



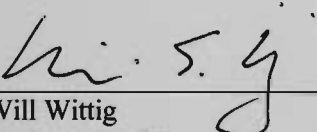
UNIVERSITY OF DETROIT MERCY
GRADUATE SCHOOL
MASTER'S PROJECT

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF ARCHITECTURE

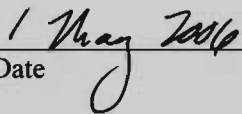
TITLE: Historical Cultural Memory Celebrated Through Architecture

PRESENTED BY: Philip Peters

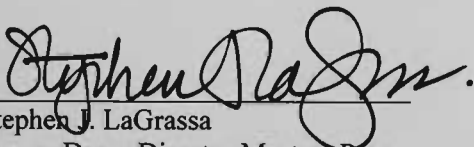
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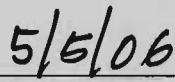
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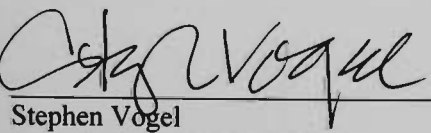


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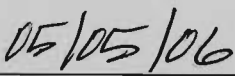


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Date

Historical Cultural Memory Celebrated
Through Architecture

by Philip Peters

Masters of Architecture

The University of Detroit Mercy School of Architecture

AR 510 & AR 520

Assistant Professor Will Wittig

1 May 2006

*A special thanks to all of those who helped me get to where I am
today, especially my parents, professors and classmates.*

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Thesis Abstract

History is important in all aspects of life because without remembering the past, society cannot advance. All original thoughts are on some level dependant upon something that has happened in the past. The present condition of any area is inherently influenced by past decisions and events. Responding to this sense of memory does not require the construction of a museum or a memorial. Every building created today has a relationship to past architecture on some level, which could be celebrated regardless of the building's program. Any building site can be thought of as a palimpsest. As sites are transformed through time, traces of past stories and human inhabitation are inevitably left behind. These traces could serve to influence the re-designing of place, which could then be understood as simply another step in a continuous transformation

Buildings are part of the cultural fabric of a community. Architecture can transform ideas, needs, and desires into space. It can capture fleeting or insistent memories into tangible, buildable forms. "Memory creates a unique relationship with space, holding on to the essence of it and letting the rest of the details fade into gray" . Architecture represents the history, tradition, and culture of a specific community. Memory has a fundamental role both in the transformation and in the preservation of cultural manifestations. A site that has, or had, a rich cultural history has the potential to be amplified through architectural intervention.

The objective of this project is to design a building that successfully respects and recognizes its surrounding site while subtly expressing historical or cultural memory. Obviously, an in-depth study of the site is necessary to make a successful building that "fits in" the context, such as observing building styles, heights and forms, roads, sidewalks, public transportation, in addition to historical conditions.

Thesis Paper

Historical Memory Celebrated Through Architecture

History is important in all aspects of life because without remembering the past, society cannot advance. All original thoughts are based on something that has happened in the past. Remembering history is what prevents people from making similar mistakes others have made in the past. Remembering history is what makes us advance in all parts of life. The history of a place should not be forgotten either. The present condition of any area is inherently influenced by past decisions and events. However, does it have to be kept in a library or a museum? The history of any site can be celebrated through architecture itself. Architecture reflects culture at each moment and in fact cities are a kind of informed record of our own history, including in some cases, our lack of respect for our own story. Can a building design be influenced by an area's cultural history?

History is in fact interpretive. No matter how one looks at a situation, each person's perspective will indeed be unique. Therefore, all research is generally interpretive. Interpretive-historical research requires "searching for evidence, collecting and organizing that evidence, evaluating it, and constructing a narrative from the evidence that is holistic and believable"¹. Throughout the process, interpretation is the key. If a chair is broken it is a fact, but many interpretations of how the chair became broken could arise depending on the interpretation of evidence and the perspective taken in narration. History is the on-going evolution of a communal consciousness or togetherness. Each person is part of something larger that he/she does not realize most of the time. Historical narration is always interpretive and from the "outside". No one can say the 30 Years War until you witness it outside of the events and then 'narrate' the term². History is intertwined with memory.

Memory is past history that is remembered. Memory is usually associated with objects, places and people. Collective memory is what a group or a society remembers about the past. "One could say that a city is a collective memory of its people, like memory is associated with objects and places"³. Cultural memory relates to history as well. "Our buildings and towns express our values and aspirations, and provide one of the primary means by which we visualize ourselves and our society. Allowing a little exaggeration, we are our buildings, and our buildings are us"⁴. Memory has a fundamental role both in the transformation and in the preservation of cultural manifestations. Memory and history relate directly to architecture. A place that has, or had, a rich cultural history has the potential to be amplified through architectural intervention.

Architecture can transform ideas, needs, and desires into space. It can capture fleeting or insistent memories into tangible, buildable forms⁵. Architecture represents the history, tradition, and culture of a specific community and memory has a fundamental role both in the transformation and in the

preservation of cultural expressions⁶. "Memory inspires us to create a fleeting vision from a dream or from our waking moments. As that yearning and nostalgia for the visual and invisible past flare up, they form and enrich our present"⁷. Architecture is a medium in which a person can create and express something. Architects create buildings remembering past examples (both good and bad). Every building created today has a relationship to past architecture on some level. The condition of an area in the present is a reflection of the decisions and events that have happened in the past.

Buildings are part of a cultural fabric of a community. They can symbolize a moment in time and/or a past memory. Architecture provides the stage on which we can enact our lives. However, it is memory that "creates a special relationship with space, holding on to the essence of it, the best and worst, letting the rest of the details fade into gray"⁸. Memory can shape the way an area is built. Through time, any area can be thought of as a palimpsest.

Palimpsest originally referred to something reused or altered but still bearing visible traces of its earlier form, such as old parchments. The term today is being used by architects and historians more and more. For example, if one sells his home and visits it a few years later, it will undoubtedly be different but certain things will reveal past memories. Any site is a palimpsest to some extent. Buildings from different time periods merge to form cities. Cities and their artifacts are dynamic systems undergoing constant change. Rome is maybe the best example of this. Structures from centuries ago blend in with some that were built only a few years ago. Even modern cities are palimpsest, comprised of remnants from earlier landscapes, always susceptible to erasure or brought into different relations with emerging structures (such as Los Angeles, New York, even Las Vegas.). The concept of palimpsest is a useful way of understanding the developing complexity of culture, as previous inscriptions are erased and overwritten, yet remain as traces within present consciousness metaphorically.

Using these ideas of history, memory and palimpsest can influence the re-design of a specific site. Understanding the transitions of a site may help to create more effective and better architecture. The existence of a defined building site is always taken for granted in contemporary architectural design, yet attempts to understand the reasons underlying its definition are surprisingly rare. Many designers see no need to actually visit the sites for which their designs are intended. Abstract space is a conceptual symbolism of site that serves instrumental interests⁹. Many designers limit themselves to the borders of site plans and forget about the true overall picture. Where do boundaries begin and end? Understanding a site in a very large context can never hurt. By receiving the information, the designer can then interpret and filter what is

important. Every site is inevitably defined by physical objects (buildings, gardens, lots, etc.) but those objects are what make every site unique. The idea that a site is defined by a physical context that "pressures" the designer into accepting nearby materials and lines of definition as those of his own leads to a loss of site identity since every true boundary is two-sided, a joint or a connection between two different things¹⁰.

Connecting new architecture with its surrounding site is essential. However, it is just as important to embrace the physical connections between new and old architecture, through materials, style, and memory. Carlo Scarpa is considered one of the masters in dealing with connecting past with present. His masterpiece example is the renovation he did at Castelvecchio in Italy. Scarpa recognized the problem in relating new with old and made it his mission to base his overall design of Castelvecchio on these details. He once said, "The problem of historical materials, which we can never ignore but can't imitate directly either, is an issue that has always concerned me...I've had nothing but trouble from planning rules in Venice and the bureaucracies who interpret them. They order you to imitate the style of ancient windows forgetting that those windows were produced in different times by a different way of life with 'windows' made of other materials in other styles and with a different way of making windows. Anyway, stupid imitations of that sort always look mean"¹¹. He truly understood the problems of adding on to historic building with respect. The way he chose to restore Castelvecchio was to try to keep as much of the old as he could while expressing all connections between old and new materials. The critical approach used in the restoration work distinguishes between ancient and modern. The ancient is rigorously respected and highlighted where possible; the damage of time and man has been repaired, but work kept to a minimum. The modern has been used only when strictly necessary to the restored whole, and the architecture of our time has in this case been used unhesitatingly but with constant concern to compose old with new and to create thereby a harmonious whole¹².

The objective of this project is to develop a site that successfully respects and recognizes its physical and temporal context while subtly expressing historical cultural memory. The site needed to have physical traceable lines as well as a rich history. Many of the sites considered were rich with industrial history but one stood out above the rest. The site chosen for the thesis project not only had a rich industrial history but also an agricultural heritage. The site is in Detroit located on the Detroit River between Meldrum Street, East Jefferson Avenue, and the MacArthur Bridge. The site was first inhabited by the Native Americans because of the access to the river. They met and traded goods on the banks of what we call the Detroit River. Some of the trails they made became streets that are still around today, such as Jefferson and Gratiot

Avenues. Cadillac and the French then settled there in the 1700s, setting up trading posts recognizing the advantages of the straights. They built slender ribbon farms to give everyone access to the river (to irrigate crops and make a decent living). These farms formed the first street pattern layout and, on the east side, the grid is still used today. By the 1800s, British and Native influence passed and the city grew. The area then became a town leading toward low-tech industry. The automobile industry was one of the many businesses that set Detroit apart from other cities. The thesis project site held many different industries, such as rubber factories, gas companies, bicycle manufacturing, stove and furnace makers, iron mills, and automobile manufacturing. The site is most commonly called the former Uniroyal site because of the enormous factory that once stood there. As Detroit was formed and grew, the site boomed and river's edge was pushed further out. Factories and mills were being built so fast that land had to be added to accompany Detroit's growth. However, the industrial success was short lived. Business began to close and building became either abandoned or demolished. Today, the former Uniroyal site is a brownfield with no inhabitation (except for possibly a few homeless). The site is a literal 'erasure' of a post-industrial condition. Through ideas of palimpsest and historical cultural memory, the site could once again serve as an important part of Detroit life. The present day needs of the area and the revealing of the site's history must be harmonious.

The historical cultural memory can be celebrated both programmatically and visually. The revitalization of the site should reveal the transition of an agricultural site to an industrial site. Also, the river's importance should be emphasized since it is the main reason each civilization settled here. The river was used by the Indians and the French for agricultural reasons and then the industries used it for exporting and importing their goods. Drawing from these past memories is one part of the design process, but relating to what is currently there is also essential. All that remains on the site today are two dilapidated abandoned buildings. Both should be either restored or otherwise celebrated. Like Scarpa did with Castelvecchio, I want to keep as much of the old structures as possible without hindering what the new buildings want to be. However, wherever and whenever old and new come together it must be harmonious and fluid.

Programmatically, a master plan of the entire site with mixed uses will be proposed. However, the main area of focus will be a thin strip of land (related to the layout of the French ribbon farms) where the program can directly relate back to the history and serve the current needs of the larger area. For instance, a bicycle shop would relate back to the old Morgan and Wright Bicycle Corporation once located on the site, while a market would relate to both the French farms and a need of grocery for residential units being put in.

back to the history and serve the current needs of the larger area. For instance, a bicycle shop would relate back to the old Morgan and Wright Bicycle Corporation once located on the site, while a market would relate to both the French farms and a need of grocery for residential units being put in.

The thesis project is not an end solution to the problems of this site. The project is another phase or proposal in the continuous transformation of the site. Thirty years from now, what will the site then want to become? The site will adapt naturally, but is there a way to design for future purposes? When the project is gone, what do I want to remain and be remembered?

The key goals for the project are to celebrate historical memory through architecture (by using ideas of palimpsest), create a harmonious design linking past, present and future, and to restore the river's importance to the site. Every other design consideration should be influenced by or at least indirectly support these main ideas.

- 1 Groat, Linda and David Wang. *Architectural Research Methods*. Pp. 137.
- 2 Danto, Arthur. *Narration and Knowledge*.
- 3 Rossi, Aldo. *The Architecture of the City*.
- 4 Gelemer, Mark. *A History of American Architecture*.
- 5 Bastea, Eleni. *Memory and Architecture*.
- 6 Bastea, Eleni. *Memory and Architecture*. Pp. 99.
- 7 Bastea, Eleni. *Memory and Architecture*.
- 8 Bastea, Eleni. *Memory and Architecture*.
- 9 Leatherbarrow, David. *The Roots of Architectural Intervention*.
- 10 Leatherbarrow, David. *The Roots of Architectural Intervention*.
- 11 Murphy, Richard. *Carlo Scarpa and the Castelvécchio*.
- 12 Murphy, Richard. *Carlo Scarpa and the Castelvécchio*.

Sketch Problem

University Dormitory Design

DETROIT, MICHIGAN

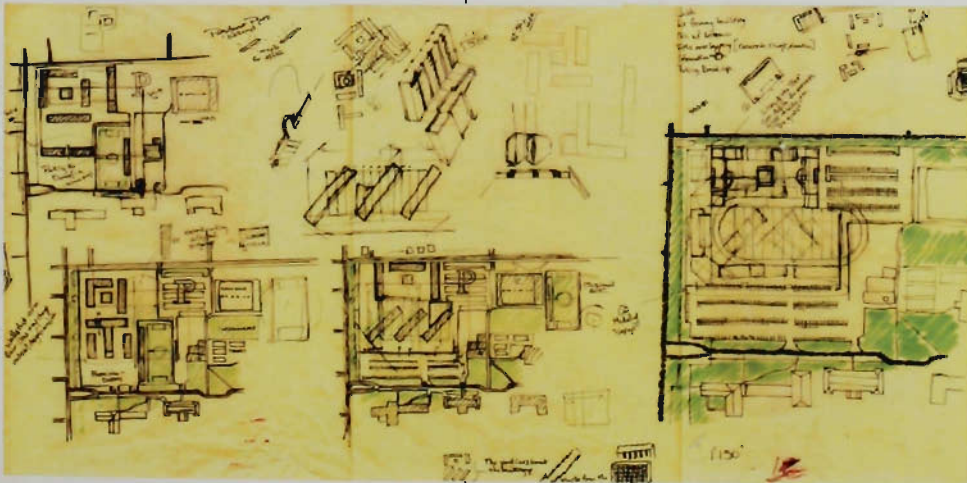
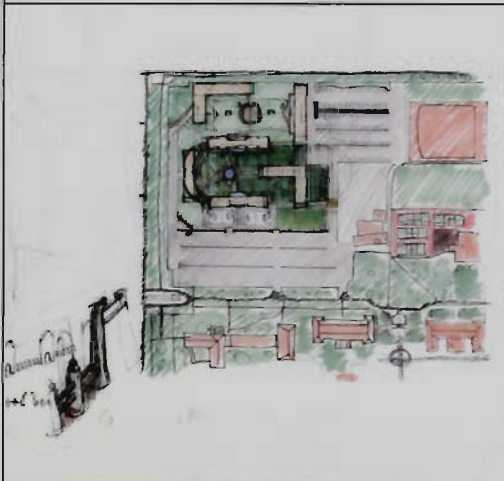
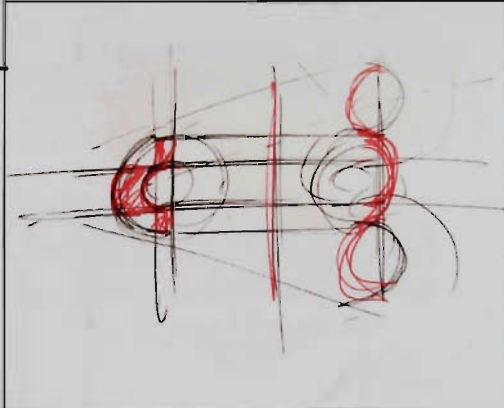
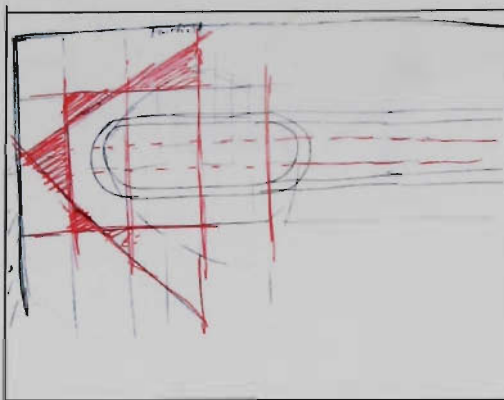
Project Information

The sketch problem was a first attempt to become familiar with the thesis ideas. The project was to create a dormitory re-design for the University of Detroit Mercy McNichols campus in the northeast lot. The project had to be designed based on the ideas of palimpsest, cultural historical memory, and historical lines. The goal was to create a re-design that was influenced by the past conditions but did not memorialize or re-create an old condition.

The site began as farmland. When the University moved there, they built the football stadium in the northeast corner. Today, the area is a parking lot and contains a soccer field. Using these layers of history, I tried to find interesting spaces to create the dorm buildings. The U-shape that the stadium once had made sense to re-create for a dormitory atmosphere. Buildings could face each other making nice outdoor public areas.

