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SpacEvenTime

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Abstract

This thesis investigation seeks the possibility of addressing and, possibly, redefining the public realm in Detroit. By public realm, I mean the type of setting in which individuals can enjoy and inhabit different kinds of spaces, both interior and exterior, with different kinds and scale of functions. My investigation proposes a built environment that can serve the multiple functions of linkages and transitions in the city of Detroit. The building engages in the city life by unfolding or blurring itself to the neighboring context and into the city as a whole. By use of the building, program functions, and sight lines people will become more aware of the city as an event. The building's function can connect people, both socially and economically and link SpacEvenTime.

The root of my investigation is grounded in the premise of SpacEvenTime as it pertains to the public realm and how it is amplified by the ambiguities between interior and exterior spaces. While each of the three elements of my investigation are separate, they can easily be linked together. Space can be described as a specific function in a location. Time can be objectively measured by the hour or subjectively measured through the essence of waiting for an event or by engaging in a space. An event can be formed from the interactions that occur between people and space at a specific time. The union of these three elements can result from a number of different programs; one can include implementing an innovative form of movement as seen in a transportation system. The program's interior and exterior spaces not only links the person to the event of the city and the program, but also to movement as it pertains to time as they move themselves or are moved by the transportation system.

Thesis

The focus of this thesis is specific to Detroit, the city's urban fabric, and the resulting interactions. The combination of these attitudes and the implementation of a multi-functional program seeks to redefine the public realm of Detroit. In the program, both the interior and exterior spaces are created at different scales and for varying functions with the intention that it will become an event in which individuals can enjoy and inhabit. Such a multi-functional program can be examined on a three-level scope in order to identify and establish appropriate links between the three scopes and SpacEvenTime. The broad scope can be defined at the level of the city, a more narrow scope is at the level of the program, and again the scope can be narrowed to the individual. Because my investigation proposes a built environment that can serve the multiple functions of linkages and transitions in the city of Detroit, the theory of my program must be examined at these three stages. This will insure that the building successfully engages in the city life and unfolds or blurs itself into the neighboring context, the city as a whole, and identifies with the individuals using the programs. By creating and specifying this three-level scope, my investigation will be more comprehensive and the possibility of not identifying functions of linkages and transitions will hopefully be eliminated.

It now becomes obvious as to why the multi-dimensional elements that compose Detroit require examination. The city is currently composed of many individual, one-dimensional events. In order to redefine the public realm as an event, it is an important preliminary step to investigate the current status of SpacEvenTime and understand their appropriate linkages. The function and location of space, the movement that occurs as it pertains to time, and the interactions that occur between people and space to generate an event all must be established and readdressed.

At the broad scope level, characteristics and elements of Detroit can be examined. Research illustrates that in addition to being the largest city in the state of Michigan, Detroit is one of the largest metropolitan regions in the United States (XIX). Over the past fifty years, the city has suffered from urban sprawl, abandonment, burnings and riots, racist tension, and the dismantling of a once first class public transportation system (VII). Currently, Detroit is the largest US city without a properly funded and functional mass public transportation system (XVII).

The fabrication of many of these problems were influenced or a result of the overwhelming power of the big three automakers (General Motors, Ford, and Chrysler), who pushed for personal ownership of automobiles. This directly lead to the formation of the second class citizen noted for there dependence on public transportation (VII). The impact of this problem is clear and can be reinforced by the decline of approximately four hundred and twenty five million public bus passengers from 1950 to 2003 (V). Currently, other cities across the United States, including Detroit, have congested road ways and suffer from heavy rush hour traffic, high fuel consumption, and much air pollution as stated by the Transportation Riders United Organization. An enhanced form of transit can not only improve these factors, but can also be constructed to complement the current systems of transportation (XVI). The city of Detroit has several transportation systems that include the Detroit People Mover, personal automobiles, buses, and taxis. As individual systems, none are effective or efficient methods of movement. However, together and with another program, the combination has the ability to unite SpacEvenTime. Such a combined transportation system can readdress the public realm, while enhancing the prosperity of the region and serving as a means to connect the city to develop it as the event (VII).

Characteristics can be identified to the specific scope of the city. The space of Detroit can be described as vast and unconnected. As quoted by Stephen P. Vogel, the University of Detroit Mercy School of Architecture Dean, it has been calculated that there is more vacant land, comprised of empty lots and abandoned property, in Detroit than the total land area of San Francisco. Due to urban sprawl, the area that encompasses the city is very large and the downtown area is unlinked to its surrounding suburbs. The discontinuous developments are characterized by the single events in and around the city and the failed attempts to create linkage between them (VII). A future means of linkage could result from a transportation system or from individual's willingness to explore downtown and make use of multiple activates during one outing. This change in attitude, away from individual one-dimensional events, could result from the blurring affect between the three scopes. These facts establish the current relationship between SpacEvenTime.

To further this point, people who live in one area are disconnected from residents of an adjacent area due to the spaces that divide them and also because they only identify with their specific area and not with the city as a whole (VIII).

The city's urban plan in downtown is widely spaced, allowing for pockets of concentrated, individual events. For example, individual events include events that are strictly for entertainment, business, and conventions. As a result, individuals only make use of the specific space that has their particular event. Certain programs are constructed in various locations of downtown and remain unconnected to other events. The means of travel are not always effective and efficient and time is wasted in an attempt to move from one event to the other (VII). The blurring effect of SpacEvenTime can be made possible in Detroit and result in the development of the city as the event, while connecting people to the area.

While the investigation into and the identification of these factors is essential for the development of this thesis, it is only the first step. It is my theoretical perspective that an innovative union throughout the city and the suburbs can connect the multi-functional elements of SpacEvenTime and as a result, can provide a vital link between all three levels. The link must have the ability to connect people, socially and economically, and link SpacEvenTime in the city of Detroit. This union can result from a number of different programs; one can include implementing an innovative form of movement as it pertains to a transportation system. This form of movement must be effective, while at the same time be efficient. Effectiveness can be described as the program's ability to fully serve its purpose and its function of connecting SpacEvenTime. For example, the program must comprehensively address each of the three element at all three scope levels, connecting the city, program, and individual to SpacEvenTime. Efficiency can be described as the program's ability to be useful in a resourceful manner. For example, extreme and unwarranted expenditures must be minimized during the construction, maintenance, and repair stages of development. Additionally, the transportation system must serve the city, program, and individuals at a low cost, with minimal pollution, and through energy effective means.

Through my investigation into the many possible programs that could serve as a link to the city with respect to SpacEvenTime, I ultimately selected one that has the greatest potential for developing into a multi-functional program that can serve as a transportation linkage. Detroit needs to tie the areas of downtown and suburbia together with an effective and efficient public transportation system (IX). This step is essential because it is individuals using, traveling,

and exploring the city that will allow it to become a public realm in which people enjoy and inhabit the space. I think that this can be assisted by implementing a light rail transit line, in addition to furthering the already established bus routes and the Detroit People Mover. Together, these modes of movement will create a system that will connect the city. This comprehensive transportation system has the potential of enhancing the region's economic competitiveness, satisfying the needs of the transit dependant, and providing a choice for those who do rely on public transport (VII). To be effective, the transit system must be dependable, frequent, fast, safe, and affordable (IX).

Currently the proposed light rail transit system in southeast Michigan, created by Southeast Michigan Council of Governments, will provide over two hundred and fifty miles of rapid transit service, while serving over two hundred and sixty stations (VII). This highly planned, effective, and efficient mode of transportation will provide a public transportation alternative to over three hundred and fifty thousand households (VII). This organized and complex system will be comprised of twelve regional corridors, including 8 Mile Road, 16 Mile Road, Fort Street, Grand River Avenue, Gratiot Avenue, Greenfield Road, Jefferson Avenue, M-59, Michigan Avenue, Telegraph Road, Van Dyke Road, and Woodward Avenue (VII).

However, it should not be mistaken that the program of the light rail system itself, in addition with the bus routes and the Detroit People Mover, will only be a part of the link that can connect the city. It is, in fact, the program of a "hub" or transfer hall that has the ability to connect people, socially and economically, and link SpacEvenTime. This hall will not only serve as the main transfer location for the light rail lines, but will also house the bus station for downtown and the surrounding suburbs, as well as serve as the location for two scheduled stops for the Detroit People Mover. While individually the different transportation systems cannot create linkages or transitions, together they can from a union, support the concept of a readdressed public realm, and develop my thesis of creating Detroit as the event while linking SpacEvenTime.

I feel one of the elements of a successful public realm is one where individuals directly engage with the life of the city and that is why I have incorporated other means of transportation into the proposal. The building is linked in a direct way to the city via the current bus lines as well as the integration of the proposed light rail system. There are bus lines (DDOT and SMART) that arrive and depart from this station. Additionally, this project operates at the end of the light rail lines and from the station, and one can access lines that go to the airport, up Woodward Avenue, and along the other fourteen corridors. Additionally, I have included a bike shop as a program in the site. This allows for people to employ another form of transportation as they venture into the city. At this program, bikes can be purchased, rented, or stored.

With different transport systems converging at one station, this allows a diverse number of travelers to move through the location as they transfer from one system to another. However, would it be possible to combine public forms of transportation, such as buses and the Detroit People Mover, with private forms of transportation, such as automobiles? I believe that it is possible because through my investigation I see possibilities in redefining the entire city as an event, instead of a collection of individual entities, and readdressing the public realm. To help make this possible, an architectural system needs to make a connection between SpacEvenTime that establishes a link between both the collective and the individual. This system would also have to generate a link between events and participates at the level of the individual.

Selection of the best site for this program is crucial for forming a concrete link, uniting the city, and readdressing the public realm. Through my extensive investigation of the scope of the city, I selected a site that already has a physical link to the well defined veins of Detroit, which include Woodward Avenue, Gratiot Avenue, Jefferson Avenue, Michigan Avenue, and Grand River Avenue that run from downtown to the farthest suburbs. Additionally the site is centrally located within downtown and within a location where the business, entertainment, and social spaces converge forming the beginnings of a public realm. This site is at the intersection of Michigan Avenue and Cass Avenue and spans an area of about one hundred thousand square feet, which is accumulative over four distinct, but adjacent plots of land. Currently this land is surface parking. At the scope of the program, the city's atmosphere around the site touches one extreme to

another during the course of a day. In the daytime, the multitude of cars suggests that this location is busy, supporting numerous businesses, hotels, and apartments. However, the same location in the evening or on the weekends reflects a much different atmosphere. Following business hours, the area is abandoned. Similarly, the atmosphere felt in downtown Detroit also reflects this same feel. This drastic difference in function and purpose demonstrates that the site, as well as the city has potential. A transportation hall of this kind can provide a twenty-four hour movement instead of strictly business movement already seen on the site.

The site context includes many high-rise buildings that border the site. This area becomes a valley that disrupts the flow of the city. In an attempt to further this idea and strengthen this site as one that is consistent with my thesis point, I have purposed the construction of several other high-rise buildings around my site. The physical location of this program is in the shadows of taller buildings, which creates an opportunity for a fifth elevation. The roof plane is an inhabited landscape where urban gardens float above the streetscape. One can access the roofscape directly from the street as well as from the interior spaces of the program. Activities such as talking, gathering, playing, and sitting activate the space and provide a more humane view from the office buildings next door. From the roofscape, individuals also continue to enjoy a direct visual, as well as physical, link with the event of the city on a larger scale.

In order to inner-link the city with the people who comprise its framework, parameters must support the needs and establish an effective and efficient method of reaching an ultimate destination. The people who understand the past and share a positive vision for the future take part and take advantage of the intended movement which the city provides. In Detroit, people utilize a variety of intended motion as they travel. This movement influences their ultimate destination to be a single event. Upon narrowing the scope to focus on the program, many similarities have been observed between the city and the program. While the discontinuous nature of Detroit was expressed, it seems fitting that the site for the program is composed of separate, individual parts. The transfer hall will be designed according to my thesis and will focus on exploiting overlapping areas of the public realm. Additionally, the program will properly use all the

spaces of the site including the fifth elevation. These factors, along with other architectural influences link the different programs of the hall. The basis for the design will blur the three scopes and link SpacEvenTime.

The architectural design of the program must be functional with respect to the scope of the people that it is planned to serve. This is because in order for this program to be successful it must fulfill the standards of being efficient and effective, enjoyable and inhabitable. As a result, all applicable conditions of the design must be considered. In doing so, it is important that the needs for both passengers and non-passengers are thought of equally. This is because this program does not only serve as a link or transition for the individuals using it for movement as it pertains to time, but also as a space for leisure, employment, commercial means, an event, or for its other functions that individuals are seeking a readdressed public realm.

I investigated several architectural design theories that relate to SpacEvenTime. The theories that were of the greatest interest were those that united spaces, either inside and outside spaces or adjacent spaces, to each other. This connection made between spaces was clearly expressed in the `Klein Bottle' diagram. The focus of this diagram serves as a reference for the spatial transformation of a surface into a whole (XV). The deformation of the diagram can be applied to a transfer hall. For my purposes, the diagram can connect the passengers and non-passengers and both the inner and outer spaces that the transfer hall encompasses. As a result, the architectural plan that is influenced by this diagram has the ability to link the person to the space and event of the transfer hall by realizing the spatial integration of the area into a one-terminal concept (XV). Furthermore, the architectural plan can also link the person to the outside environment, thus connecting them to the space and the event of the city of Detroit.

The diagram can be further exemplified through a description of its influence on the architectural plan. The diagram allows for constructive stability due to its ability to turn back onto itself, creating an inner link that is void of a weakened end (XV). The folding action and the transformation of the surface into the whole allows for natural air and light to penetrate into the structure. This action also forms a transition or the unity between the building and its function

with the city (XV). The overhang from the people mover adjacent to the site becomes an extension to house the busses. Within the transfer hall, people will feel a connection between the inner space and the outer environment through sight lines and the large amount of green areas enclosed within, present on top of, and seen around the site. Within the transfer hall, the person will feel a connection between the inner space and the outer environment. Because the diagram is able to fold back onto itself, this develops a solution to the existing differences in height in the program. The unfolding overcomes this height barrier between the person and the multi-levels of the transfer hall. The continuity of surface, between ground and the ceiling within and outside the transfer hall allows for the person to vary their perspective and view their destination by lines of site instead of through mental images. The open floor plan with seemingly endless opportunities cannot only link the person to the space of the program, to the event of the city, but to movement as it pertains to time either as they move themselves or are moved by the transportation systems.

The transfer hall is an area that accommodates many interchangeable and interrelated forms of movement. The areas that have a void in movement, or lack of frequent travelers, leads to alternative paths of movement that help link different programs together. Density observations of people walking through the program utilize the different functions to create secondary programs and pathways that connect these programs together. Walls thicken and thin to suggest how the building transforms from one program to another. Spaces for each program are integrated into the surrounding elements, including the walls of the building. For example, the information kiosk for ticket purchasing grows out of the wall which becomes a secondary space for the transfer hall. These differences in heights, sight lines, and population density surveys develop the pathways between programs. Investigating the waiting times and transfer percentages help identify the locations that are suitable for programs that cause a pause in movement, such as restaurants, stores, service amenities, and storage lockers.

The issue of fast movement vs. slow movement is also identified and addressed by the program. The design will also include elongated staircases to act as a ramp to slowly change the perspective of the person in the transfer hall and out into the city. The slow rise causes the loss of awareness of the individual's vertical location. Additionally, the building

relates to another issue of fast movement vs. slow movement. This issue can be observed in the use of the coffee bar. It has its own sit down dinning area for use on a lunch break and then it has a vendor stand for the people on their way to catch a bus or tram.

During my investigation, I also looked into the different movement and quantities of time that encompassed other programs that are present. The differences between the activities of purchasing a ticket and waiting for a tram, or watching the life of the city and passing from one building to the other within the site were examined. These studies strengthen the locations of these programs within the floor plan. The open floor plan at the interior not only links the person to the space of the city as the event, but also to movement as it pertains to time as they move themselves or are moved by the transportation system. The analysis of the types of movement, in addition to the absence of movement, as seen in waiting, includes the directions of the various trajectories and the blurring effect of the relationship between all forms of transportation on the site. This architectural system, along with the design of the building does not only equally serve the different forms of transportation, but it also satisfies the complex interactions by addressing the relationship between SpacEevnTime.

The multi-dimensional transportation system will encourage movement and provide an effective and efficient travel in between events. Soon individuals events will blur together and a single event will result. As a result, the transfer hall will not be designed to fulfill a single purpose, but will be responsible for fulfilling many tasks. The design of the program must not only equally serve the different forms of transportation, but also satisfy the complex interactions by addressing the relationship between SpacEvenTime. By addressing and, possibly, redefining the public realm in Detroit, the space in which people find enjoyment and are able to inhabit will consist of different kinds of spaces, both interior and exterior, with different kinds and scale of functions. This built environment will serve the multiple functions of linkages and transitions between the city as a whole, the program, and the individual. The architectural plan of the program will visually employ conclusions drawn from my thesis studies. The placement of programs, relationship developed between interior and exterior space, and the unfolding action of the program will engage the individual by blurring itself into the

city, developing it as the event. The innovative for of movement of the building will connect people, both socially and economically and link SpacEvenTime. The public realm and how it is amplified by the ambiguities between interior and exterior spaces will investigate the connection between SpacEvenTime at the level of all three scopes. And through this investigation, SpacEvenTime will in turn provide the connection between the city, program, and individual.

Transportation Center Charlotte, North Carolina

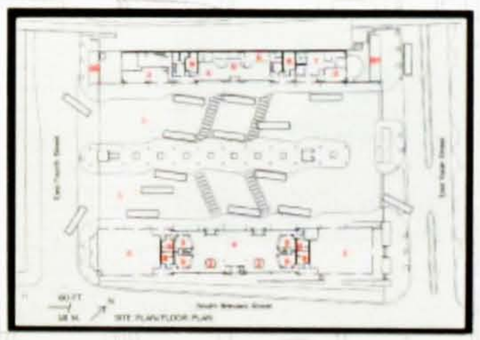
Gantt Huberman Architects 1994-95

Precedent Analysis

Planning to orchestrate any means of a mass form of movement through readdressing and redefining motion is a major undertaking. Much examination on past successes and failures must be researched in order to learn from the past and improve on the future condition. Observations concluded in this study is that the program is lacking the ability of linkage needed to connect individuals to the main event: the city itself.

The movement that traditional bus stations have is loose, lacking any strong structure that has the ability to link an individual to a space or destination (IV). The mobility created by the current bus plan does not support or help define the event of the city. On a large scale scope, the concept of linking through mobility is apparent because the bus lines travel throughout the city and into the surrounding area. However, on the scope of the program, the bus system, which is comprised of its stations, buses, routes, and riders, does not form an adequate connection to individuals and the event of the city. The form of movement developed by the bus system is discontinuous. Each bus dose not create a specific path, instead each path of movement is arbitrarily defined due to the accidental maneuvers of other buses (IV).

Top: Interior perspective of the bus hub in the Transportation Center. Middle: Exterior view to the bus hub with adjacent program conditions of the city. Bottom: Floor plan of the bus hub depicting the possible movement of the transportation system into the surround context of Charlotte.



Transportation Center Charlotte, North Carolina

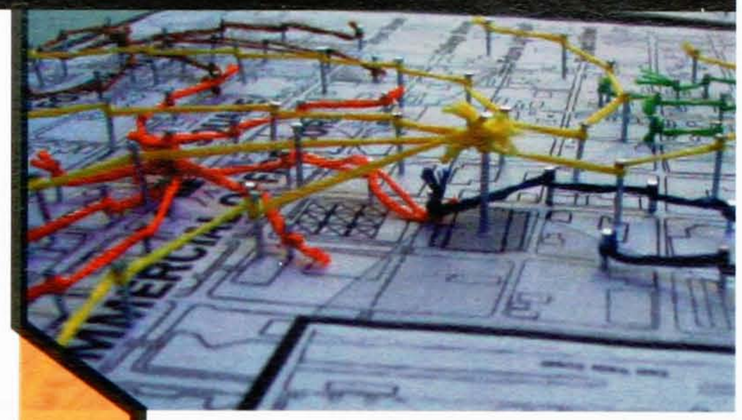
Gantt Huberman Architects 1994-95

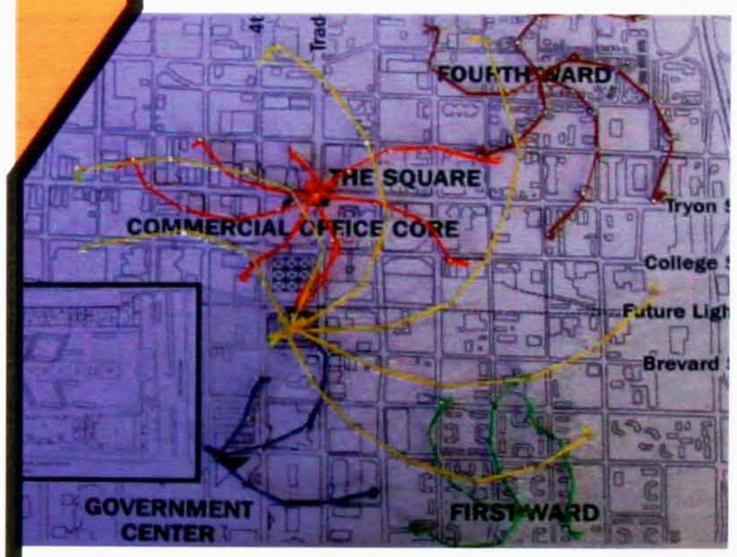
Precedent Analysis

Some transportation stations designed for various sites around the world are classified as an architectural wonder. In the case of the Transportation Center, which is a bus station in Charlotte, North Carolina, it too is a wonder for developing solutions to solve the many status problems that are commonly associated with mass transportation stations (IV). The station was built on a former, undeveloped parking lot. The location of the station was picked for the convenience of the bus traveler. In an attempt to relieve a busy street of further congestion, the station was awkwardly moved south of the main stream downtown area and into a closed-in site. The premise of this relocation is to link the business district with the city and county offices (IV). The architects working with this project felt that a bus station should be more than just a pick up and drop off point, but a major link to the city life.

A public feel is needed to attract visitors that potentially might choose to live or work in the area. This can be accomplished by constructing a multi-functional building that is composed of multi-dimensional programs. The overall goal was to show that motion and movement observed in this building was different from any other building in downtown (IV). This motion would act as a link to the city. In the more concentrated areas that either had more residents or more activity, there is a greater need for mobility. That is why movement in this area must be accessible and free flowing. Additionally the nodes between the areas of great mobility must be linked in order to connect the city and in turn make it the event.

These concepts of concentrated and linked mobility are visually identified through the use of the string spirals. These spirals also define the districts, which are similar to Detroit in that they are discontinuous and do not relate to one another. The large center spiral, unlike any other spiral, expresses the linkage between a district and rest of the city.





Top and Bottom images: Analysis diagram depicting the use and position of multi-colored string and different lengths of nails to illustrate different types of movement.

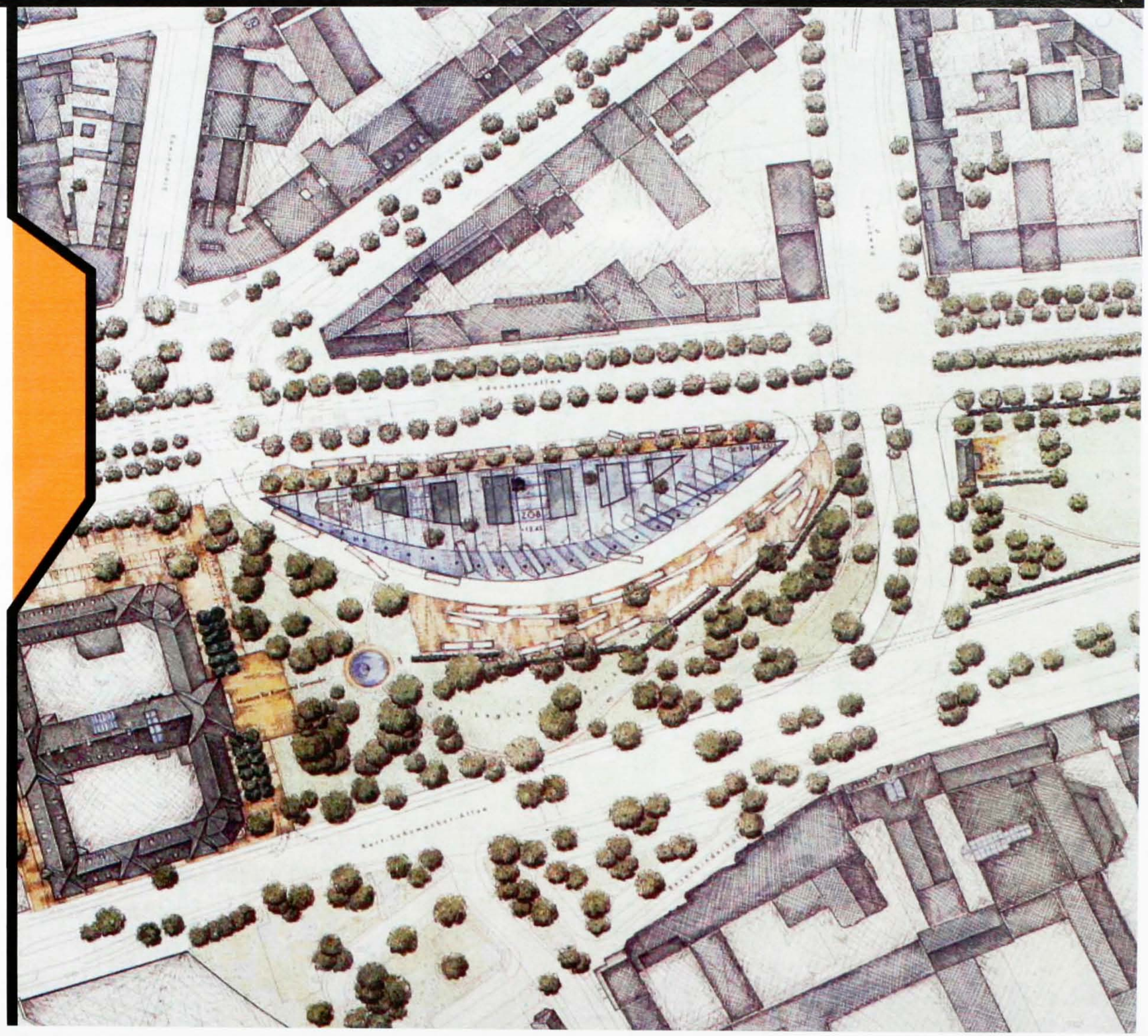
Central Bus Station: Hamburg, Germany

Silcher.Werner + Redante: 2000-01

Precedent Analysis

Through examining the Central Bus Station of Hamburg, Germany, I was able to hypothesize about the possible links made between the mobility of people with respect to a public transportation system. I examined the speed of this connection, the travel volume of this mobility, and the associated status of each form of movement. Additionally, the link, which connects the individual to a mode of transportation and then to the urban fabric of the city, was explored. By observing how mobility is represented in architecture, this theory can be further analyzed as to what extent the movement of people and objects affects the shape of architecture.

Right: Arial view of the Central Bus Station within the surrounding context of Hamburg.

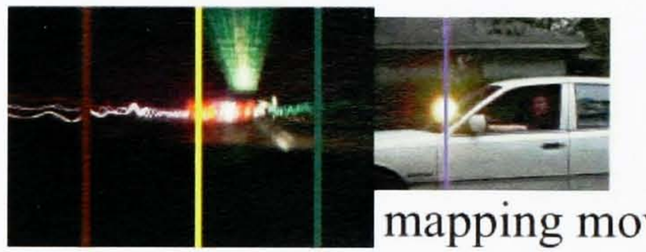


Central Bus Station + LINK + Thesis

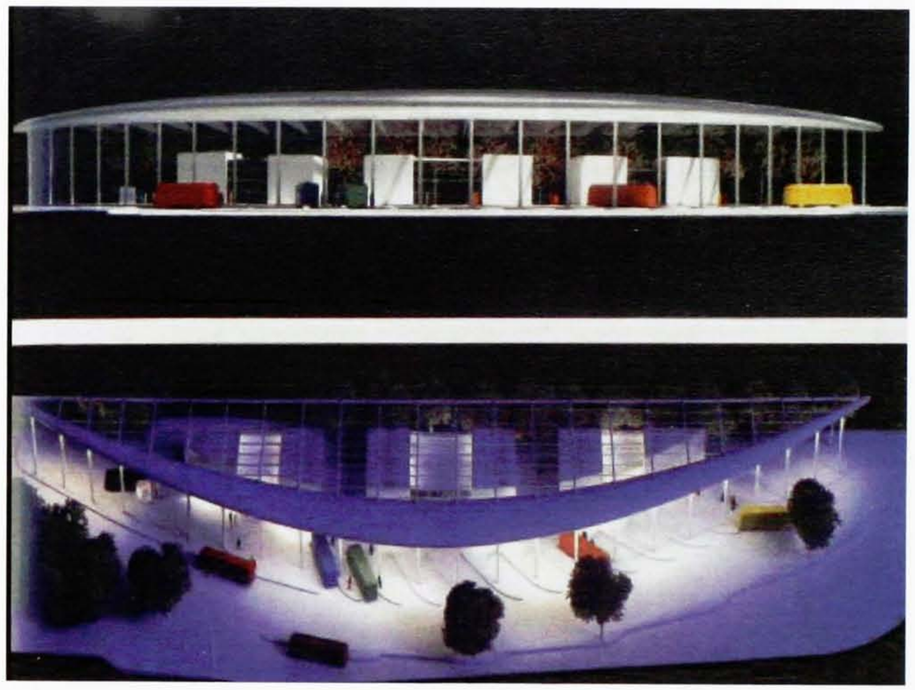
Any form of transportation physically creates movement in an obvious manner. However, through less obvious measures, which are still apart of the larger movement scheme, this architectural system has much influence on urban mobility. The movement of the buses creates the shape and space that forms the building. The buses are directly linked to the structure of the building and have a specific place (II). The connection with the surrounding environment begins to transform and develops a transition between the area of the system and adjacent grounds and the city. This is in contrast to the all inclusive program remaining an average bus station. This creates the ability to connect individuals to one another and to their surroundings.

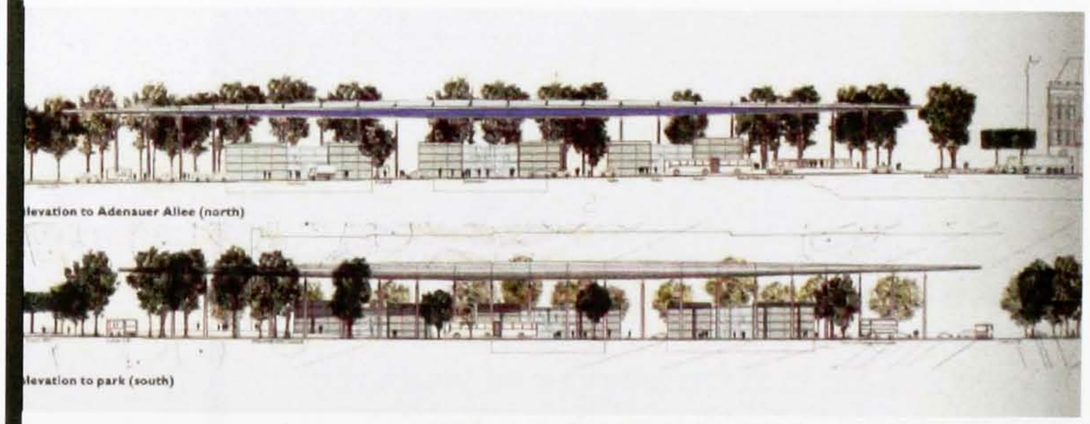
Movement occurs at different rates and speeds (II). Some forms can be associated with siren-red speeds that whirl by during emergencies or with scenic-green tones that conger memories of a Sunday drive or with a frigid-blue pace that barely covers any ground. The different speeds at which various modes of transportation travel are visually displayed through the colored strings. Within the walls of the Central Bus Station, the calming green tones are predominating and the slower speed allows for a less chaotically-confused atmosphere. However, once the bus leaves the hub, it is whizzed up into the high pace world of mobility about the urban landscape. In a fast pace society this system offers a good balance of color and therefore, speed.

Right: All images are of exterior views of the bus hub.



mapping movement

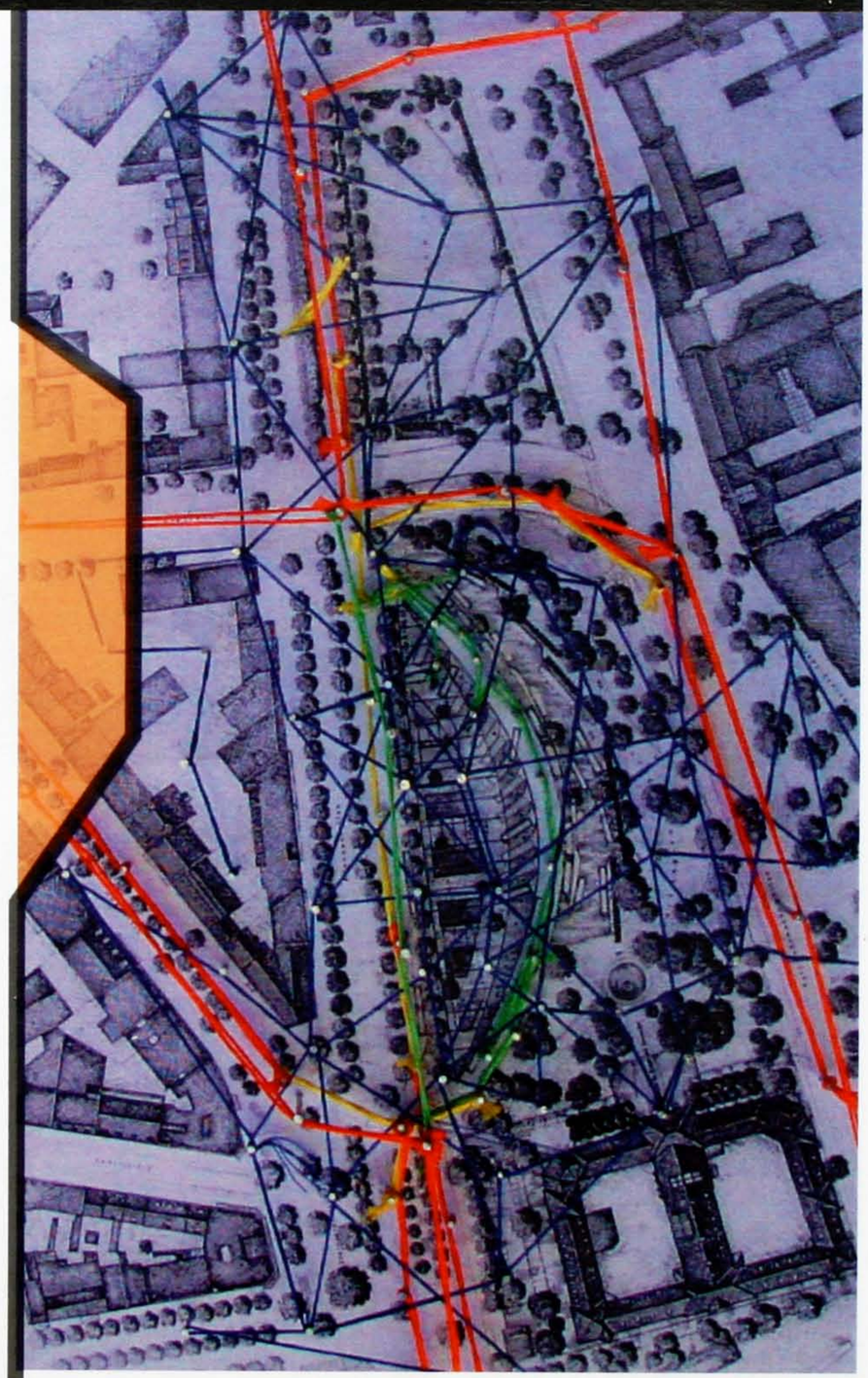




Central Bus Station + LINK + Thesis

For any form of transportation to be successful, it requires public assistance to overcome the negative vibes that are associated with any particular system of movement (II). Is it possible to create a form of mobility that obtains a high level of status from all points of view? In Hamburg, Germany and in other cities across the world, travelers who rely on the bus system are commonly viewed as second class citizens, who for some circumstance or another, may not own a private car (II). For those who do use bus stations, the routes and functional appearance of the building are merely tolerable and do not overall surpass extraordinary expectation that are desired by the travelers. As a result, these murky shelters become recognized as lower than economy class forms of travel. Visually on my analysis study, this preconceived notion of differing economic class is represented by the varying heights of the nails. One can be fortunate enough to travel in high-style, a car. On the other hand, one might choose the reliable "two feet" method of movement. Still other may pay a fee to lower not only their method of movement, but their self image as well by using the bus to travel. The major weakness seen through this idea is that travel via bus is the lowest form of transportation available. While mass forms of mobility need to become more modern means of travel, the hub and architectural system must also adapt to surpass into the extraordinary realm.

To ensure the success of any system of transport, the need for that type of movement, its consumer availablity, and the dependence on that form of mobility are required. The volumes of travel that can use each form of transportation are illustrated by the thickness of the string. Even though few travelers take advantage of the bus lines, this method of urban mobility can accommodate many travels at one time.



