



a building within a building



Virginia Polytechnic Institute and State University

MAY 2005

a building within a building

Andrew Ryan Hunt

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

MASTER OF ARCHITECTURE

Professor William Galloway

Chairman

Professor Jim Jones

Professor Hans Rott





contents

cover	1
<i>title page</i>	3
<i>contents</i>	5

the idea

6

the city	10
<i>existing</i>	16
<i>shell</i>	20

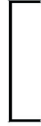
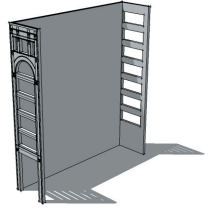
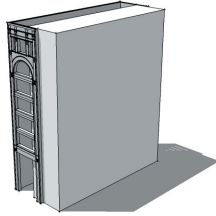
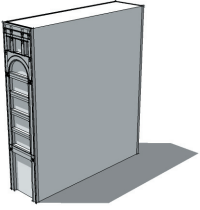
emergence	28
<i>structure</i>	30
<i>ground level</i>	32
<i>facade</i>	36

extension	42
<i>sliver</i>	44
<i>courtyard</i>	48
<i>terrace</i>	52

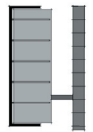
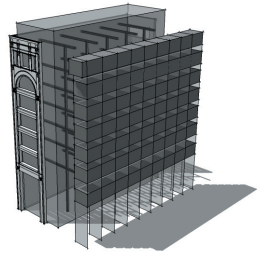
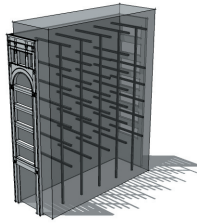
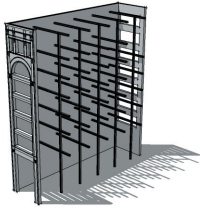
conclusions

56	
<i>acknowledgements</i>	62
<i>bibliography</i>	63





...It is my proposal that unused shells of the past serve as cocoons for the future, providing the precedence from which grows "a building within a building". The tension created between old and new encourages a didactic relationship between building and city, cognizant of the past while looking towards the future.



the idea

A city, struggling to redefine its identity, is forced to answer difficult questions of what remains and what must go. Ideally, a strong economic base breathes life into the city. Where industry booms, commerce is found around every corner, and shops and markets evoke the interaction that makes a city great. All the services and opportunities provided within a city mean nothing if there is not the density of patrons to support them.

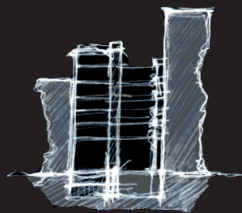
What happens after dark in many "briefcase cities" when the vast population lives outside of the city? The city sleeps alone. Half of its day is spent unproductively waiting for the first break of dawn, for its streets to be filled again. Through the integration into the downtown of residential solutions, in particular within the cultural districts of the city, the life cycle can be stretched. Residents can walk home from work, unwind and return to the streets for dinner, for a movie, or a night out. The dreaded commute is abolished, and the time saved is given back to the city. The level of interaction is elevated and so too is the economy of any small city.

Pittsburgh, PA. is just such a city, a city asleep, reminded of an industry that once defined it, now searching for an economic base to lean on in an uncertain time. Time and industry have bestowed upon the city a wonderful array of architecture; though many whose primary uses have dried up and who now beg for reuse at a time when the correct solution could be more "useful" than ever.

Six to eight story vertical warehouses, coined "sliver buildings" for their narrow facade and lengthened footprint, frame many of the cities downtown streets. The avenues of Liberty and Penn are peppered with such structures, their contextual facades helping to maintain the rhythm of the urban street, while their interiors sit empty, vacated by the same industries that spawned their creation. These forgotten shells provide opportunities to activate the street fronts with shops, restaurants, and businesses, as well as to shelter the city's faithful, those who relish the commotion and vibrancy of the downtown with no thought of escape.

The question remains, what structures to reuse and in what manner? Often the choice is made at the hand of historical tax credits, a large supporter of reuse, however in areas where such credits are not available the questions remain unanswered, and the buildings empty.

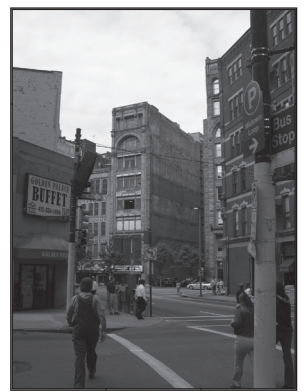
It is my proposal that these unused shells of the past serve as cocoons for the future, providing the precedence from which grows "a building within a building". The tension created between old and new encourages a didactic relationship between building and city, cognizant of the past while looking towards the future.





"To run after the past is a futile pursuit. Only by the manifestation of the present can the past be induced to speak."

Sverre Fehn



The potential of any project lies in the mind of the architect and at the mercy of the site. The challenge is in designing around the constraints that are present and accentuating the potentials, as there will always be both.

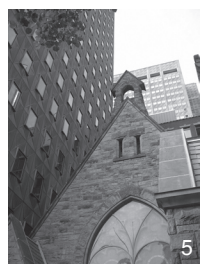
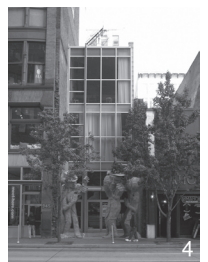


the city

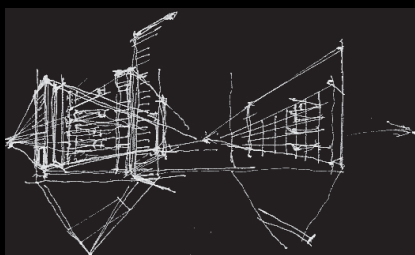
At first glance the site had to appear a forgotten place. A ruin within the city, not just an abandoned building but a desperate building, one with a score to settle and a story to tell, one whose usefulness outlasted its use. What better setting for such an investigation to take place than one that could be best served by its findings.

The site itself came to me through research into development and reuse within Pittsburgh. In reading a manifesto on reuse entitled "Living with Ghosts" by local Pittsburgh architect Dutch Macdonald and developer Eve Picker, I was first introduced to the idea of "sliver buildings" and became interested in the possibilities they held. The site of 915 Liberty Avenue and the fortuitous vacant lot adjacent struck me at first glance as the perfect vehicle for the idea. The axis of the site as illustrated in the previous spread provides an opportunity to emphasize the emergence of new from old and to connect the gesture to the heart of the city through line of site. The vacant lot allows for the emergence to take a dramatic leap outside of the existing shell, reaching out to the opposing brick facade and in doing so joining two lots together as one.

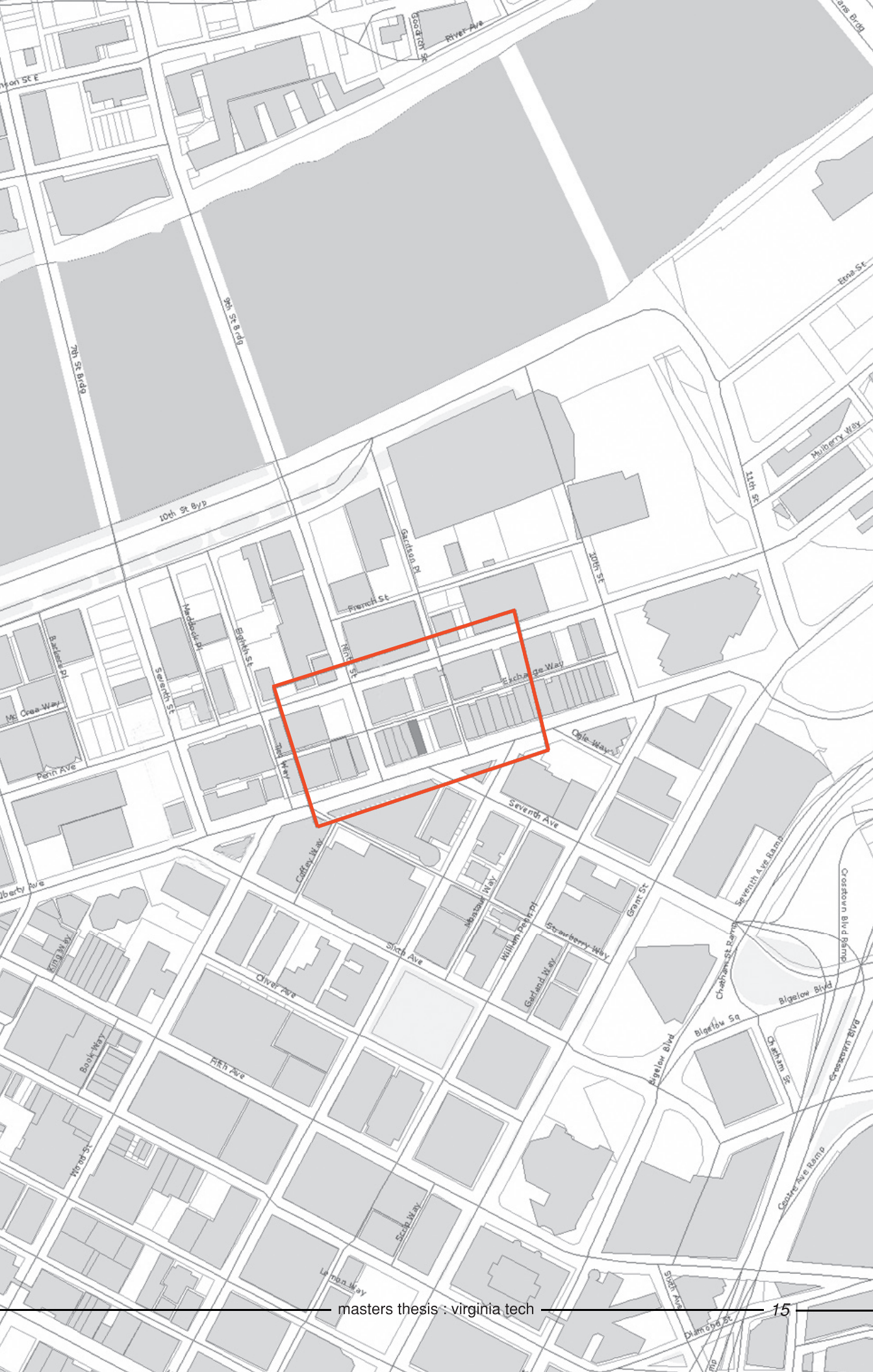
The character of the existing facade was as forgotten a building as I could have hoped for. A beautifully weathered facade constructed at the turn of the 20th century, with the strong, stable presence of masonry contradicted by the permeable nature of missing or broken glazing. It struck me as the perfect shell, stable yet vulnerable, solid yet penetrable, much in need of the building within and its program for compliment and contrast. A building is nothing but a shell without a use to breathe life into it.



1. Pittsburgh Plate Glass Building, *Phillip Johnson*
2. Heinz Chapel, University of Pittsburgh
3. County Courthouse, *H.H Richardson*
4. 947 Liberty Avenue, *Edge Studios*
5. Alcoa Headquarters, *Harrison & Abromivitz*



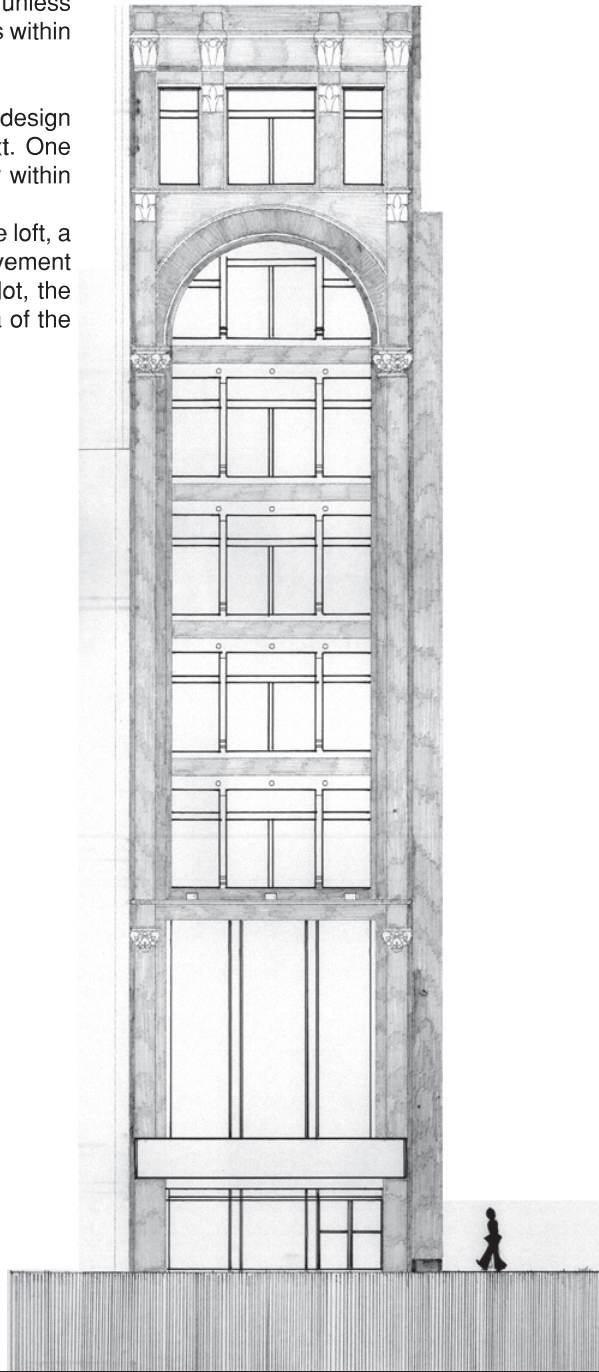
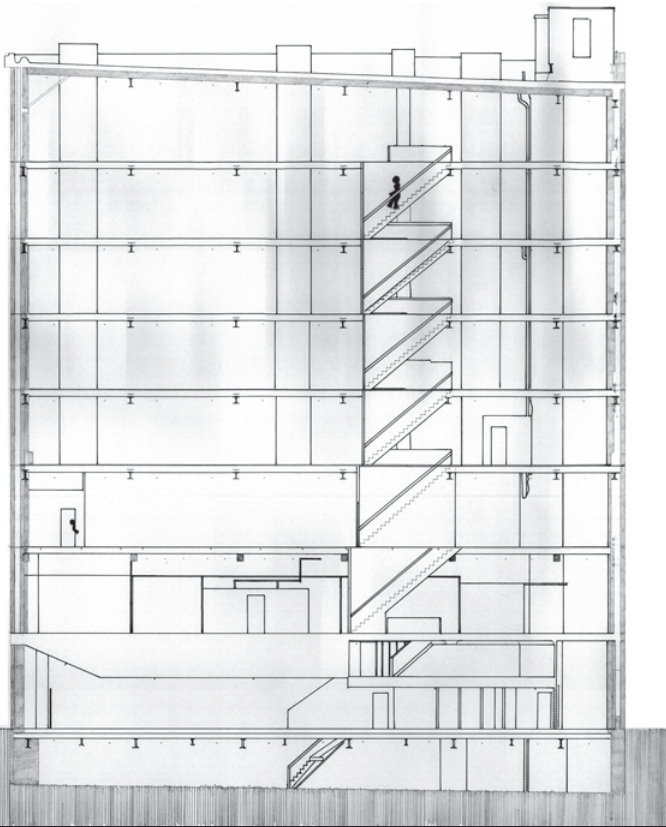


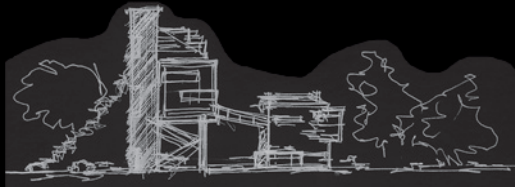


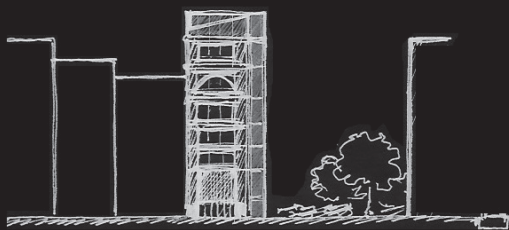
...existing

915 Liberty Avenue... a vacant building in a frozen city.
As time elapses trends change, businesses grow, or fade and so too do the buildings that house them. A structure becomes ruin unless acted upon, and a ruin becomes only a memory unless it holds within it the possibility of something greater.

The proposed program includes six loft apartments whose design exhibits a participatory involvement within the urban context. One that welcomes interaction and thrives in movement, not only within the spaces but surrounding them, a true urban experience.
The bottom two floors are made one, to be inhabited by a wine loft, a space in which to enjoy clusters of conversation and the movement of mingling. Through the acquisition of the adjacent vacant lot, the idea of emergence can be further explored in that each area of the program has its moment to step into the city.









