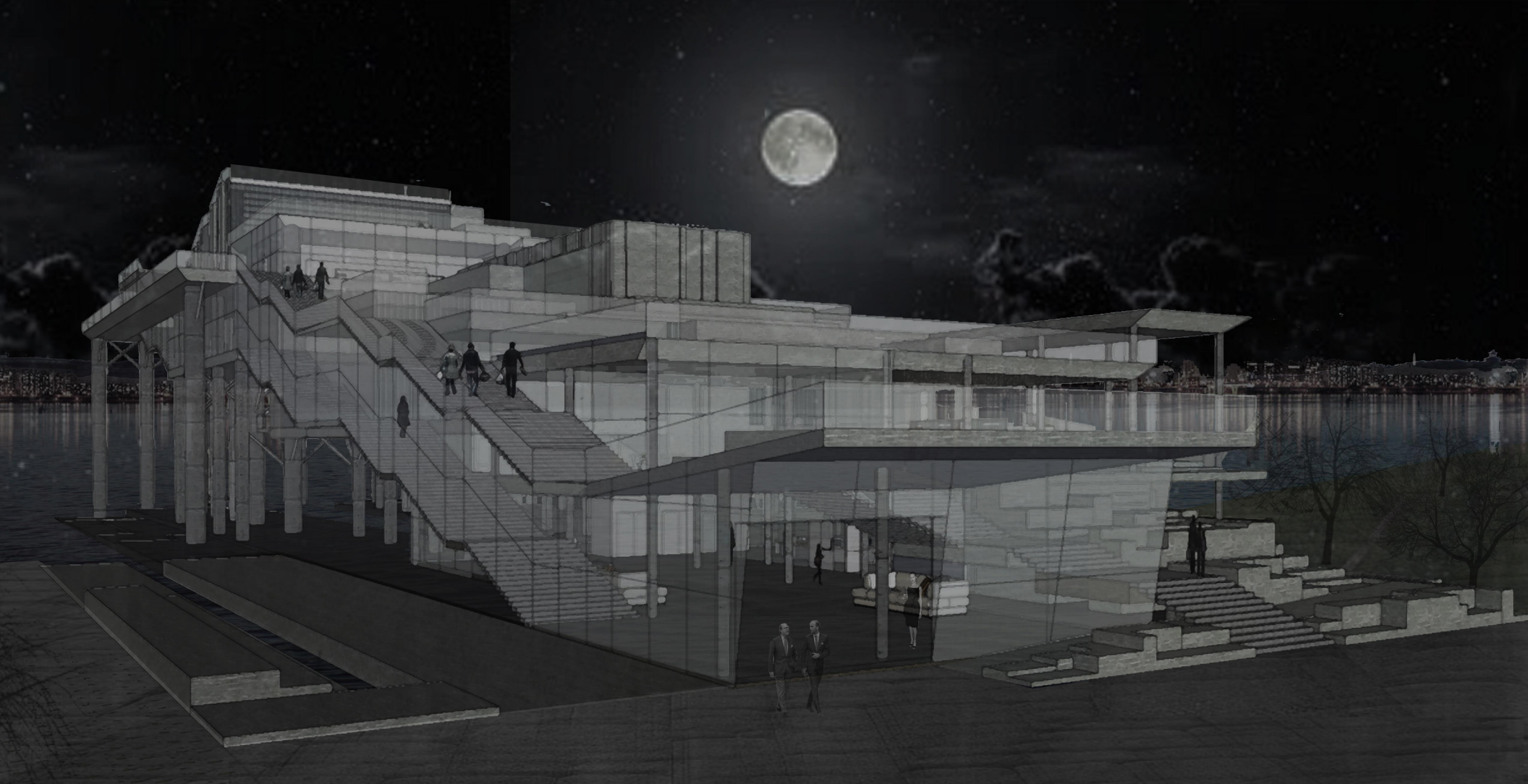


An Architectural Response to Movement



A Center for Dance on the Potomac River in Alexandria, Virginia's Old Town
Ashton Elizabeth Hartley, Master of Architecture Thesis 2010-11. Washington-Alexandria Architecture Consortium

ASHTON ELIZABETH HARTLEY

Thesis submitted to the faculty of Virginia Polytechnic and State
University in partial fulfillment of the requirements for the degree of:
Master of Architecture in Architecture

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DEFENSE DATE

September 26, 2011, Alexandria, Virginia

KEYWORDS

Movement, Circulation, Layers, Transparency, Choreograph

ABSTRACT: AN ARCHITECTURAL RESPONSE TO MOVEMENT

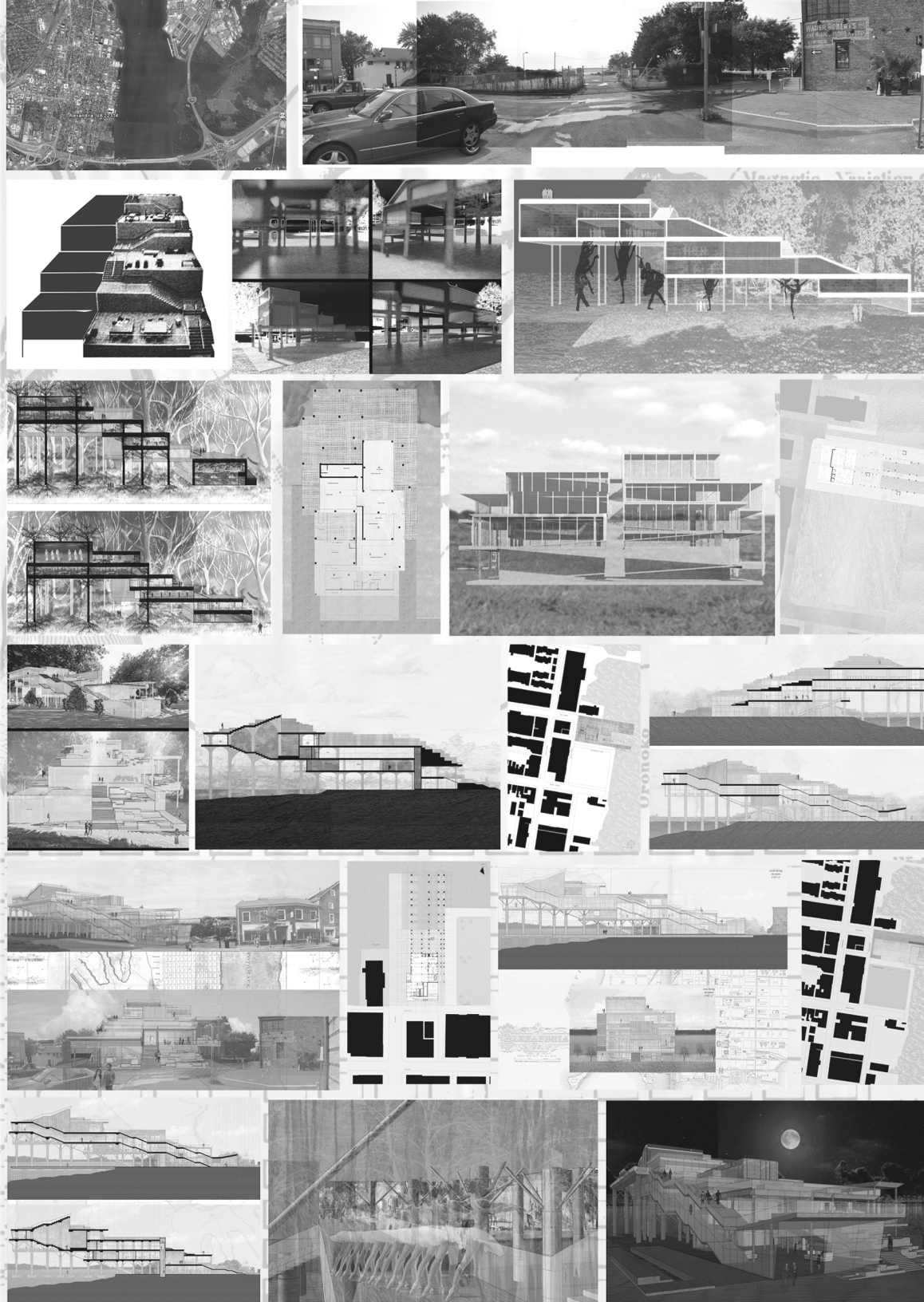
-ASHTON ELIZABETH HARTLEY-

Movement as thesis: the idea of movement gives the design order, clarity, and meaning.

City planners in Alexandria, Virginia are devising a plan to help the city's historic district take full-advantage of its land along the Potomac River. In my thesis, I have attempted to breathe life into two lots at the terminus of King Street, using architecture as my medium.

To bolster Alexandria's burgeoning reputation as a mecca for the arts, I chose to design a dance center, a building type with which I am deeply familiar, in the aforementioned site. Given the importance of movement to my site, especially in terms of pedestrians and the Potomac River, a dance center is a fitting building type.

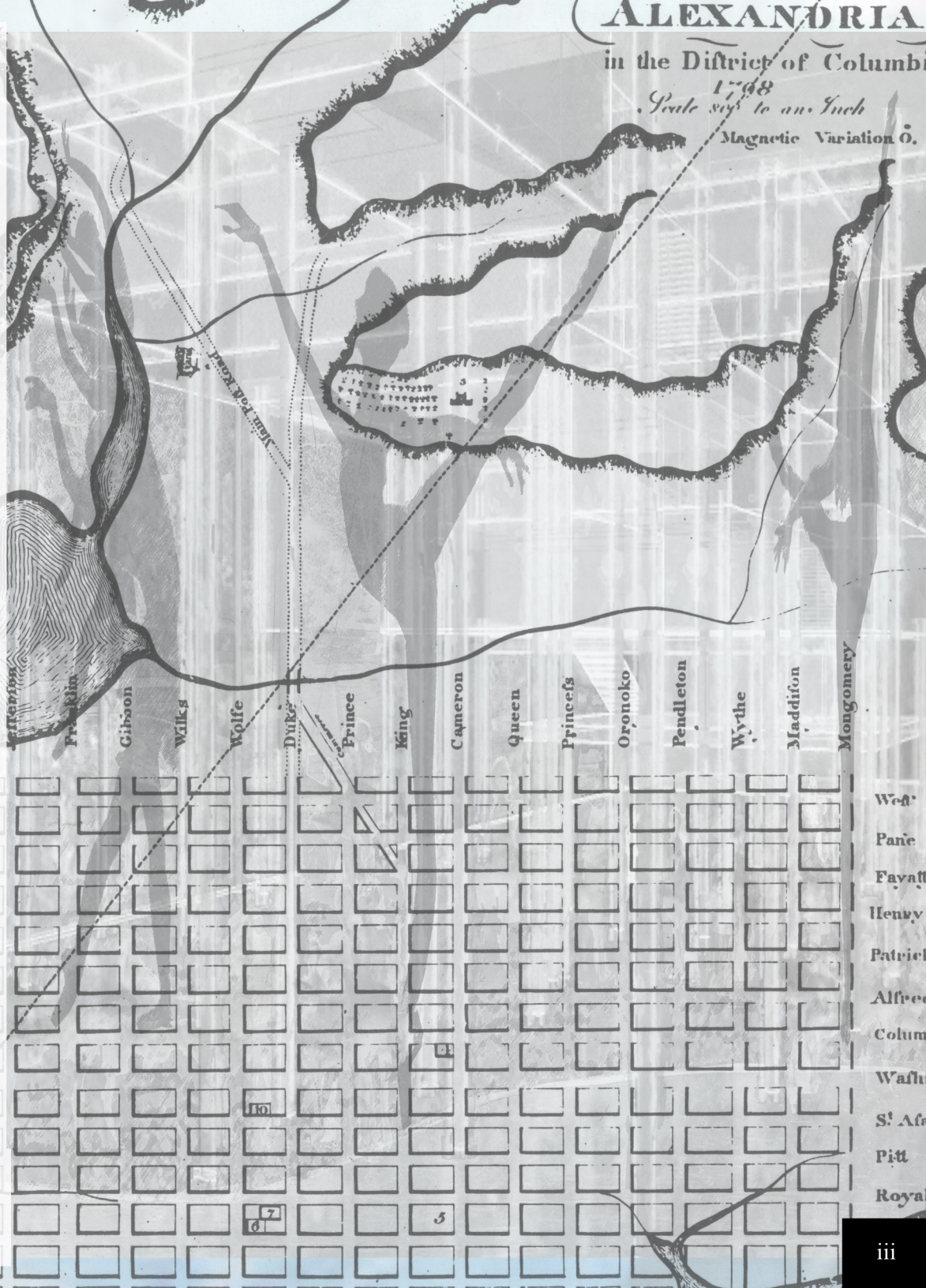
To aid in crafting a cohesive building that spoke to both the demands of the site and the programmatic needs of a dance center, I looked to movement as the answer to all design quandaries: movement as thesis. I developed a stepped parti- a concept informed by strategies to invite, accommodate, and glorify movement. All elements of the building reinforce this parti to create a holistic building. The building follows the ascension of a primary staircase, and is supported by a multitude of columns, simultaneously reminiscent of a corps de ballet and an enchanted forest, both staples in classical story ballets.



ACKNOWLEDGEMENTS:

To those who constantly rekindled my spirit during the evolutionary journey that was my thesis, and who reminded me that nothing worth becoming comes easily.

- Mike Hantjis- my beloved husband, who was my fiance AND my rock during my thesis year
- Frances and Lawrence Hartley- my parents, for their years of steadfast support and unconditional love
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- My architecture friends- especially Mercedes Kiss, Katrina Trozado Nguyen, Anna Bayoczek, Samantha Bennett, Inga Beerman, and all of my “roommates” for always being available to “talk architecture” and broaden my perspective
- Susan, Paul, and Marcia- my committee members, for pushing me to explore my initial impulses to the point where I produced a thesis in which I can take pride. During my thesis process, I expanded my capacity for architectural thinking beyond what I could have imagined. This is an immeasurable gift, which I will keep for the duration of my life.



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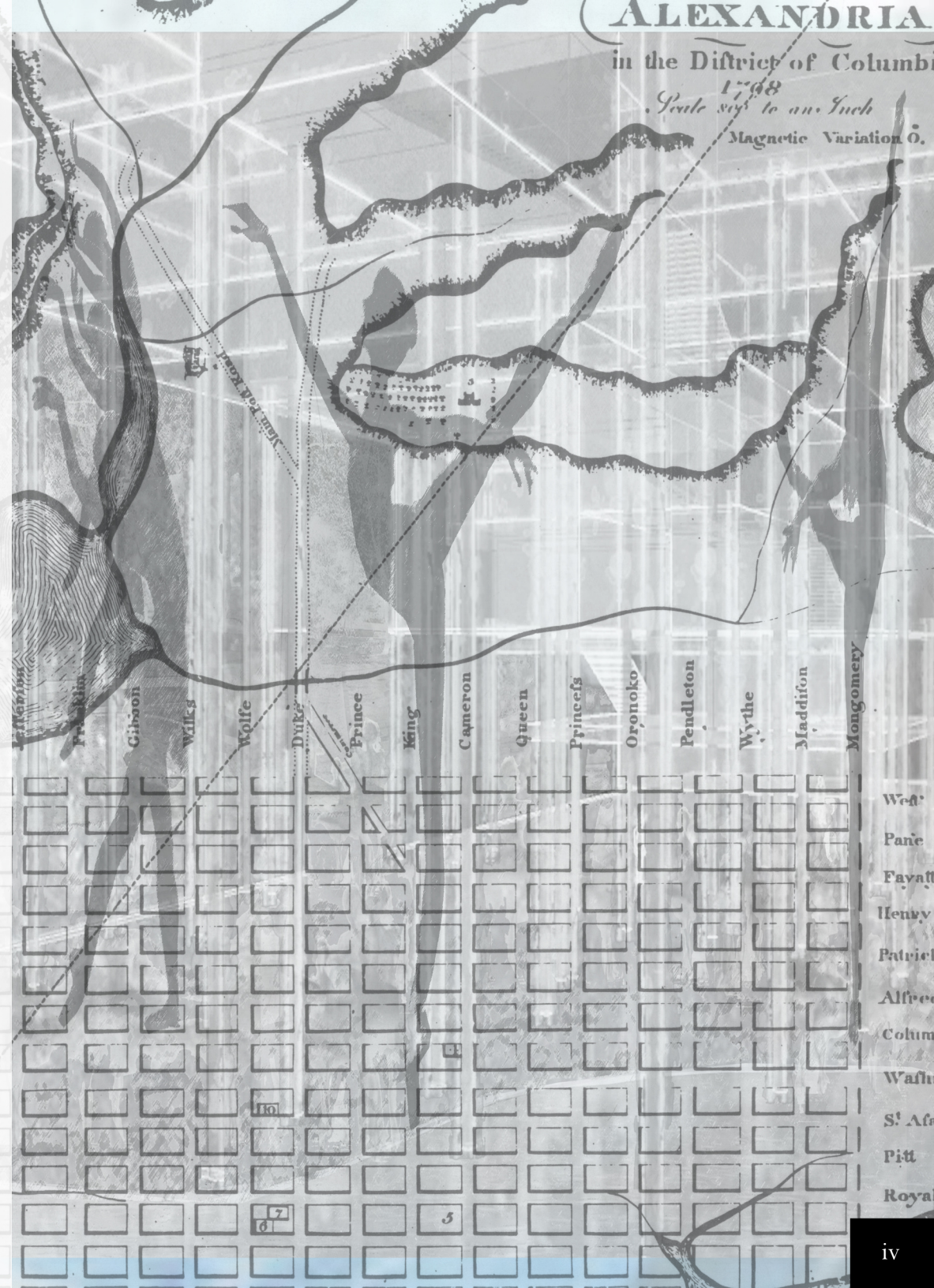
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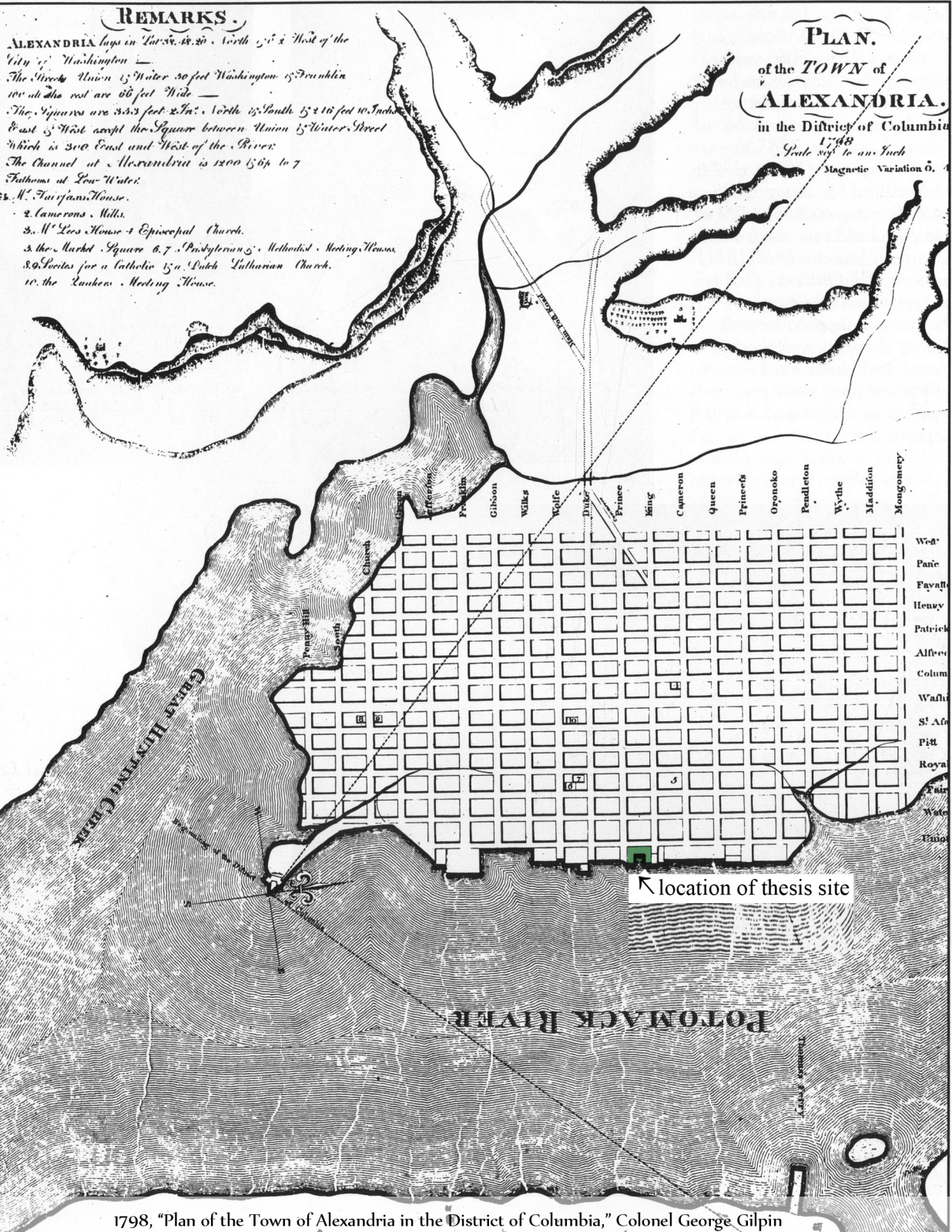


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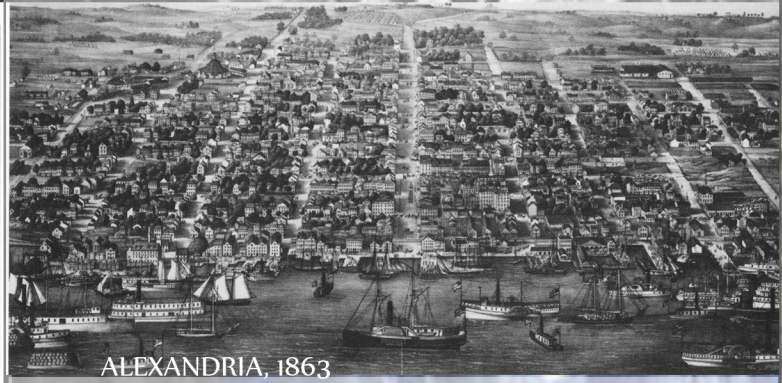
ALEXANDRIA lays in $38^{\circ}55' 48''$ North $76^{\circ} 2'$ West of the City of Washington —
 The Streets Union & Water 50 feet Washington & Franklin 100 all the rest are 66 feet Wide —
 The Squares are 353 feet 2 In: North & South 15 & 16 feet 10 In: East & West except the Square between Union & Water Street which is 300 East and West of the River.
 The Channel at Alexandria is 1200 & 64 to 7 Fathoms at Low Water.
 1. M. Telford's House.
 2. Camerons Mills.
 3. M. Lee's House & Episcopal Church.
 4. the Market Square & 7. Presbyterian & Methodist Meeting Houses.
 8. 9. Sites for a Catholic & a Dutch Lutheran Church.
 10. the Lutheran Meeting House.

PLAN.
 of the TOWN of
ALEXANDRIA.
 in the District of Columbia

1798
 Scale 500 to an Inch
 Magnetic Variation 0. 4



1798, "Plan of the Town of Alexandria in the District of Columbia," Colonel George Gilpin



ALEXANDRIA, THEN AND NOW

Alexandria, Virginia sits on the west side of the Potomac River, 6 miles south of Washington, D.C., and 9 miles north of Mt. Vernon, the former home of George Washington. The river has played a large role in shaping the city's history, from leading early explorers to the area in the early 1600's, to helping Alexandria become one of the nation's leading seaports by the late 1700's.

Today, the city of Alexandria has a population of close to 140,000 residents, many of whom work in government related jobs, which abound due to the area's proximity to the nation's capital, Washington, D.C. Alexandria's historic center, known as Old Town, is a major draw for tourists, with its abundance of early American architecture, historic landmarks, and world class restaurants, galleries, and boutiques.



ALEXANDRIA, 2011

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1845, Plan of the town of Alexandria, D.C, Maskell C. Ewing



1935, Aerial view of King Street



1845, Alexandria with the ship Fairfax leaving for Rio de Janeiro, John Stobart.



1900, foot of King St, looking towards the Potomac

“WHEN I WAS YOUNG, MANY A TIME HAVE I COUNTED OVER THE SHIPS AND THE BARQUES BELONGING TO ALEXANDRIA— 10 or 12 FIRST CLASS SHIPS. I COULD JUMP ON BOARD A WEST INDIE TRADER AND PICK UP A PINEAPPLE, BANANA, OR ORANGE.”
 —FROM “MANUSCRIPTS OF AN OLD BACHELOR: REMINISCENCES OF ALEXANDRIA, 1830’s”

“SEEN FROM THE RIVER, THE TOWN PRESENTS AN APPEARANCE AT ONCE STRIKING AND QUIET. THE TOWN, STRETCHING BACK AND UP FROM THE RIVER, MAKES AN EXCEEDINGLY PICTURESQUE AND ARTISTIC SKYLINE. ALEXANDRIA HARBORS A GENIAL LIFE, WHICH RETAINS MUCH WARM CORDIALITY AND QUIET, UNOSTENTATIOUS, HEREDITARY REFINEMENT.”
 —FROM “AN OLD VIRGINIA TOWN”, BY F.H. LUNGREN AND R. BLUM IN SCRIBNER’S MONTHLY, FEBRUARY 1881.

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Vignettes from a journey down King Street, depicting the historic storefronts and the monumental Masonic Temple



KING STREET

The primary pedestrian street in Old Town is King Street, lined by centuries old buildings, which house countless shops, restaurants, businesses and residences. The anchors of King Street are the George Washington Masonic Temple at the west end, and the Potomac River at the east end. A block from the Masonic Temple is the King Street metro, the construction of which sparked extensive development in Old Town's west end in the 1980's.

"ALEXANDRIA IS VERY HANDSOMELY SITUATED, WITH STREETS LAID OUT ON THE PLAN OF PHILADELPHIA. IT IS CONSIDERED REMARKABLY HEALTHY, AND THE VIEW FROM THE CITY IS VERY FINE. THE TOWN IS SITUATED IN THE BOTTOM OF A VALLEY, WHICH TO THE EYE IS TERMINATED IN EVERY DIRECTION BY LOFTY AND VERDANT HILLS... TO THE SOUTH, THE BROAD TRANSLUCENT EXPANSE OF THE POTOMAC OPENS UPON HIM." -FROM "ALEXANDRIA, VIRGINIA AND THE DISTRICT OF COLUMBIA" BY JOSEPH MARIN, 1835

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Images of Old Town's waterfront



THE WATERFRONT

The riverfront offers vistas of the monuments in D.C. to the north, and of the newly developed National Harbor to the south, both of which can be reached by boats launched from the city's docks. The Mount Vernon Trail, a popular running and biking trail along the Potomac, connects it to both Mount Vernon and Washington, D.C. The main attractions of the waterfront are the Torpedo Factory (a remnant of the early 20th century which now serves as studio and gallery space for renowned artists), the boardwalk in front of the Torpedo Factory, and the nearby Waterfront Park and Founder's Park.

