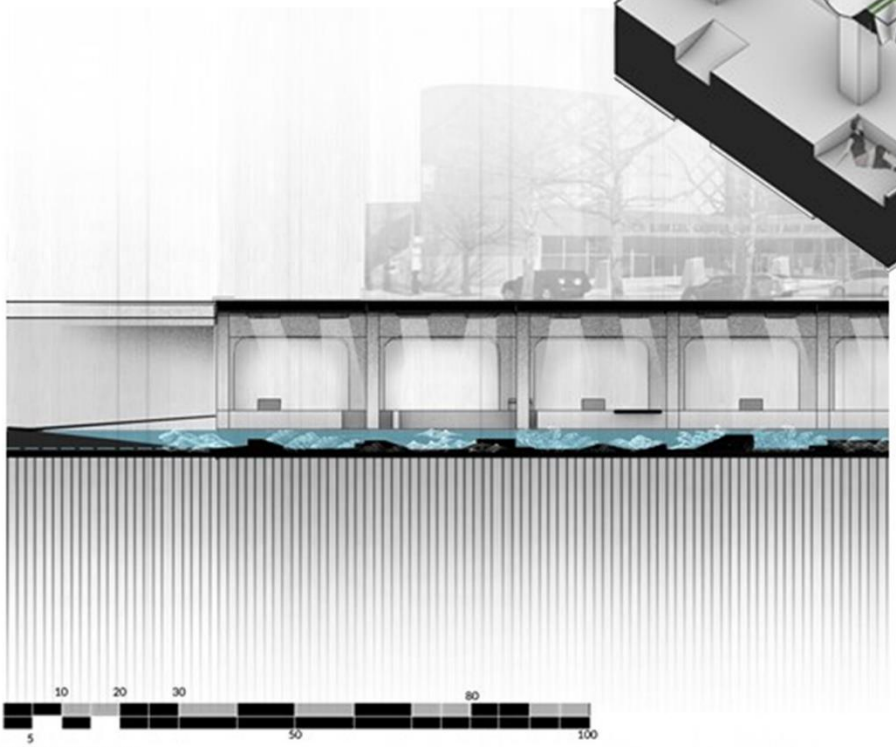


Race Street Station

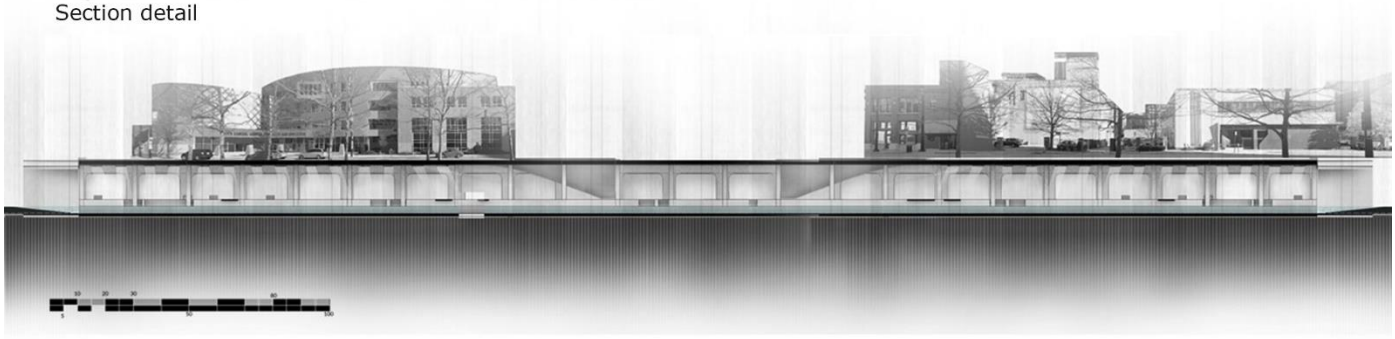
Natural light changes mood through skylights. A interactive water feature seclude people from city above with its ever changing water flow, sound and light reflection