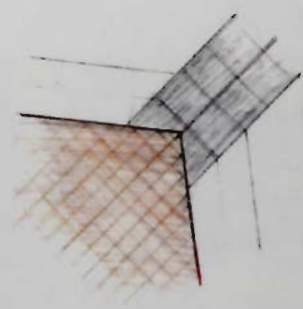
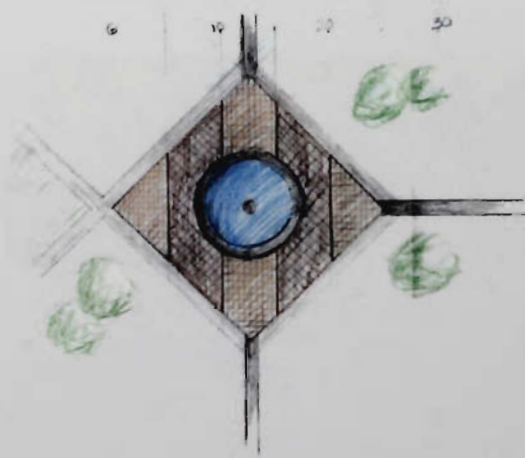
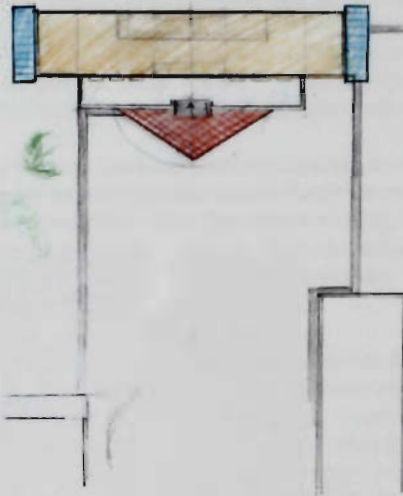
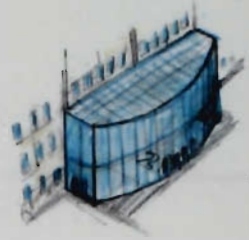
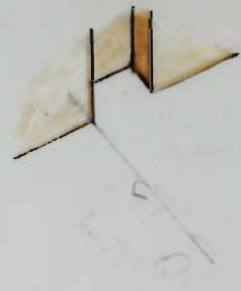
The sketch problem was not a complete success as far as a design but it did teach me a few things. First, not all historical lines are important. For instance, where the 30 yard line does not really matter. Secondly, the design should not be hindered by the historic lines. Thirdly, the actual lines are not the most important thing necessarily. How people engaged the site and moved through the area may re-create how people move through the site once again. Finally, the decisions made for the thesis project should be subtle and expressive.



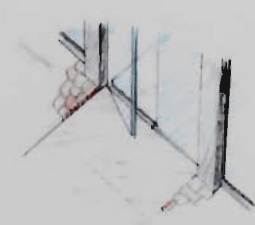
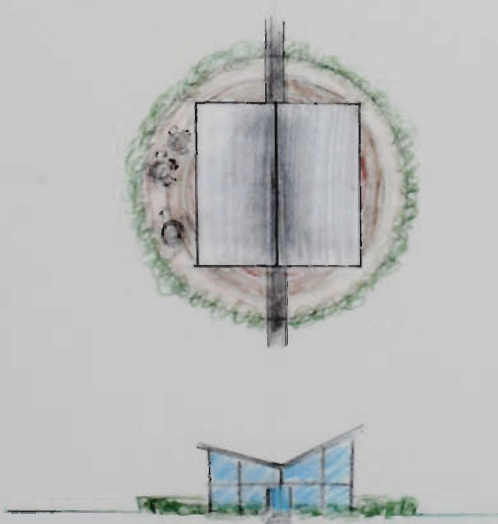
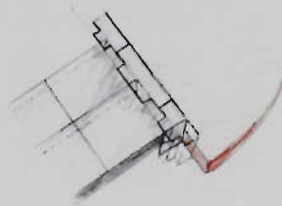
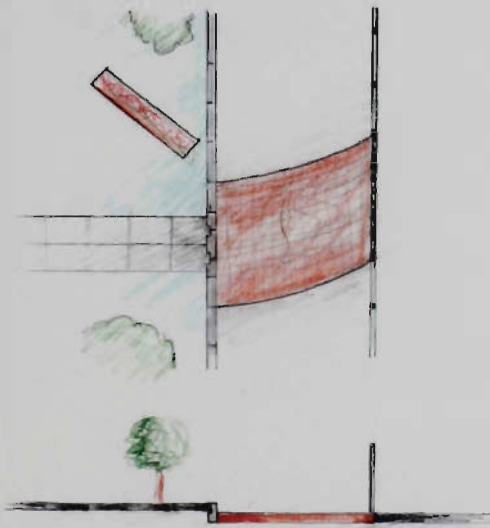
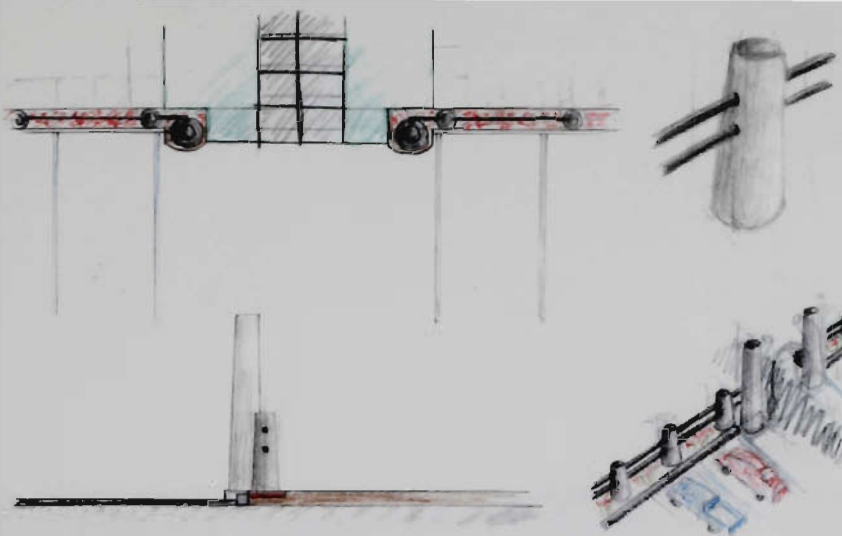


The top two sketches were finding axes that may help organize the buildings. The third drawing is a sketch of the masterplan. The last image is a few sketches that played with different organizational ideas for the masterplan.

Details



These details each show a way that the past lines re-create an area. The top image shows a building that notches out where the football field lines used to be. The second building's porch and pavers reflect where the soccer field used to be. The last image shows the fountain area created through past axes.



The first two images show landscape and path decisions based on historic lines and movements. The last image is an student lounge and information center located where the old soccer midfield existed.

Precedents



St. Mary's Church Conversion

KLAUS BLOCK ARCHITEKT
MUNCHBERG, GERMANY
1998

Project Information

St. Mary's Church was originally a medieval Prussian church in the city of Müncheberg, Germany. Today, it is much more than an old Gothic church. It serves many functions and is one of the most unique adaptive re-use projects ever done.

After the church was ruined in the Second World War, Schinkel brought it back to life by inserting the town library into it. Klaus Block won the competition to restore the church by turning it into a space of both temporal and spiritual uses.

Klaus Block Architekt's radical proposal included creating a huge new form in the old nave making the old chancel the church proper. The temporal part of the new building is contained in a curved structure independent of the old work. "Its ash slatted walls evoke the side of a ship"¹. The word 'nave' in Latin is literally vessel, making the form of a ship inside the church quite metaphorical. This ship-like structure is four stories high, containing the library, community office, council chamber and storage, bathrooms, etc. The old chancel now acts as the place of worship, concerts, and public meetings.

The "new ship" is structurally separate from the old church. The stairs serve as the link between the old and the new, along with bridges that "fly across the voids over stair flights to meet the beautiful old (Schinkel-restored) slender brick Gothic mullions over the nave windows"².



Project Importance for Thesis

The way this project deals with history and memory directly relates to the thesis study; more specifically, the connections between new and old, the separation of functions, and relationship of old style and material to new style and materials.

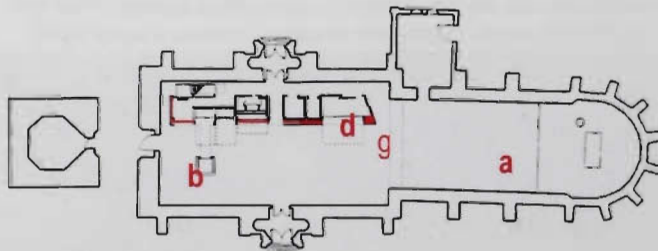
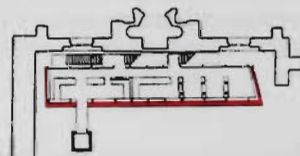
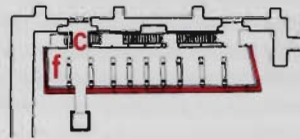
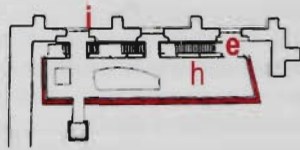
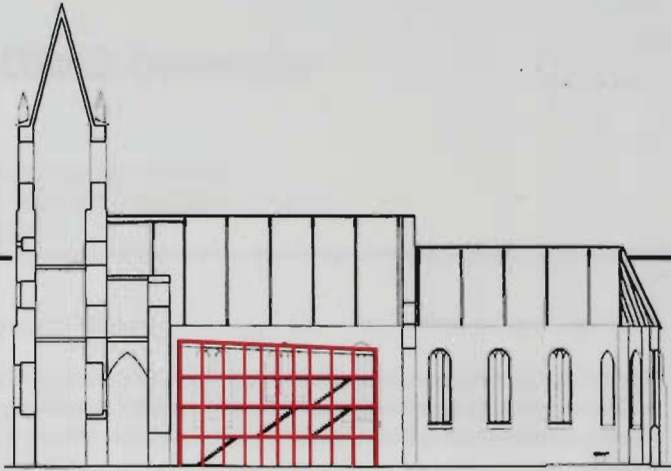
Strengths

Though the thesis focus is not an adaptive re-use project, some ideas related to motivations behind adaptive re-use are relative to the thesis (the importance of cultural history and memory, connection of old with new, relationship of new and old materials, etc.). The conversion shows that the building was important enough that the community wanted it to not only remain, but serve a significant function for their community. The way the architect celebrated the connections showed sensitivity to both old and new. For example, keeping the new structure completely structurally separate from the old is very delicate. The bridges that span to the beautiful old brick Gothic mullions emphasize their detail. Connections like these are essential for good design when dealing with old and new materials. The way the architect separated the functions (dealing with spaces, acoustics, thermal issues, etc.) is sound. The complete separation (connectively) emphasizes the separated functions, new and old, and metaphorically.

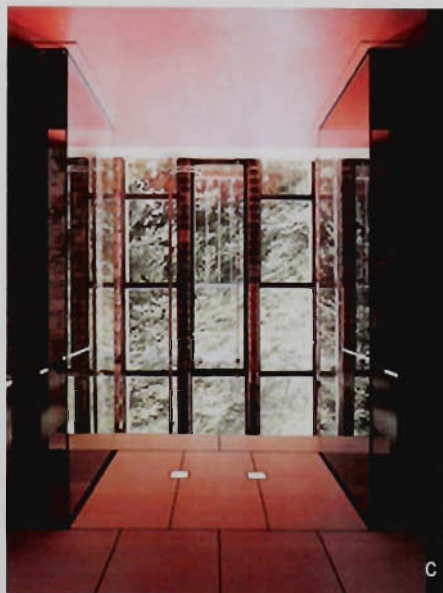
Weaknesses

The functions seem too disconnected by separating them structurally, visually and spatially. It is almost like one building being encompassed by another. The ship-like form may also be too literal of a connection to the origin of the word 'nave'. It is an unique, metaphorical connection, however, it seems slightly forced.

Plans & Sections



(Top) Section
Top Floor
Second Floor
First Floor
(Bottom) Ground Floor



The new addition is a light, slotted wood structure that appears heavier than it is actually. The materials used in the addition are clean and new in comparison to the old materials.

Connections



The wood addition blends well with the old brick. The architect responded well to the opportunity to relate the new facade with the old, bridging the two spaces and taking great care in connecting the two.





Details



Klaus Block
Architekt did a very
good job in the
subtleties, such as
the delicate way
they dealt with the
old gothic mullions
of the church with
new materials.



Castelvecchio

Castelvecchio

CARLO SCARPA
VERONA, ITALY
1964

Project Information

The Scaligeri residence of Castelvecchio was originally opened as a museum on April 25, 1926 and stayed open for almost thirty years. Carlo Scarpa was hired then to plan a restoration and rearrangement of the museum portion of the Castelvecchio. Scarpa worked on the project from 1957 until 1964.

Licisco Magagnato, who hired Scarpa, said about the redesign, "The ancient is rigorously respected and highlighted where possible...The modern has been used only when strictly necessary to the restored whole, and the architecture of our time has in the case been used unhesitatingly but with constant concern to compose old with new and to create thereby a harmonious whole". Scarpa only wanted to add what was necessary to restore the museum and celebrated every connection¹.

Project Importance for Thesis

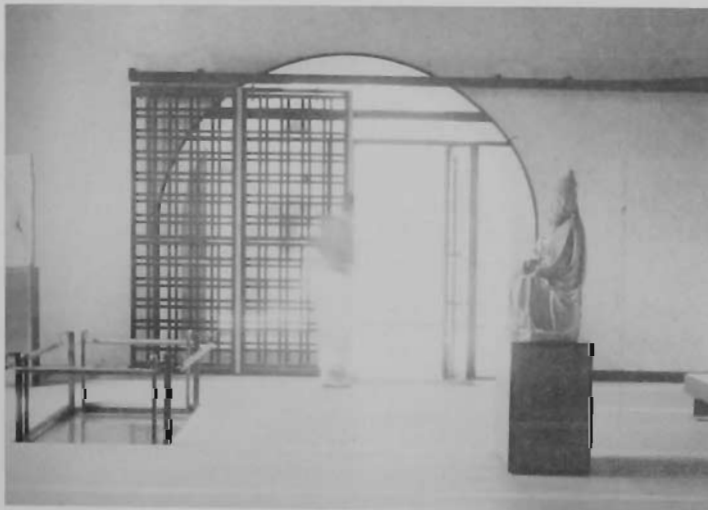
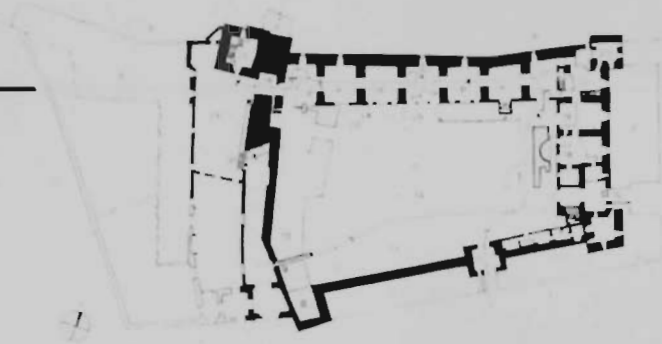
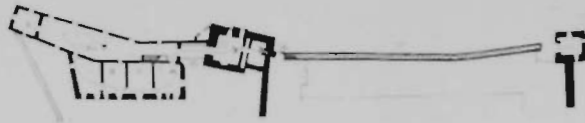
Scarpa's Castelvecchio is a restoration project that successfully deals with the issues of respecting the history of a site with modern changes. Scarpa's brilliant work shows other architects examples of how to embrace connections of old and new materials. Scarpa's attention to detail is the most valuable correlation between Castelvecchio and the thesis.

Strengths

Scarpa connects the old and new with great thought and precision. His goal was to keep as much of the old structure as possible and delicately adding his additions. Some decisions he made were bold, such as removing part of the roof to allow light into the Cangrade space. He proves it is not always best to "build around" the existing structure in a renovation/restoration project.

The museum adding Scarpa's drawings show how artistic he was in his design. Overlaying sections on top of plans allowed him to get a true sense of the space he was designing. The drawings show relationships between the observer and the space, the effect of light and shadow, and the construction details.

Scarpa's attention to detail was carried throughout Castelvecchio, from the entrances and stairs to the structures that hold the sculptures. The use of materials and style remain constant throughout the building making the connections between old and new consistent but still, each connection is designed uniquely.

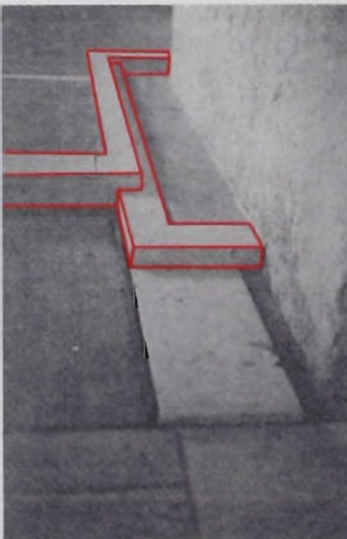


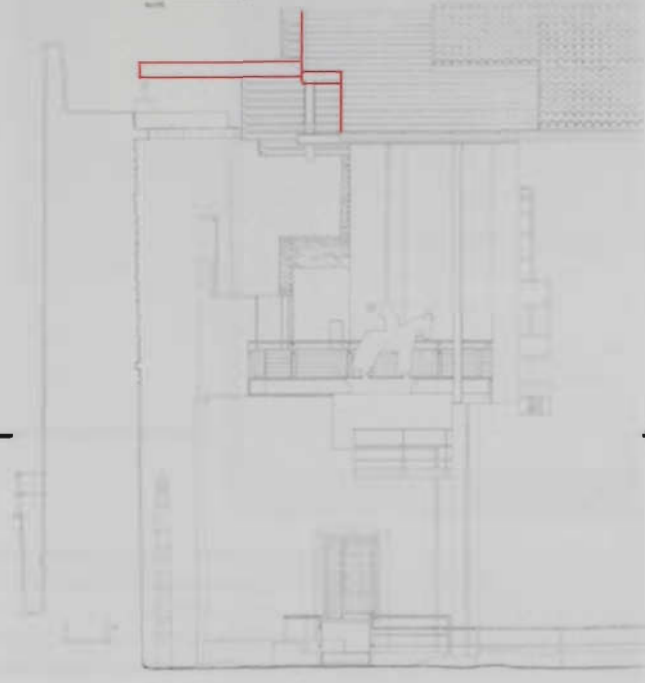
The first image contains floor plans of Castelvecchio. The second image is an aerial view of the site. The last image is the gallery room showing the exit door and sliding/folding internal security screen (showing Scarpa's attention to detail).