“AT ALEXANDRIA... THE POTOMAC ROLLS WITH SUB-LIMITY AND GRANDEUR. SIXTY-GUN SHIPS MAY LIE BEFORE THE TOWN, WHICH STANDS UPON ITS LOFTY BANKS. THIS TOWN IS RAPIDLY ON THE INCREASE, AND CANNOT FAIL TO BECOME ONE OF THE FIRST CITIES OF THE NEW WORLD.”

- FROM “TRAVELS IN NORTH AMERICA, VOL. III” BY THE MARQUIS DE CHASTELLUX, 1780-1782



Photographs depicting the need for the revitalization of Old Town's waterfront



ALEXANDRIA WATERFRONT PLAN

The waterfront's value to Alexandria did not end with the destruction of its vibrant port, brought on by war and industrialization. It is still an invaluable resource, with the possibility of becoming a place of community and tourism, and thus an economic boon for the city. Currently, the land in Old Town bordering the river consists of unrelated segments. Patches of private property make a continuous path along the waterfront obsolete. A journey from the Masonic Temple down the dynamic King Street comes to an anticlimactic end at the Potomac River. Views are blocked by private buildings, parks lack enticing landscaping, and the planned areas that do exist, such as the boardwalk in front of the Torpedo Factory, lack imagination. The "Alexandria Waterfront Plan" has been devised to help the city capitalize on its location. Plans for the betterment of the riverfront seek to highlight the city's long connection to the river, and ergo, its rich role in American history. The plans also aim to establish visual and physical connections between the riverfront and the rest of Old Town.



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Panoramic photographs of the site, taken from different perspectives



Aerial images of the site, each at a different distance to give a full perspective of the context



THESIS SITE

One of the most problematic areas along the waterfront in Alexandria's Old Town is the small, poorly defined, and unappealing lot of grass at the eastern terminus of King Street, as well as the large adjacent large parking lot, enclosed by a foreboding chain-link fence. In my thesis, I have sought to breathe life into this dilapidated site, with architecture as my medium.

"A BUILDING IS A DECLARATION OF LOVE FOR ITS SITE."
- PETER ZUMTHOR

"BY ORGANIC ARCHITECTURE I MEAN AN ARCHITECTURE THAT DEVELOPS FROM WITHIN OUTWARD IN HARMONY WITH THE CONDITIONS OF ITS BEING."
-FRANK LLOYD WRIGHT

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WHAT

A center of dance on Old Town's waterfront. The idea of movement speaks to the demands of the site and program, and gives the design organization, clarity, and meaning.



RELATED TERMS

DANCE- visible and invisible meet and anneal, timelessly in a unique ecstasy/ the arrangement and rhythm of the dance are the rungs of the ladder which provides the escape/ the shamans dance to drum beats to ascend to the spirit world

PRECEDENTS- an archetype/ antecedent/epitome/ paradigm/ paragon/ pattern for excellence

THESIS- idea/ proposal/ view/ theory/ sentiment/ hypothesis/ a proposition to be proved

IDEA- result of thinking or of conceiving in the mind

KNOWLEDGE- acquaintance through familiarity gained by experience OR the apprehension of truth through reasoning

*definitions, etymological origins, and synonyms are derived from... dictionary.com, etymonline.com, and thesaurus.com





MOVEMENT AS THESIS

Alexandria's efforts to advertise itself as a burgeoning mecca for the arts, paired with my deep familiarity with the world of dance, sparked the notion of designing a dance facility in the chosen site for my thesis. While Old Town boasts venues for music, theater, and visual arts, it lacks any representation for dance. Given the influence of movement on my chosen site, especially in terms of pedestrians and the Potomac, a dance center is an appropriate addition to the given context. To guide in the design of a cohesive building that speaks simultaneously to the demands of the site and the programmatic needs of a dance center, I've chosen movement as the answer to all design quandaries: movement as thesis.

"I AM INTERESTED IN INSTITUTIONS SUCH AS ART MUSEUMS AND CONCERT HALLS, WHICH HELP US WORK AGAINST AGGRESSION, AND BRING OUT THE GOOD IN PEOPLE."
—PETER ZUMTHOR



EURYTHMIA

The design of the ballet center, adjacent to the base of King Street, must address not only the movement of the dancers filling its studios, but also the movement of a wide array of factors which act upon the site: whirring automobiles atop the highly visible Wilson Bridge, boats of all sizes crawling and speeding down the Potomac, planes hovering impossibly close as they come and go from Reagan National Airport, bicyclists rolling by as they travel along Mt. Vernon Trail, pedestrians drawn down King Street by the promise of the waterfront's unique character, the waters of the Potomac rising and falling according to rain fall and tidal patterns, the changing seasons rendering stark differences in temperature and the appearance of foliage, and the sun whose constant dance with the Earth produces ebbing shadows and light throughout the day. In JJ Pollitt's *The Ancient View of Greek Art*, a conversation between two Greek philosophers gives rise to the topic of eurythmia, as they discuss the need for armor to be tailored to fit the specifications of a particular body (1). Eurythmia, rooted etymologically in "eu", meaning good, and "rhythmos", meaning form and shape, can be examined through the architectural act of tweaking a design to conform to given conditions. Like the Greek armor, which was adjusted to allow for free movement, the design of the dance center must begin with an awareness of the types of movement to be allowed for, and take shape accordingly. The study of ballet can inform the architect in the eurythmic process of crafting a building to suit its site, as demonstrated in choreographer Agnes de Mille's observation of ballet: "Ballet technique is arbitrary and very difficult. It never becomes easy--it becomes possible. The effort involved in making a dancer's body is so long, relentless, and painful, the effort to maintain the technique so grueling, that unless a certain satisfaction is derived from the disciplining and the punishing, the pace could not be maintained." Just as a building's design is tuned to compliment the site, a ballerina's body is ever adapting in an effort to best celebrate the art of ballet.

1. J.J. Pollitt, *The Ancient View of Greek Art: Criticism, History, and Terminology*, New Haven, Yale University Press, 1974

"DANCE AND ARCHITECTURE HAVE MUCH IN COMMON. BOTH ARE CONCERNED WITH THE PRACTICES OF SPACE. FOR A DANCER, THE ACT OF CHOREOGRAPHY AS A WRITING OF PLACE OCCURS THROUGH THE UNFOLDING OF SPATIAL DIMENSIONS THROUGH GESTURE AND EMBODIED BODY MOVEMENT. FOR THE ARCHITECT, SPACE IS THE MEDIUM THROUGH WHICH FORM EMERGES AND HABITATION IS CONSTRUCTED. FOR BOTH, THE FIRST EXPERIENCES SPACE IS THE SPACE OF THE BODY."

—CAROL BROWN, CHOREOGRAPHER

MOVEMENT, BALLET, AND ARCHITECTURE

Ballet, like architecture, operates on a system of tension, compression, and counter-balance, working within the laws of gravity to seemingly defy them. The flow of movement characteristic to ballet stems from an acute awareness of this operating system. Even while maintaining her pose, the dancer meditates on a disciplined continuity of energy. While perching on the tips of one leg's toes, the other leg stretched behind her in an arabesque, the dancer maintains the opposition and continual extension needed to sustain the pose's delicate balance. Her arms stretch towards opposite walls. She imagines strings attaching her chest and the top of her head to the clouds, while keeping her shoulders pressed down. Though her standing leg bears the weight of her entire body, she maintains the leg's turn out, in turn pulling its muscles skyward. As her raised leg shoots behind and away from the body, the dancer engages her back, working to keep it upright despite its yearning to differ to the back leg and tilt forward. It is from this meditative awareness of her every muscle that the dancer is able to spring into staccato-like motion, or create flowing transitions between the slow, controlled movements of an adagio.

A center for dance must address dance's implied notion of movement. The placement of my dance center, at the crux of the 2 important pedestrian axes of Alexandria's King Street and the Potomac river, demands that the design speak to the movement of pedestrians, as well as of the dancers. Dance training and performance will be on view to the building's users via the stacked staircases, which run the length of the building, and serve as the primary means of circulation. Furthering the idea of movement, the center will be adaptable to different needs, and constantly in flux, as each studio will have operable windows, movable panels which will allow space to be reconfigured as needed, and on occasion, entire walls which will retract to open studios to an outdoor, public amphitheater. Like Walter Benjamin's arcades project, the dance center will be a fluid place... montage-like, and always remoulding in meaning (1). A shaping force in the dance center's design will be the "deep fascination that draws people towards others; an architecture that recognizes sociality." (2)

1. Walter Benjamin, *The Arcades Project*, New York, Belknap Press, 2002

2. Robin, Evans, *Translations from Drawing to Building*, Cambridge, MA, MIT, 1997

RELATING DANCE TO ARCHITECTURE

“It can be argued that dance, more than any other art form, resembles the fundamental characteristics of architecture. Like architecture, it:

1. Is constructed of the human figure, & occupied by the human spirit.
 2. Is a constant battle with gravity & the limitations of human physicality.
 3. Demands precise technique and craft.
 4. Requires knowledge of its traditions, history, & theory
 5. Creates an awareness of the line between body & mind.
- Doing and Dancing: Rudolf Laban & the Dance Form*, by Mack Scogin

”...AND WITH THOSE EYES HE (DA VINCI) SAW MORE THAN ANYONE HAD EVER SEEN BEFORE, BECAUSE HE WAS ALWAYS ASKING HIMSELF QUESTIONS ABOUT WHAT HE OBSERVED.”
-E.H. GOMBRICH



sun and shadows



bicycles



boats



water



dancers



planes



pedestrians



cars on the bridge



seasons

BALLET, LIKE ARCHITECTURE, OPERATES ON A SYSTEM OF TENSION, COMPRESSION, AND COUNTER-BALANCE, WORKING WITHIN THE LAWS OF GRAVITY TO SEEMINGLY DEFY THEM.

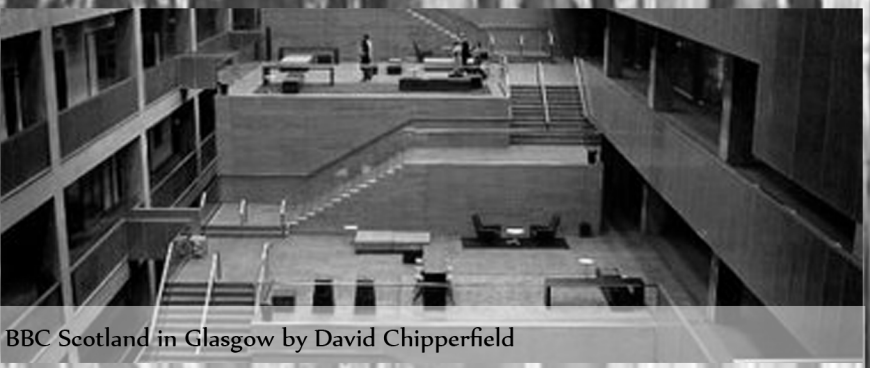




Detail at the Brion Vega Cemetary by Carlo Scarpa



TIFF Bell Lightbox in Toronto, Ontario, Canada by KPMB Architects



BBC Scotland in Glasgow by David Chipperfield

CASE STUDIES: BUILDING ELEMENTS TO FACILITATE MOVEMENT

- 1) STAIRS- Stairs will allow height to be reached and thus promise pedestrians unmatched views of the Potomac, the National Harbor, and Washington D.C.. Additionally, by elevating the building near the river, the pedestrian path along the river will be preserved.
- 2) UNDERNEATH- The area beneath the stepped building will be populated by supporting columns, creating a forest-like setting, where boats will be able to tie up to the columns, and steps into the river will engage the changing tide.



Beaux Arts Museum in Quebec, Canada by OMA



Sagrada Familia in Barcelona, Spain by Antonia Gaudi



Library Info Centre in Kosice, Slovakia by Juraj Koban

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TELUS Centre for Performance and Learning in Toronto, Canada by KPMB



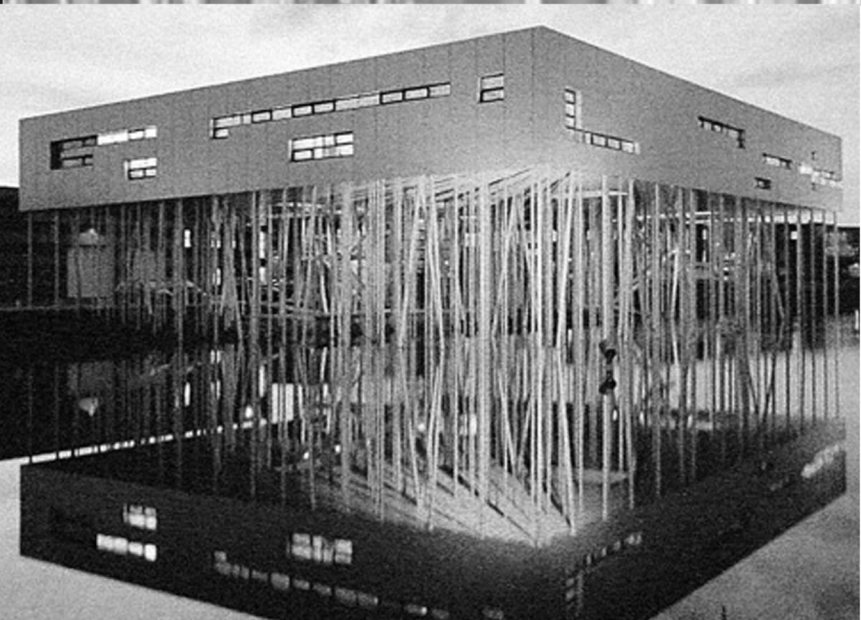
Creative Arts Center in Providence, Rhode Island by Diller, Scofidio + Renfro



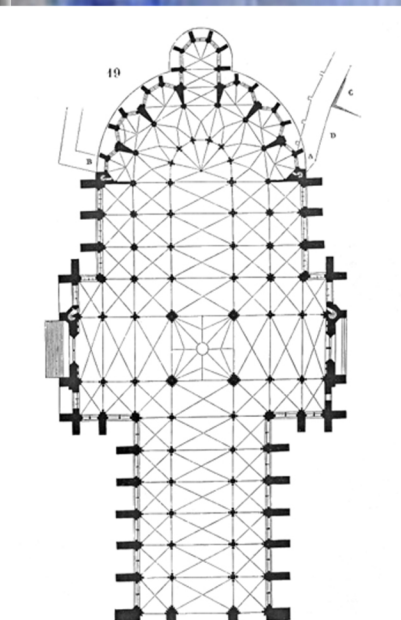
Gatti Wool Mill in Rome, Italy by P.L. Nervi

3) COLUMNS- Columns supporting the stepped building call to mind 1) an enchanted forest, in which so many classical ballets are set, as well as 2) a corps de ballet, who, like the columns, seemingly defy gravity through a specific structure.

4) LAYERS- The volumes which compose the interior of the dance center follow the stepping of the stair which runs the length of the building, overlapping in layers, thus providing for dynamic relationships between the interior spaces.



Aluminum Forest in Utrecht, Netherlands by Micha de Haas



Amiens Cathedral, in Amiens, France



Park Guell in Barcelona, Spain by Antonio Gaudi

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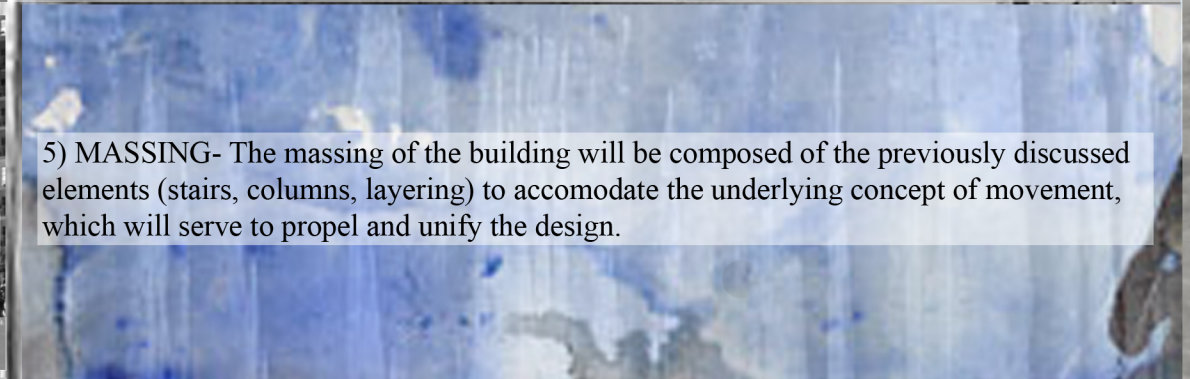
Beaux Arts Museum in Quebec, Canada by OMA



Mountain Dwelling in Copenhagen, Denmark by BIG Architects



La-cubo Commercial Facility in the Republic of Korea by JUNGLIM Architecture



5) MASSING- The massing of the building will be composed of the previously discussed elements (stairs, columns, layering) to accommodate the underlying concept of movement, which will serve to propel and unify the design.



Seattle Public library by OMA



Alice Tully Hall in NYC by Diller Scofidio+Renfro



III Lincoln Road in Miami, Florida by Herzog and de Meuron

HOW

Multiple iterations of the building were created in an aim to reach a fully examined design, capable of enriching and invigorating the waterfront.

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RELATED TERMS

STAIRWAY- ascent to knowledge/ a symbol of the acquiring of learning

CONTEXT- to weave, or join together/ the circumstances surrounding the situation

SITE- place or position occupied by something

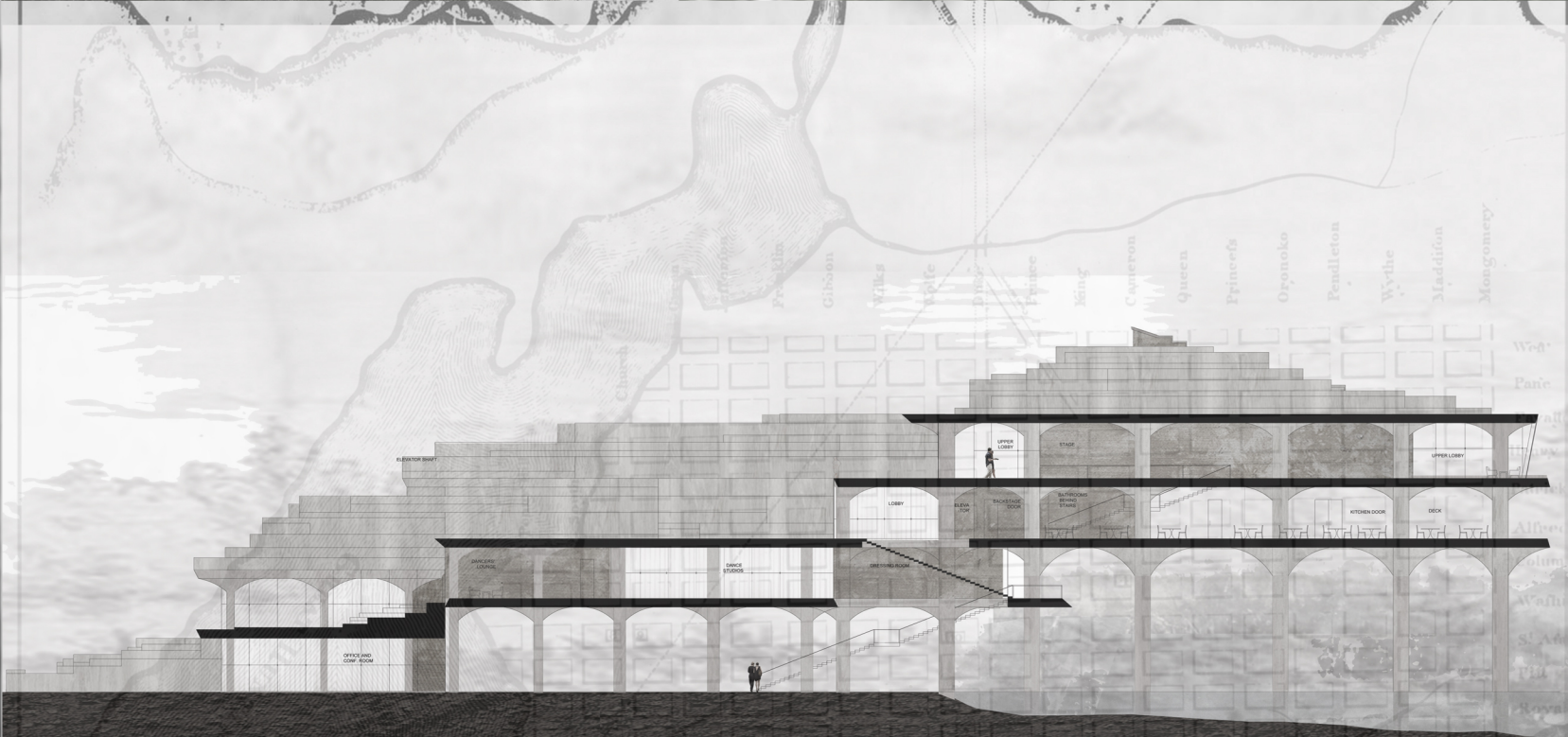
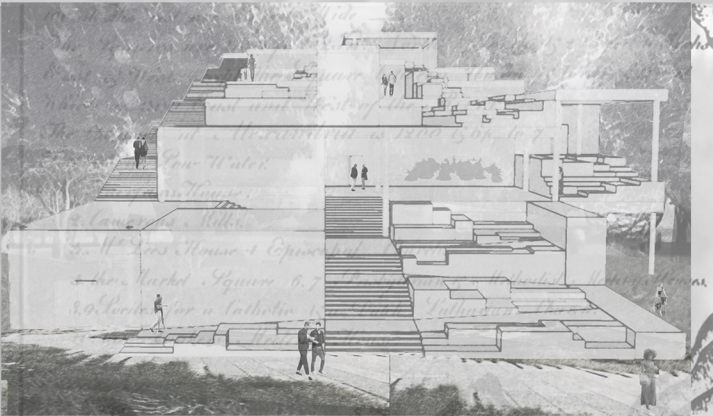
PROCESS- a continuous series of actions meant to accomplish results

ANALYSIS- resolution of anything complex into simpler elements/ set free

PARTI- from the French "prendre parti"- to make a decision/ the organizing idea behind a design, presented as a basic diagram

DESIGN- to devise for a specific function/ purpose

*definitions, etymological origins, and synonyms are derived from...
dictionary.com,
etymonline.com,
and thesaurus.com



METHODS TO INCREASE WATERFRONT VIBRANCY

By choosing the waterfront site in Old Town, Alexandria for my thesis, I have inherently enlisted in an effort to address the widely held desire to enrich Alexandria's waterfront. Currently, this section of Old Town's waterfront is afflicted by a lack of vistas, public amenities, and pedestrian connectivity. In reading over minutes from the waterfront planning committee's meetings, accessible through the City of Alexandria's website, I have gathered some key suggestions which, if executed, will imbue the waterfront with vibrancy. They can be categorized according to the scales to which they speak: that of the city, the site, and the building.

CITY SCALE

- Be mindful of the urban fabric- designs should harmonize with the built & natural environment.
- Establish anchors, which will pull the energy of King Street to the water, & between which development will flourish.
- Development should be mixed-use for round-the-clock vitality.
- Bolster Alexandria's growing reputation as an arts community.

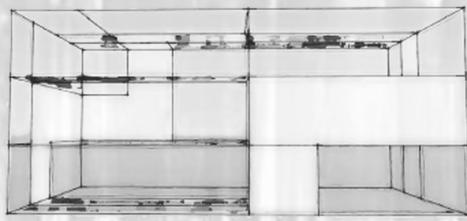
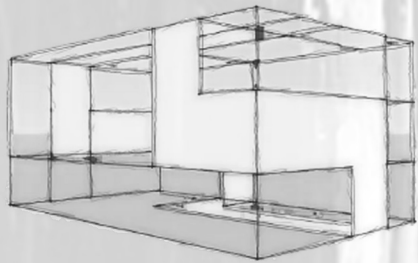
SITE SCALE

- Create continuous public access along the waterfront. Offer amenities that cater to pedestrians.
- Carry out appropriate edge treatments, such as terraces or steps for interaction with the water.
- Relate the building to the monumental qualities of 1) Washington D.C.'s tidal basin, connected to the site by the Mt. Vernon Trail, which runs along the Potomac River, and 2) the George Washington Masonic Temple, connected to site by Old Town's King Street.