Sectional detail Axono



Section detail



Section

Liberty Street Station

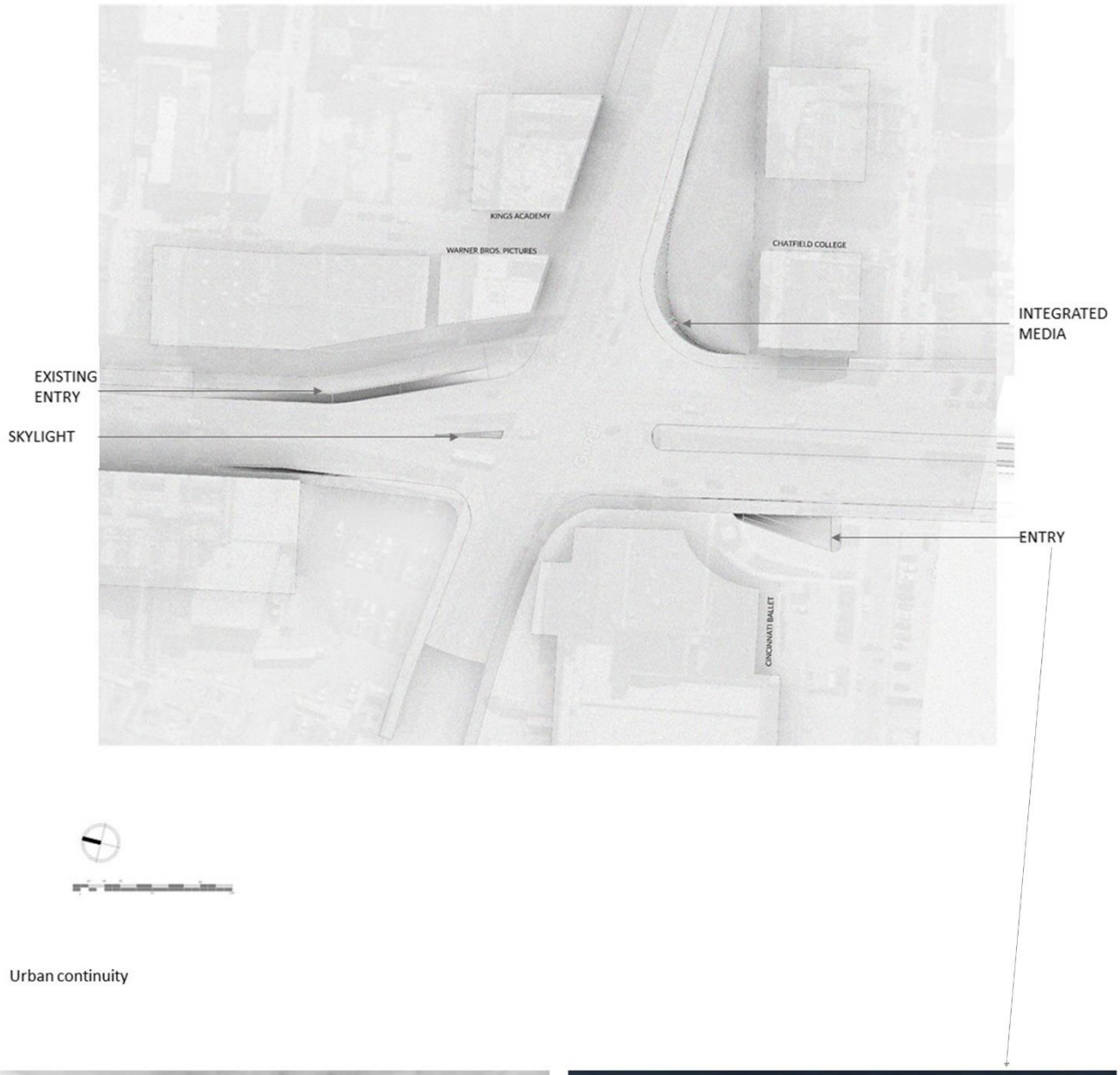
Street level surgical design intervention in open spaces





Liberty Street Station

Street level surgical design intervention in open spaces, underground film and public space