Details



At the top is a detail of an old wall connecting to the new floor. The Cangrande space in the middle is showing where the roof has been cut back allowing light into the space. At the bottom is a detail of the paving edge at the threshold between the entrance room and the sculpture gallery.





The top image is a drawing of the Cangrande space design. The lower image shows rough and smooth Prun stone on the exterior of the Sacello. Also, the Napoleonic wall construction exposed on the main facade

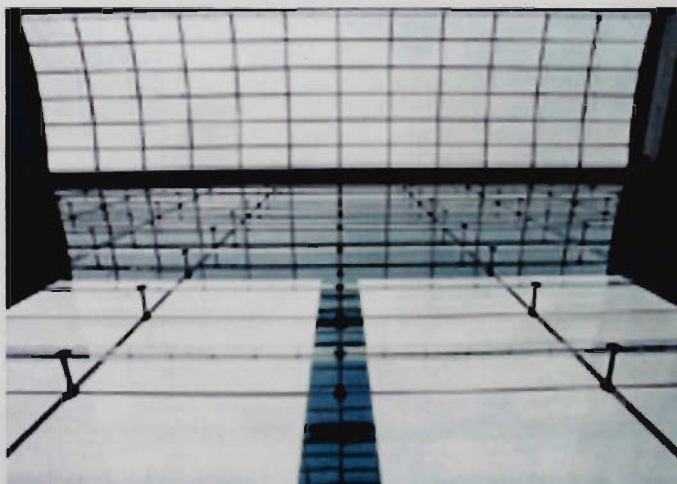
Lichthof Facade and Roof

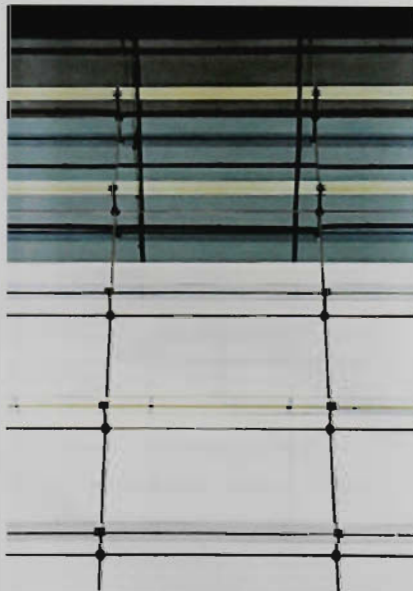
MÜLLER REIMANN ARCHITEKTEN
GERMAN FOREIGN MINISTRY, GERMANY
1999

Project Information

The Lichthof is the public space of the new German Foreign Office in Berlin. The space is a light-filled courtyard with a glazed roof and facade and is used as an orientation area for the public who enter the building. The space is also used for semi-public and institutional gatherings. "On an urban and cultural level the facade of the Lichthof forms an important boundary through which the public views the Foreign Office, the civil servants view the city, and in which the images of both sides are reflected. The boundary condition and the north-facing orientation of the courtyard are the basic conceptual parameters of the design."¹

The designers took the parallel planes of the deep roof beams and the facade and used the possibilities of reflectivity, transparency and color afforded by various glass coatings and specular metal to ensure that sunlight would be reflected back into the shadow. The entire facade is designed to reflect light into the interior, eliminating shadows and brightening the space. The facade prevents condensation, reflects light and mirrors images. "The superimposition of real and reflected image increases the awareness of the Lichthof facade as a boundary, but it can also be seen as a metaphor for boundaries in general, which relates strongly to the political function of the Foreign Office itself."²





Daytime view of the Lichthof Facade (top) shows the courtyard. The light from the inside is reflected in the blades and the famous Berliner Dom is mirrored in the facade (middle).

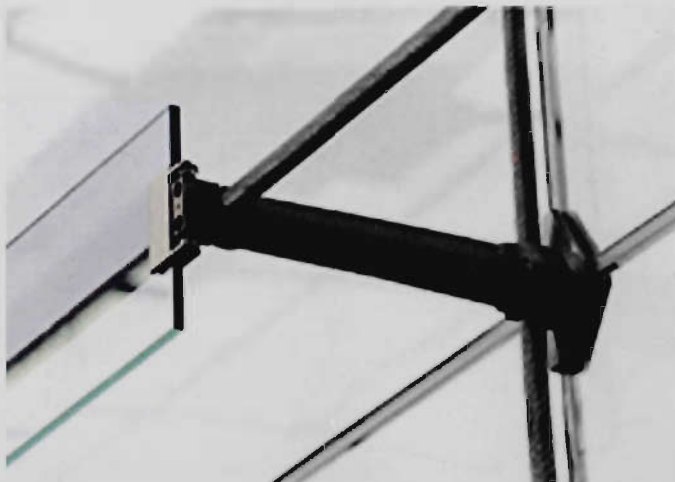


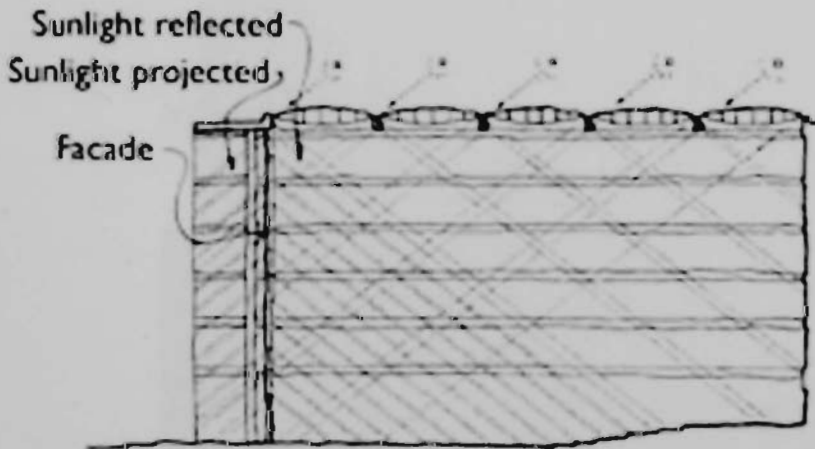
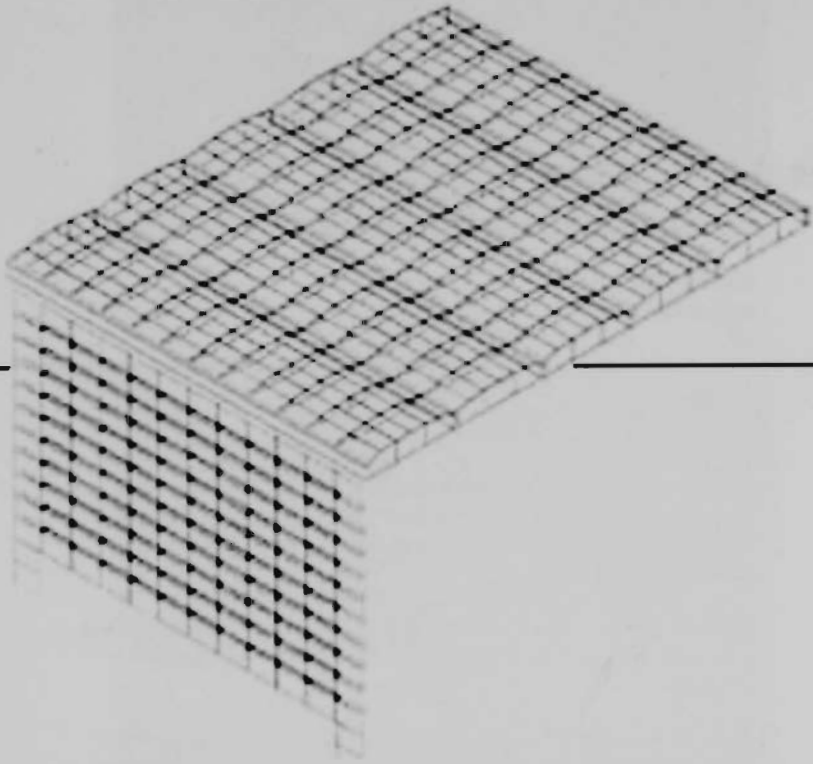
Project Importance

The Lichthof Facade and Roof is one example of how a glass facade and roof can do more than just allow natural light into a space. The bicycle manufacturing shop wants to have a light, glass structure attaching to the abandoned, heavy ruin.

Strengths and Weaknesses

The Lichthof Facade design is very high-tech. The facade and roof maximize the amount of light inside while reflecting rays that are 'blinding'. The facade uses three glass coatings to modulate reflectivity of heat, sunlight and color. The innovative dichroic coatings (shown below), applied to horizontal bands of glass cantilevering from the facade, divide sunlight into two halves creating a field of color onto the facade. However, for the space to function and the system to work, the structure had to be extremely tall, questioning the practicality of the space.





The top image is an axonometric drawing of the roof and facade. The concept sketch below shows the sunlight reflection and projection on the facade.

Sony Center (Potsdamer Platz)

MURPHY/JAHN
BERLIN, GERMANY
2001

Concept for Center by Jahn Helmut

After the World Wars, Berlin looked toward reconstruction. The Sony Center encompasses a new technical vision. It is not a building, but a part of the city. The place is about atmosphere and feeling. Sony Center is a link between reality and a virtual world.

Surrounding Sony Center are the traditional urban streets and spaces. Inside is a new covered, urban Forum for a changing cultural and social interaction of our time.

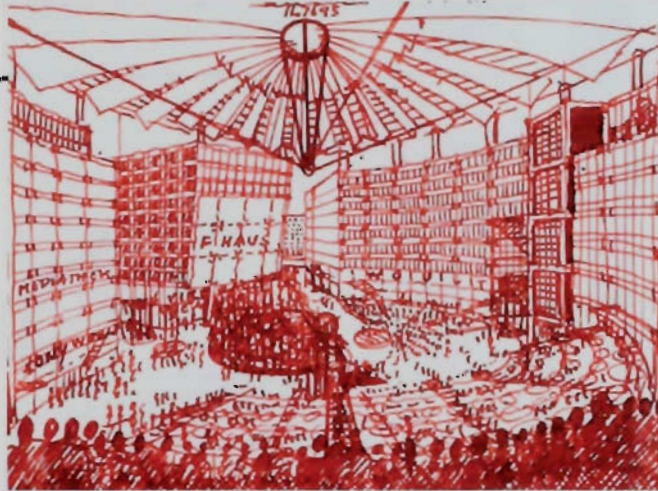
Sony Center is about light, both artificial and natural. It is luminous, not illuminated. Façades and the roof act as a screen, which moderates the natural and artificial light. With its characteristics of transparency, permeability to light, reflection and refraction, there is a constant change of images and effects during day and night, effecting not only the appearance but also maximizing the comfort and minimizing the use of resources. The experience is truly moving.

The vision of public space in the city becomes the Center's primary urban characteristic. Sony Center is a group of buildings composed for the newest age of entertainment and technology. There is a serious effort for tailoring an architecture to the stimulating contemporary confusion of private and public space. Sony Center is a cultural forum¹.

Project Importance for Thesis

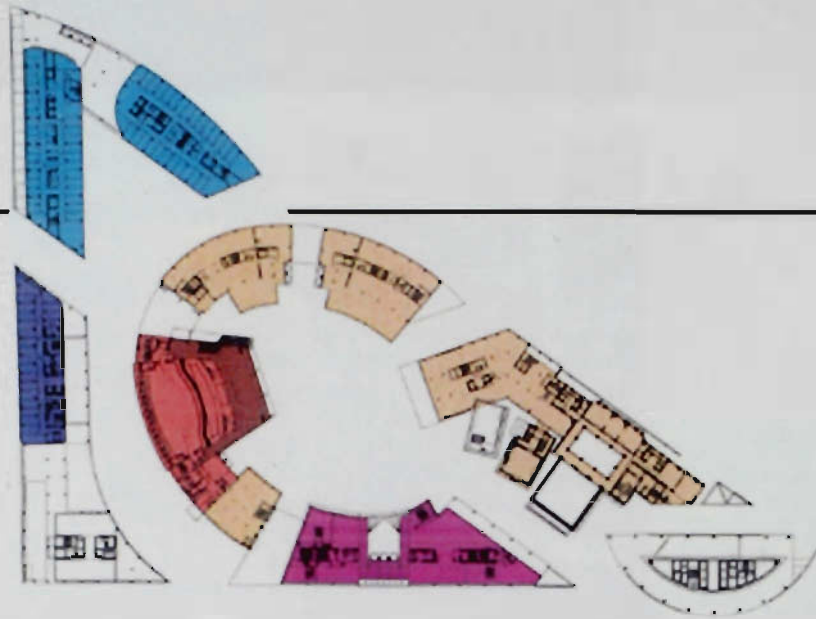
The Sony Center relates to the thesis in a few ways. It is a redevelopment of an area that has been destroyed. An area of the redesign shows relationship to historic facade. The programs of two of the buildings relate to the program (mixed-use buildings combining residential and entertainment).



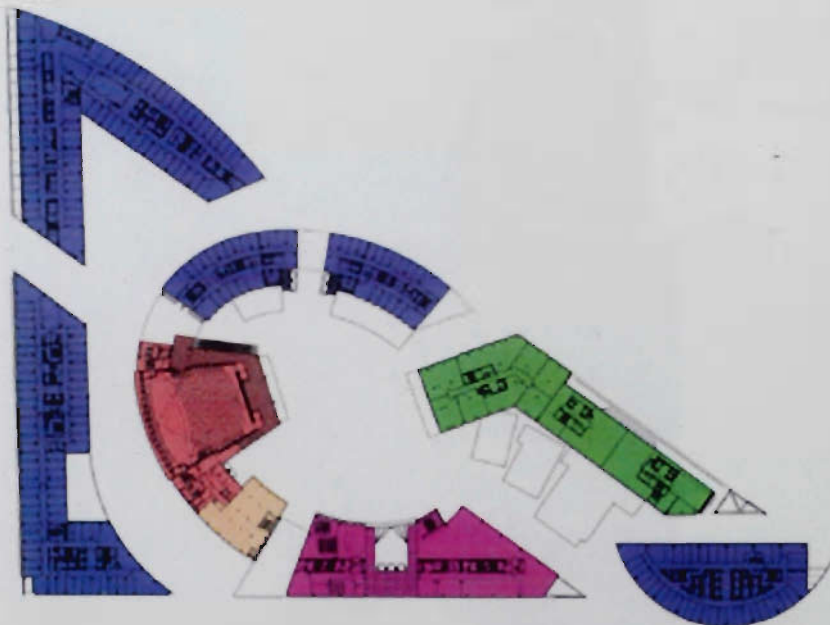


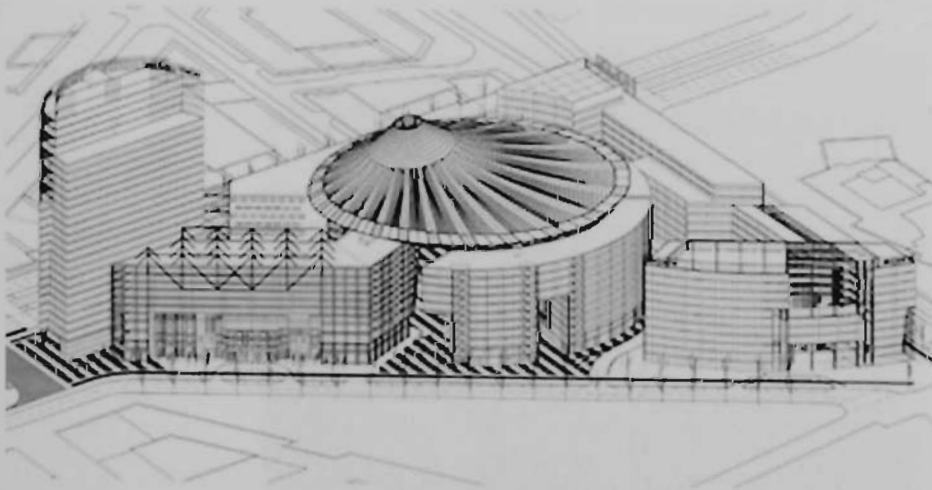
The top picture is an image of the tensile roof structure. The middle image is a sketch by Jahn Helmut of the plaza. The bottom image is a computer animated image of the plaza.

Floor Plans



The top image is the first floor plan of the plaza.
The bottom image is the third floor plan.





The first two images are drawings of the platz. The bottom image is an arial drawing of the platz. Both of these are done by Jahn Helmut.

Sony Center- Esplanade Residence

MURPHY/JAHN
BERLIN, GERMANY
2001

The Esplanade Residence has gone through dramatic change in its history, which the Sony Center redevelopment acknowledged and celebrated. Composing the different eras, the facade changes are collaged and enveloped behind glass. The glass allows for viewers to see the old facade but also is a gentle connection that emphasizes the design decision to celebrate the past of the hotel².