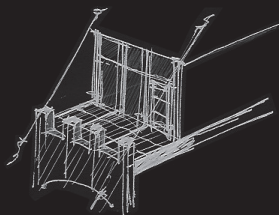
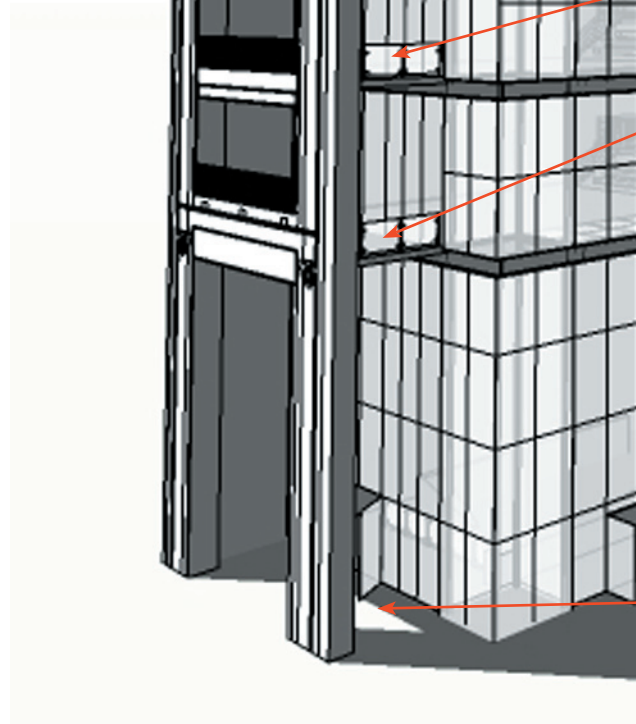
"At the necessary juncture of culture and place, architecture seeks not only the minimal ruin of landscape but something more difficult: a replacement of what was lost with something that atones for the loss."

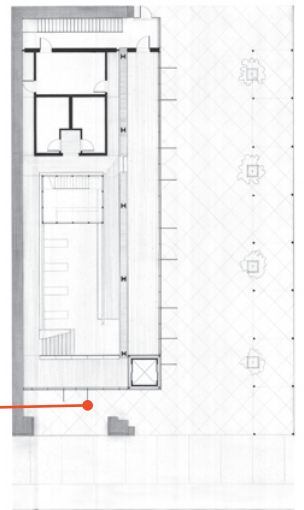
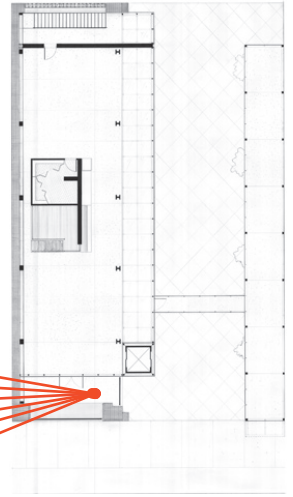
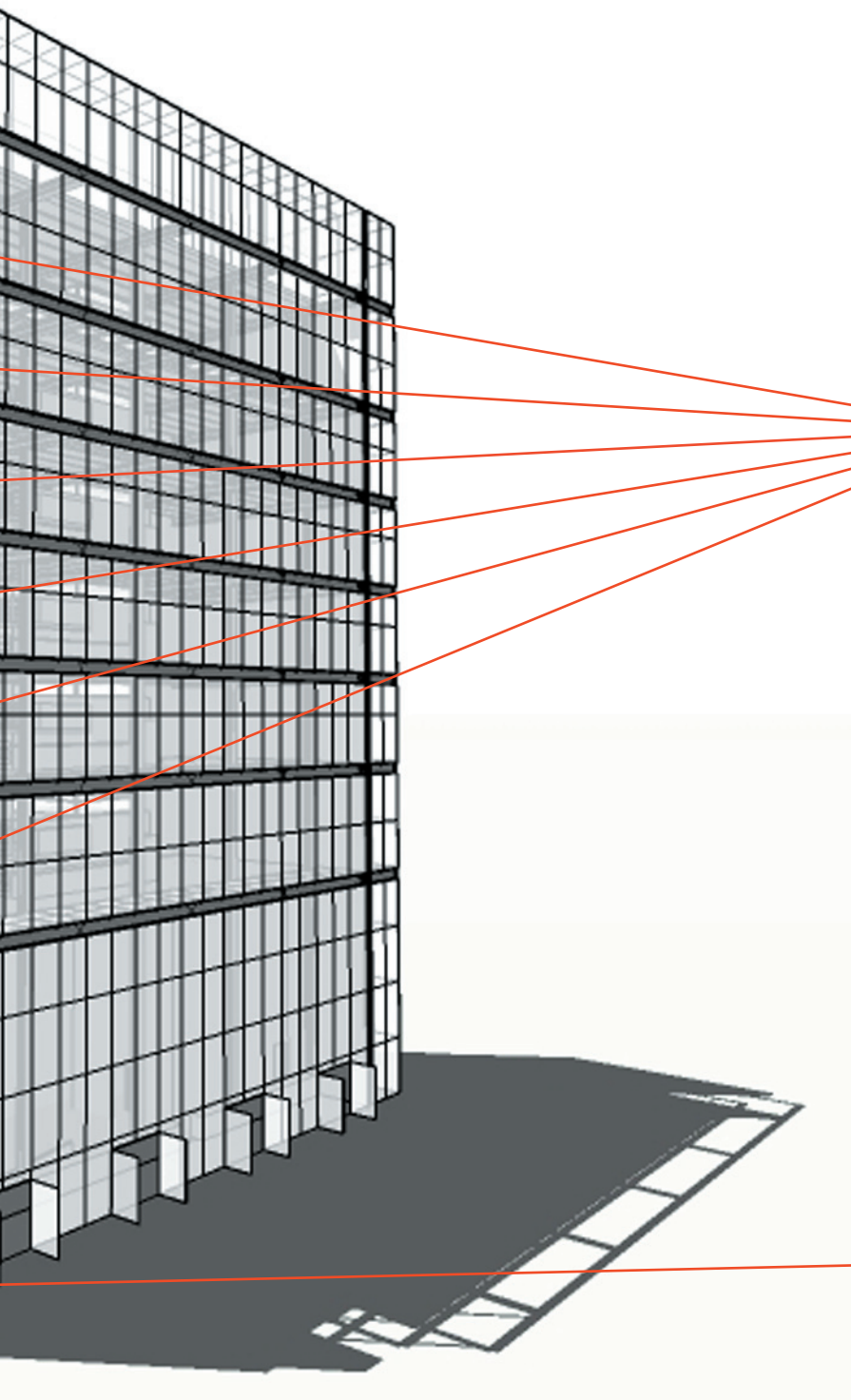
W.G. Clark

...shell

That piece of the existing which remains. A threshold, a screen, a divide, between existing and new, between the actual and the ideal. Through the gesture of a recessed glass facade the identity of the shell is isolated as a skin. An activated ruin, presenting itself to the street and inviting the passage of both air and occupant through its openings.

Where the recess occurs, a space is created, neither indoors nor out, sheltered but not enclosed. It is a place of reflection between the existing shell and the building within, and one of the most distinct moments within the project where this relationship between old and new can be understood. At this point the old walls remind us of the time that has passed, and the new glass introduces the future.

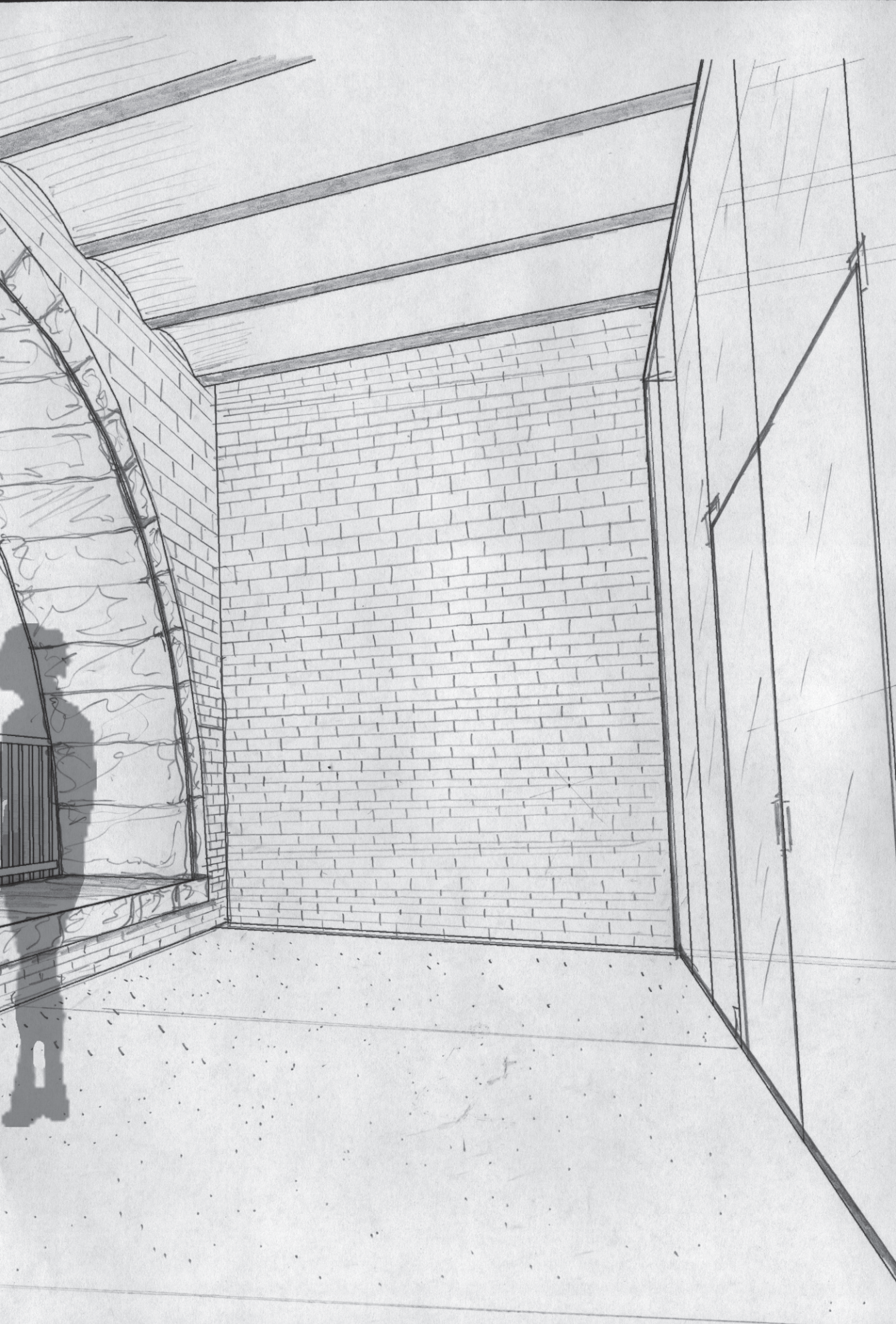




"...the old walls make us aware of the times that have passed and the new walls introduce the present."

Sverre Fehn

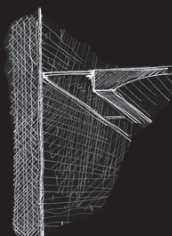
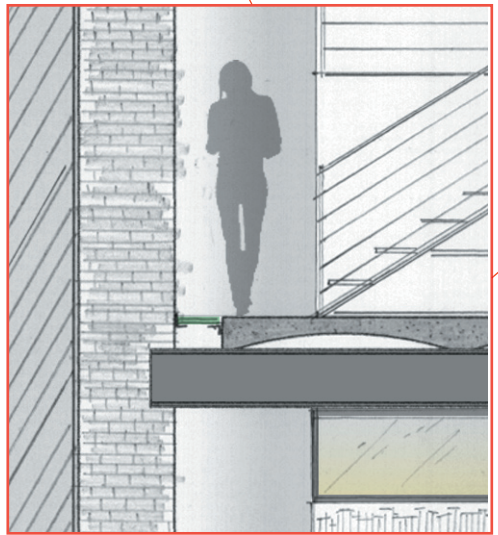
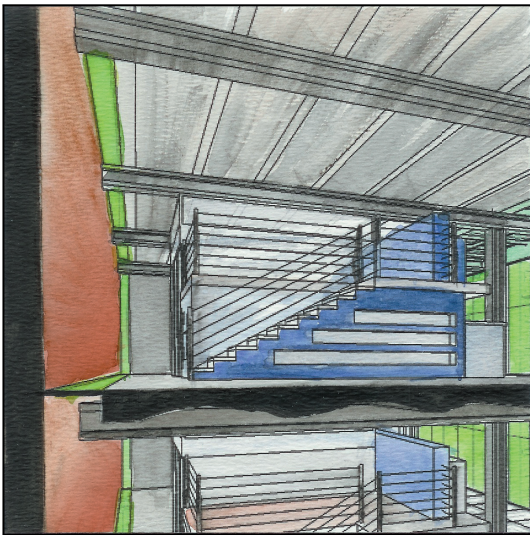
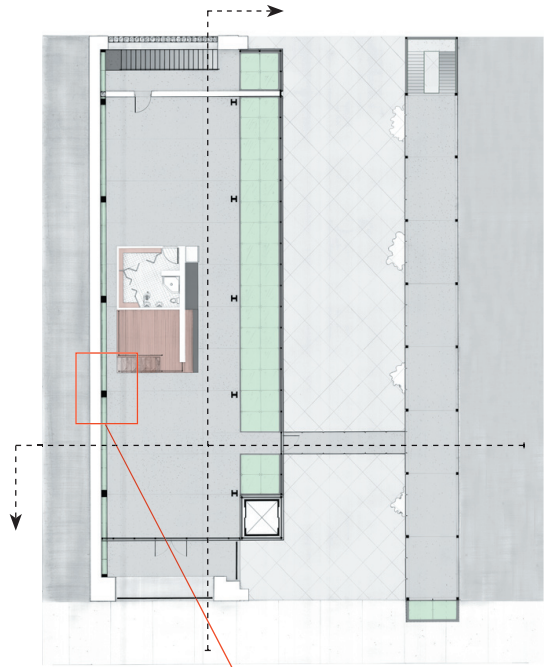


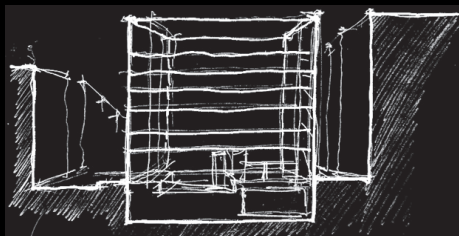


Within any apartment building, one's place within the larger scheme is often lost to enclosure and intended isolation. In an effort to recapture that sense of place within a larger whole, one needs to sense an extension of something greater, something larger that holds a presence within the immediate confines yet continues outside.

The shell provides that presence. In respect of what came before, the connection between old and new is a translucent one. Thick plates of glass fill a gap one foot wide that is left as the new concrete slab pulls away in respect of the shell.

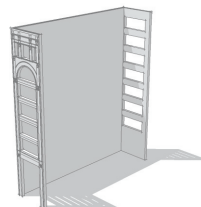
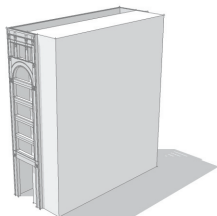
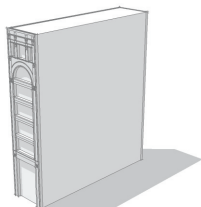
Through the glass, light illuminates the presence of the mass continuing above and below and reinforces the idea of a larger context in which the inhabitant is now able to find his or her place.