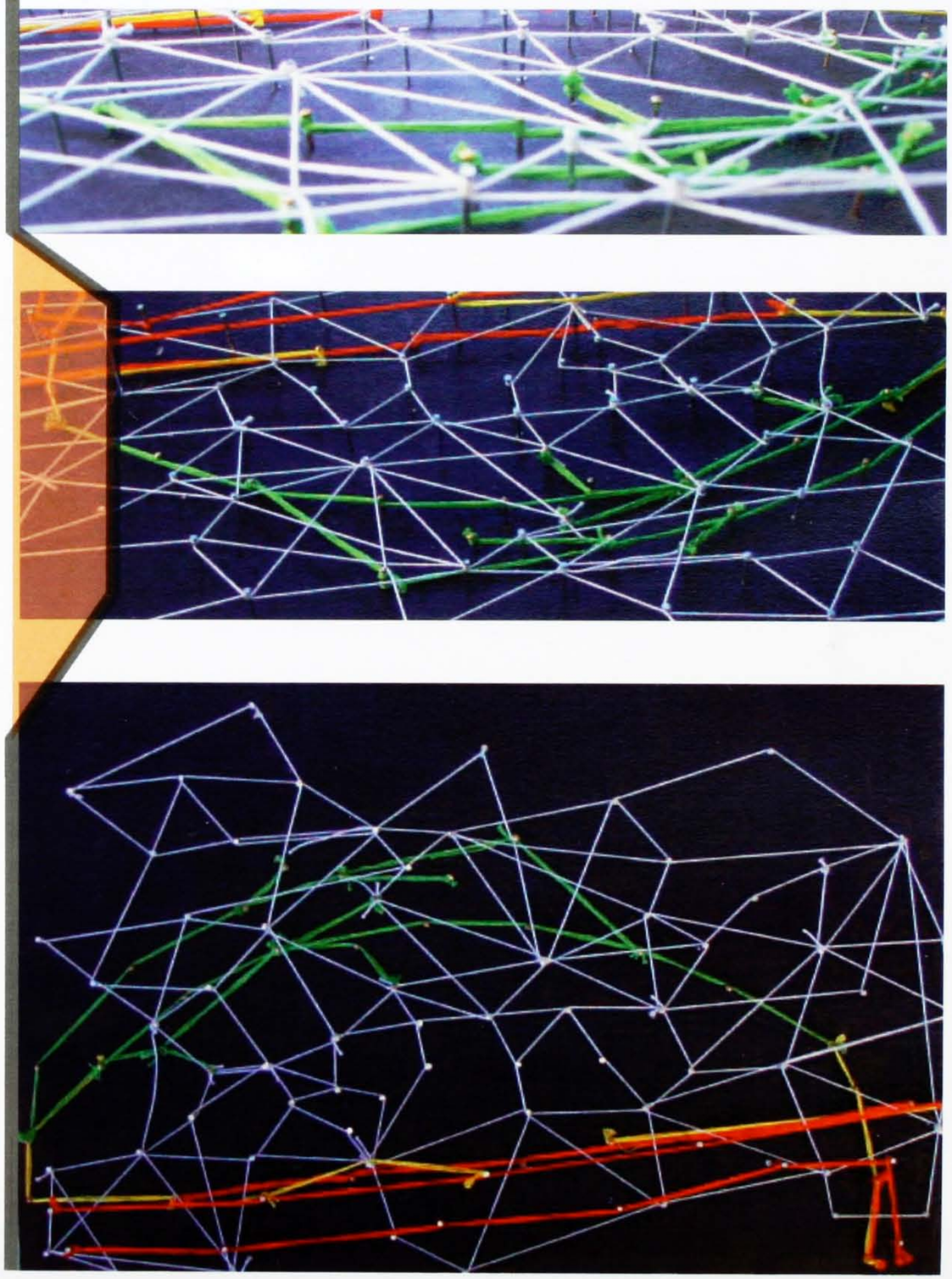
Analysis diagram depicting different types of movement through the use and position of multi-colored string and different lengths of nails.

Central Bus Station + Revisited

In the absence of the underlay site plan, the plotted interpretations of movement that represent Hamburg's Central Bus Station become more abstract. Visually, there is no longer a direct consequence or influence from barriers formed by buildings, streets, and walkways on the distinct forms of movement.

The color of the strings, the height of the pins, and the thickness of the lines still hold the same meaning. However, that meaning has now been made more apparent without the site plan. This is because the patterns and structure of movement in this environment connect and interact with each other instead of connecting and interacting with the ground plain. At initial glance, the color, height, and thickness are interlinked in some locations and disconnected in other locations. This allows for a more in depth study of motion, which suggests how motion has or does not have a connection with itself. Due to the lack of connection with the ground plan, this study is not influenced by any structural plans or manual construction. By revisiting this precedent study I have discovered more in depth detail into "freed" motion. Additionally, I am more thoroughly studied in this novel form of "intended" movement. I feel that the conclusions drawn from this study will further strengthen my thesis.

Right images: Removal of the underlying landscape of Hamburg allows of a more abstract investigation into movement. String color, string thickness, and nail height all represent the analysis of a different element of movement.

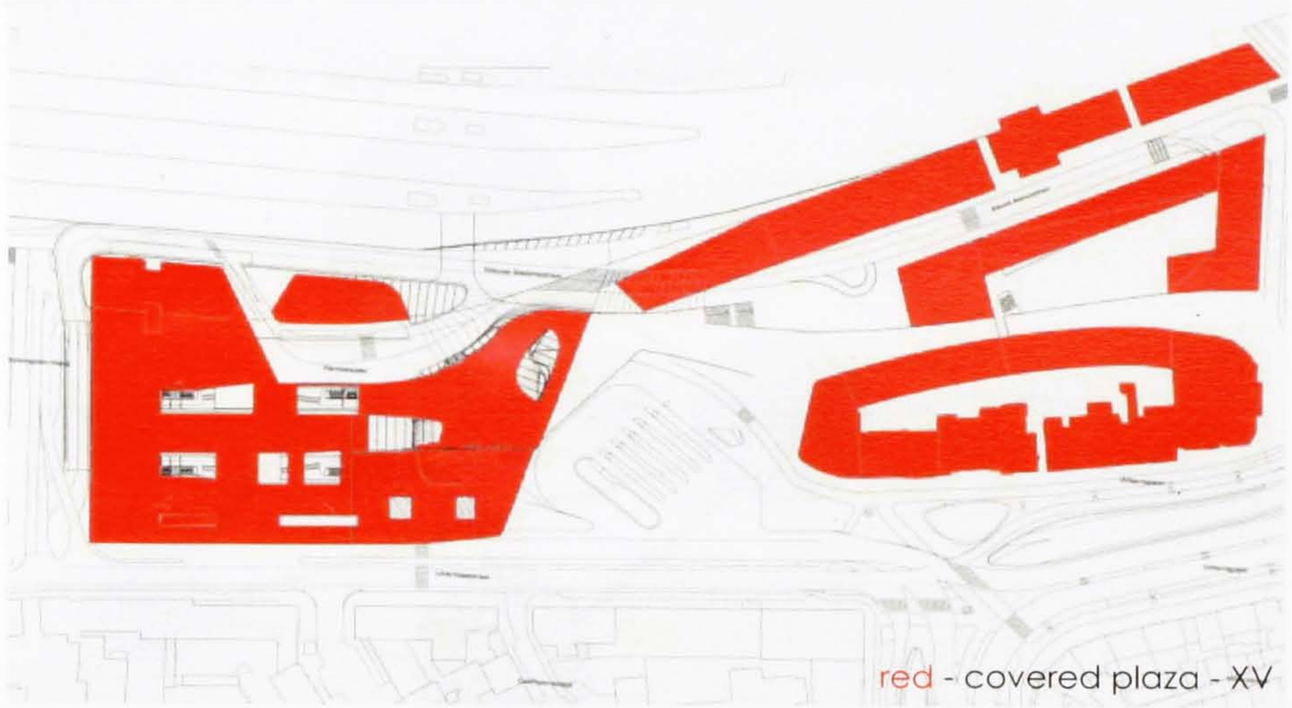


Arnhem Central Station Arnhem, Netherlands

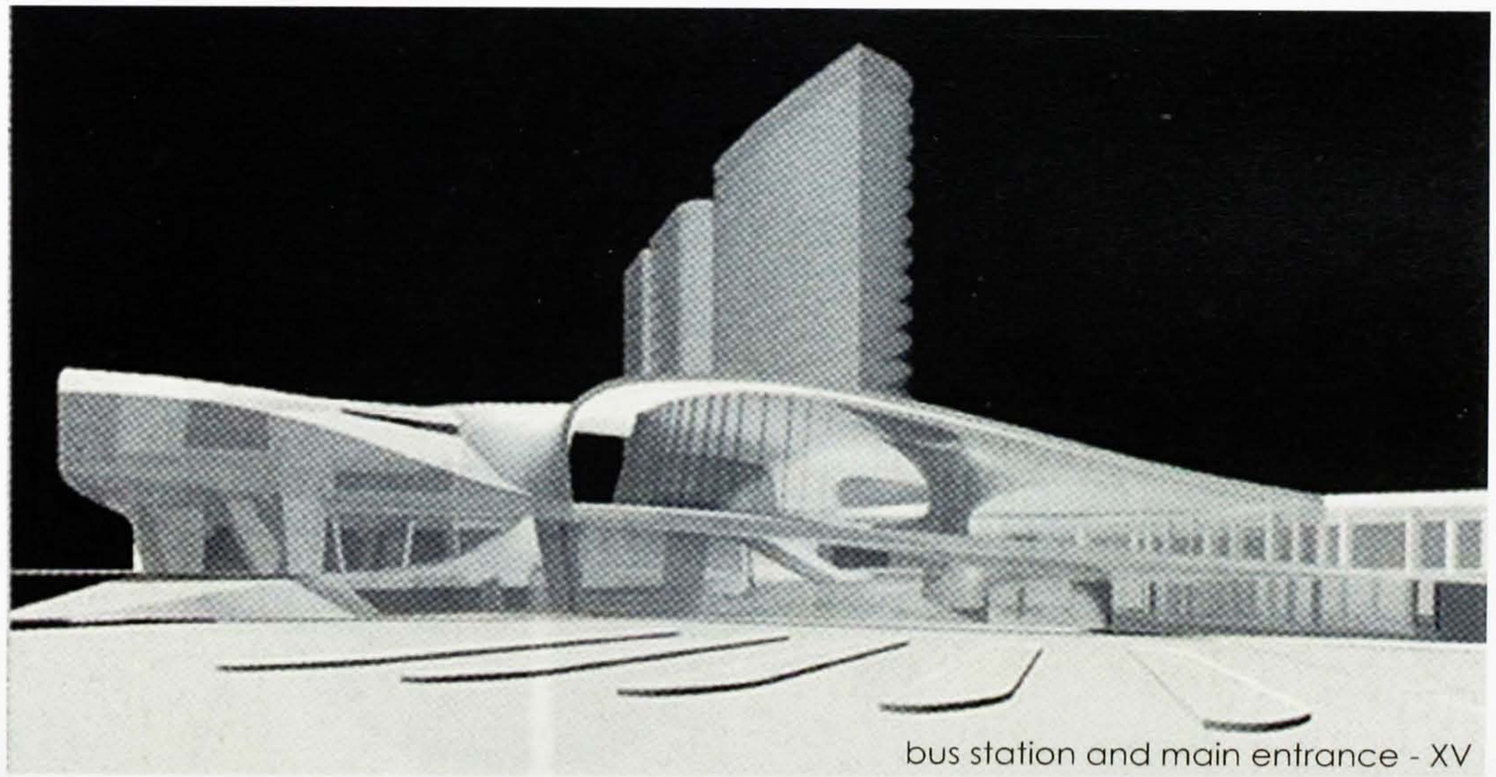
UN Studio van Berkel & Bos: 1996-2007

Program Precedent Analysis

The Arnhem Central Station can be defined as a multi-use transfer hub with a total of 1.722 million square feet of mixed program space (XV). The interface of the hub allows for the movement of travelers to join with the interconnecting transport systems and facilities to form a fully utilitarian structure. The multi-level terminal is mainly roof covered and of which is temperature controlled. To be a fully utilitarian hub for every mode of movement, there are parking spaces for cars and bikes, office spaces to facilitate business needs, and the town center for commercial retail. The development of the project encompasses 861,000 square feet of office space, 118,000 square feet of commercial retail, bus and train stations, four railway platforms, railway underpass, car tunnel, bike rack for 5,000 bikes, and a garage for 1,000 cars all on a 430,000 square feet site (XV). This program is very successful, as more than 65,000 people rely on this hub for 24 hour a day safe and dependable transportation and thus, many view the hub as the gateway to the rest of the town (XV).



red - covered plaza - XV



bus station and main entrance - XV

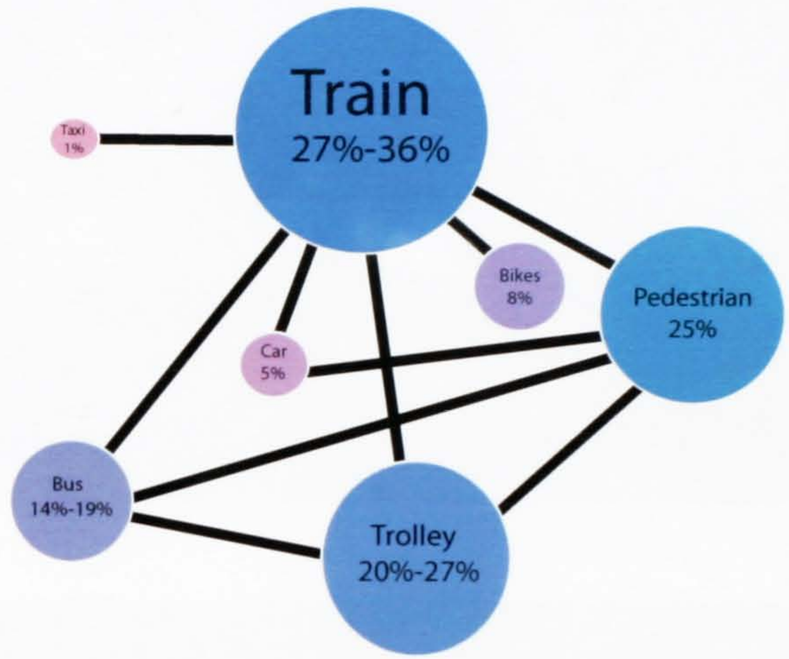
Arnhem Central Station Arnhem, Netherlands

UN Studio van Berkel & Bos: 1996-2007

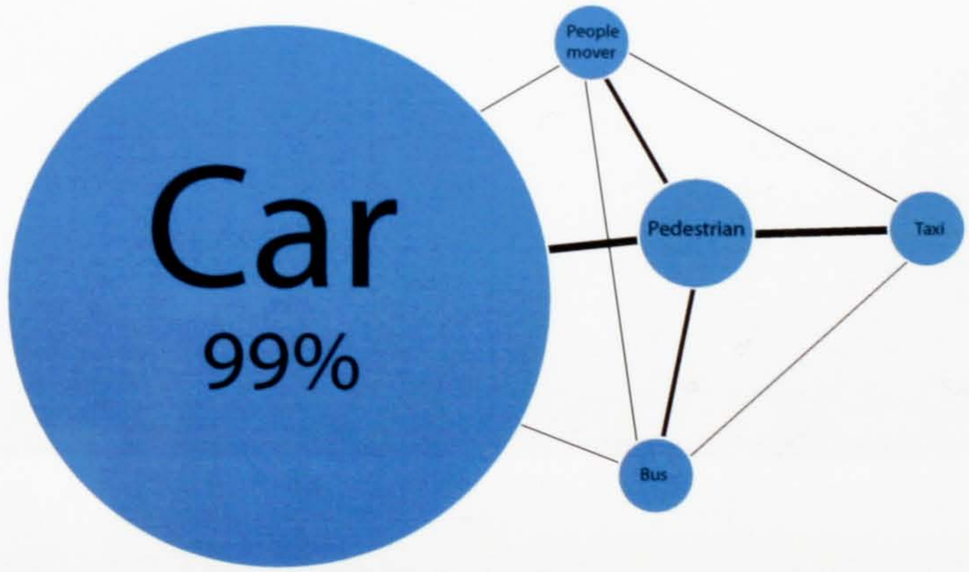
Program Precedent Analysis

The concept of the Arnhem Station can be defined in two words as being "all inclusive" (XV). At this one hub, there is a merger of six different transportation systems. The intergraded public transportation area is novel and sophisticated. The junction at which six systems, representing all different modes of movement, combined is complex and leads to the notion of a truly multi-functional station. "We are confronted by the need to design hybrid environments that encompass space, place, time, and interaction" (XV). The six modes of transportation that interconnects and are available to travelers are trains, trams, taxies, buses, cars, and bikes.

Arnhem Central program breakdown - XV



Detroit's current condition

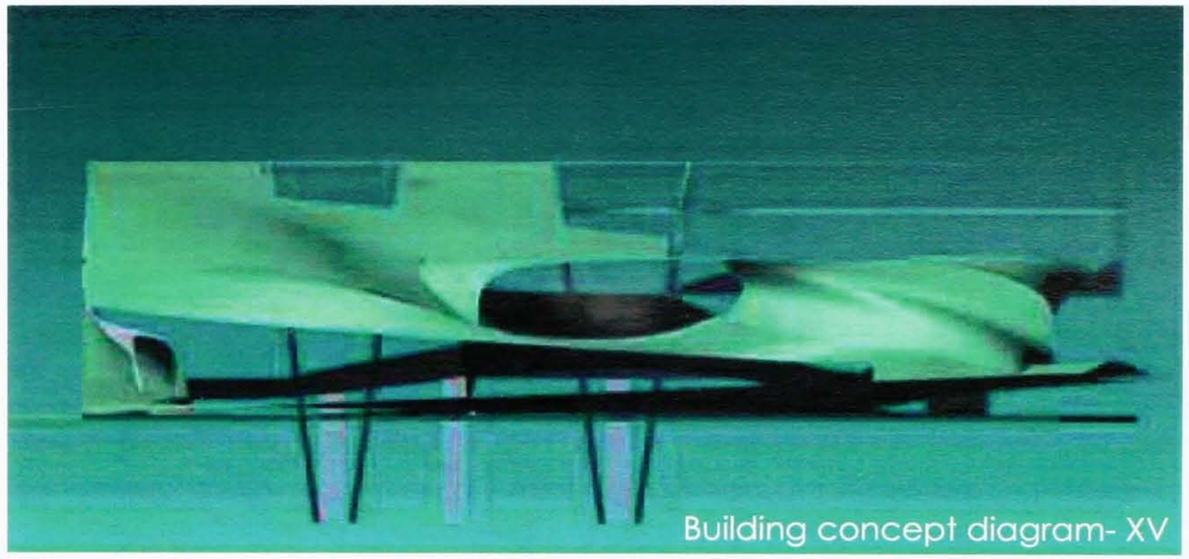


Arnhem Central Station Arnhem, Netherlands

UN Studio van Berkel & Bos: 1996-2007

Program Precedent Analysis

In order to develop an apparent "continuous-differentiation" between the six different modes of movement within the complex, designed differences in height were incorporated to facilitate a continuous movement between the travelers, the transport systems, and commercial entities (XV). The differences in height allow for a conscience and concrete connection between the floor plan and the sources of movement. This open area floor plan is made possible by the position of the folds in the landscape. For example, sunshine is able to transcend from above to the lower entrances of the station, garage, and offices (XV). Additionally, the open floor plan allows for clear and lengthy vision lines because the lines of sight are not obstructed by walls. The holes in the landscape can create an arrangement of shortcuts between the many programs. All of these modifications assist in traveler orientation and ability to easily navigate through the hub.



Building concept diagram- XV

"Klein Bottle" diagram - XV

Arnhem Central Station Arnhem, Netherlands

UN Studio van Berkel & Bos: 1996-2007

Program Precedent Analysis

Arnhem Central focuses on the identification and determination of a common denominator of mutual parameters and values in overlapping areas (XV). One element of major concern is the movement of travelers. This focus causes the redevelopment of the location in order to identify shared elements. Surveys detailing transfers percentages are useful in isolating locations that are favorable for the creation of secondary program, which include the commercial retail and business areas (XV). In such surveys, the dark gray areas denote waiting spaces, light gray areas denote additional waiting spaces, and gray bars denote traveler circulation. These movement studies are the foundation of the program and the floor plan. The analysis of the types of movement include the directions of the different routes, their importance in relation to other forms of transportation on the site, continuance, and their connection to different programs.

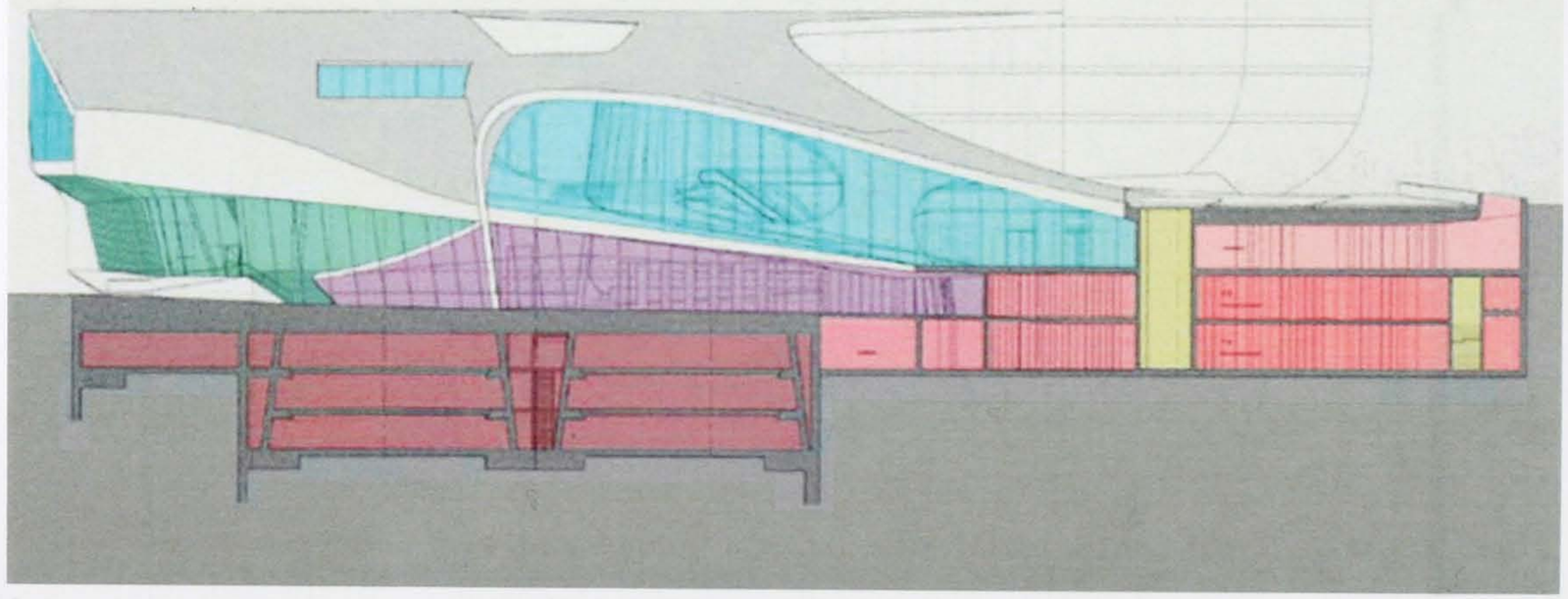
Ground floor plan showing circulation and places of waiting - XV.

Arnhem Central Station: Arnhem, Netherlands

UN Studio van Berkel & Bos: 1996-2007

Program Precedent Analysis

interior view of the station - XV



cross section - different colors represent different program elements- XV

Tectonic Precedent Analysis

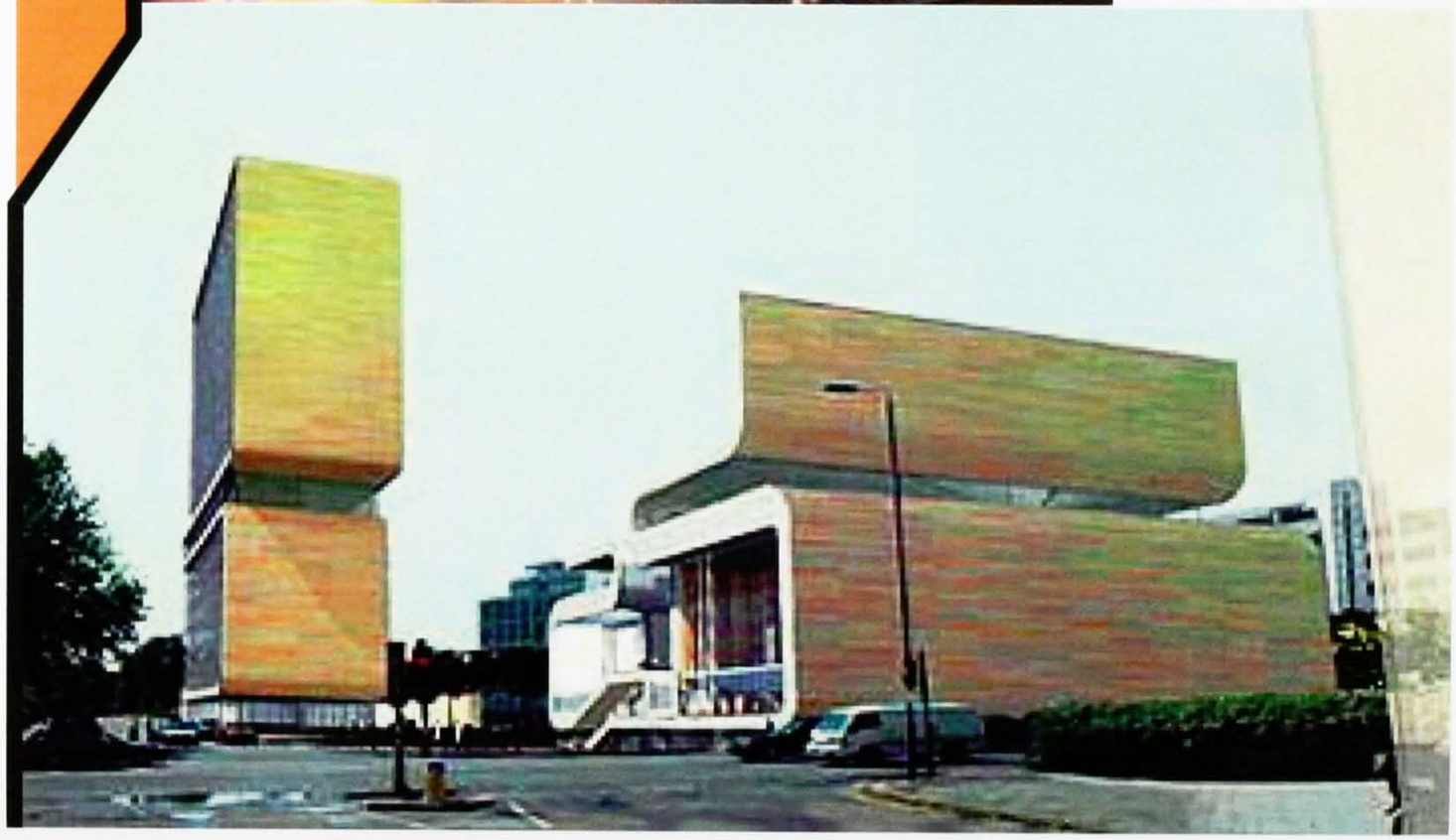
The Music Box - BBC Music Centre - White City, London

Foreign Office Architects (FOA) - 2003-2006

Tectonic Precedent Analysis

No other building exemplifies the unique method of dividing a building's programs by the use of external structures. The Music Box, designed by Foreign Office Architects (FOA), expresses the unfolding and transformation of a wall into different program elements. The front façade is dynamically expressed through the folds of the opposing "S" shaped walls (XIV). This provides the opportunity to grant transparent and framed views though large windows into and out of the music hall. The front façade of the building is animated with the conceptual idea of the unfolding and transformation effect expressed through the thickening and thinning fold structure. To balance this façade, east and west elevations of the building, which comprises the center gallery and gathering space is accentuate by the very simple solid vertical stone wall.

Top image: Expresses the unfolding and transformation of a wall into different program elements from the ground plane to the roof. - XIV



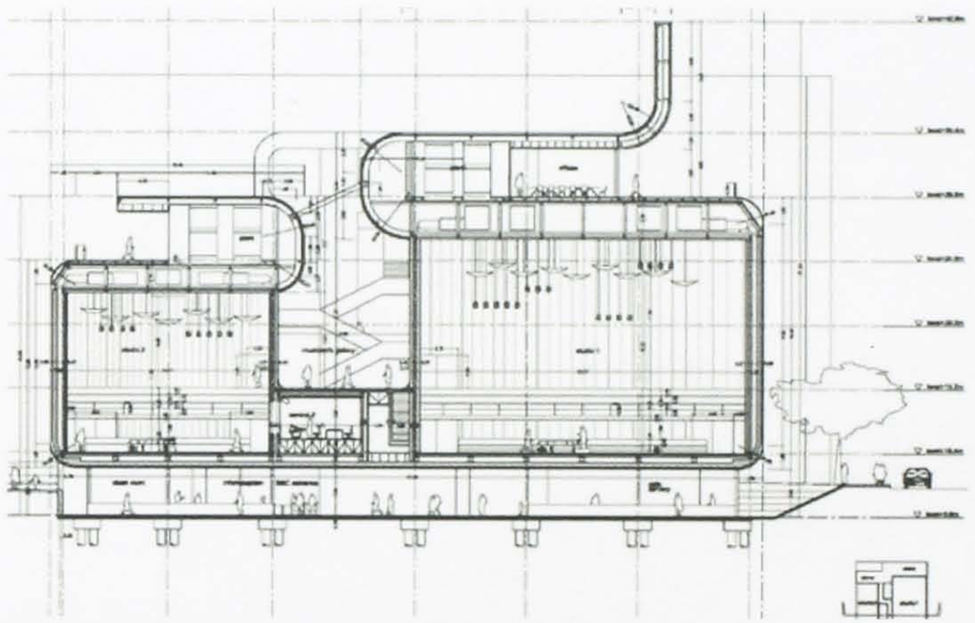
Bottom image: The Music Box with an adjacent office building with same tectonic concept - XIV

The Music Box - BBC Music Centre - White City, London

Foreign Office Architects (FOA) - 2003-2006

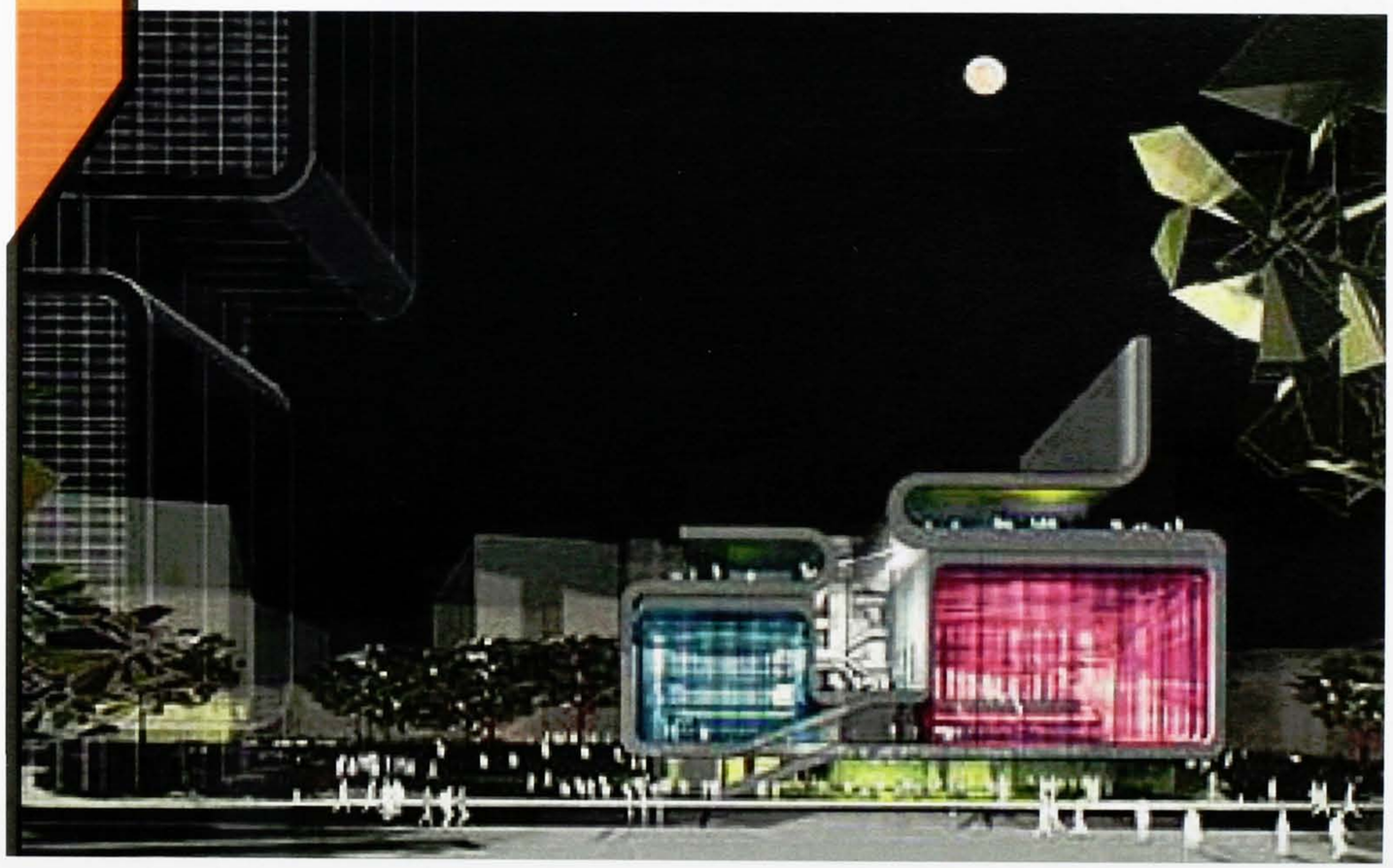
Tectonic Precedent Analysis

As the two 75,000 square feet structures' lower creases are folded and thickened, it creates the secondary program spaces for the performance and rehearsal studios, while providing full-height windows at one end (XIV). In the opposite direction, the folds lead to a pair of open upper-level terraces that view out into the park. A valley of public spaces divides these two "S" shaped volumes, serving as a gallery space and gathering area that leads to the stairs at the back of the structure (XIV).



Top image: Cross section showing the two "S" shaped volumes - XIV

Bottom image: The front façade is dynamically expressed through the folds of the opposing "S" shaped walls. - XIV



Chapel of St. Ignatius - Seattle University - Seattle, Washington

Steven Holl Architects - 1997

Tectonic Precedent Analysis

The Chapel of St. Ignatius expresses the unfolding of the curved roof into the concrete panels. These panels then interlock with other panels to create the openings for glazing. The chapel was thought of as a job-site pre-cast concrete construction rather than a tilt-up concrete construction (XII). This was due to the level of difficulty and the amount of finish work required to complete the job. Steven Holl was quoted as saying that "The whole building was horizontal, and then 24 hours later, like an apparition, it rose" (XII). The chapel's 21 concrete panels interlock like pieces of a three-dimensional jigsaw puzzle, added another layer of complexity beyond the already complicated steel framed structural system (XII). The windows were formed from voids made in the interlocking nature of the tilt-up slabs, which created a purely tectonic expression. The surface of the wet concrete was smoothed with a steel trowel and finished with an acid-base ochre-colored stain. The panels were 8 and 10 inches thick, some weighing as much as 78,000 lbs (XII). To cover the holes left on the front of the panels by the pick-up points, FOA designed cast-bronze point plugs. These plugs helped to define the material and create shadows throughout the day as the sun moved. They also choose building materials that were not polished or new looking, but rather ones that showed signs of aging and history.

Chapel of St. Ignatius - Seattle University - Seattle, Washington

Steven Holl Architects - 1997

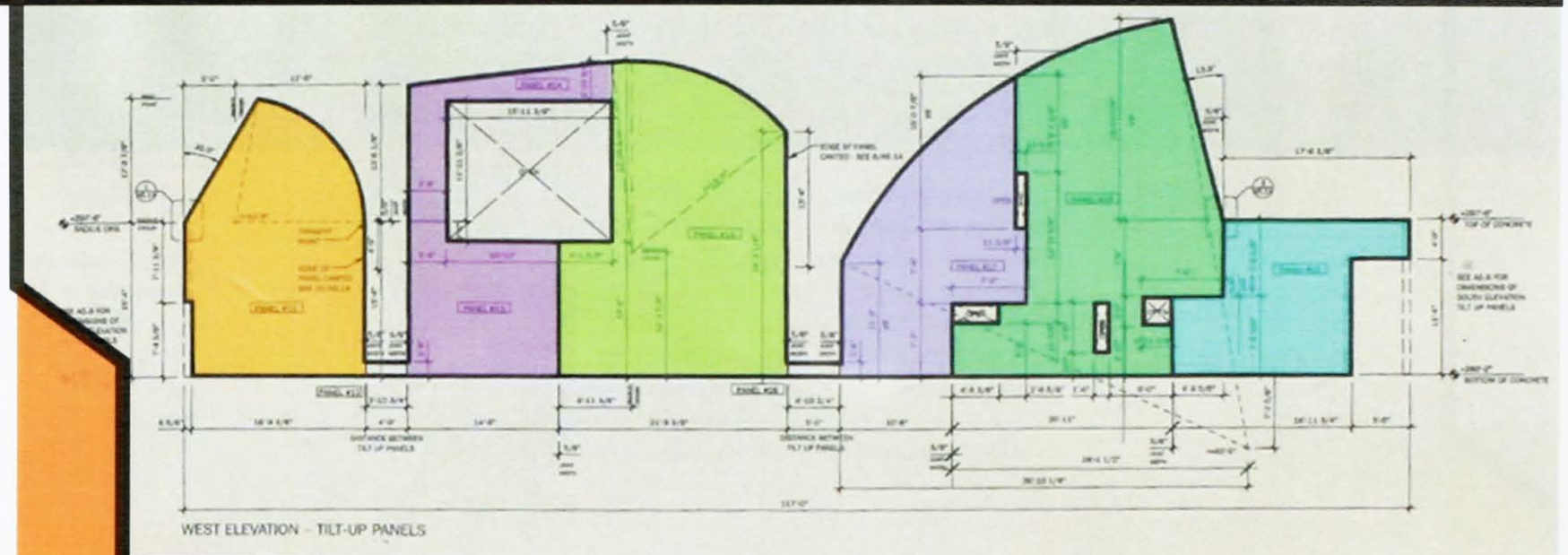
Tectonic Precedent Analysis

Top image: The Chapel's 21 concrete panels interlock like pieces of a three-dimensional jigsaw puzzle.