The high-tech bridge creates hanging apartments over the Hotel Esplanade. The bridge is both expressive and functional.

The use of steel and glass is for a quality of transparency. "Entirely rooted in the tradition of 19th century engineering architecture, yet always interested in developing innovate facade technologies, Jahn turns his building inside out, putting the steel frame on the outside. At the same time he envelops them in glass creating weightless interior spaces which acquire a particular experiential quality by addition of light and color"³.





1
9
0
8

The restored historic facade here brings the architectural grandeur of the Kaiser era back to life.



1
9
4
5

In these areas the war damage to the facade marks the most dramatic chapter of the building's history.



1
9
6
0

After the second conversion phase, the appearance of the old Esplanade was dominated by smooth concrete.

These images describe the history that the Esplanade Residence has gone through.



1
9
5
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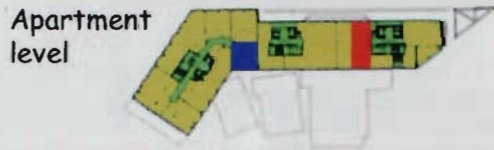
In the post-war period, reconstruction and preservation work gave the Esplanade facade a makeshift appearance.



Residence Info



Ground level



Apartment level

- 2 rooms 60-111 sq.m.
- 3 rooms 116-197 sq.m.
- 4 rooms 227 sq.m.



2 room
3rd-11th



3 room
6th-11th

The Esplanade Residence is composed of 134 condominiums, ranging from 60 to 227 square meters. The building is partially a adaptive re-use or historic preservation project. The design frames the old Hotel Esplanade into a painting. The lower level is full of entertainment, restaurants, and retail shops.



Relating to Thesis

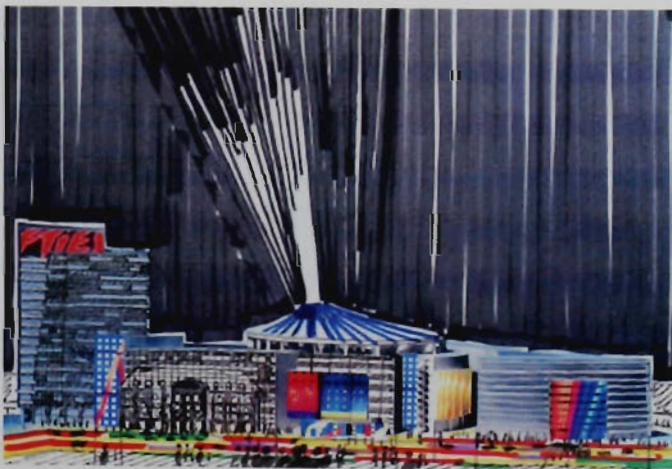
The Esplanade Residence is one example of a mixed-use building that combines residential with entertainment and retail. Spatially, the lower levels function as entertainment while the upper levels function as housing. The project also relates to the thesis through the idea of relating new architecture with old architecture. The connections with the facade of the old Esplanade Hotel is relevant to the thesis.

Strengths

The most successful aspect of the project is the design of the bridge to hang the apartments and encase the facade of the old hotel. The design is bold but very elegant in dealing with past history. The bridge literally links the past with present. The separation of functions is typical, with residential being over the entertainment, but made exciting through the connections and stepping out of the upper floors. The way people interact with the space is very successful through the entire Sony Center. The luminance and reflection/refraction of light awes most tourists and provides an exciting atmosphere for the residents.

Weaknesses

The Sony Center is too introverted, or turned inward. The surrounding area seems to be disassociated from the design. The center seems to be too much of a focal point and does not give much back to the surrounding site. Also, many of the private and public spaces are not separated effectively. People can get access anywhere through the circulation areas in the Esplanade Residence especially.





Forum Apartments



Ground level

Apartment level



- 2 rooms 60-111 sq.m.
- 3 rooms 116-197 sq.m.
- 4 rooms 227 sq.m.



2 room
3rd-11th



3 room
6th-11th

The Forum Apartments are composed of 67 apartments, ranging from 38 to 145 square meters. The building is mixed-use between residential and entertainment. On the floors 1 through 3 is an I-Max theater. Exterior escalators serve as fire exits for the theater. Entrance into the structure is separated for residents and theater participants.



Relating to Thesis

The Forum Apartments is a unique multi-use building. It combines residential with a movie theater. The separation of the two functions is clear visually. The apartments seem to wrap around the sides of the theater portion, which projects out toward the plaza. The connection of theater and living directly relates to the thesis program.

Strengths

The most successful aspect of the project is the views created through the design. The theaters are tucked away so that most of the building can remain glass, giving people on the inside a stage setting where they can watch time pass through the plaza. The separation between public and private spaces is successful. Residents have a different entrance than movie viewers to keep the functions separate. The envelope of the building ties the functions together well (through materials and connections). Also, the materials enhance the luminance of the space.

Weaknesses

The mix of theater and residence is problematic when dealing with privacy, but is possible. However, the brightness and high energy may not be suitable for residential. Of course, the German culture is not the same as the American culture. The residential portion of the building seems to be secondary from some views (like image to the right). The windows and the way the building sets back is weak. Perhaps residential in such a vibrant area should not be directly in the center.



Program

1. Introduction
2. Objectives
3. Scope
4. Methodology
5. Results
6. Discussion
7. Conclusion
8. References
9. Appendix
10. Glossary
11. Index

Program Description

Design Intent

The overall program for the thesis incorporates four different buildings with various uses: an interpretive museum about the site, a bicycle manufacturing shop, a market/bicycle stop, and a marina. These spaces were chosen to relate future programmatic uses with the site's historic uses (manufacturing plants, agricultural land, etc). The site in a larger context will include a master plan of commercial/residential and retail/residential buildings. The program, as well as the design, should be considered another step in a continuous transformation of the site.

Past History/Future Plans

The site has many past lives that could influence the building design. The French finger farms were an important part of the site's history. The site then began its transition into a town. Then, low tech industry began, which would ultimately spark the growth of Detroit. The spark lasted a while but came to a disastrous halt, turning the site into a brownfield. Now, there are proposals for a state park on Detroit's Riverfront, including this area. This site's lost narrative is a focal point for the thesis design. How can these different functions influence a building? Can the program have some sort of relationship to the historic narrative? The idea of storytelling is so important to this site that it should be incorporated in the function of the building. A book store could suggest the idea of storytelling. The idea of work is also important to the history of the site. The finger farms and the industries have supplied work for the site for most of its Detroit life. How can residential, commercial and retail spaces relate to the idea of work? The residential spaces will be part of a master plan but the focal point of the thesis will be a leisure space with mixed commercial uses. A market space can relate back to the French ribbon farms. The long, slender forms of the farms could influence not only the market, but building design as well. A bicycle manufacturing company will reinstall the idea of manufacturing and industry. A marina could give the river back its importance to the site. Finally, an interpretive museum, with art scattered throughout the site, will be introduced to have a more direct relationship to the past history of the site.

Site Considerations

The riverfront site is located between Mt. Elliot, Jefferson, the old rail line that ran from the riverfront toward the Packard Plant, and the river itself. The once thriving industrial area was heavily used. Today, most of the buildings that remain are in despair. A few businesses are open and an old iron manufacturing plant has been turned into lofts. The site is off Jefferson, a major road leading into Detroit's downtown and is near the riverfront. Therefore, the building "images" have more significance than other buildings in Detroit.

Building Necessities for Thesis

The master plan of the site will include the riverfront becoming a commercial/residential area but the portion of the site that will be focused on will not have any residential spaces. By reinstalling the old street grid (or perhaps a different type of infrastructure) the residential areas and the focused commercial/leisure area will be separate. Most of the residential units will be three to five stories high to blend in with development of the rest of the riverfront.

Enumeration of Actions

Dwelling- The residential spaces will not be designed but only master planned. The building must allow enough natural lighting for the residents along with comfort. The lofts and apartments must provide interesting spaces for sleep, living, work, eating, and relaxation.

Bicycle Shop Actions

Buying/Selling- Customers will be meeting with designers and salespersons to create custom bicycles. The customer should get a good sense of the company when entering into the public spaces.

Manufacturing- The building will have a manufacturing area where raw materials come in, workers cut pipe and weld them, paint the frames, and assemble the bikes. This area emphasizes the importance of manufacturing that was once on the site. The process will be able to be viewed by the public (customers and visitors).

Working- There will be many different offices in the building where employees will run the company.

Presenting- An exhibition space will allow the company to show off its products during conventions or to customers that are interested in creating their own bicycle.

Leisure- A break room will allow the workers to relax during lunch hour. A nice place for workers to get away from work for an hour will enhance their moods.

Riding- There needs to be an area where the workers/customers can test their finished product. This space will be in and out of the building. Areas for speed and jumps will be needed to test the bikes properly.

Eating- In the break room will be a small kitchen and dining area for the workers to enjoy their lunches.

Parking- The parking area will have to be located near the main entrance (Customer Service Area) but an employee's parking lot may also make sense. The public parking should allow for about 30 spaces and the employee's parking for about 30 spaces as well.

Loading/Unloading- There needs to be an area (or perhaps two) for trucks to drop off the raw material and load the finished products. The Loading area needs to be accessible to customers that want to pick up their bicycles personally.

Interpretive History Museum Actions

Working- There needs to be spaces for offices and customer information. Some of these spaces will be closed offices separate from the public and some may be open to help the public.

Exhibiting- The majority of the building is exhibition space for the art and historic information. These areas need to have adequate space for the public to engage the pieces while others may pass by quickly.

Storing- There must be storage areas for art that is not being used, chairs, exhibition stands, etc.

Parking- There will need to be about 40 parking spaces. The parking lot could be located on either side of Jefferson but the majority will be on the North side. Employee and handicap parking will have to be located closer to the main entrance. A loading entrance may be needed as well.

Bike Stop/Market Space Actions

Buying/Selling- There will be areas to buy/sell different goods from produce to refreshments. This building is meant to be a place for people using the bicycle paths throughout the site to stop and enjoy themselves. It also could serve the residents in the area to buy some of their produce.

Eating- There will be one or two restaurants in the building. The restaurants will have interior and exterior spaces.

Relaxing- Spaces for bikers to relax their legs and converse will be around the exterior of the building. The actual bicycle paths will be in proximity to the building as well.

Parking- There needs to be two types of parking: a lot for cars and an area for the bicycles. The parking lot needs to allow for 40 cars and an area for unloading trucks. The bicycle parking needs to accommodate about 30-40 bikes.

Marina Actions

Buying/Selling- The marina will have supplies for boaters to purchase, such as lifejackets and refreshments. There will also be a bar/restaurant in the building.

Eating/Leisure- A waterfront restaurant will be included in the program, allowing boaters and guests to eat and drink. The boaters will have a place to relax before going back out on their boats.

Parking- There will need to be a few parking spots for cars but the majority of spaces will be for boats. A dock that allows for about 20 boats should be enough.

Quantitative Summary

Quantitative Summary

Bicycle Manufacturing Shop

Manufacturing Area (10-12 workers total)

Raw Material Storage-	1500 sq'
-shelving space, pallet space, circulation for pallet jack and 2 persons	
Pipe Cutting/Welding-	600 sq'
-cutting machines, tool storage, work benches, open work space, 4 persons	
Painting Area-	450 sq'
-frame parts, paint storage, sprayers, brushes, 2 persons	
Finishing/Assembly Area-	600 sq'
-bike frames, minor shelving, work benches, tool storage, 4 persons	
Finished Product Storage-	1000 sq'
-10 completed bicycles, shelving for packaging materials, space for pallet jack, 2 persons	
Net Space:	4150 sq'
Circulation + Mechanical @ 30%:	1245 sq'
Gross Space:	5395 sq'
Lobby-	200 sq'
Circulation + Mechanical @ 30%:	60 sq'
Gross Space:	260 sq'
Exhibition/Customer Service-	4000 sq'
-20 customers, 3 employees, exhibition stands/space, customer service desks	
Circulation + Mechanical@ 30%:	1200 sq'
Gross Space:	5200 sq'
Design Offices/Engineering Office-	
3 Designer Desks- 64 sq' each	192 sq'
1 Engineering Desk-	64 sq'
Group Design Area-	100 sq'
Net Space:	356 sq'
Circulation @ 30%:	107 sq'
Gross Space:	463 sq'
General Manager/Director of Operations Offices- 81 sq' each	162 sq'
-2 offices, desks, file cabinets, computers, 1 person in each	
Circulation + Mechanical@ 30%:	48 sq'
Gross Space:	210 sq'
President/V.P. Offices- 115 sq' each	230 sq'
-2 offices, desks, file cabinets, computers, 1 person in each	
Circulation + Mechanical@ 30%:	69 sq'
Gross Space:	299 sq'

Marketing/Shipping-Receiving Offices- 75 sq' each	150 sq'
-2 offices, desks, file cabinets, computers, 1 person in each	
Circulation + Mechanical@ 30%:	45 sq'
Gross Space:	195 sq'
Treasurer/Secretary Office-	64 sq'
-2 desks, file cabinet, 2 computers, 2 persons	
Circulation + Mechanical@ 30%:	20 sq'
Gross Space:	84 sq'
Customer Restroom-	120 sq'
Circulation + Mechanical @ 30%:	36 sq'
Gross Space:	156 sq'
Locker Room/Restroom-	
Men's Room-	120 sq'
Women's Room-	120 sq'
20 Lockers/Bench-	200 sq'
Net Space:	440 sq'
Circulation + Mechanical@ 30%:	132 sq'
Gross Space:	572 sq'
Break Room-	400 sq'
-kitchen, cabinets, table, couch, television, radio, refrigerator	
Circulation + Mechanical@ 30%:	120 sq'
Gross Space:	520 sq'
Total Gross Space:	13354 sq'
Parking-	
15 Customer Spaces- 15 x 300 sq'	4500 sq'
30 Employee Spaces- 30 x 300 sq'	9000 sq'
Commercial Truck Spaces- 2 x 1500 sq'	3000 sq'
Total Parking:	16500 sq'

Raw Material Storage

A. Quantities Required

1. Unit Capacity- storage for raw material, boxes, pallet jack, and circulation for 2-4 persons at any given time.
2. Number of Units- 1
3. Net Square Feet- 1500 sq'
4. Total Net Area- 1500 sq'

B. Purposes/Functions- This space is where all the bicycle parts will be stored, such as pipes, pedals, wheels, etc. The area will be private for the workers but may be open to "tours". The space needs adequate shelving, open space for one pallet jack, and an area for trucks to drop off the 'raw materials'. Lighting may be natural, artificial or both. This space is not to be used as a workshop of any sort except maybe a small area to open boxes and check orders. This space will be the beginning of the bicycle manufacturing and the assembly spaces will sequentially follow through the building (pipe cutting, welding, painting, assembly, storage of finished materials).

C. Activities- Loading/unloading of raw materials, transferring of raw materials, storage and entry.

D. Spatial Relationships- The 'Raw Material Storage' space and the pipe cutting space can be open to each other and the spaces may "flow together". Though the building does not want to be a huge one room space, large openings may be appropriate to make the process more fluid. Also, if clients and guest could visually see the process without entering the spaces it could be nice. The existing building has wide windows that could become part of a viewing corridor.

E. Special Considerations- Trucks must be able to unload and a loading dock is necessary (though it does not have to be raised). There should be adequate light when dealing with heavy machinery (electronic pallet jacks). The ceiling height must be at least 10' for the high-lows. The access door should include one for people and a larger opening for the hi-lows/pallet jacks (maybe a pull up garage door, electronic, etc).

F. Equipment/Furnishings- The pallet jack(s) must be stored somewhere in here. The open space may be acceptable enough. Shelving will occupy at about 30-50% of the space. Separate shelves will be needed for pipe, wheels, pedals, grips, chains, brake line, spokes, etc. Some of the materials may be able to be stored on pallets but generally there needs to be more 'permanent' area of shelving for commonly used materials (generic types of pipe, chain, grips, etc).

G. Behavioral Considerations- None.

H. Structural Systems- Since (right now) I envision the location of this space being in the abandoned building closest to Jefferson, any subtraction or addition of construction will have to consider the structural condition used now.

I. Mechanical/Electrical Systems- The only special electronic system that may be added is an electric opening door (a pull up door would be sufficient though). Regular outlets and light fixtures would be the only other necessary electrical considerations. Mechanically, typical heating/cooling as in any other work space throughout the building is recommended (if that, since it is mainly for storage).

J. Site/Exterior Environment Considerations- The space needs to allow trucks to pull up and have entry for workers. A parking lot may make sense to be linked to this space. This area might also want to have an area to store scraps that can either be recycled or reused.

Pipe Cutting/Welding

A. Quantities Required

1. Unit Capacity- 4 workers, pipe, machinery, benches, and open space
2. Number of Units- 1
3. Net Square Feet- 600 sq'
4. Total Net Area- 600 sq'

B. Purposes/Functions- This space is where the raw materials are taken and the design of the bicycle begins to take shape. The pipe will be cut and welded in this space. The frame fabrication begins here. The area will be private for the workers but may be open to "tours". Lighting may be natural, artificial or both. The space is the second in the sequence of the 'manufacturing process' (between the raw materials area and the painting area).

C. Activities- Frame manufacturing and bicycle design begins.

D. Spatial Relationships- The 'Pipe Cutting/Welding' space is located between the raw materials storage space and painting space. The spaces may be open to each other. Though the building does not want to be a huge one room space, large openings may be appropriate to make the process more fluid. Also, if clients and guest could visually see the process with out entering the spaces it could be nice (perhaps glass walls allowing people to see through from other rooms).