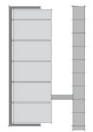
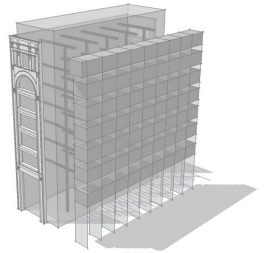
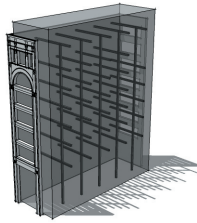
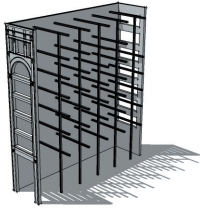








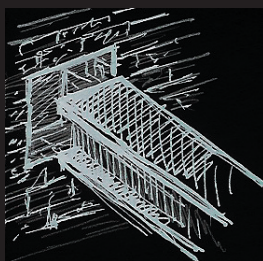
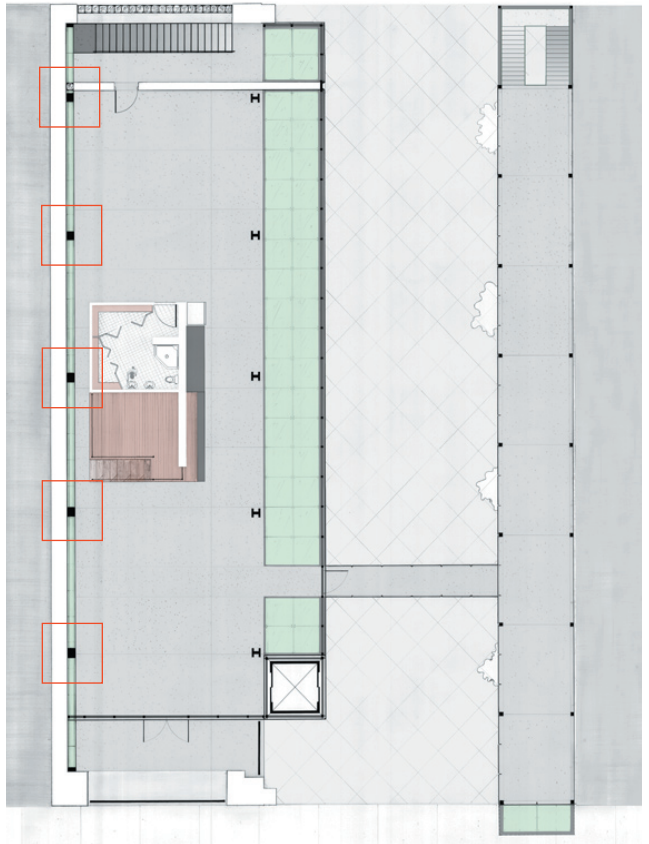
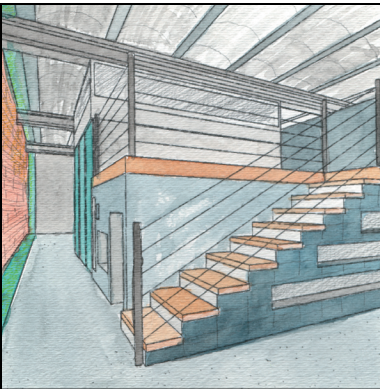
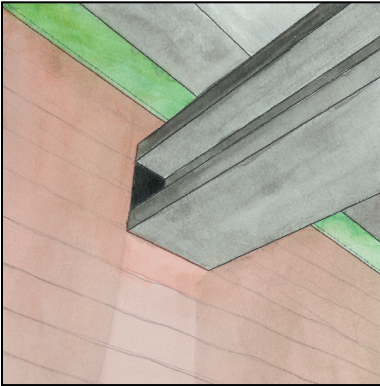
The emergence is that which comes forth from within, serving to separate identity through form and proportion. What results is the cooperative balance of two worlds, old and new, and those special places in between where the boundary is blurred.

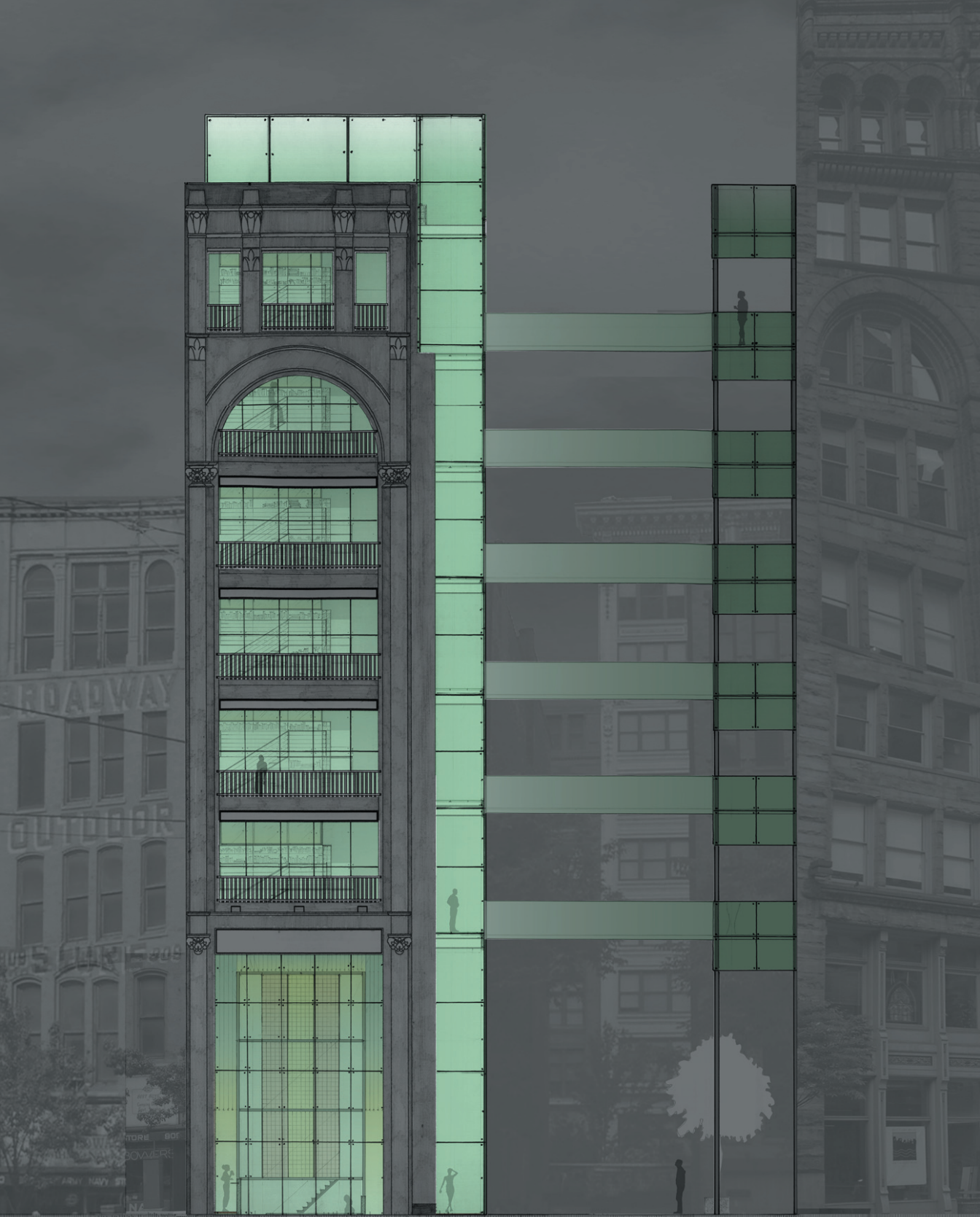


emergence

...structure

The emergence begins within the shell. The new is invited to rise out of the old; where the two touch are points of trust. In the vacated cavities where old beams once rested, a new steel structure finds a home, taking its cues from the rhythm of the old, a minimal contact, and measure of respect given the shell.





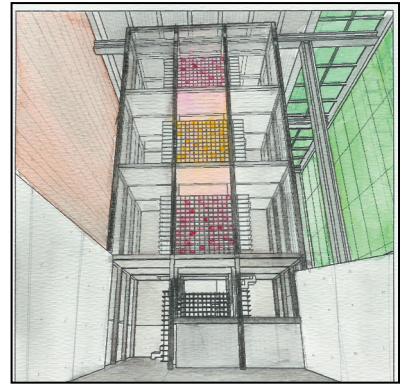
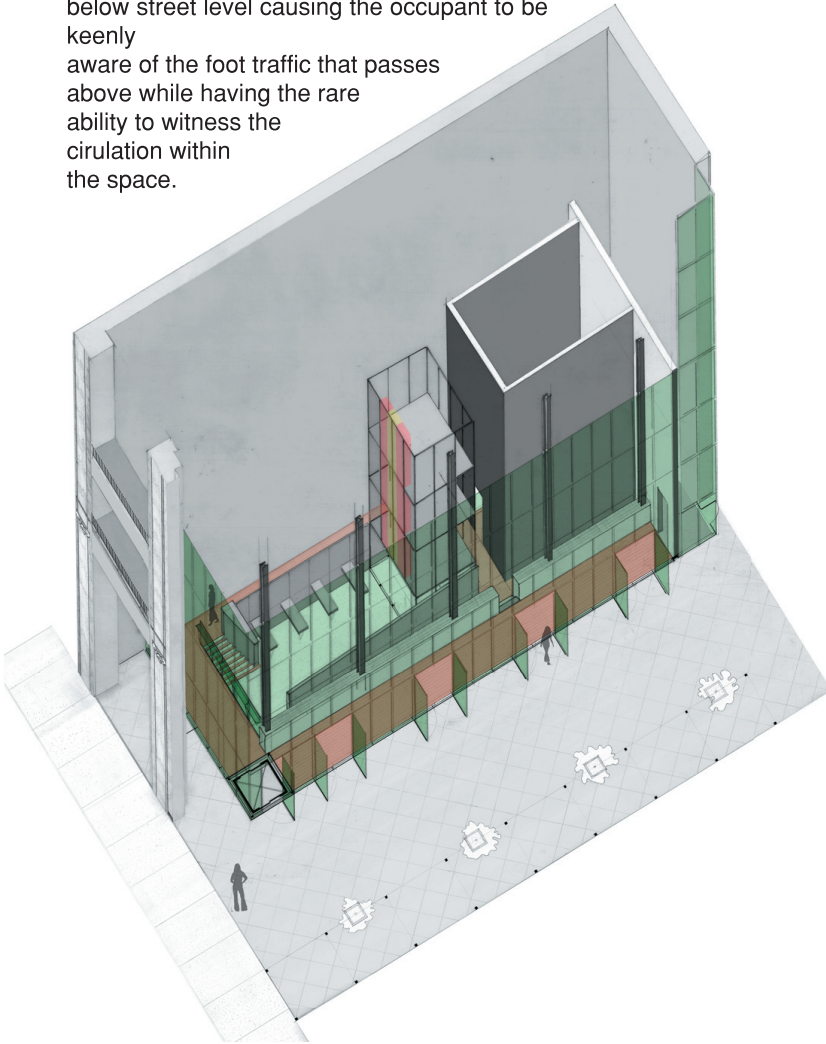
"The building is a reflection of time through material;
the nature of both the new and old construction... thus
no age favors another."

Sverre Fehn

...ground level

At ground level, emergence takes shape within the setting of the wine loft. The space is defined by its scale and the movement within it. To emphasize this movement the bar is set up without a place to sit. Only places to rest a drink, stand, and interact. The commotion that results is one of vibrant activity, the movement of an active meeting place, a mirror of the bustling street. The architecture focuses on movement by placing the commotion at eye level. The bar floor is submerged four feet below street level causing the occupant to be keenly

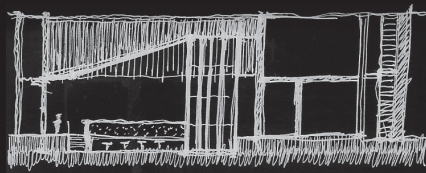
aware of the foot traffic that passes above while having the rare ability to witness the circulation within the space.

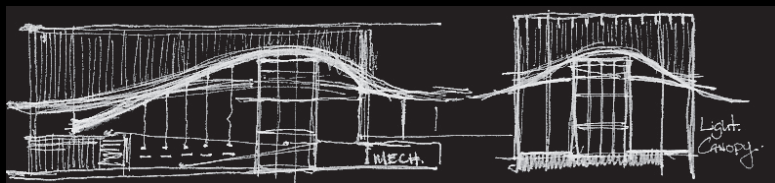
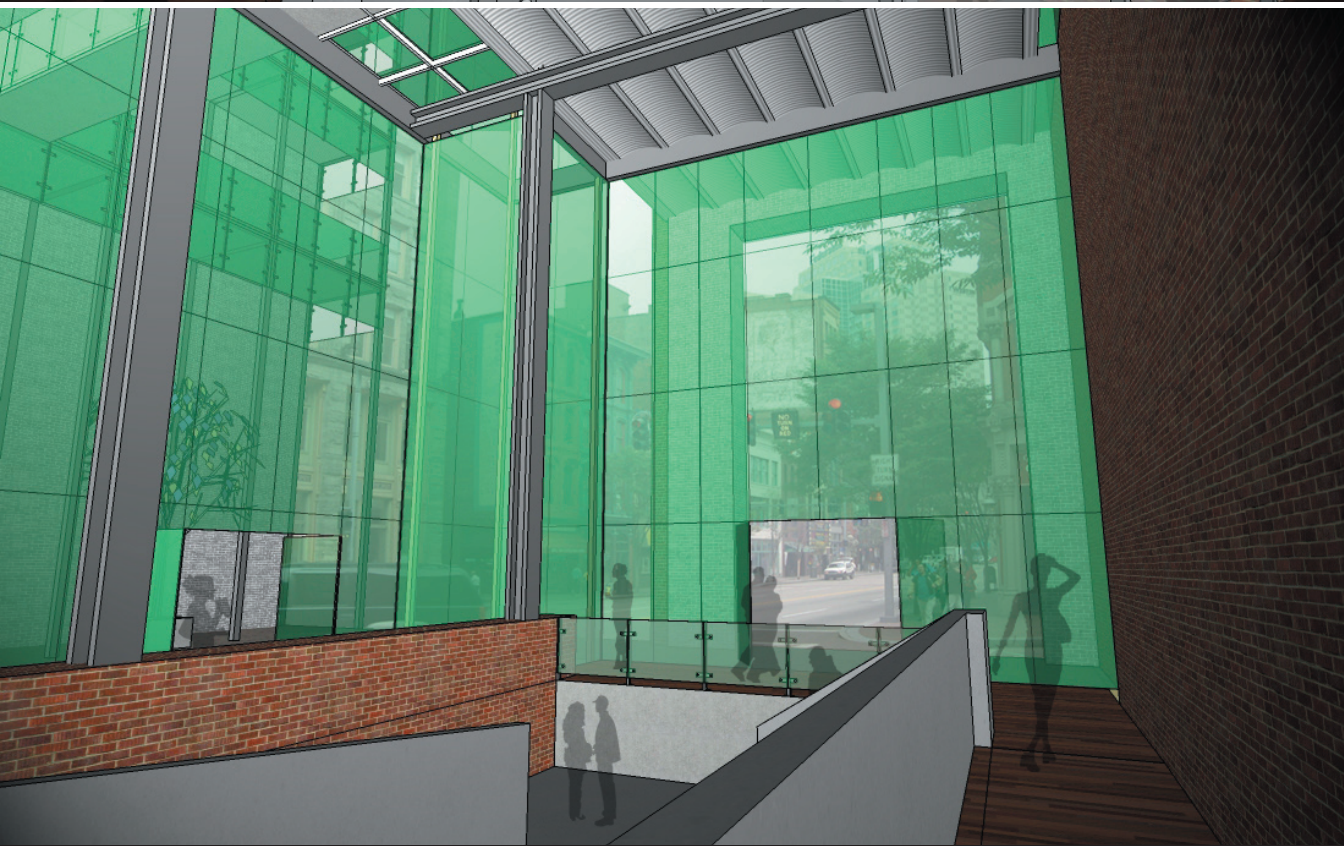
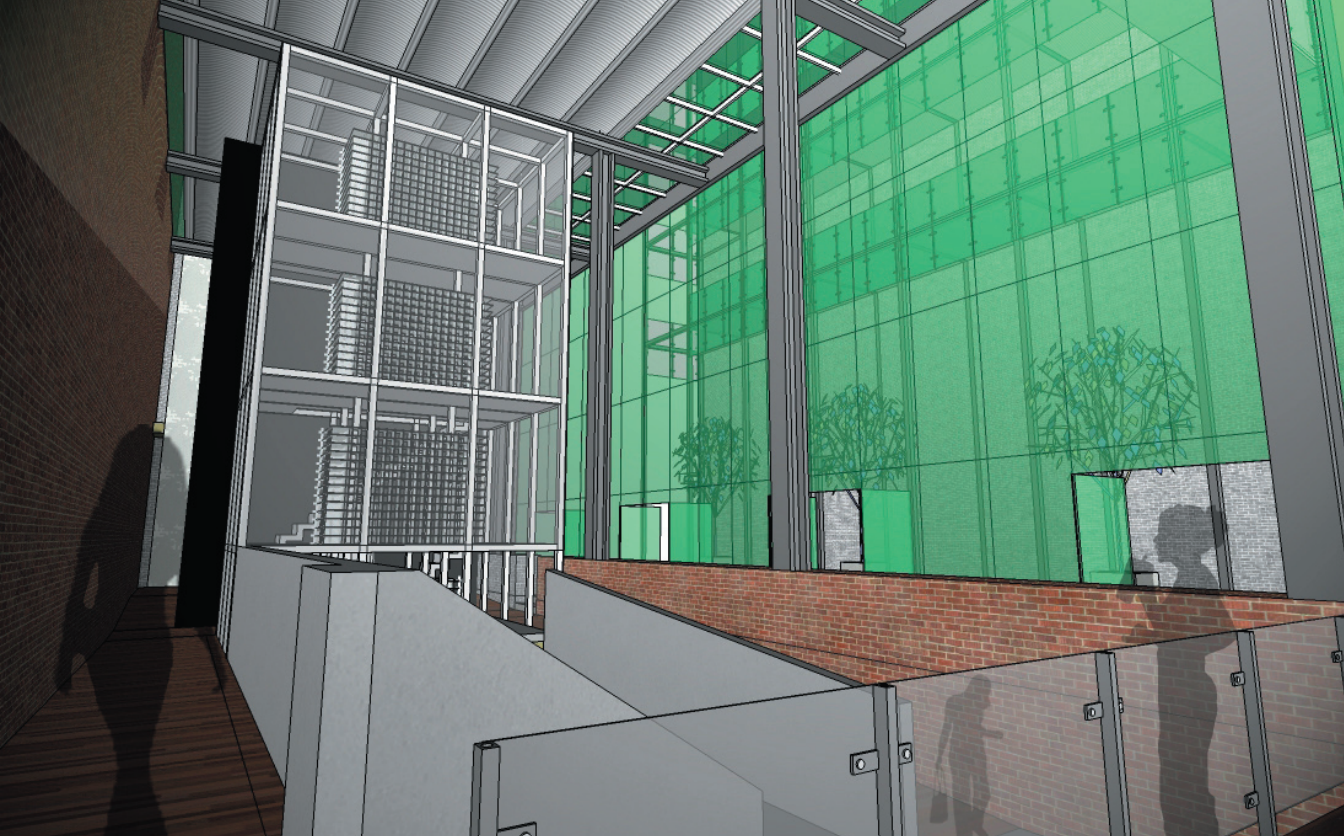


From bar floor emerges a tower, a building within...