Bottom left two images: Holl states, "The whole building was horizontal, and then 24 hours later, like an apparition, it rose."

Bottom middle two images: The chapel was thought of as a job-site pre-cast concrete construction rather than tilt-up concrete construction.

Bottom right two images: The windows are formed from voids made in the interlocking of the tilt-up concrete slabs. To cover the holes left on the front of the panels by the pick-up points, FOA designed cast-bronze point plugs.

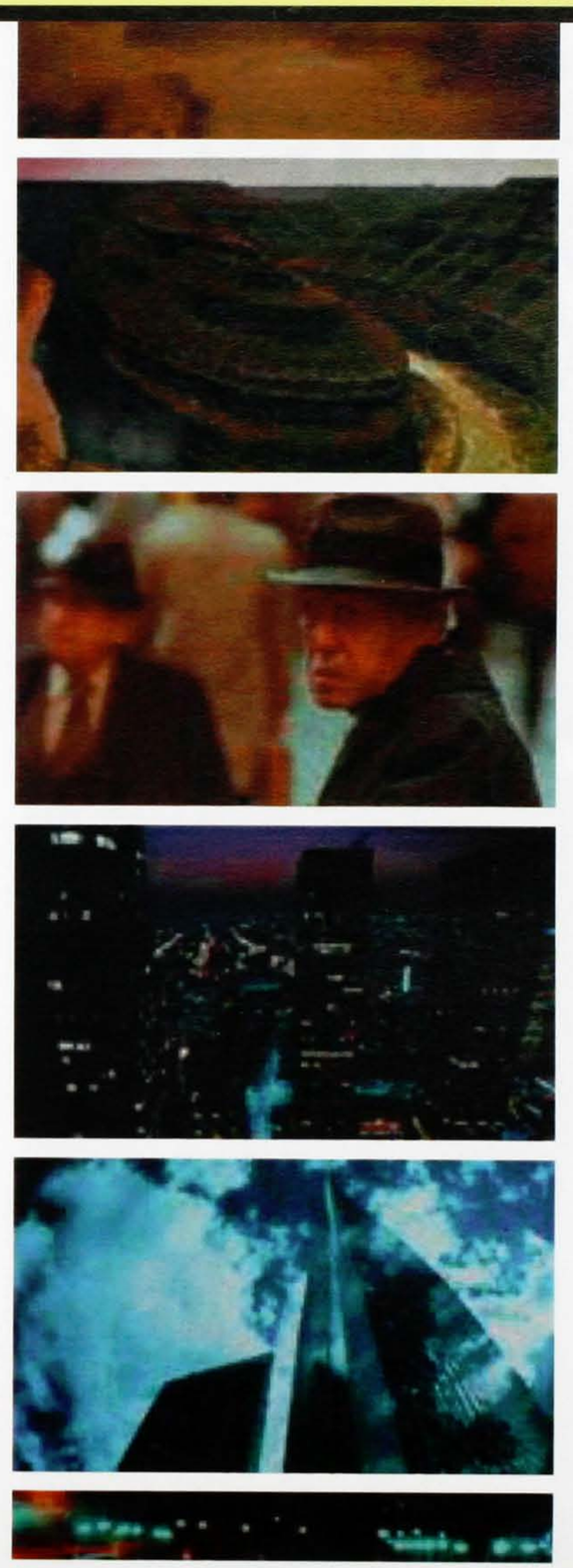


Sketch Problem

"A collision of two different worlds; urban life and technology vs. the environment" (X).

Koyaanisqatsi (1983) is a film meaning "life out of balance" and has no story, dialogue, or characters (X). It moves through a variety of sequences depicting both earthly occurrences such as clouds and waves, and human-made disturbances seen in the natural landscapes such as buildings, earth-moving machinery, and automobiles. The message observed in the collections of footage and images is clear. In its simplest terms, the movie is conveying the perspective of humans' overwhelming impact on the earth's environment and how human involvement and disruption is leading to the destruction of the planet. Additionally, the music, composed by Philip Glass, adds an additional element to the film's meaning (X). The colorfully arranged music deepens the viewing experience. Even if Glass' work was heard in the absence of the images, it would still a powerful composition translating into similar moods and emotions.

Right: Series of images showing the progression of time throughout the movie Koyaanisqatsi (X).

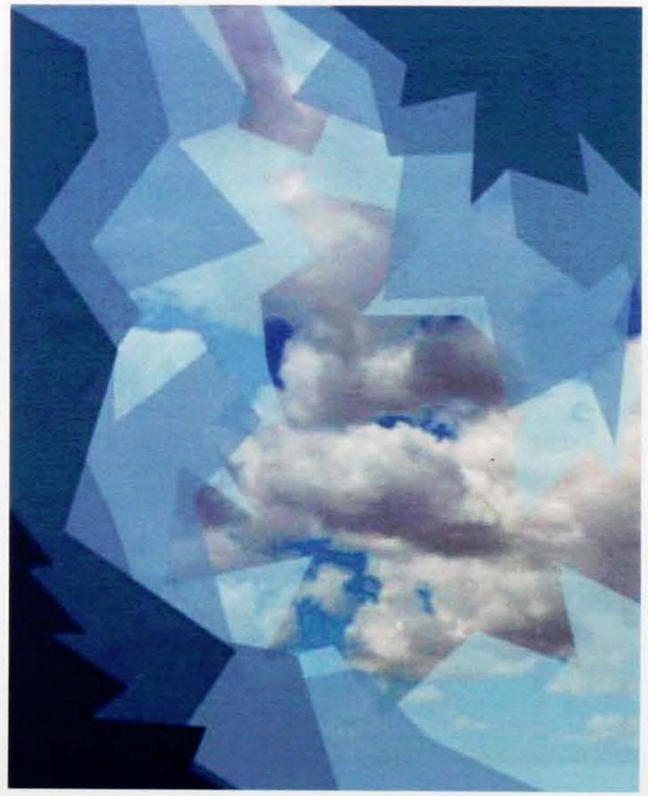


Sketch Problem

From the film, I developed a series of overlay studies that abstracted and communicated the essence of movement, space, time, and bodies.

Top image: Smog is one example of humans' negative interactions with nature. Humans create the smog and the natural environment retains it because it can not be destroyed. Nature holds onto these negative effects of human involvement and disruption to serve as a constant visual and sensual reminder of the destruction that humans are causing to themselves.

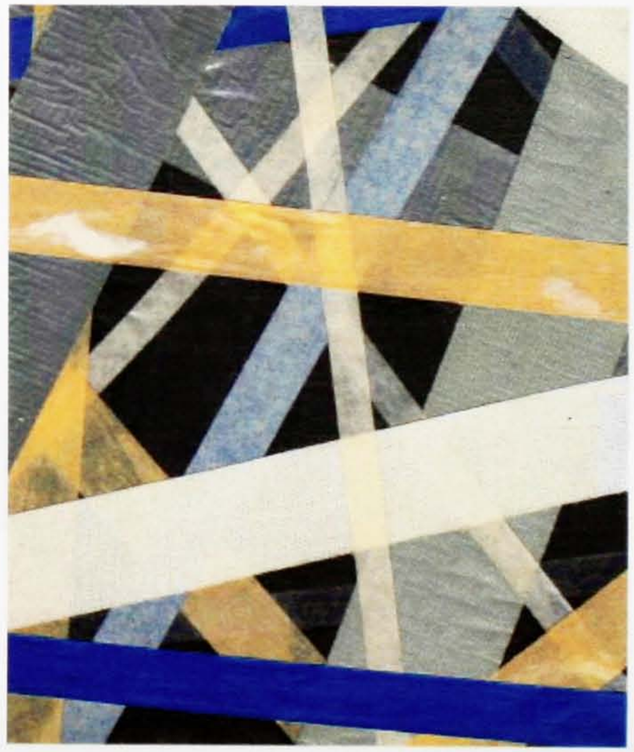
Bottom image: The layers of broken glass express the occurrence of wear and tear, neglect, and decay of any building. Behind the layers of fractured pieces lays a full, unbroken pane of glass. Observe how the unbroken pane is able to reflect life, where the broken pieces only reflect the shadows of neglect and decay. With time, the life and spirit of the building can became less visible and as dark as its broken glass.



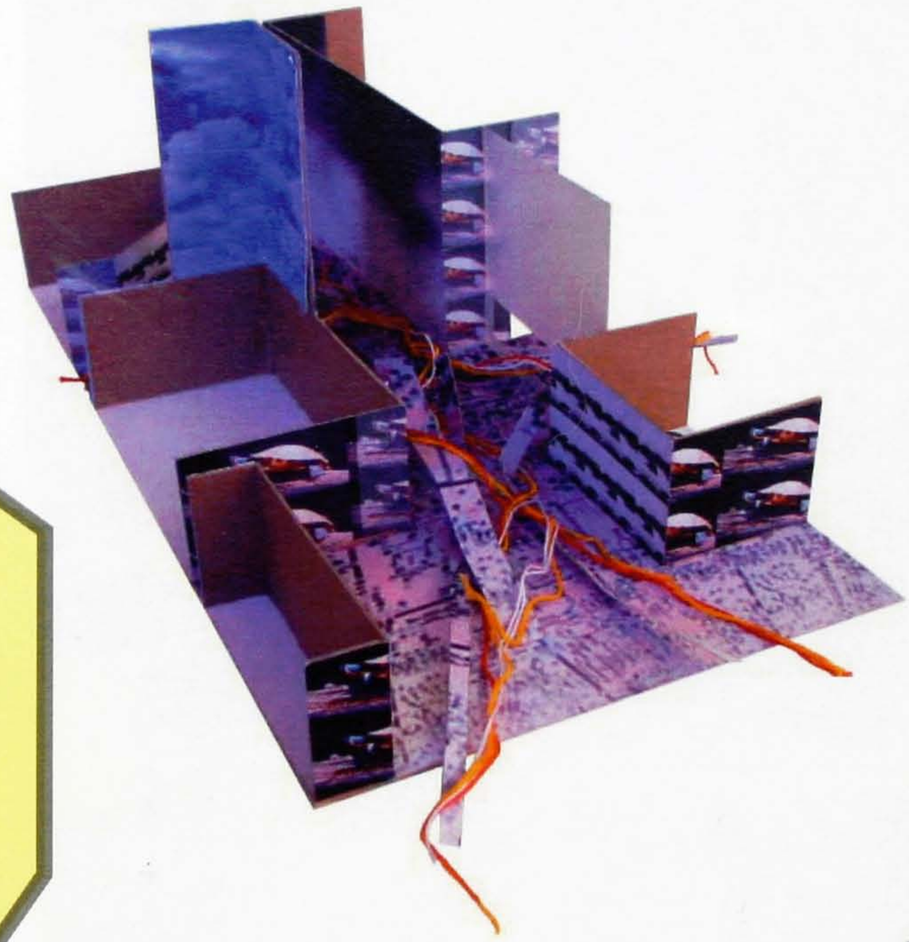
Sketch Problem

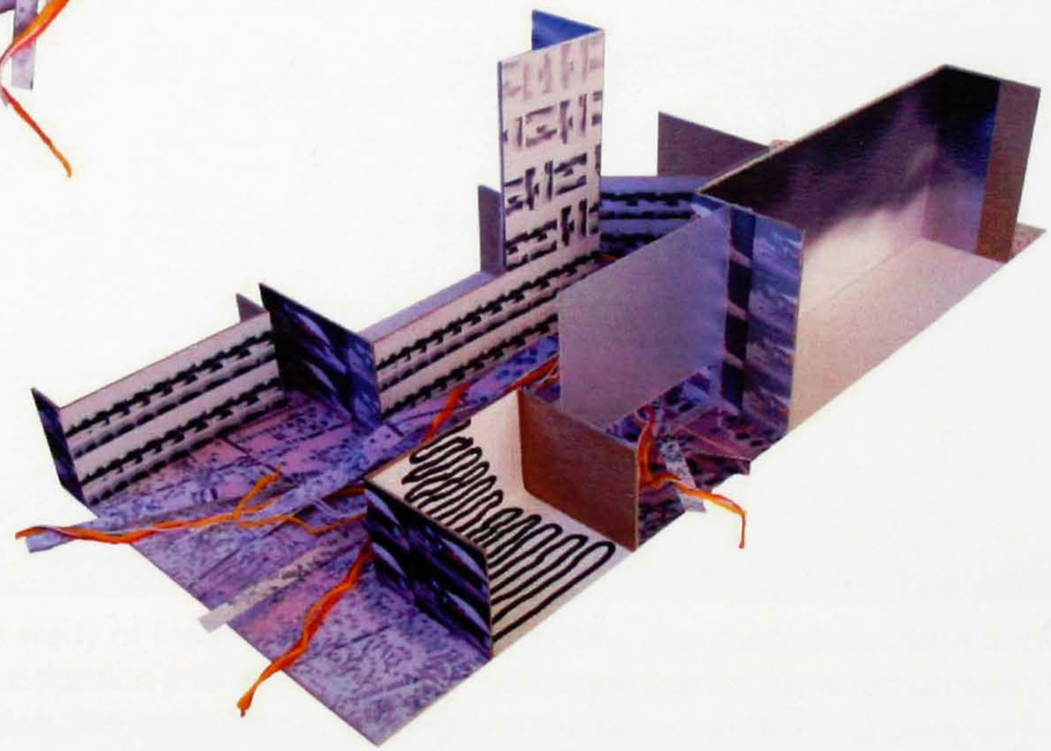
Top image: Paths of people are not specifically defined in an open plan yet due to some program elements paths are created and followed as if arrows were directing them. While some paths are not as define roads or streams, they can still provide a defined way to a specific destination.

Bottom image: The study that utilizes the different tape colors, textures, widths, alternating directions, and methods of layering directly relates to the textural details of a city and how human disruptions create friction, which opposes movement. The study suggests how movement can be resisted or influenced, connected or disconnected.

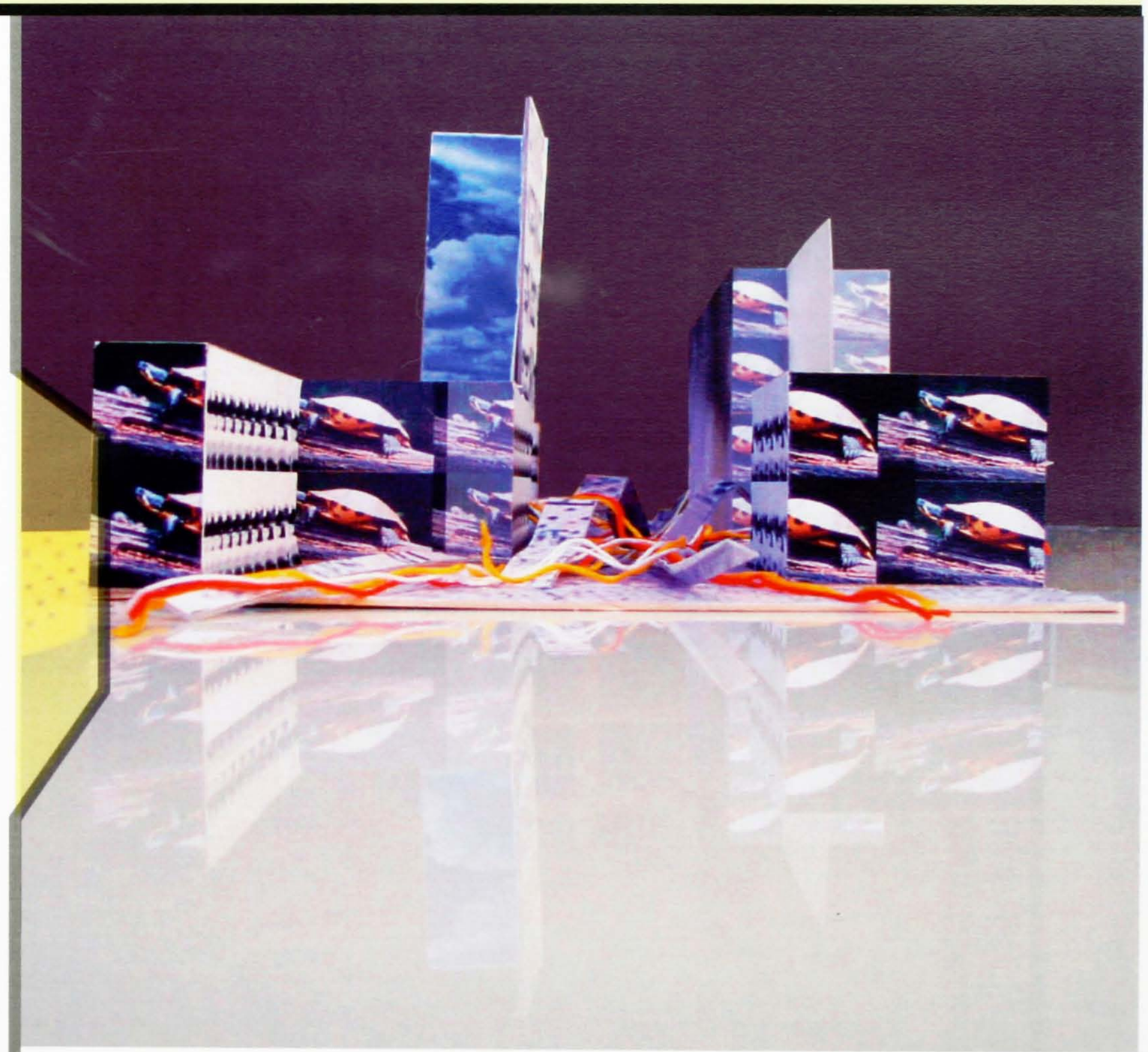


My overlay studies were then woven and fused onto the shell of my construct in order to document the city through the details of its landscape. Fragments of mobility were also used to suggest the traces of personal relationships between the ground and the inscribed urban fabric. In performing this study, conclusions revealed the effects of invisible factors on conventional plan views that were applied to the construct.





The construct also served as an interface between the city and our body. It progressed in opposite directions simultaneously: small and large, slow and fast, light and heavy, soft and hard, permanent and temporal, micro and macro, local and global. I was also able to apprehend the notion of spatial definition and to re-consider the ideas of spaces made for and as a result of movement. The construct suggest yet another dynamic relationship, this one including the ground and the sky at the same time. It was not simply placed on the ground or somewhere under the sky, but the ground/sky itself was expressed as a section within which one can find creases and folds to engage in and inhabit. Through the interactions, one becomes aware of the relationships of the mind to the body. As placed in architectural terms, it is the relationship between materiality and construction. Through our sensory and physical interactions with the edge, our sense of space, place, and others is altered.



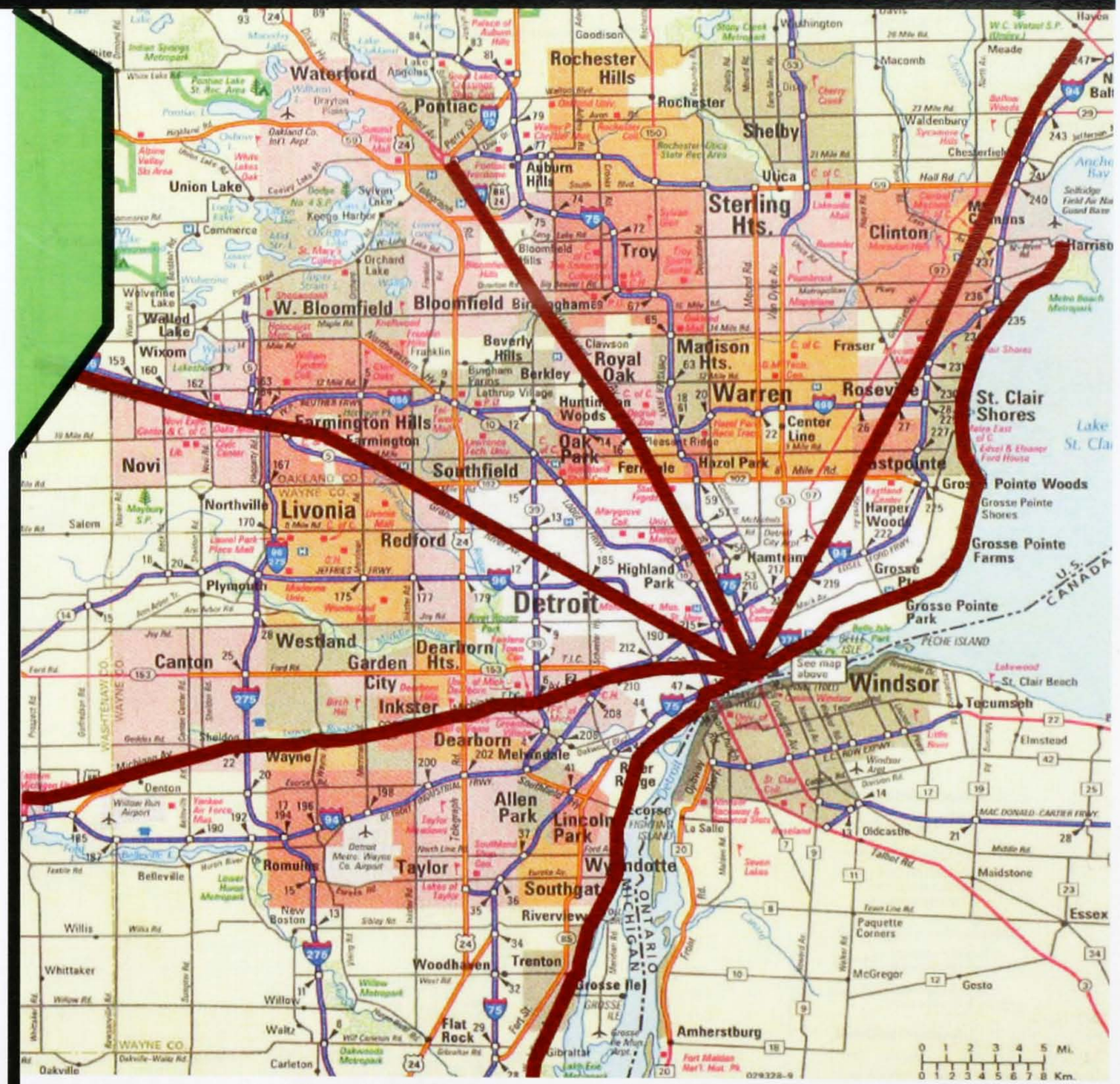
Analysis study of the movement through a city. The models illustrate a multi-level investigation into the collision of fast movement vs. slow movement, the individual vs. the surrounding, varying orientations, and differing perspectives.

Site Analysis

In my site analysis, investigation is first done on Detroit's geography at the scope of the city as a whole. Observations conclude that the downtown area is not the center point of the metro area. Instead, downtown is on the southeast central end of the city and extends out from the Detroit River. Accordingly, Detroit proper and its suburbs radiate roughly one hundred eighty degrees from the lower southwest corner towards the northeast corner.

Downtown Detroit becomes defined as a result of five major roadways; Michigan Avenue, Grand River Avenue, Woodward Avenue, Gratiot Avenue, and Jefferson Avenue, which extend to the outer periphery of the suburbs and then converge at a focal point, downtown. Outside of downtown, the greater metro area arises due to the movement possible along these major veins.

From this scope, I was able to identify three possible site locations: New Center Area, Campus Martius, and Time Square.

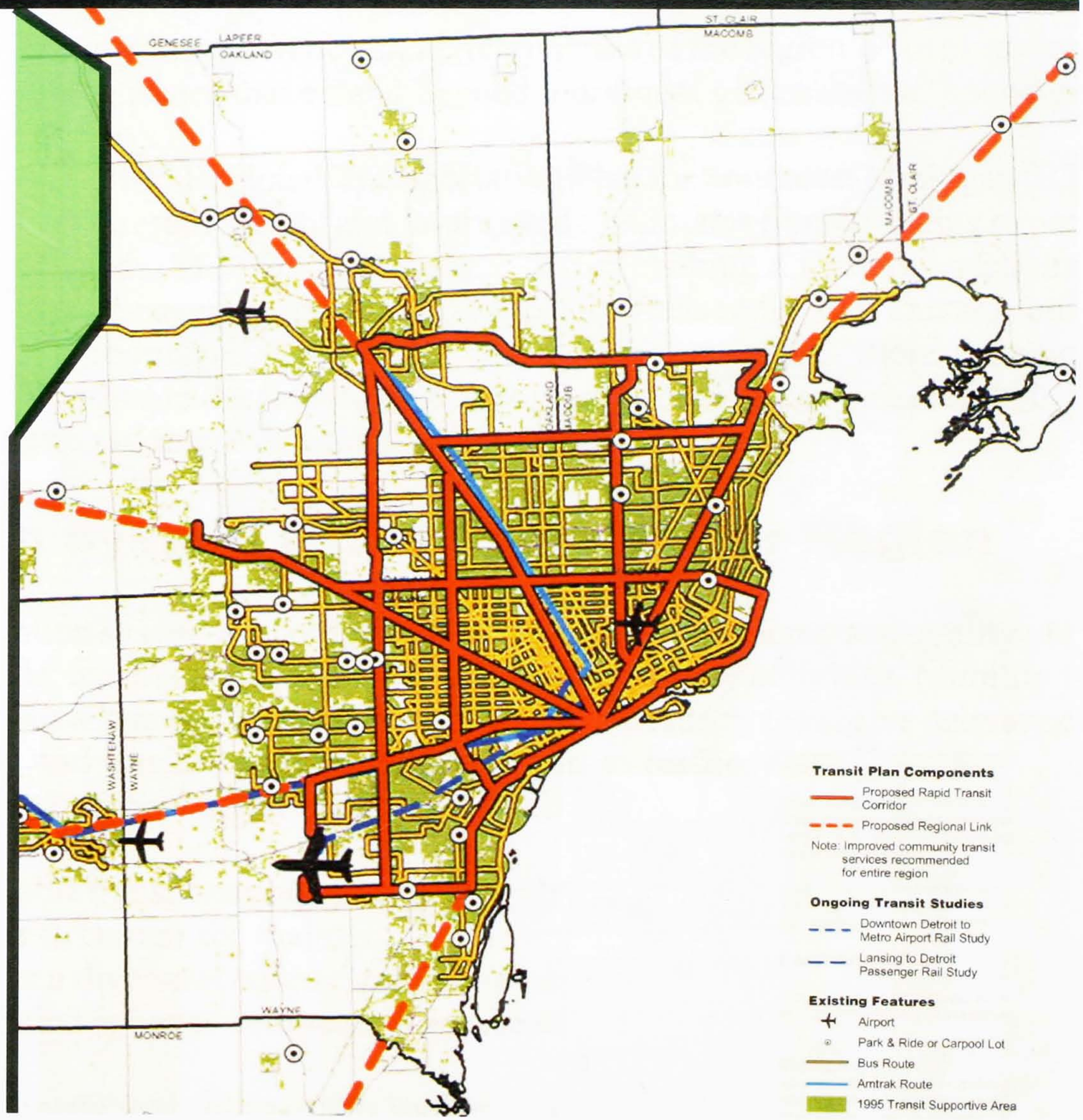


Southeast Michigan becomes defined as a result of five major roadways that extend from downtown to the farthest suburbs - XIX

Site Analysis

The proposed light rail transit system in southeast Michigan, created by the Southeast Michigan Council of Governments will provide over two hundred and fifty miles of rapid transit service, while serving over two hundred and sixty stations. This highly planned, effective, and efficient mode of transportation will provide a public transportation alternative to over three hundred and fifty thousand households. This organized and complex system will be comprised of twelve regional corridors, including 8 Mile Road, 16 Mile Road, Fort Street, Grand River Avenue, Gratiot Avenue, Greenfield Road, Jefferson Avenue, M-59, Michigan Avenue, Telegraph Road, Van Dyke Road, and Woodward Avenue.

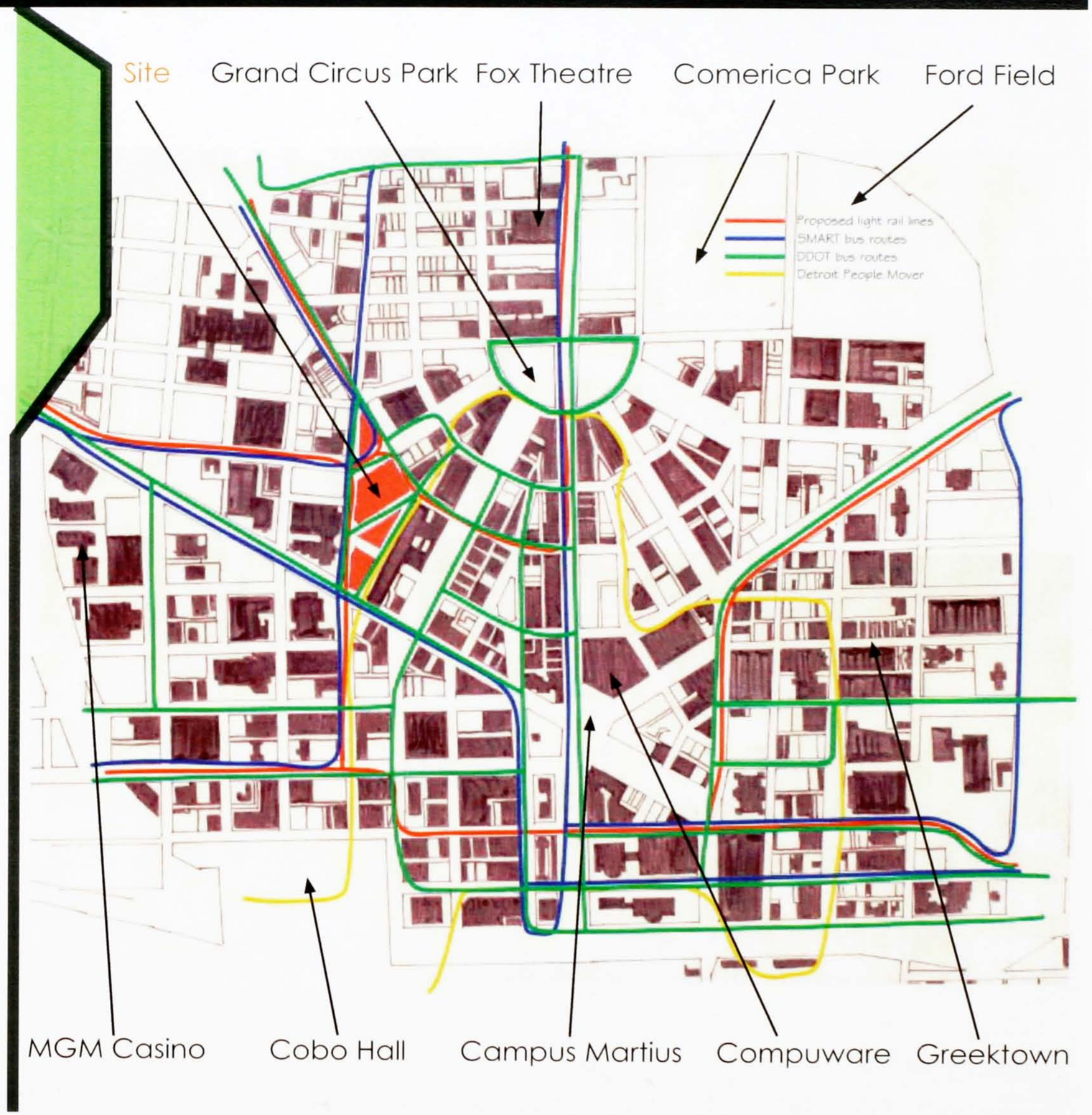
As viewed in the diagram of the proposed light rail corridors in Detroit, the lines are meant to form a link between the suburbs and the Detroit. From the periphery of the metro Detroit area, the corridors converge in downtown. As a result, I narrowed the search for possible sites to the downtown area at a location that has access to one or more corridors.



Site Analysis

Through the study of the geography of downtown, it is evident that the urban plan and layout of the major roadways allows for a unique situation. The central location where these roadways converge provides a direct link to the individual, discontinuous events of Detroit. The layout allows for an efficient method of public transportation.

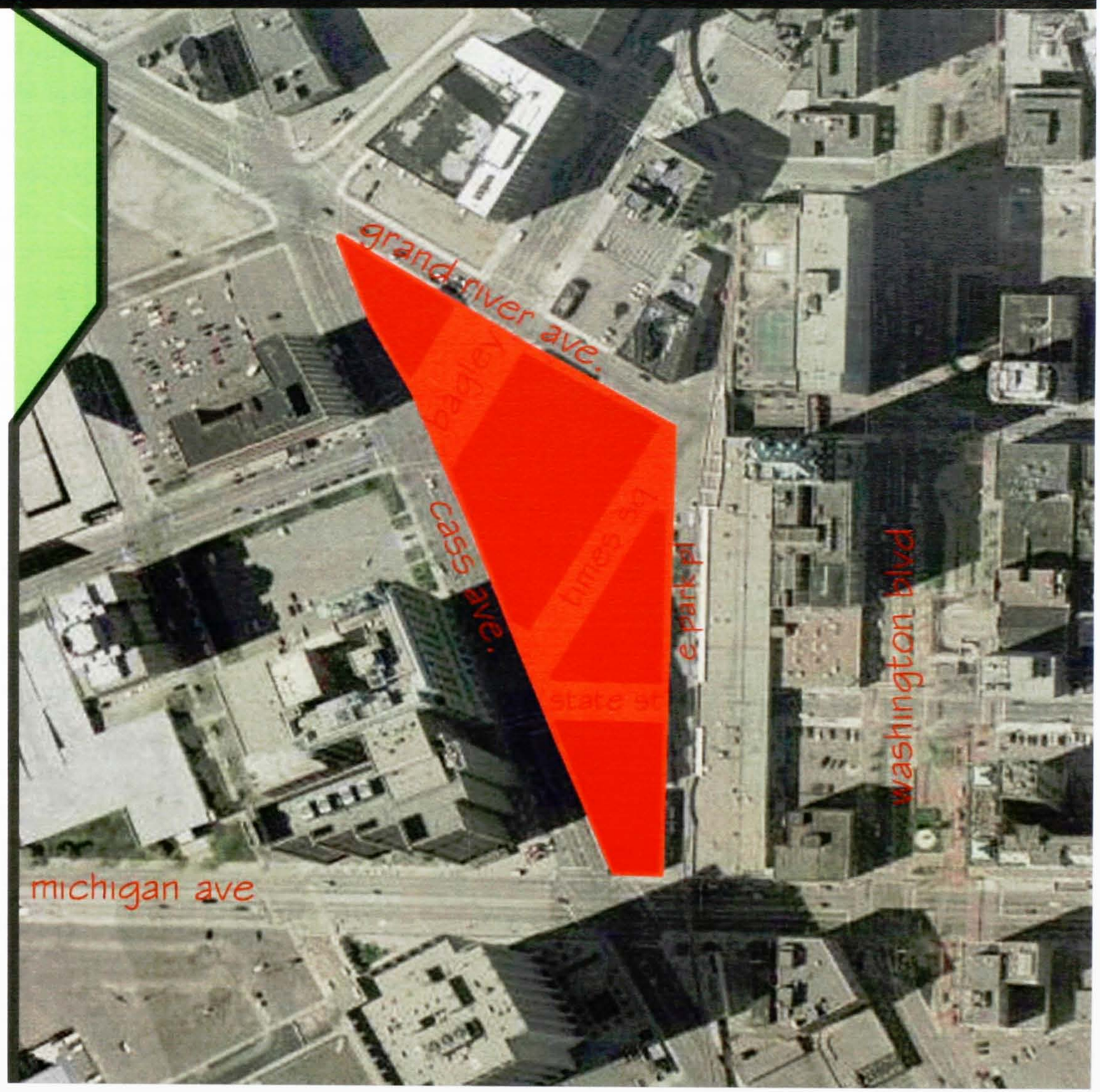
At a narrower scope of the city, investigation must be done to examine the many forms of movement that serve as reliable methods of transportation for Detroit. Of the possible sites that I previously identified, one site provided the most direct link to the different forms of movement. The site is near the Time Square stop for the Detroit People Mover and is also a part of an unmarked major bus depot for DDOT and SMART. Additionally, the site is connected to the major veins that radiate from downtown and equally importantly, it is adjacent to the Bagley Avenue exit. This exit is the first to downtown from the John C. Lodge Freeway. The avenue then runs through the north corner of the site and as a result, high traffic volumes consisting of buses, taxis, and personal automobiles pass by the site.



Site Analysis

After further narrowing the scope of Detroit to that of the scope of the site for the future program, investigation shows that the site is very spacious, as it consumes nearly one-hundred thousand square feet of surface area. While the site is large, this does not necessarily imply that my program will also be large in scale. In fact, the future program will only take up a little over half of the site, allowing the remaining area to engage with and transition into the urban city through greenery and outdoor space. I like to think of the boundaries of the site as not being finite because it is my vision that the site is able to sprawl and unfold itself into the city in an attempt to create Detroit as the event. The site as the location for the future program has the capability of linking the city to the people, while at the same time linking the people to the city. This site will allow for the program to fulfill its design of connecting SpacEvenTime.