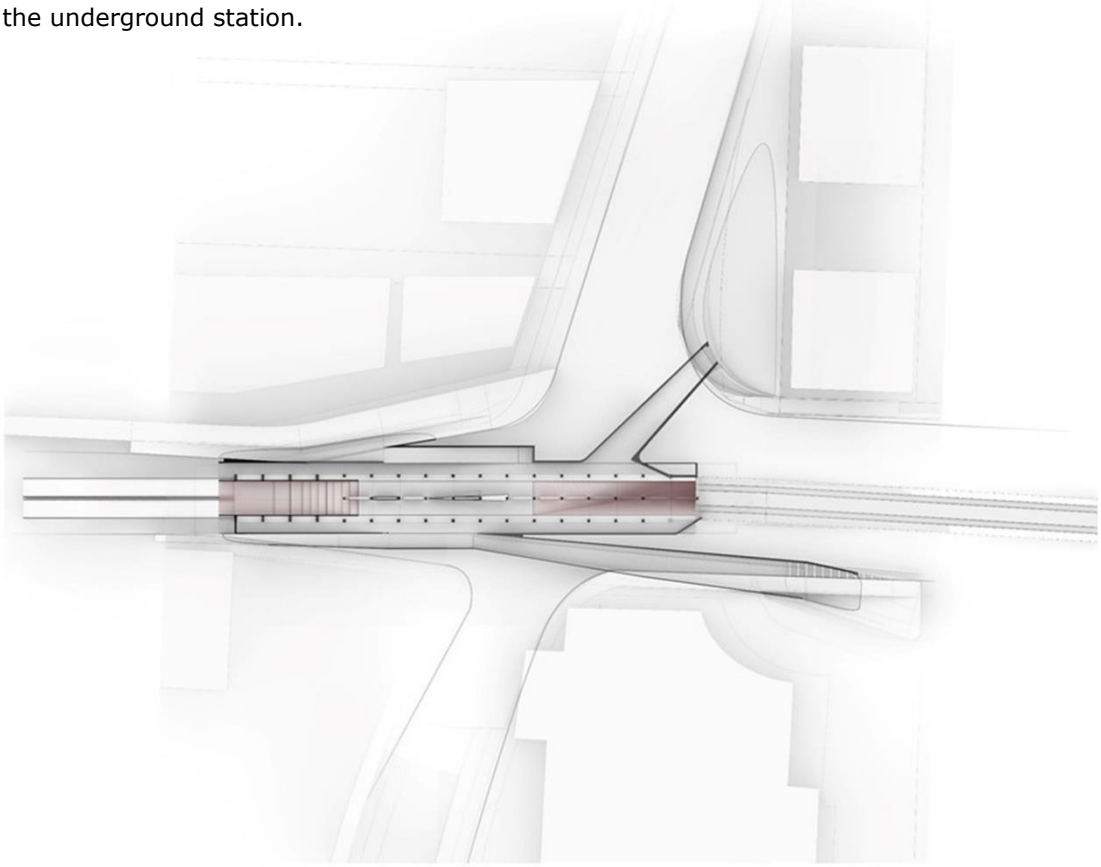
Urban continuity

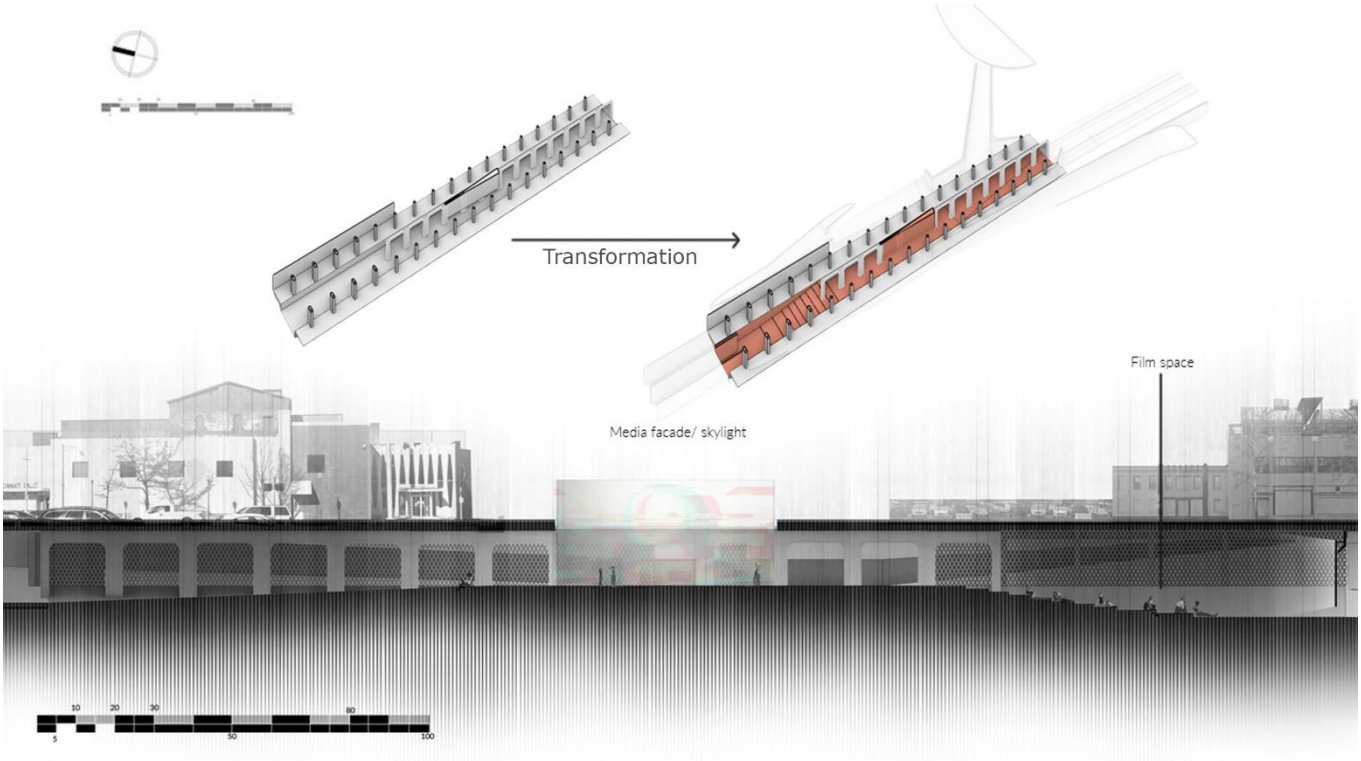




Liberty Street Station

Underground public film Space, Sectional transformation. A skylight/Media façade connects upper urban layer with the underground station.