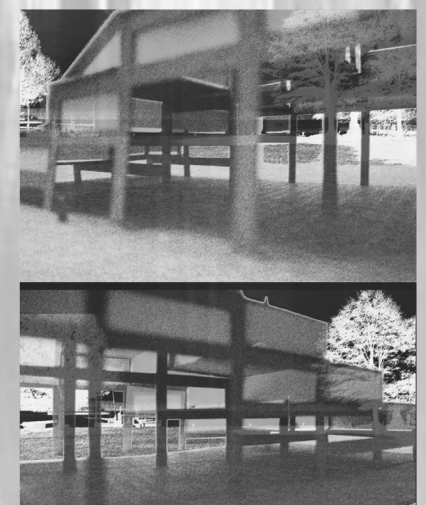
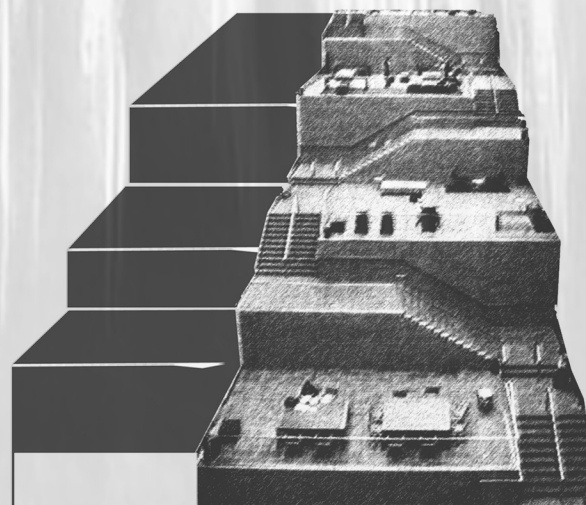
BUILDING SCALE

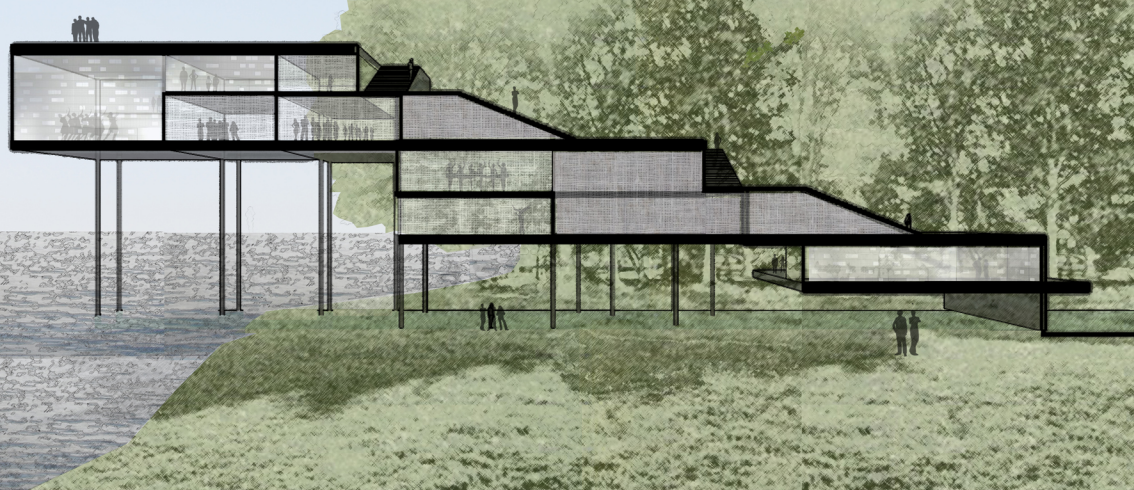
- The scale of new buildings should relate to pedestrians & the surroundings. Compose vistas & gateways to the water.
- Utilize iconic structures to create a sense of arrival, & fulfill the city's goal to "brand the strand".
- Form central gathering spaces where vistas of the Potomac River & of the life of the town can be achieved.
- Activate 1st floor spaces, and offer an occupiable roof.

"IF YOU DON'T KNOW WHERE YOU ARE GOING, ANY ROAD WILL GET YOU THERE." -LEWIS CARROLL

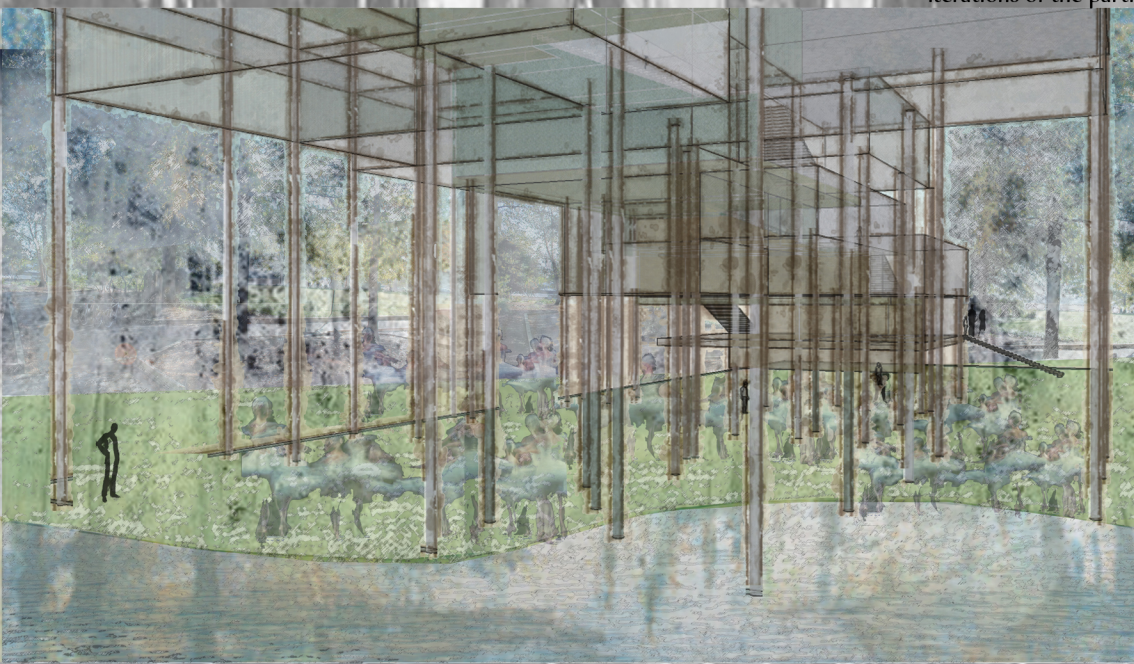
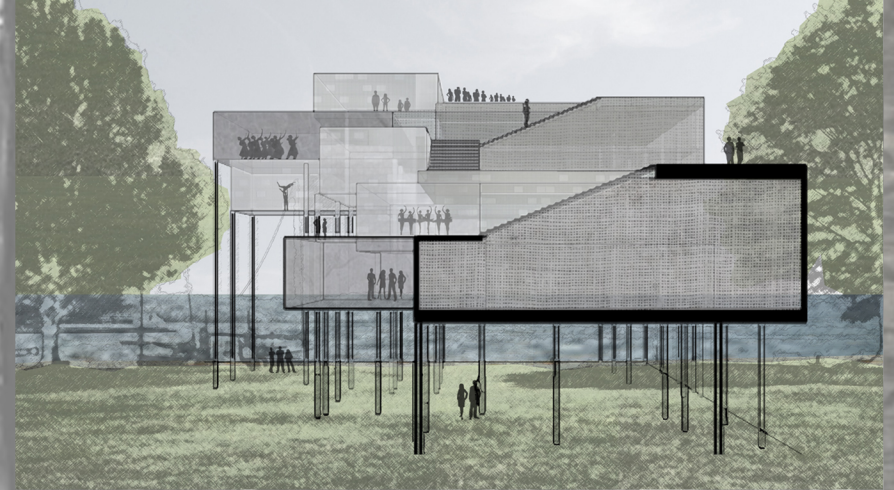


initial explorations of massing and scale





iterations of the parti

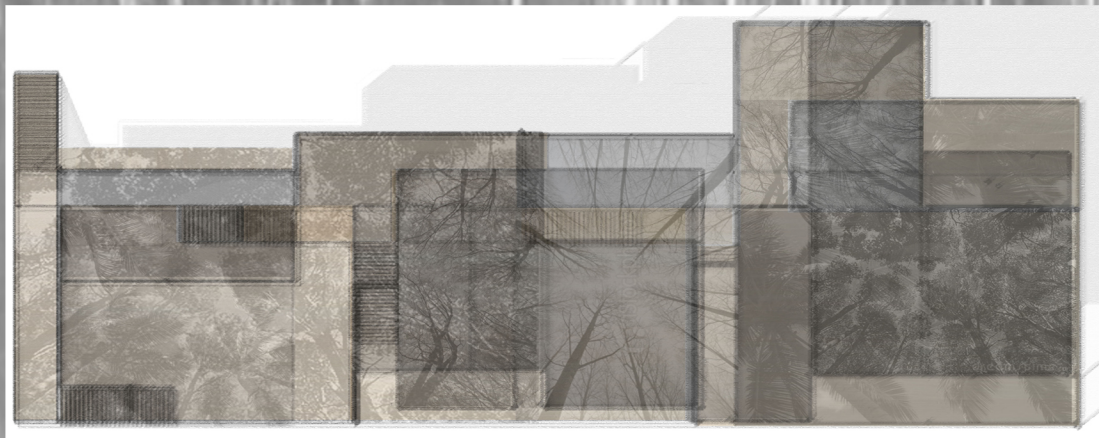


PARTI

The stepped parti's form is guided by a staircase that serves as the principle means of circulation and runs the length of the building. Its concept was informed by strategies for inviting, accommodating, and glorifying movement. All elements of the building will reinforce the parti to create a holistic building.

This parti works toward the goal to activate the waterfront by... 1) drawing pedestrians up the exterior stairs of the dance center to experience unparalleled vistas, and 2) elevating the dance center as it approaches the water's edge to allow for uninterrupted pedestrian access along river.

“YOUR DESTINATION IS NEVER A PLACE BUT A NEW WAY OF SEEING THINGS.”- HENRY MILLER



where.

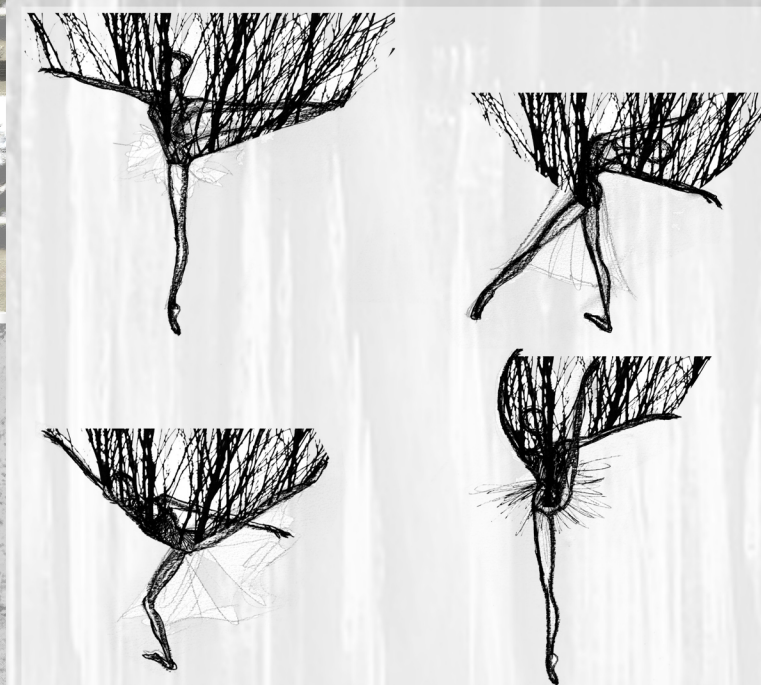
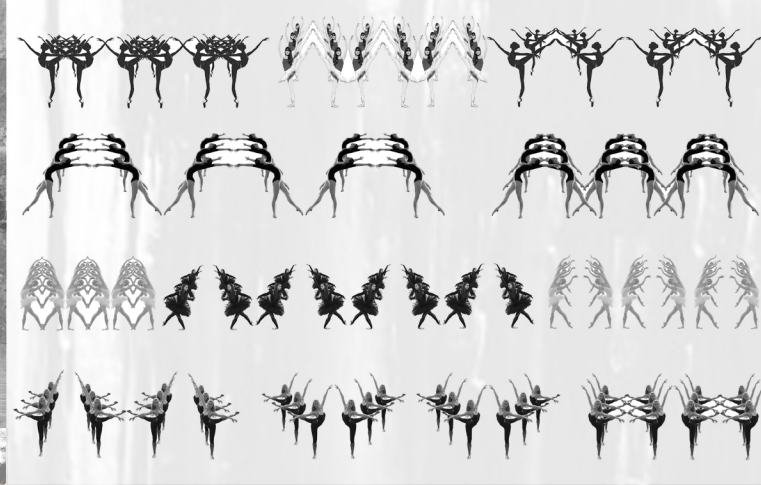
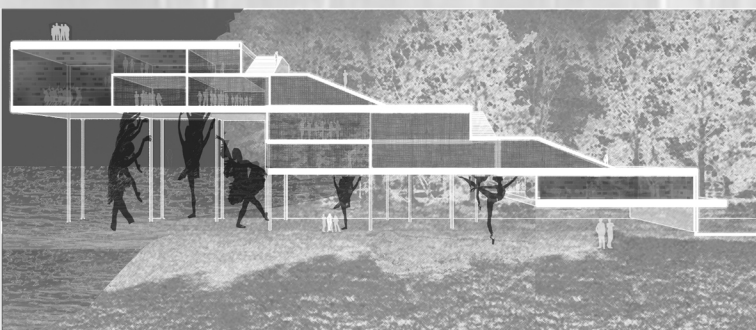
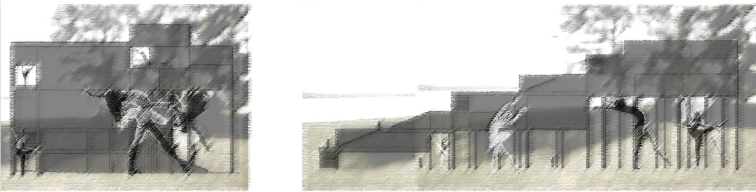
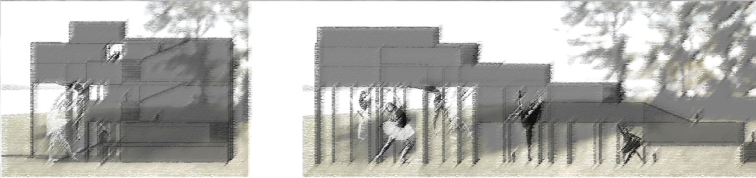
what.

how.

realization



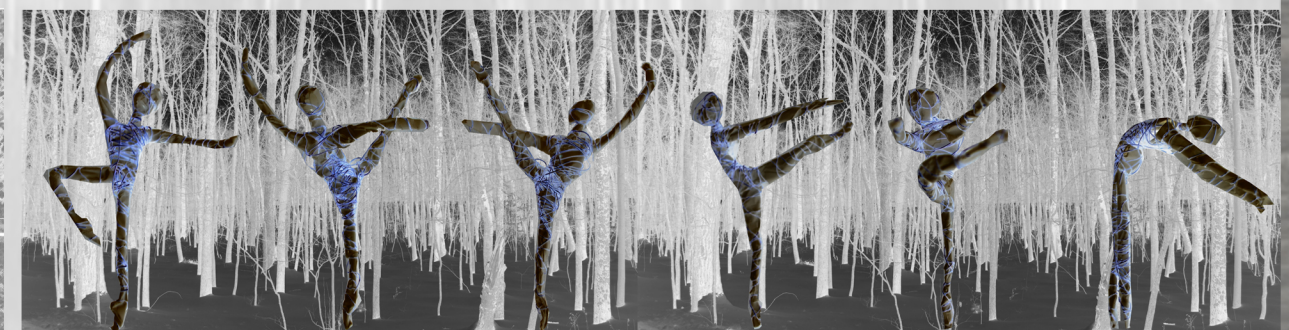
developments of the comparison of columns to dancers



A REFLECTION ON OPPOSITION

The forest of columns provides a stage-like setting, reminiscent of the enchanted forests in which so many classical ballets are set. Of these, *Swan Lake* provides a superlatively applicable framework for developing my design. All ballets have many elements of value, such as choreographics, and musical tempos. However, only *Swan Lake* offers such an overriding dichotomy between opposing elements (in the form of Odete and Odile) which could give rise to architectural expressions of inversion and mirroring. Current productions of *Swan Lake* represent Odile as the evil black swan. However, in early productions, she was costumed in colorful dress, and presented as a woman of the world, whose seductions lay in her glamorous availability, in contrast to the withheld Odette. This prompts architectural explorations of expressing the the juxtaposition between a worldly and colorful component, and an ethereal and pure component.

The building follows the ascension of the staircase, and is supported by a multitude of columns, simultaneously reminiscent of a corps de ballet and an enchanted forest, both heavily featured in the classical story ballet.

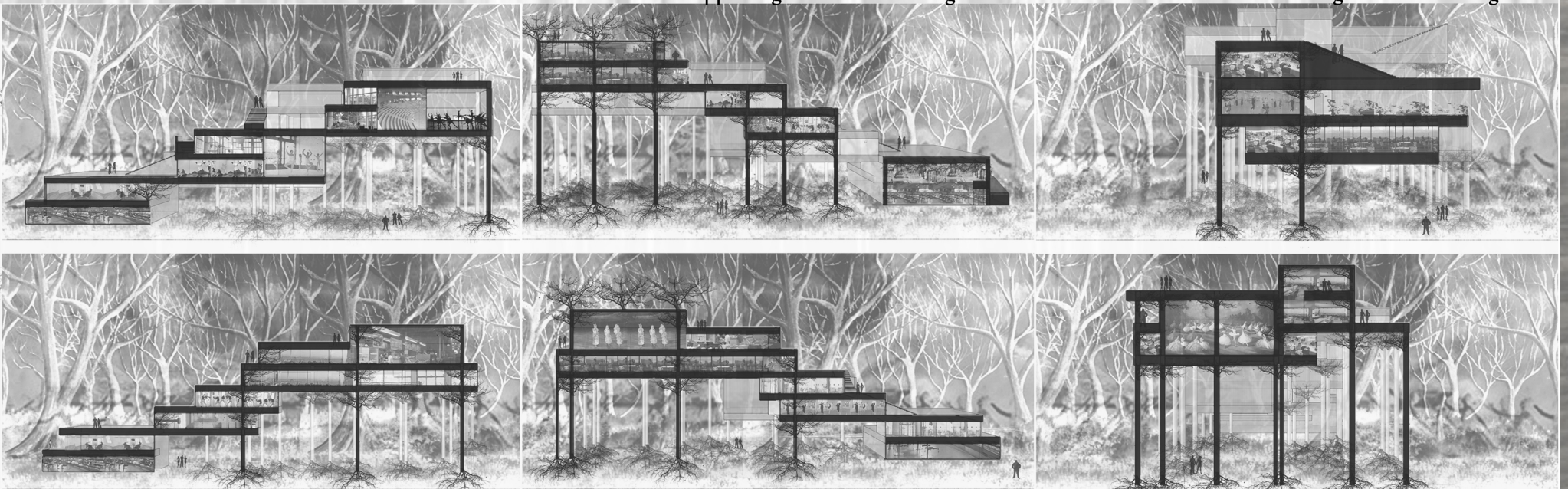


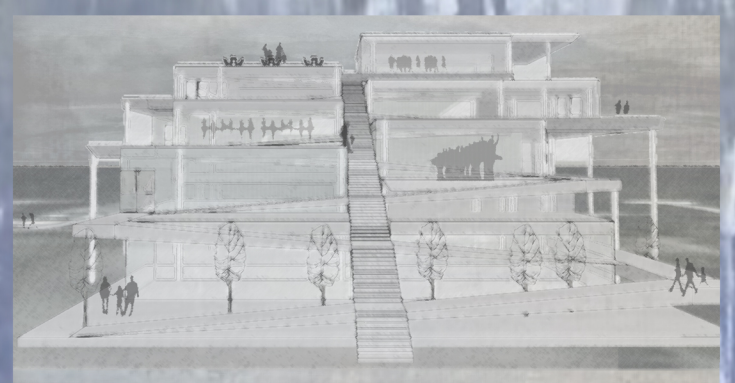
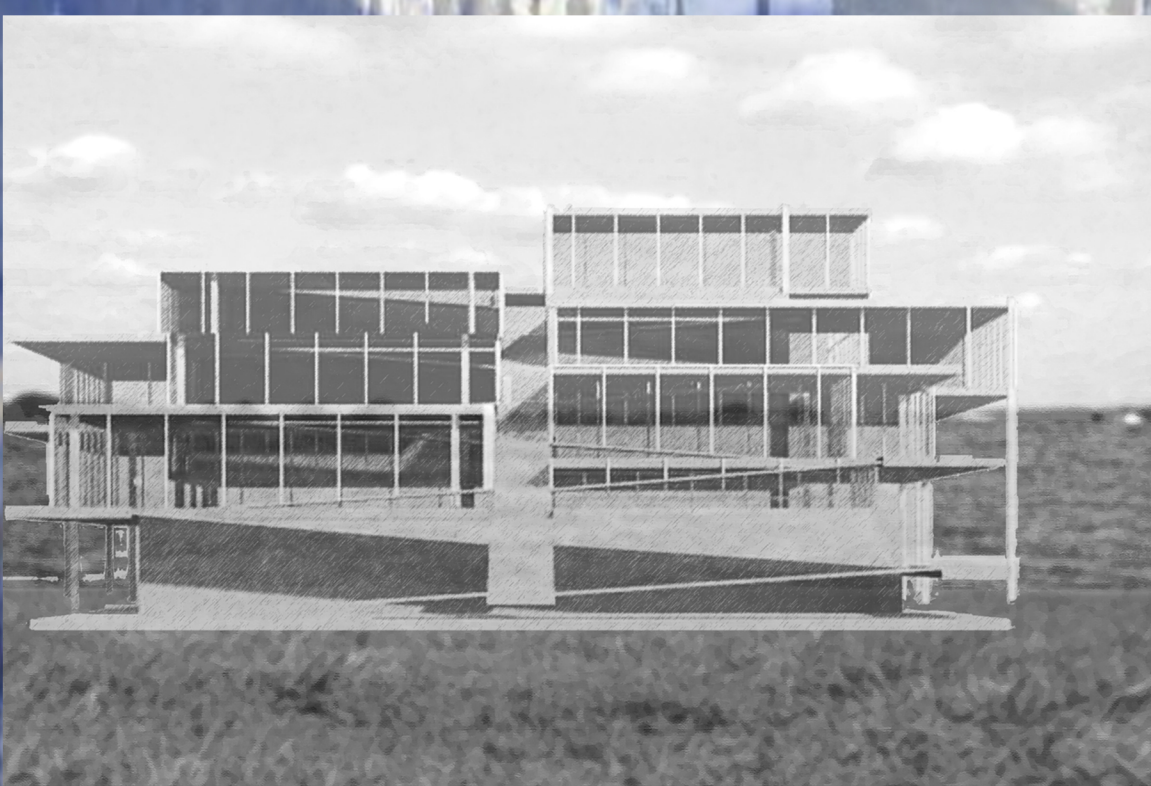
A REFLECTION ON SHADOWS

As I ascend the interior staircase, I am struck by the moving shadows behind translucent walls, which belie the building's role as a center of dance. The studios are lit in a variety of ways, some by natural light, others by stage lighting, creating a contrast in the appearance of the shadows. Seeing the dancers in silhouette allows me to focus solely on the movement, and like a child entertained by shadow puppets, my imagination is set free. The dancers become paintbrushes, creating a Pollock-esque canvas with their crossing paths. Like clouds bearing an uncanny resemblance to people, places and things, the shapes made by the dancers play tricks on my eyes with their shifting their appearance. Dancers morph into ghouls and goblins, and other creatures of Halloween, their shape and stature distorted by dramatic lighting. The building's beauty is amplified by the pattern of the shadows, and the contrast of the light and the darkness which its architecture highlights. In Junichiro Tanizaki's *In Praise of Shadows*, he writes, "We Orientals find beauty not only in the thing itself but in the pattern of the shadows, the light and darkness which that thing provides" (1). However, as my imagination begins to get carried away, and I feel overwhelmed by the sensations sparked by these mysterious shadows, I reach the top of the staircase, which offers unmatched views of the steady river, framed before me like a beacon of security.

1. Junichiro Tanizaki, *In Praise of Shadows*, New York, Vintage Books, 2006

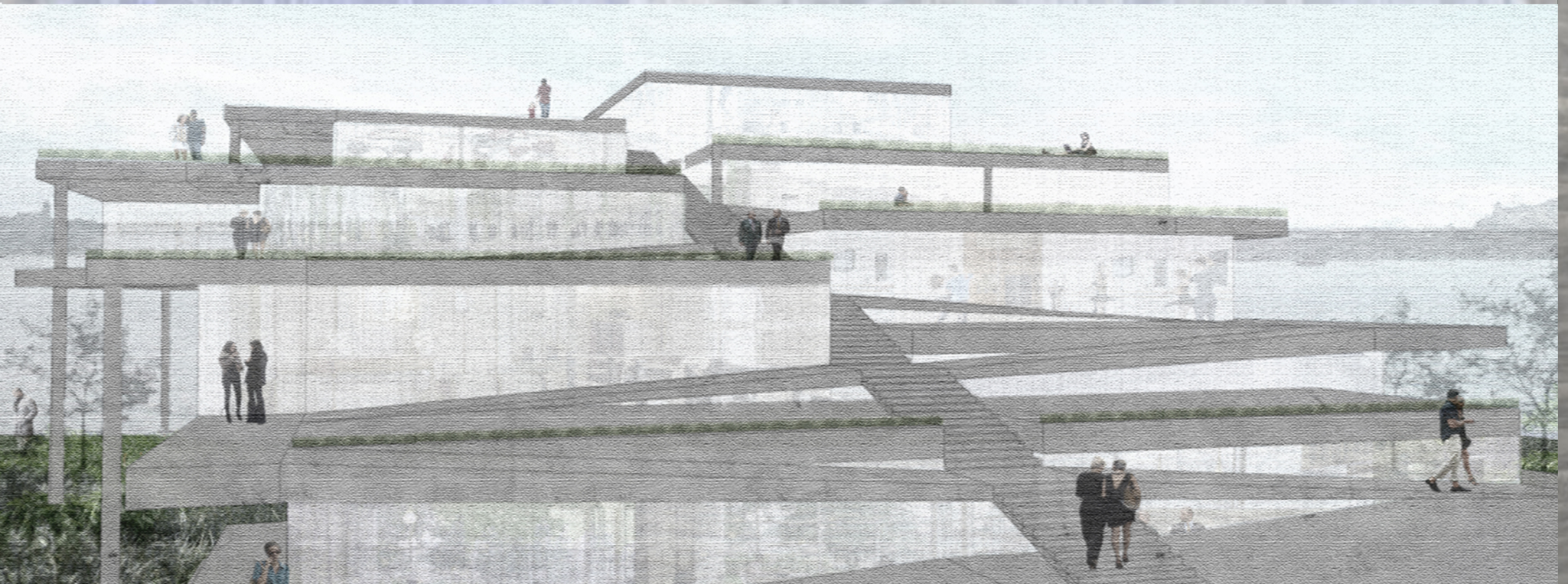
The initial sections demonstrate the idea of a forest of columns supporting volumes stemming from a staircase which runs the entire length of the building.





STAIRS AND MOVEMENT

Renderings of the study in which movement is facilitated by a centrally located stairway, transversed by a ramp system, both of which lead to unmatched views.



where.