Right: Arial view of my site within the surrounding context of Detroit (XX).



Site Analysis

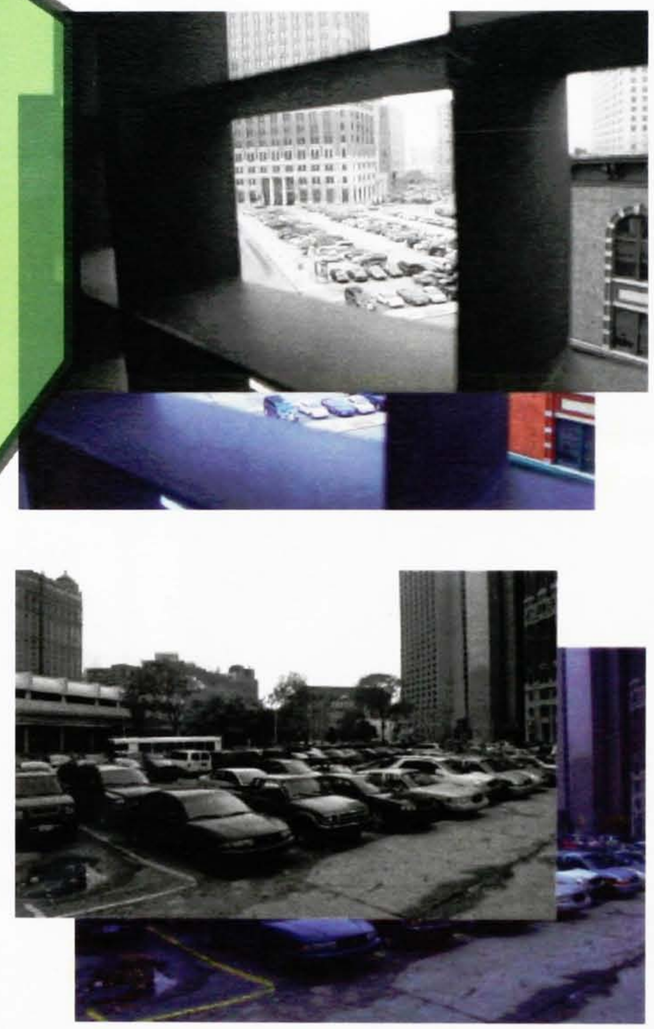
The site selected is located at 42° 20' 10" N latitude and 83° 03' 50" W longitude on the larger scale scope. However, on a scope of the program, the site contains four pieces of land located just north of Michigan Avenue, between Cass Avenue and Park Place. State Street, Time Square, and Bagley Avenue all intersect the site, thus creating a discontinuous atmosphere to build from. The site contains the Robert L. Hurst Jr. Park, which adds greenery and a small taste of Detroit history to the site.

In reference to the diagram on the right, proper investigation of the existing site conditions illustrate that a majority of the area around the site is committed to surface area parking (yellow). Furthermore, the site context is also well developed as many large buildings populate the area (grey). Finally, one plot of greenery is seen throughout the site (green) and it is my intention through the future program to further develop the greenery seen in the area as a means to blur and engage with the urban city.

Right: Arial view of my site depicting the function of the landscape.

Site Analysis

Currently, over ninety percent of the purposed site is used for surface parking for personal automobiles. The four plots of land that make up the site are used as parking lots only during work days for the major businesses that surround the area, which include SBC, AT&T, DTE Energy, and Ramada Inn. On the weekends or in the evenings, the site has little activity. There is also very little pedestrian movement through the site after business hours.



Above: Site photographs taken during business hours.

Right: Underlying photograph is of my site during business hours when it is populated by many personal automobiles. The other photographs are of my site during the weekend or at night, at which time the site has little to no activity or function.

Site Analysis

These photographs detail yet another perspective of the current site conditions. It is clear that the area serves no other function then to be a location for surface parking during business hours. As seen from the unkept concrete landscape, this area is neglected and represents a discontinuous element seen throughout the city. Another main discontinuous element is also photographed here and it is the personal automobile. This mode of transportation down grades and does not embrace the public realm and its methods of public transportation.

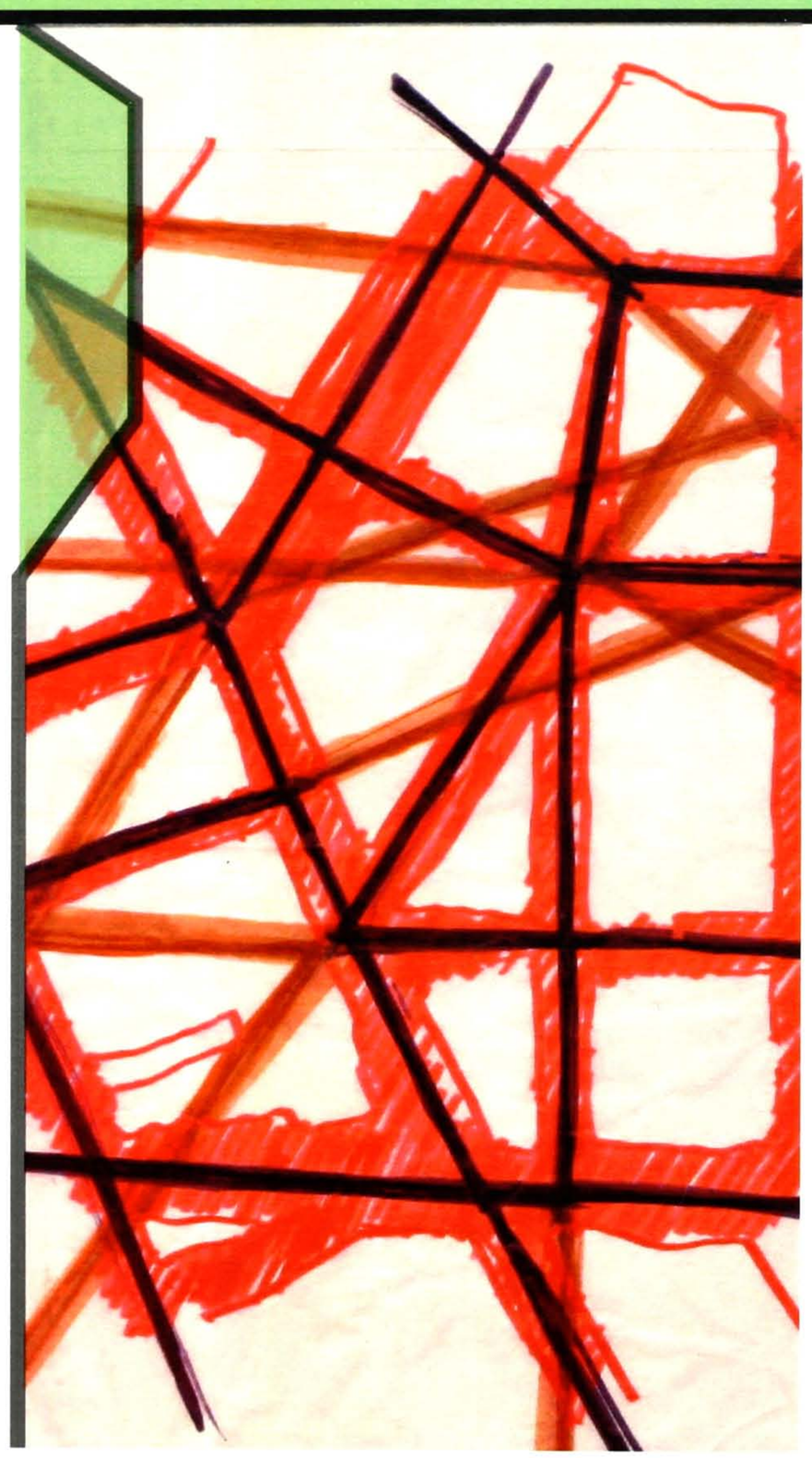
Right: (Top) Site photographs taken during business hours. (Middle) Photograph depicting the site's proximity to the people mover and greenery. (Bottom) Site photograph taken during business hours to depict the lively atmosphere at this time, also capturing two buses in route around the site.

Site Analysis

Left Image: The black lines represent the existing streets. As observed, the black lines merge into and become the brown lines, which represent streets that would run through the surface parking lots. This study was done to illustrate the multitude of movement seen through the site via numerous roadways.

Right image: The blue lines show the movement that is carried through the site from the surface parking lots to either a space of work or home. The brown and orange lines express movement patterns and their thickness correlates to the density of traffic.

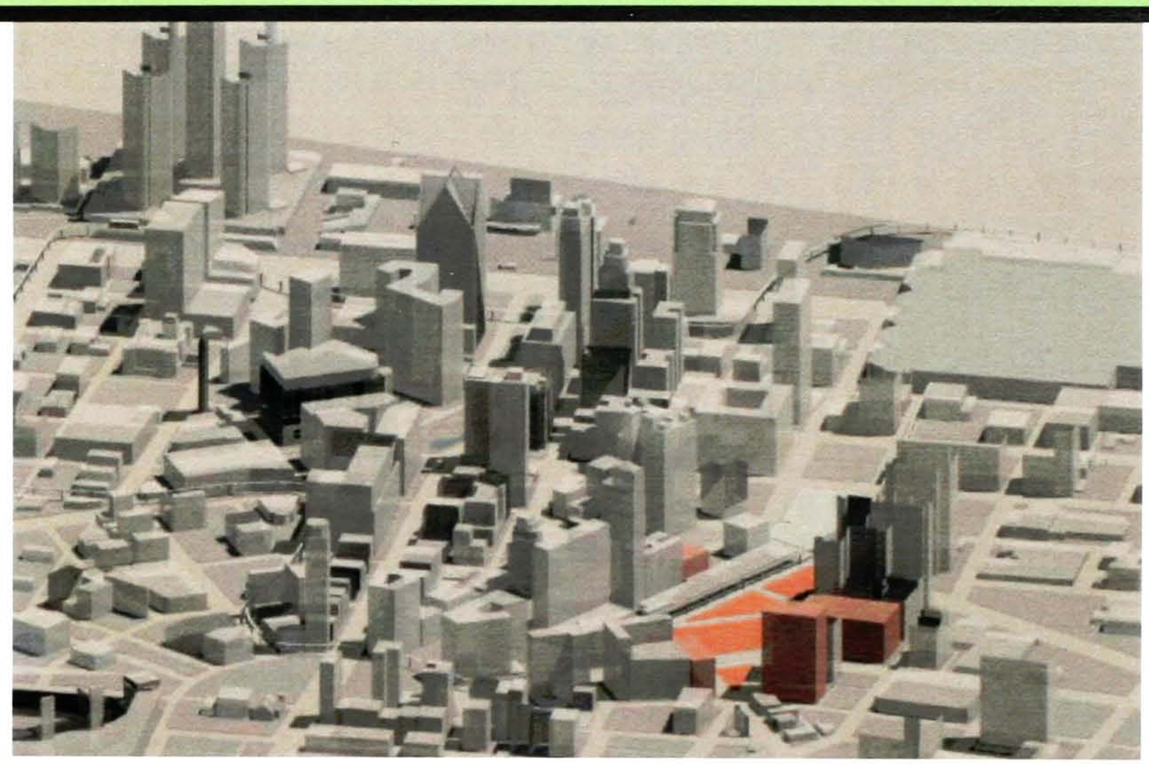
Bottom Right: The blue line shows the movement through the site during a business day. The highest peaks are during the morning and evening rush hour. Little movement is ever visible again, except a small amount during lunch hour.

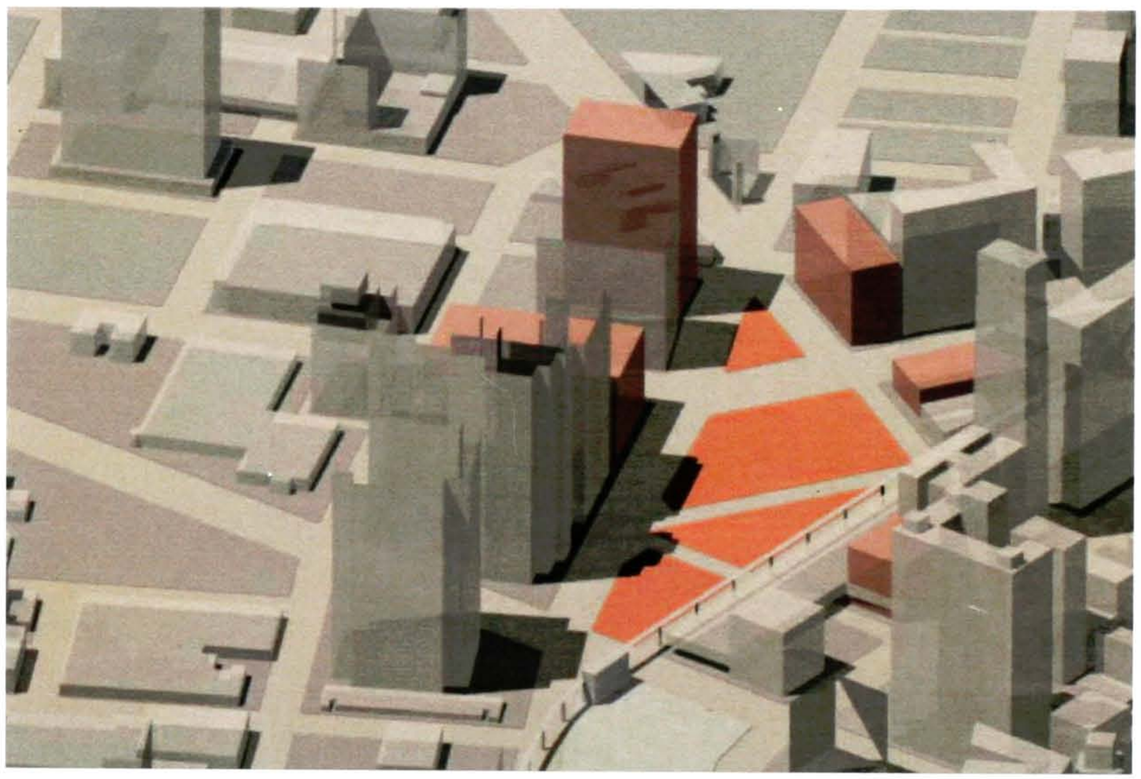


Site Analysis

The physical location of this project is in the shadows of taller buildings, which creates an opportunity for a fifth elevation. The roof of the transfer hall could become a plane for an inhabited landscape where urban gardens float above the streetscape. Activities such as talking, gathering, playing, and sitting activate the space and will provide a more humane view from the office buildings next door. From the roofscape, individuals also continue to enjoy a direct visual, as well as a physical link with the event of the city on a larger scale.

Right: Computer generated images of Detroit illustrating the cityscape. My site is highlighted in red and my proposed buildings are highlighted in brown.





Project Identification

Program

I am proposing to readdress the public realm of Detroit. This will develop the city can become the event by decreasing the single events that occur within the city and developing an innovative form movement that can serve as a link between individuals and SpacEvenTime. This novel form of movement in the design of an architectural system can assist in implementing and allowing for movement throughout the city and the suburbs. The system, which will be unlike a popular trend, will remain constant because of its effectiveness and efficiency. This link could connect people, socially and economically, and link physical space as well as event and time. While there are two public bus systems already in use, there are many negative issues surrounding this mode of transportation. The two forms overlap, but do not work together to form one comprehensive system. One system is designed for the city, Detroit Department of Transportation (DDOT) and the other is designed for the suburbs, Suburban Mobility Authority for Regional Transit (SMART). In light of this pre-existing condition, a novel form of movement will serve the multiple functions of linkage and transitions in the city and the surrounding suburb. The development of a light rail system could serve these multiple functions. There are already proposed light rail routes to Metro Airport and up the Woodward corridor to the Detroit Zoo. The most appropriate location of the central hub to house both the light rail and bus would be the most crucial element in the focus of my thesis because it will insure the future success of my multi-functional program, which could serve as the critical link to the city.

The central focus of this program will be to capture the essence of multi-dimensional, non-fragmented movement. The components of my program would influence movement that will be uncharacteristic of the type of exchange that occurs in a transportation system. The transfer hub will allow for a central opportunity for a multi-use development. This would be assisted by incorporating commercial amenities, a conversational atmosphere, and a willingness to use the system to move.

Articulation of Intent

Program

My program serves my thesis because it will develop a type of movement that is innovative, yet works fluidly with the current state of movement seen in Detroit. I would characterize the current state movement as being composed of many discontinuous developments that lack an inter-linked connection and being associated with a negative experience. This experience stems from cultural and economically stereotypes associated with public movement. The light rail system will hopefully erase the "second-class" citizen stigma that is often related to Detroit's public transportation system. This could be accomplished through efficiency and effectiveness with regards to economics, maintenance, destination locations, speed, and time saving capabilities. These developments are characterized by the large quantity of single events in the city and a failure to link the individuals to the city, it urban framework, and SpacEvenTime.

Would it then be possible to enable an architectural system that generates an intra and inter-linkage between events and participates at the level of the individual? By addressing and, possibly, redefining the public realm in Detroit, individuals can enjoy and inhabit different kinds of spaces, both interior and exterior, with different kinds and scale of functions. In the case of Detroit, while there is a continual hope and revitalization that is seen throughout downtown and surrounding areas, the city itself is still far from being an ultimate destination in terms of a redefined public realm and serving all the multiple functions of linkage and transitions. A transportation hub would help develop a link and comprehensive form of movement throughout the city. The positive movement will possible overcome the individual events so each entity develop into and serve as the event of the city. The program type, which is a light rail, bus, and Detroit People Mover hub, will become a multi-use building serving multiple functions and connecting individuals in Detroit to SpacEvenTime. The program will enhance the fast pace city movement, as well as, developing and embracing a balance with slow movement. An example of the balance between movement is observed in a coffee shop setting in which individuals can get an order to go or can relax with their order and the daily paper. In the simplest of examples, individuals are connect through a space inside an event during a specific time that is measure by the individual.

Waiting – An essence of time that can be observed during a transfer, while sitting on a bench, when walking around, buying a snack, patiently standing behind the yellow line, starring at your watch, pacing nervously by the phones, closing your eyes outside, or when day dreaming while in motion.

Conversational Atmosphere – It is time spent whispering, talking, laughing, smiling, or just being with a friend, acquaintance, or stranger. The chatter is different, it can be small talk or in-depth conversations. It is also time spent by yourself reading a book or reading facial expression of people walking by. It can occur over a quick snack on the go or while sitting down for a leisurely bit to eat. Moments and instances spent passing time, wasting time, or finding time.

Release From the Norm – The norm is never static and is always changing. It consists of new places and faces, a different movement than a car, and a different perspective or view. It is a time to fall into yourself.

Collision vs. Balance - Opening of the doors only after reaching a complete stop. Air brakes pumping. Pressure increasing and decreasing. A balancing controversy is found between outside vs. inside, public vs. private, happy vs. grumpy, and fast vs. slow.

Casual Flow - Movement in, out, and around. Sit down, stand up. Easy going. Many directions to travel that have loose paths and attainable destination. Movement can be traveled at either a personal speed or an automatic speed. The permission to stop and go is not always as you would please.

Harbor - An inlet that provides refuge from the crashing, chaotic larger body of water. It is a relaxing escape from the fast past world, but yet is still allows for fast pace passage. It is calm yet busy. A middle transition or changeover state. A place to refuel, rest, and then set sail again.

Program areas

A	**Exterior spaces**		
	a1	pedestrian green spaces on ground level (4 spaces)	21,000sf
	a2	interior courtyard (2 spaces: 1 day care, I public)	8,500sf
	a3	pedestrian green spaces on second level roof (2 spaces)	2,500sf
	a4	pedestrian green spaces on third level rood (3 spaces)	14,000sf
	a5	outside restaurant on second level	4,000sf
	a6	covered connection to the Detroit People Mover (2 spaces)	3,000sf
	a7	outdoor covered eating area	2,800sf
	a8	platforms for light rail loading and unloading (3 spaces)	12,000sf
	a9	platforms for bus loading and unloading (2 spaces)	13,000sf
	a10	outdoor bike racks for storage and rental	1,800sf
		total exterior square feet	**82,500sf**
B	**Transfer Halls**		
	b1	entrance vestibule (5 spaces)	2,100sf
	b2	transfer halls (3 spaces)	28,000sf
	b3	ticket booth and informational stand (4 spaces)	3,200sf
	b4	locker storage and public amenities (4 spaces)	2,200sf
	b5	toilet room (3 spaces) (men and women)	1,200sf
	b6	security office	1,500sf
		sub-total	45,000sf
		structure/mechanical	8,000sf
		total square feet	**53,000sf**

C	**Commercial Amenities**		
	c1	city of Detroit tourist center	5,000sf
	c2	restaurant with kitchen and waiting area	3,800sf
	c3	café / coffee shop with kitchen	2,800sf
	c4	café / coffee shop on the go	600sf
	c5	pharmacy/drug store	2,800sf
	c6	food vendors (3 spaces)	2,500sf
	c7	dining and waiting area (4 spaces)	4,500sf
	c8	news stands or kiosks (5 spaces)	1,000sf
	c9	travel agent	2,300sf
	c10	day care center	4,300sf
	c11	clothing store	2,200sf
	c12	bike shop and storage	2,500sf
	c13	dry cleaners	1,200sf
		sub-total	35,500sf
		structure / mechanical	6,500sf
		total square feet	**42,000sf**
		total gross square feet	**177,500sf**

Quantitative Program Summary

Public

transfer hall
ticket booth and informational stand
city of Detroit tourist center
restaurant and waiting area
café / coffee shop on the go
food vendors
dining and waiting area
news stands or kiosks
bike shop and storage
locker storage and public amenities
restrooms
pedestrian green spaces of interior courtyard, ground, second, and third level
platforms for light rail loading or unloading
outdoor covered eating area

Private

day care center and interior courtyard
pharmacy/drug store
clothing store
travel agent
dry cleaners
café / coffee shop
security office

Collective

transfer hall
city of Detroit tourist center
restaurant and waiting area
café / coffee shop
dining and waiting area
day care center and interior courtyard
outdoor covered eating area
pedestrian green spaces of interior courtyard, ground, second, and third levels

Individual

ticket booth and informational stand
café / coffee shop on the go
food vendors
news stands or kiosks
bike shop and storage
locker storage and public amenities
Restrooms
platforms for loading or unloading from light rail and bus

	Capacity	No. Units	Total Net Area
Transfer Halls	2,000	3	28,000sf

Purpose/ Function:

Provide an open entry gathering area for both passengers and non-passengers that use the building for various purposes, including public transportation, work, and leisure.

Activities:

The many activities that could take place in the transfer hall include buying tickets, transferring lines or modes of transportation, asking questions, waiting for departure times, shopping, buying or selling goods, eating, and meeting friends, business affiliates, or family. During daily excursion, individuals can hurry through the hall or pause to shop, eat, or verify departure times. Traveling can either occur individually or in groups. Some individuals will be aware of their surroundings and others will be engulfed with the event they are apart of. It will be a space where different levels, speeds, spaces, actions, events, and forms of movement meet.

Spatial Relationships:

This area should allow for views of the exterior as well as views of the interior. The space should not be a grand entry space with an open plan and tall ceilings. Instead, it should be constructed to satisfy the scale of the individual and consequently, the transfer hall will have a more intimate feel. The three transfer halls will each satisfying a different function as they serve as a means to connect, link, and transition the passengers and non-passengers to the either the bus hub, the Detroit People Mover, the light rail lines, or the city. These transfer halls will not be limited to their own function, but will unite together and blur into one main hub. For example, one hall will be designated for the transfer from one light rail line to another light rail line and another hall will connect the two way transfer from the people mover to the light rail lines. The third hall will connect the two way transfer from the bus station to the light rail lines and the final hall will provide the connection and transition between the individual and the scope of the city as well as the scope of the program.

Special Considerations:

The entrance vestibule within the hall should express the way individuals move from the exterior to the interior spaces and the method by which they are blurred together. As a result, it is important to allow for the entry of natural light, natural landscape, and natural life from the exterior to the interior to create a transitioning and linking effect between outside environment and inside area. It should also express how individuals move from one mode of transportation to another. This necessity is satisfied by the architectural plan of having the transfer halls overlap each other. Differences between programs within the halls need to be expressed. For example, one individual might be hurrying to buying a ticket while another might be casually buying food. Even the event of watching other to actually meeting a party for lunch could facilitate the use of other programs.

Equipment / Furnishings:

The floor space should mainly be open with strategically placed event locations in which individuals can eat, shop, wait, or gather. These strategic spaces should correspond to the overall layout of the restaurants, shops, and platforms.

Behavioral Considerations:

Individuals should be able to look into the transfer hall and see the movement of people from different spaces and events over different spans of time. The reason and direction of their movements between the different spaces and events should be efficient and effective. People should feel comfortable to enter and use the space to satisfy every need.

	Capacity	No. Units	Total Net Area
Pedestrian Park	2,000	10	40,000sf

Purpose/ Function:

To create a people friendly atmosphere that begins to blur the connection of people to SpacEvenTime through greenery. It is also important to create a continuous movement from the existing conditions through the streetscape, onto the park, and into the transfer halls.

Activities:

People of the area will come and enjoy the park at all times of the day. People will eat their lunches during business hours, take a nap, read a book, or suntan in the summer months. People will pass by the park on their way from the transfer hall to their destination in the city.

Spatial Relationships:

This program will help develop a blurring element into the city through the functions of transition and linkage. The program will begin to bridge the gap of public transportation and private transportation. Through the use of greenery, it will develop a sense of pause or slow movement in the mists of a fast pace world.

Special Considerations:

There will be a park-like setting with tables, benches, and a water fountain. The movement in and around the area will be that of individuals coming and going, sitting or standing, moving alone or in a group. It will respond and grow from the already existing urban fabric.

Behavioral Considerations:

This exterior environment will be hectic with individuals rushing through or playing catch in the open lawn. On the same hand, it will be peaceful with individuals napping, quietly conversing, or reading a book. The space will allow for a variety of events and will link the program to the event of the city.

	Capacity	No. Units	Total Net Area
City of Detroit Tourist Center	200	1	5,000sf

Purpose/ Function:

This place should provide information to either passengers or non-passengers on public transportation routes and on expected times for arrivals and departures. It should also provide information that helps visitors gain awareness and knowledge on planned events in downtown Detroit. It will be used as a marketing device to advertise what Detroit has to offer and what is the most effective and efficient mode of transportation to reach those desired events.

Activities:

Individuals will be able to ask all necessary questions to guest service representatives that are familiar with both the transportation systems and with the history and present event status of Detroit. There will be brochures and pamphlets available that give a detailed outline on all modes of transportation including departure and arrival times, along with advertising the many attractions that are found along the Detroit People Mover, the bus routes, and the light rail line routes in Downtown Detroit and in the surrounding metro area.

Spatial Relationships:

This area should be centrally located in the transfer hall to allow for easy access. For easy identification, a clear and noticeable visually marker should be used. The information center should be well lit and have a comfortable feel to encourage interaction between users and service representatives.

Special Considerations:

This space should contain up-to-the-minute information on schedule changes and route detours. It should be inviting and visually stimulating, yet clear to allow for all users to easily reference. It should be located where users most frequently travel on their way to their destination. Users should want to come in contact and interact with this program.

Behavioral Consideration:

There must be enough room behind the counter to move around and access all necessary information. Any information about the city's attractions or amenities must be clearly displayed and related pamphlets available for the public.

	Capacity	No. Units	Total Net Area
Ticket Booth and Informational Stand	100	4	3,200sf

Purpose/ Function:

This space provides passengers with the opportunity to purchase tickets for the Detroit People Mover, the bus system, or the light rail line. Additionally, user service representatives should also have the resources to answer any question related to travel or about any of the modes of transportation.

Activities:

Some passengers may approach this space in a hurry. As a result, the program must be design to allow for effective and efficient movement. Passengers should be able to move toward the ticket booth, exchange currency for a ticket, and continue on to their destination.

Spatial Relationships:

Multiple booths should populate the four transfer halls. The booths should be easily accessed when entering the building and available at each mode of transportation. There should also booths that are linked to the exterior area of the building. Wherever located, the ticket booths must be clearly and visibly marked for quick identification. This should also be a location at which users can easily view each transportation system's departure and arrival times.

Special Considerations:

The process of buying a ticket should be an easy exchange. There will be electronic machines for some passengers to buy tickets and if passengers do not feel comfortable using this form of technology, user service representatives will also be available for assistance. The purchase of tickets for all modes of transportation will be available at all ticket booths to better serve the passengers.

Behavioral Considerations:

The user service representatives should be friendly, patient, knowledgeable, and be willing to assist all passengers. These characteristics will ensure that their travel needs are met effectively and efficiently. The computer technology that allows passengers to electronically purchase tickets should be straightforward, easy to navigate, have the availability to answer simple travel questions, provide a print-off travel itinerary, and provide direction in several different languages. User service representatives should also be available to assist with computer questions and problems.

	Capacity	No. Units	Total Net Area
News Stand or Kiosks	50	5	1,000sf

Purpose/ Function:

Newspapers, magazines, and other small goods will be sold to people on the go. Its objective is to be a quick way to purchase reading materials as the individuals journey through the transfer halls.

Activities:

People will quickly stop, skim over the day's news or contemplate what would be the best reading material for their trip, and then exchange their coins for a purchase. Some might already know what they want to purchase and others might never consider purchasing anything, but use the program as an opportunity to waste time.

Spatial Relationships:

It should be a small program located on a heavily traveled path in the transfer hall. It should have a direct link, in this order, to the informational stand, ticket booth, and public amenities. This gives the news stand the same spatial relationships as the ticket booth. The news stands should be adjacent to each of the light rail lines and bus depot and as you enter the building. They should also be linked to the exterior and located visibly in each of the main transfer halls.

Special Considerations:

The process of looking at reading material along with purchasing goods should be a loose process where you do not feel over crowded or pressured into making a quick decision. This blurs the meaning of a quick stop and not having to make a quick decision.

Behavioral Considerations:

People, most of the time, will use this type of program to waste time. They will fill the area and stop other customers from getting a chance to take a look. Since the spaces are so small, personal space will be interrupted by different individuals utilizing the space.

	Capacity	No. Units	Total Net Area
Locker Storage and Public Amenities	100	4	2,200

Purpose/ Function:

This space provides passengers and non-passengers with the opportunity to rent locker space for the storage of personal belongings on a daily basis. This area will also include public utilities such as bathrooms, telephones, drinking fountains, and vending machines.

Activities:

Passengers, visitors, tourists, and non-passengers that arrive at the transfer hall with extra belongings have the option to rent a locker and store their possessions, instead of carrying their goods around all day. This program also provides a resting area where individuals can use the facilities, grab a quick snack, or have a refreshing sip of water. As a result of these activities, this program creates a moment of pause in the transfer hall. Constant motion is seen throughout the transfer hall, but when people take part in any of the activities that are related to this program they must break their motion.

Spatial Relationships:

The location of this program is an essential for the success and usefulness of the program. The lockers and especially the public utilities must be located in a convenient, yet safe area. These utilities should be found in a location that is not hidden away from the public, but at the same time not in the center of the transfer halls to rudely interrupt movement. Signs should be in place to direct intended users in the direction of their locations.

Special Considerations:

These utilities should be centrally located between all three transfer halls and readily accessible to everyone. Of course, handicap considerations must be followed for all utilities. Proper instructions that detail the instructions as to how to use the lockers and telephones should be posted. All signs should be posted in English and Spanish.

Behavioral Considerations:

The lockers must be spaced a small distance apart from each other to allow for personal room and freedom of movement. The telephones should be placed in a location that is separate from the busy and loud transfer hall so that the noise level dissipates. The bathrooms should be in a secure area and the entrances for both sexes should be distanced from each other. Also security cameras should monitor all the locker and utility areas.

	Capacity	No. Units	Total Net Area
Restaurant and Waiting Area	200	1	3,800sf

Purpose/ Function:

This program will be a sit down restaurant for riders, workers, and people living nearby who want to enjoy a good meal. There is a waiting room to give overflow customers a place to pass time. There is an outdoor eating area that opens up to the south and faces downtown.

Activities:

The restaurant has its own private sitting area restricted only for the restaurant users. People must wait until there table is ready to be seated. The outdoor eating area will be open, weather permitting, during the spring, summer, and fall seasons. The restaurant will turn primarily into a bar in the evenings to reach out to the younger population in Detroit, however food will still served at this time.

Spatial Relationships:

Its main entrance will be from the street level, but will take you immediately to the second level where the restaurant will be located. The waiting area blurs the movement from the transfer hall to the restaurant. It then creates another level of speed of movement. The restaurant will have no direct link to the light rail lines or bus.

Special Considerations:

There should be privacy from the main transfer hall. It should have a social atmosphere, but much lighter and calmer than the transfer hall. It should be welcoming from both the interior programs and the exterior street life. Natural light is important to ensure the blurring of interior and exterior spaces. The exterior city life should be modeled on the interior in a different scale and speed.

Behavioral Considerations:

People should be able to enter the restaurant without entering the transfer hall.

	Capacity	No. Units	Total Net Area
Food Vendors and Dining Area	500	4	7,000sf

Purpose/ Function:

To provide a quick snack or bit to eat as people pass through the transfer halls. The program must also offer customers the option to sit and relax.

Activities:

These activities will off set the restaurant because this program acts as a simple transaction of money for food and is in continued flow with the transfer hall. The food vendors become a part of the hall itself. The blur of the noise and movement are continued throughout the space and the high pace experience of the transfer hall is the same as people pass the food vendors.

Spatial Relationships:

This program should become part of the transfer hall. The individual entities of the overall "food court" will be small in size and separate form one another. They will be grouped together in small sections, but still share the same table and chairs for dining.

Special Considerations:

Local companies or local people will sell fresh goods, as well as prepared goods. There will be seating adjacent to the vendors so that the opportunity to slow one's pace from the busy transfer hall is available to customers. If they choose the vendors as a quick stop, they can move directly back into the transfer hall following there purchase.

Behavioral Considerations:

The individual entities of the overall "food court" will be separate form one another to allow for lines to form that are not too crowded together. Additionally, the seating area will be adjacent to the vendors, but will be far enough apart to separate the seated customer from the crowded lines and busy rush of the vendor's counter.

	Capacity	No. Units	Total Net Area
Outdoor Eating & Gathering Area	75	1	2,800sf

Purpose/ Function:

The purpose is to develop a space where people can meet to talk and eat. It will be a loose atmosphere with no firm structure or program plan. It is an extension from the interior eating area and the transfer hall.

Activities:

The activities will blur with the pedestrian park and further connect the exterior and interior functions together. Tables and chairs will fill the area to allow for passengers, workers, or people living in the area a place to sit, eat, and relax. The activities are limited due to the seasons and potential weather conditions.

Spatial Relationships:

This program will be a continuation from the inside to the outside environment. As a result, it will need to consist of both natural and architecturally planned landscape in order to become an extension of the transfer hall.

Special Considerations:

This program should respond to the already existing built world by connecting and transitioning the already existing conditions with that of the transfer hub. It will allow light in through the covered metal screen, yet still provide protection from the sun and rain.

Behavioral Considerations:

While this program's goal is to provide a connection and transition from the interior space to the exterior environment, the social atmosphere in this program is different from any other space. It is lively, yet calm and peaceful. It is also viewed at the scope of the transfer hub, as well as at the scope of the city.

	Capacity	No. Units	Total Net Area
Security Office	10	1	1,500sf

Purpose/ Function:

This space will be the place of employment for the security officers that oversee the transfer halls. Their duty will be to either monitor camera images from the office or to patrol the halls in order to ensure the safety of all passengers and non-passengers that are using the transfer hall. When a disturbance arises, the dispatcher in the security office must be able to use their resources to locate the situation and alert other safety personal and, if needed, the Detroit Police/Fire Department to the area.

Activities:

This program space will overlook the activities that take place in the transfer hall. Either through personal patrol or security camera surveillance, security personal should have all the necessary resources available to them in order to keep the public and their staff safe. The transfer hall security will be the first response to any incident and will notify the Detroit Police/Fire Department if a specific situation requires it.

Spatial Relationships:

This program should be placed in a location that requires least amount of response time possible to all three transfer halls. There will be one central office in which security staff will monitor the build by use of the camera surveillance system. Since security patrol personal will be walking the corridors, these individuals will always be first on the scene.

Special Considerations:

The offices will be visible and centrally located so everyone will feel comfortable and protected. Additionally, these will bring a necessary visible presents that is needed in the transfer hall. The Detroit Police Department will work in conjunction with the security officers and have a fiduciary relationship to help keep the area as safe as possible.

Behavioral Considerations:

People will be able to look into the control center so they can see personal watching over the transfer hall in an attempt to keep the area safe.

	Capacity	No. Units	Total Net Area
Pharmacy / Drug Store	50	1	2,800

Purpose/ Function:

To provide an element for the travelers, workers, and people of Detroit to receive prescription drugs, toiletries, or other essential goods. It should be open twenty-four hours and have its own entrance from the road as well as from the transfer hall.

Activities:

It will be the emergency outlet for things that happen at anytime. This program will serve multiple functions through the sale of a variety of items.

Spatial Relationships:

It will have it own entrance from the street as well as from the transfer hall. It will be located near the large apartment building at the north east corner of the site as a means to unfold, transition, and interact with the surrounding city and community.

Special Considerations:

This program will focus more on the people who live and work in the area compared to the travelers who use the transportation systems. Currently there is no such amenity for individuals who live and work in this district.

Behavioral Considerations:

This program requires a large space in order to accommodate a number of isles that display a wide ranging variety of items. These isles need to be clearly and visibly labeled to insure convenience for customers. While there needs to be a large enough space to house these isles, they need to be spaced a distance a part so that customers are not crowded and can maneuver through the isles quickly and easily. The pharmacy within the program should be in the back of the store to allow for privacy for the exchange of customer information and prescription pickup.