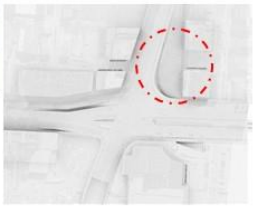


Liberty Street Station

Perspective at Urban Level

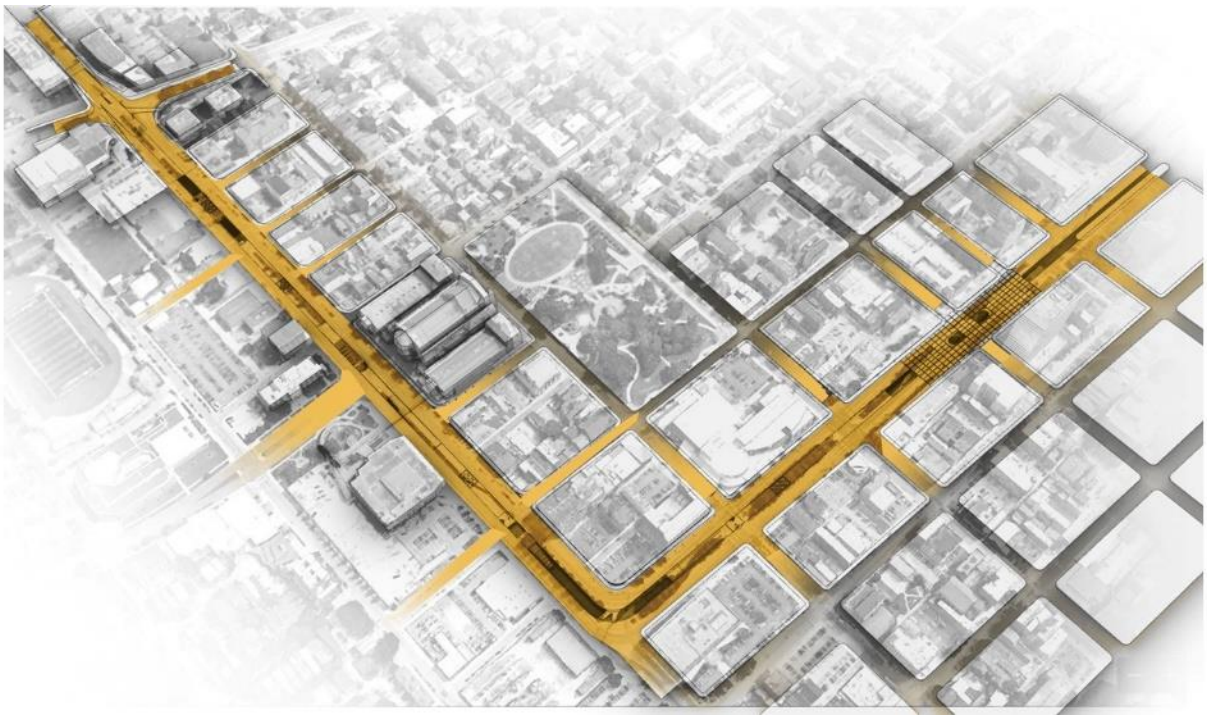
Integrated media

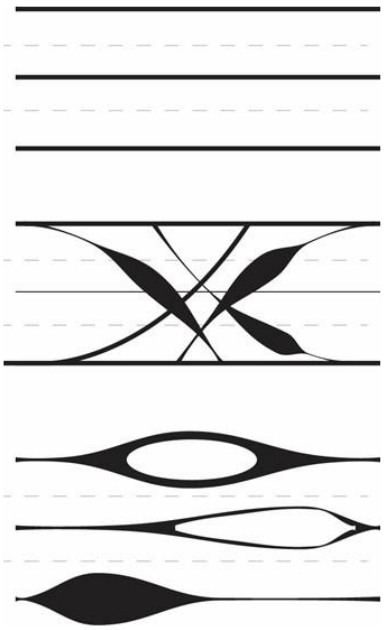


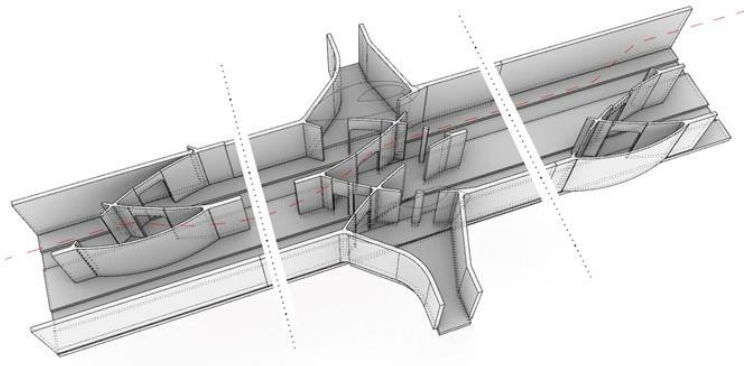


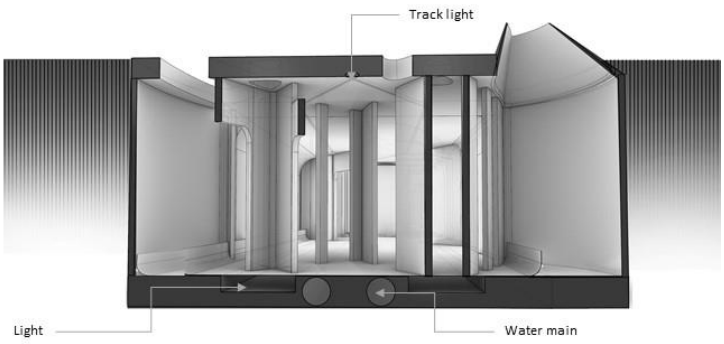
The Tunnel

Spatiality changes throughout the tunnel based on different interaction with urban layers such as entry points. Through sectional diversity the tunnel deals with humane scale and different experience









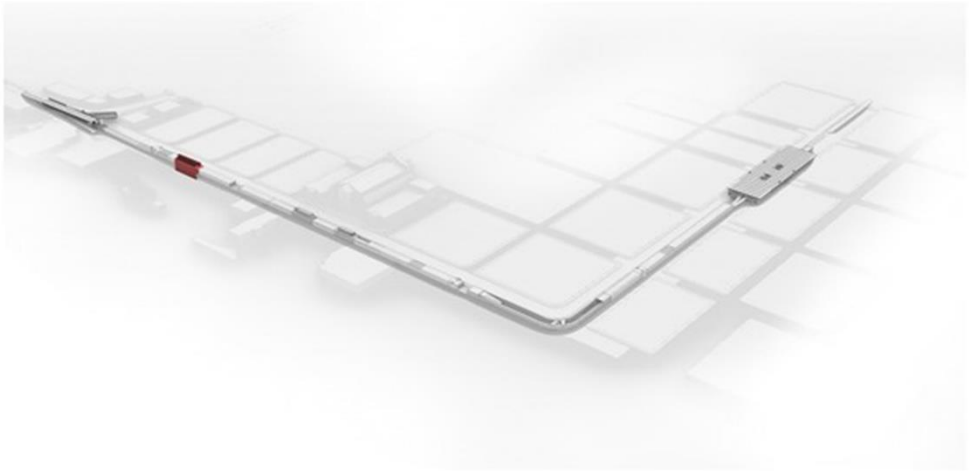
The Tunnel

Basic spatial section is dicernable as the previous tunnel. Through intervention natural and artificial component creates a harmony.