E. Special Considerations- There should be adequate light when dealing with heavy machinery (electronic pallet jacks, cutting/welding machines, etc). The

The ceiling height must be at least 10' for the high-lows and materials.

F. Equipment/Furnishings- Pipe cutting machines, welding equipment, and tool storage need to be in this space. At least 50% of the overall space will be filled with equipment. A couple of work benches or tables will be needed for small scale shaping and cutting/welding.

G. Behavioral Considerations- None.

H. Structural Systems- Since (right now) I envision the location of this space being in the abandoned building closest to Jefferson, any subtraction or addition of construction will have to consider the structural condition used now. The room is on the first floor so dead load should not be a problem.

I. Mechanical/Electrical Systems- Powerful outlets and light fixtures would be the only necessary electrical considerations. Mechanically, typical heating/cooling but heavy ventilation is needed for welding/cutting.

J. Site/Exterior Environment Considerations- None.

Finishing/Assembling Area

A. Quantities Required

1. Unit Capacity- 4-8 persons, 2-3 complete bicycle pieces, minor shelving.
2. Number of Units- 1
3. Net Square Feet- 600 sq'
4. Total Net Area- 600 sq'

B. Purposes/Functions- This is where the frames will be assembled. The bicycles will be entirely completed here. The area will be private for the workers but may be open to "tours". Lighting may be natural, artificial or both. The space is the fourth in the sequence of the 'manufacturing process' (between the painting area and the finished product storage area).

C. Activities- Bicycles will be assembled, finished and completed in this area.

D. Spatial Relationships- The painting space is located between the painting space and finished product storage space. The spaces may be open to each other. Also, if clients and guest could visually see the process without entering the spaces it could be nice (perhaps glass walls allowing people to see through from other rooms).

E. Special Considerations- The lighting could be natural, artificial or both.

F. Equipment/Furnishings- A few work benches and tables will be necessary for assembly and finishing though the space will mostly be open. A tool area will be needed as well.

G. Behavioral Considerations- None.

H. Structural Systems- Since (right now) I envision the location of this space being in the abandoned building closest to Jefferson, any subtraction or addition of construction will have to consider the structural condition used now.

I. Mechanical/Electrical Systems- Regular outlets and light fixtures would be the only necessary electrical considerations. Mechanically, a regular heating/cooling system should be sufficient.

J. Site/Exterior Environment Considerations- None.

Finished Product Storage

A. Quantities Required

1. Unit Capacity- circulation for 2-3persons, 40 complete bicycles, shelving.
2. Number of Units- 1
3. Net Square Feet- 1000 sq'
4. Total Net Area- 1000 sq'

B. Purposes/Functions- This is where the finished products will be stored. The bicycles will be picked up or wait for shipping here. The area will be private for the workers but may be open to "tours". Lighting may be natural, artificial or both. The space is the last in the sequence of the 'manufacturing process' (after the finishing/assembly space).

C. Activities- The space is strictly used for storage and the loading of finished products into trucks.

D. Spatial Relationships- The storage space is located at the end of the assembly space. The spaces may be open to each other. Also, if clients and guest could visually see the process with out entering the spaces it could be nice (perhaps glass walls allowing people to see through from other rooms).

E. Special Considerations- The lighting could be natural, artificial or both. The space must have some shelving for shipping materials (boxes, pallet wrap, moving stuff, etc) and storage space. An exit door and a loading door also need to be in this space. The loading area does not have to be raised, but should allow for at least 9' wide opening.

F. Equipment/Furnishings- A couple tables, some shelves and pallet jack space are the only necessary considerations.

G. Behavioral Considerations- None.

H. Structural Systems- Since (right now) I envision the location of this space being in the abandoned building closest to Jefferson, any subtraction or addition of construction will have to consider the structural condition used now.

I. Mechanical/Electrical Systems- Regular outlets and light fixtures would be the only necessary electrical considerations (unless a electrical door is used). Mechanically, a regular heating/cooling system should be sufficient.

J. Site/Exterior Environment Considerations- None.

Break room

A. Quantities Required

1. Unit Capacity- 25-30 persons
2. Number of Units- 1
3. Net Square Feet- 600 sq'
4. Total Net Area- 600 sq'

B. Purposes/Functions- This space allows for the workers to eat lunch, take breaks, and socialize.

C. Activities- Relaxation, eating, leisure activities (watching television, listening to the radio, etc) and conversing.

D. Spatial Relationships- The break room will be connected to the locker room and the offices will bridge across to the break room. The space will be directly above part of the manufacturing space.

E. Special Considerations- The room should be comfortable but allows easy clean up. Many of the workers will be dirty when entering and work hours do not allow for much cleaning of the area (for example, use tile floors instead of carpet). The room should not be too comfortable though to keep the workers there for only short periods of time.

F. Equipment/Furnishings- The break room will need a couple tables for eating or cards, kitchen counter space, refrigerator, a couple vending machines, microwave, a television, a radio, cupboards, and maybe a couch.

G. Behavioral Considerations- The kitchen area, lounge area, and locker area

should be separated. Nobody wants a guy eating where he is changing.

H. Structural Systems- The materials should be modern to express their relationship to the existing building materials.

I. Mechanical/Electrical Systems- The kitchen area will obviously need running water and electrical outlets. The temperature should be comfortable enough to live in so maybe a thermostat adjuster in this space would be appropriate. Also, the space will need good ventilation.

J. Site/Exterior Environment Considerations- None.

Locker Room w/ 2 Bathrooms (M/W)

A. Quantities Required

1. Unit Capacity- 20 lockers, bench, 2 bathrooms
2. Number of Units- 1
3. Net Square Feet- 2 bathrooms= 120 sq' each, locker area= 200 sq'
4. Total Net Area- 440 sq'

B. Purposes/Functions- The lockers are for workers to store their coats, lunches and other personal items. The two bathrooms are men and women restrooms with toilets and sinks.

C. Activities- Storage and the rest is pretty self explanatory.

D. Spatial Relationships- The locker room area should be between the restrooms and the workers' break room. This space will be above the manufacturing space and across from the offices.

E. Special Considerations- Since this space is above the pipe cutting and welding, the ventilation could system would want to be above each other.

F. Equipment/Furnishings- Bench, lockers, toilets, sink, and trashcans.

G. Behavioral Considerations- None.

H. Structural Systems- This space wants to be made out of modern materials to create a expressive relationship with the old, existing materials.

I. Mechanical/Electrical Systems- Electric outlets and light fixtures needed. Ventilation should be in sink with the system below.

J. Site/Exterior Environment Considerations- None.

Exhibition/Customer Service

A. Quantities Required

1. Unit Capacity- 3-4 salespersons, 25+ customers
2. Number of Units- 1
3. Net Square Feet- 4000 sq'
4. Total Net Area- 4000 sq'

B. Purposes/Functions- This area will be used to display bicycles. This is where customers can make orders and watch manufacturers work. There should be plenty of space for customers to peruse, obtain sales literature and appreciate the bicycles. On one side of the space will be the Viewing Corridor to observe the manufacturing. In the center will be the elevated test track. On the other side of the space will be the bicycles, sales desks and some seating.

C. Activities- Bike riding on the test track, selling/buying, observing the creation of the bicycles and socializing.

D. Spatial Relationships- This space needs to have direct relationships with the lobby, design offices, test track, and viewing corridor. In this space will be stairs leading up to the offices and conference room. There should also be a restroom for the salespersons and customers. The design offices would be next to this space so that the designers take measurements and size the bicycle for each customer.

E. Special Considerations- This area needs to be vibrant and comfortable for the customers. The test track should not separate the sales area from the viewing corridor (so if the track rises, it cannot divide the entire space). The space should also be fairly tall and open for circulation.

F. Equipment/Furnishings- A large customer service desk is needed along with a general information counter. Exhibition platforms can raise some of the bicycles up.

G. Behavioral Considerations- This area will be facing the exterior pedestrian path and should relate well with the Market building.

H. Structural Systems- The space will be a light steel frame structure and glass.

I. Mechanical/Electrical Systems- The space would need electric outlets near the sales desks. One elevator would need to be located somewhere in here leading up to the offices.

J. Site/Exterior Environment Considerations- The test track that may connect

the exhibition space to the exterior. The track is going to have an outdoor area. Also, there should be door leading out to the pedestrian path. The exhibition space will be able to extend out into the plaza for small bicycle shows.

Design Offices/Engineer Office

A. Quantities Required

1. Unit Capacity- Employee areas with 2 seats for customers, design area
2. Number of Units- 4 employee areas, 1 group design area
3. Net Square Feet- 64 sq' employee areas, 100 sq' group design area
4. Total Net Area- 256-320 sq' + 100 sq' = 356-420 sq'

B. Purposes/Functions- This space is for the designers to simply design. The salespersons and clients can meet with the designers here or the client's desires can be given to the designers and they can get to work. A group design area will allow designers to have small meetings with each other and present ideas (also, to consult with the engineer). The offices may be cubicles or enclosed offices. The area is private unless a client needs to meet with the designer(s). The space includes individual and collective spaces.

C. Activities- The space will be used for bicycle design and designer meetings/critiques.

D. Spatial Relationships- The design offices will be connected to the sales/customer service area. The design offices should also be linked to the manufacturing area. Many designers are also the makers and need easy access to the manufacturing area.

E. Special Considerations- The lighting could be artificial, natural or both (natural is always better for designers). Designers need space for computers, model areas (material storage and model display), and pin-up areas. They should be able to take measurements of customers just outside the office or in the group design space.

F. Equipment/Furnishings- A desk in each designer space with drawers and computer space is needed. The group area needs a table with some chairs but is not meant to be a large conference room (space for a copier and plotter).

G. Behavioral Considerations- None.

H. Structural Systems- The area will most likely be made of a light, steel framing with view from the group area into the manufacturing area and customer viewing areas.

I. Mechanical/Electrical Systems- The space would need many outlets for computers, plotters, etc. Mechanically, a regular heating/cooling system should be sufficient.

J. Site/Exterior Environment Considerations- None.

General Manager Office/Director of Operations (separate spaces)

A. Quantities Required

1. Unit Capacity- 1 GM/1 Director and 2 chairs for 'guests'
2. Number of Units- 2
3. Net Square Feet- 81 sq' each
4. Total Net Area- 81 sq' per office

B. Purposes/Functions- One office is for the General Manager of the company and the other for the Director of Operations. These offices are important to the overall building because these jobs help the company run smoothly. They should be central, allowing them easy access to all parts of the operations.

C. Activities- Meetings, office work, etc.

D. Spatial Relationships- These offices should be located in near with the President, V.P., Marketing Executive, and stay central for supervision of all fields (manufacturing, designing, engineering, etc). The offices should be able to access the break room easily.

E. Special Considerations- None.

F. Equipment/Furnishings- Typical office needs: desk, chairs, shelves/file cabinet and computer/printer.

G. Behavioral Considerations- None.

H. Structural Systems- The offices will probably be typical drywall rooms. However, it may be nice if the offices were brick or concrete block to form a relationship with the existing structure. They could be a heavy mass held up by a very like steel structure.

I. Mechanical/Electrical Systems- Outlets and light fixtures are needed and typical ventilation, heating and cooling.

J. Site/Exterior Environment Considerations- None.

Lobby

A. Quantities Required

1. Unit Capacity- 1-2 employees greeting customers, 5+ customers.
2. Number of Units- 1
3. Net Square Feet- 200 sq'
4. Total Net Area- 200 sq'

B. Purposes/Functions- This space is where customers will enter the building. There will be a lounge area with a couple chairs, or a couch, for customers to peruse magazines and brochures. There will also be a refreshment area (basically just a table) for coffee or soda.

C. Activities- The space will be used for salespersons to greet customers and is the main entry for the public.

D. Spatial Relationships- The lobby is the buffer between the exterior and the interior. This space will lead the customers into the exhibition/customer service space. The space should be fairly open (taller ceilings, comfortable atmosphere, vibrant space).

E. Special Considerations- The lighting should include some natural light and some exterior views would be nice. There may want to be space for a bicycle to begin the sales/exhibition process and excite the customer.

F. Equipment/Furnishings- The space needs a couple chairs and/or a couch, a coffee table, a refreshments table, and a stand for one bicycle. Also, there may want to be like a brochure/catalog rack.

G. Behavioral Considerations- The space is where the entry takes place and that is always important.

H. Structural Systems- The area will most likely be made of a light steel framing structure with glass walls. The high technology should start to show here and will connect to the existing building. Connection details are important in this space.

I. Mechanical/Electrical Systems- Regular outlets and light fixtures would be the only necessary electrical considerations. Mechanically, a regular heating/cooling system should be sufficient.

J. Site/Exterior Environment Considerations- The main entry is located here and should be inviting from the exterior. Views into and out of the space are important.

Marketing/Shipping-Receiving Offices

A. Quantities Required

1. Unit Capacity- 1 employee and 2 seats for other people
2. Number of Units- 2
3. Net Square Feet- 75 sq' each
4. Total Net Area- 75 sq' per office

B. Purposes/Functions- One office is for the Marketing Representative of the company and the other for the Shipping, Receiving and Transportation Coordinator. These offices are important to the overall building because these jobs help the company run smoothly.

C. Activities- Meetings, office work, etc.

D. Spatial Relationships- These offices should be located near with the Marketing Executive, General Manager and Director of Operations. The offices should be able to access the break room easily.

E. Special Considerations- None.

F. Equipment/Furnishings- Typical office needs: desk, chairs, shelve/file cabinet and computer/printer.

G. Behavioral Considerations- None.

H. Structural Systems- The offices will probably be typical drywall rooms. However, it may be nice if the offices were brick or concrete block to form a relationship with the existing structure. They could be a heavy mass held up by a very like steel structure.

I. Mechanical/Electrical Systems- Outlets and light fixtures are needed and typical ventilation, heating and cooling.

J. Site/Exterior Environment Considerations- None.

Manufacturing Viewing Corridor

A. Quantities Required

1. Unit Capacity- 25 persons
2. Number of Units- 1 continuous corridor
3. Net Square Feet- Undecided
4. Total Net Area- Undecided

B. Purposes/Functions- This corridor will allow the customers and employees to

view the manufacturing process without entering the work area. Though access to the shop areas by the public is not entirely excluded, it would be nice to have a safe area for customers to see production without being at risk of injury, distracting the workers or getting in the way of manufacturing.

C. Activities- Viewing production and walking through to other areas of the building.

D. Spatial Relationships- The corridor can become a link from the customer service area to the exhibition area. Obviously, the corridor will have to be directly next to the production areas with either large window or glass walls.

E. Special Considerations- The corridor can double as a viewing area and a typical hallway, therefore it must be wider than a larger hallway (probably at least 6' wide).

F. Equipment/Furnishings- Stools and counter space connected to the 'viewing wall' could be nice if the customer wants to spend more time there than just a run through.

G. Behavioral Considerations- None.

H. Structural Systems- Not sure yet.

I. Mechanical/Electrical Systems- Normal.

J. Site/Exterior Environment Considerations- None.

President/V.P. Offices (separate spaces)

A. Quantities Required

1. Unit Capacity- 1 president/v.p and 2 seats for other people
2. Number of Units- 2
3. Net Square Feet- 115 sq' each
4. Total Net Area- 115 sq' per office

B. Purposes/Functions- One office is for the President/Owner of the company and the other for the Vice President. These offices are important to the overall building because these jobs help the company run smoothly. They should be a little more spacious than a normal office.

C. Activities- Meetings, office work, etc.

D. Spatial Relationships- These offices should be located near with the

Marketing Executive, General Manager and Director of Operations. The offices should be able to access the break room easily.

E. Special Considerations- A administrative assistant space may be needed outside or connected to these offices.

F. Equipment/Furnishings- Typical office needs: desk, chairs, shelve/file cabinet and computer/printer.

G. Behavioral Considerations- None.

H. Structural Systems- The offices will probably be typical drywall rooms. However, it may be nice if the offices were brick or concrete block to form a relationship with the existing structure. They could be a heavy mass held up by a very like steel structure.

I. Mechanical/Electrical Systems- Outlets and light fixtures are needed and typical ventilation, heating and cooling.

J. Site/Exterior Environment Considerations- None.

Treasurer/Administrative Assistant

A. Quantities Required

1. Unit Capacity- 2 employees and 1 seat for another person
2. Number of Units- 1
3. Net Square Feet- 64 sq'
4. Total Net Area- 64 sq'

B. Purposes/Functions- The space allows for either two administrative assistants that handle the books or one administrative assistant and one treasurer. This office would assist the President and Vice-President of the company.

C. Activities- Book keeping, scheduling, phone calls, etc.

D. Spatial Relationships- This office should be located near the President and Vice President offices. The offices should be able to access the break room easily.

E. Special Considerations- None.

F. Equipment/Furnishings- Typical office needs: desk, chairs, shelve/file cabinet and computer/printer.

G. Behavioral Considerations- None.

H. Structural Systems- The offices will probably be typical drywall rooms. However, it may be nice if the offices were brick or concrete block to form a relationship with the existing structure. They could be a heavy mass held up by a very like steel structure.

I. Mechanical/Electrical Systems- Outlets and light fixtures are needed and typical ventilation, heating and cooling.

J. Site/Exterior Environment Considerations- None.

Test Track Space

A. Quantities Required

1. Unit Capacity- Test 1-2 bicycles
2. Number of Units- 1 path
3. Net Square Feet- ?
4. Total Net Area- ?

B. Purposes/Functions- The test track will allow the bicycle company to test how the finished products work. The track will run partially on the interior and partially on the exterior.