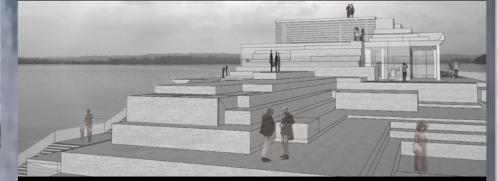
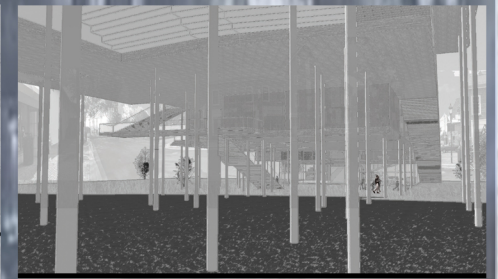
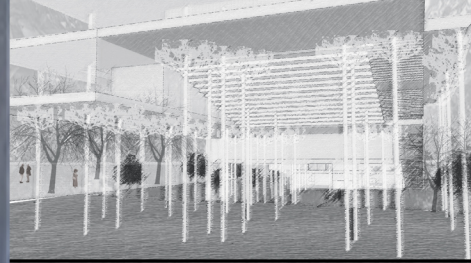
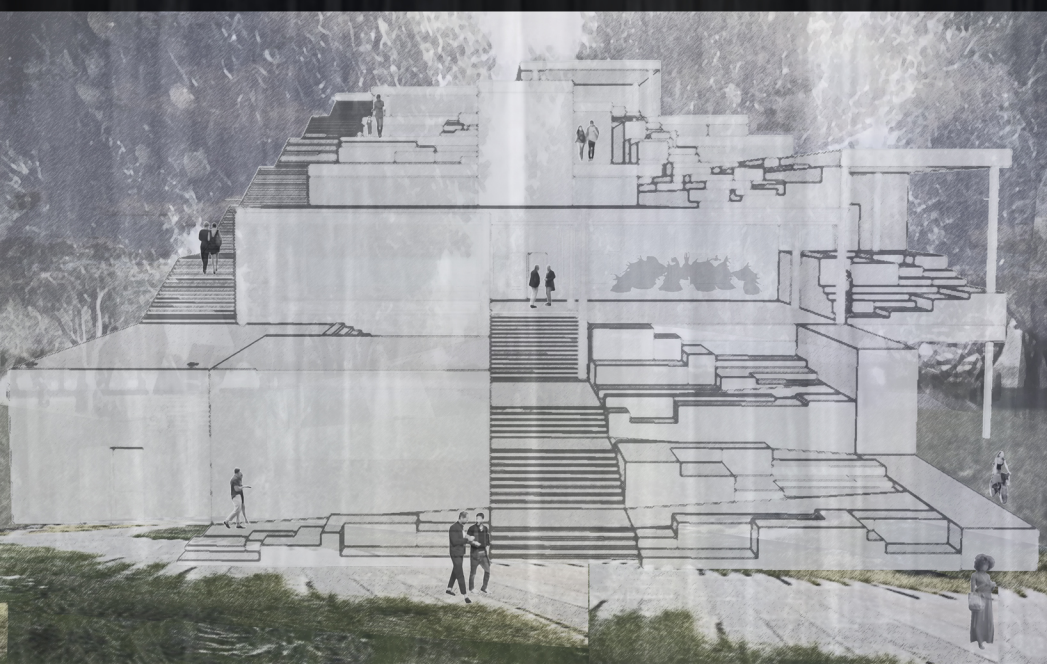
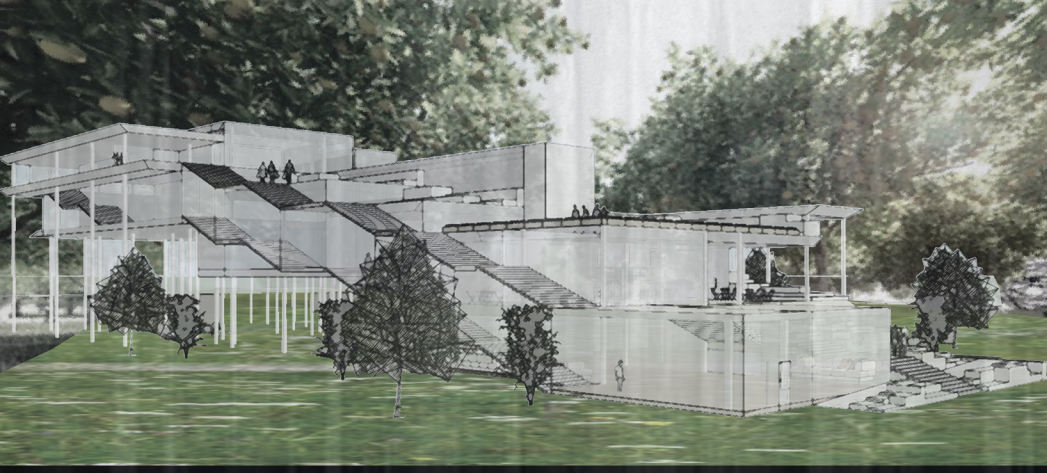
what.

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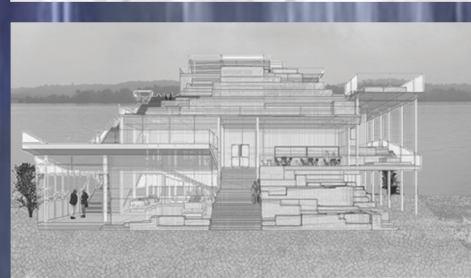
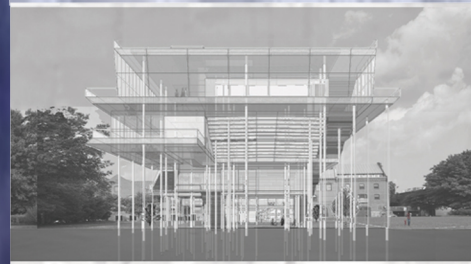
20

Stairs have a natural ability to connect the land with water, as they accomodate the rising and falling tide, and imply motion at the intervals of their dimensions.



ELEVATED VIEWS

Terraces stem from the exterior staircase, transforming the exterior of the building into a tiered park, providing all with elevated views of Old Town.



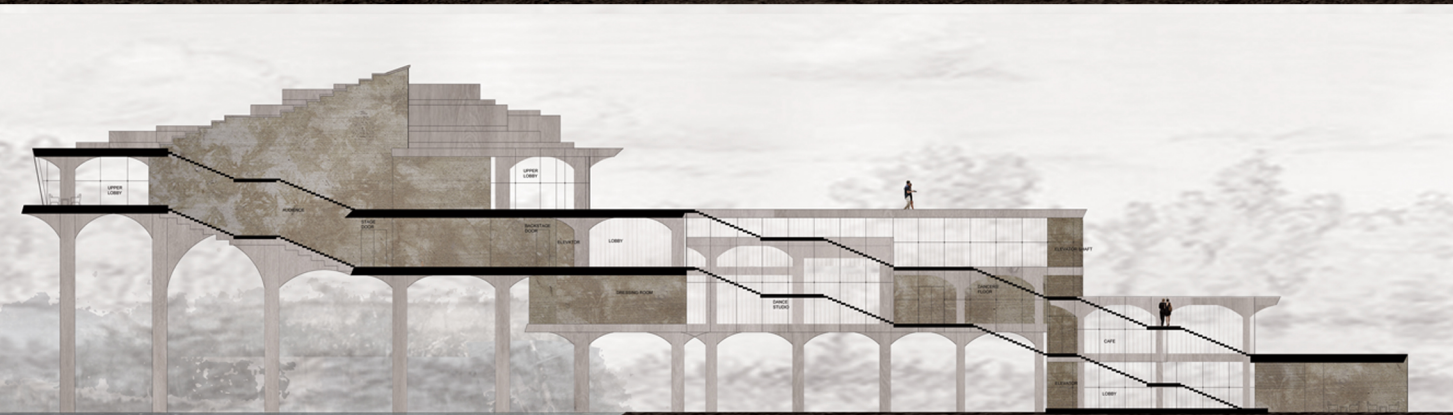
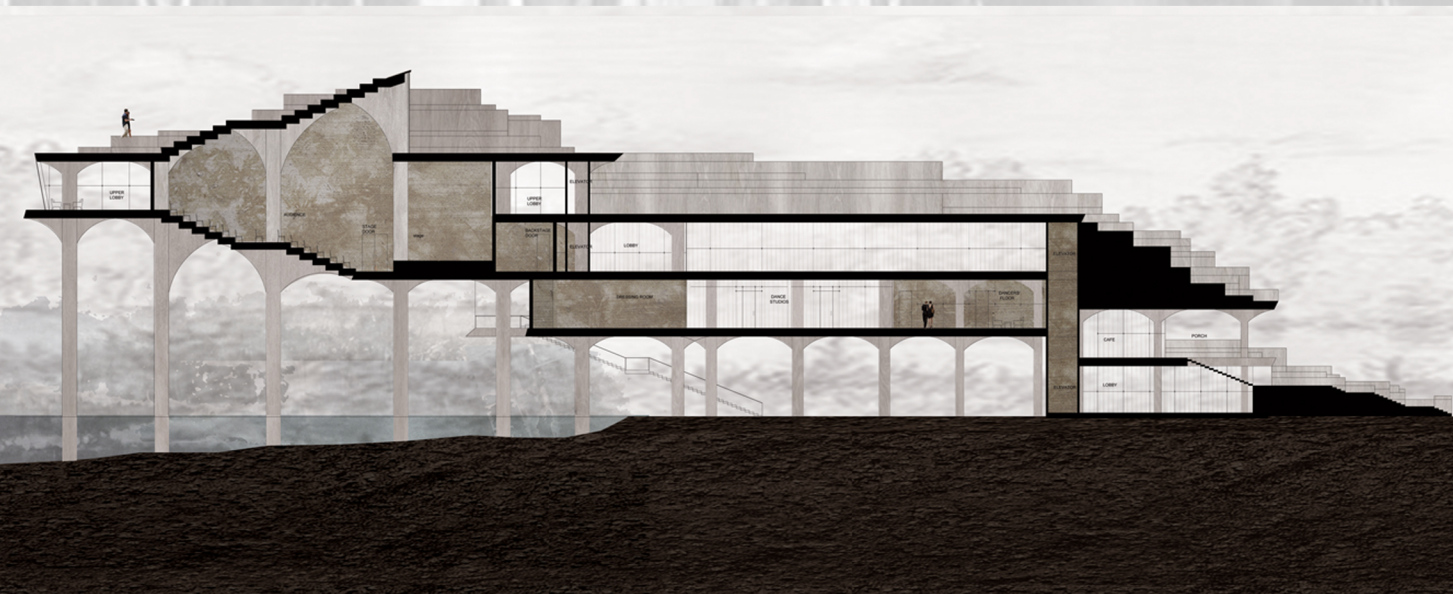
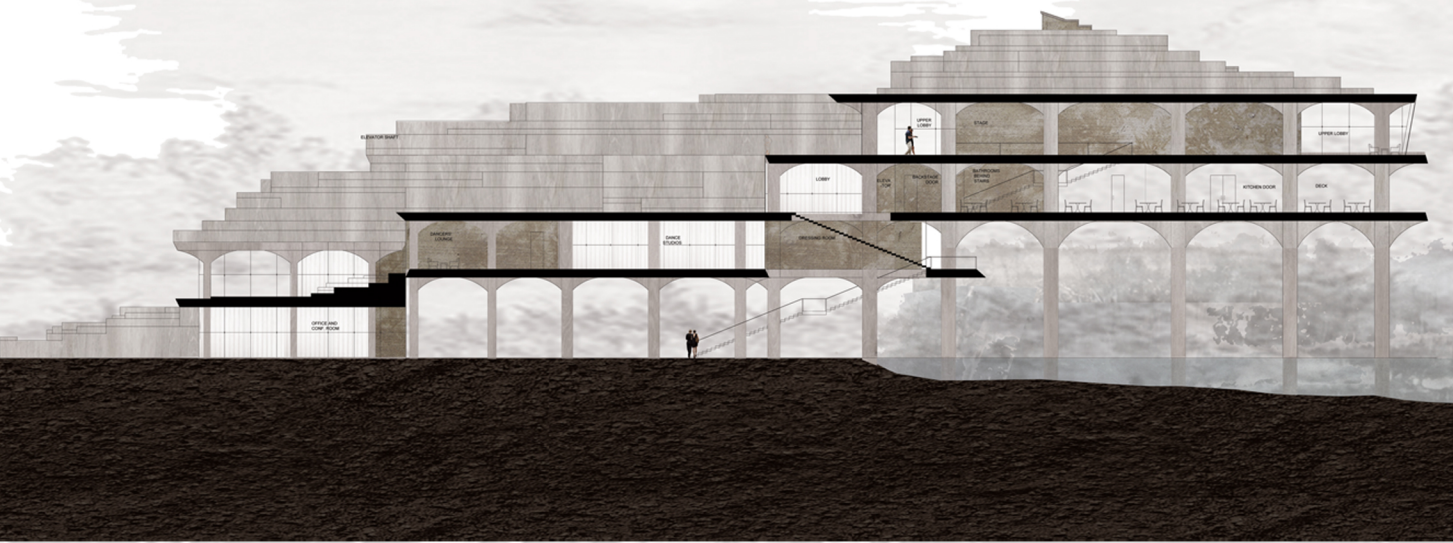
THE BUILDING IS A DANCE UPON THE SITE ... AN IMPULSE TOWARDS MOVEMENT

where.

what.

how.

realization



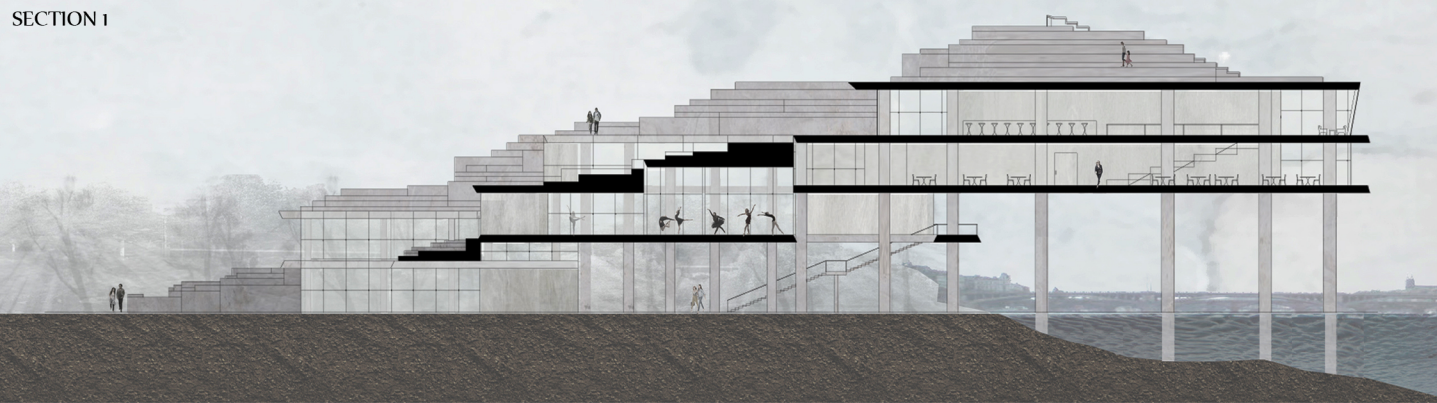
HIGHLIGHTING MOVEMENT

The long staircase lures passerby's to explore the dance center's activity, and ultimately ascend to the top platform and achieve unparalleled views up and down the Potomac. The design highlights movement, the underlying concept of all design decisions, by creating opportunities for...

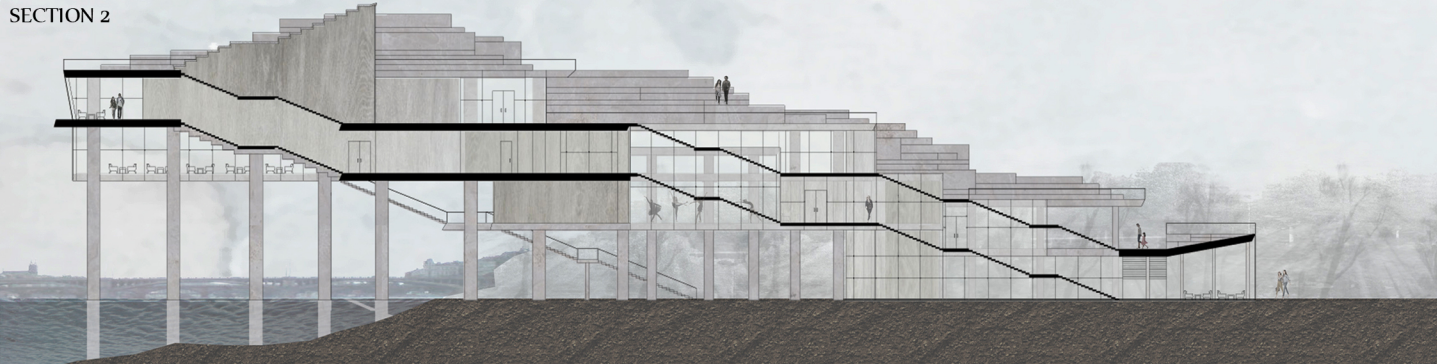
- 1) pedestrians, dancers, and the river to interact with the forest of columns.
- 2) the sensation of moving simultaneously upward towards the sky and outward towards the water by ascending the staircase.
- 3) passerbys to glimpse the skilled movement of the dancers
- 4) the shadows of the columns to track the movement of the sun.

“ARCHITECTURE IS THE SCIENTIFIC ART OF MAKING STRUCTURE EXPRESS IDEAS.” –FRANK LLOYD WRIGHT

SECTION 1



SECTION 2

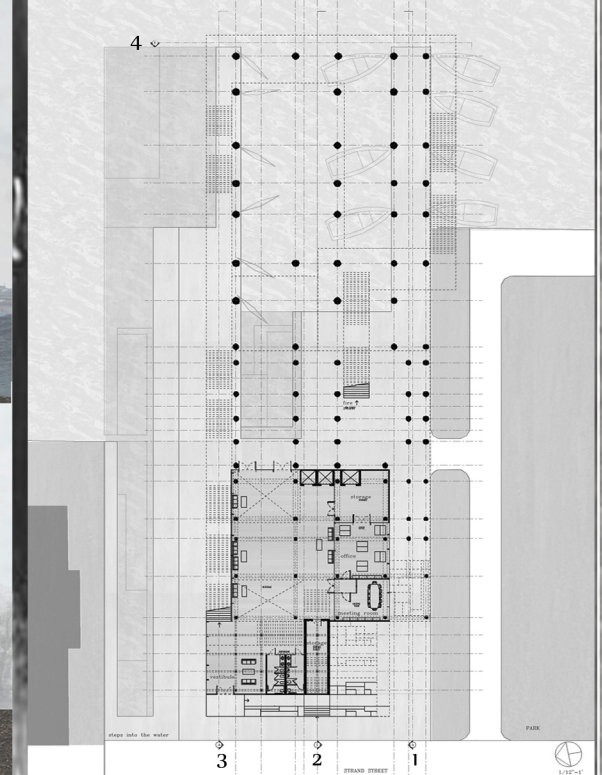


“ARCHITECTURE IS THE TRIUMPH OF HUMAN IMAGINATION OVER MATERIALS, METHODS, AND MEN TO PUT MAN INTO POSSESSION OF HIS OWN EARTH.”—F.L. WRIGHT

SECTION 3



SECTION 4



VISUAL LIGHTNESS
 ...is achieved, despite the building's vast size, by... 1) the columns, which in their multitude appear relatively sinewy and dancer-like. 2) the piecing together many small volumes to compose larger volumes. 3) the use of mostly translucent materials, which lend the building a gossamer quality.

“A PROPER BUILDING GROWS NATURALLY, LOGICALLY, AND POETICALLY OUT OF ALL OF ITS CONDITIONS.”
 —LOUIS SULLIVAN

where.

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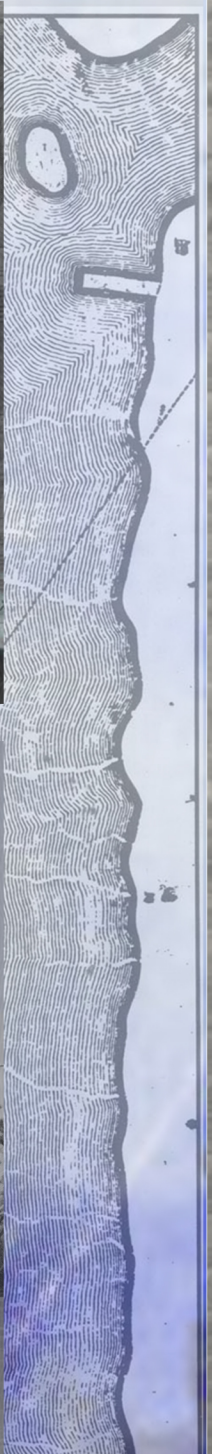
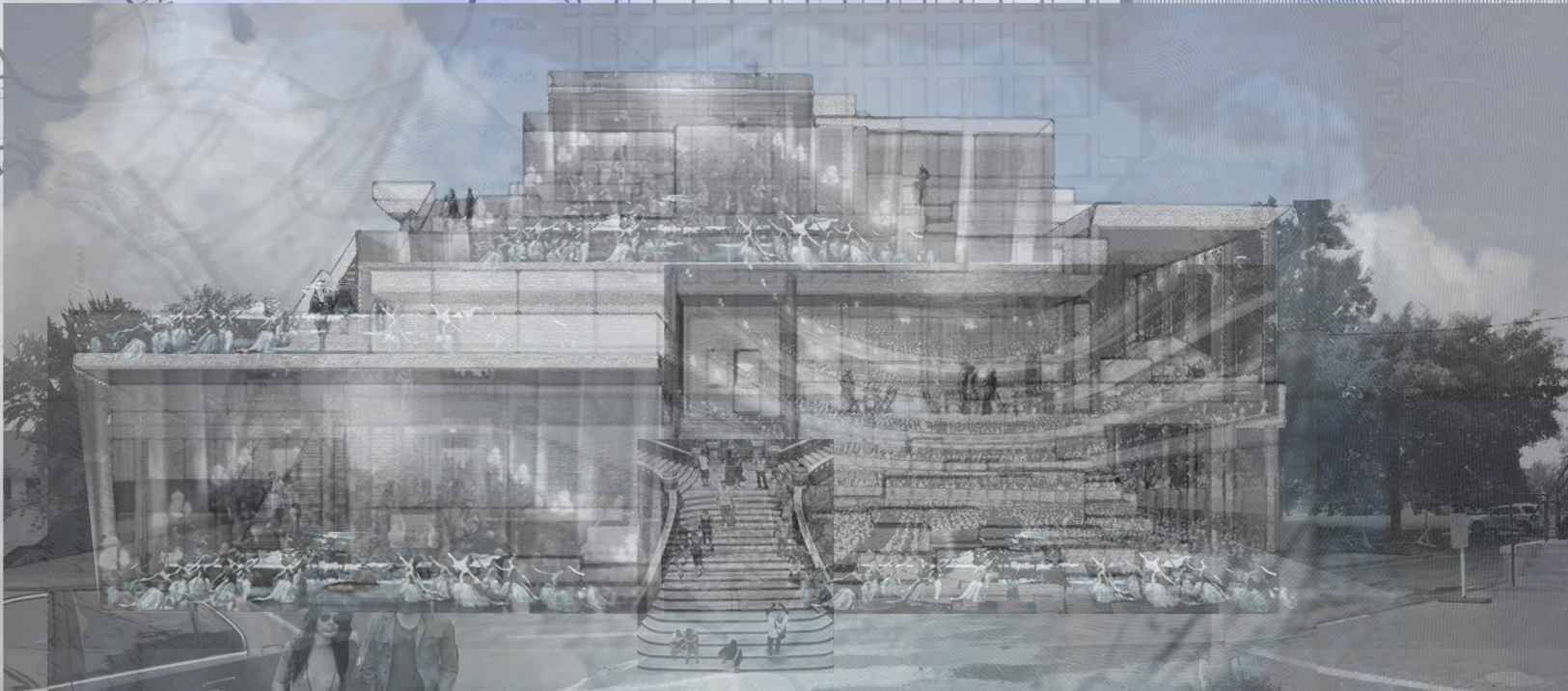
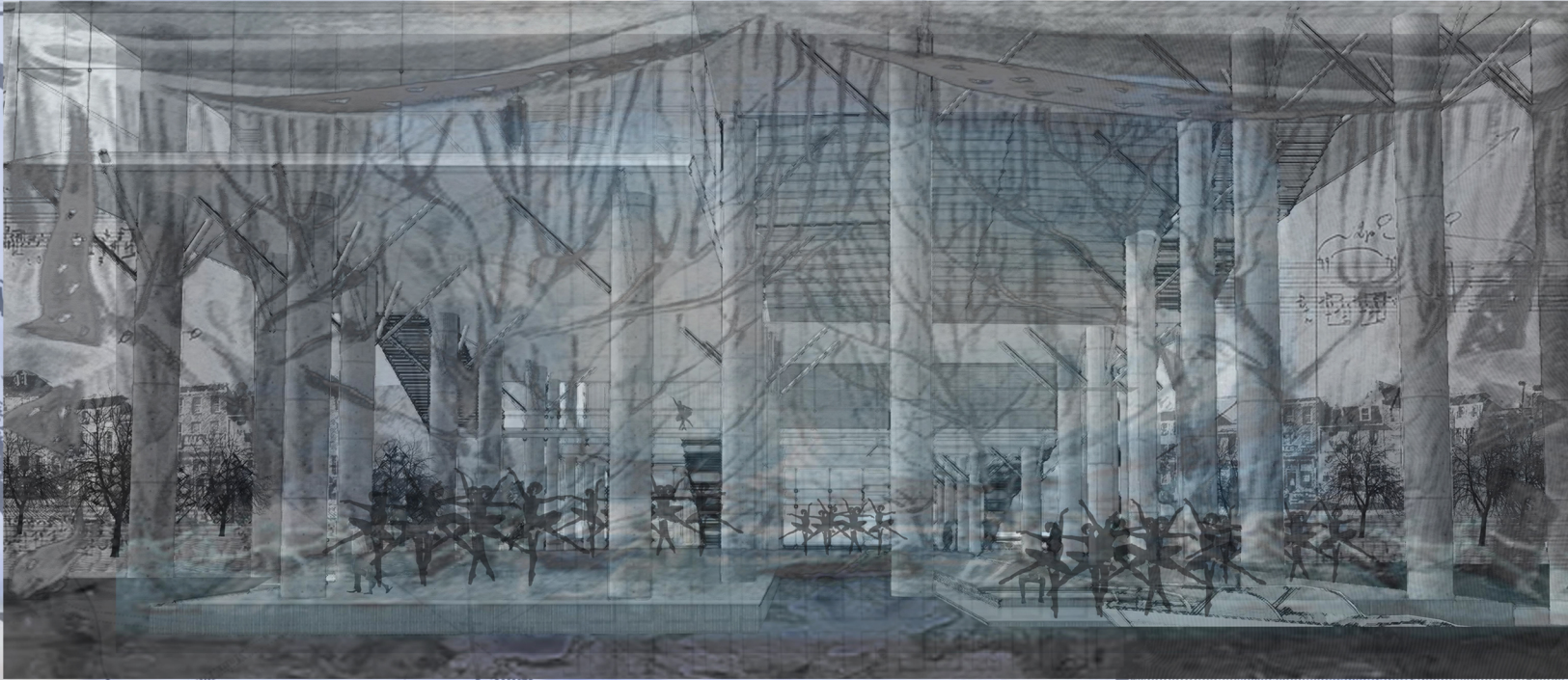
realization

REALIZATION

A dance center at the intersection of the Potomac and Old Town's King Street, the design of which evolved around a stair-like parti, shaped by the guiding thesis: movement.