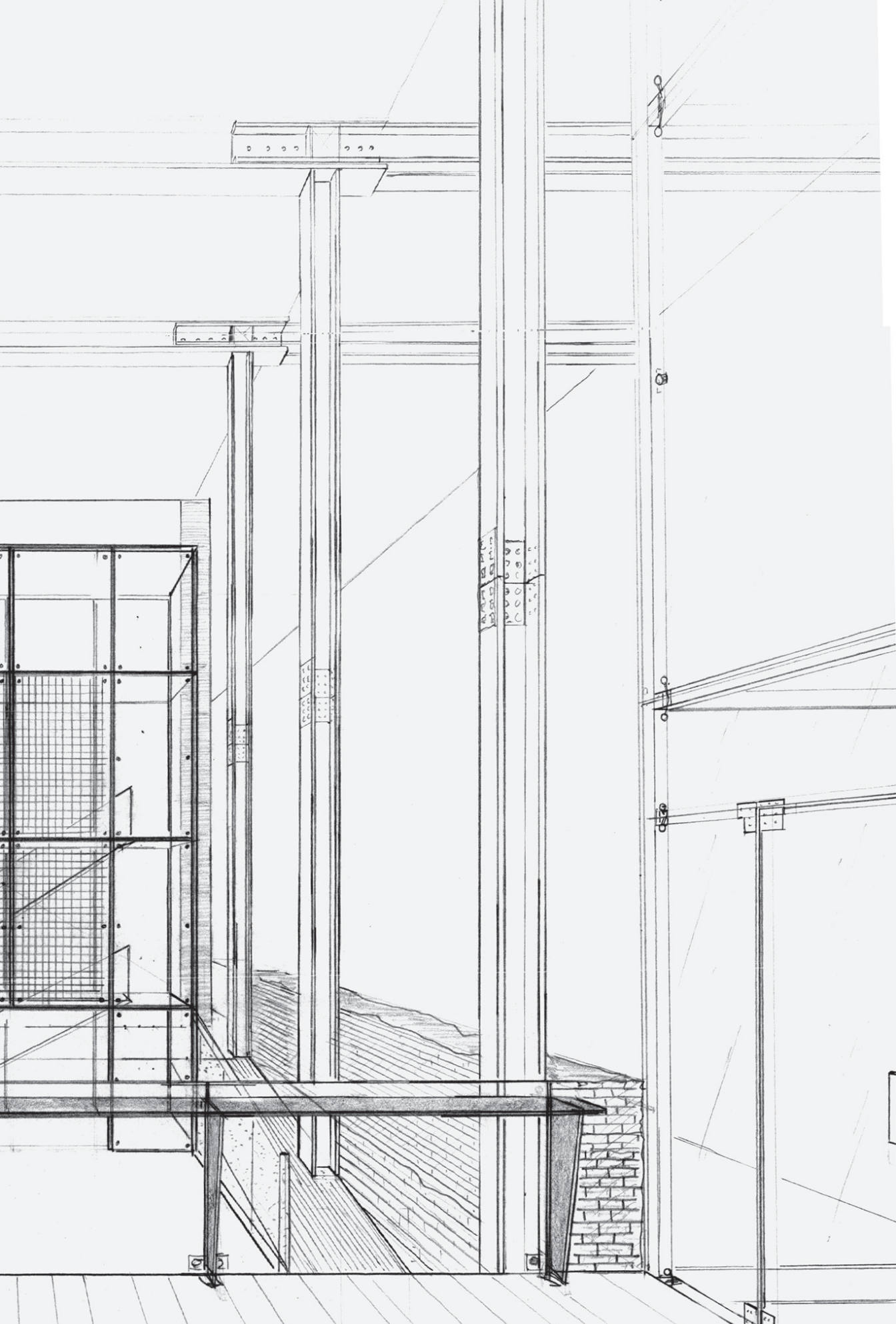
The tower houses the wine collection and serves as a point of contrast within a space defined by movement, a point at which to stop and stare and watch the circulation of another, up and through the tower to fetch a bottle. Within a double height space the tower also serves to bring a sense of scale to the inhabitant.

The wine loft is intended to question how we move within a city, intentionally depicting movement as an event within the space. There is an awareness of others around you, within a space that you too share. Whether a city street or a crowded bar, the architecture begs one to take notice and take part in human interaction, at points forcing contact through narrow pathways spilling into more open receiving areas. The pathways are intended as places where interaction begins, leading to the more open spaces where it is invited to develop.





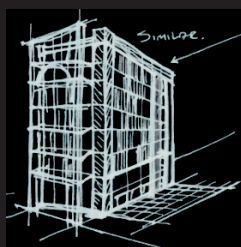
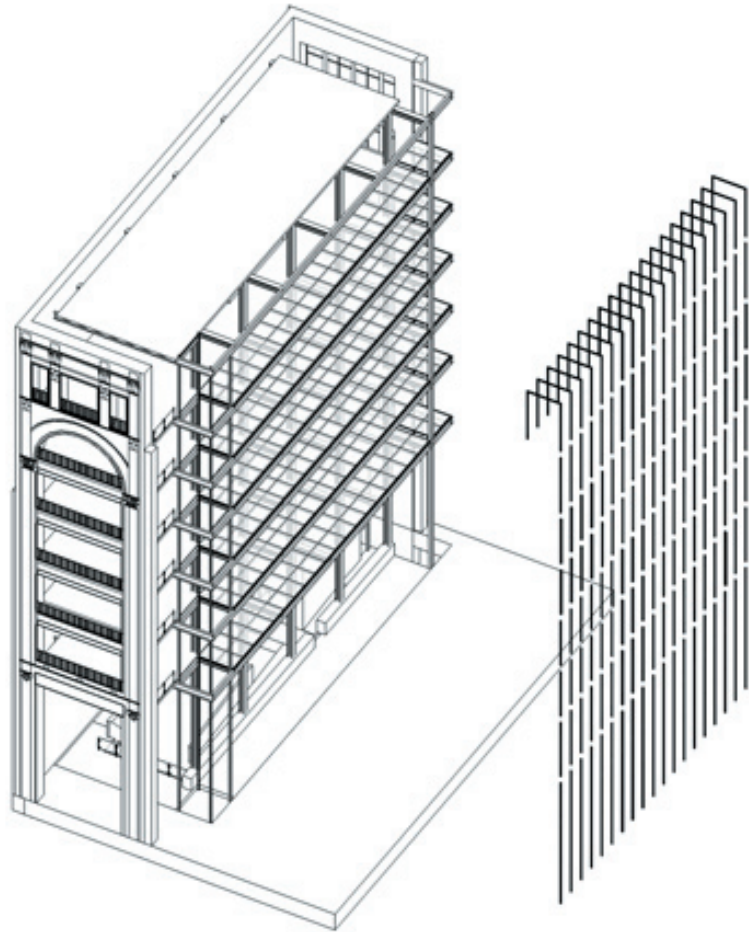


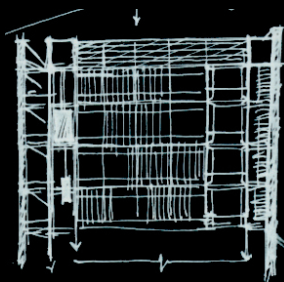
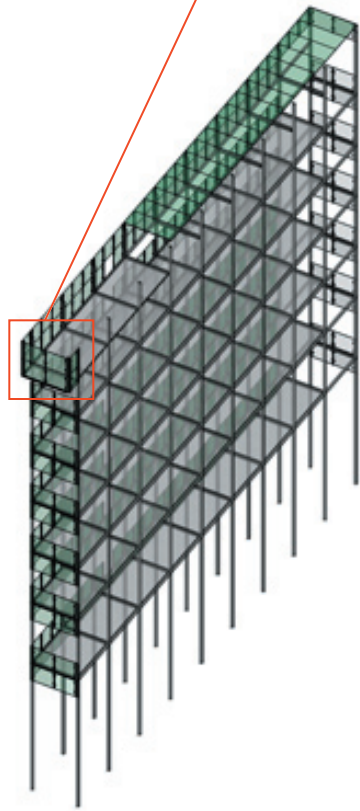
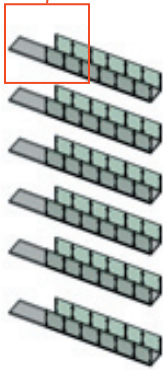
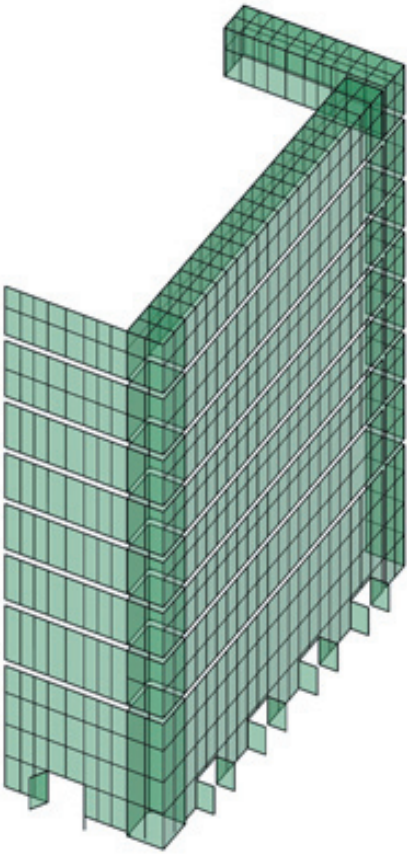
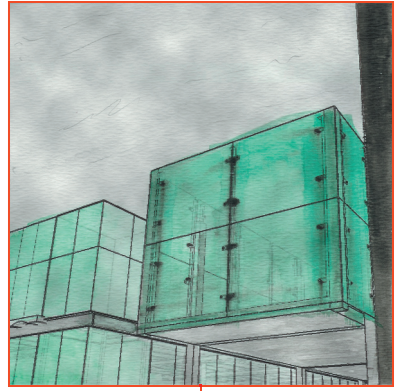
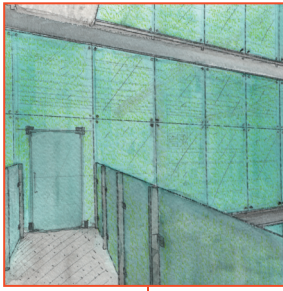


...facade

The facade is the calling card of any building, the architect's gift to the passerby. The building within poses a stark contrast to the shell from which it emerged. The light, transparent nature of the glass, in opposition to the heavy, opaque character of the masonry shell serves at first glance to differentiate the two and allow the observant to view each with its own identity. The transparency of such a large glass facade goes a long way in expressing the intention of visual permeation both into and out of the project.

The emergence takes place from out of an existing shell, a ruin in many respects, weathered by time and abandoned by use. But it is also an emergence from an enclosed way of living. The fusion of new and old create a balance both visually and in the way we live. The shell is grounded, weathered, a testament of time and experience. The new desires to see and be seen, emerging from the safe, enclosed confines of the shell and stretching across the courtyard to the opposing wall in the form of terraces. Then, inching ever closer to the street, in the final gesture, extending out, breaking the plane of the store front to have a look at the city. The terrace cantilevered over the street in a moment of escape and excitement.



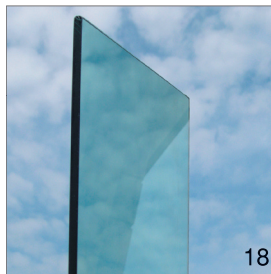
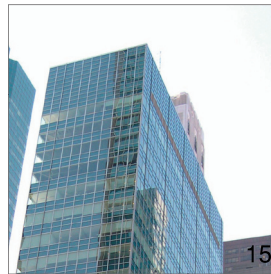
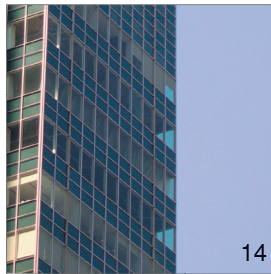
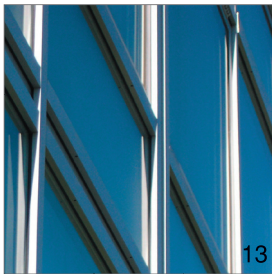
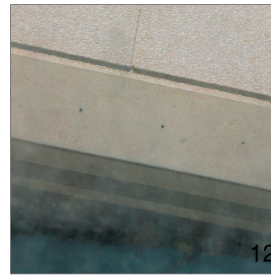
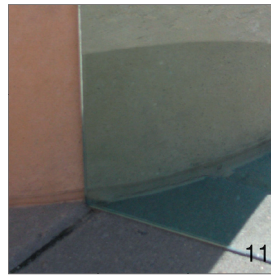
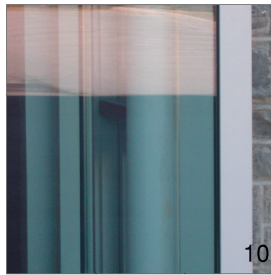
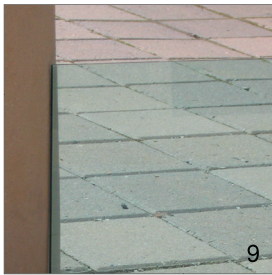
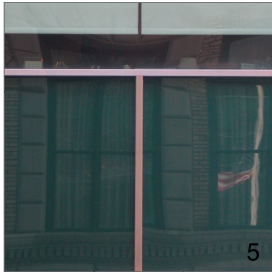
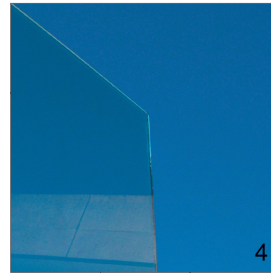
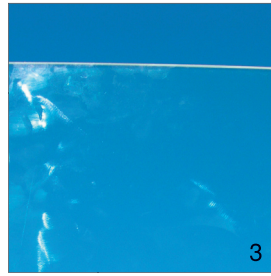
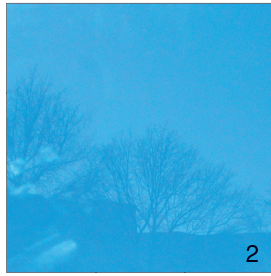
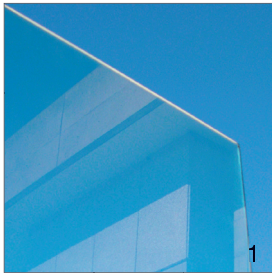


The facade, as the calling card of the building, when constructed almost entirely of glass has the potential for change from hour to hour, day to day. When exposed to different lighting conditions the glass responds uniquely. The same building can appear completely different from a cloudy day to a sunny one. It can mirror the outside world or expose the inner.

That potential for complete reflection or transparency of the same sample is dependent on lighting. During a sunny day, the light of indoor activity cannot compete with the intensity of the sun. It becomes easy to see out but difficult to see in. In contrast, the evening's darkness is no match for the intensity of indoor lighting. The result is a role reversal, with interior movement on display and views looking out more difficult. With the ability to both invite the viewer, or turn them away in reflection, a glass facade is able to narrate the events of the day.