C. Activities- Bicycle riding, walking and running.

D. Spatial Relationships- The test track is going to run through the exhibitions space and extend to the exterior. The track may link with the bike paths incorporated throughout the overall site.

E. Special Considerations- The ceiling heights throughout the track must be at least 12' to allow for wheelies and other small jumps to test the shocks. Also, the test track may want to change elevation in the exhibition space.

F. Equipment/Furnishings- Some small ramps for jumps may be needed to test the shock quality of the bicycles.

G. Site/Exterior Environment Considerations- The test track that may connect the exhibition space to the exterior. The track is going to have an outdoor area, linking the test track to the bicycle paths on the larger site.

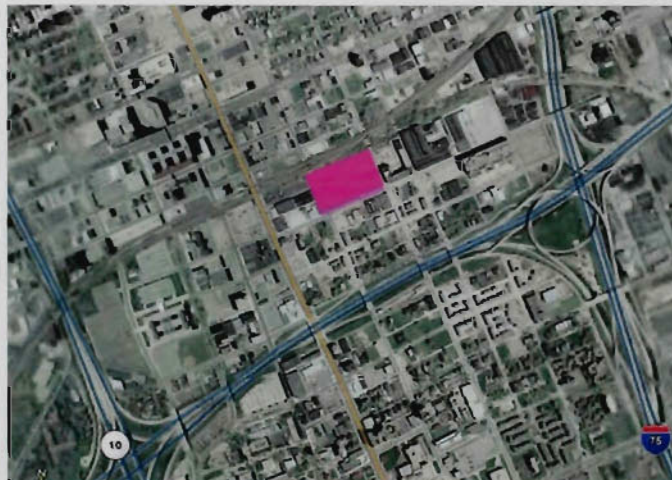
Site Analysis

Studebaker Plant

PIQUETTE
DETROIT< MICHIGAN
1906

Project Information

In 1906, the Studebaker Plant was built on Piquette St., between John R and Brush. On June 20, 2005, Detroit lost another historic building. Though the building had not been used in some time, the Studebaker Plant was a building of pride for many Detroiters. The industrial building produced the most cars from 1910 to 1928, second only to Ford. For the last fifty years, the building served as a warehouse for a meat wholesaler. The building caught fire and burnt through the night as firefighters hopes to stop the blaze grew dim. The timber framed structure became rubble, leaving only traces of walls and stairs. The site was leveled shortly after (to protect the Ford Piquette Plant next door) leaving only scraps of scorched materials on the ground.





These images show the transition the site has gone through. The pictures play on the idea of a movie reel considering the possible program of a theater to relate to storytelling and narration.

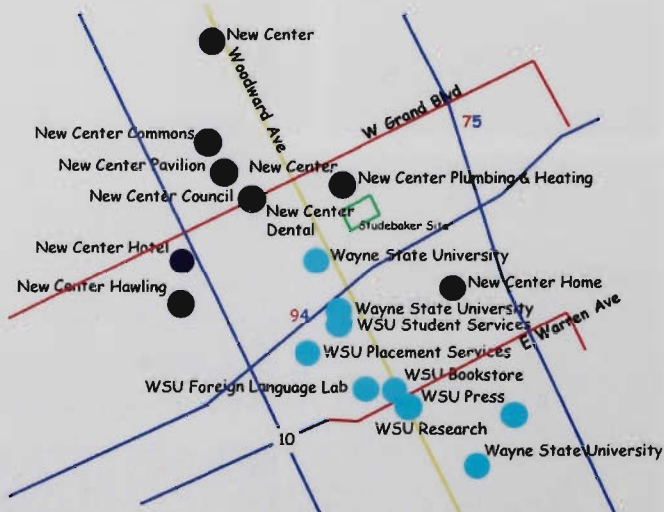
2004

Masterplan Goal for Middle Woodward

Preserve sound neighborhoods, Revitalize neighborhoods with poor housing conditions, Increase residential density, Conversion of obsolete industrial buildings, Increase the vitality of commercial thoroughfares, Increase the vitality of neighborhood commercial area, Improve the New Center's position as a center for corporate headquarters, Maintain the New Center as the State governmental center, Increase the viability of industrial areas, and Increase open space and recreational opportunities .

Thesis Considerations

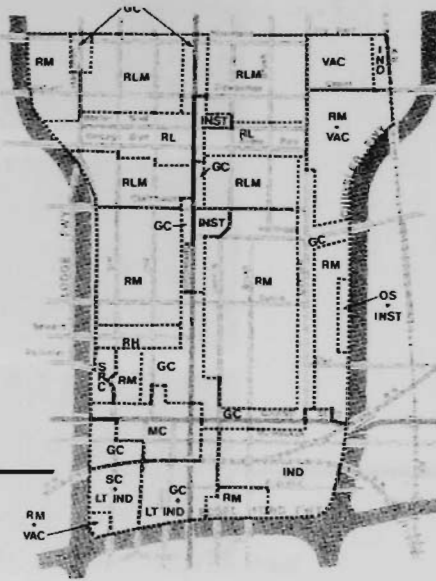
The site does have an industrial history and could be an appropriate site, however, there are not many layers of history here. The cultural memory is not as rich as other sites throughout the site. Also, a site that is not completely wiped clean would be much more effective for the thesis project. Old and new connections help really convince others to believe in the idea.





These are some images of the Studebaker site after the fire.

Land Use Diagrams



1973
Generalized
Existing Land Use

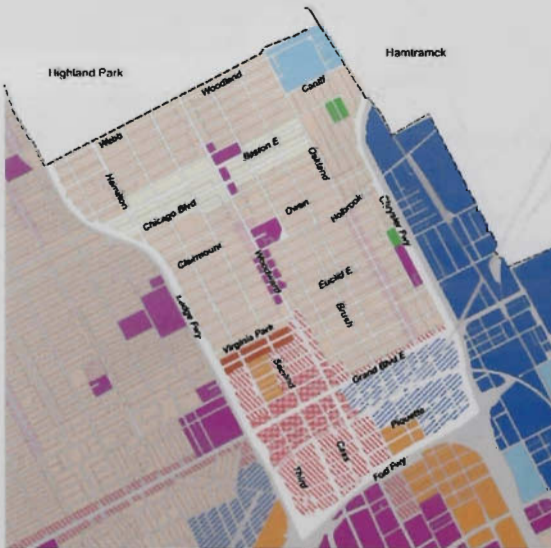
- RL- Low Density Residential
- RLM- Low/Medium Density Residential
- RM- Medium Density Residential
- RH- High Density Residential
- SRC- Special Residential/Commercial
- INST- Institutional
- IND- Industrial
- LT. IND- Light Industrial
- MC- Major Commercial
- SC- Special Commercial
- RLC- Residential/Local Commercial
- GC- General Commercial
- CC- Comparison Commercial
- MUR- Mixed Use Residential
- MP- Major Park
- RC- Recreation
- OS- Open Space
- VAC- Vacant



Existing Land Use

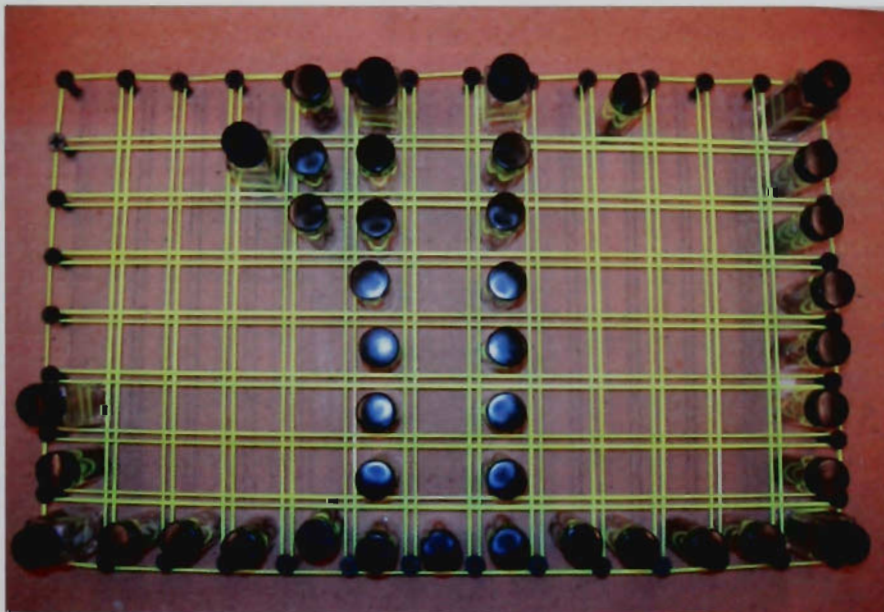
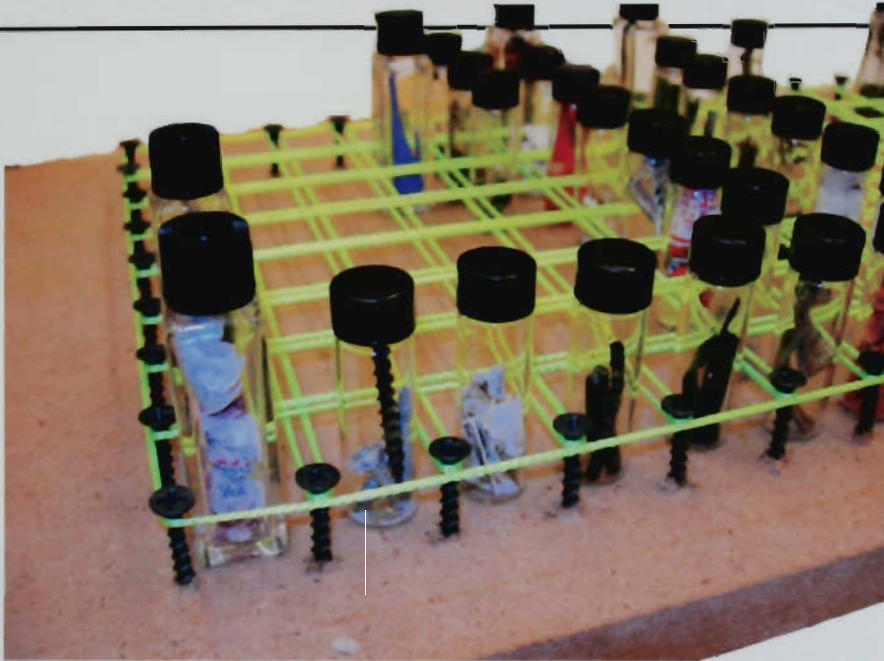
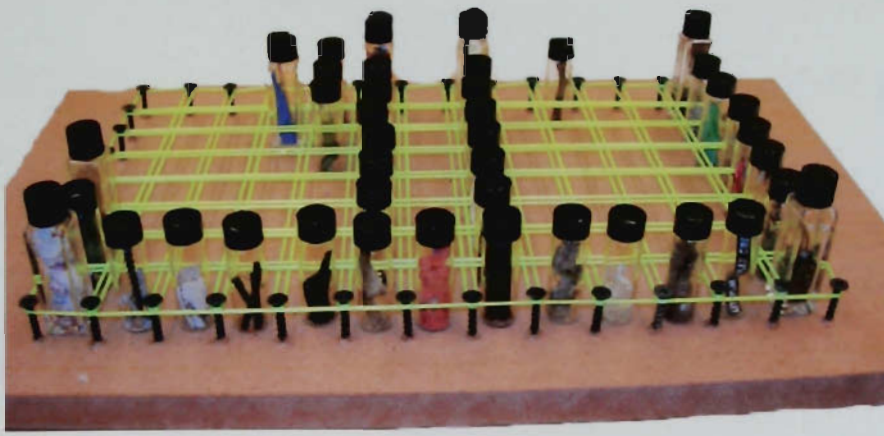
- Residential
- Commercial
- Office
- Industrial
- Transportation
- Utilities/Communication
- Hospital/Clinic
- School-primary
- School-other
- College/University
- Institutional
- Cemetery
- Recreation/Open Space
- Vacant

These three images are different land use diagrams that the site has or will go through.



Future Land Use

- Low Density Residential
- Low/Medium Residential
- Medium Density Residential
- High Density Residential
- Major Commercial
- Retail Center
- Neighborhood Commercial
- Thoroughfare Commercial
- Special Commercial
- General Industrial
- Light Industrial
- Distribution/Industrial
- Residential/Commercial
- Residential/Industrial
- Town Center
- Recreation
- Private Marina
- Regional Park
- Airport
- Cemetery
- Institutional



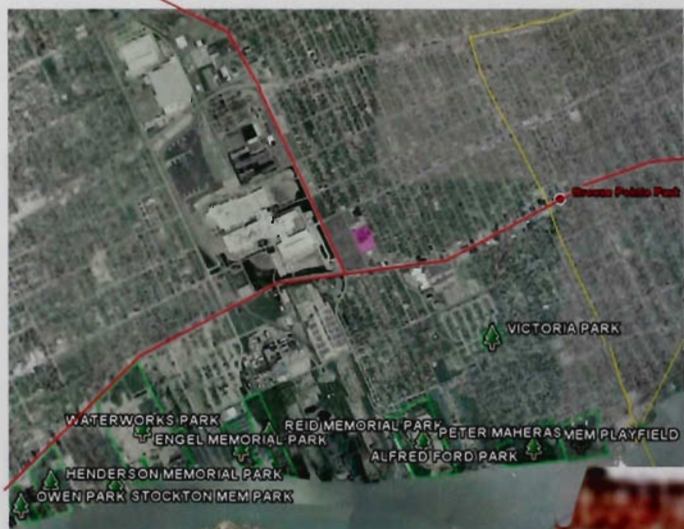
These are images of an interpretive model of the site. I made a grid of the site and walked in the rubble. Where there used to be building, I gathered objects of what lay there now. Some spots had rubber or brick and others had chip bags or cigarette butts. It was an expressive way to experience what the site is like today.

Continental Motors Site

ALGONQUIN
DETROIT, MICHIGAN
1900s

Project Information

The Continental Motors Plant was once one of Detroit's most productive automotive industries. Today, the building is abandoned and in severe decay. The former Continental Motors building is located between Algonquin, Jefferson, Gray and Kercheval on Detroit's eastside. The area was one of Detroit's most industrial areas in the 1900s. It became a residential area, however, now most of the people have migrated North and East. Low income neighborhoods rule the area now along with many abandoned or burnt down houses. Industrial companies, such as Diamler-Chrystler, are still operating to the west of the site. Commercial buildings run along Jefferson and Kercheval, but retail and entertainment buildings are missing¹.

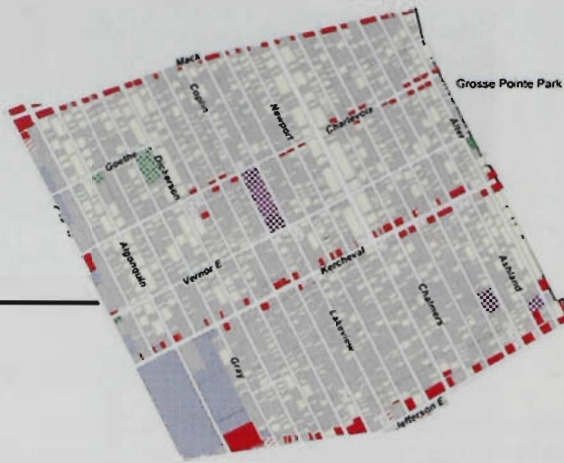




These are some images of the abandoned building on the site. The towers dominate the viewers eye.

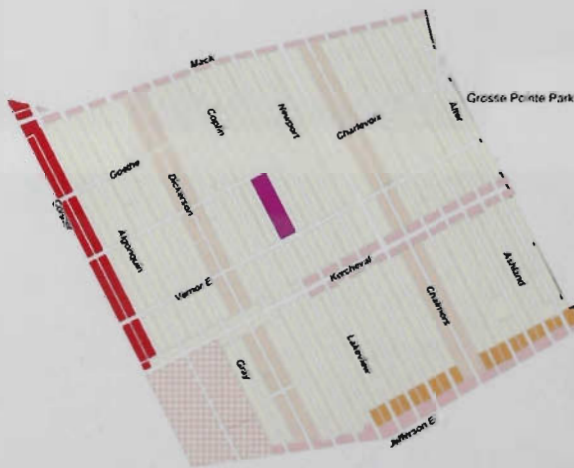


Land Use Diagrams



Existing Land Use

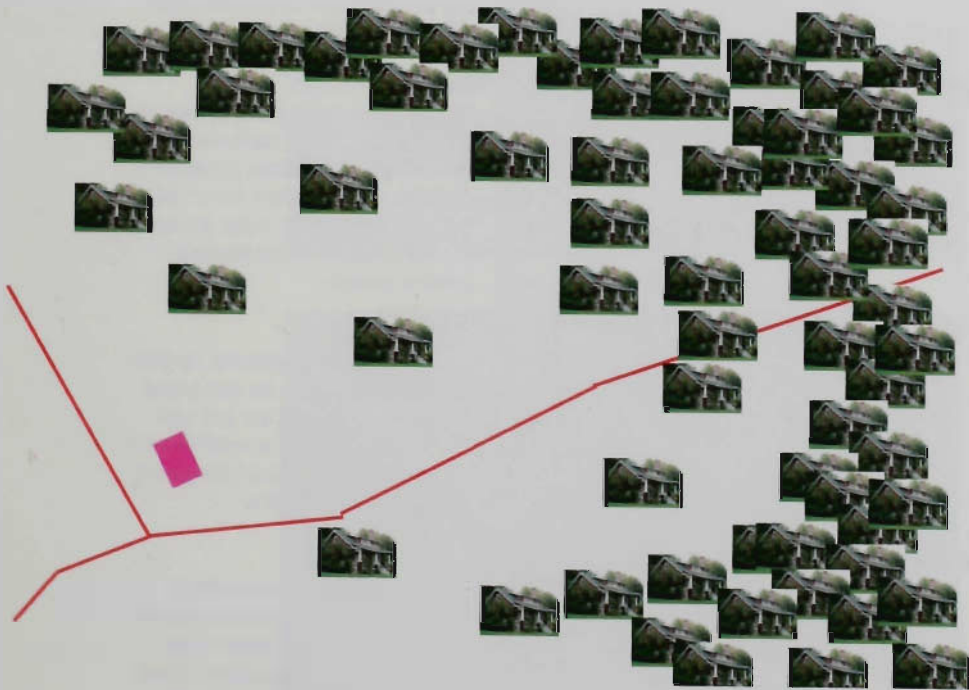
- Residential
- Commercial
- Office
- Industrial
- Transportation
- Utilities/Communication
- Hospital/Clinic
- School-primary
- School-other
- College/University
- Institutional
- Cemetary
- Recreation/Open Space
- Vacant



Future Land Use

- Low Density Residential
- Low/Medium Residential
- Medium Density Residential
- High Density Residential
- Major Commercial
- Retail Center
- Neighborhood Commercial
- Thoroughfare Commercial
- Special Commercial
- General Industrial
- Institutional

These two images are different land use diagrams that the site has or will go through.