Performative Space: Urban Level

Street level and underground level plan of performative space located near Cincinnati ballet center

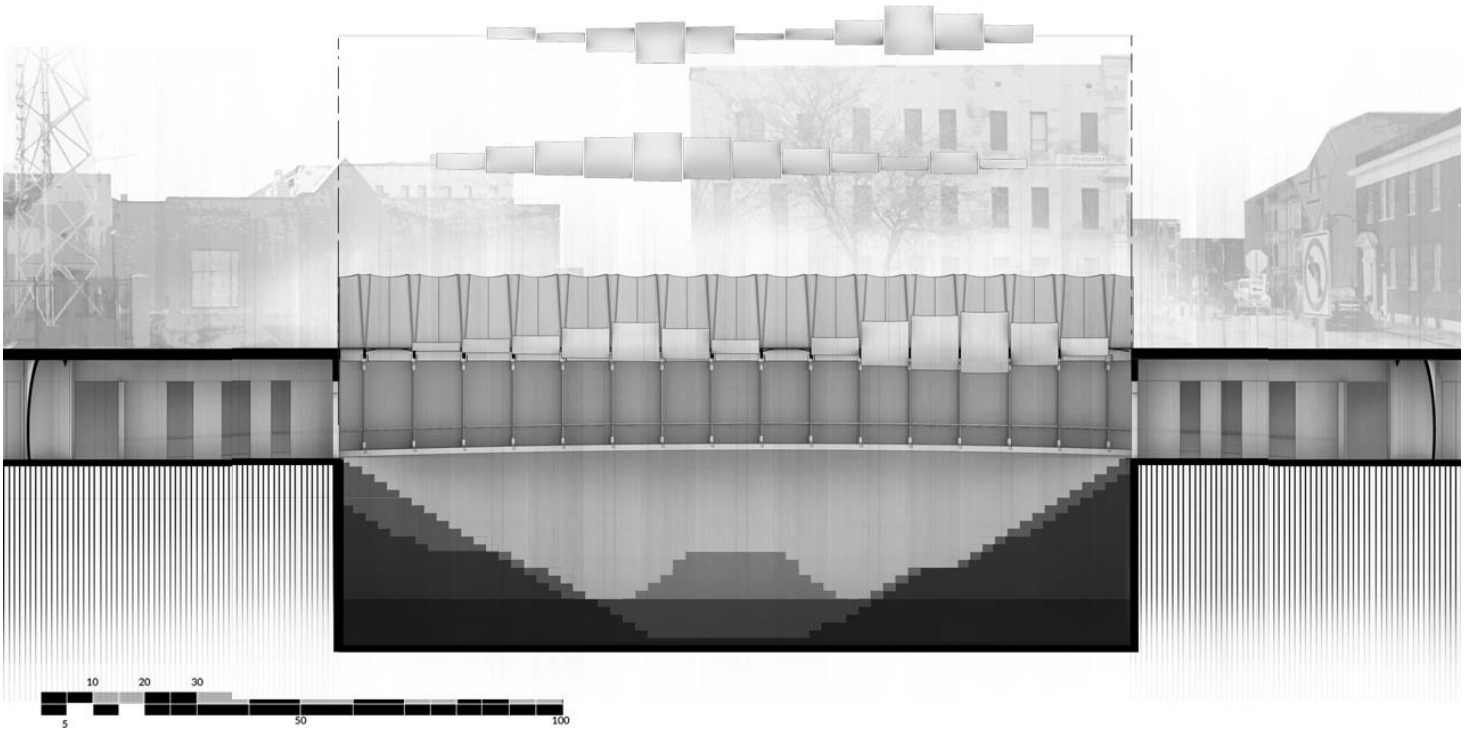




Performative Space: Plan and Section

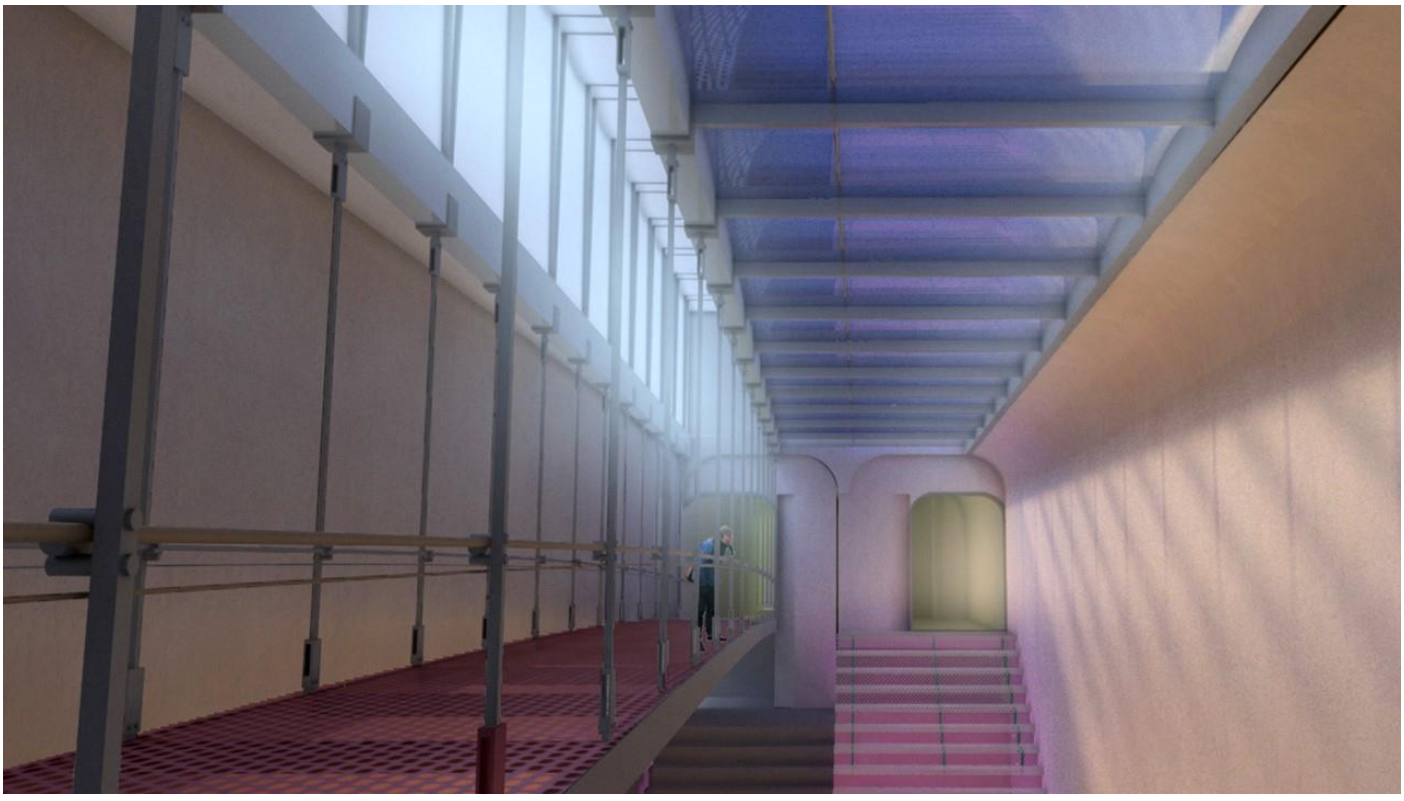
Kinetic skylight reacts with natural light and produces enhanced effect. Flexible performance stage transforms to accommodate from street artists to stage dancers. The body of architecture reacts to the body of the audience.