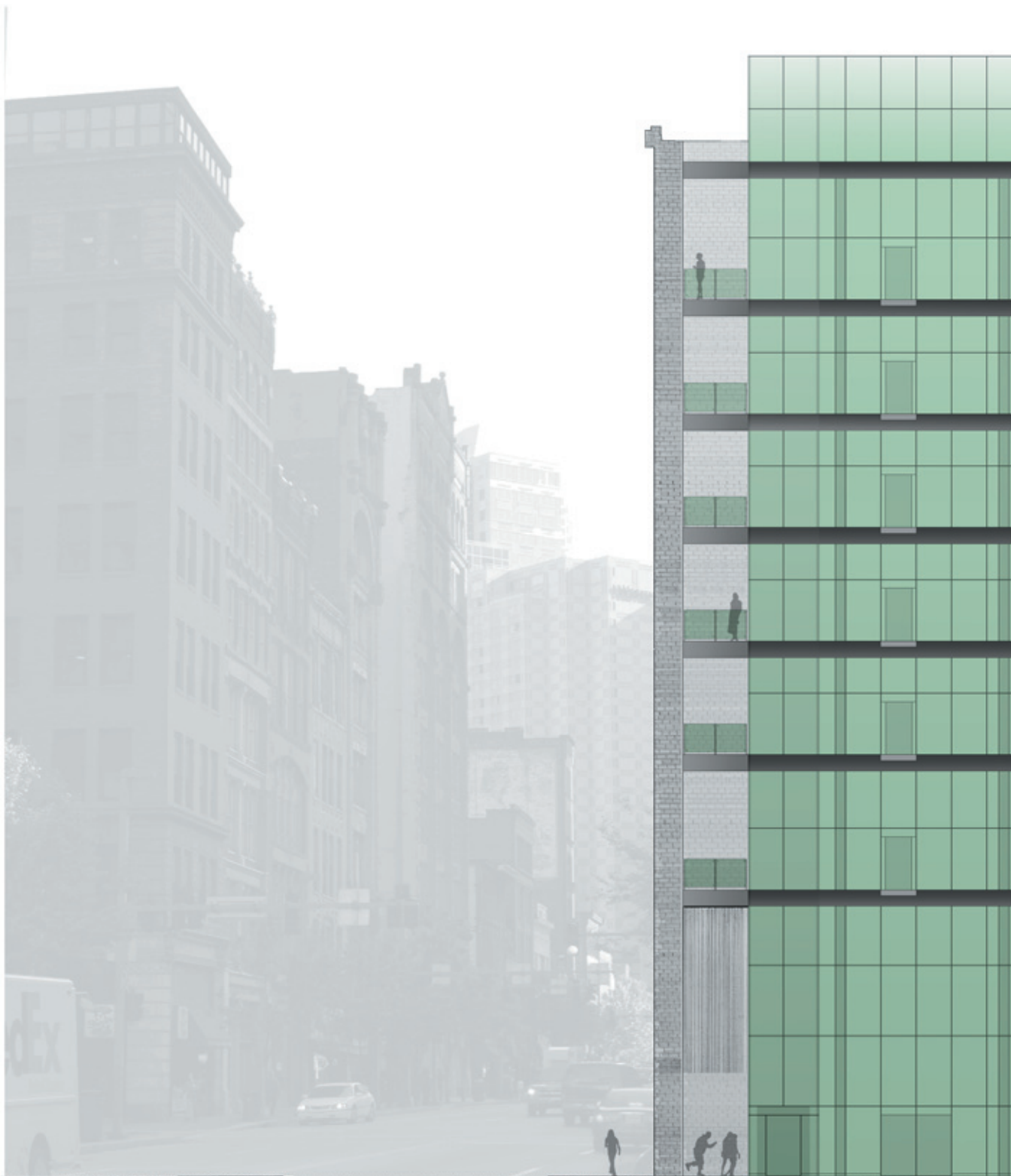


1. Angled reflection, clear day.
2. Straight on reflection, clear day.
3. Sun through, clear day.
4. Angled reflection, clear day
5. Reflection straight on, Lever House
6. Sky through glass, Virginia Tech
7. Glass difference at corner, Virginia Tech
8. Looking up through, Virginia Tech
9. Masonry through glass
10. Reflective glass w/ masonry, Virginia Tech

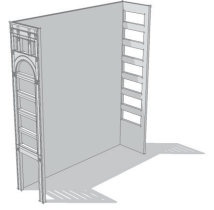
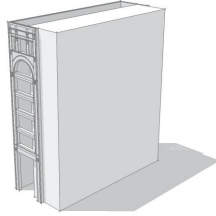
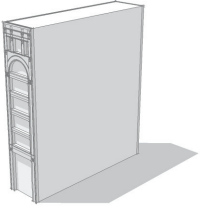


- 11. Shadow behind
- 12. Dark behind, full reflection
- 13. Angled full reflection, Virginia Tech
- 14. Blurring the edge, Lever House
- 15. Blurring the edge, Lever House

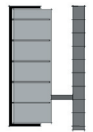
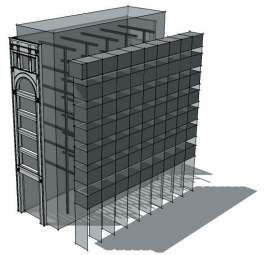
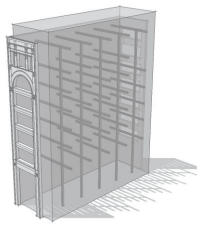
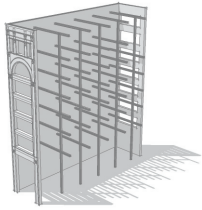
- 16. Facade in shadow, Lever House
- 17. Angled glass, cloudy day
- 18. Further angled, cloudy day
- 19. Light at edge, cloudy day
- 20. Straight on reflection, cloudy day







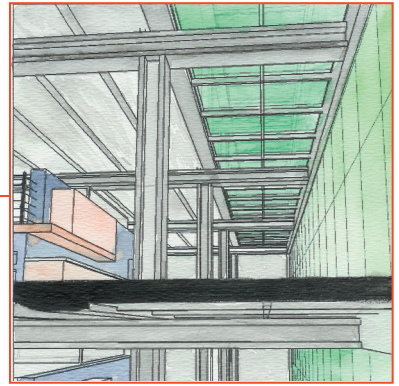
A furthering of the emergence, the extension activates an otherwise wasted space within the city, breaking the rhythm of the facades in a visual difference. The gesture provides an opportunity unlike any other within the city. The ability to step outside one's apartment and look back, removed from the enclosure of the residence where one can own a piece of the sky.



extension

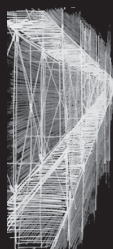
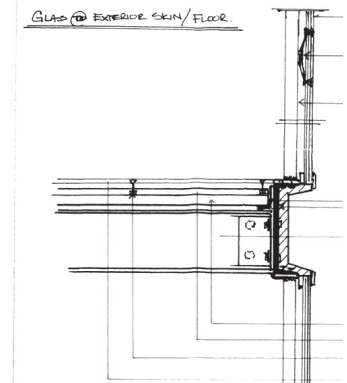
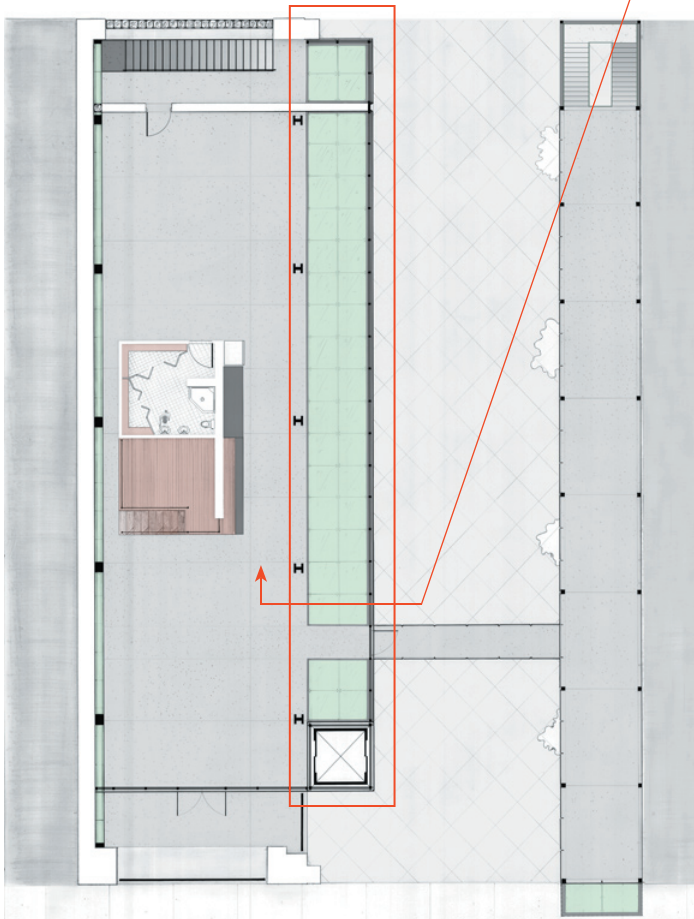
...sliver

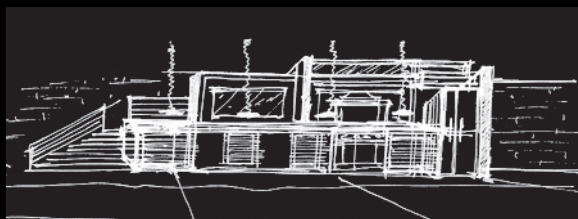
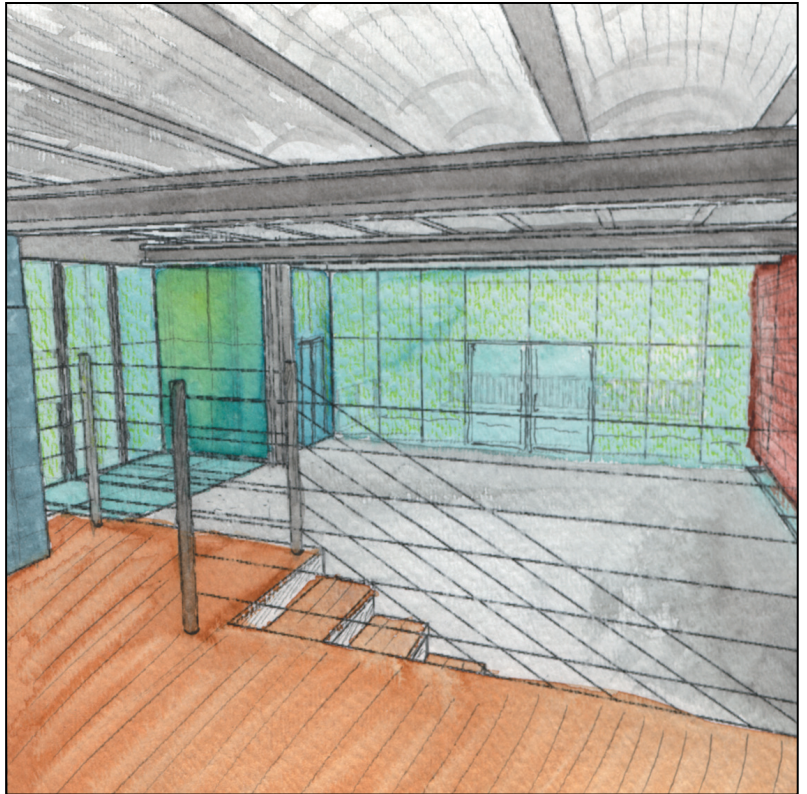
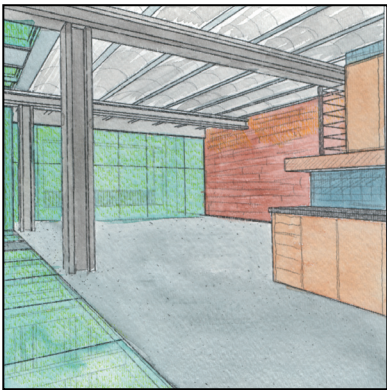
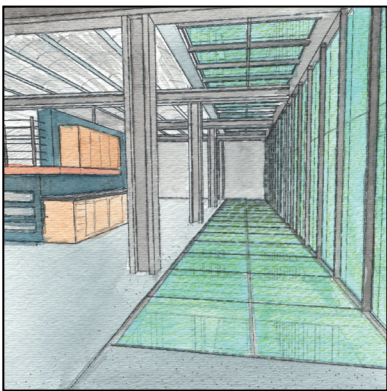
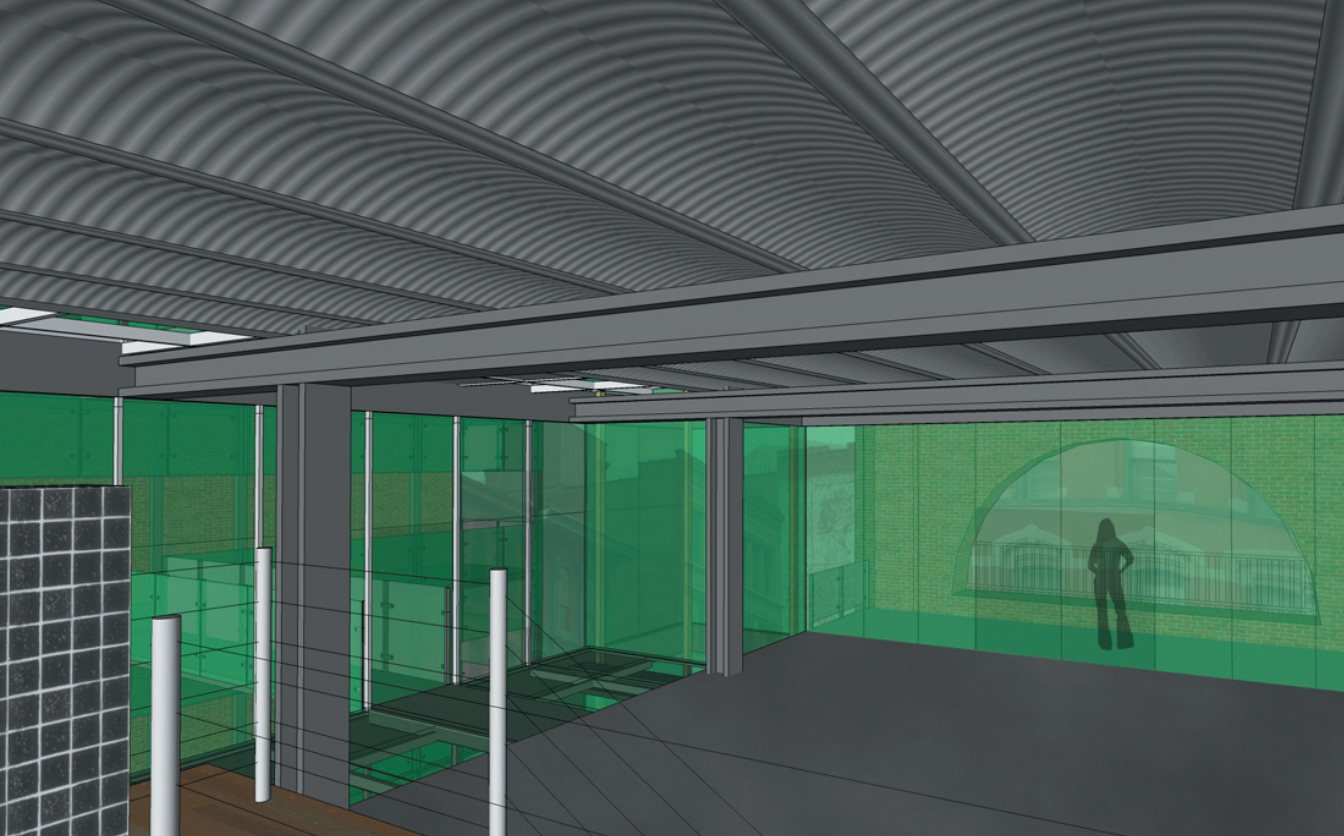
As the building within extends from the confines of the shell, there is an architectural decision to be made, one that asks, in what manner do we proceed? The sliver is the answer, as a narrow extension outside the footprint of the shell represented on each level with a structural glass floor, and from the street, as a glass elevator. The use of glass as a floor material is an attempt to reinforce the understanding of place within the whole. The translucent quality of the glass allows the shadows of movement above to be visible to the floor below and faint silhouettes of form to be seen when looking down through.