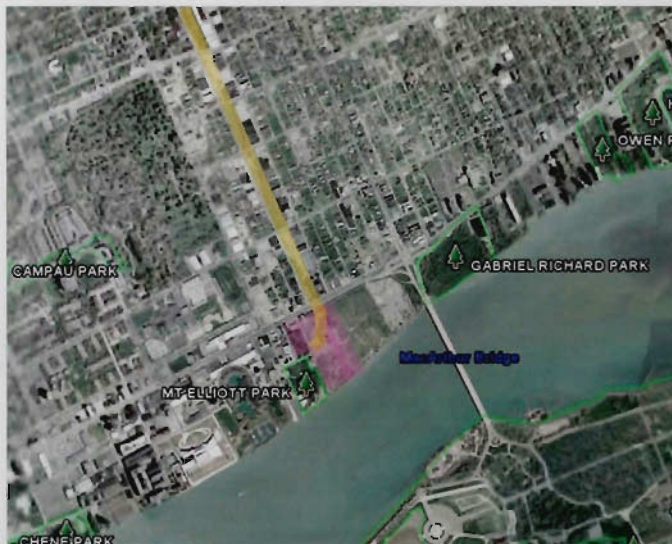
This is an interpretive diagram showing the site as an abandoned area. As people moved out, density lessed around the immediate site and sprawled out toward Gross Pointe and other parts of the city toward the north.

Uniroyal Site

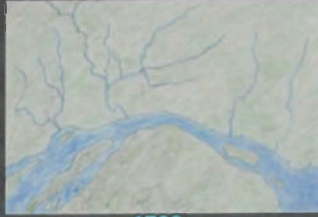
EAST JEFFERSON
DETROIT, MICHIGAN

History of Riverfront

The Detroit Riverfront has a long history. From the Native trading posts and the French ribbon farms to the industrial powerhouses and current brownfield, the riverfronts narrative should never be forgotten. The Riverfront is too important to Detroit's history to be abandoned. The river is originally what brought civilization here and it should remain an important part of the city. However, planners, designers and architects should not "look past" the history of the Near East Riverfront when planning a use for the riverfront.



Drawing interpreting what the land might have looked like before civilization. Most likely, trees surrounding the area and the river.



1700s

Native Americans met and traded goods on the banks of what we call the Detroit River long before the French influence. Even streets used today were once Indian trails, such as Gratiot and Jefferson.



Cadillac and the French set up trading posts recognizing the advantages of the straights. Detroit's street layout on the east side still follows the pattern of the early French ribbon farms, those long thin portions of land that allowed everyone access to the river.



1800s

By the 1800s, Native and British influence passed and the city boomed. Low-tech industry took over as the city grew. The automobile industry was only one of many businesses that set Detroit apart from other cities.



Industrial business jolted Detroit. Besides car manufacturing, Detroit's Riverfront inhabited world leading businesses in stove, rubber and bicycle manufacturing. Land was added altering the river's path, but it still played a major role for the industries shipping.

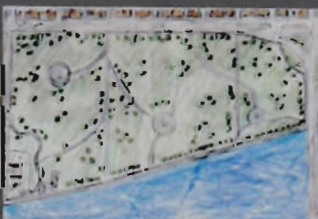


1900s

Detroit's industries could not survive and behind they left many abandoned buildings. The site is now a brownfield with little habitation and many toxins. A couple of dilapidated buildings is all that remains of the heavy industrial area.



The Riverfront's next life is still to be decided, however. many plans are in the works. A state park running the entire river's edge is a possibility. A boardwalk across the edge is probable as well. Turning the tracks to trails is also planned.



FUTURE

This is an interpretation of how the history transformed the site. The site has went from an agricultural base to an industrial base to a wasteland.

Land Use Diagrams



Existing Land Use



These two images are different land use diagrams that the site has or will go through.

Future Land Use



Veiled Tracks

Railroads ruled the Near East Riverfront site for over a century. Most of them have been torn out or covered with pavement. However, the site remains true to its past showing glimpses of the past tracks. Even the way the weeds and plants grow on the site hint at what was once there. Pieces of wood and steel break through the ground in some areas. These unique site conditions provide unique opportunities for park conditions and paths. Unearthing the site should reveal more situations like these images show.



Vieled Tracks



These images show the different ways that the site has been effected by the railroad tracks. These areas provide interesting destination points.



The image is an abstract collage of site photos facing the direction of the streets. The photos show the lack of life toward the site and also the lack of quality architecture.



Detroit Riverfront Conservancy, Inc



Detroit Riverfront Conservancy, Inc

Future Uses of the Riverfront

The city has a few proposals in the works for Detroit's Riverfront. One idea is that there would be a state park that scattered across the stretch from the Ambassador Bridge to the MacArthur Bridge. The Riverfront Conservancy is proposing a boardwalk across the same stretch that ties the existing parks (Chene Park, Mt. Elliot Park, etc) into a larger scheme. The other proposal that is going through is the idea of turning the old railroad tracks into bicycle and pedestrian paths. The Rails to Trails proposal would be integrated into the parks and extend to the Cass Corridor/New Center area.





These are some images of the ruin closest to the river. The condition of the walls makes it interesting to look at in itself.



Panaramas

These photos show how abandoned the site is and also show the conditions of the vegetation and buildings.

Schematic Design



Overlay Drawings

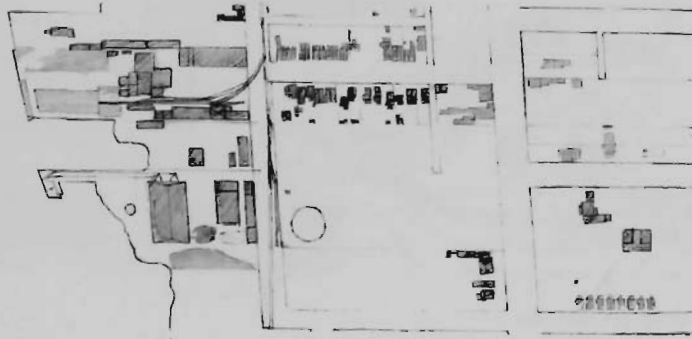
Purpose

These overlay drawings were a first step in trying to understand the site and slowly unveil the cultural history. The drawings were essential for the success of the project. They reveal important areas to build along with gaining a thorough understanding of the site's history. The palimpsest of different parts of the site from different times began to surface traces that were interesting. From these drawings, the project was able to advance into actual building design.

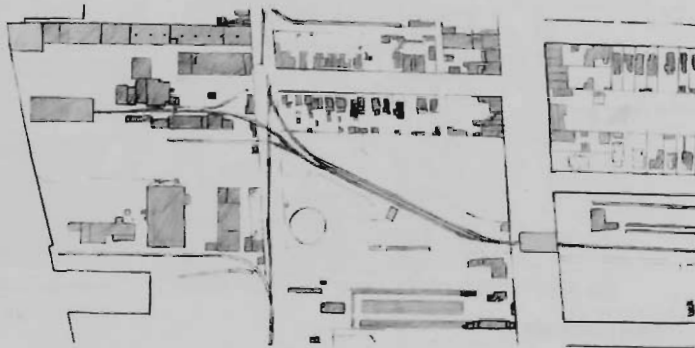
The first five drawings were based on old sandborne maps. They show the site's transition from an agricultural site to a post-industrial site. Then next few try to reveal unique conditions through studies of negative space, river's edge alteration, and old vehicular and pedestrian movements. The last few are composites of different eras and interesting areas.