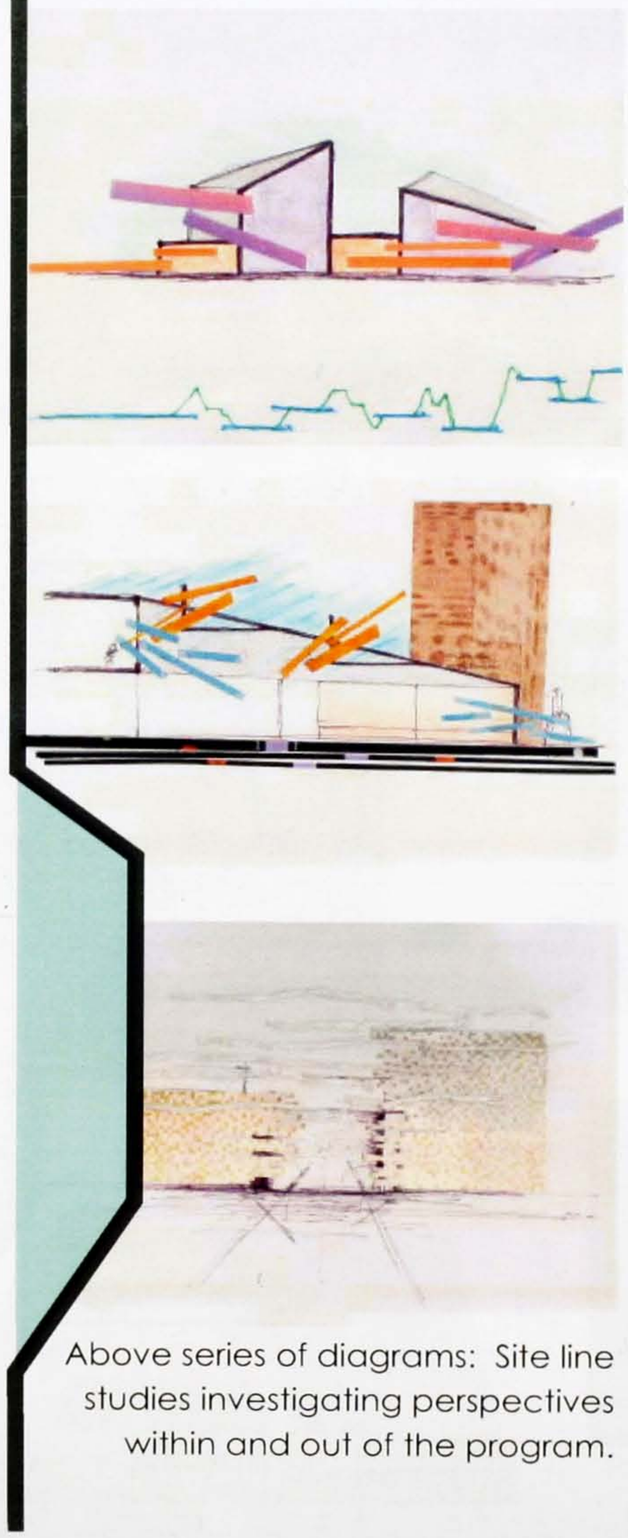
Spring Board

Height differentiation, environmental space unity, forms of movement, and pathway formation are areas of focus and are the ideas I want to exemplify on the spring board diagram to illustrate the basis of SpacEvenTime.

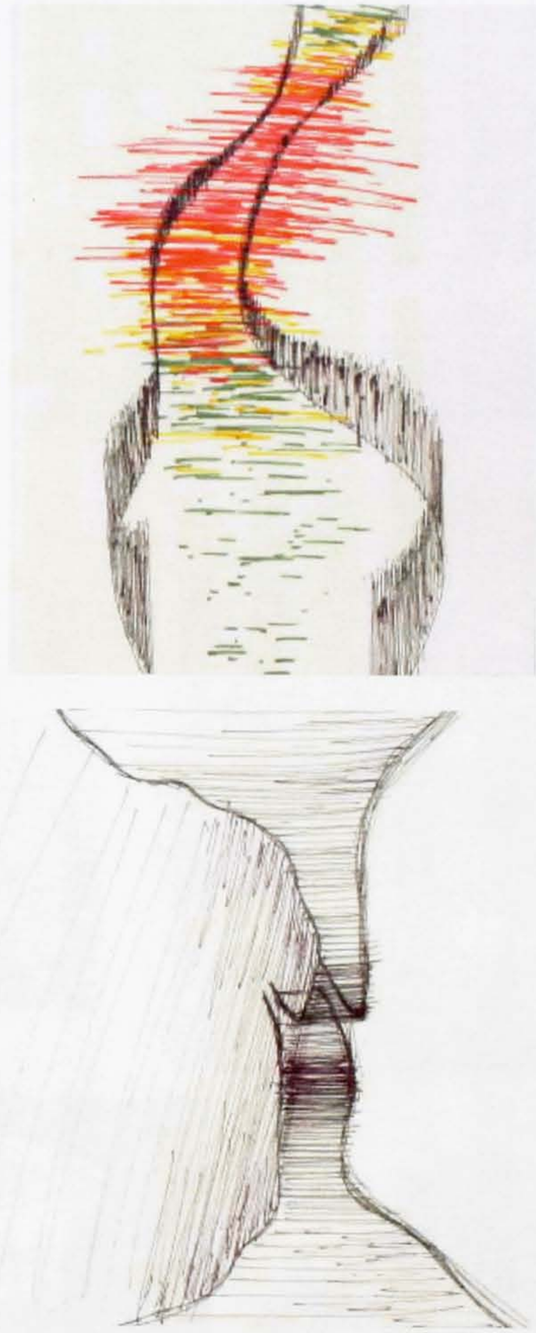
The focus on the ideas of height differentiation and environmental space unity are exemplified in the architectural plan as the model twists back onto itself, thus joining the existing differences in height and drawing a connections between the inner space and the outer environment.

Design advantages result from exploring and investigating solutions to bridging the barriers of height and spatial differences. The transformation of the surface into the whole not only unites these two ideas, but also allows for natural air and light to penetrate into the structure.

The transfer hall becomes an area for interrelated forms of movement. The voids in movement lead to alternative pathways. Here the ideas of movement and pathway formation merge to create functions of linkage and transitions.



Above series of diagrams: Site line studies investigating perspectives within and out of the program.



Above diagrams: Density survey studies investigating movement, speed, and population as it relates to the transfer hall.

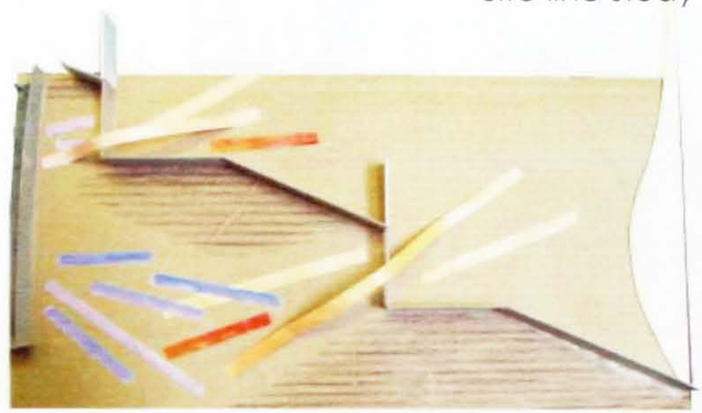
Spring Board

Again, investigations into unifying vertical and spatial differences lead to a further definitive link between SpacEvenTime. As the model twists and unfolds, continuity of surface allows for the individual to vary their perspectives and view their future destination by lines of site instead of through reminiscent mental images.

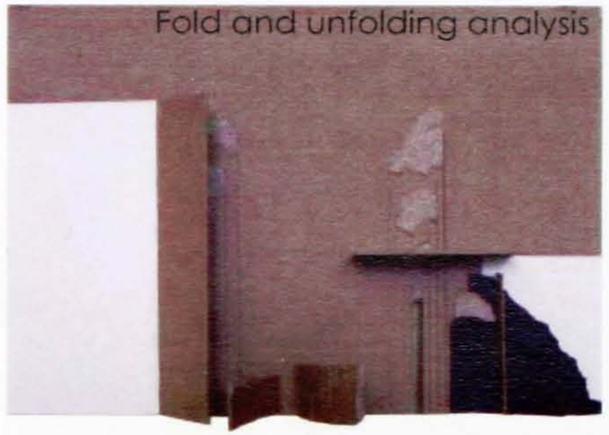
Investigating into forms of movement will identify proper locations for programs, whether these programs are meant to stay on pace with the fast speed environment or cause a pause in the surrounding movement.

Movement studies will become the foundation for the floor plan design. Analysis of the forms, speed, and direction of movement, in addition to the absence of or void in movement, as seen in waiting time, will determine the proper location of and relationship between programs. The directions of the various trajectories and the blurring effect of the relationship between all the forms of transportation will be expressed in order to insure that the architectural system readdresses the condition of SpacEvenTime.

Site line study

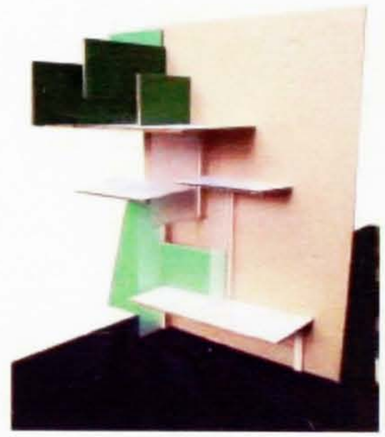


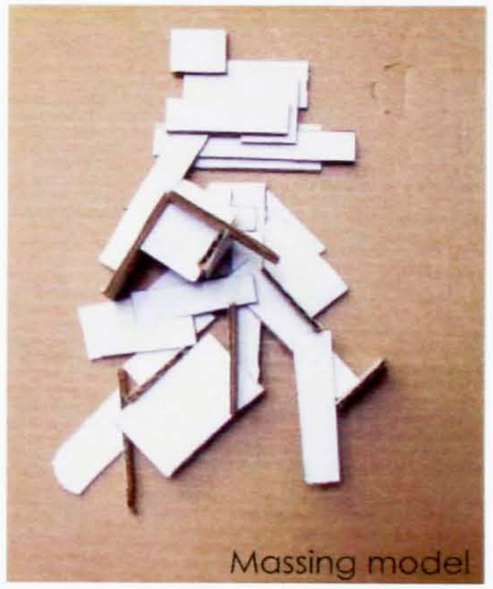
Fold and unfolding analysis



Massing model

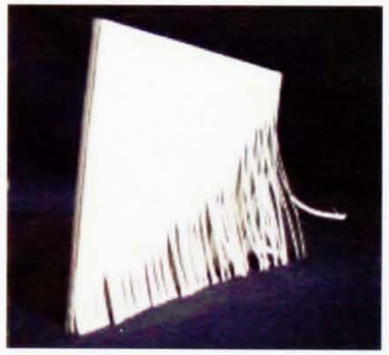
Fold and unfolding analysis





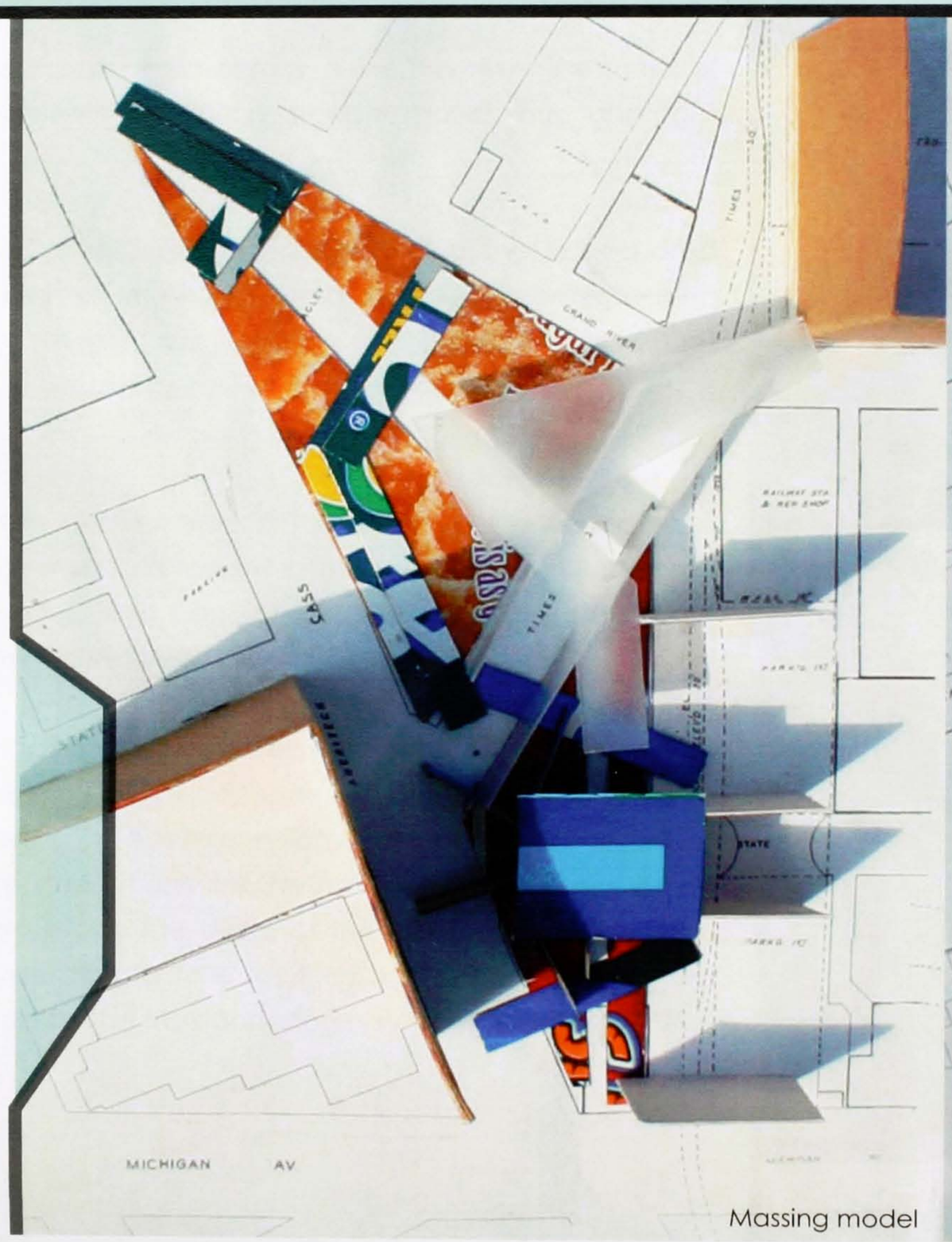
Massing model

Site line study



tectonic study

Massing model



Massing model

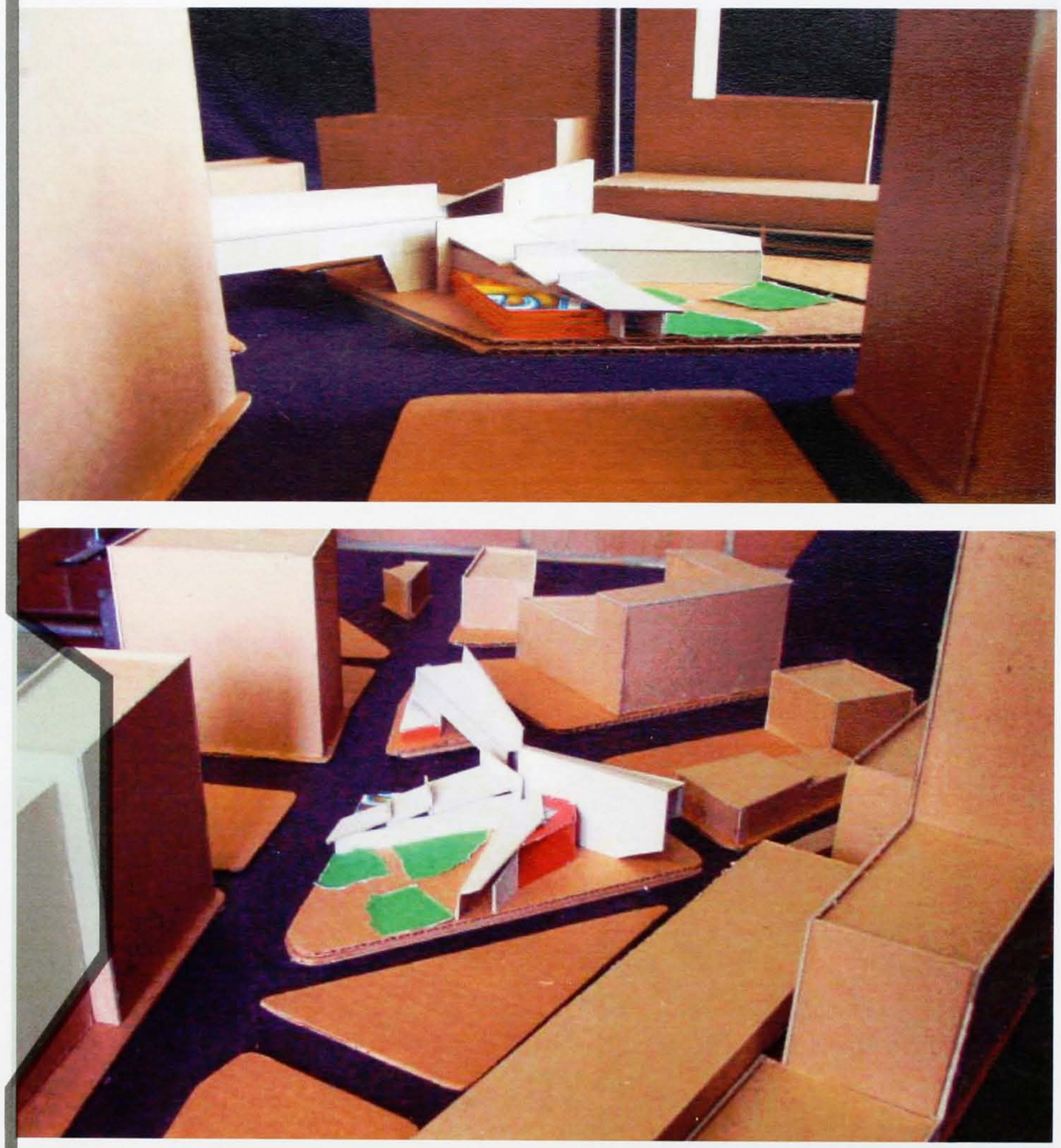
Site line study

Three transfer halls create a link between the forms of movement; pedestrian, people mover, bus, and light rail.

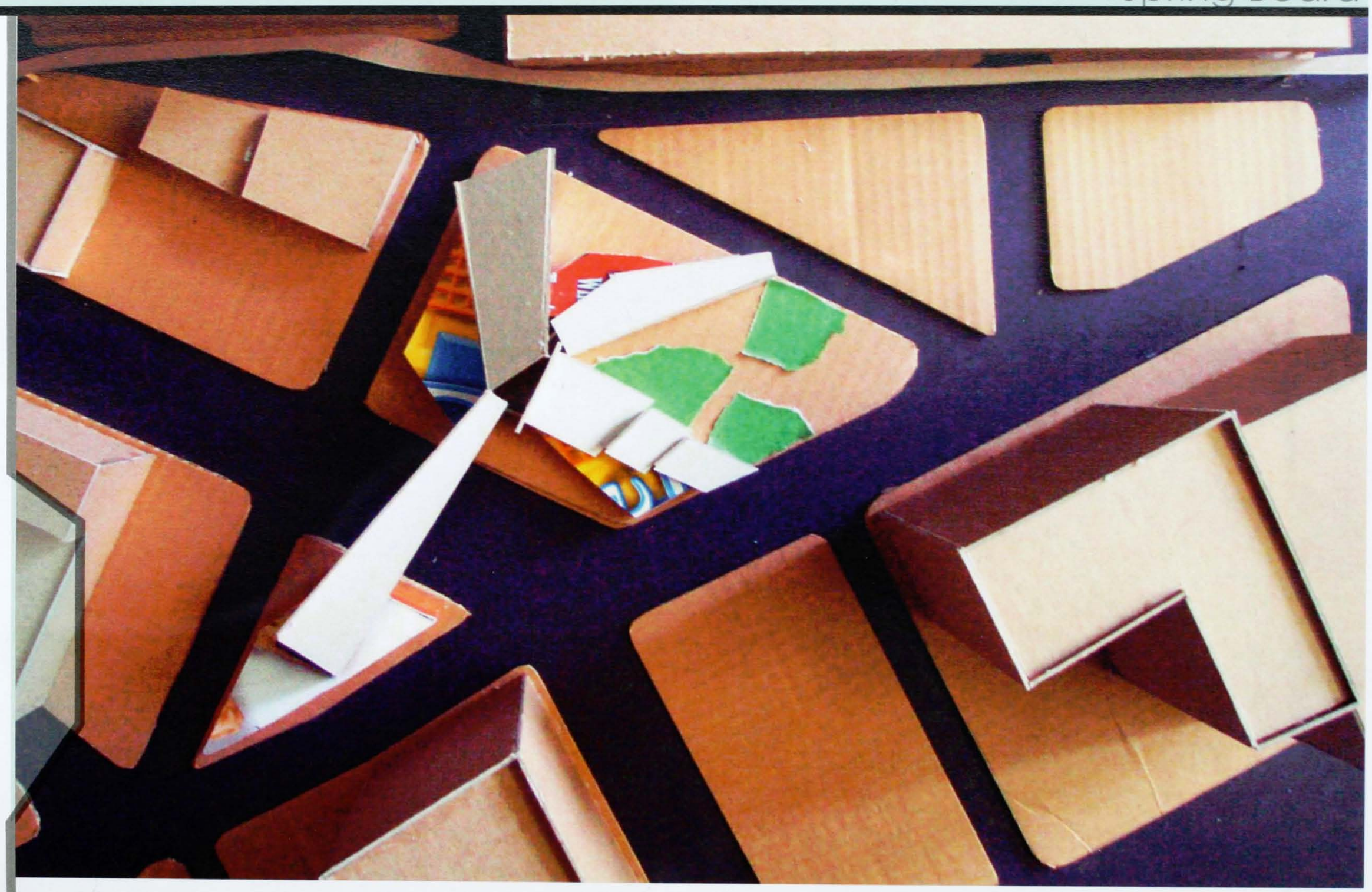
A focus on exploiting overlapping areas that have shared parameters, as well as common values in order to form direct relationships between events and to ensure that space is properly and effectively used.

The area not directly influenced by the program will assist in directly blurring the inside space and outside environment. Within the building, differences in heights, sight lines, and population density surveys create the pathways between programs.

Varying perspectives alters the view of future destinations and lowers one's dependence on memory to reach a location. The open floor plan, with seemingly endless lines of site, cannot only link the individual to the space of the program and the event of the city, but to movement, as it pertains to time, as they move themselves or are moved by the transportation systems.



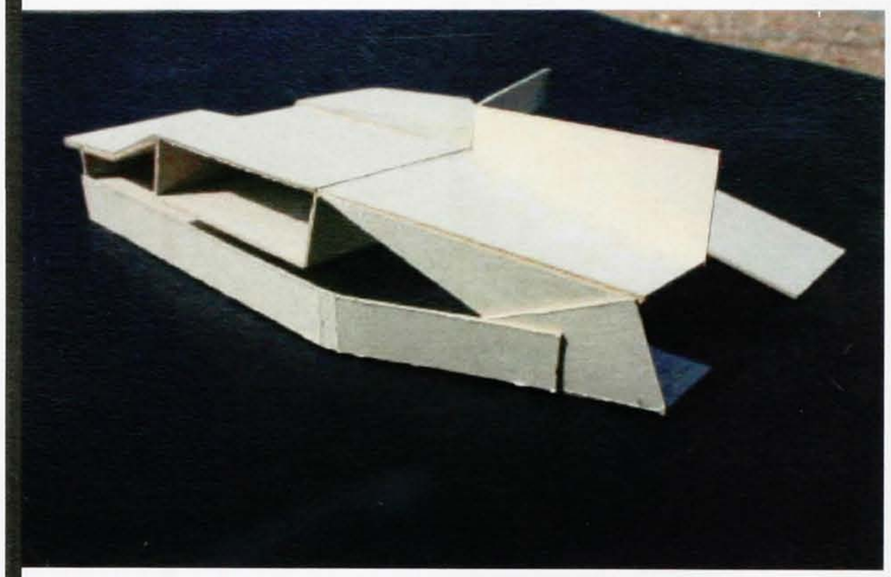
Above photographs: Massing models placed within the context of the site and surrounding city.

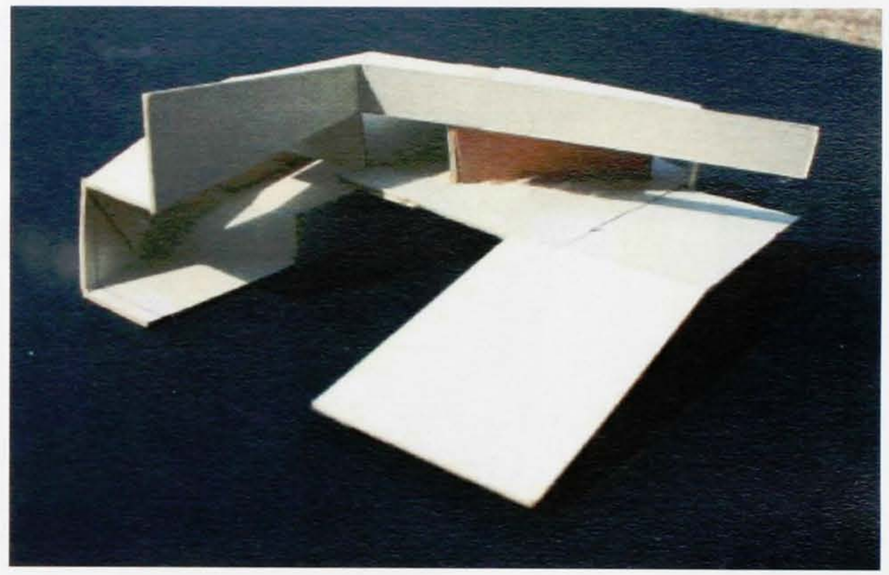


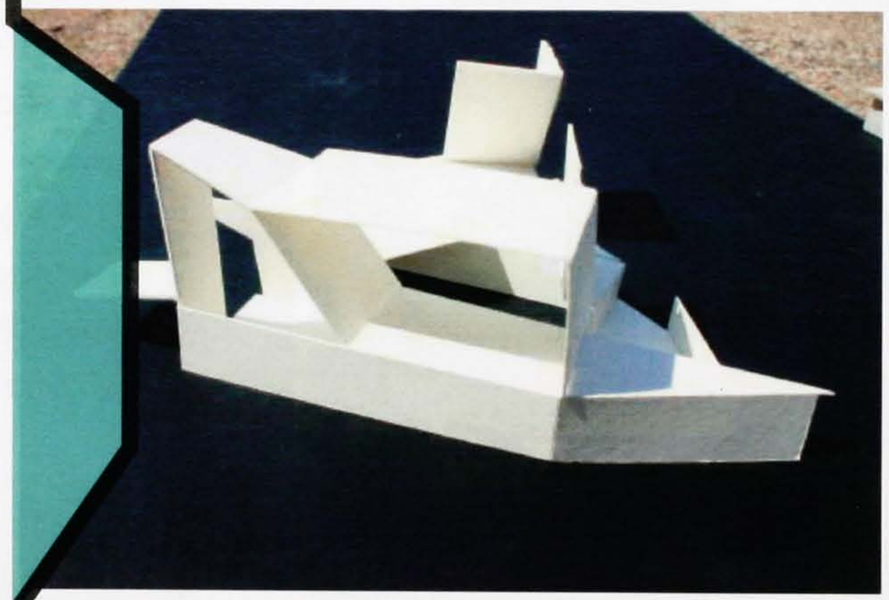
Massing model placed within the context of the site and surrounding city.

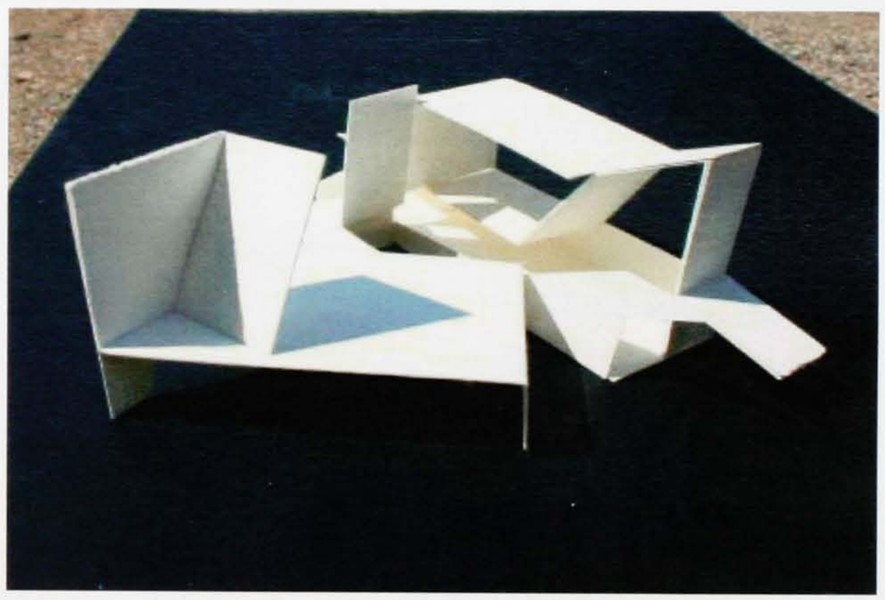
Schematic Design

These study models begin to investigate one of the main elements uncovered during the research of my thesis. The element of unfolding is important in that it allows for the transformation of the surface into the whole as a means to let natural air and light penetrate into the building. This action also forms a transition or a unity between the building and its function within the city. Within the transfer hall, people will feel a connection between the inner space and the outer environment due to the unfolding process.









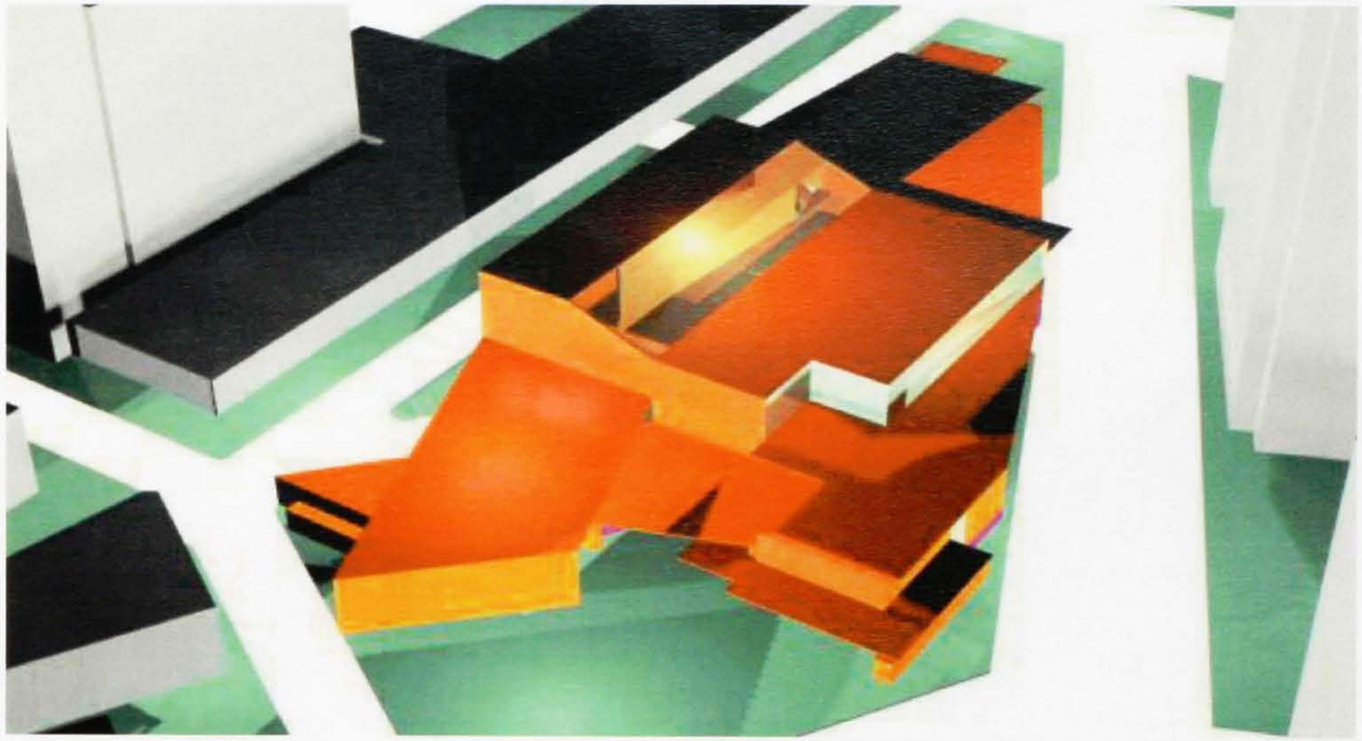
Above photographs: Models investigating the theoretical elements of folding and unfolding.

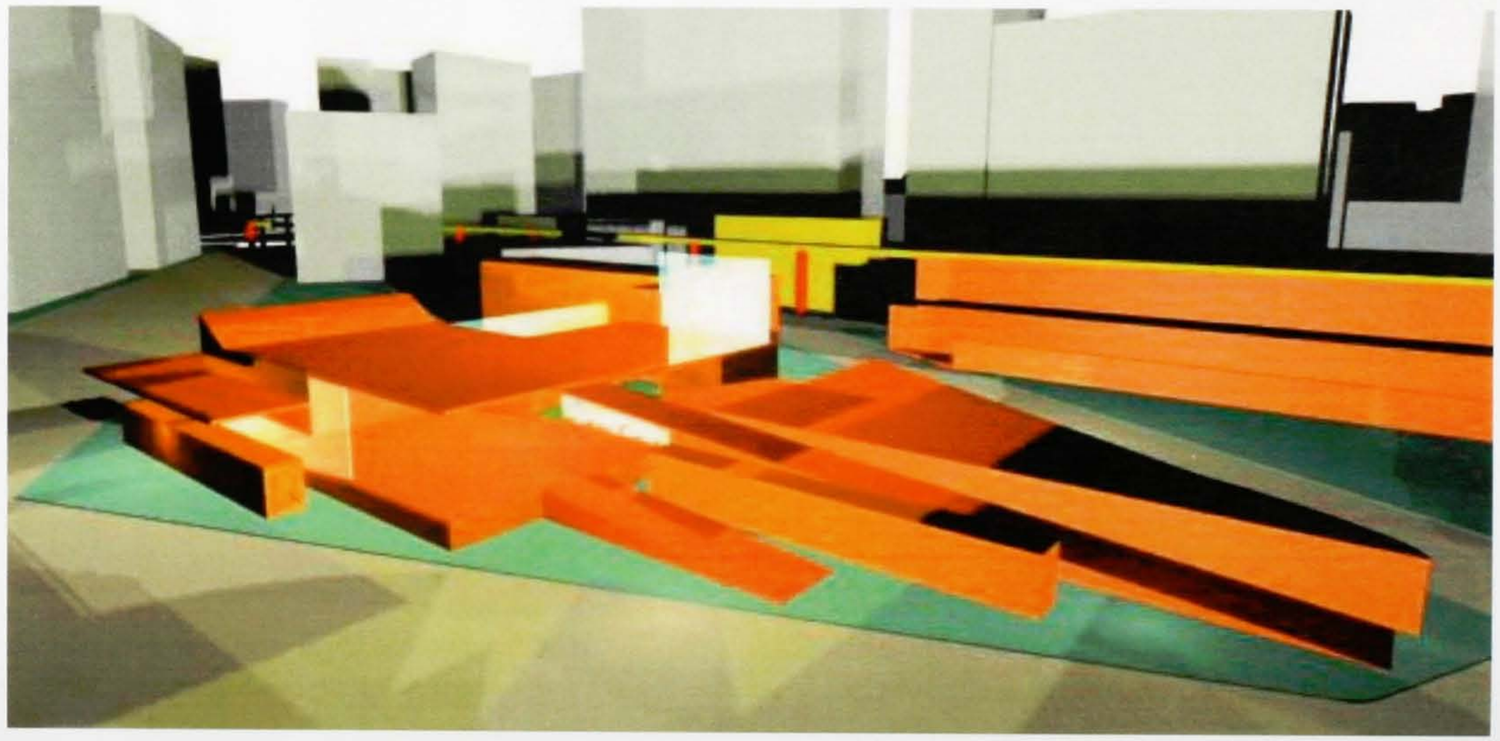
Schematic Design

These computer renderings represent my first attempt at organizing and developing the multi-functional transfer hall with its many programs.

Top Image: The massing model is too large and heavy for the site because it contradicts the idea of a pause in movement seen in the city and the transition needed to form appropriate linkages as investigated in my thesis.