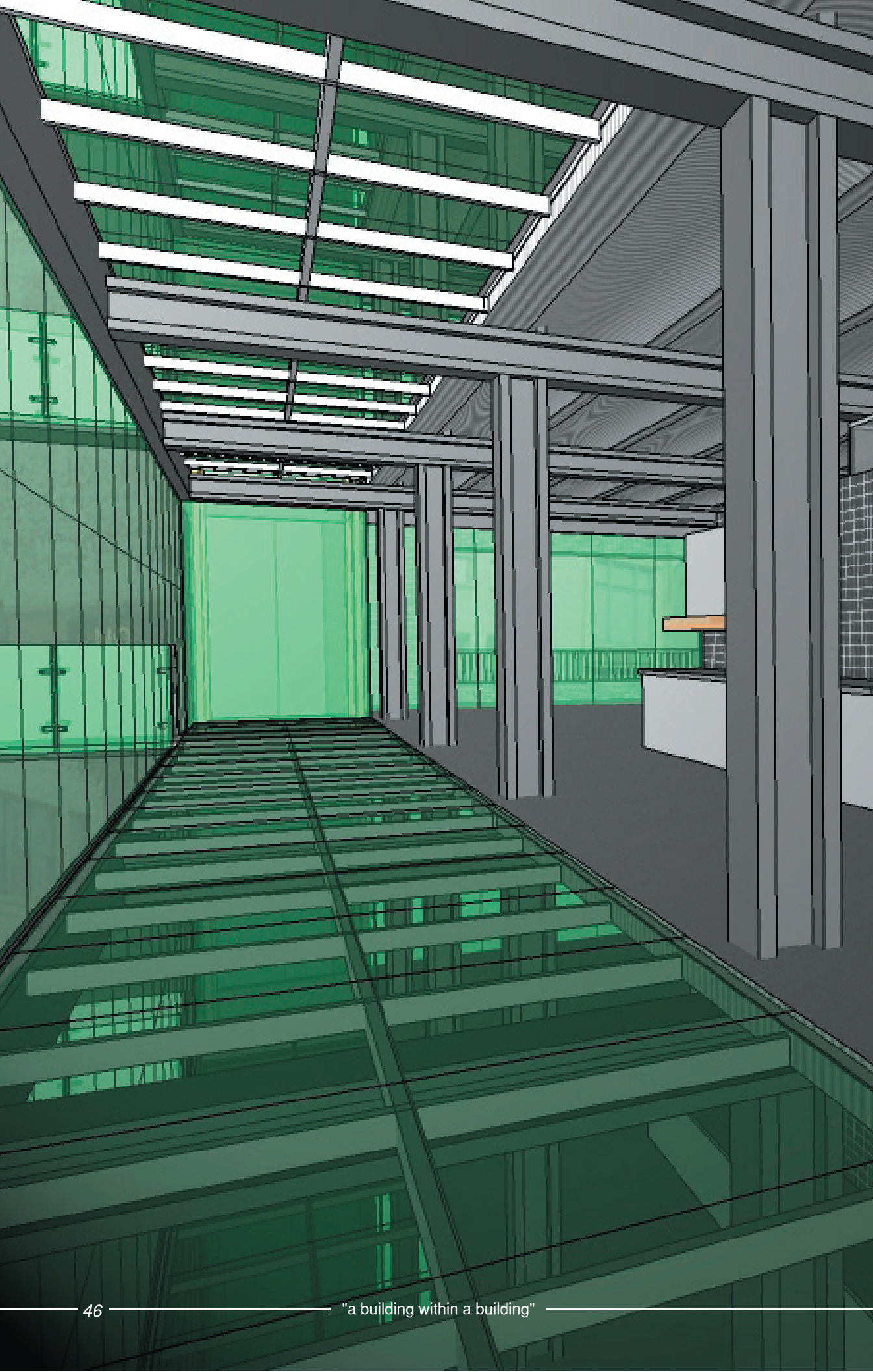


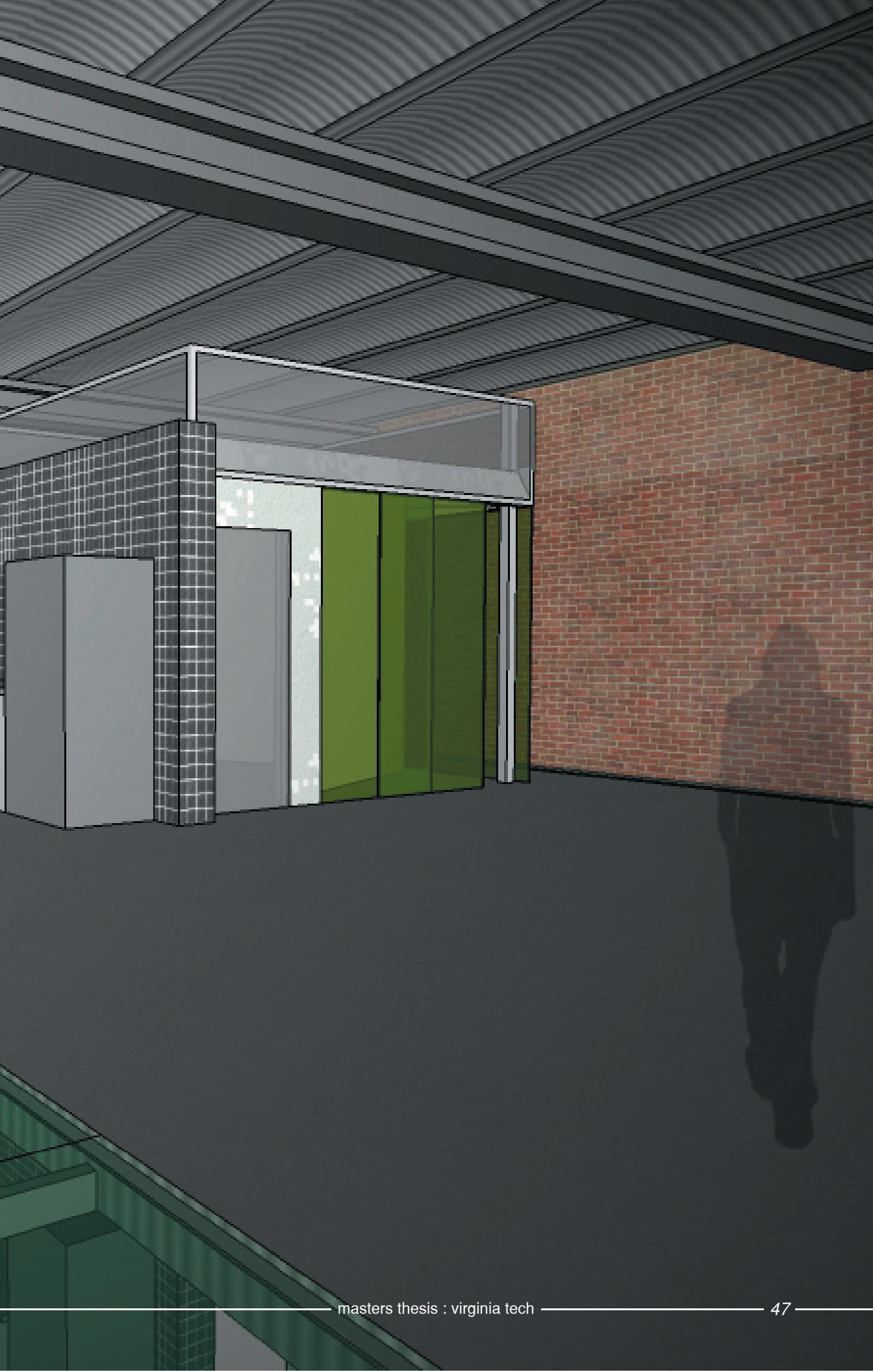
The gesture of stepping outside the confines of the shell brings a new dimension of movement to the project. In the process blurring the boundaries and stretching the possibilities of the way we live. Similar to the circulation paths in the wine bar, sidewalks on the streetfront, and the ascent in a glass elevator, the understanding of movement within your surroundings is a key factor in creating a place for yourself.

The aim is not distraction, but rather awareness, awareness that speaks to a larger idea inherent in every decision made throughout. It is an idea questioning how we live within a city, and as well, how the city lives within us.







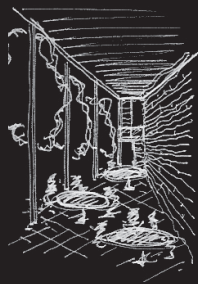
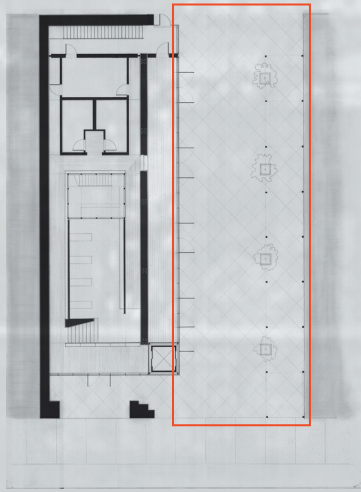


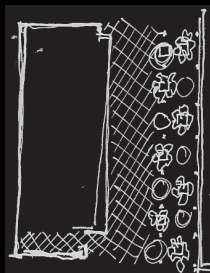
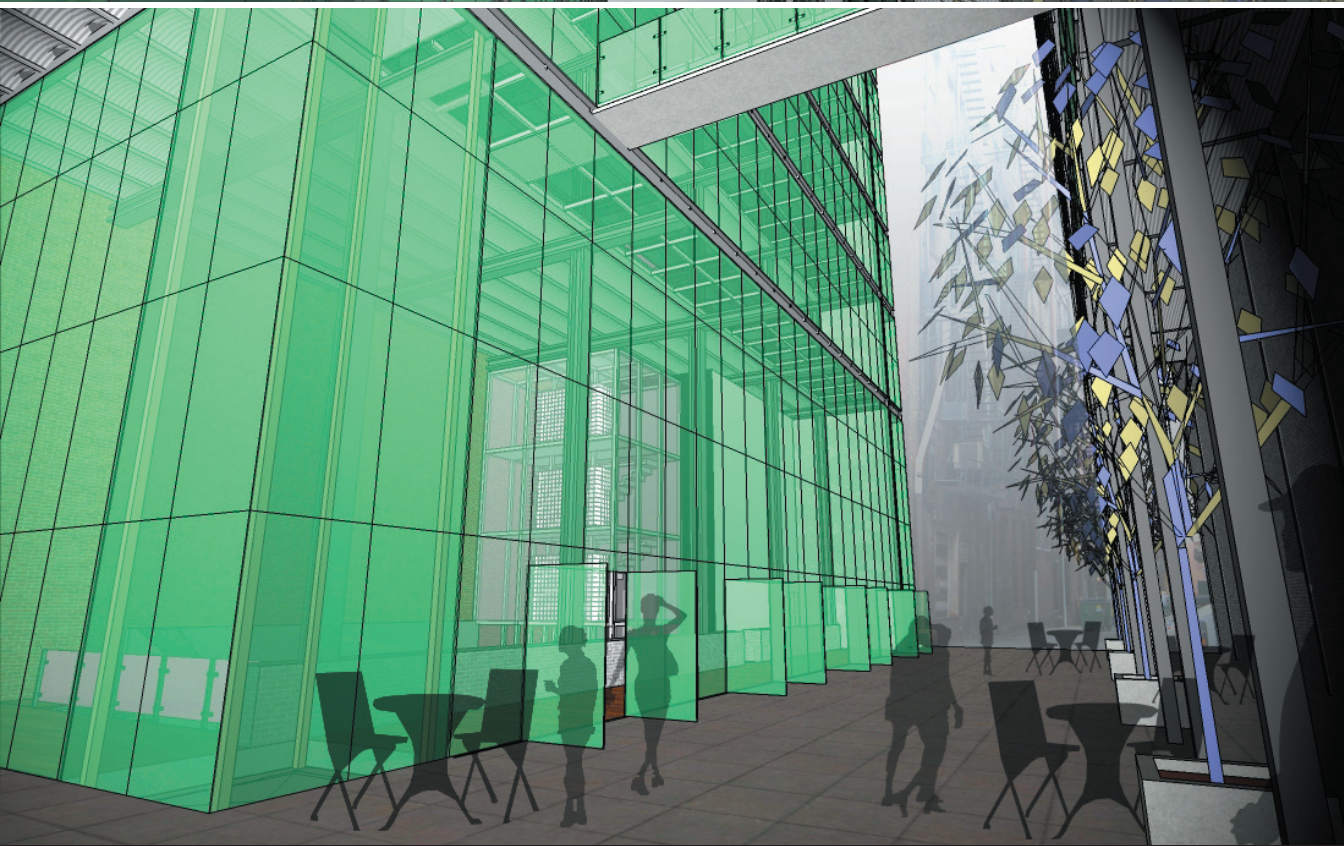
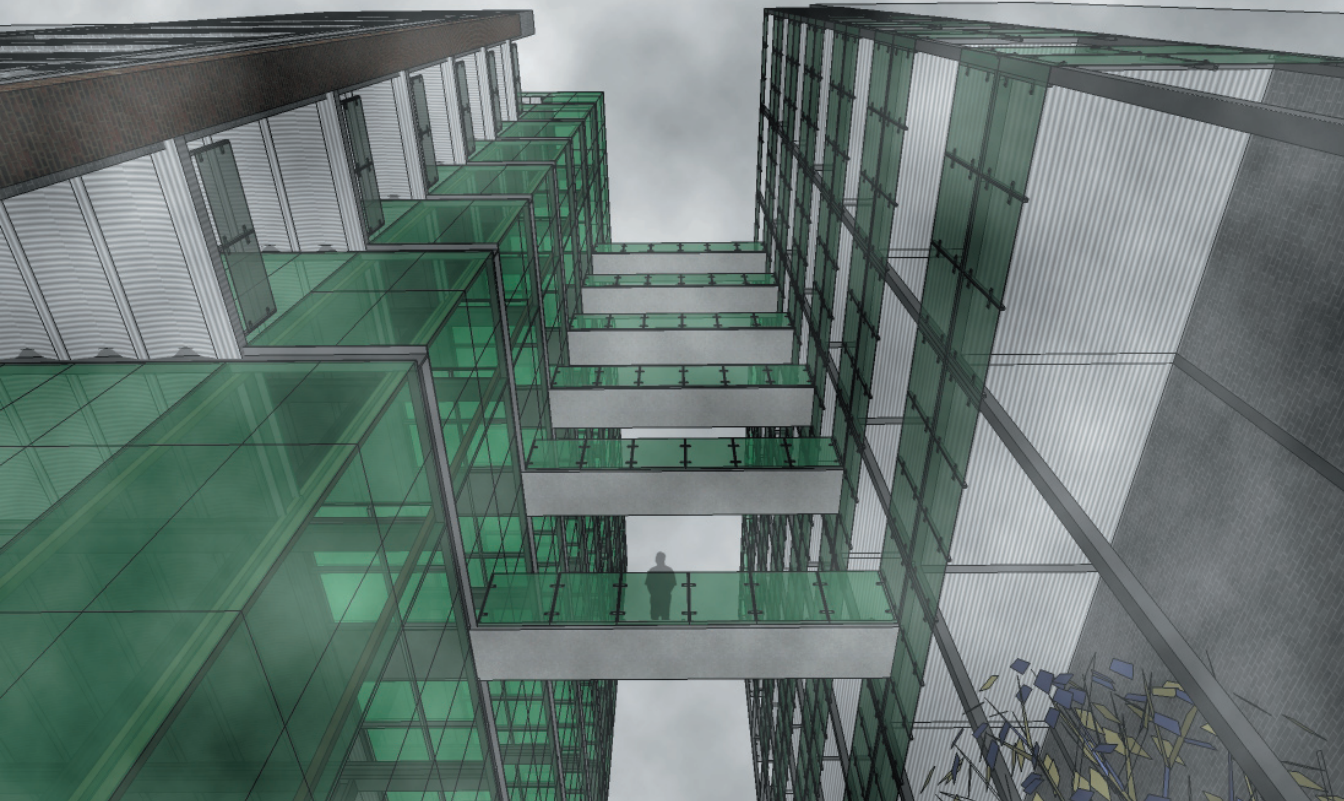
...courtyard

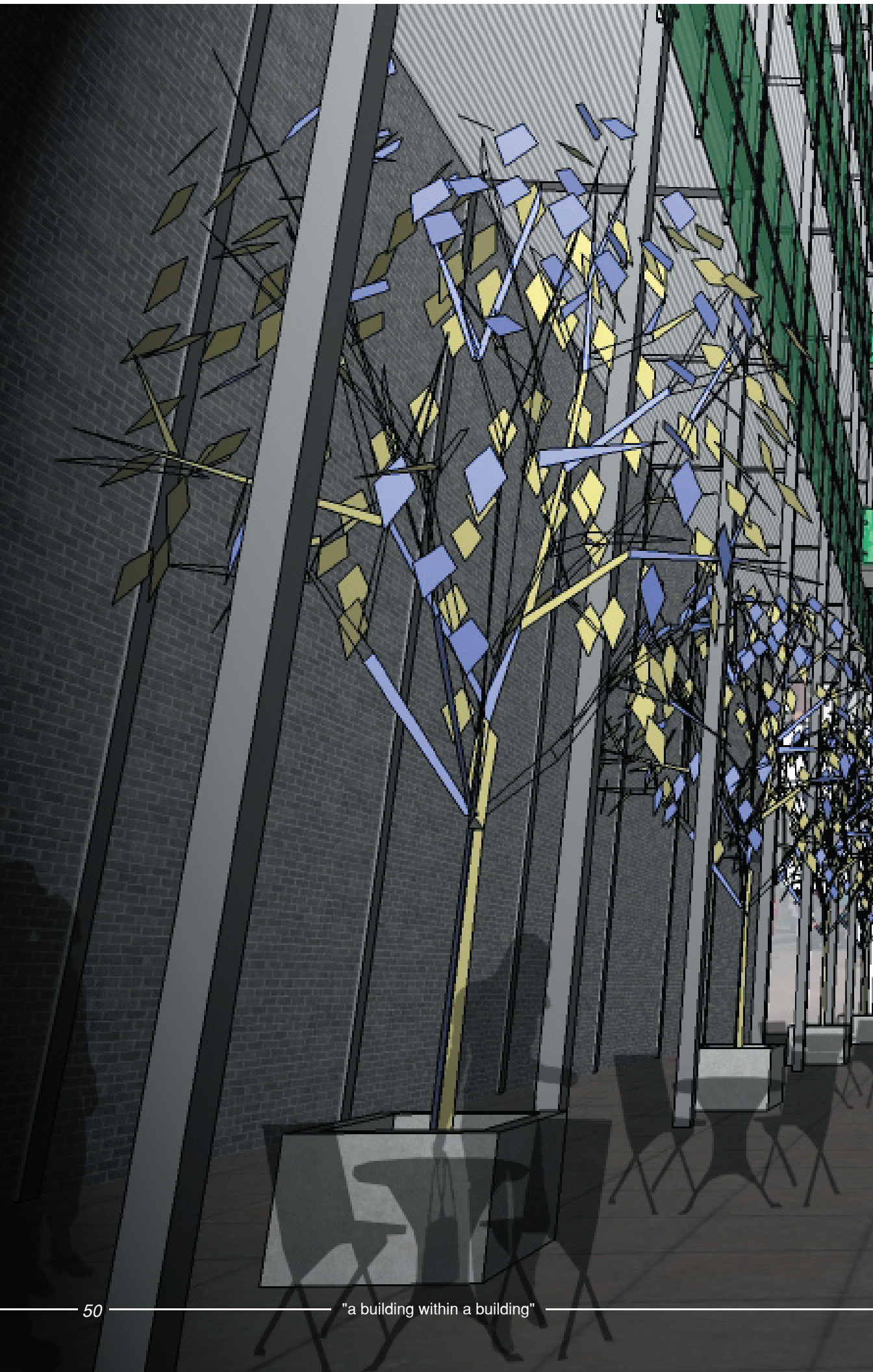
The courtyard is an extension for the community and for the patron, nestled within the rhythm of the streetfront, as much a part of the ground floor as the wine loft. The circulation, conversation, and activity that grows within the glass confines of the bar flows out into the courtyard.