ALEXANDRIA
in the District of Columbia
1798
Grade says to one inch
Magnetic Variation 0.4

feet wide
2 feet 2 in. North 83 South 5 2 10 feet 10 inches
the Square between Union & Water Street
and West of the River
Alexandria is 1200 564 to 7

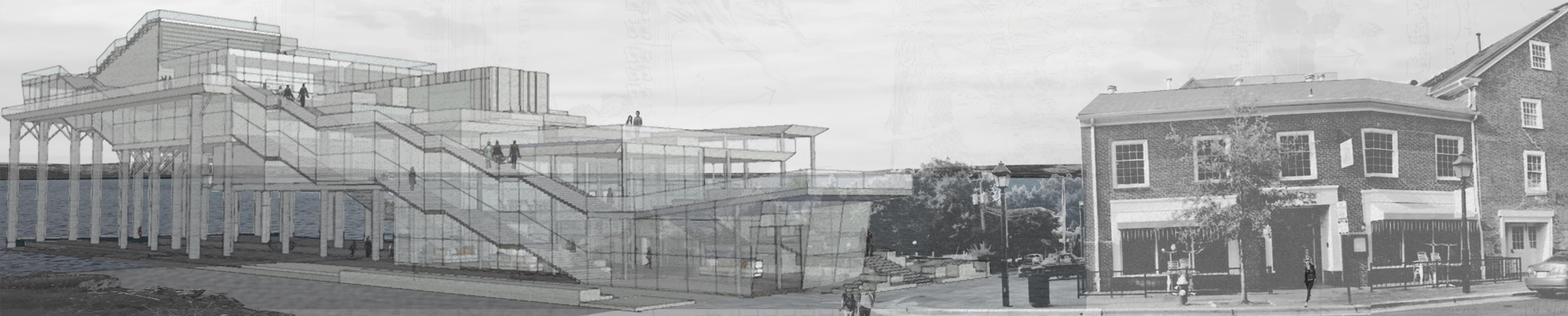


where.

what.

how.

realization



CONTEXT

With its design inviting exploration, the dance center accomplishes the Waterfront Planning Committee's goal: to draw the energy of King Street to the waterfront.

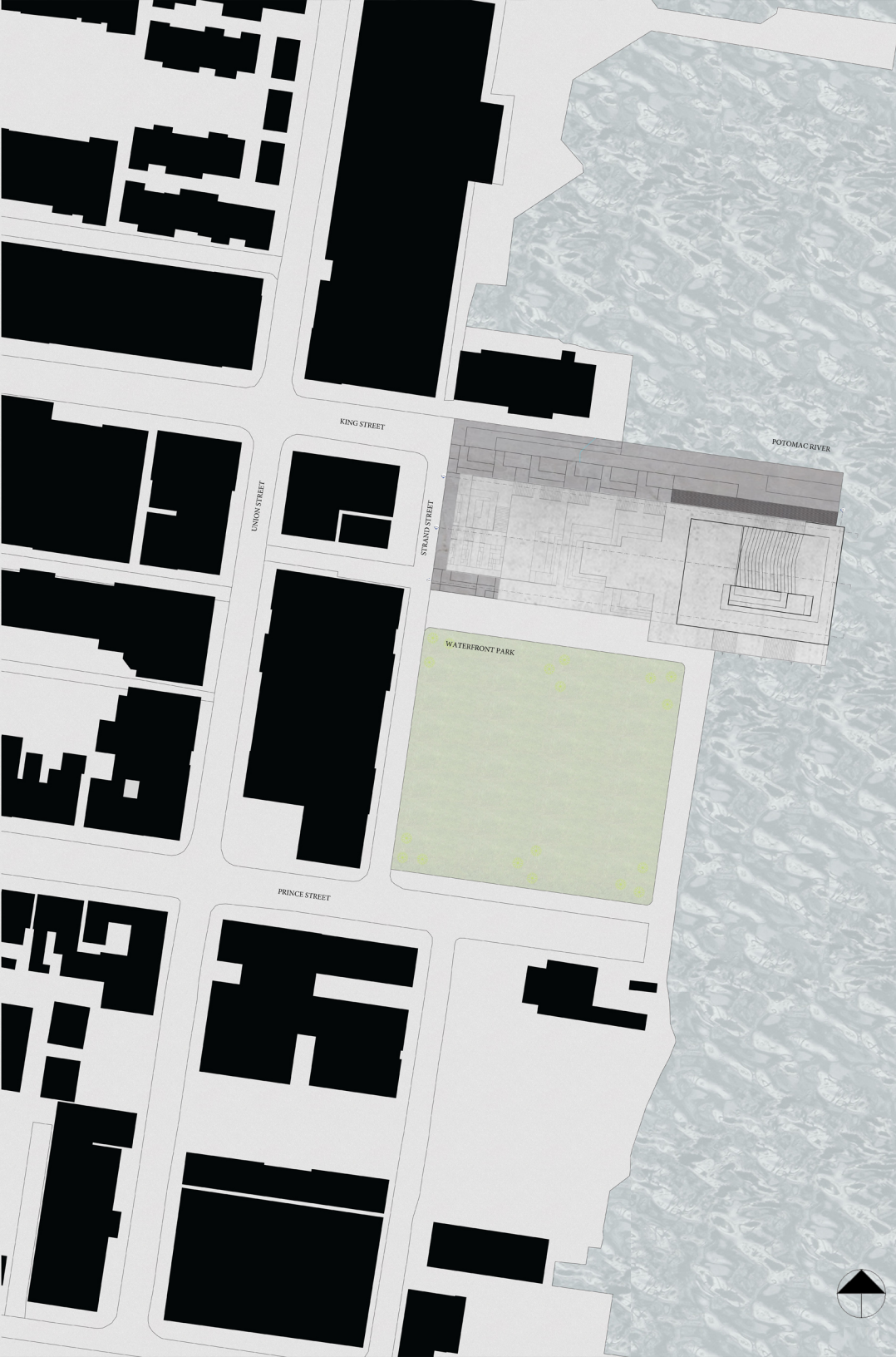


where.

what.

how.

realization



SITE PLAN

This aerial view of the building within its site illustrates many important aspects of the design.

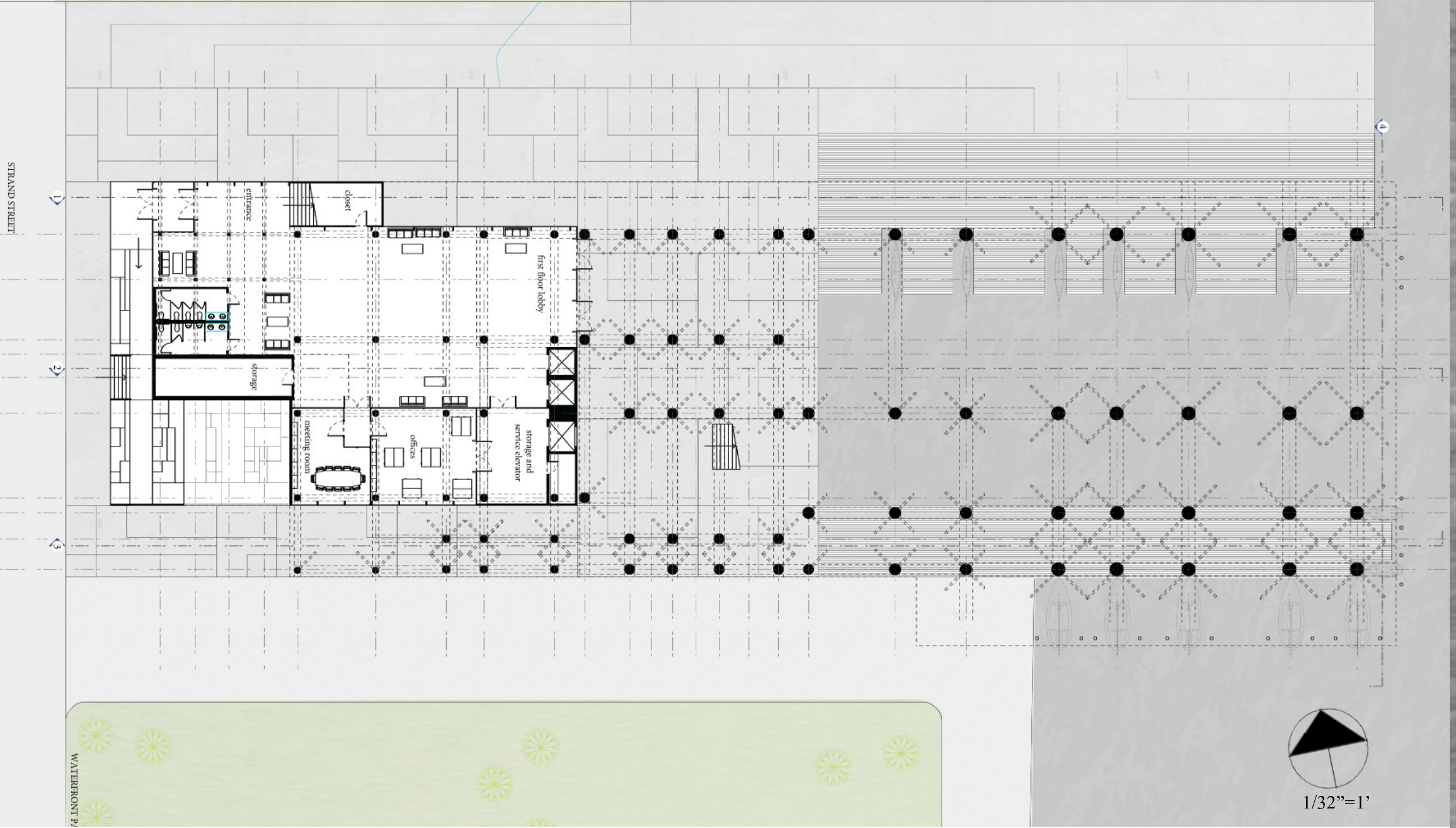
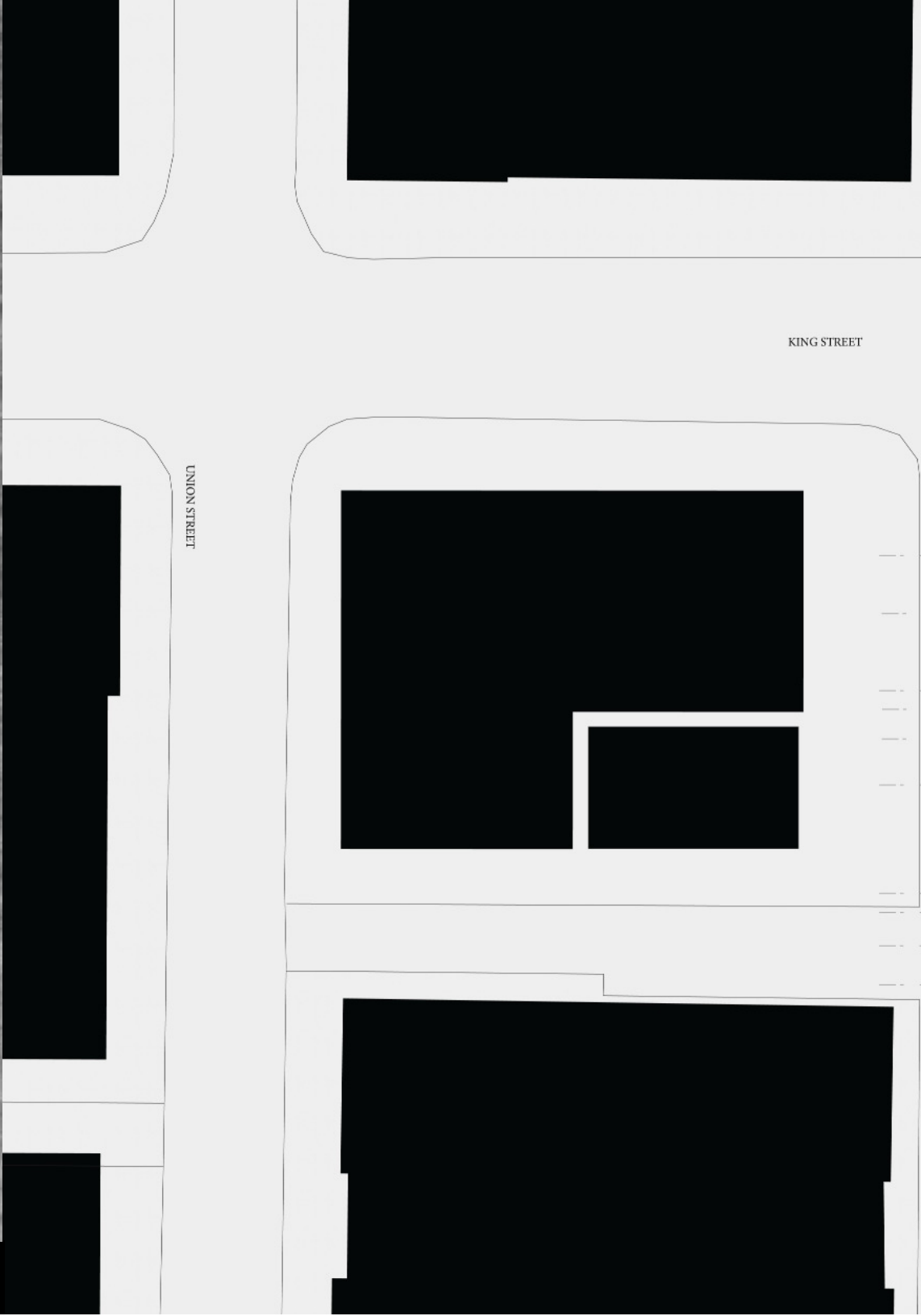
The stepped area surrounding the building's base receives pedestrians as they reach the eastern terminus of King Street, providing the lively thoroughfare with an ending consistent with its allure. Here, visitors can interact with and observe the waters of the Potomac, in a way not otherwise provided for along Alexandria's waterfront.

Additionally, the building provides the opportunity for boats to dock and tie onto one of the many columns supporting the center, which lifts from the ground as it approaches the river. Despite its waterfront location, the center's stairlike design allows for an uninterrupted pedestrian path along the river.

Stemming from the outdoor building-length staircase are tiered "porches", which also function as the roofs of the interior spaces. They provide the public with elevated recreational space, from which they can attain unprecedented views of both Old Town and the river. Atop the layered roofs, the step (the most prevalent design element seen in the center) is employed to fashion seating areas, where guests can rest while taking in the activities of the adjacent Waterfront Park.

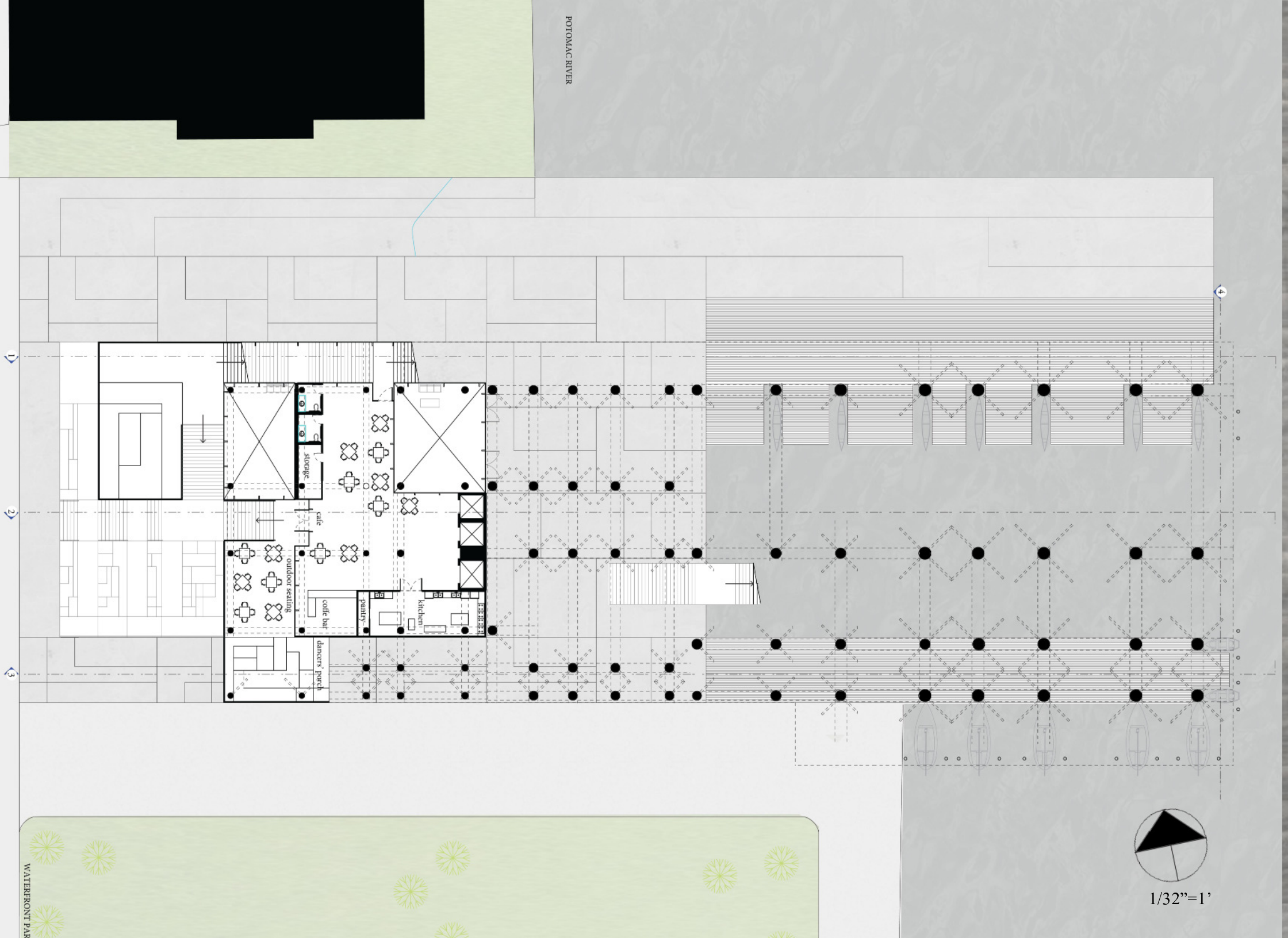
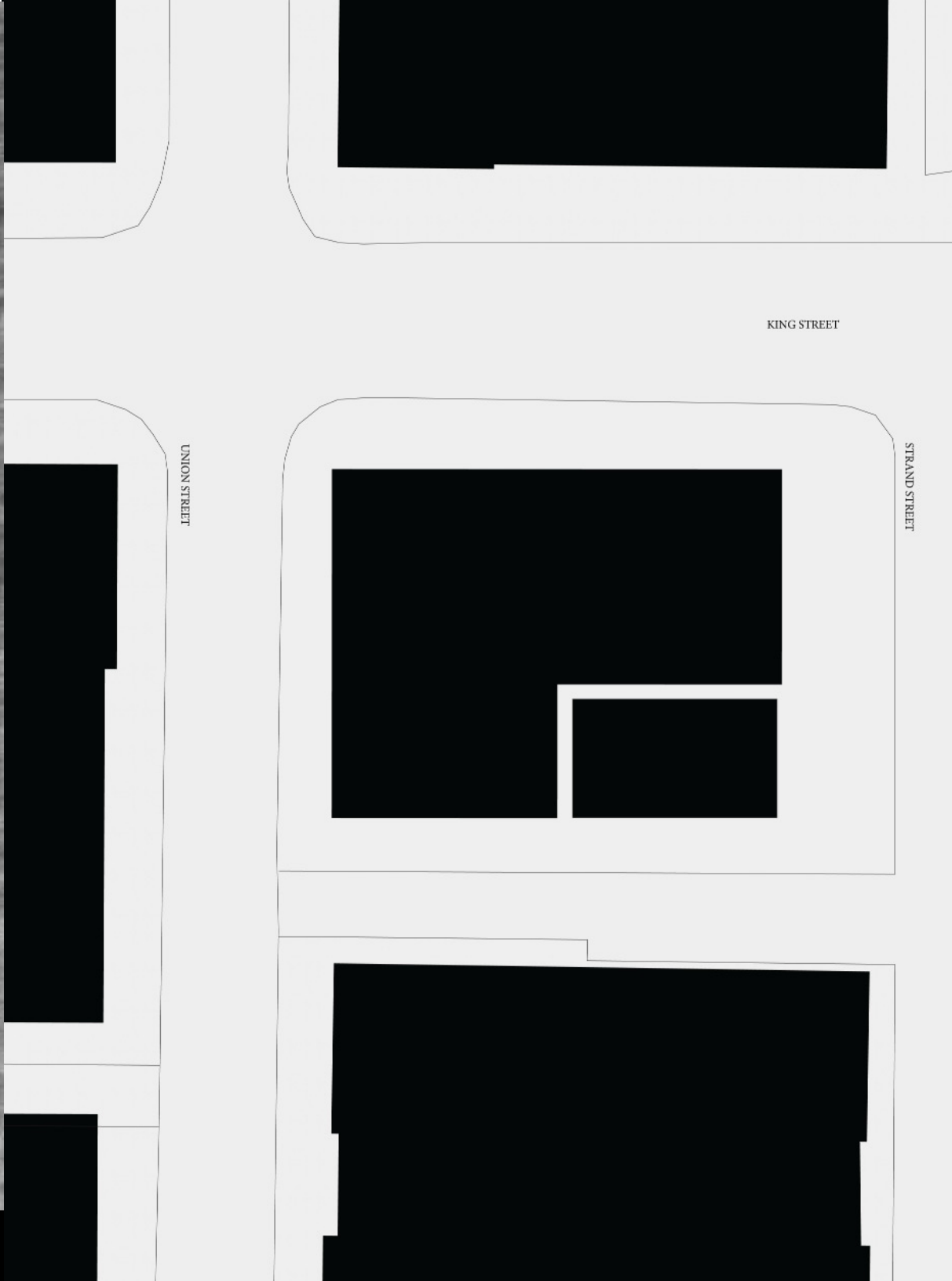
The building respects the fabric of the city, its dimensions harmonious with those of the surrounding buildings. The building's length allows it to respond to the differing scales at each of its ends. Its western end, being modest in height, speaks to the scale of the historic buildings at the base of King Street, while its eastern end, in its height, speaks to the grand scale of the river.

The pages immediately following display the architectural plans of each of the center's 6 levels, and further demonstrate the details of its design, as discussed above.