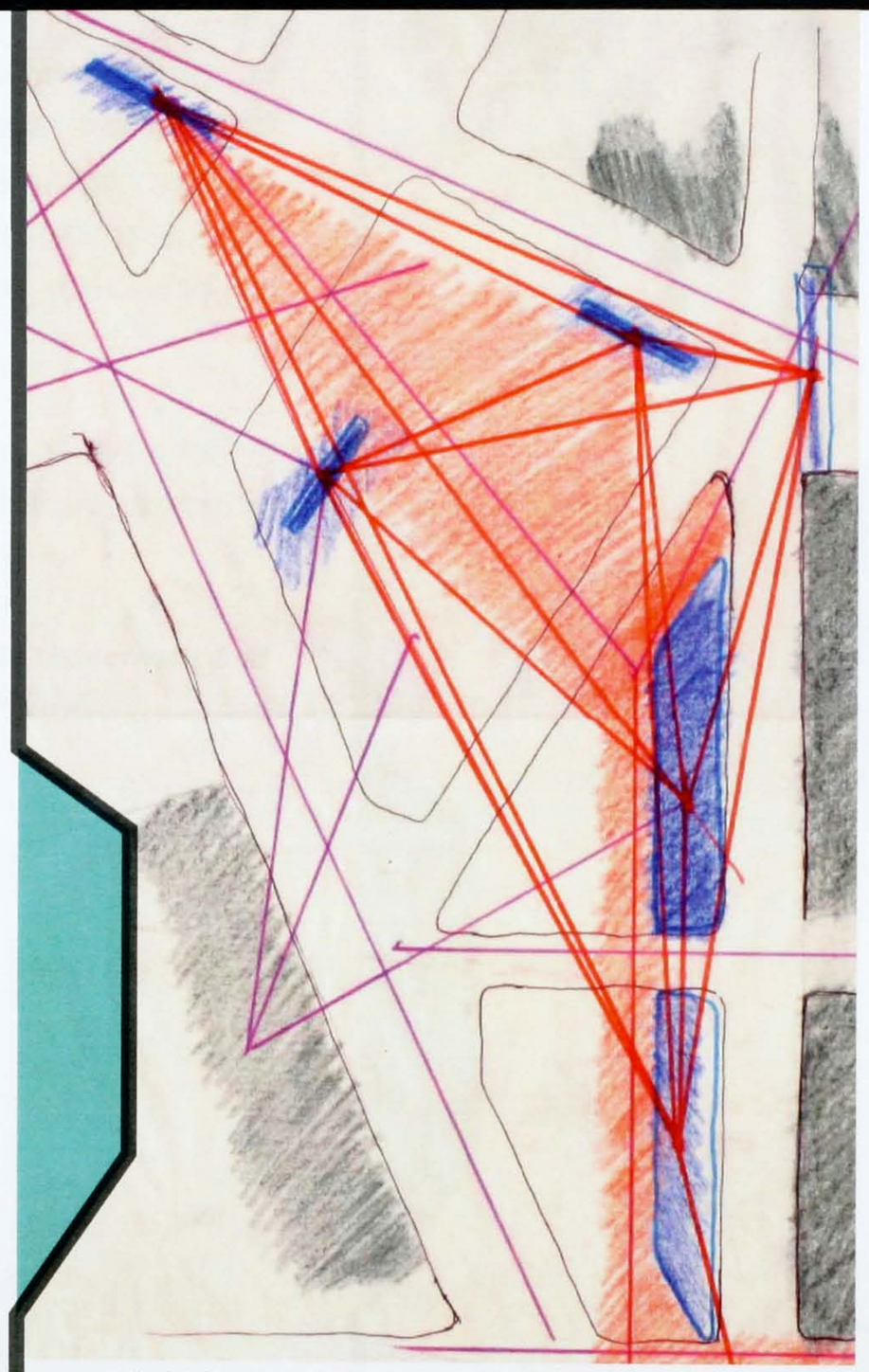
Bottom image: This attempt at a massing model did not relate to the preexisting plots of land that comprise the site. The model leaves the feeling that the building is simply placed on the site, instead of being incorporated into the surround context and allowed to transition into the rest of the city.



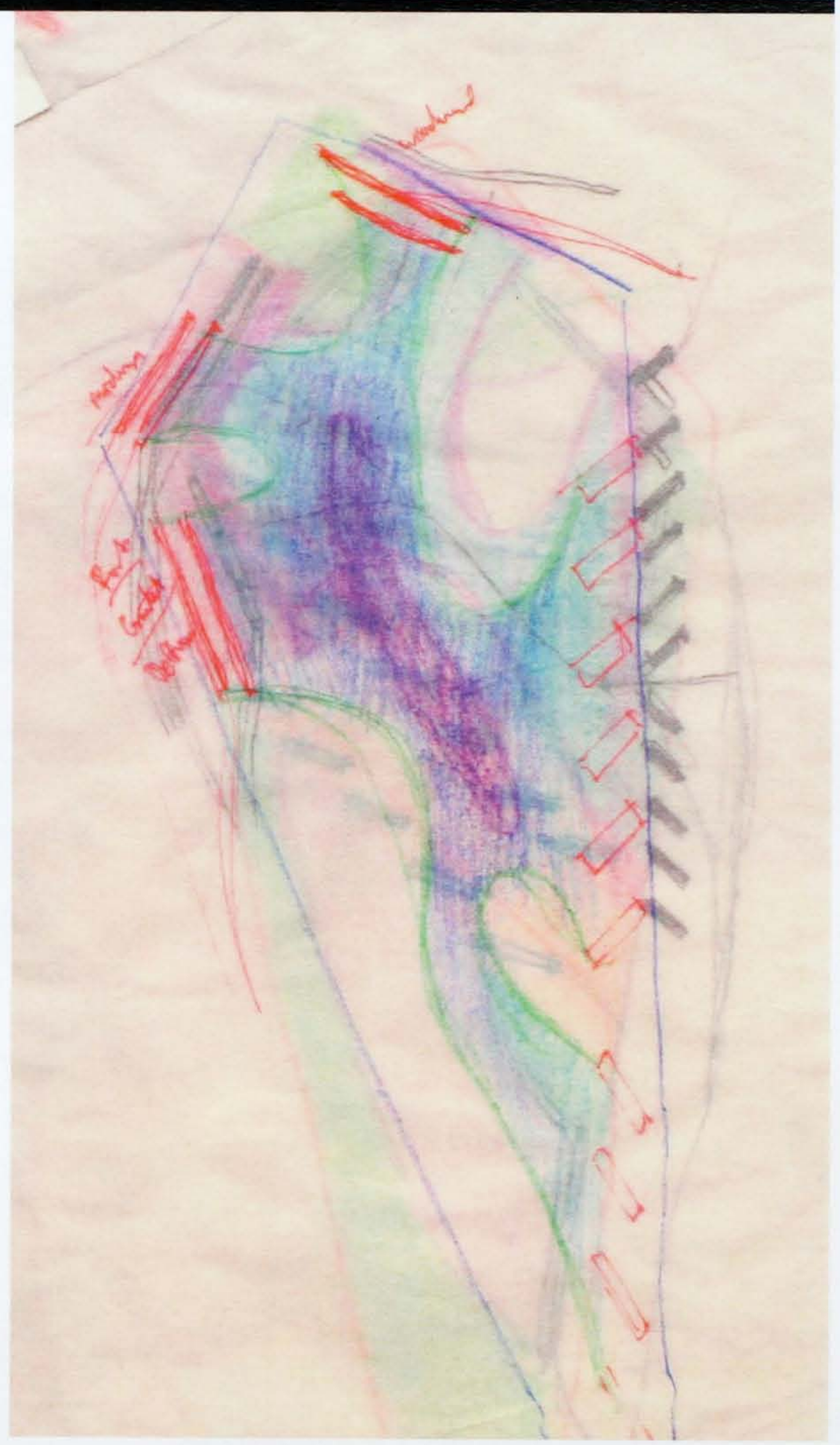


Schematic Design

These preliminary studies utilize overlays that begin to determine the locations for the bus depot, light rail system, and the formation of the transfer hall. These studies will aid in the overall development of how the main programs will interact to create a blurring effect. Also, the question of how individuals will move or be moved through the building and the site is being investigated.



Sight line study to connect the light rail trams and buses to each other, the city, and the transfer hall.

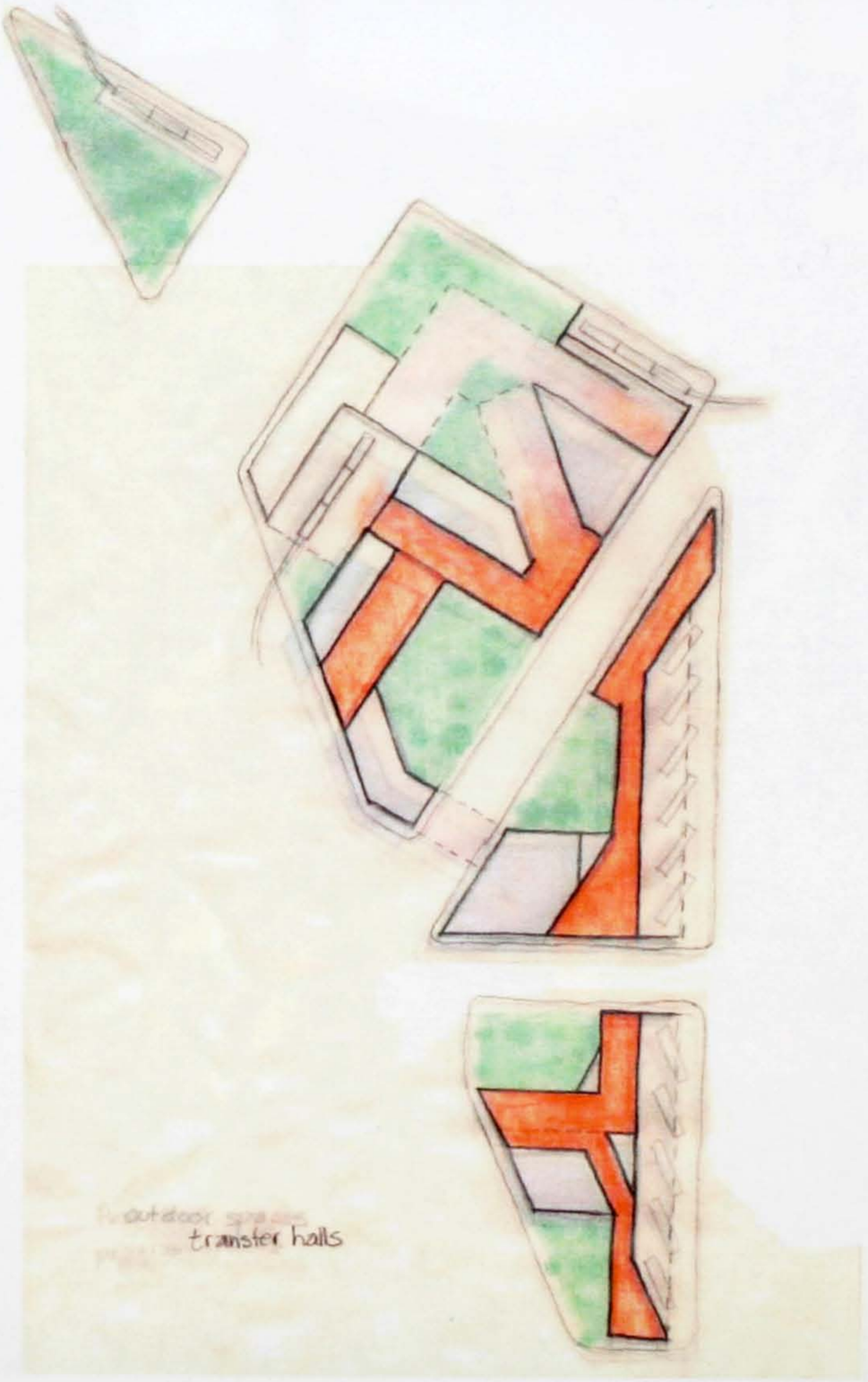


Overlay study to investigate movement and determine program spatial relationships.

Early overlay studies of the different program spaces. These spaces include: transfer hall (red), exterior greenery (green), light rail and bus waiting areas (brown), programs specific to the city (dark blue), program specific to the transfer hall (light blue).

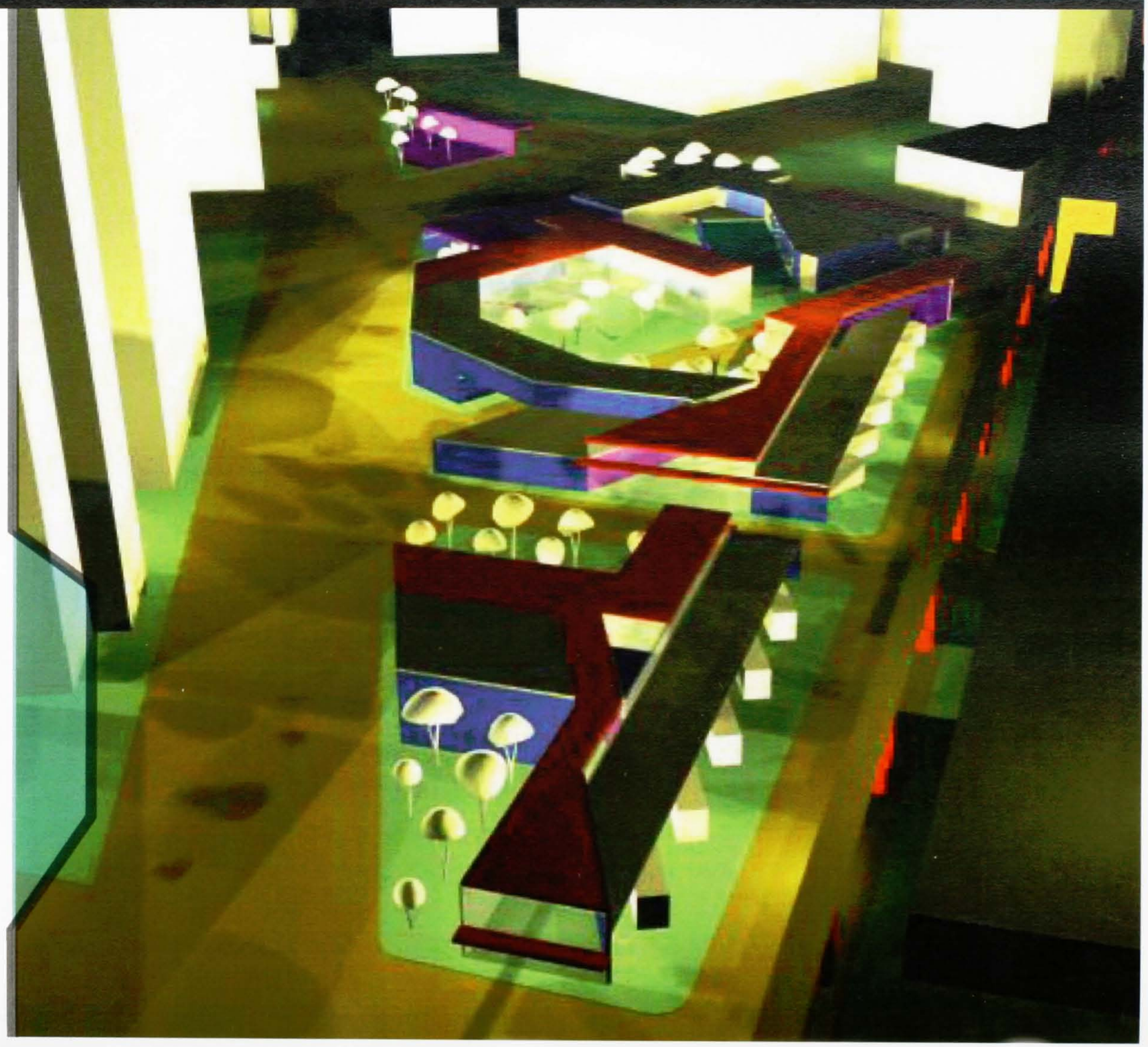
Studies assisted in organizing and determining the relationships between different programs and the spaces in between them.

Right: Overlay study to investigate movement and determine program spatial relationships.



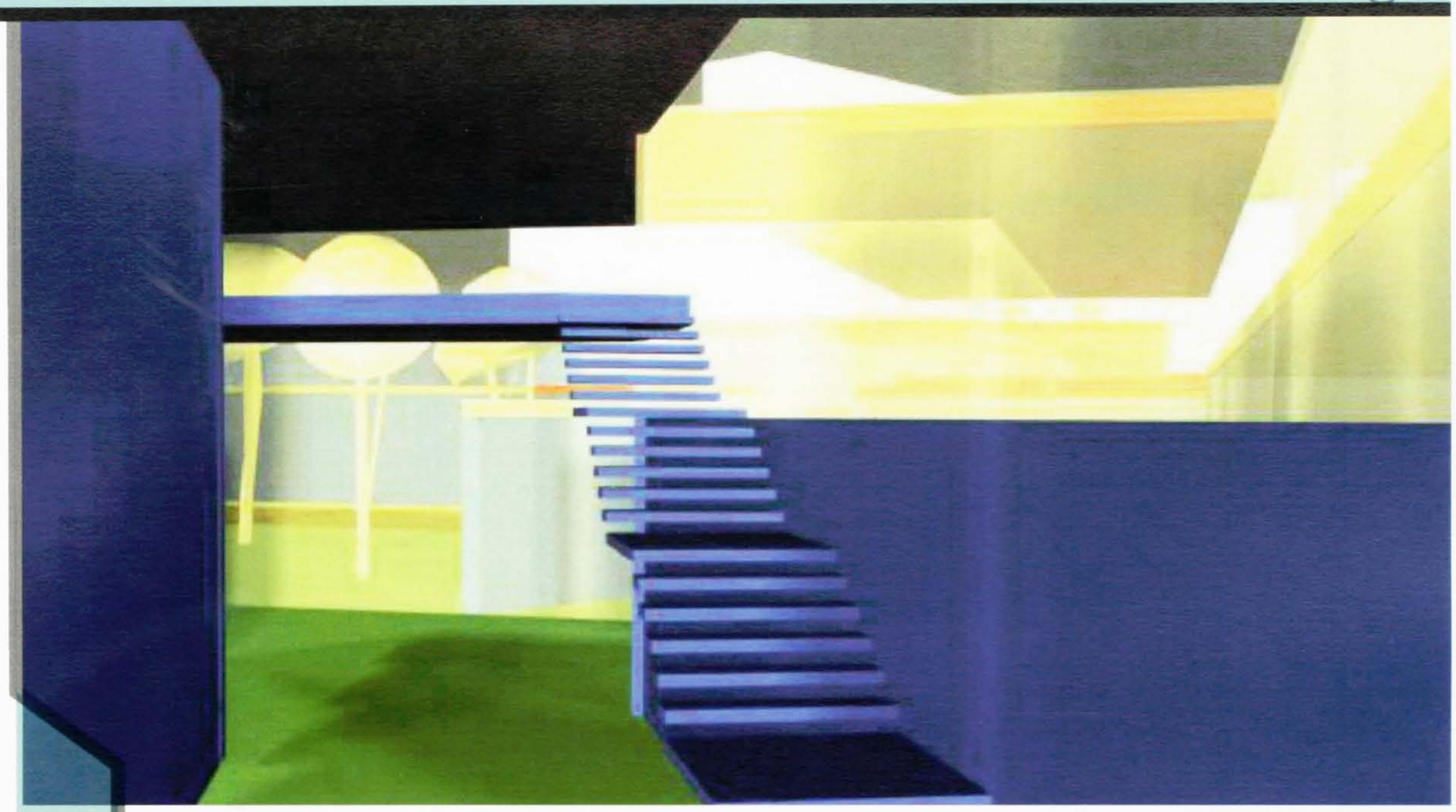
Schematic Design

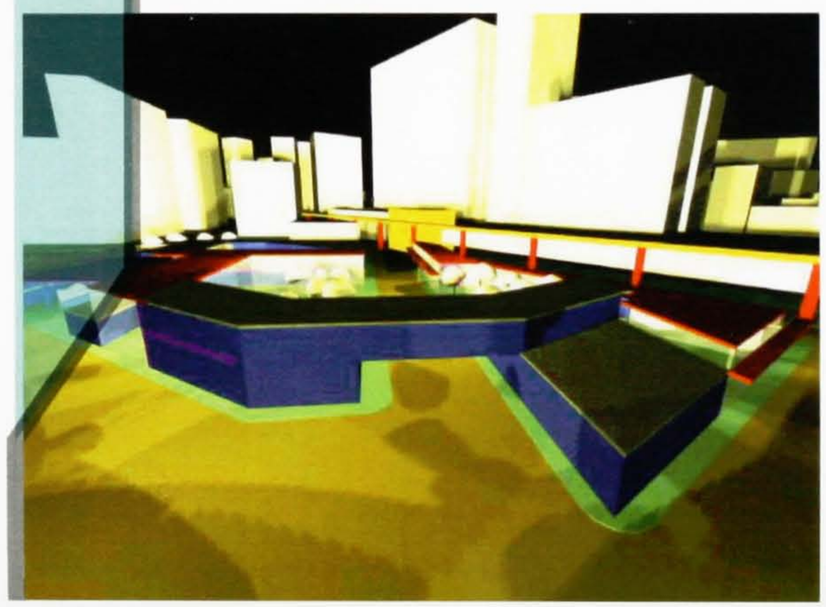
This is the final schematic design proposed for my building. Clearly, the building has begun to express the location of movement throughout the transfer hall as seen with the red roofs. The exterior and interior elements are also being defined because after much analysis, spaces are being designated for different functions. For example, the location of the bus hub and light rail system stops are determined and positioned in accordance to the site conditions.

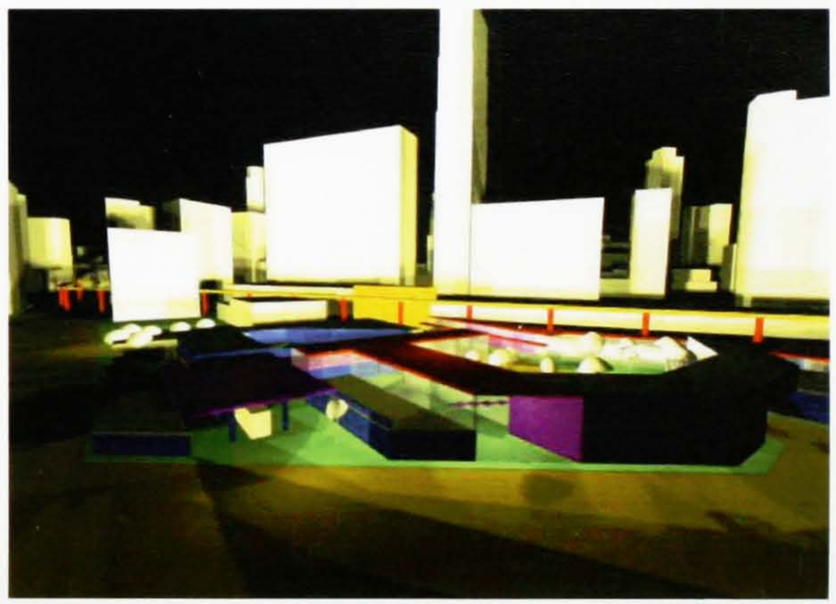


Top image: The incorporation of an elongated staircase into the design demonstrates the connection between movement and position. The staircase acts as a ramp to slowly change the perspective of the individual in the transfer hall and then out into the city. This slow rise causes the individual to loss awareness of their vertical location, while in motion.

Bottom two images: The renderings of the massing model from two varying perspectives from the scope of the city. The left image shows the outdoor dining area on the second floor and the ability of the program to unfold into the city. The right image shows the light rail in its rest position in the transfer hall as it waits for its departure to the airport.





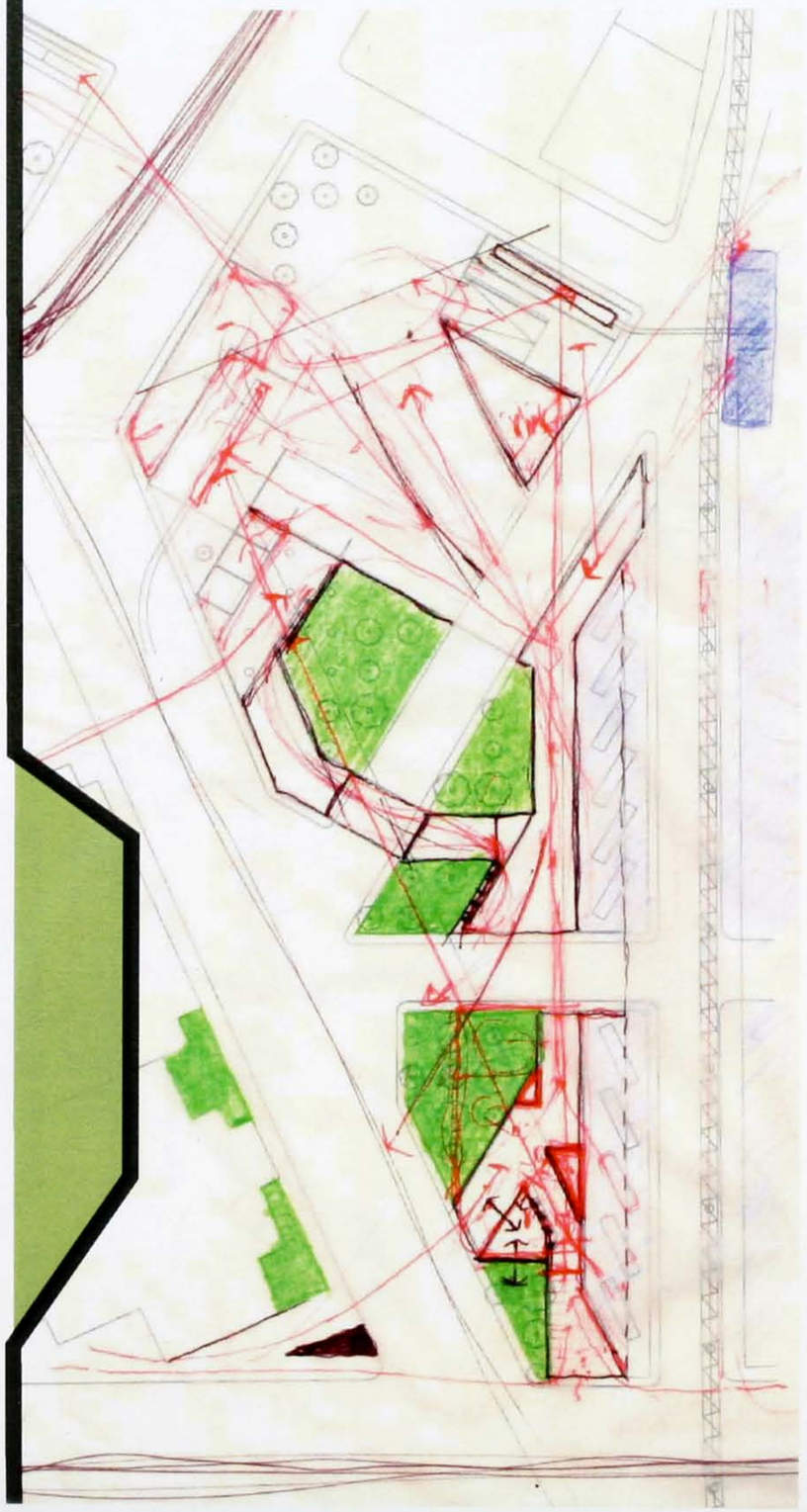


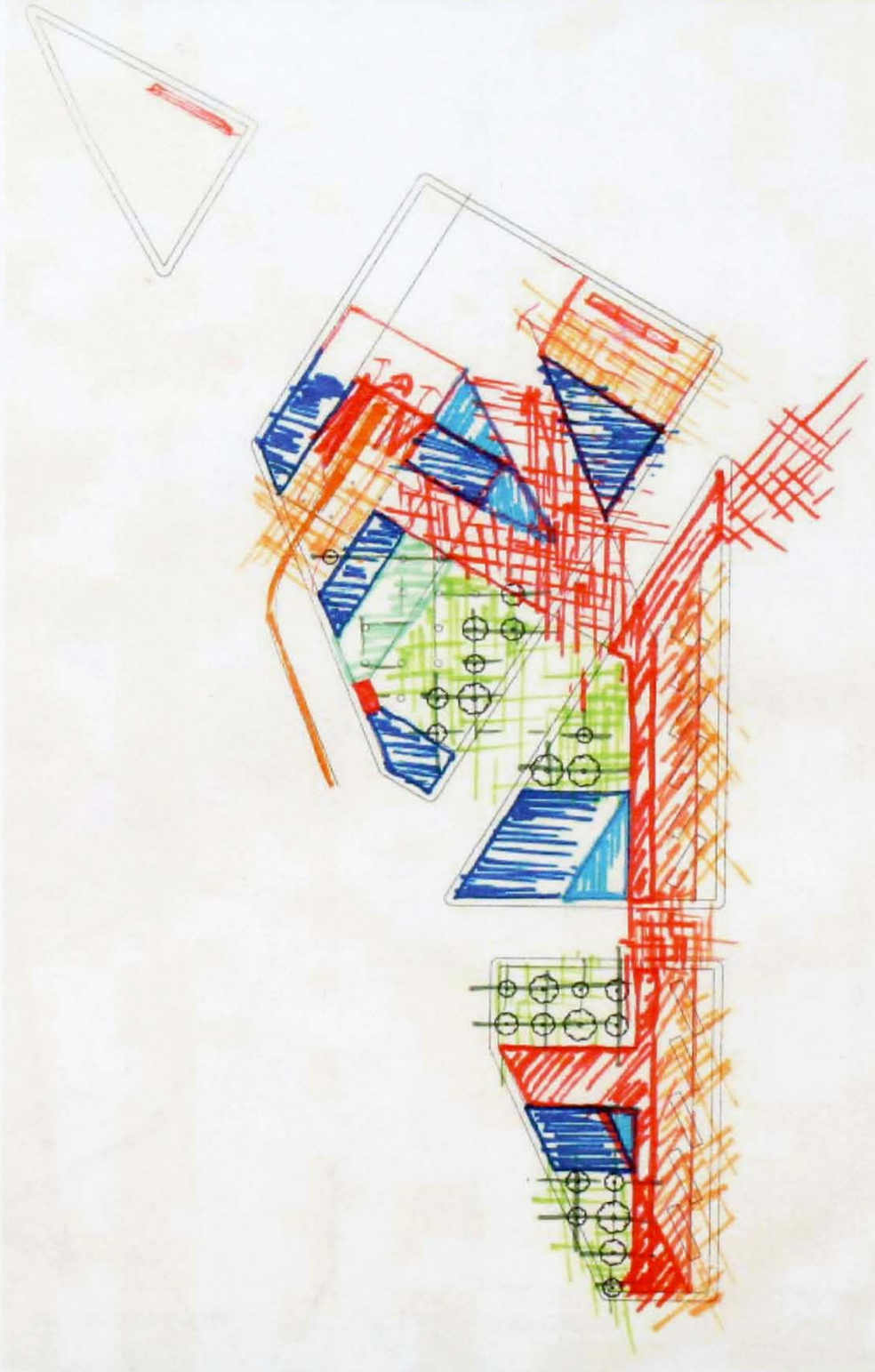
Design Development

Design Development

Left image: The red lines with arrows heads represent the possible sight lines as seen from one program to another within the interior of the building, as well as sight lines that are visible from the exterior looking inward and visa versa.

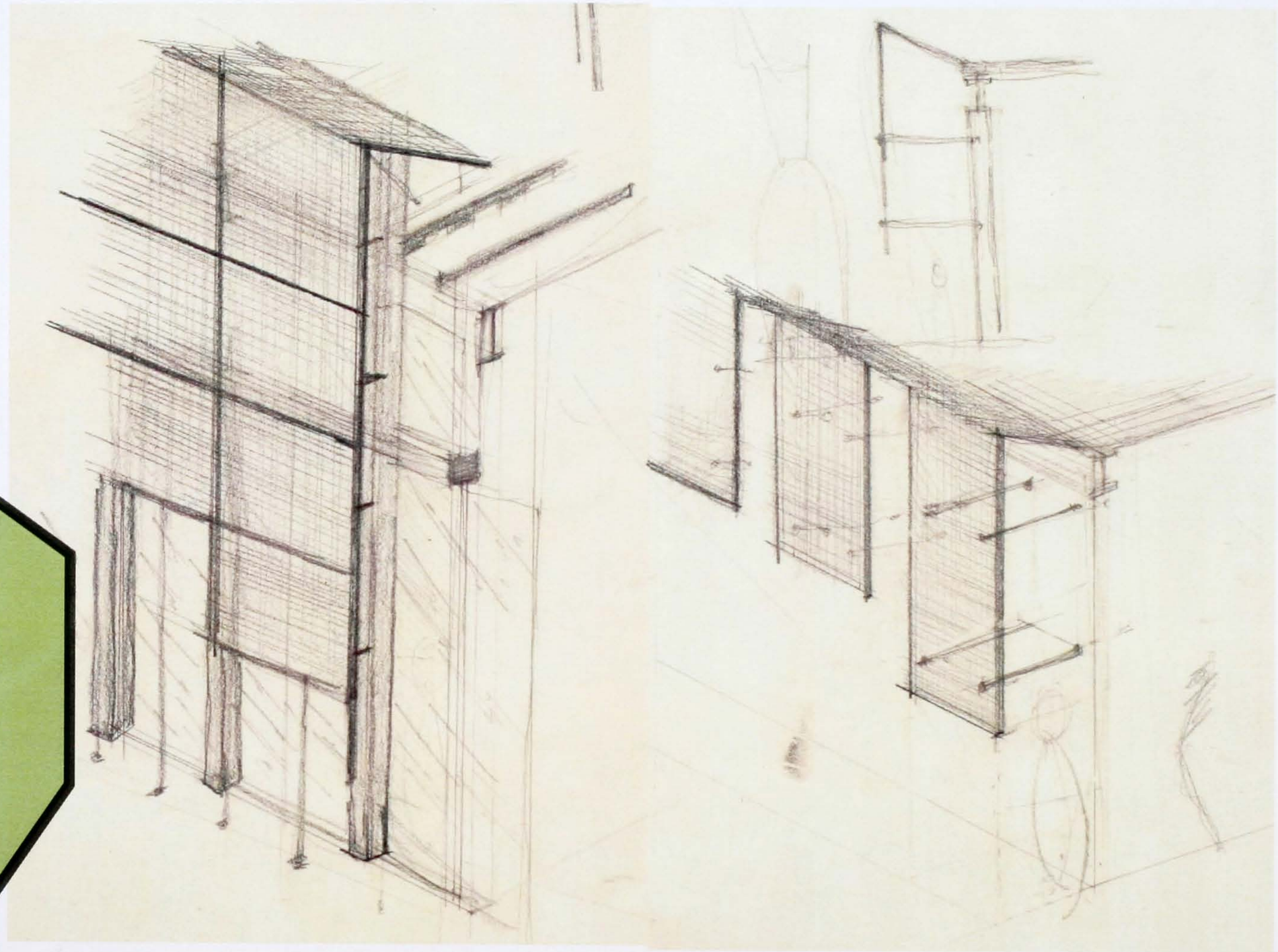
Right image: This sketch will assist in the further development of the program and its multi-dimensional secondary functions. The different colors represent the possible locations of these functions and map the possible interactions that will result between the programs.