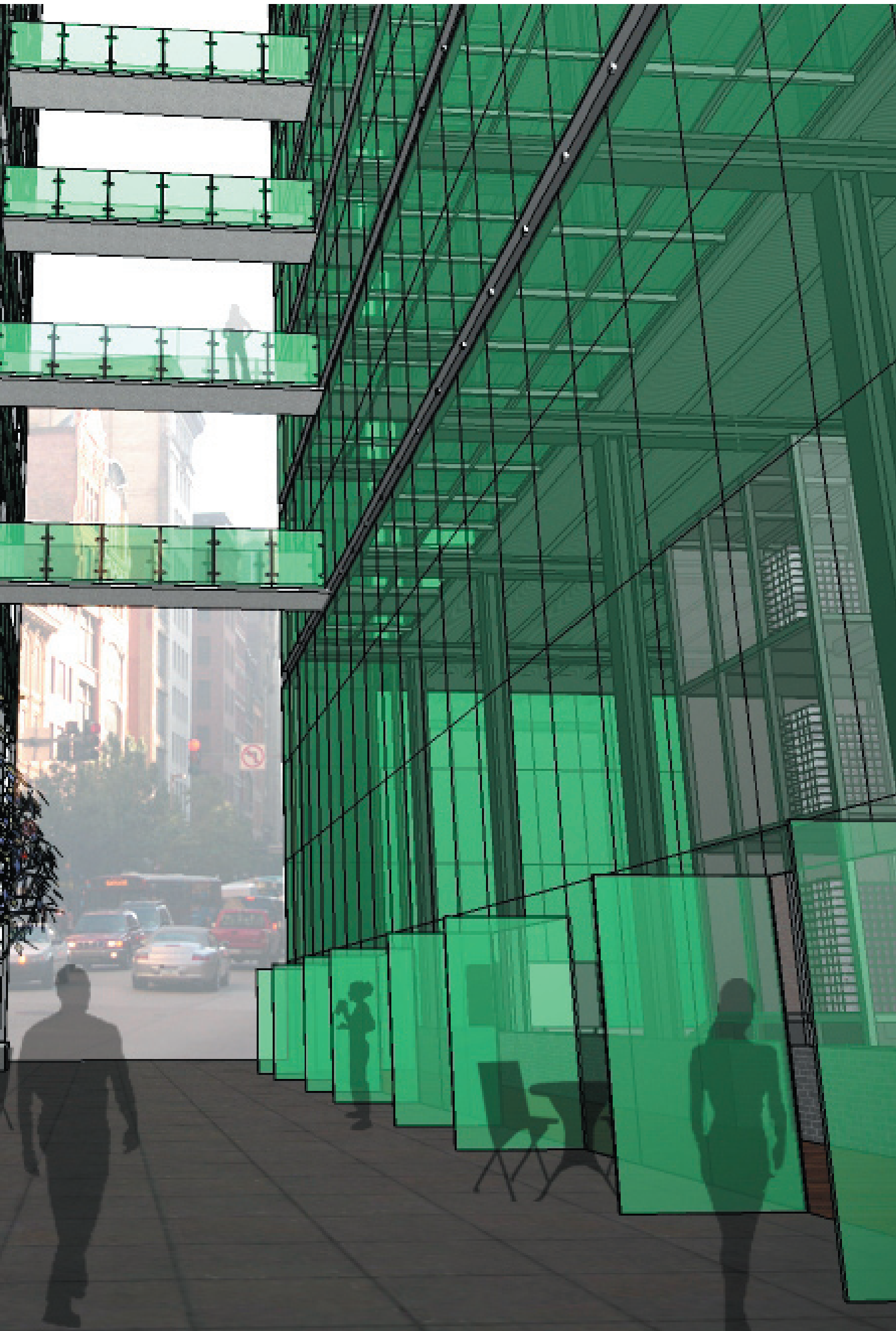
In being protected by the adjacent brick facade, and while vulnerable to the glass one, the courtyard becomes a place to see and be seen. Looking up to the lattice of bridges one can witness the movement of a resident to their private terrace, or the movement within lofts along the glass. As part of the trade off the same observation can be taken in from above, looking down on the curious patrons and passers by.

Foot traffic within the courtyard flows from the wine bar or off the sidewalk, and collects throughout the open court. The exception occurs at the divide created by the columns in support of the terraces above and the trees placed to continue the same line. Intermingled amidst this urban forest one can find a place to sit, a place of rest at the farthest reaches of the plan.





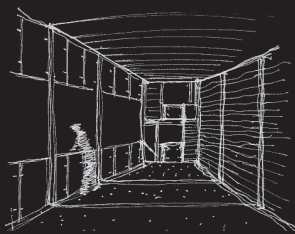
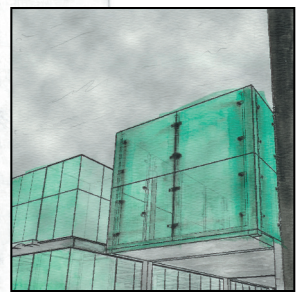
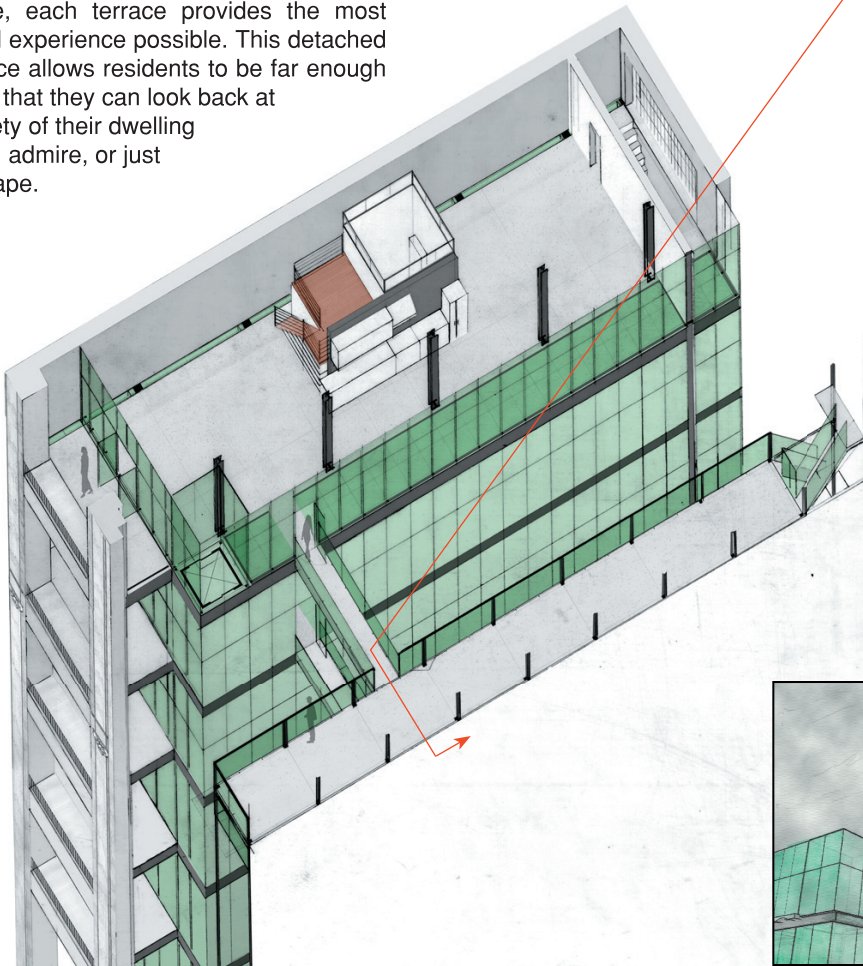
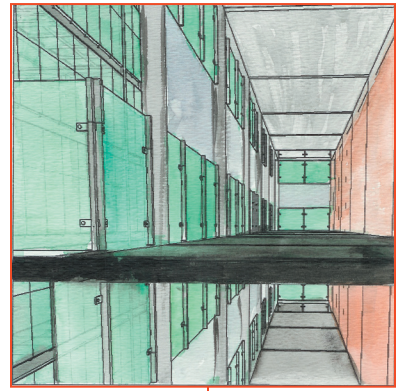


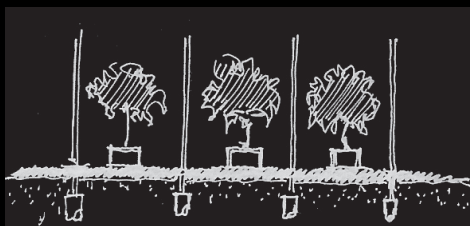
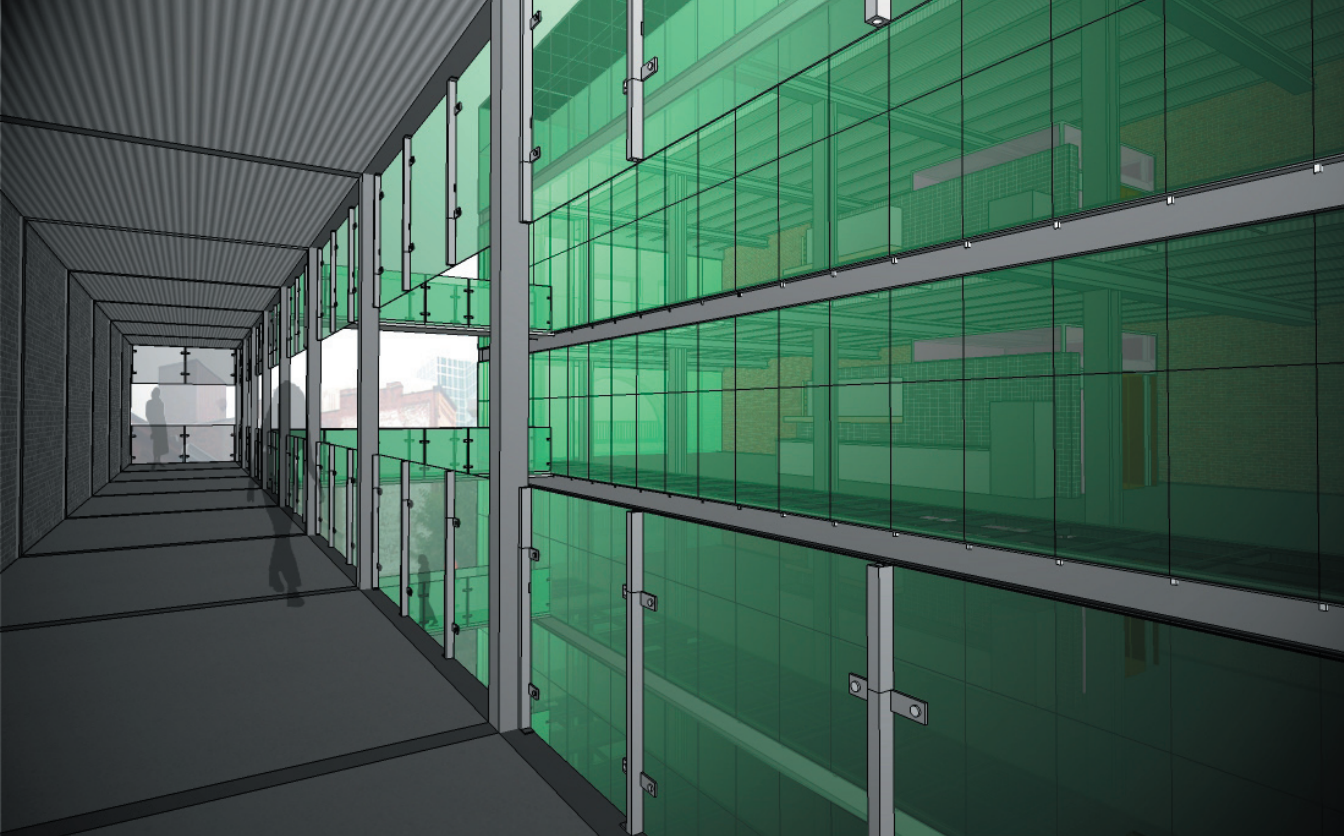