1/32"=1'

Level 1: entry hall, administrative offices, information desk



1/32"=1'

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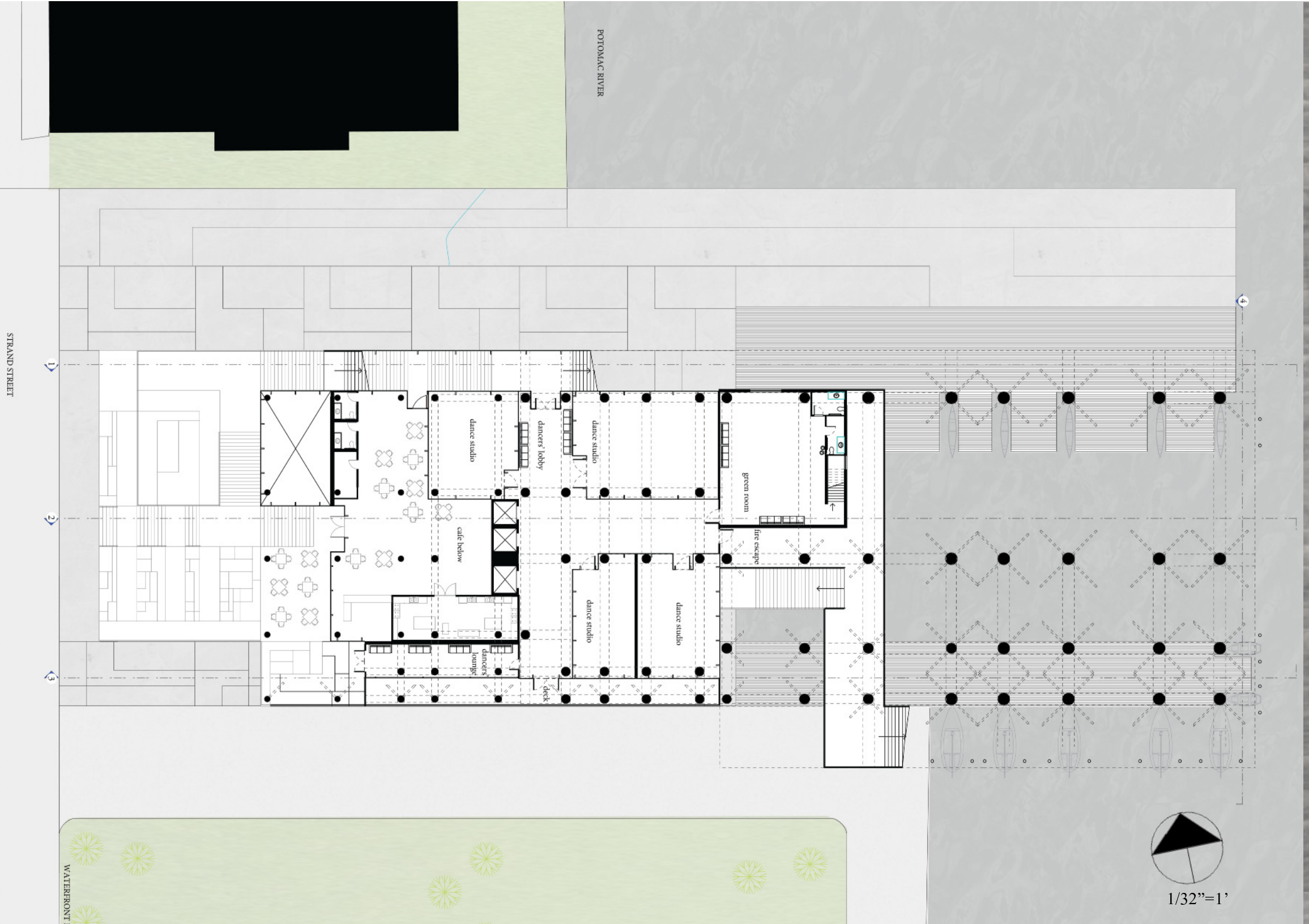
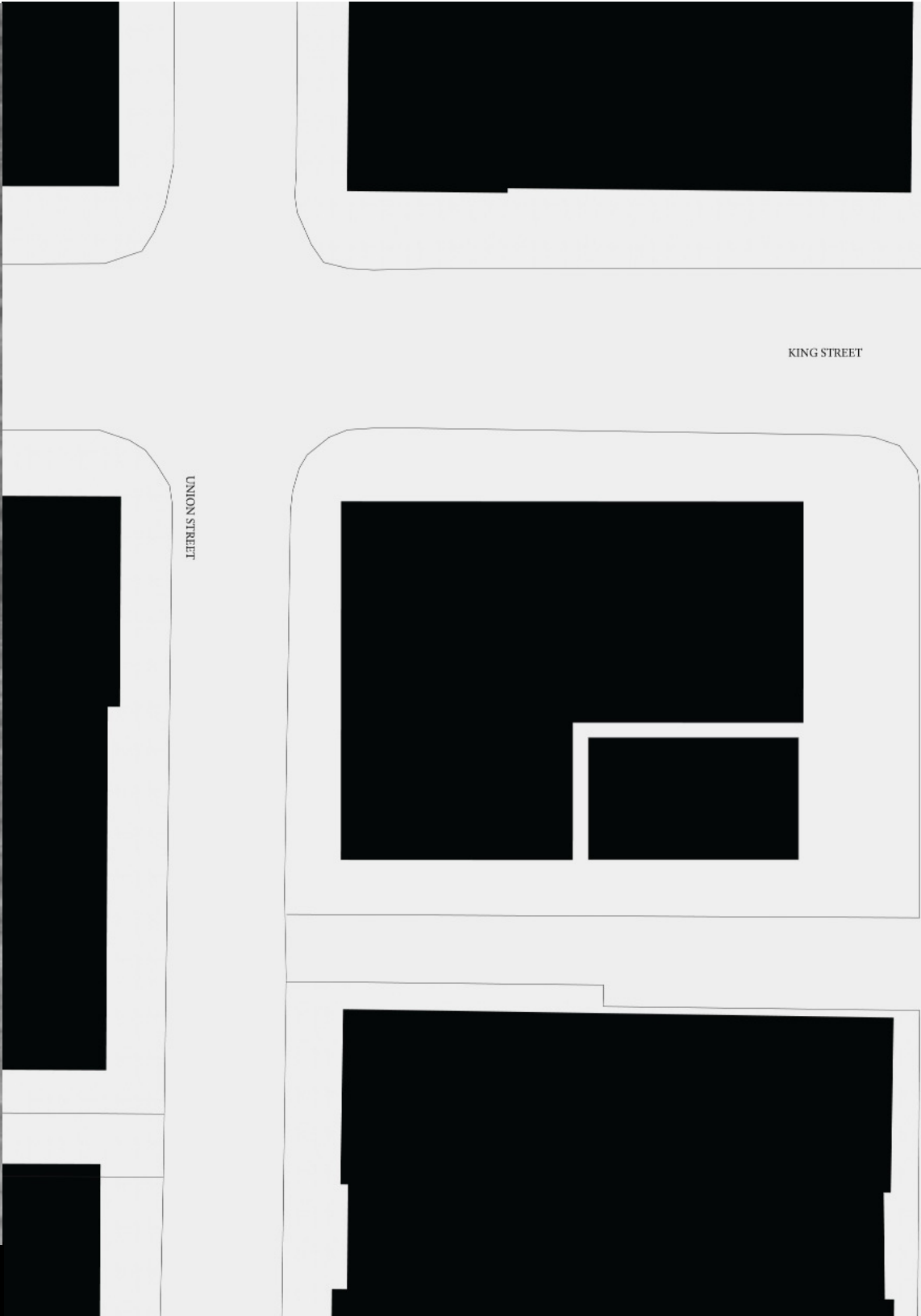
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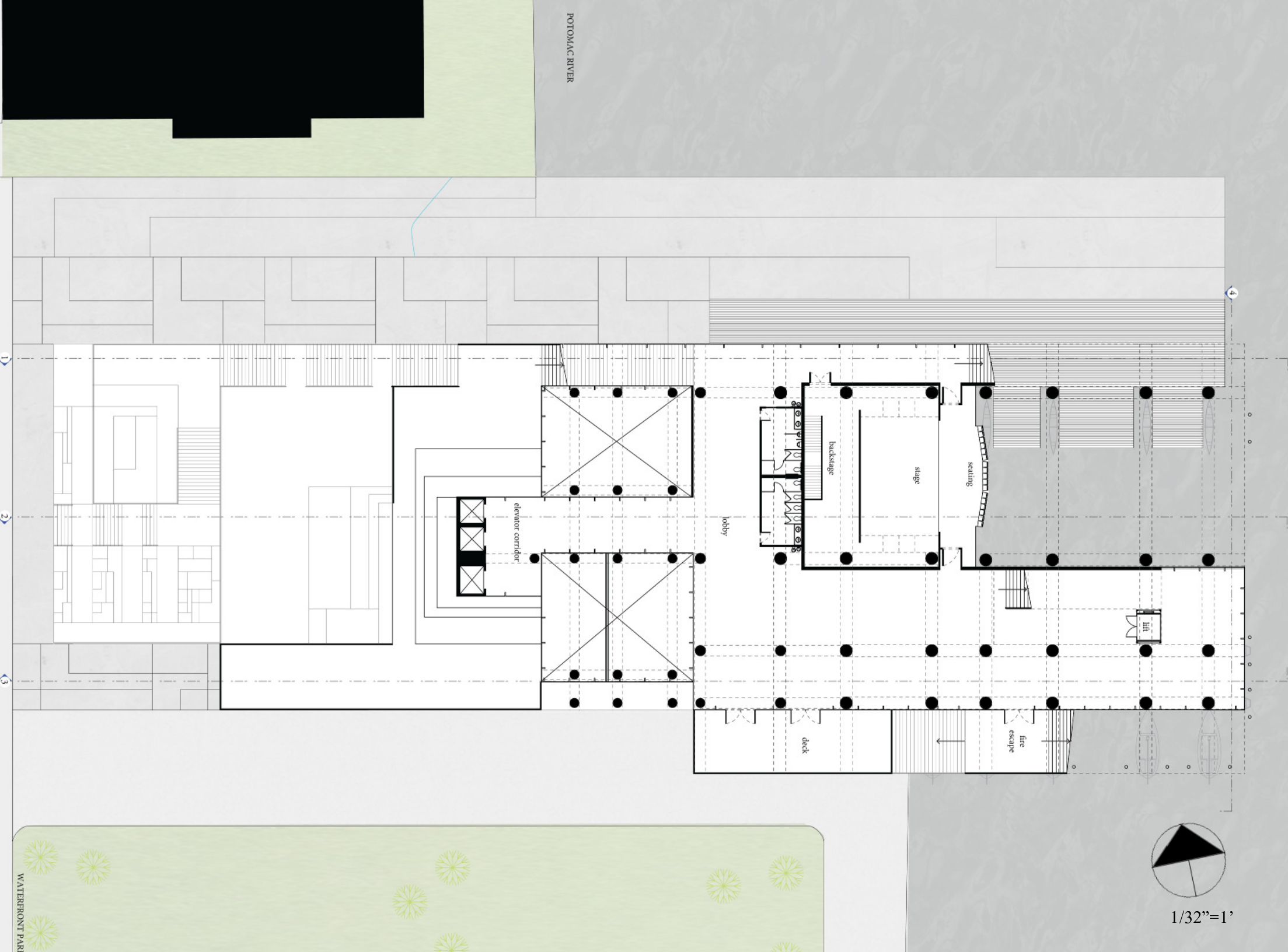
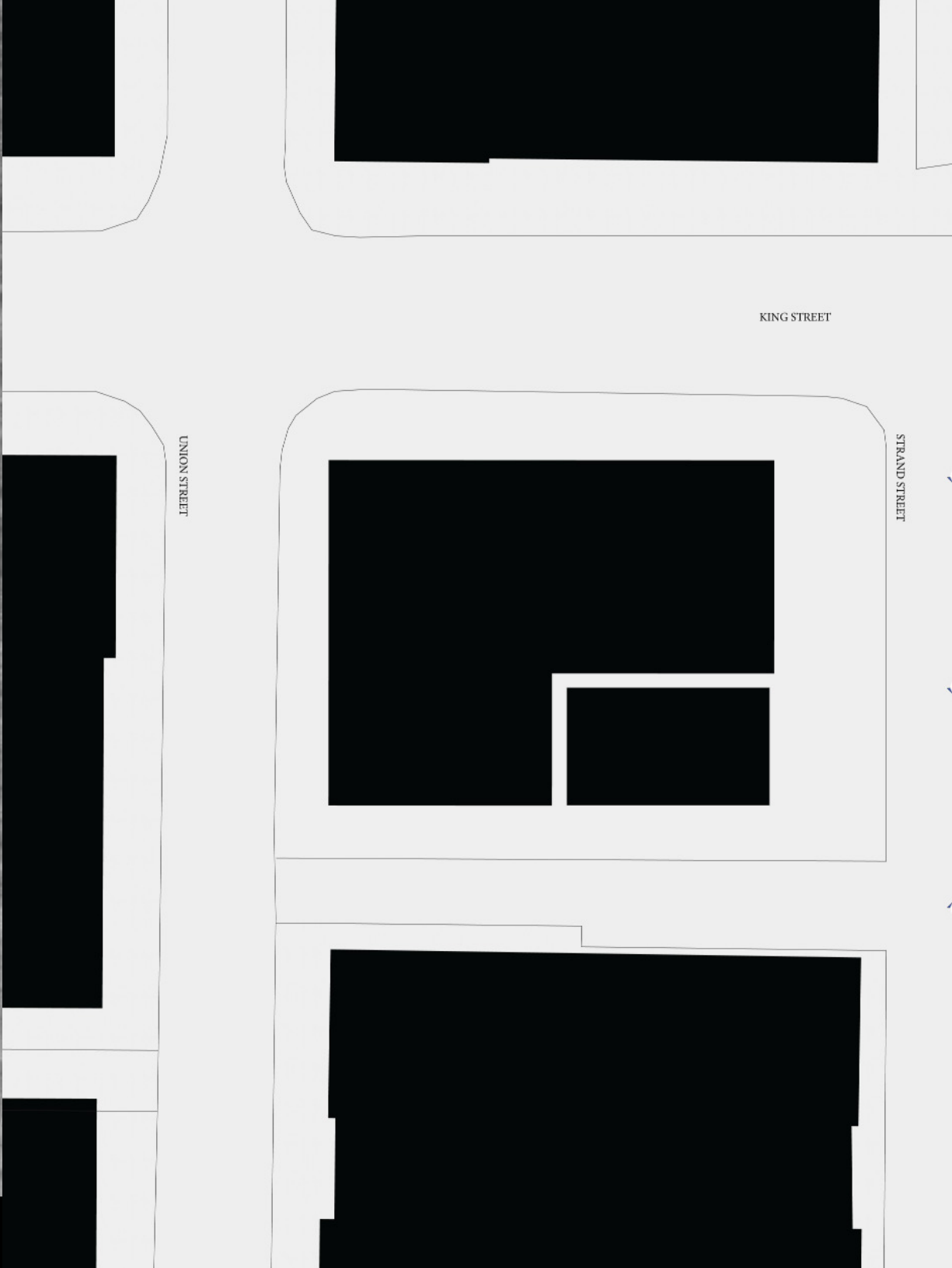
how.

realization

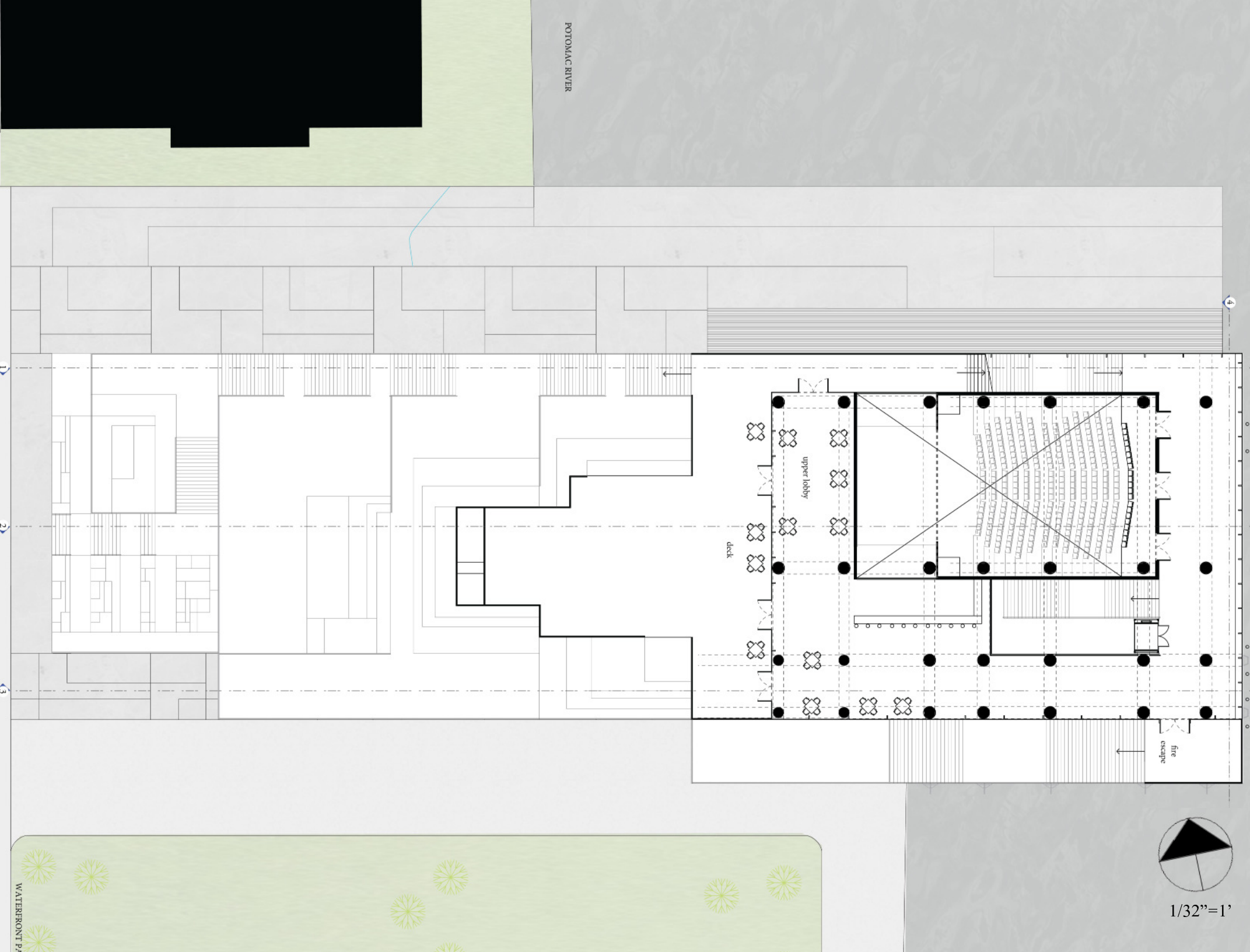
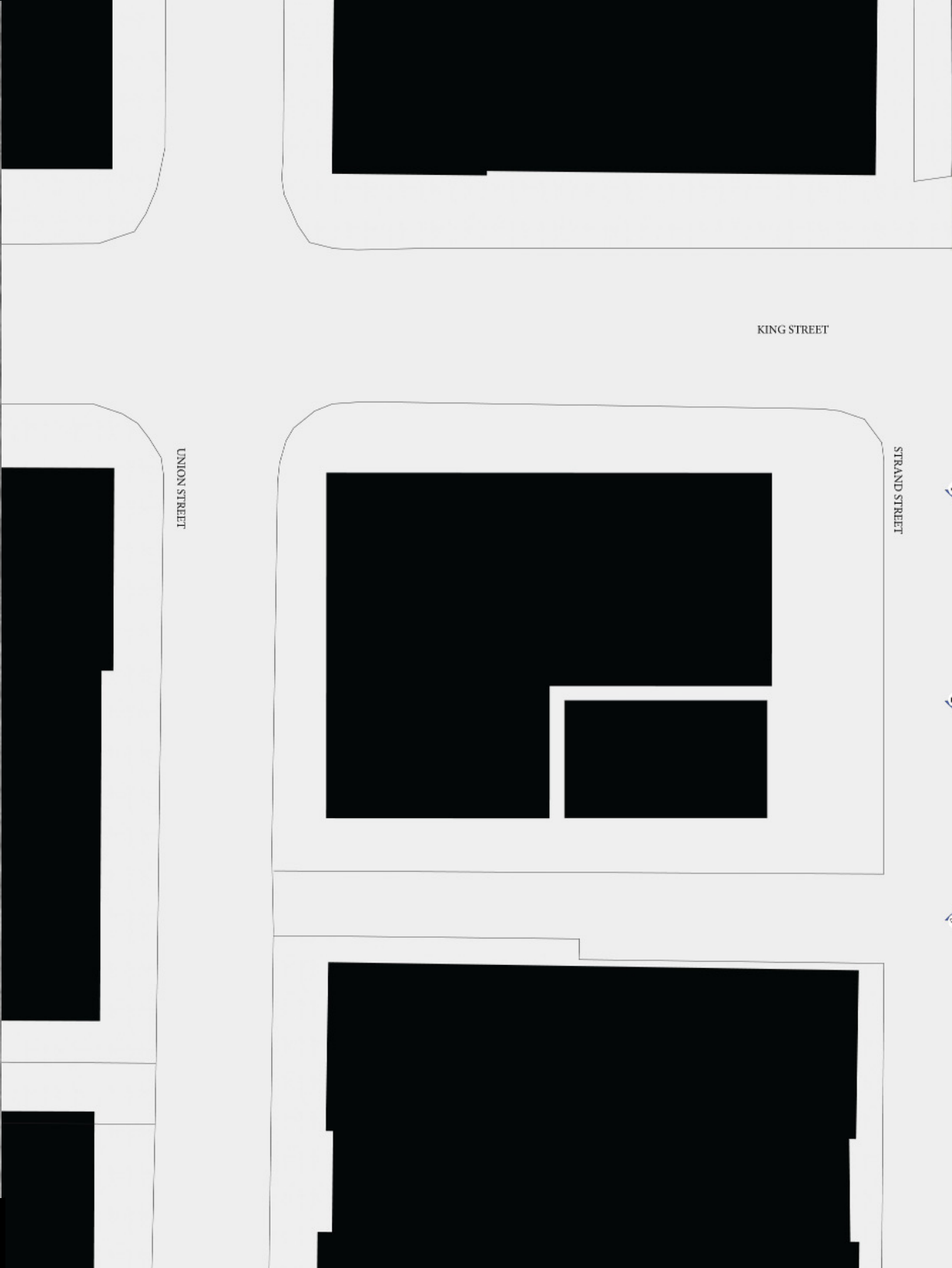


Level 3: dance studios and green room

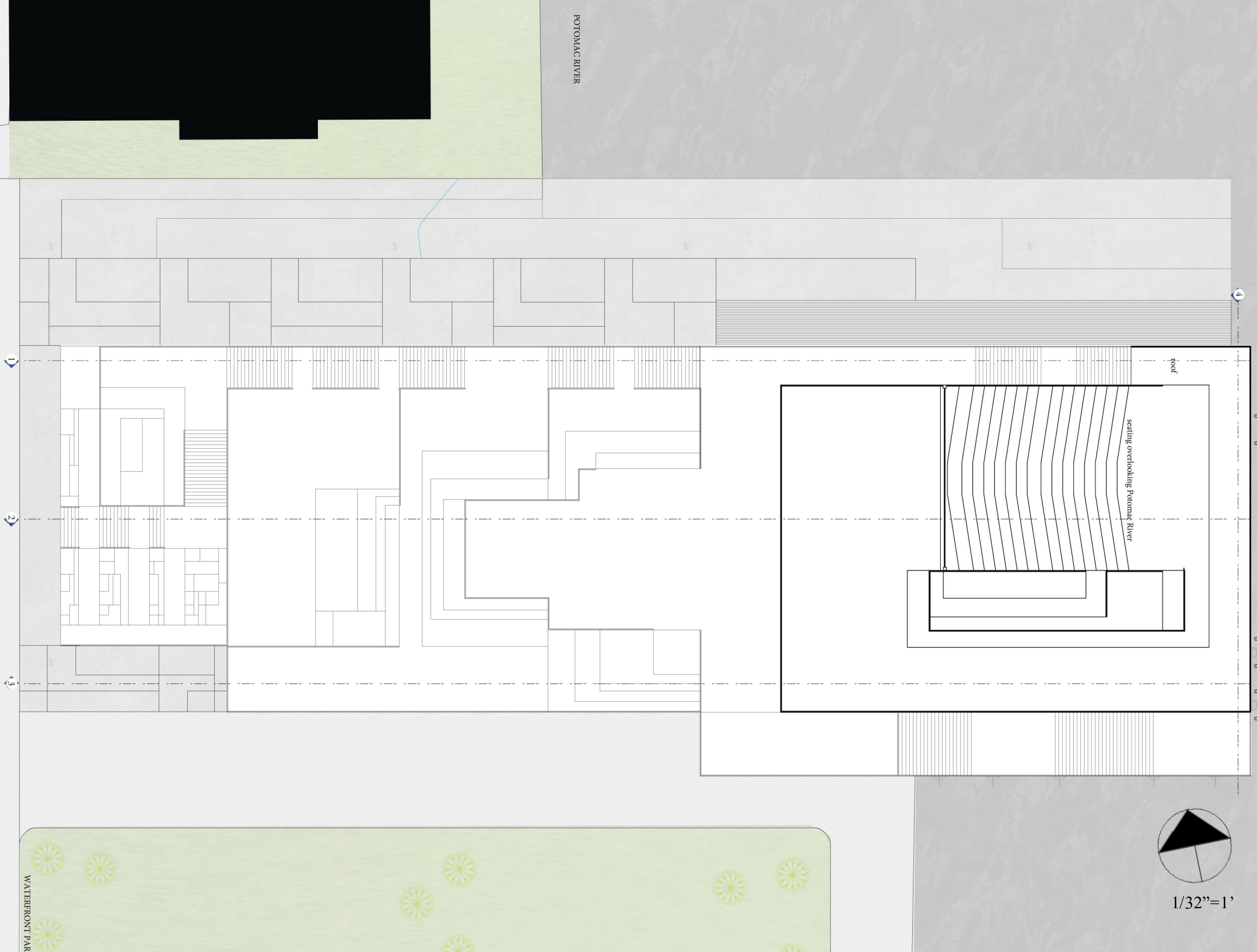
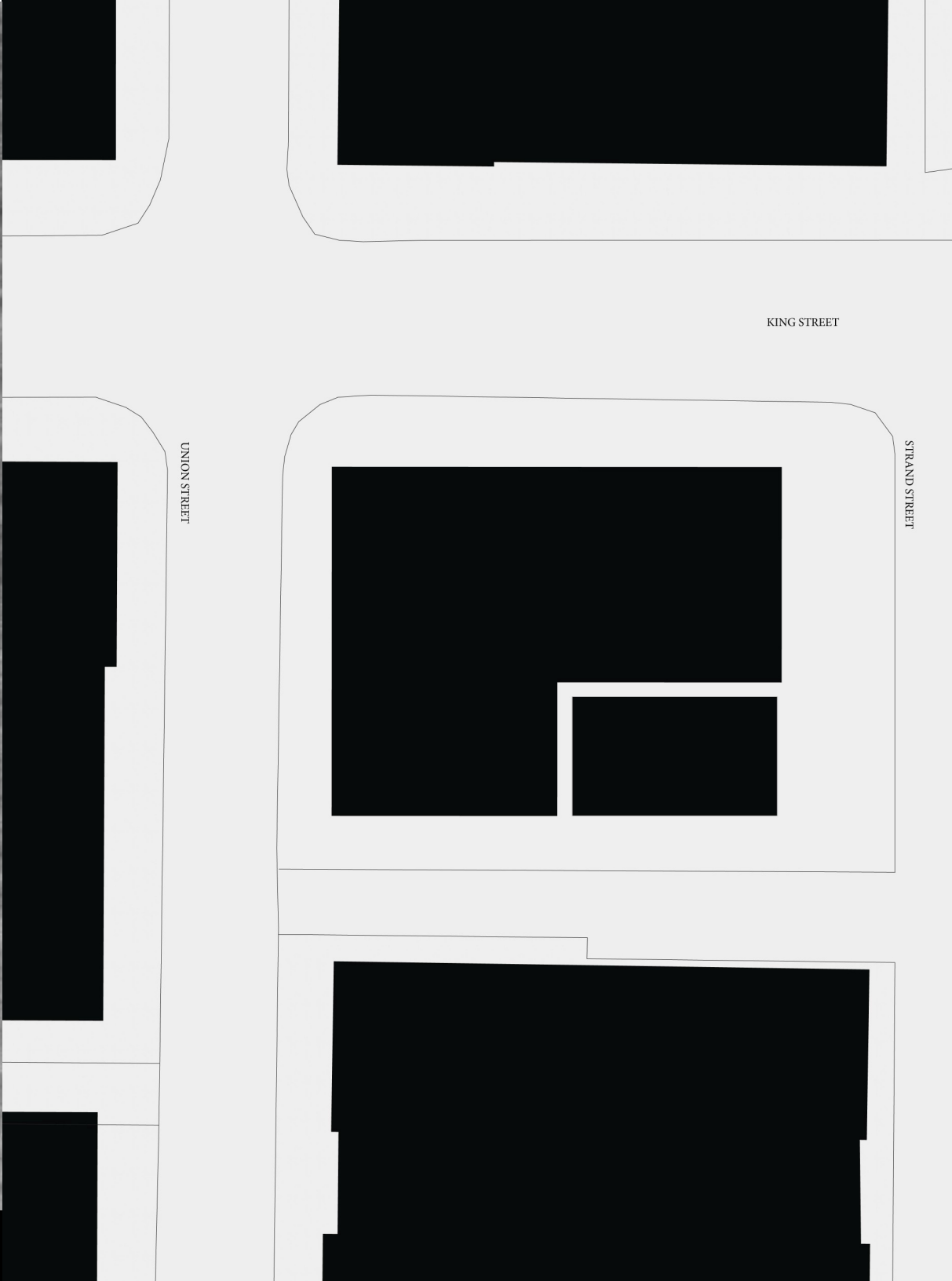