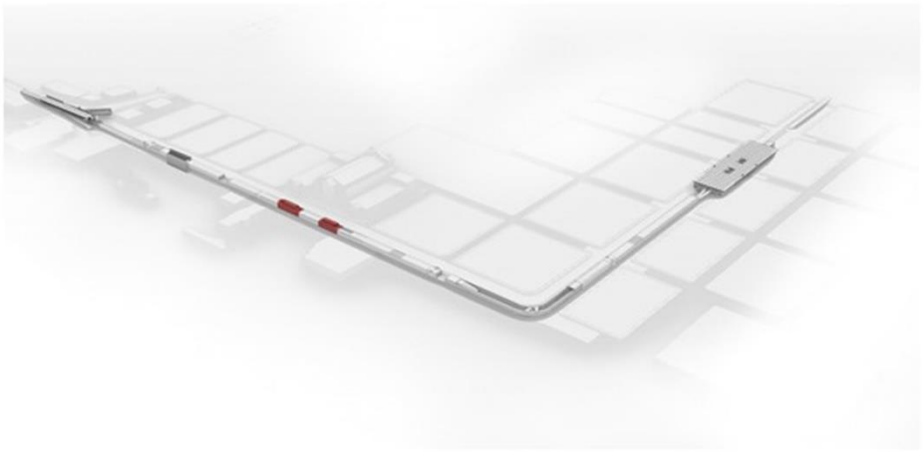
Performative Space

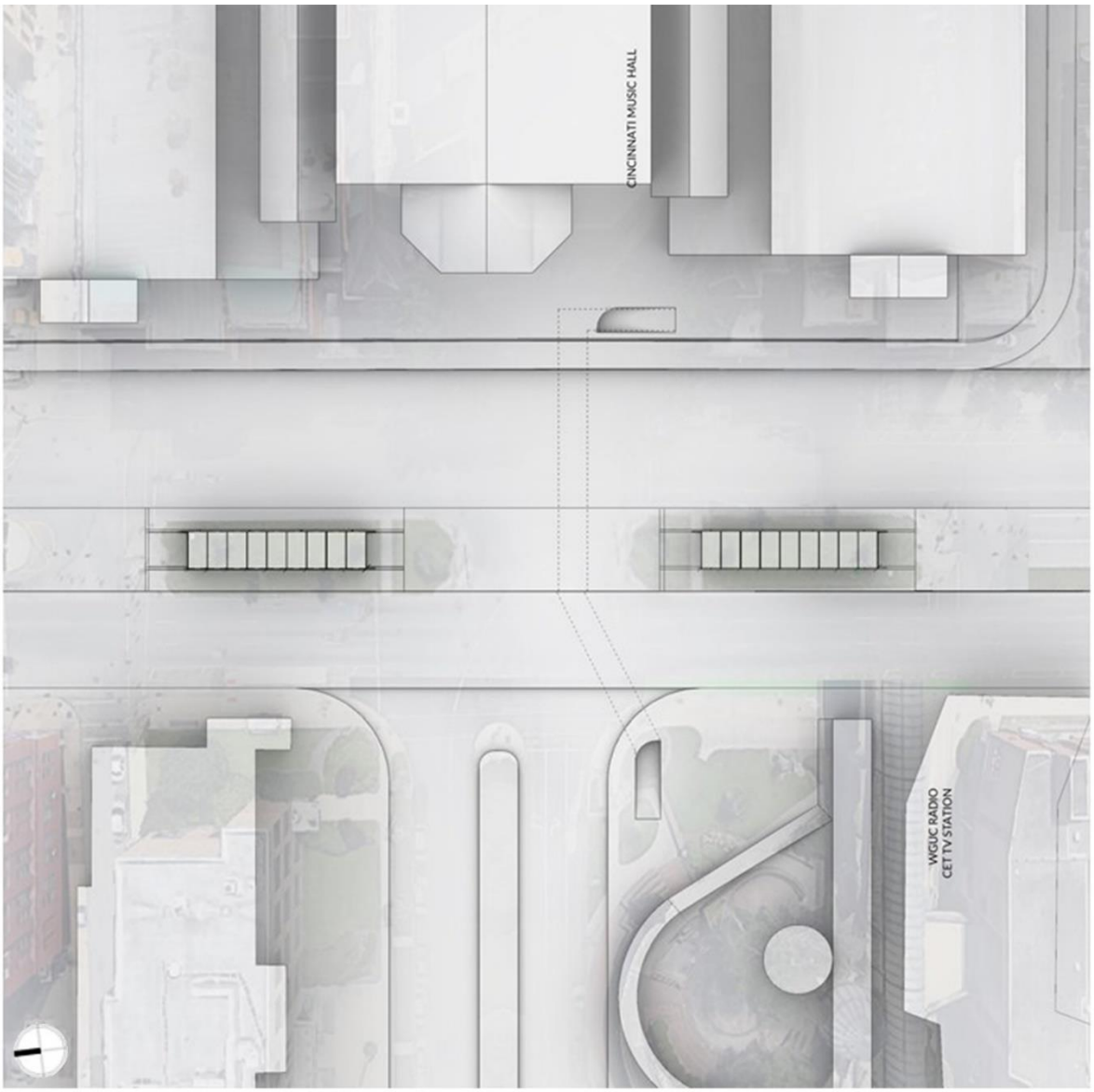
Interplay of Natural and Artificial



Music Hall Area

Between the historical music hall and modern radio and tv station, a