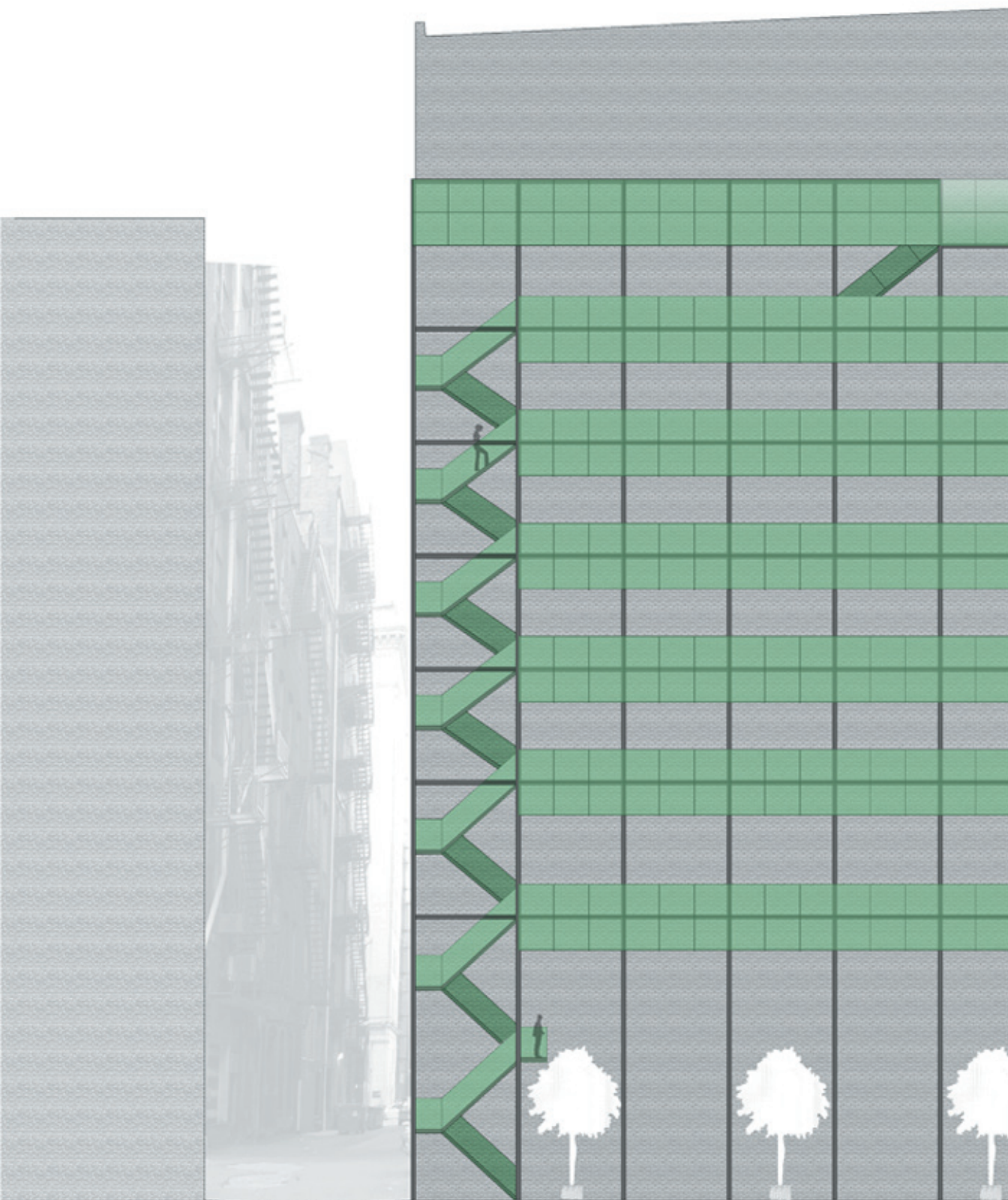
...terrace

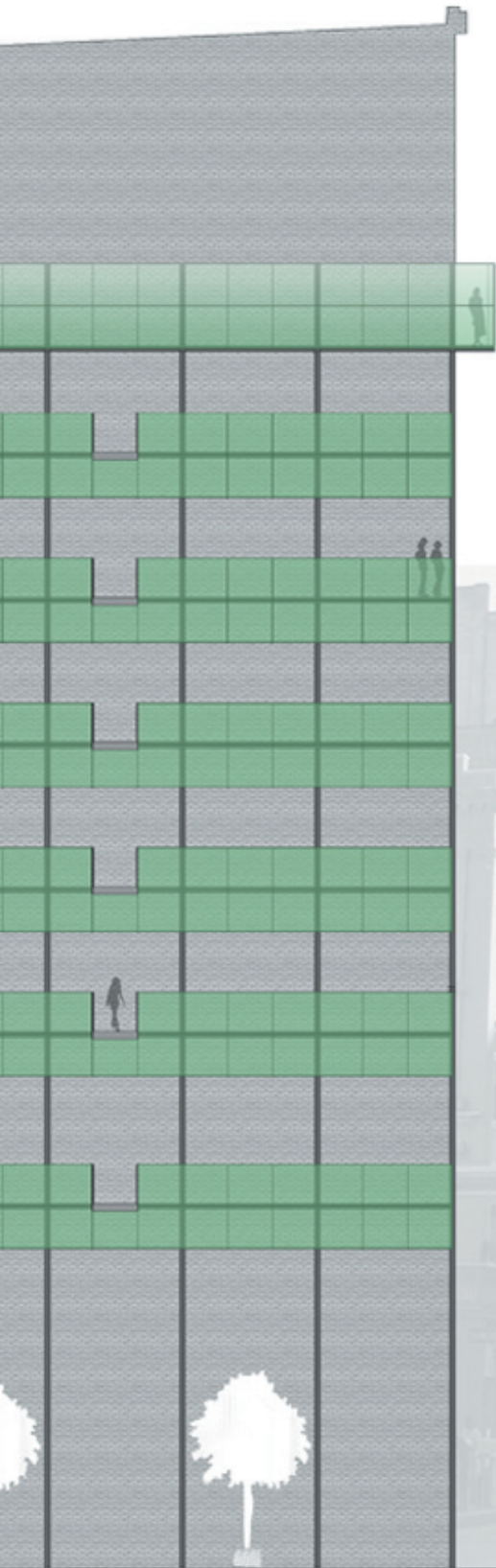
The luxury of the vacant lot provided the opportunity for the courtyard at ground level and the availability of an entirely glass facade on the emerging side of the building. Possibly the greatest opportunity provided took shape high above the courtyard.

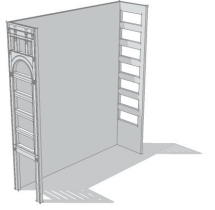
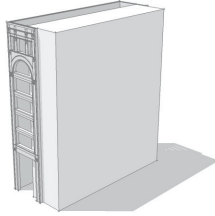
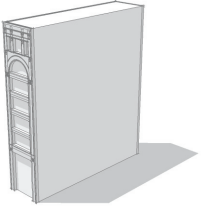
As an extension of the loft experience, each terrace is an open programmed space, variable in its use yet distinctive in its character as an elevated, separated, outdoor retreat whose opportunity is unique within the urban context. Though they are raised, exposed to the elements, and largely transparent in nature, each terrace provides the most detached experience possible. This detached experience allows residents to be far enough removed that they can look back at the entirety of their dwelling to reflect, admire, or just truly escape.



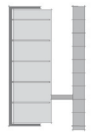
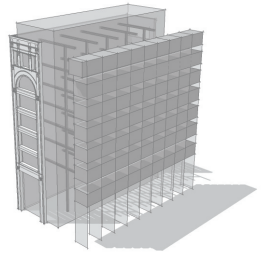
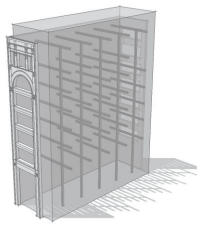
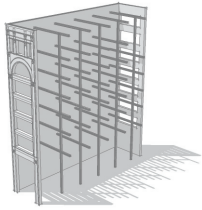








What do we take away?



conclusions

The intentions of this project began with the building as a vehicle for the ideas: ideas on reuse, on the relationship between old and new, and how that relationship can inform the way we live and interact within an urban context.

If one stops to consider the predominant trend in urban living, there exists a stereotype of the apartment or the townhouse as an escape from the city, a place of retreat where one can avoid the movement of the streets, turning a blind eye to activity in return for peace and quiet. The need for privacy can hardly be disputed, however for the urban dwelling to serve only as this barrier to the outside environment can inhibit the growth and awareness of those who live within.

The urban dwelling has the potential to offer more, an attachment to the environment in which it exists, an attachment that begins with history and the understanding of the place that is being inhabited. To begin with the old we can better inform the new.

Many examples exist of unused buildings still with a story to tell and a contribution to make to their surroundings. It is the role of the new to breathe life back into these forgotten shells providing a purpose to their existence, and a second chance.

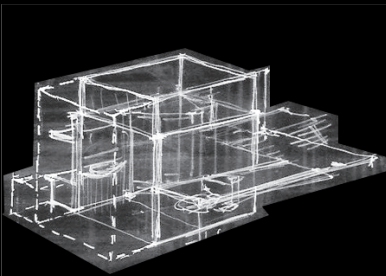
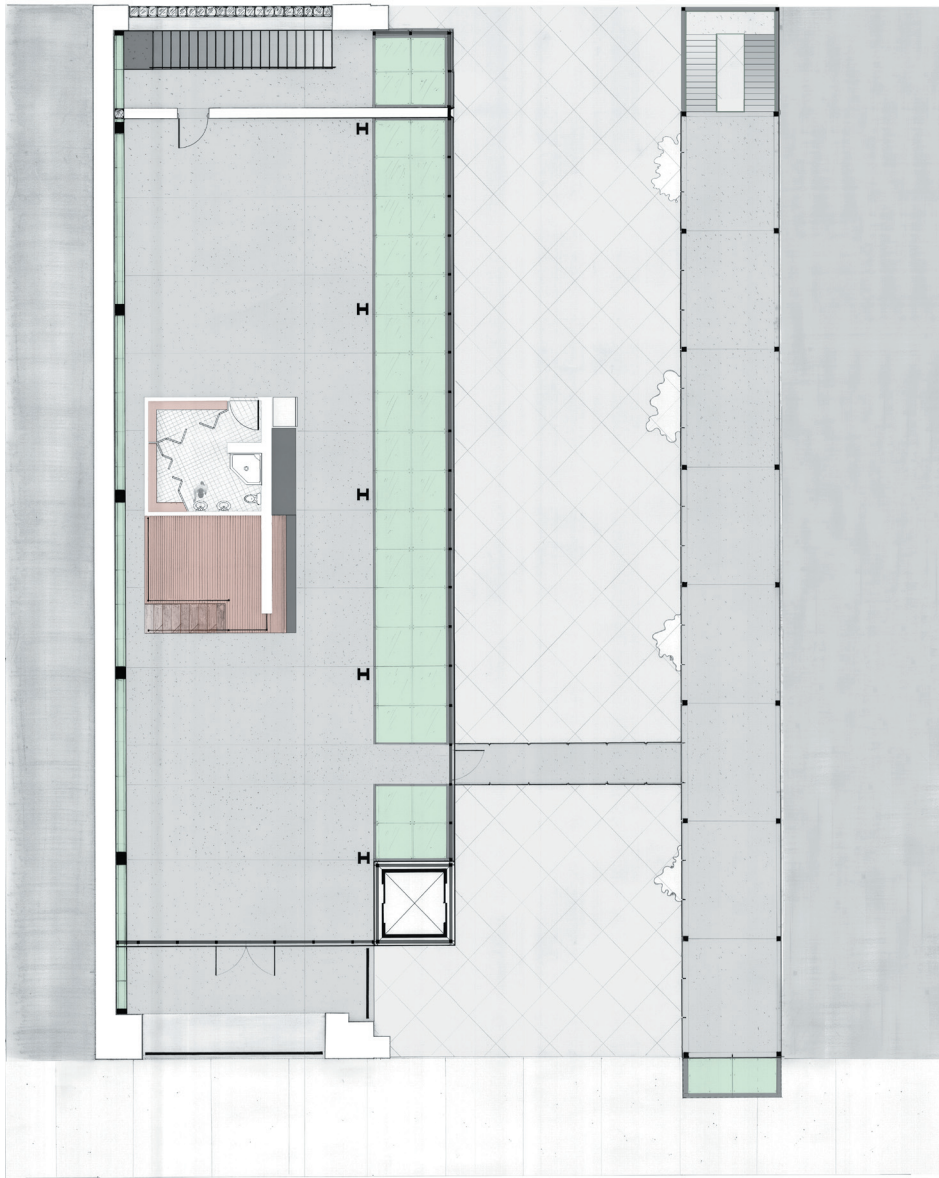
For me the dialogue created between old and new expresses the variety of life for those who live within the urban context. The balance between the need for privacy and the desire for exposure, between quiet and commotion, between motion and static. To design for these ever evolving needs and wants is to provide places in which the needs can be fulfilled and the wants can be explored.

To involve the city in the space, is to do so physically at points but visually throughout. This connection will always provide a sense of place within a larger whole. A sense of place is an awareness which begins within the dwelling, a connection established between inhabitants of a similar space. The connections need not be audible distractions, nor visual ones, but moreso a presence that evolves with the time: the way a shadow may be seen through a translucent floor letting you know something or someone is above, or the presence of light that began outside the limits of the place but has made its way in. These factors among others contribute to a spatial understanding that helps to define the place we live in, and within that place what areas we use for what activities.

Within the project there is a harmony between enclosure and exposure, which for me speaks directly to how we live. The opaque masonry shell protects and encloses, thus the more private tranquil spaces would be found tucked against that wall. In contrast, the translucent qualities of the emerging glass facade invite light into the space and facilitate the more active and exposed living activities, in particular, movement. The central area of the space, between movement and rest, between enclosure and exposure is where we spend most of our time. It is where the core of services are found, where we cook, wash, and work.

For me it is at the hand of the architect that an empty plan becomes a livable space, but through the heart of the inhabitant that it becomes a home.

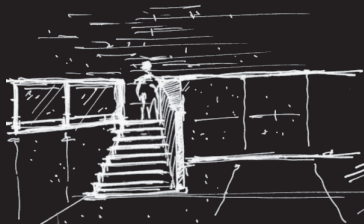


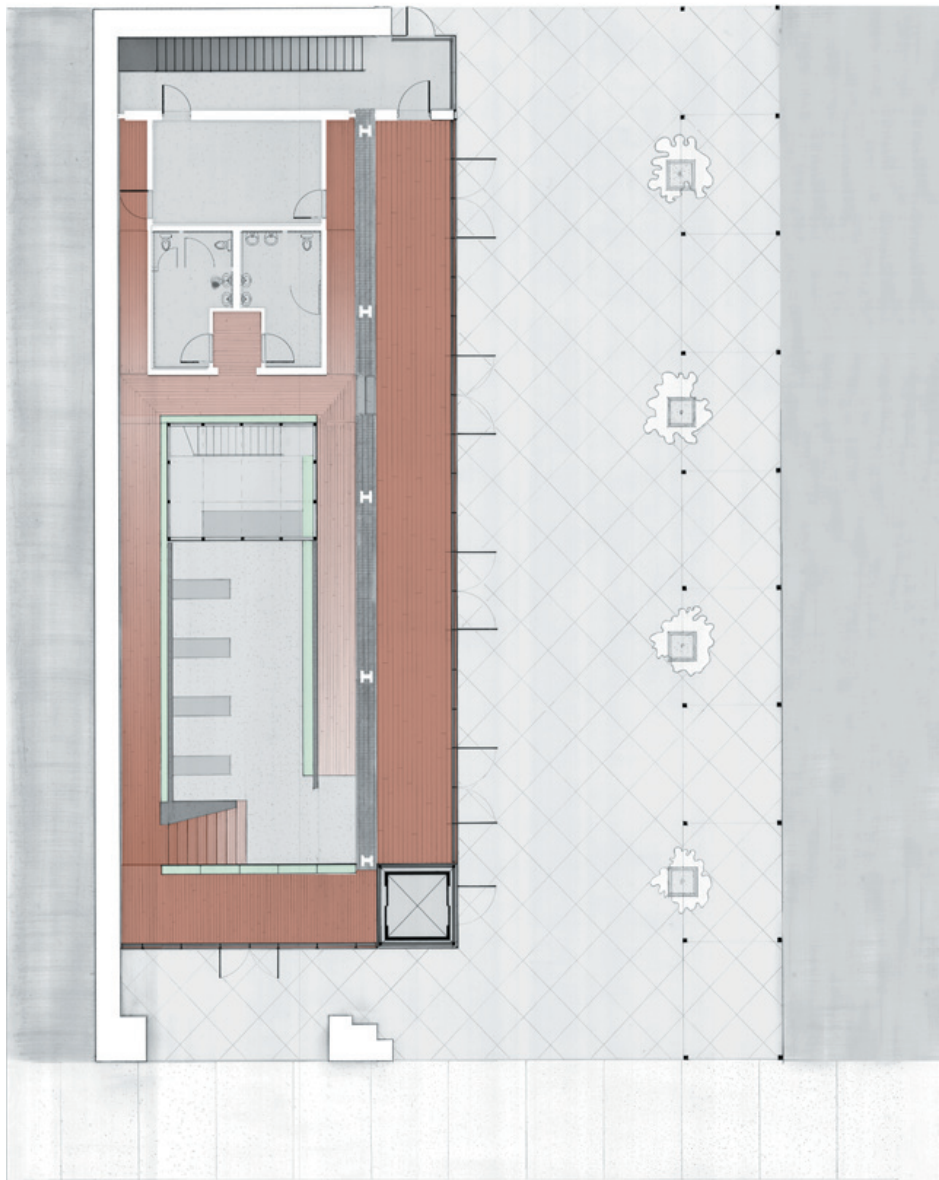


While the residences of the project serve as an investigation into the way we live, the wine loft at ground level is an investigation into how we move and interact.

It is a place where movement is experienced through a series of gradual level changes and observed from the points of rest, collection points to which the paths lead. For me this movement and observance is an echo of the urban street, a place to watch and be watched, though rarely do we take the opportunity to stop and create dialogue. One of the questions of the space, explored through movement, is the random opportunity that exists at the end of a path, where prescribed direction spills into unplanned openness. The intent is that people will cluster in conversation mingling and moving, activating the space. Conversation may last or it may not. With no place to sit the ability to escape is a step away, but the decision to stay is one made with sincerity. Thus the evening is made an experience not a commitment. The bar is not so much a destination point as an in-between point, a threshold in itself, amidst a busy day and a quiet evening, nestled between the old and the new.

This project has provided me the opportunity to think through and tie together many ideas that have been floating around within my head in need of direction. The idea of reuse and its contribution to the city, as well as how we live within an urban context, how we create a place for ourselves amidst our surroundings. The specific design is unique to its site but the ideas behind it, of a building within a building, can be applied universally. It has been rewarding to think through these issues at length and to develop architecture in response to a particular train of thought. This process has established a beginnings for me, from which to move forward, and provided the means to do so.





Many Thanks:
To my committee, Bill, Jim, and Hans.
My peers. My family for this opportunity,
and to Sherry for her support.

bibliography

All photographs taken by the author.

~ Fjeld, Per Olaf. Sverre Fehn: the thought of construction.
New York: Rizzoli, 1983.

~ Clark, W.G. "Replacement." Modulus, no. 20. 1991: p 2-5.

~ MacDonald, Dutch, Picker, Eve. "Living with Ghosts." 2001
www.edge-studio.com/ghosts. Sept. 2004.

a building within a building

Andrew Ryan Hunt

Master of Architecture
2005
Virginia Polytechnic Institute
and
State University

Bachelor of Arts
2002
Hobart College