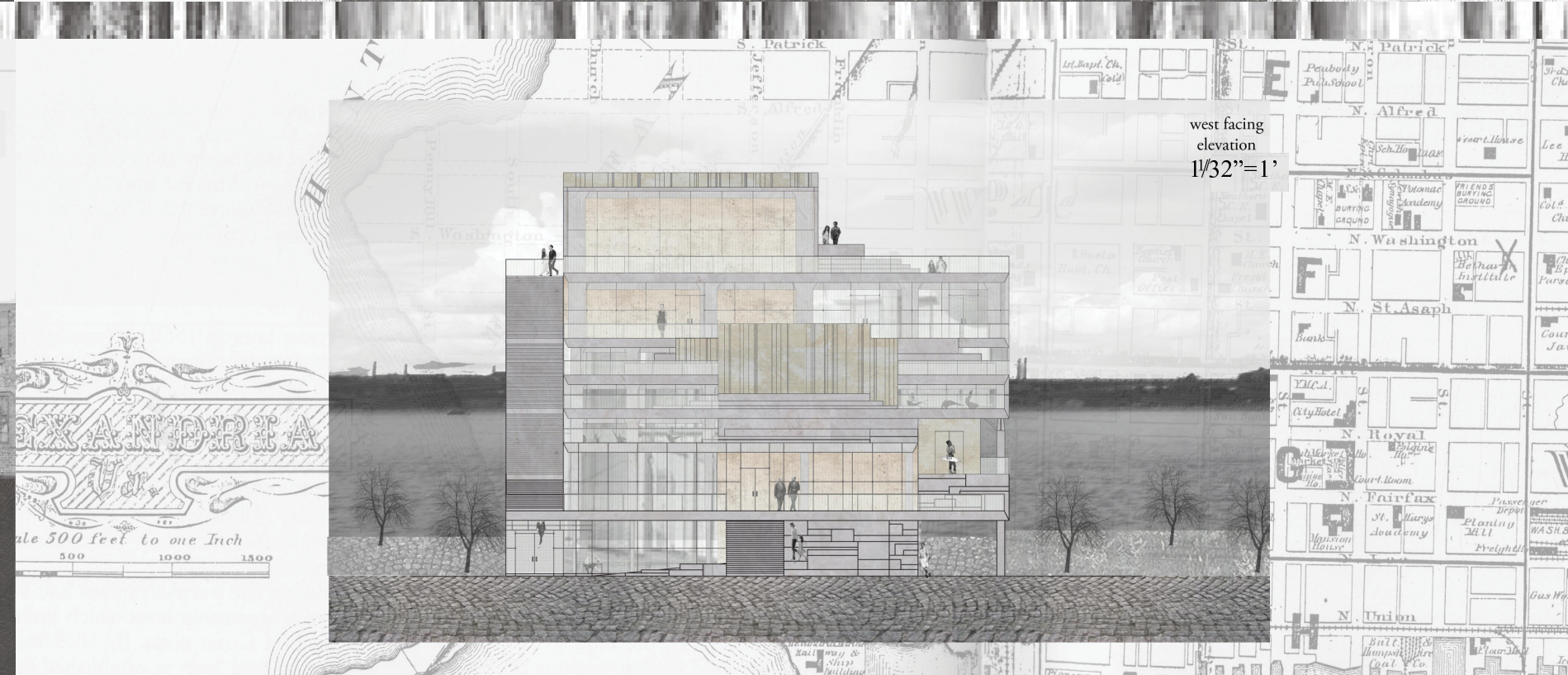
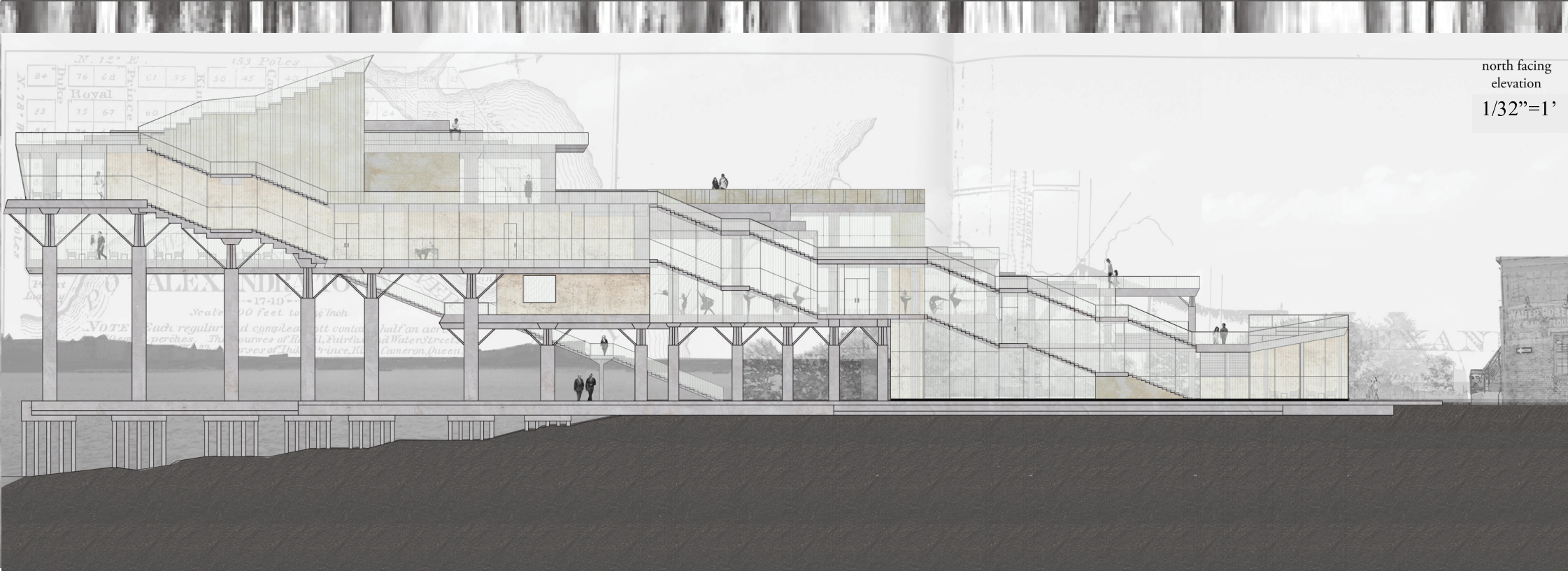
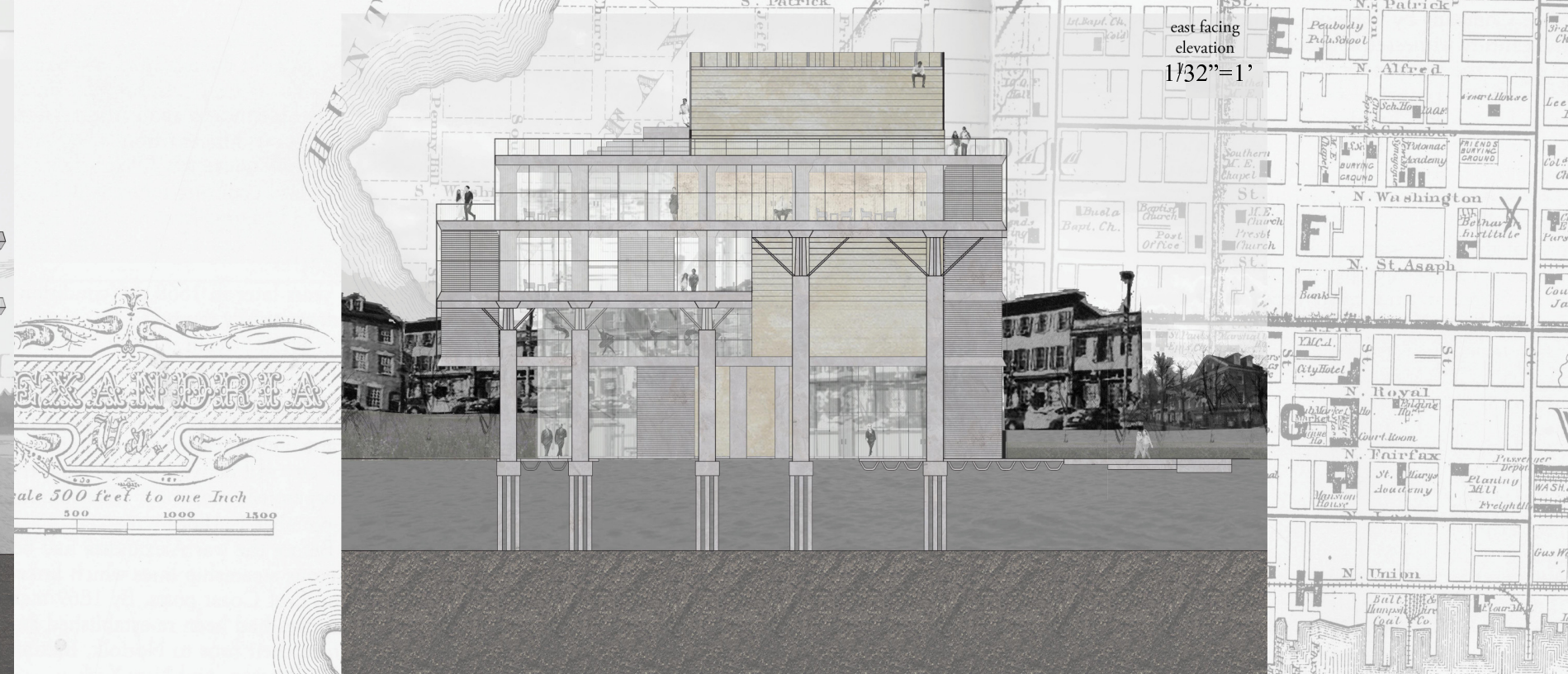
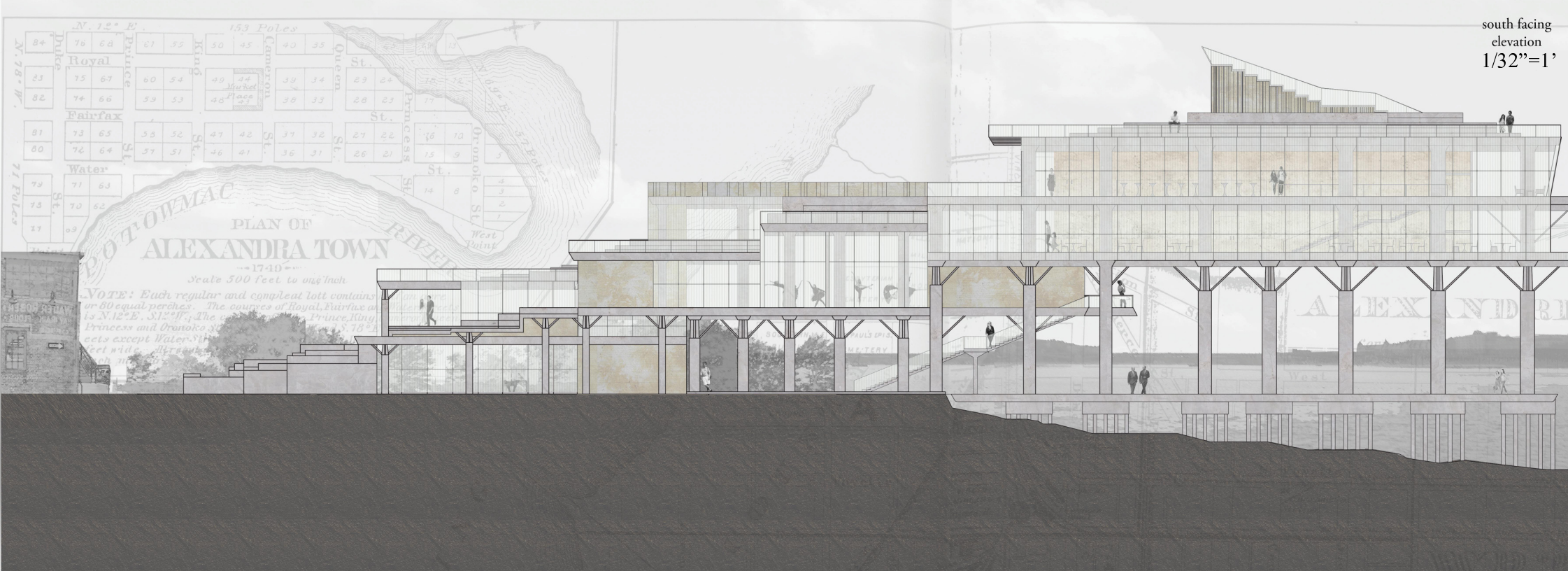
1/32"=1'



Level 5: upper performance hall and lobby space



Level 6: roof and stepped river overlook



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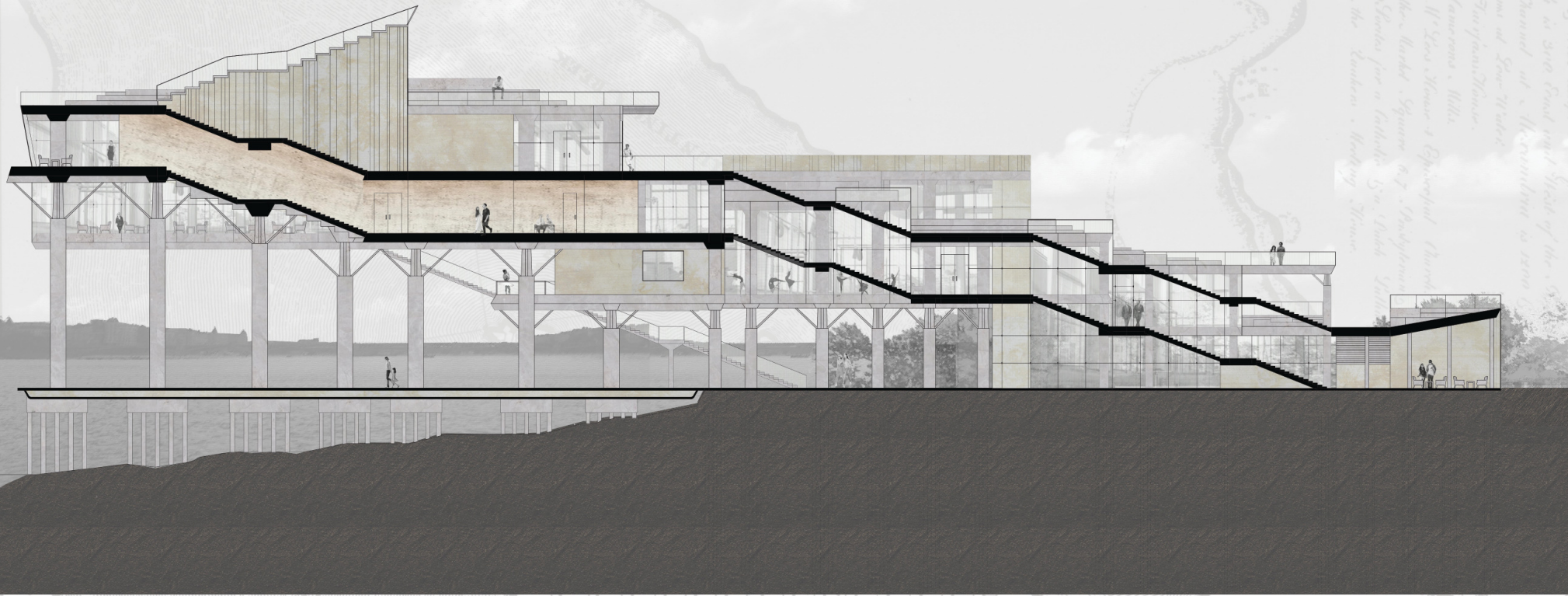
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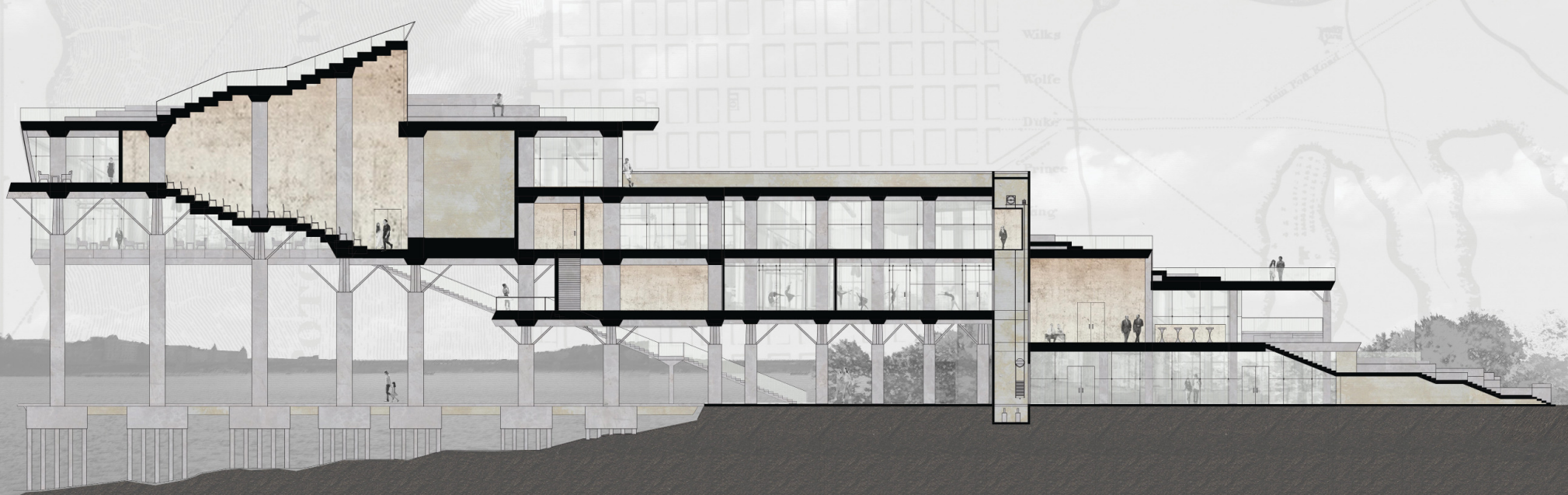
realization

33

Section 1- Through the layered stairway, which is the primary means of circulation



Section 2- Through the center of the building, showing the stepped layers

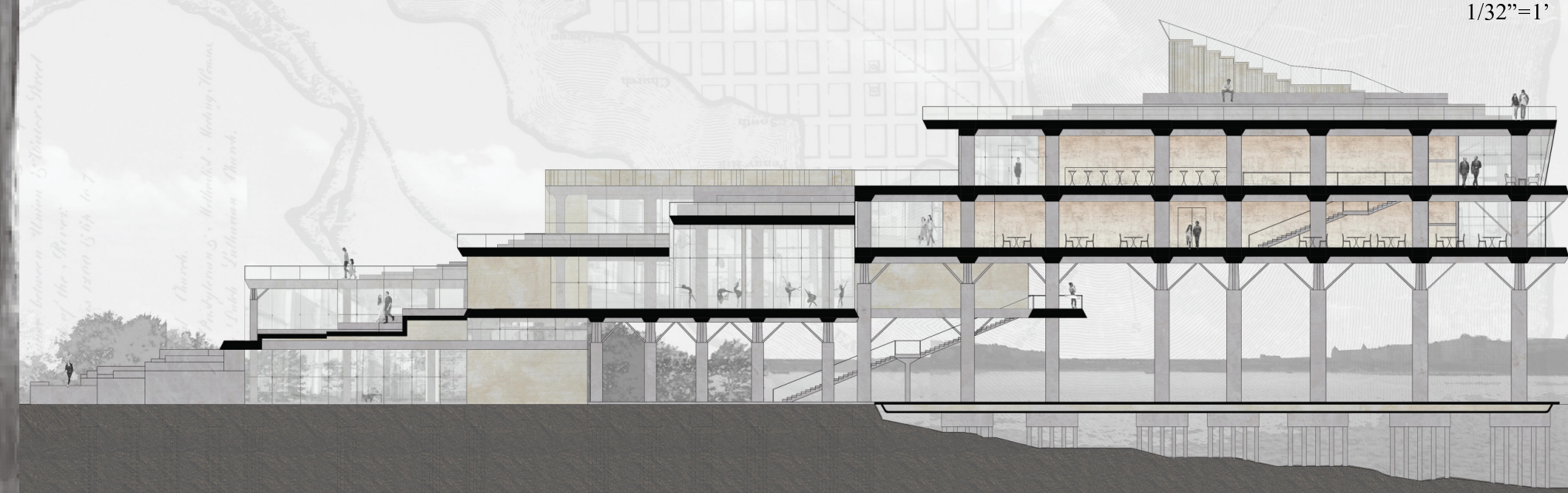


Section 3- Through the uppermost most levels, which serve as the lobby for the theater



Section 3
1/8"=1'
1/32"=1'

Section 4- Through the center's southern edge, showing the ballet studios and lobby



Section 4
1/32"=1'

where.
what.
how.
realization



SECTION THROUGH KING STREET

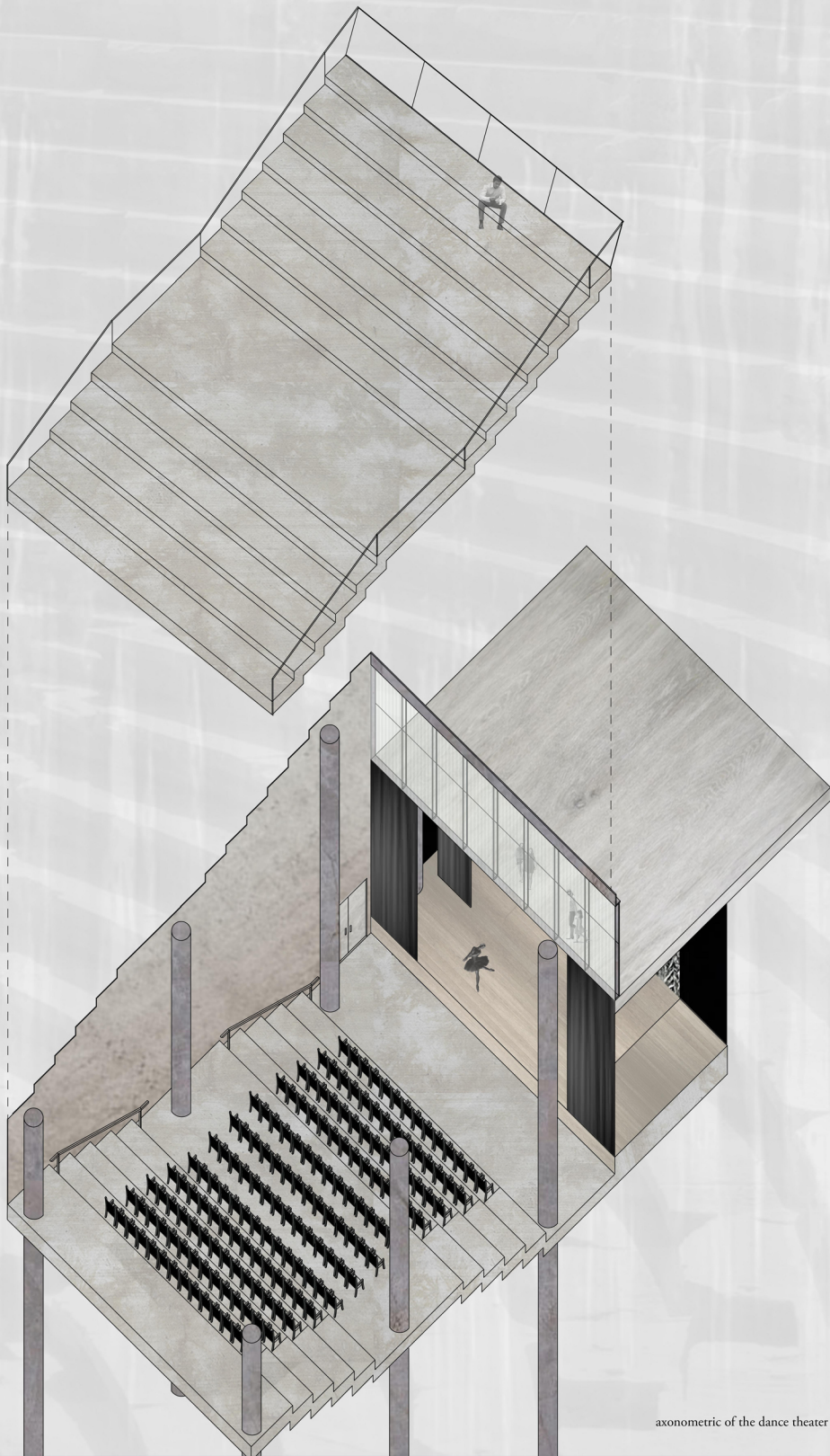


where.

what.

how.

realization.



axonometric of the dance theater and its roof

AXONOMETRIC OF THE THEATER

clere·sto·ry

noun- an outside wall of a building that rises above an adjoining roof and contains windows for supplying natural light to the interior space

Origin: Middle English, clere + story, 15th century

The term clerestory was developed to describe the windows that rise high above the nave of medieval cathedrals.

Windows at the meeting point of roof and wall have been employed since ancient times to maximize natural light in enclosed spaces. The oldest known example is the Karnak Temple in Egypt, where high central columns and low outer columns create a gap for light and air.

This axonometric depicts the dance center's clerestory window. It is located above the stage, in the vertical gap between the roof over the stage and the roof over the seating area.

The latter doubles as stepped outdoor seating, which overlooks the river. With its promise of unprecedented views, the outdoor seating lures pedestrians to the top of the exterior stair.

The clerestory window allows visitors on the adjacent deck to peer into the theater below, and theatergoers to glimpse the sky beyond.

From the seats in the audience, the view of the sky heightens the atmosphere of a production's scenery.