soundscape transforms city's acoustical space

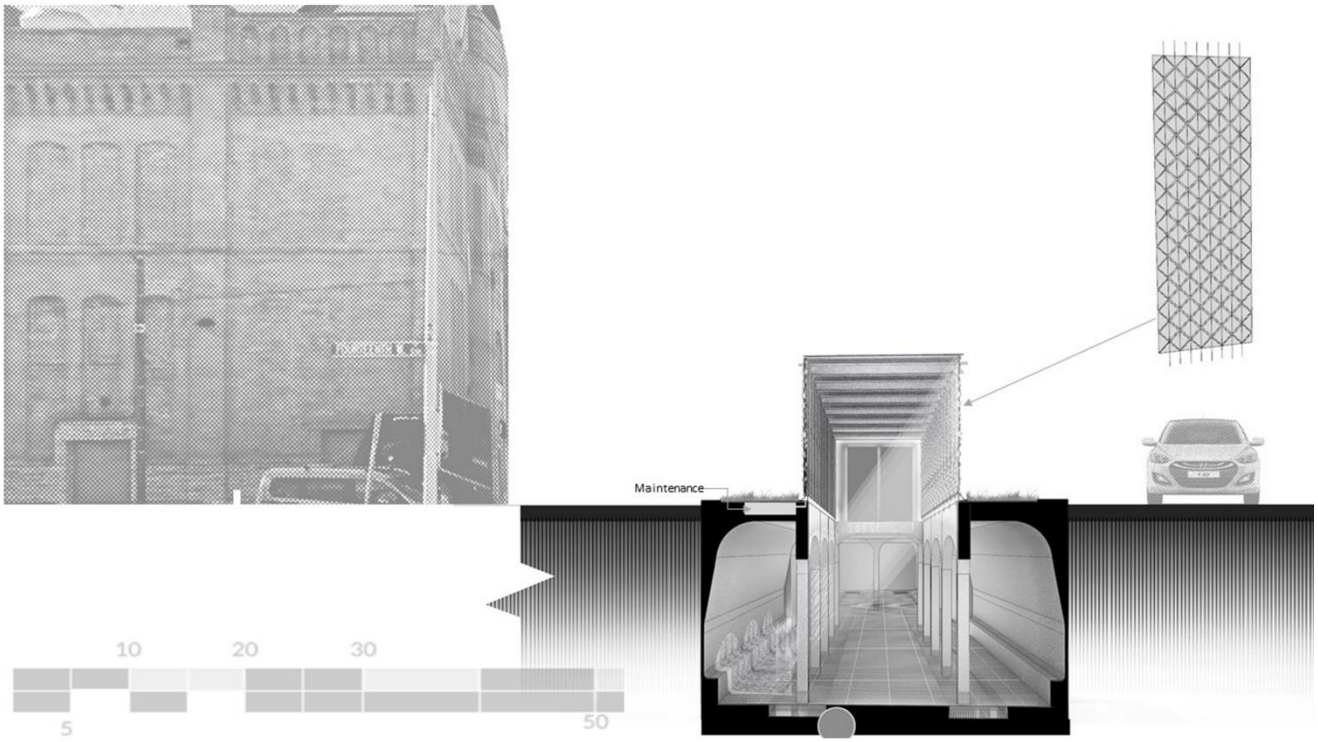




Music Hall Area

Interactive acoustical screen reacts with traffic and wind motion, generating interplay of light and sound.