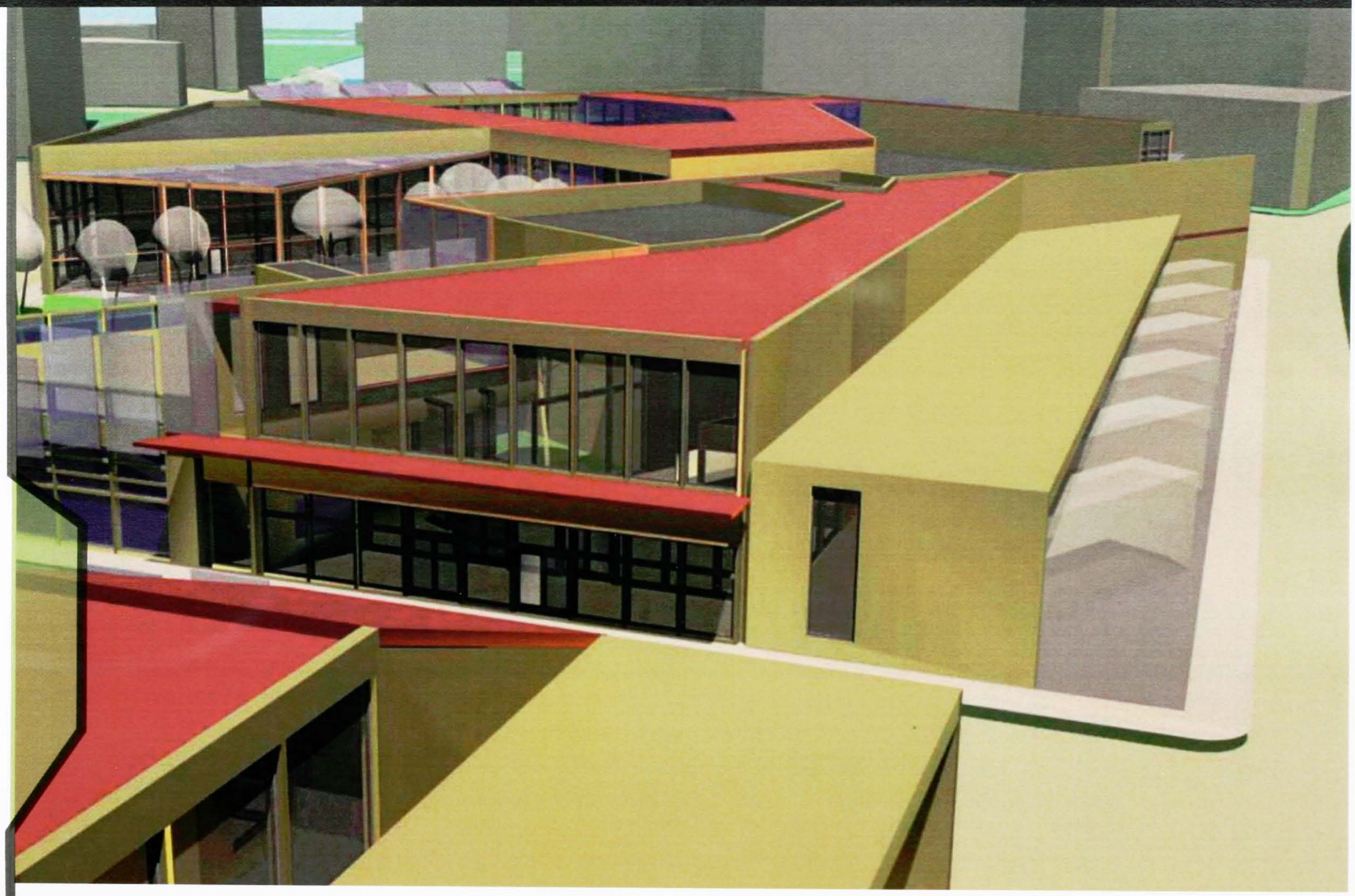


Design Development

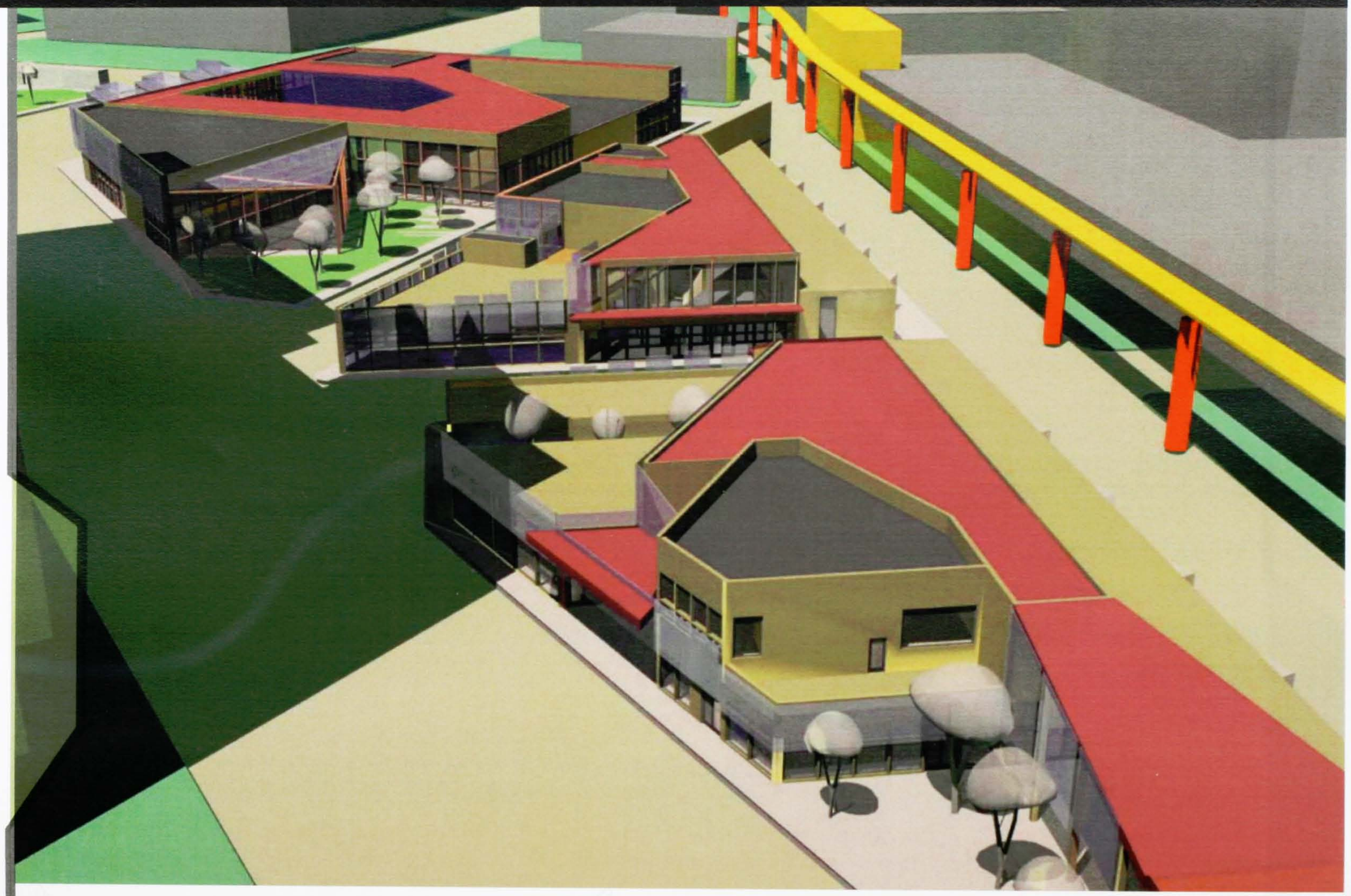
A variety of different materials are utilized to transition between the buildings and the surrounding context. One material that is commonly utilized is a metal screen. Like the building that it is attached to, this screen serves multiple functions. It can be an element of the façade, a shield that allows for an inhabitable space while waiting for a light rail tram, or finally a covering for an outdoor eating area.



Above sketches: Developing of the metal screen element.



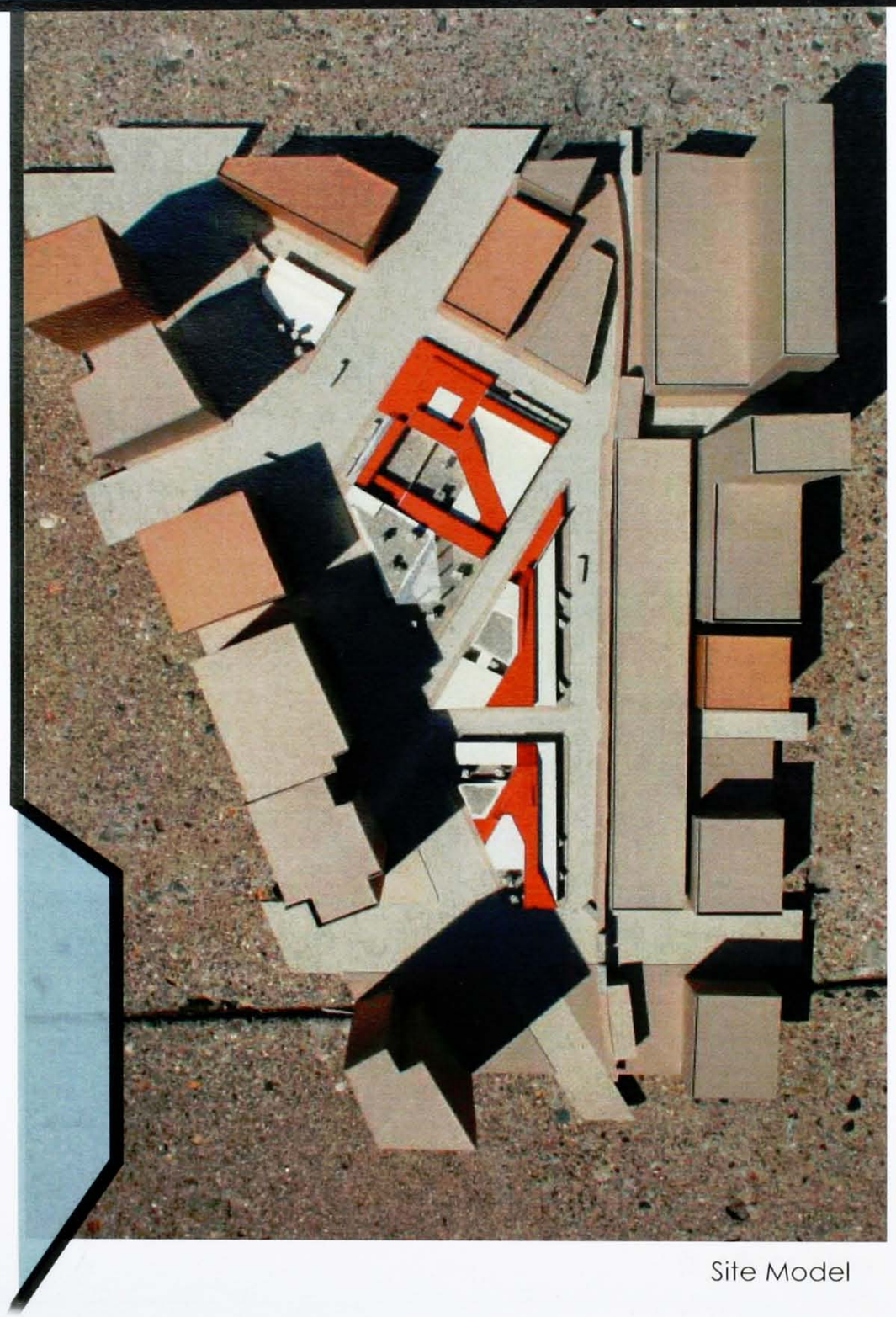
Early stage of the transfer hall depicting the red colored roofs as flat surface, lacking vertical transitioning elements.



Early stage of the transfer hall depicting the red colored roofs as flat surface, lacking vertical transitioning elements.

Final Design

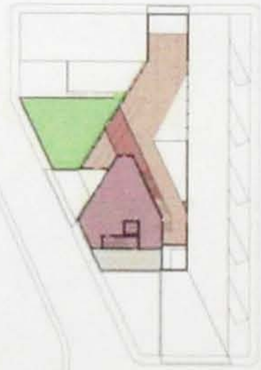
Site plan within the city of Detroit



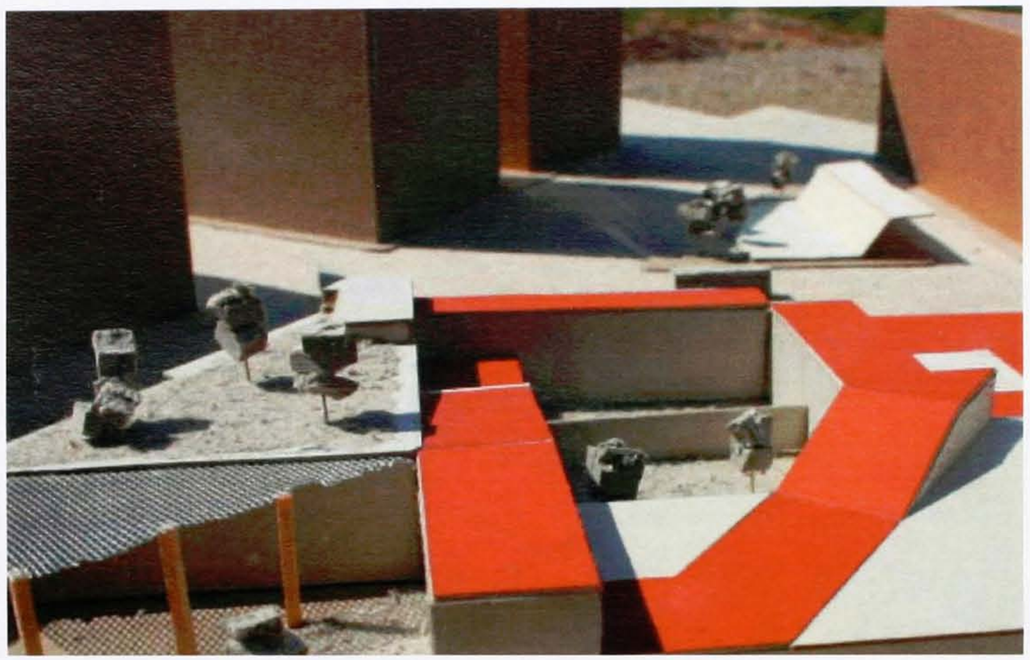
Site Model

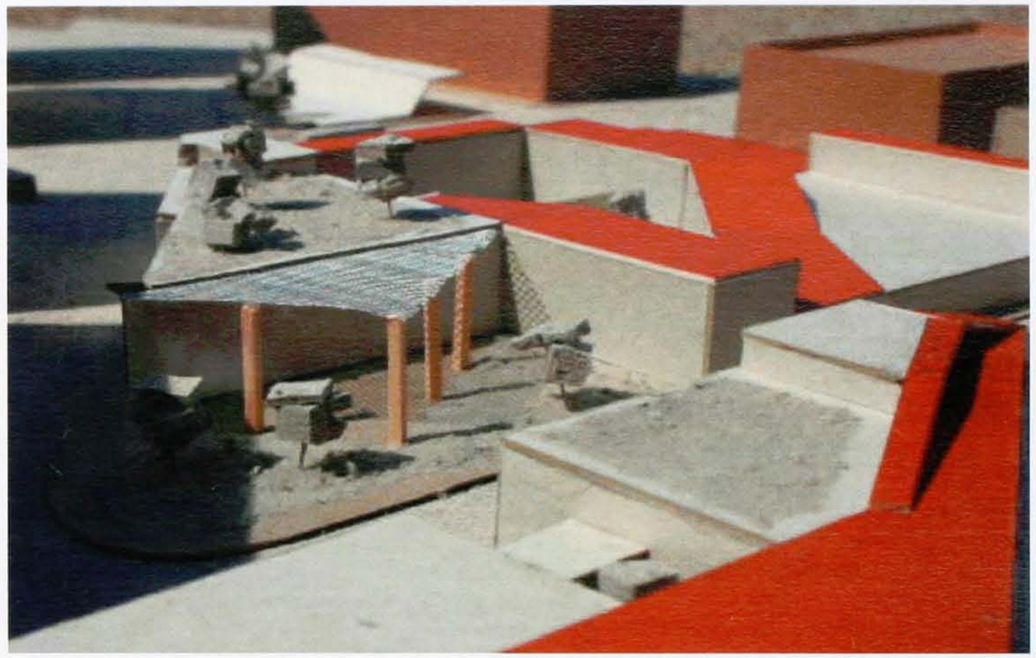
3-D Viz Site Model

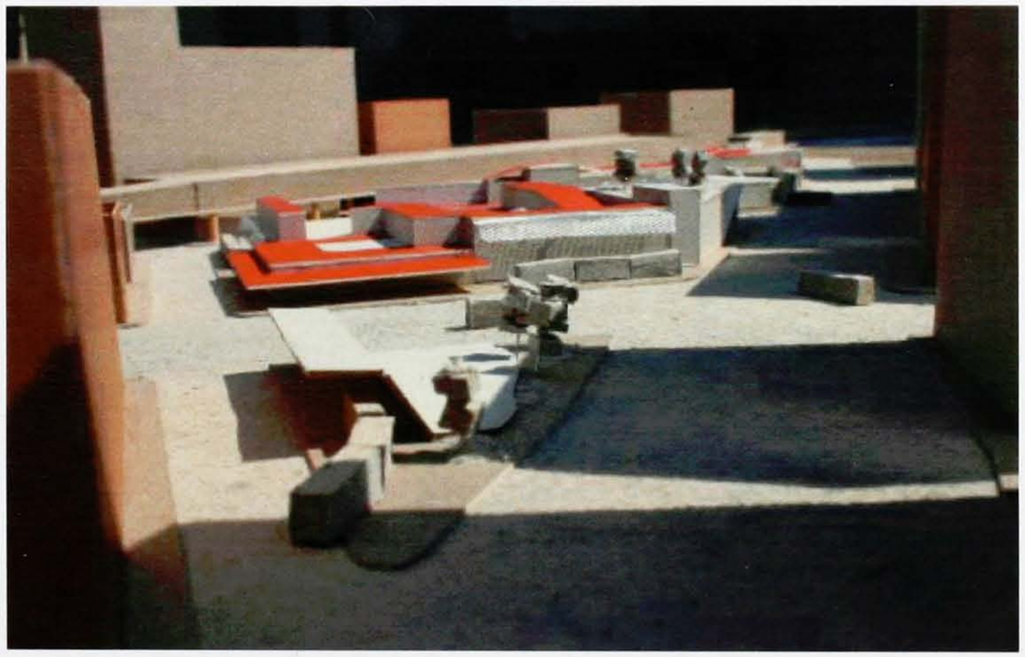
first floor plan

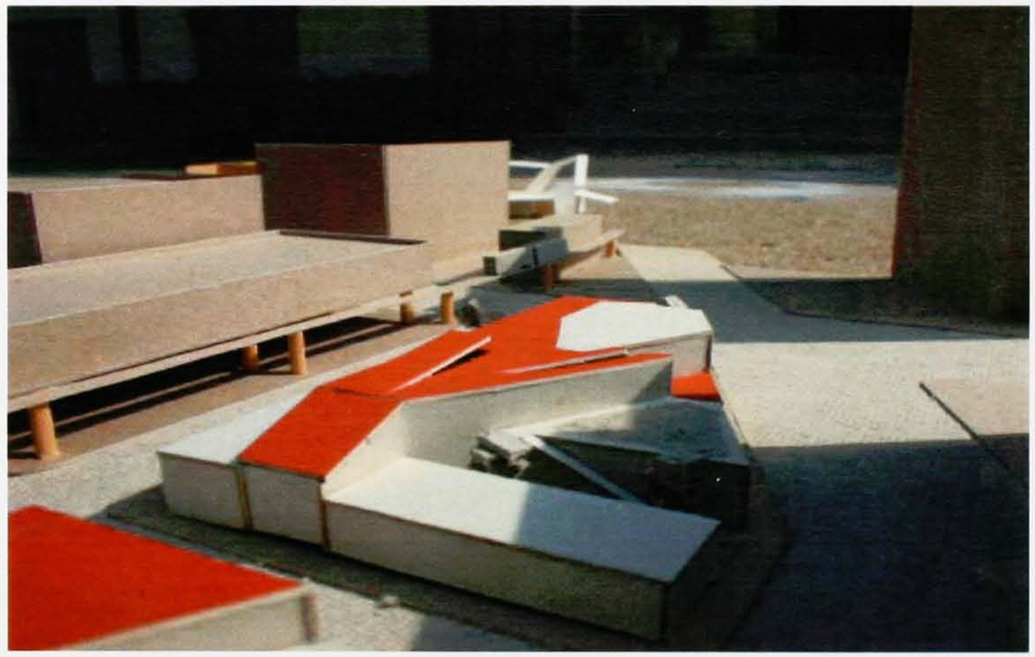


second floor plan

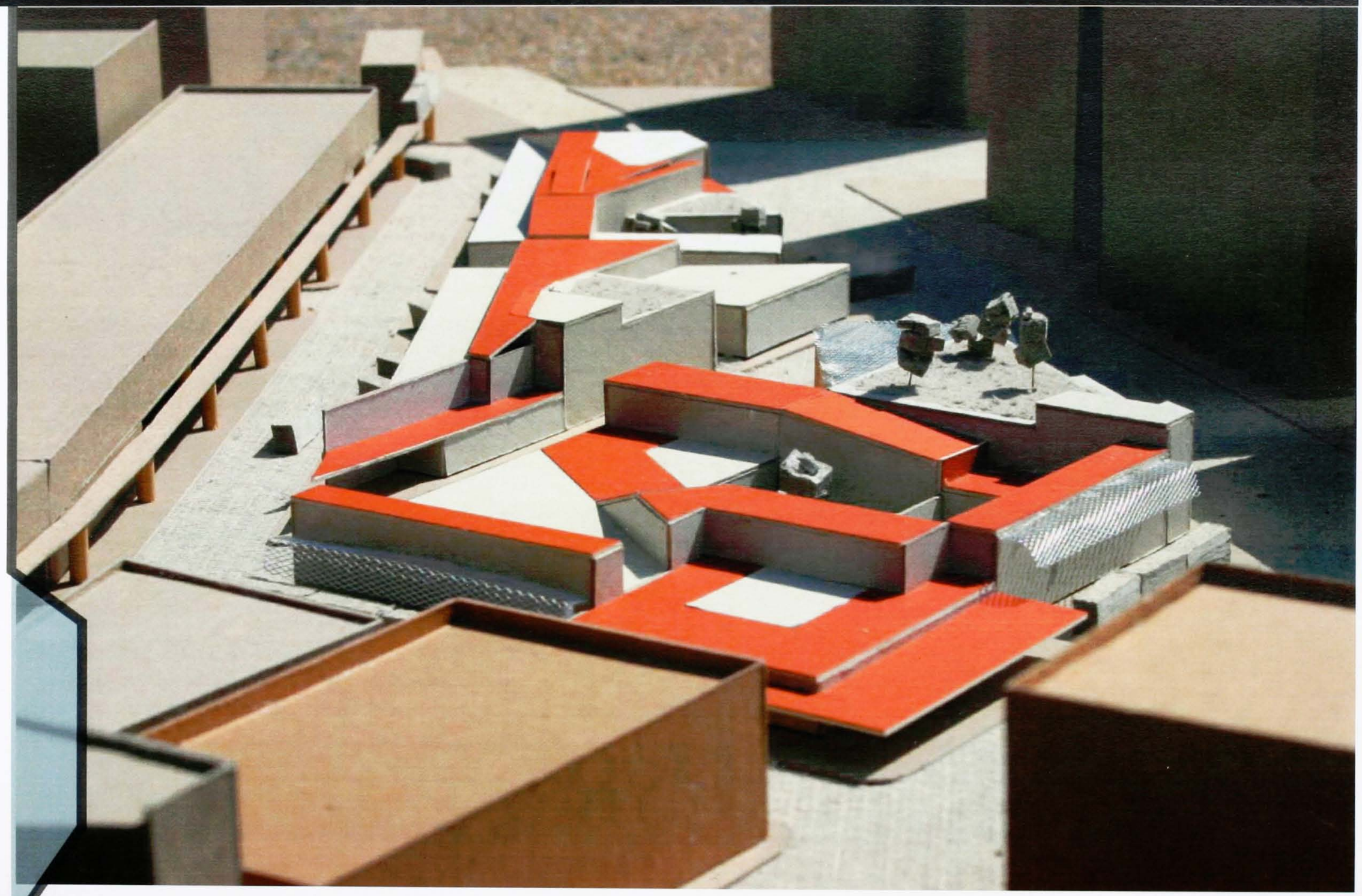




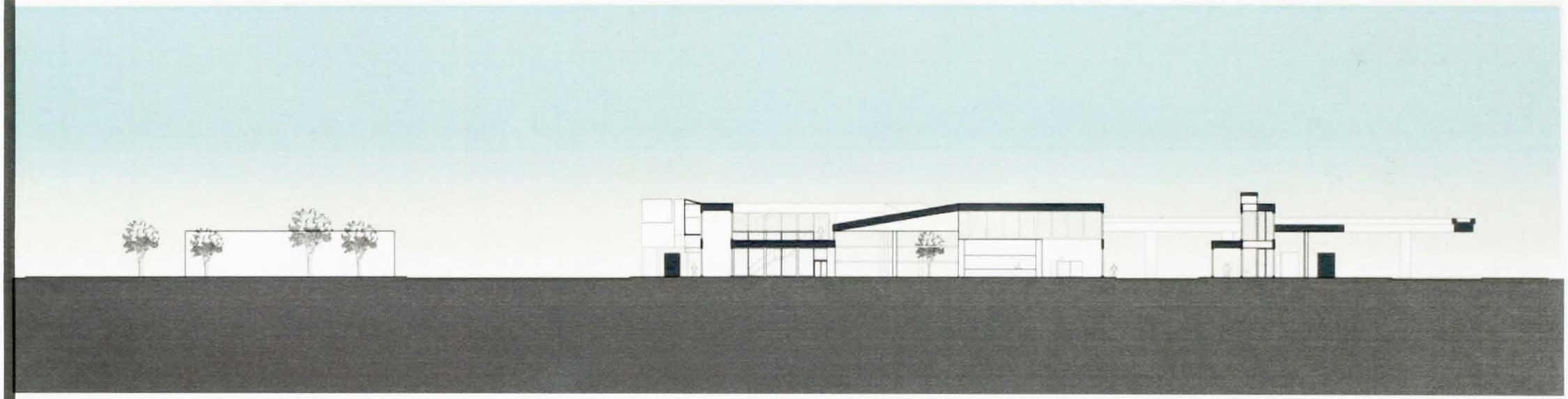




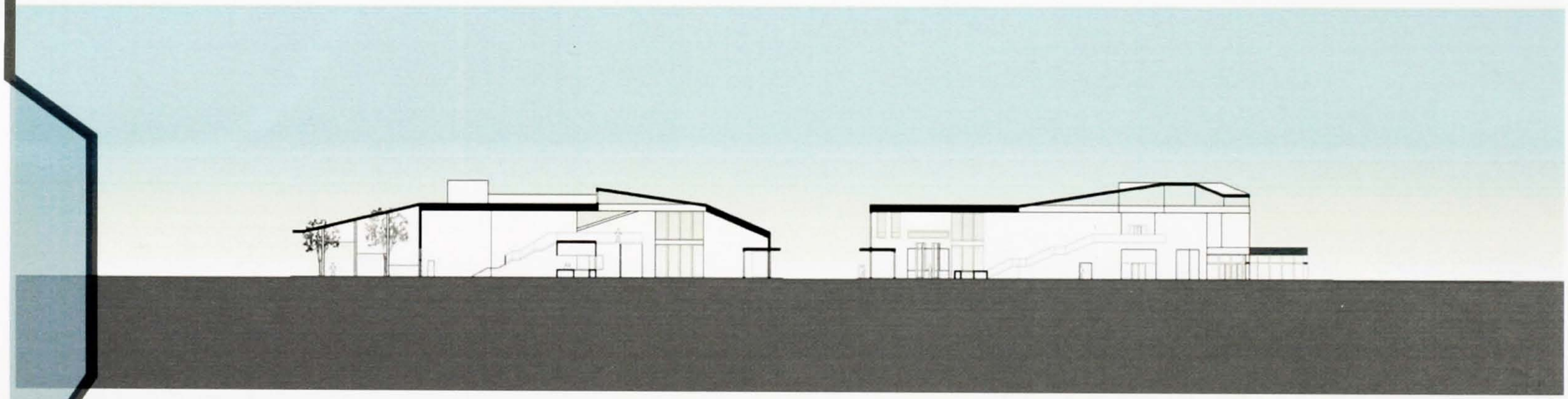
Photographs of massing model, which include design elements as the metal screen, red transfer halls, and exterior greenery spaces.



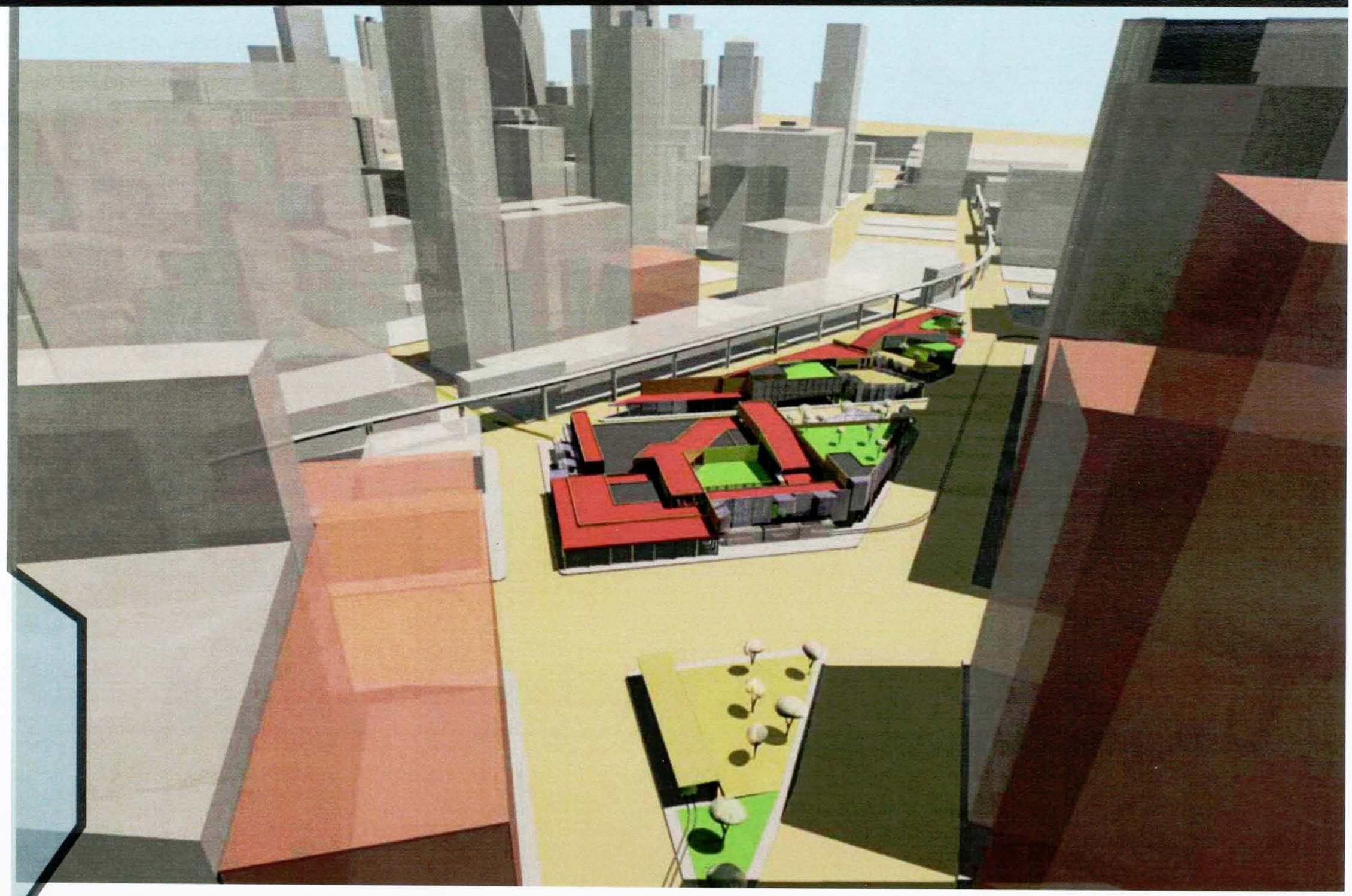
Photograph of massing model within the context of the site and surrounding city.



Cross section through light rail transfer hall with links on both sides.



Cross section through bus 's transfer hall.

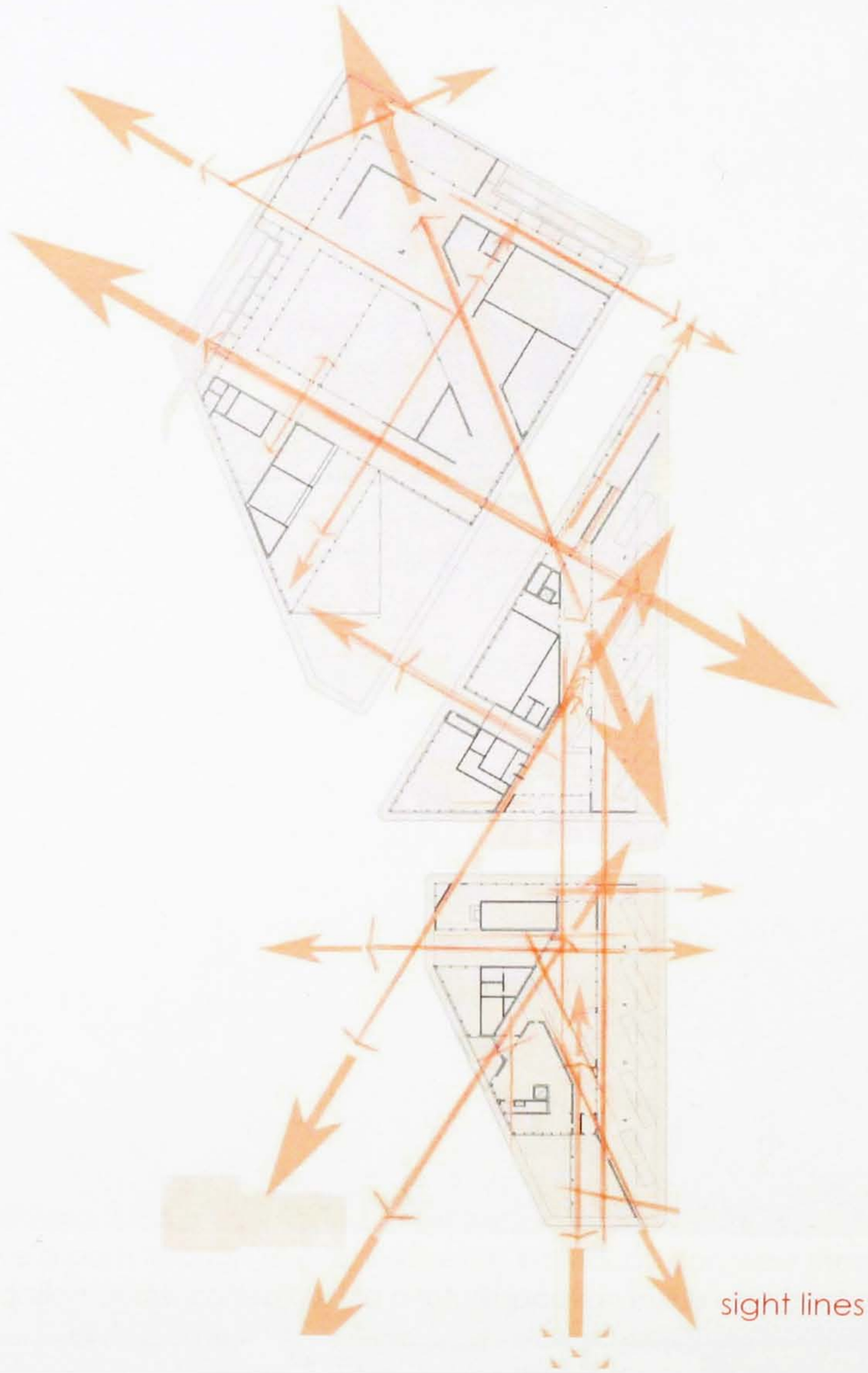


View from the north looking at the transfer hall with the city of Detroit in the background.

Final Design

While inhabiting the transfer hall, individuals will feel a connection between the inner space and the outer environment due to the linkage created through sight lines. This is because the continuity of surface, between ground and the ceiling within and outside the transfer hall allows for an individual to vary their perspective and view their destination by lines of site instead of through mental images.

This image is of the sight lines seen throughout the entire transfer hall. These sight lines either connect the buildings to each other or the exterior and interior spaces.



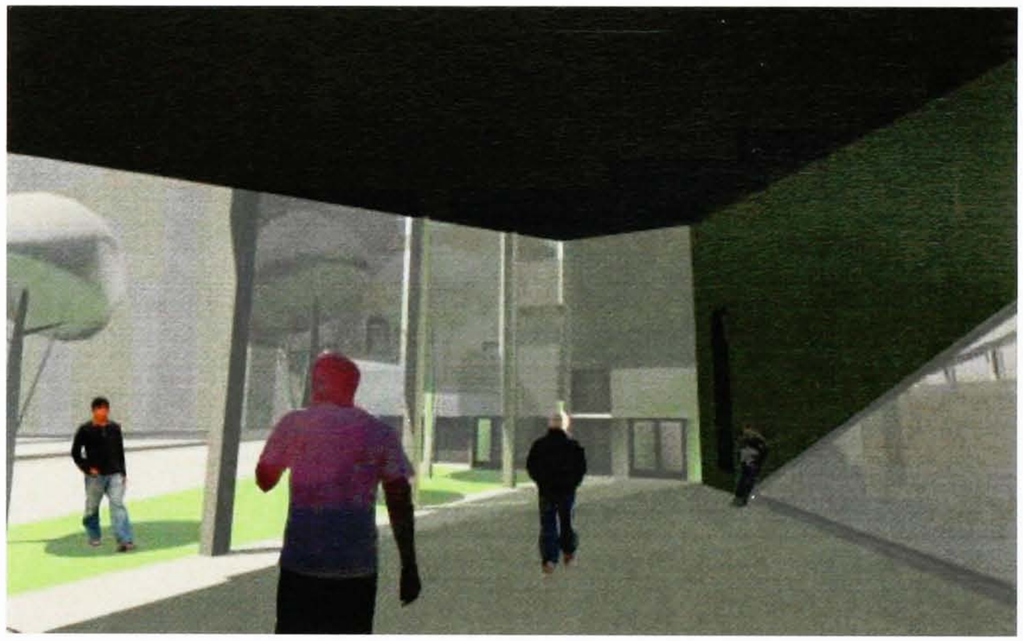
sight lines

Sight lines pave a path through mental images as individuals can view their current location at the coffee bar, to a future location in the adjacent building.