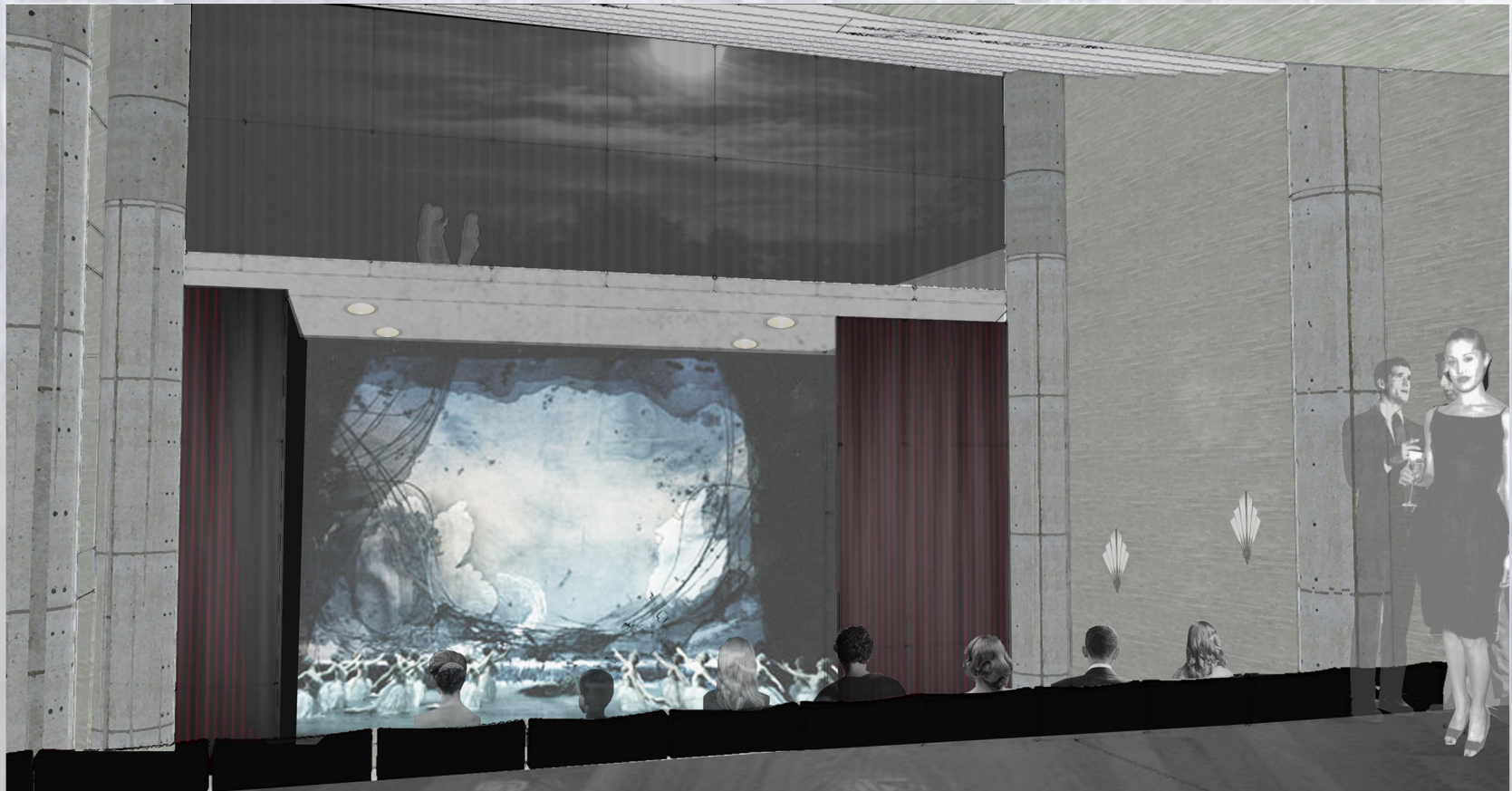
Any lights in the theater emit a glow through the clerestory at night, transforming it into a beacon to nearby pedestrians.

Aesthetically, the stepped roof/outdoor seating gives the building a visual climax, and echoes the many tiered elements of the Masonic Temple at the opposite end of Old Town's King St.

RENDERINGS



Top: Vignette showing the layering created as the levels branch off the primary interior staircase, seen here from the entrance hall
Bottom: Vignette showing the clerestory window above the stage, and the potential it has to visually contribute to a performance



where.

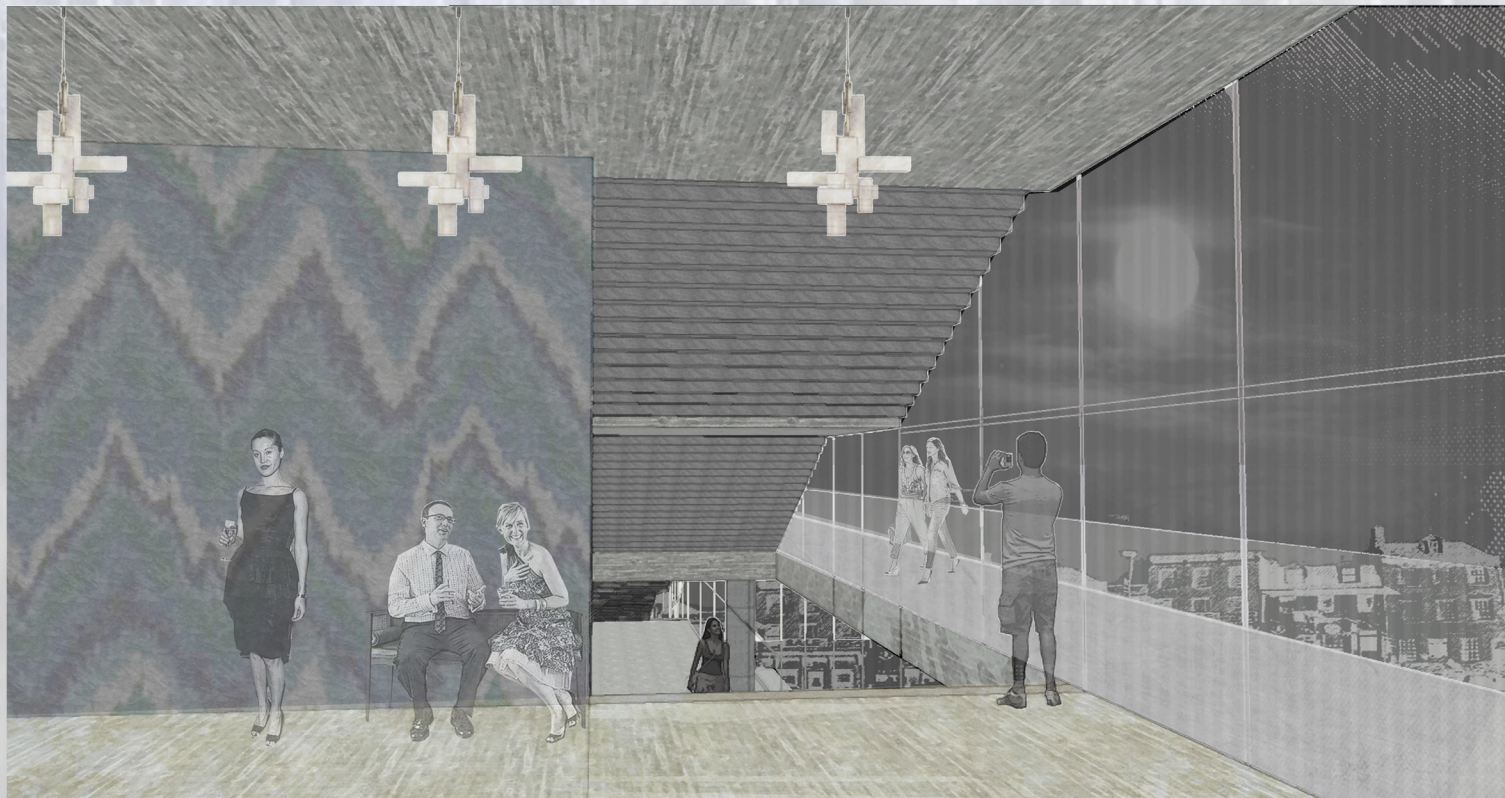
what.

how.

realization.



Top: Vignette illustrating the approach to the dance center from the Potomac River, as perceived by those arriving via boat
Bottom: Vignette from the highest interior level, depicting the experience of the stacked stair, and of looking back at the city

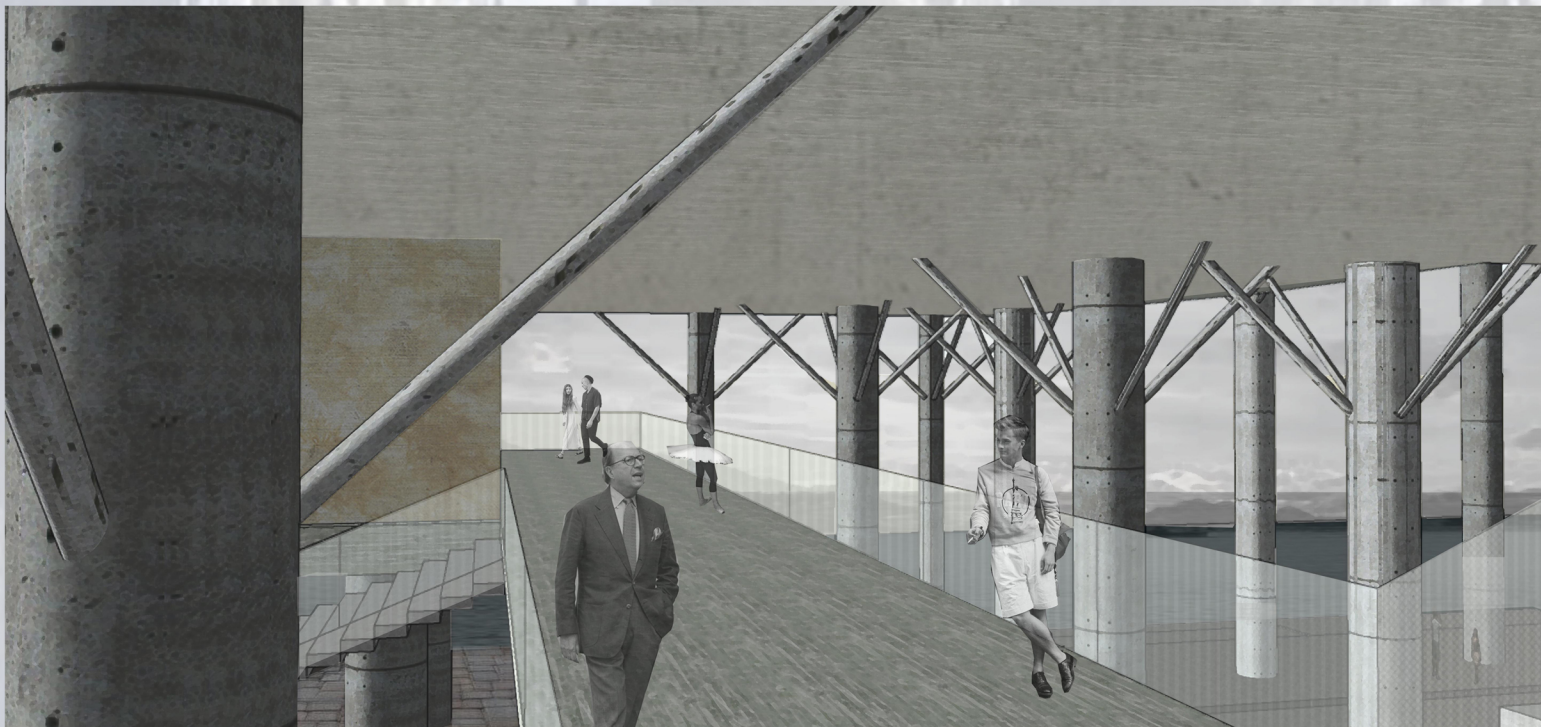


where.

what.

how.

realization.



Top: Vignette from a fire escape landing, picturing the columns which call to mind both a corps de ballets and an enchanted forest in which many classical ballets are set.

Bottom: Vignette from the upper part of the exterior stair, detailing the views over the Potomac River, and the tiered outdoor public spaces branching from the staircase.



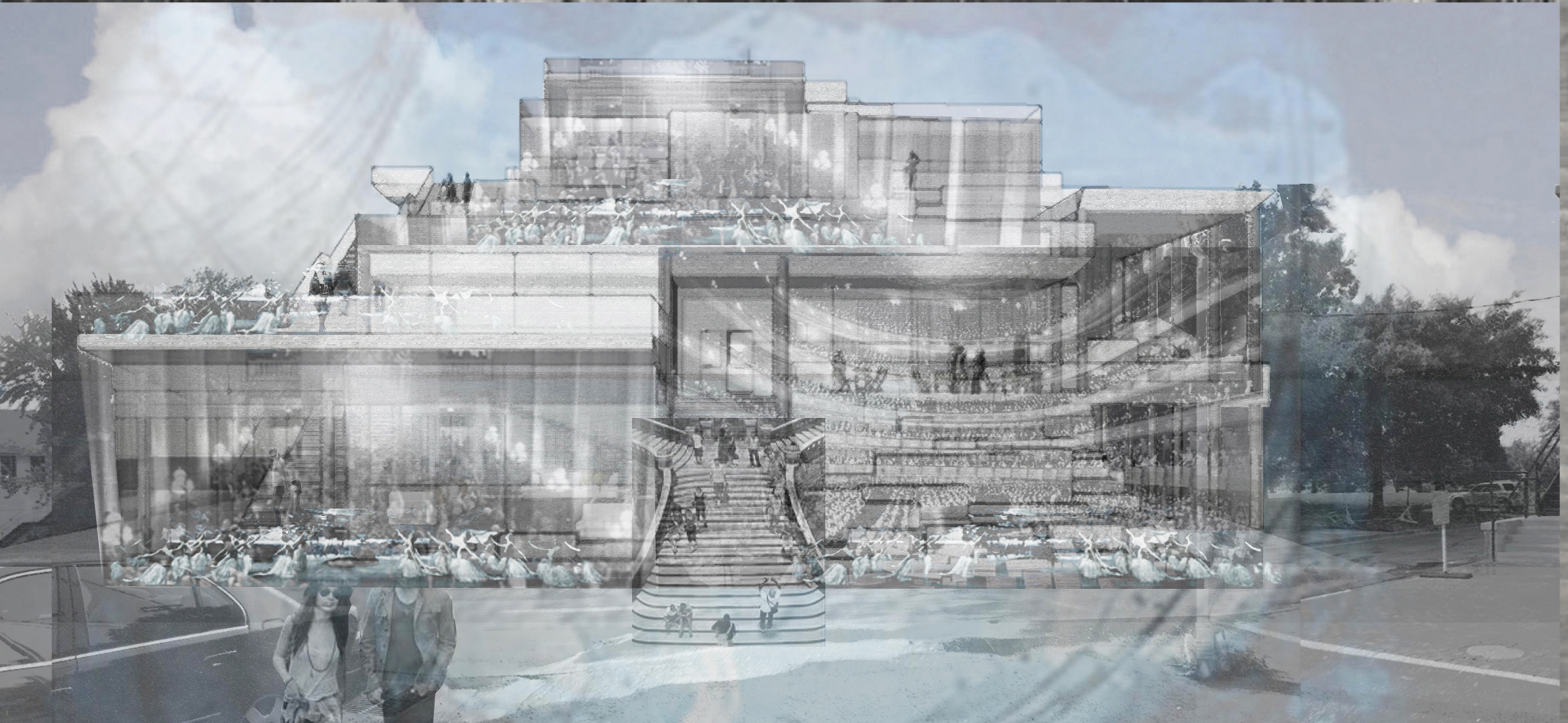
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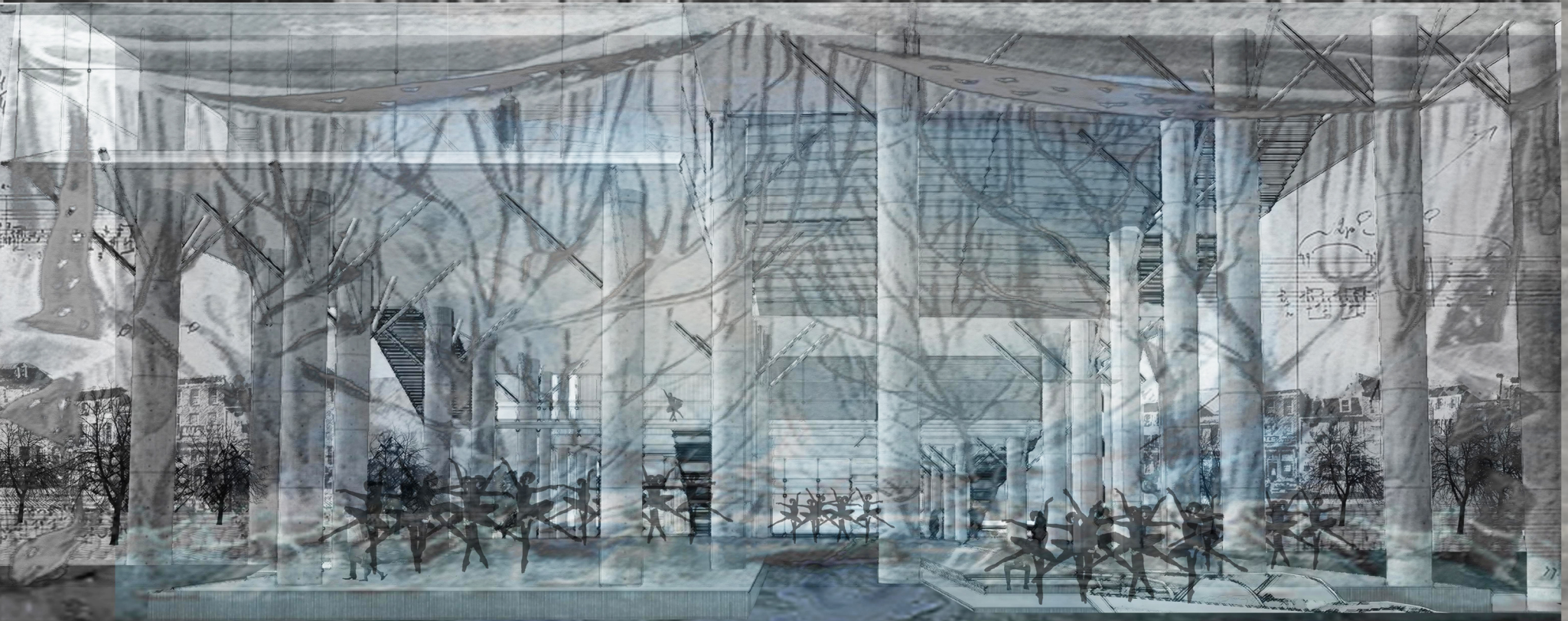
realization.

ATMOSPHERIC COLLAGE: THE THEATER OF THE CITY



The terraced roofs as 1) stages for performance, and 2) places from which to observe the theater of the street.

ATMOSPHERIC COLLAGE: FOREST OF COLUMNS



The space beneath the stepped building as scenery of a classical ballet performance

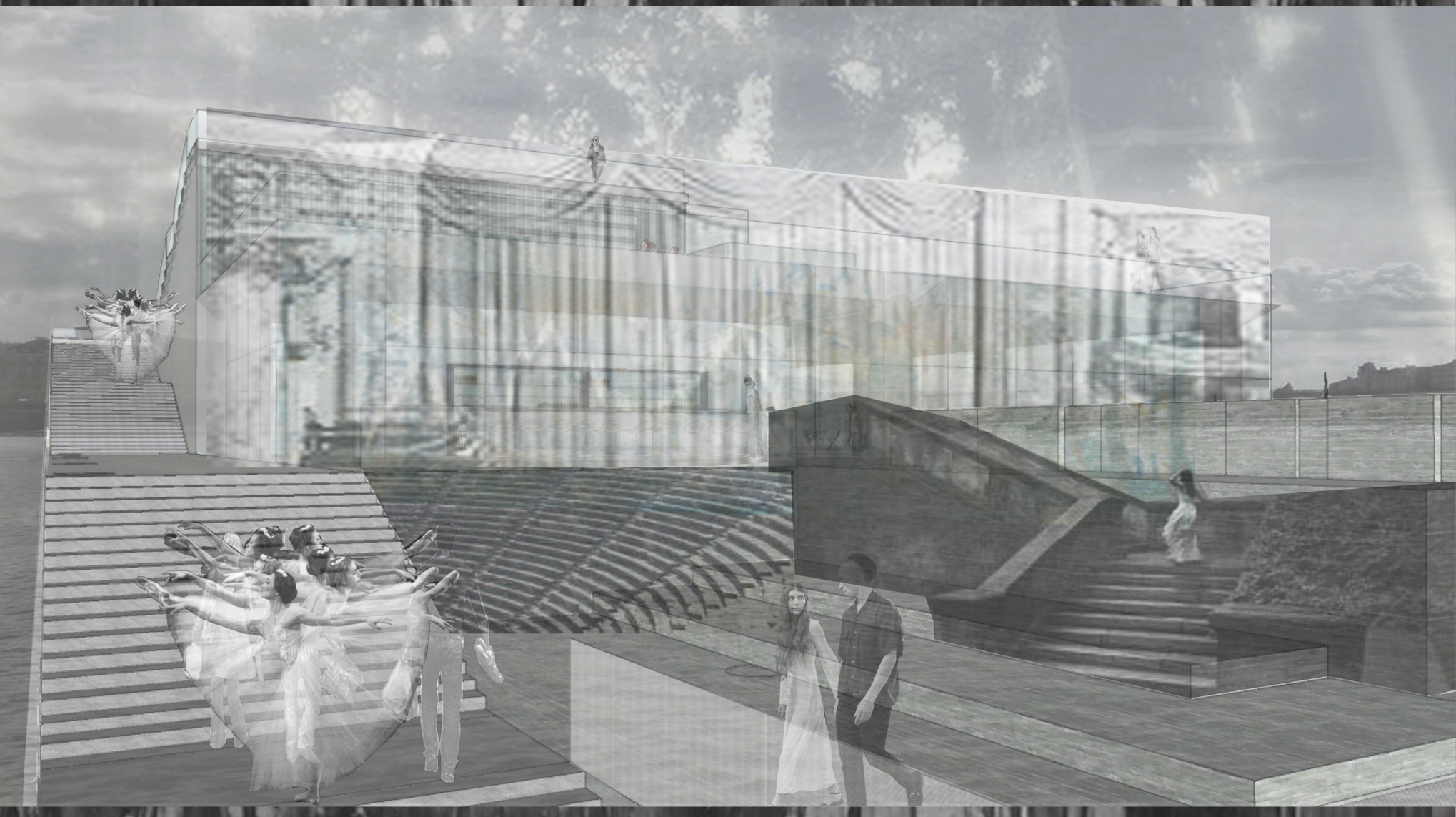
where.

what.

how.

realization.

ATMOSPHERIC COLLAGE: A BUILDING FOR PERFORMANCE



The tiered outdoor spaces as places of performance, the stairs as choreographic elements, dictating the movement of its users

where.

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how.

realization.

ATMOSPHERIC COLLAGE: COLUMNS/ DANCERS/ FOREST



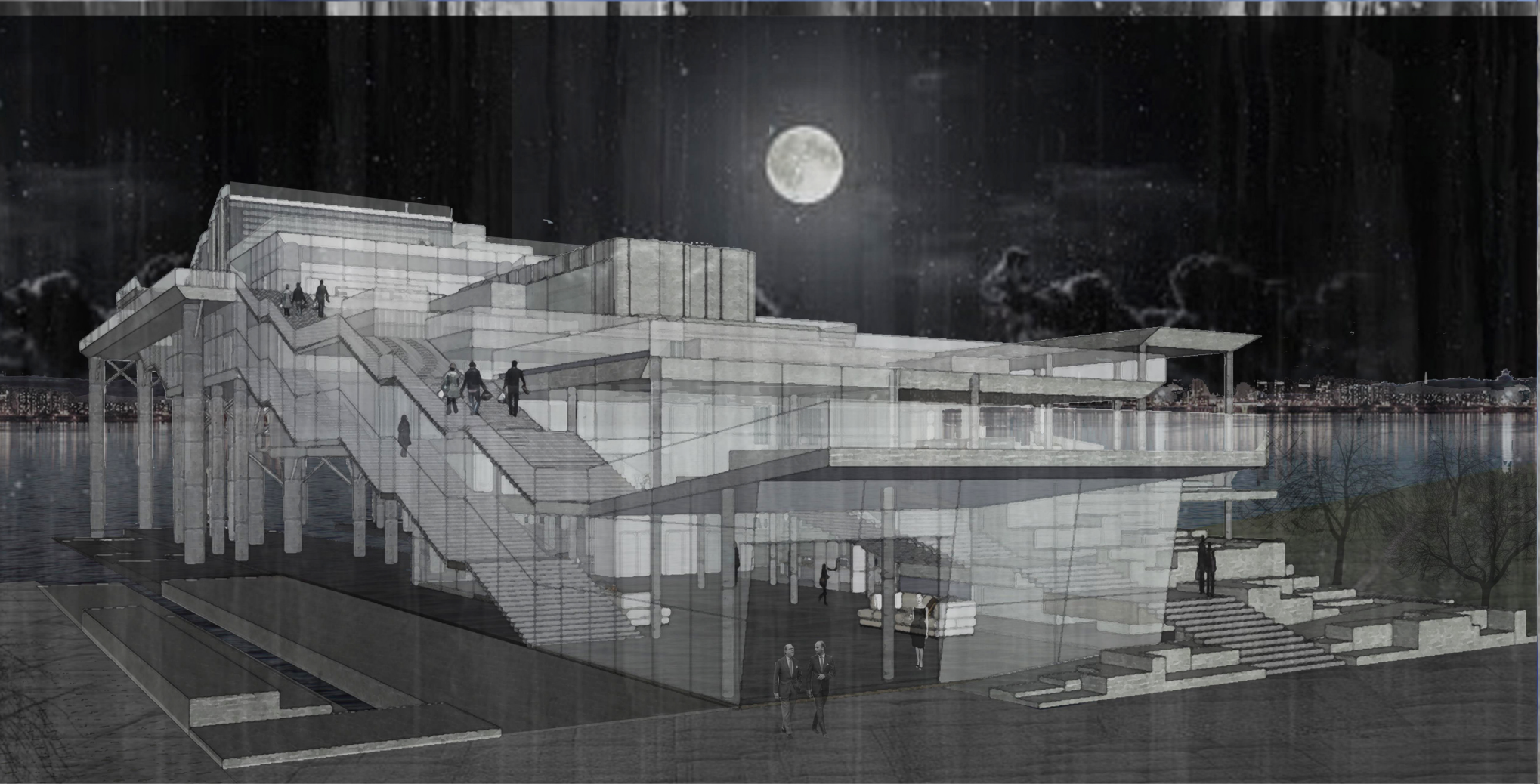
The visual analogy between columns, dancers, and a forest

where.

what.

how.

realization.



NIGHTTIME RENDERING OF THE DANCE CENTER

where.

what.

how.

realization.



Images from thesis defense, September 26, 2011/ Pictured below: My mother, Frances Griffith Hartley



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IMAGE CREDITS

Clockwise, from top left:

Page 2:

- 1) “Travelers’ Accounts of the Historic Alexandria Waterfront (pg. 37).” *City of Alexandria, Virginia*. Accessed September 15, 2010. <http://alexandriava.gov/uploadedFiles/oha/info/TravelersAccountAlexandriaWaterfront.pdf>.
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