Further activation during urban events





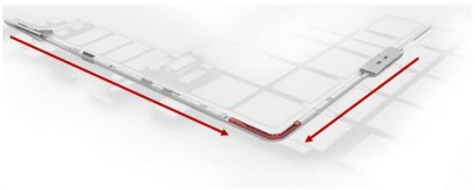
Music Hall Area

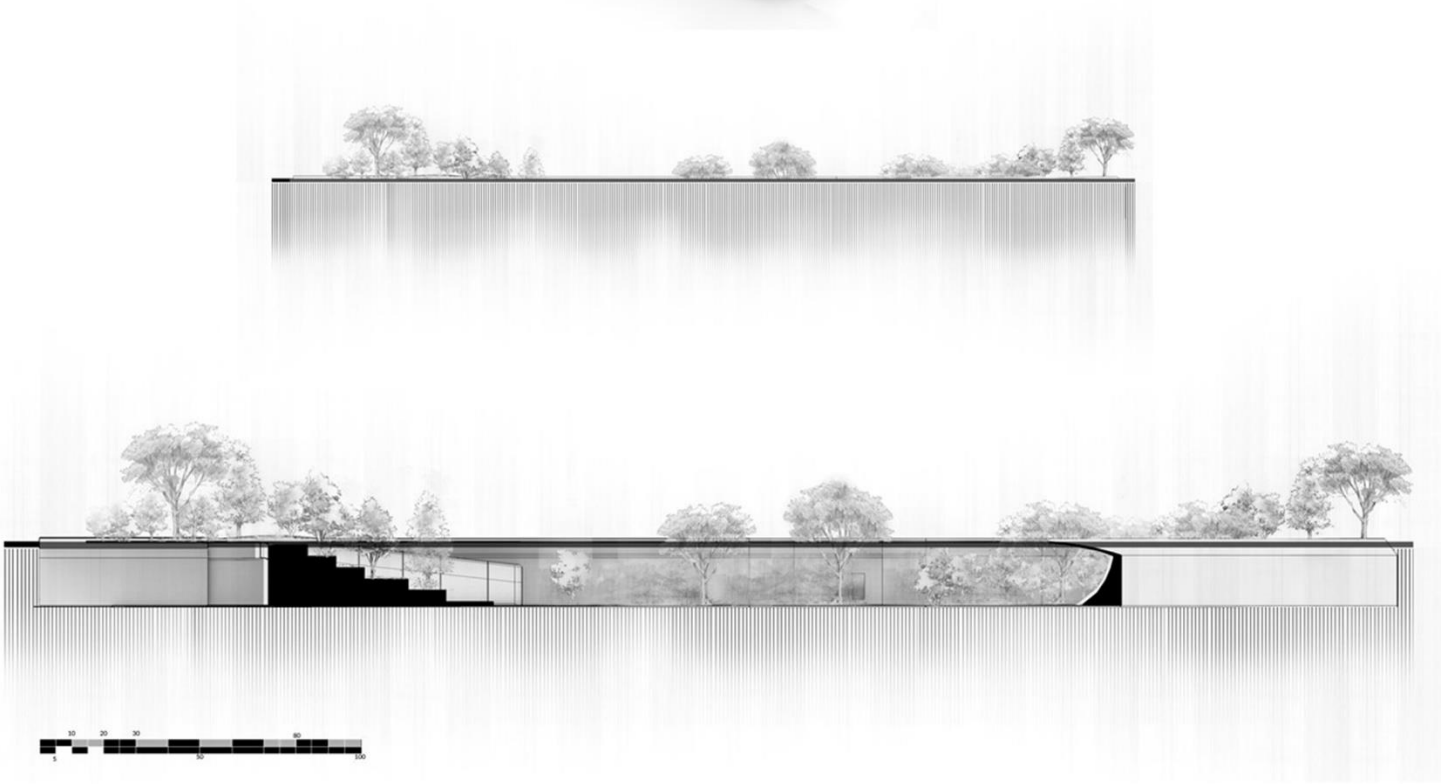
Story of movement, shadow, sound, and material

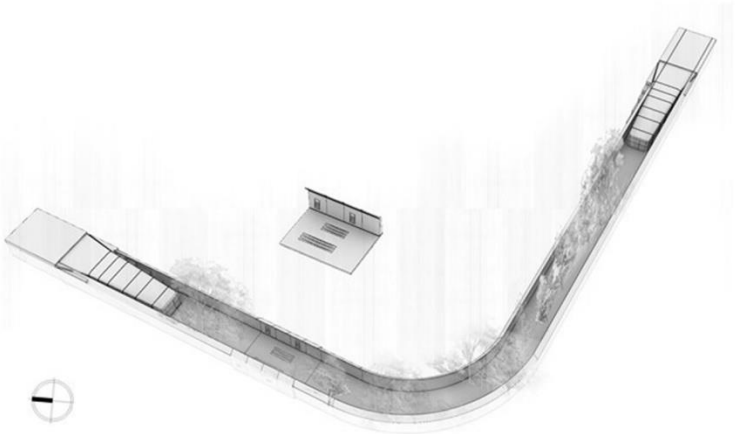


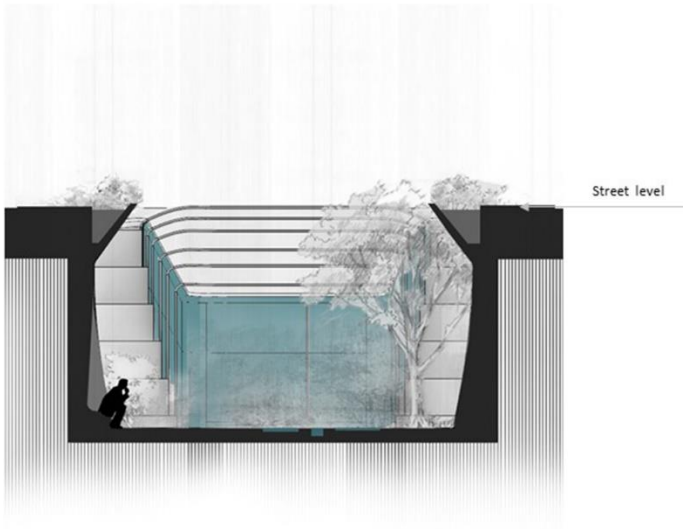
The Garden

At the turn of the street the canopy of trees on the median vanishes into a below ground garden









The Garden

Before reaching the garden a meditative space, smart glass with variable transparency acts as a screen that turns the natural content from the other side in a vivid experience.



The Garden

The garden offers a sublime atmosphere where the space is surrounded by natural elements with no sight of the city, expect for the sound of the traffic above blended with the sound of the wind and the flowing water from the garden……

…..and so we can experince the ever familiar yet the invisible city.