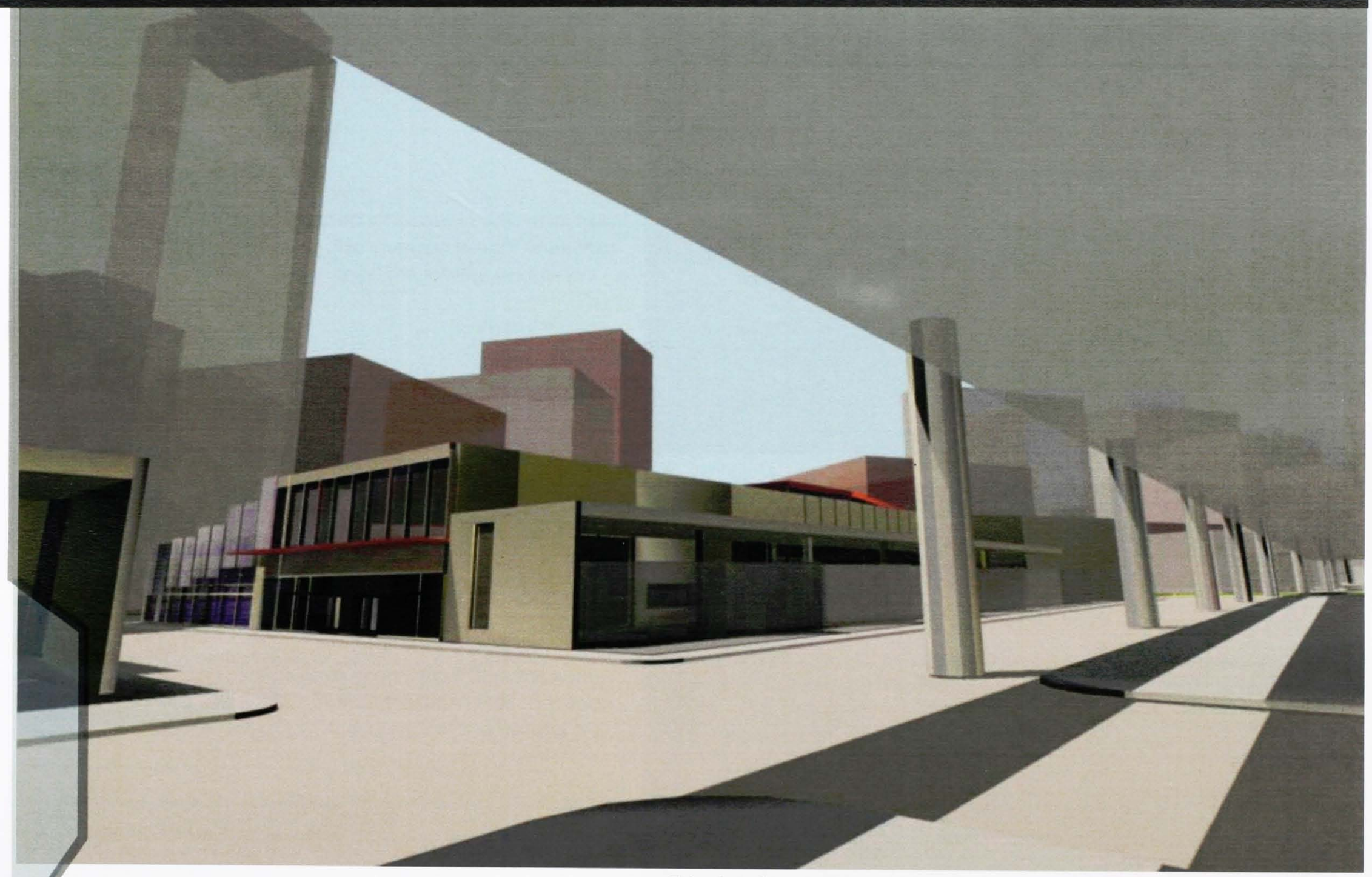
Interior view of transfer hall looking at an information stand.

Interior courtyard with garage doors of the transfer hall open.

Example of an unfolding element as the ceiling forms the wall and then forms the bench.

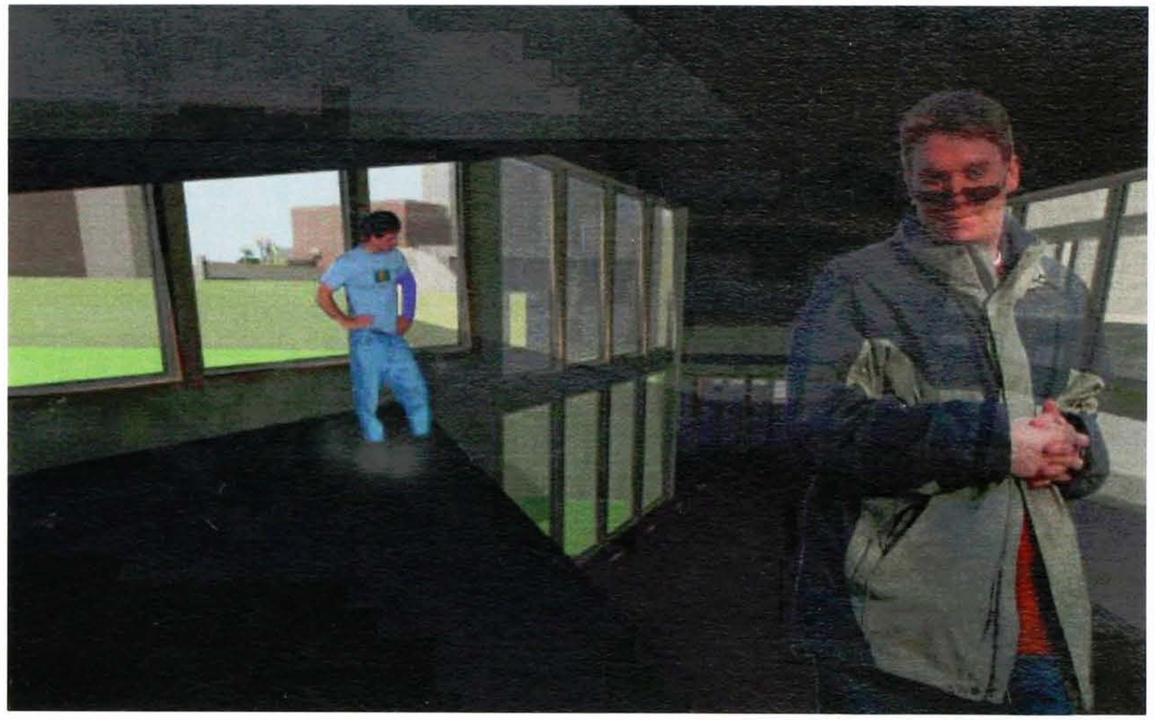


Example of an unfolding element where the roof fold to become the wall.

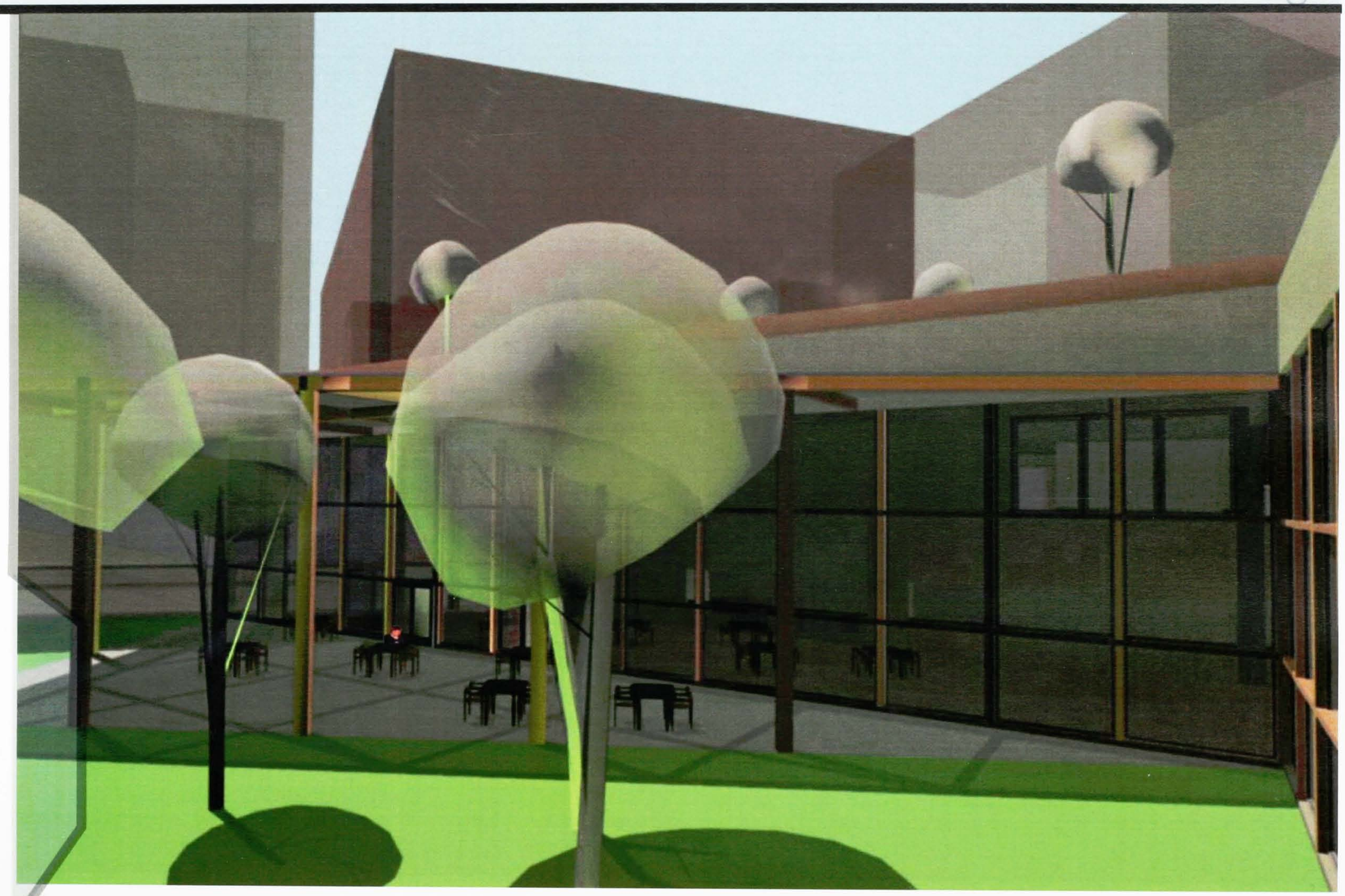


This view from under the Detroit People Mover illustrates the connection between this form of movement and the bus hub of the transfer hall.

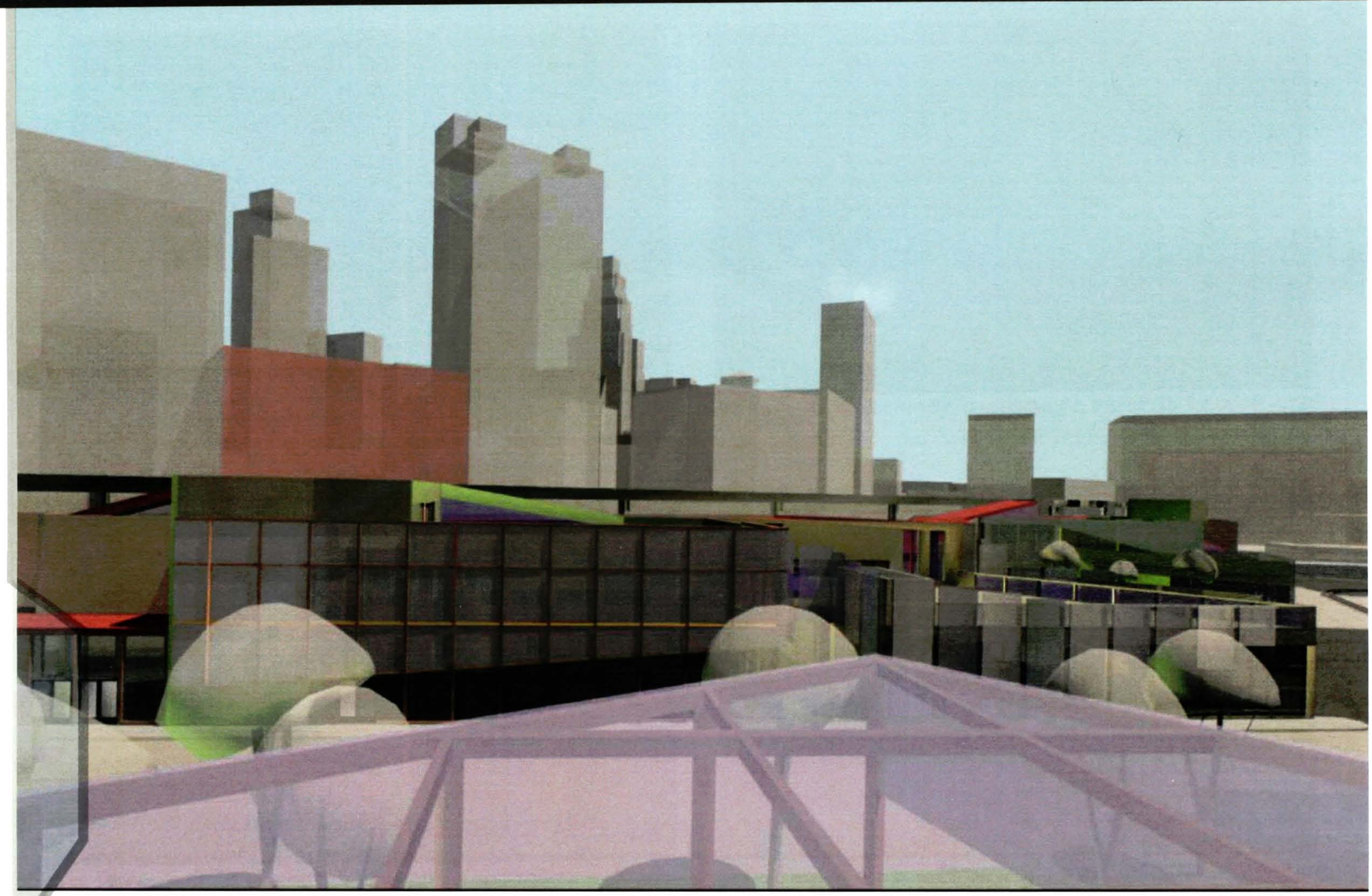
View from the balcony of an elongated staircase in a transfer hall. Notice the numerous sight lines that span the interior and exterior.



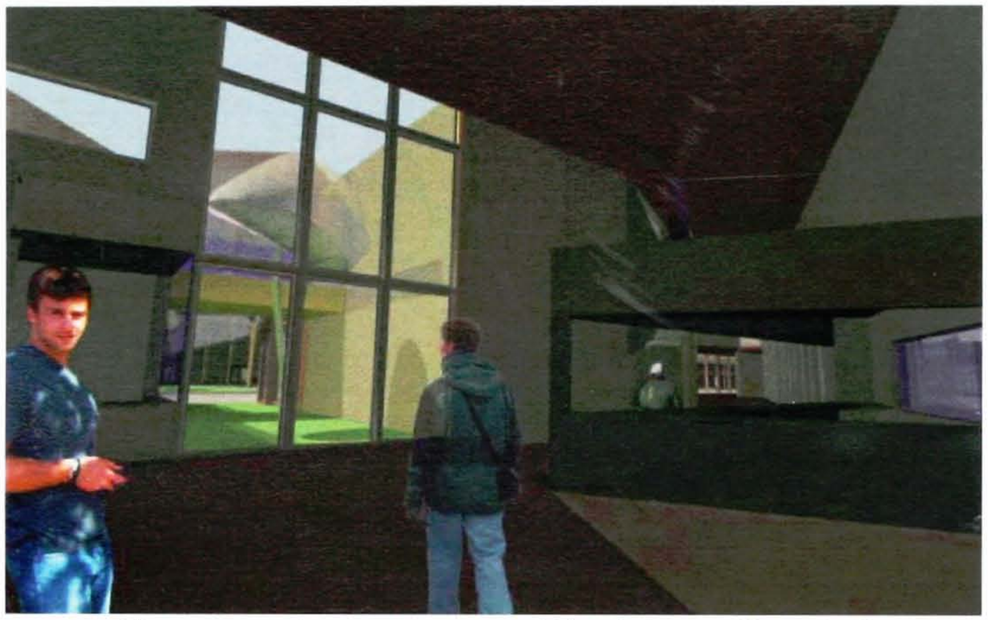
View from the transfer hall where the staircase grows from the thickened wall. Notice the sight lines that span the interior of the transfer hall.



Covered dining area formed form the folding of the metal screen structure.



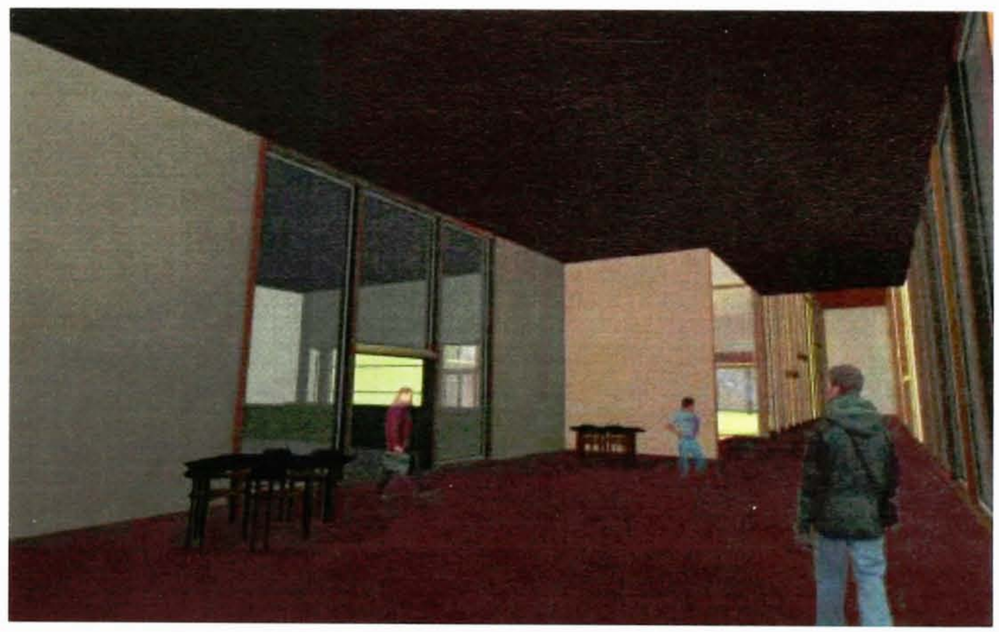
From the third level exterior park, individuals can look over the metal screen covered eating area and onto the cityscape.



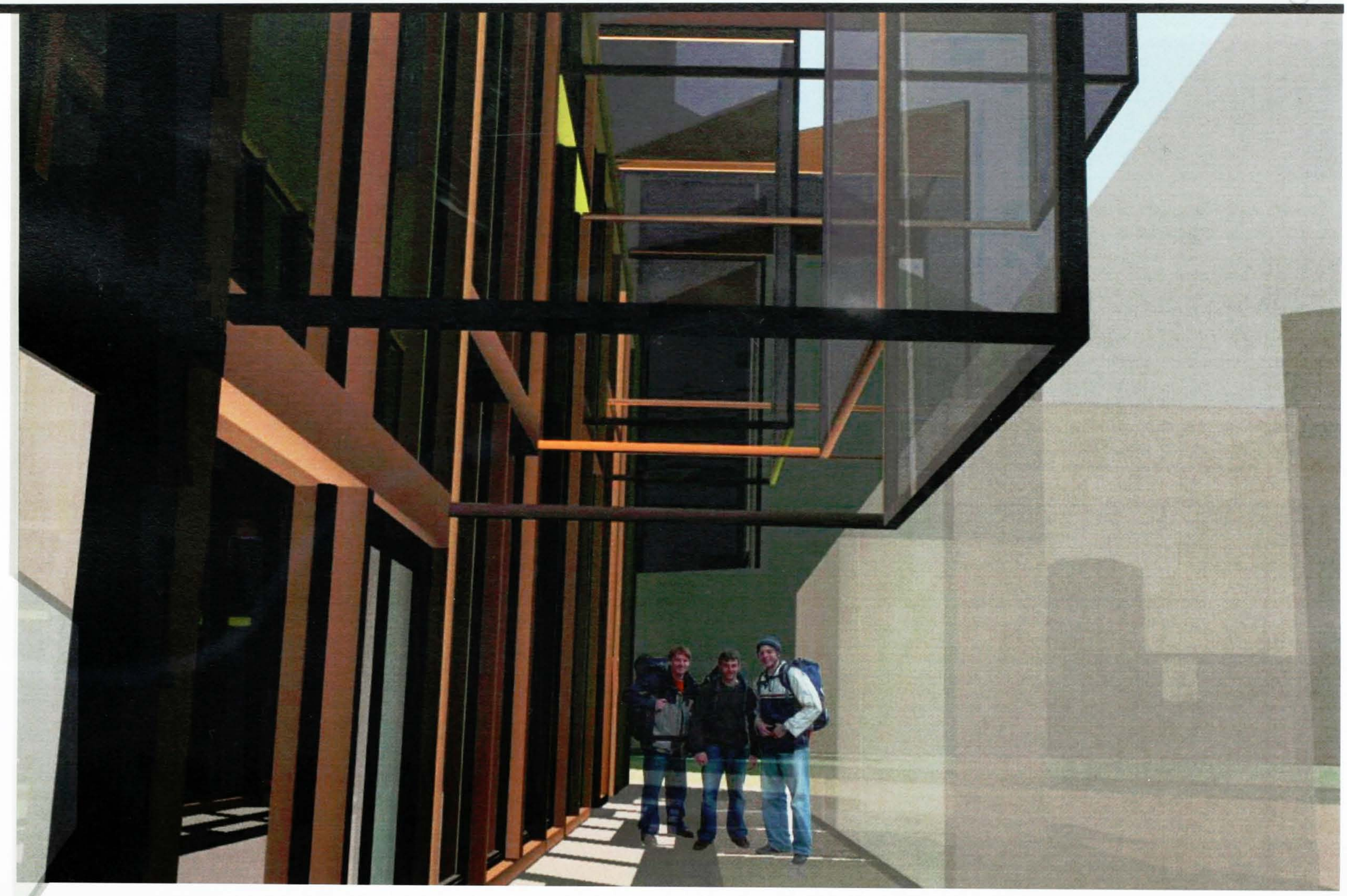
The secondary program of the information desk grows from the wall and creates a moment of pause.

Coffee stand is available on the go or for a relaxing drink with seating around the corner.

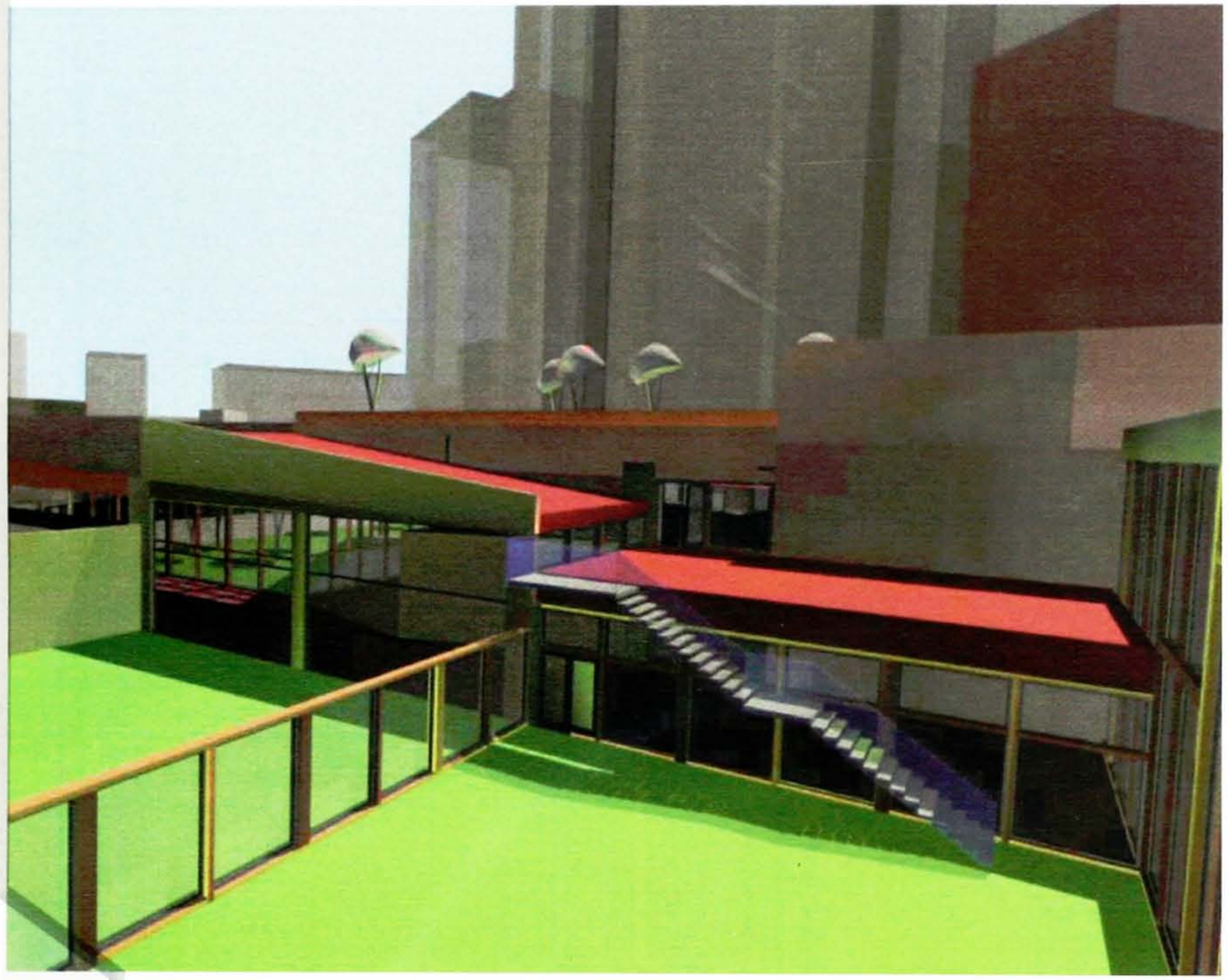
Food vendors extend from the interior space to the exterior environment where they are covered by the metal screen.



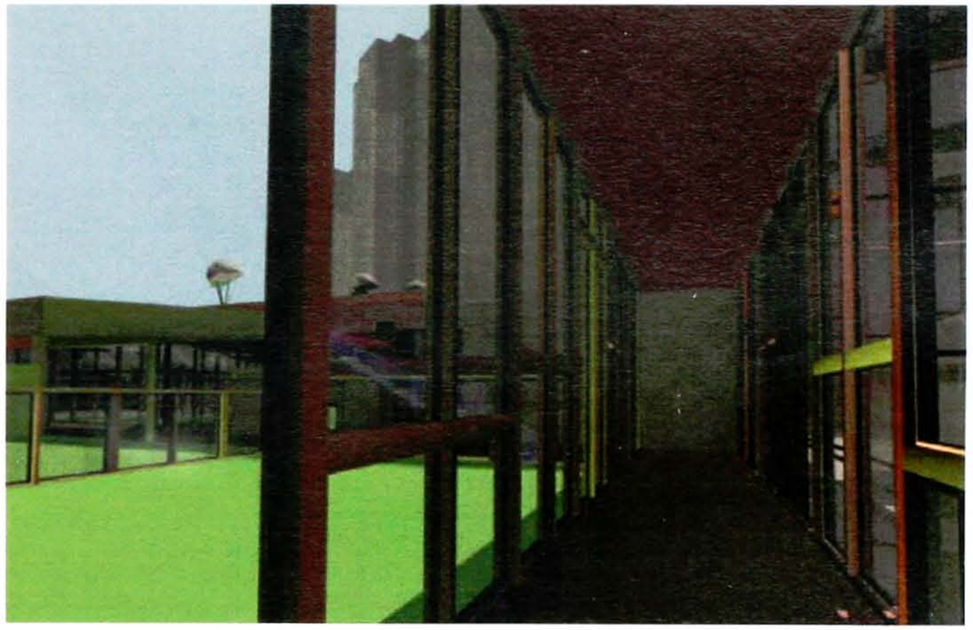
An interior view of the transfer hall with its open floor plan and many site lines. The wall expands to allow for a moment of pause in movement.



Loading area for the light rail tram. The above metal screen forms an inhabitable space for passengers to wait.

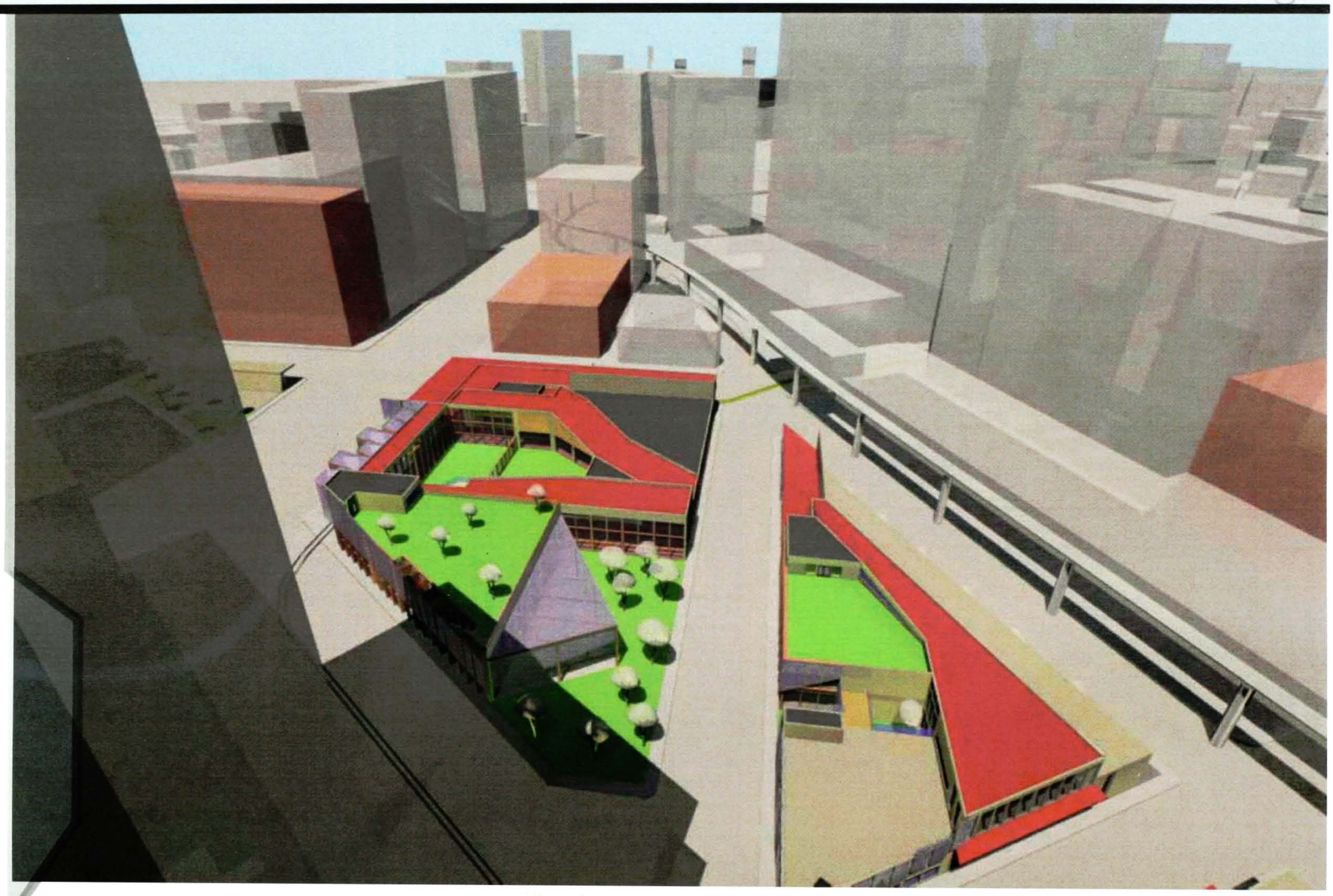


View looking into the courtyard with the outdoor path that connects the day care center to the private interior courtyard.



Interior view looking down a transfer hall path with the interior courtyard to the left.

Interior view from the day care center looking into the transfer hall.



View from an adjacent office building showing the fifth elevation of the transfer hall.

View from the transfer hall to an adjacent building within the site, which utilizes the metal screen element as a façade.

Conclusion

Conclusion

Following the theoretical "work up" process, which entailed research into past and existing conditions of Detroit, observation of other architectural works that touched on aspects relevant to my thesis, and analysis of studies referencing movement, space, and time, my thesis paper developed from an culmination of a multitude of ideas, facts, principles, and examples. Of the information that was drawn from other individuals, the points of emphasis, which I found significant for readdressing the public realm and developing Detroit as the event, I used to open many new avenues of exploration into my thesis. This novel information allowed me to dive deeper into my thesis proposal, thus developing my own conclusions and additions to the paper and program.

While some of these critical points found in my thesis paper stemmed from the stimulation of others, many were drawn from my own knowledge of Detroit and its history, fascination with movement, and an ability to incorporate theoretical elements into an architectural design. In this respect, I was fortunate to create a thesis, which I had some awareness about and that I was truly interested in. I personally would like to see the public realm of Detroit redefined and readdressed. I do think that Detroit is comprised of many discontinuous, one-dimensional events and I would embrace the changes required to develop the city as an event. Finally, I do think that an innovative form of movement is needed to link the current forms of transportation, the city, and the individuals together. To me, a transfer hall, similar to the one I designed, that serves the multiple functions of linkage and transitions is a promising answer to many of the problems seen throughout Detroit.

As stated before, I feel that my thesis proposal that I developed was carried over into the design and development phases of my program. The transfer hall employs many of the critical points of my thesis and these characteristics are prominently observed. I investigated several architectural design theories that related to SpacEvenTime. The theories that were of the greatest interest were those that united spaces, either inside and outside or adjacent spaces, to each other. The `Klein Bottle' diagram was one that focused on the spatial transformation of a surface into a whole and it was the deformation of this diagram that I applied to my transfer hall. For my purposes, the diagram connected the individual

to both inner and outer spaces. As a result, the architectural plan is influenced by this diagram and serves my thesis by linking the individual to the space and event of a one-terminal concept.

From this simple diagram I also developed a complex folding action that is seen throughout my thesis and program. Through folding, the transformation of the surface into the whole allows for natural air and light to penetrate into the structure. This action also forms a transition or a unity between the building and its function within the city. For example, as seen in my program, the overhang from the people mover adjacent to the site becomes an extension to house the busses. Within the transfer hall, people will feel a connection between the inner space and the outer environment through sight lines. This is because the continuity of surface, between ground and the ceiling within and outside the transfer hall allows for an individual to vary their perspective and view their destination by lines of site instead of through mental images.

The fifth elevation of the building is also utilized to readdress the public realm, while linking SpacEvenTime. The large amount of green areas enclosed within, present on top, and seen around the site blur and transition the interior and exterior spaces. This is in addition to unfolding the program into the cityscape. To further the need for the fifth elevation, while exploiting the fact that my transfer hall is among the shadows of the many surrounding high-rise building, I purposed to build additional high-rise buildings adjacent to my site. This area will then become even more of a valley that pauses movement of the city and will strengthen this site as one that is consistent with my thesis.

Along with differences in heights, sight lines, and unfolding elements, population density surveys help to develop the locations and pathways between programs. Investigations of waiting times and transfer percentages were used to identify the locations that are suitable for programs that allowed for fast movement, as well as those that caused a pause in movement, such as restaurants, stores, service utilities, and storage lockers. The program further relates to the issue of fast movement vs. slow movement into the floor plan. For example, the use of the coffee bar can display slow movement as an individual sits down to relax and also, fast movement, as the individual grabs their purchase on the go.

Analysis of these studies strengthens the locations of these programs within the floor plan. Finally, the incorporation of an elongated staircase into the design also demonstrates the connection between movement and position. The staircase acts as a ramp to slowly change the perspective of the individual in the transfer hall and then out into the city. This slow rise causes the individual to loss awareness of their vertical location, while in motion.

While many theoretical ideas, facts, principles, and examples that were redefined and readdressed in my paper were also successfully employed into my building, some of the aspects of my architectural design process could have been taken further. A concept that I could have taken one step further dealt with the proposal of the adjacent high-rise buildings. The next step would be to design each building's entrance location to ensure that my transfer hall is able to unfold into the city by first transitioning into the surrounding context. Furthermore, in order to better unfold into the neighboring conditions, more attention should have been brought to connecting the greenery of my site to greenery nearby.

My lack of precise connection to the two adjacent people mover stops was another issue that I did not fully address. While the site that I selected was near two stops, there could have been more emphasis place on the direct connection between the two. However, this was an unseen short-coming because if the method of transfer between the different modes of transportation is not easy and efficient, it will not be used.

The incorporation of the personal automobile into my program is another issue that I could have taken a step further. An aspect of my thesis did focus on decreasing or eliminating discontinuous elements and events, while at the same time developing linkages and transitions. One of the discontinuous elements that I did identify was surface parking lots and another was the personal automobile. Through the development of my program on the site of three adjacent and highly used business parking lots, I now think that I too quickly tried to eliminate two identified discontinuous elements. I ignored the findings of my program precedent analysis and dismissed Detroit's dependence on the automobile. With the current circumstances and attitudes being what they are regarding the car, it would be better for me to gradually

eliminate Detroit's dependence as a means to provide for my programs success. Additionally, a car rental could be incorporate into my program. This program would be available as another option to link individuals to the city.

Given any other city, like Chicago or Los Angeles, the notion of this type of program failing would never be addressed. However, given the city of Detroit, the notion of a transfer hall being a success is highly speculated against. Along with questioning the program and the thesis proposal of redefining the public realm, the location of my site was also addressed. During the final critique, the re-location of my current site, found near the business and entertainment realm, was proposed to be move to a site that would serve more of its immediate audience. If my thesis in general is successful, thus my program will be successful and the location of site will be of far less importance. This is because my program would connect the surrounding suburbs to the city, thus linking SpacEvenTime on a large scale. There would be an equal balance of individuals working in the city and living in the suburbs with those who work in the suburbs and live in the city utilizing the light rail and bus systems. Transitions and exchange would occur effectively and efficiently on a 24-hour basis. Additionally, there would also be an equal transition and exchange apparent in the city for individuals who both live and work in Detroit. The conflict and mere importance involving site selection will be resolved because the means of movement seen in and around the city would be representative of extraordinary methods of transportation.

Personally, my vision for Detroit and its current status of transportation is hopeful. I believe that more than adequate movement throughout the city will result from improvements in the current bus and people mover systems and that an innovative form of movement, as seen in the proposed light rail system, will link SpacEvenTime. Finally, the theory that supports a redefined and readdressed public realm can materially construct a transfer hall that utilizes the theoretical elements of unfolding, site lines, varying heights, and the differences between slow and fast movements.

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