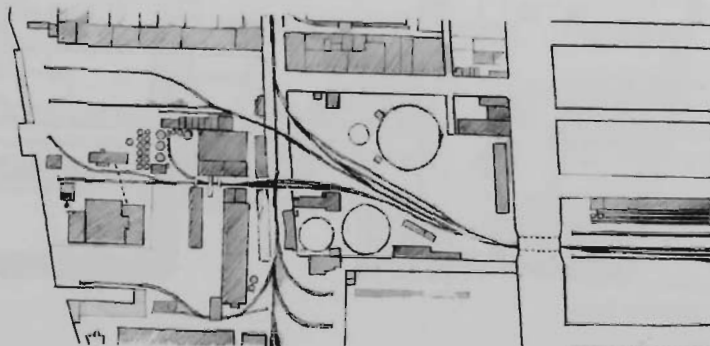
French Ribbon Farms



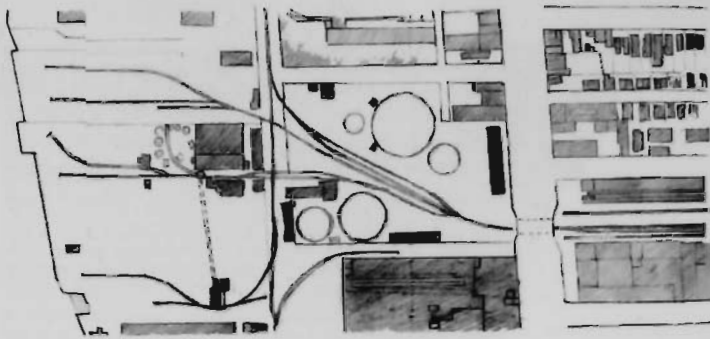
Site in 1884



Site in 1897

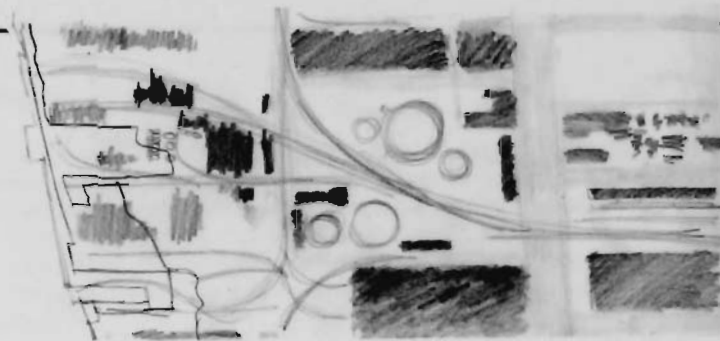


Site in 1922

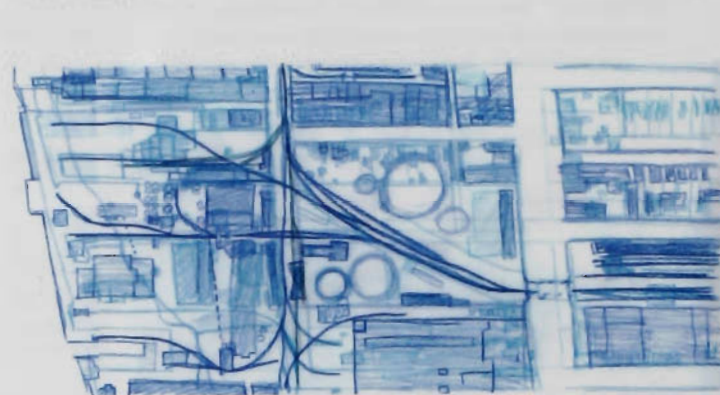


Site in 1951

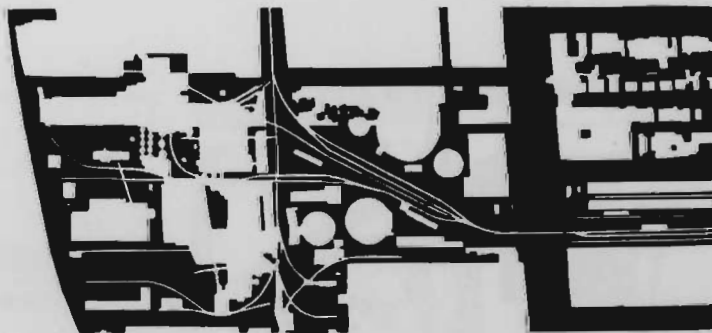
Overlay Drawings



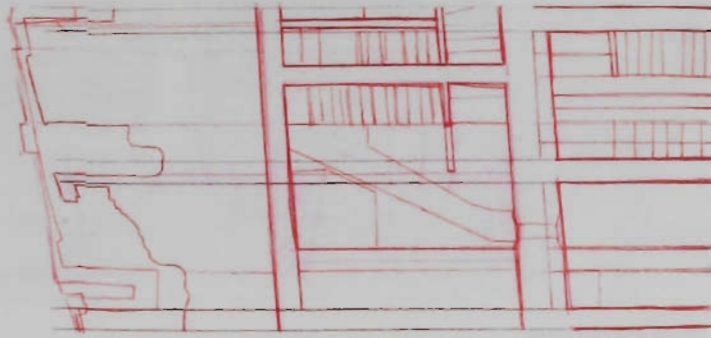
Graphite Composite



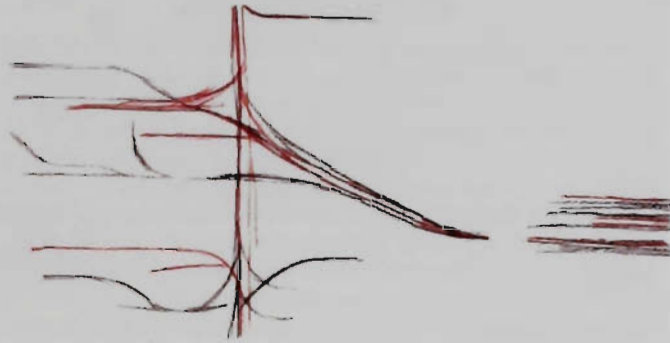
Colored Composite



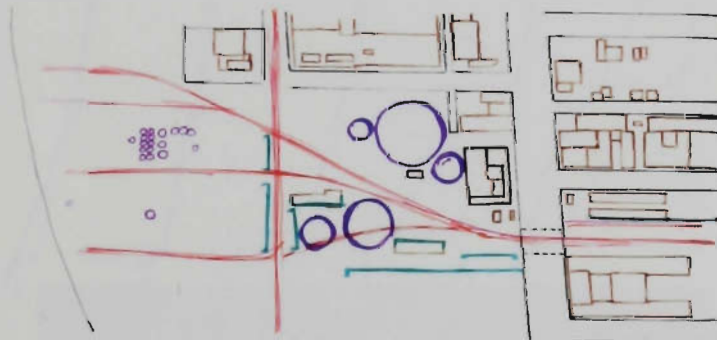
Negative Space



Edges/Paths



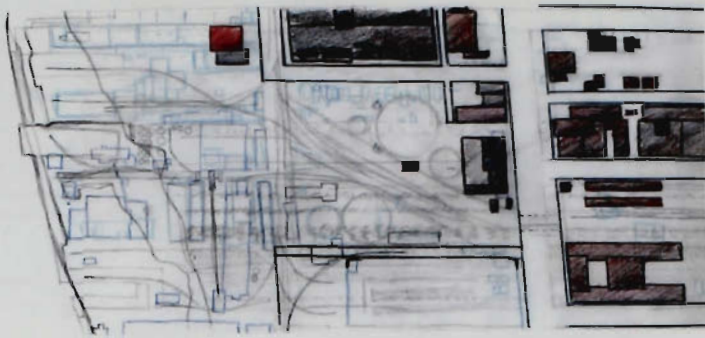
Railroads



Palimpsest

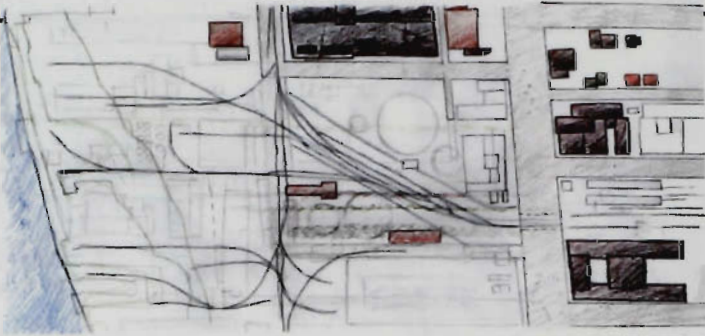


Axis

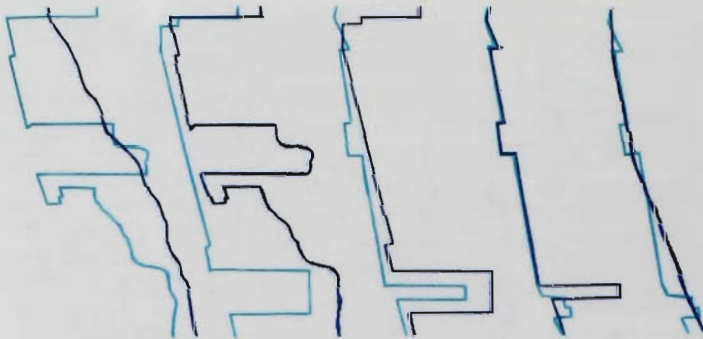


New/Old Composite

Overlay Drawings



New/Old Composite 2



River Change



Building Areas

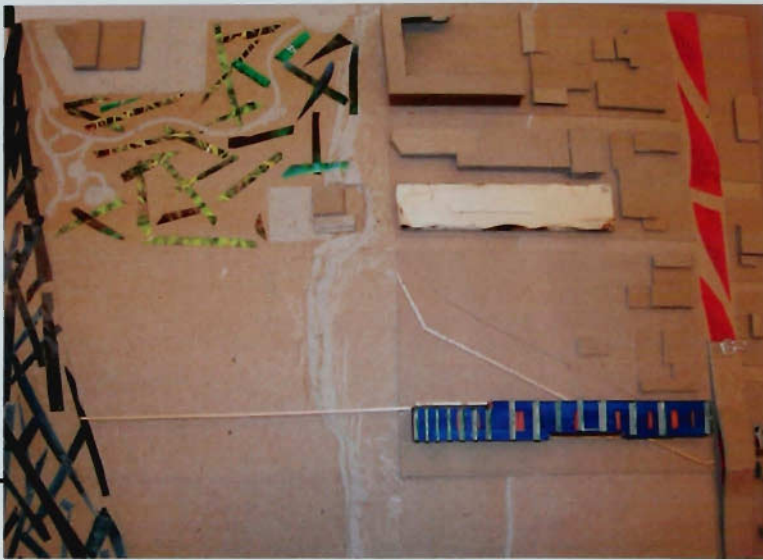
Charette Models

These charette models were intended to find smaller spaces on a large site that would be designed through the thesis. A master plan of the overall site will be schematic but the actual design will be focused in these smaller areas. The first few models incorporated a large program into a mixed-use building. The slender form relates back to the narrowness of the French ribbon farms. In model number two, the red represents pedestrian flow from Jefferson down to the river. The wood pieces represent that the site would need anchors (destination points) to support retail throughout the site. The last couple models scatter program throughout the site. Model number five maps out the old rail lines that could become bicycle paths, the width of the French farms and spaces that building would be appropriate. The last model is a final site model at the end of schematic design. The building lead pedestrians down toward the river and all of the building forms keep the slender form of the old farms.

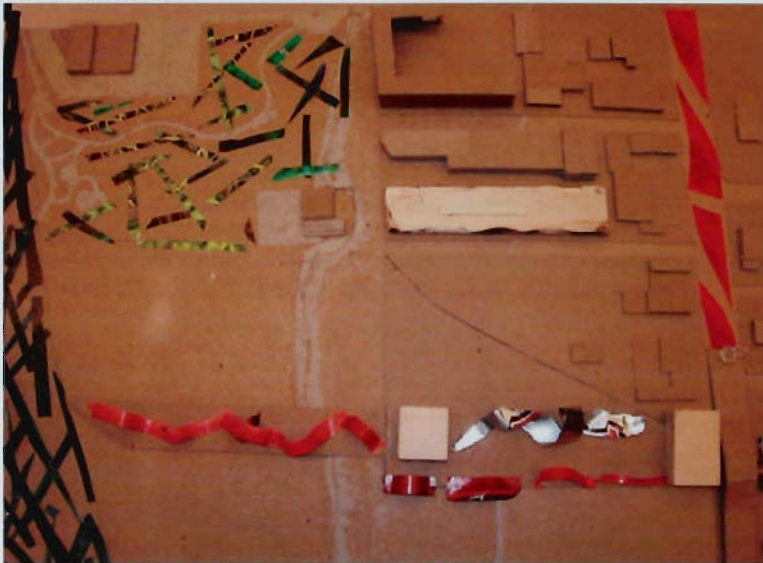


Site as it exists

Charette Models



Emphasizing linearity



Emphasizing pedestrian flow from Jefferson to the river using two anchors.



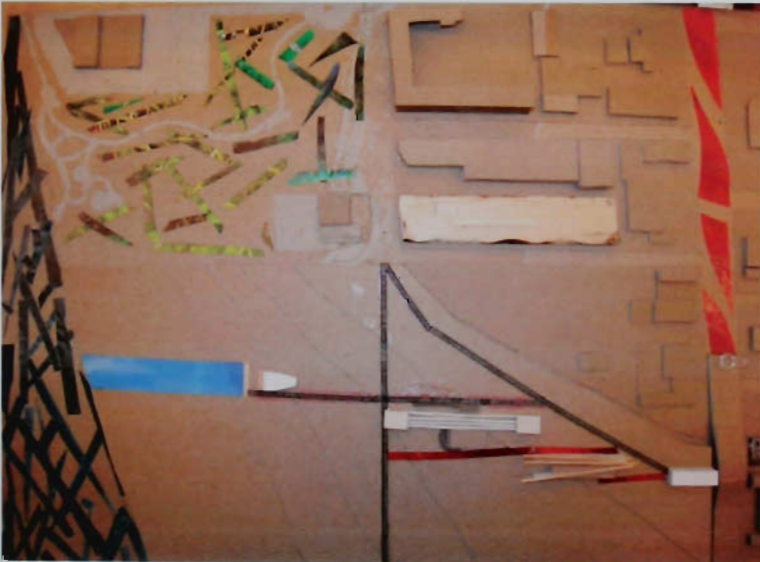
Emphasizing paths and edges.



Emphasizing pedestrian flow and building mass.



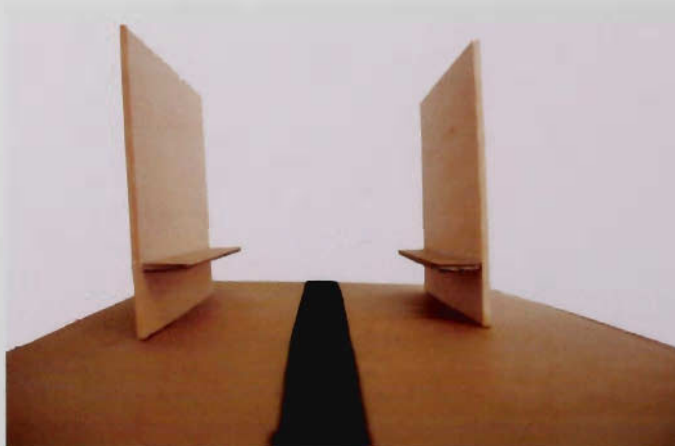
Emphasizing building areas and paths.



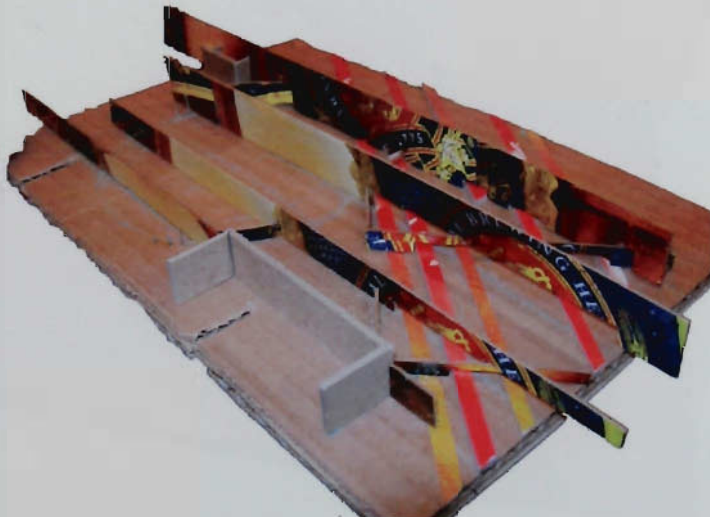
Emphasizing building areas.

Design Axis

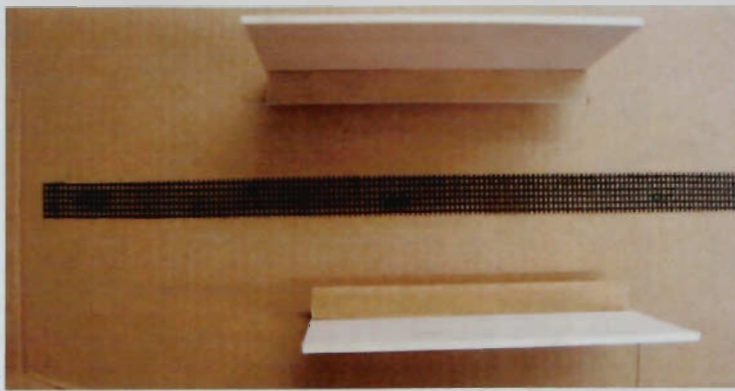
These models expressed areas where building and pedestrian path would interact and unite. The first two models play with the idea of a pedestrian path or bicycle path running between two buildings, creating an interior/exterior market space. The red lines represent pedestrian flow (walking and bicycle paths). The multi-colored lines represent where building will occur; the top lines are market space and the bottom lines are the bicycle manufacturing shop. These gestural models investigate how the bicycle path can engage the building. In the design axis images, the arcs represent walls that could be interior and exterior separating different spaces. The circular form was derived from a past form that was on that specific spot. The last model shows the current topography change where the old rail line could emerge again and become a pedestrian path below the new buildings.



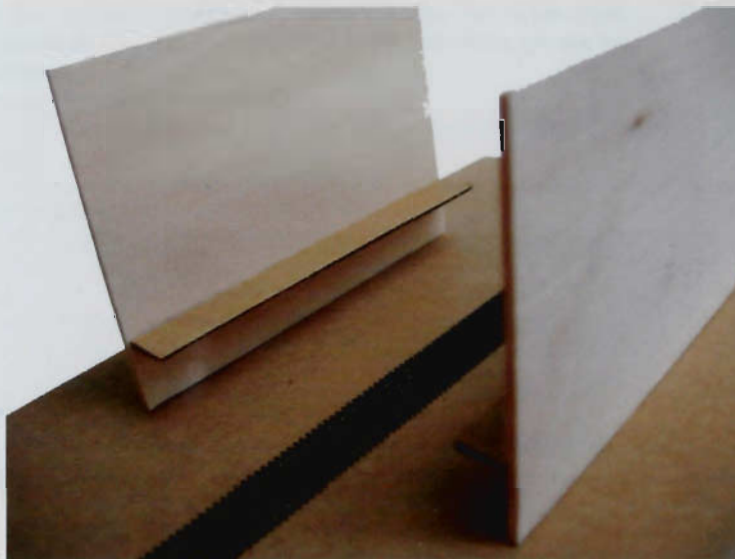
Pedestrian path and gathering space between buildings.



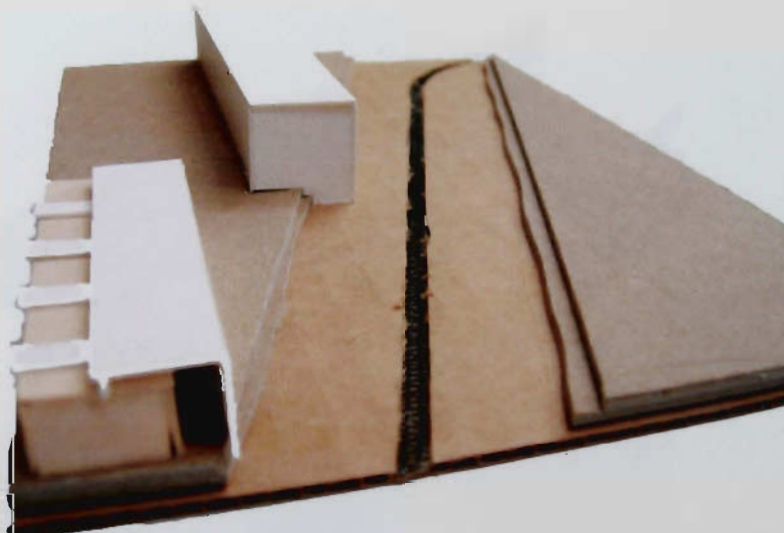
These models explored different axes that the past tracks and buildings formed. These models help guide my thoughts about how pedestrians should move through the site.



Design Axis

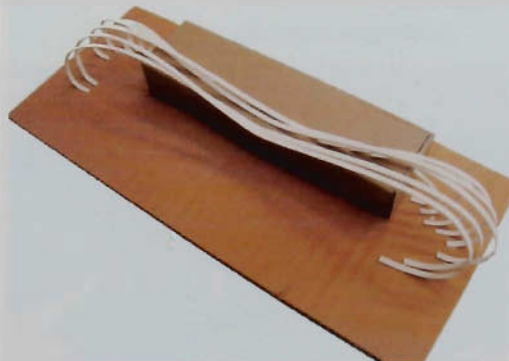
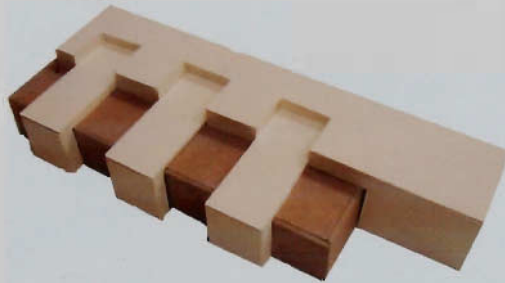


These images show an idea of a pedestrian (bicycle path) path between two buildings.

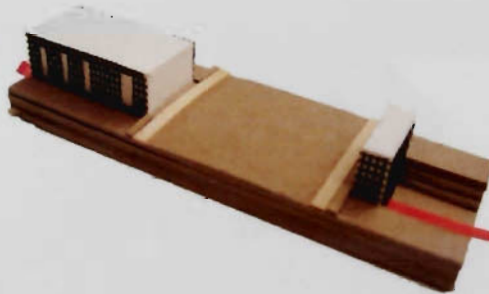
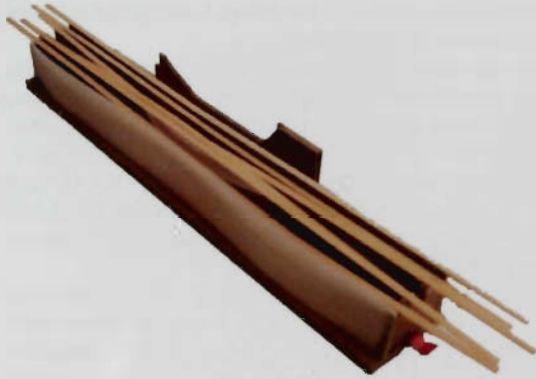


Schematic Models

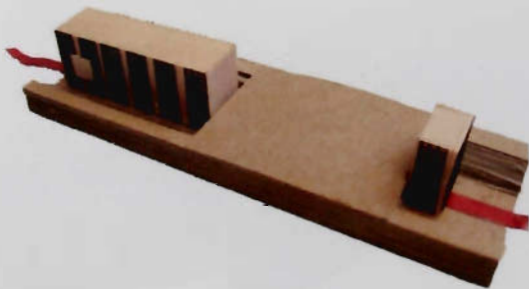
These are schematic design models of a few different buildings that are on the focused site. The first three models represent different designs for the bicycle manufacturing shop. These models led to the building wanting to be a light structured addition to the old building. The design should sell the idea of speed and motion. The old building holds the manufacturing and the new addition holds the offices, customer service and exhibition space. The market space model is a mixed use building functioning as market space, restaurant, a bicycle stop (for the riders on the paths), and a book store. The design is slender like the French farms and leads pedestrians toward the river. The last couple models are of the interpretive history museum. They are both modeled off of the look and dimensions of a rail car. On one side of Jefferson will be an enclosed staircase and on the other side the actual building. The old rail lines connect the two underneath Jefferson. The two models below were massing models to study how to attach a new building onto the existing structure. The top model slits into the old building and the second model was a first attempt to create a structure that would sell the idea of sleekness and motion down toward the river.



Schematic Models



The model above is of the bicycle manufacturing shop. The design wanted to sell speed and fluidity. The second model that shows a market that expresses linearity. The bottom two are the interpretive art museum that are based off a rail car dimensions. The main building is on one side of Jefferson and staircase on the opposite side.



Schematic Models and Site Sections

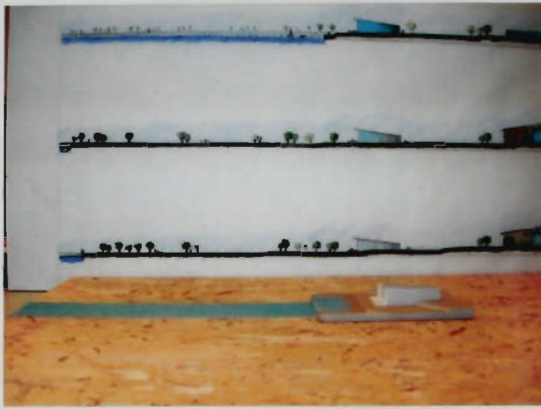
These images show the schematic design models in relationship to the site sections. The models are placed correctly as to where they are on the site, however, the topography change and landscape design are not shown. These models and sections were helpful and instrumental in realizing that the landscape and surrounding site need to be designed in greater detail. A master plan of the buildings' surround site will be needed as well as the park or green areas that are incorporated within the focused site. The bicycle paths should and palimpsest drawings will influence the next steps of schematic design on a master plan level.



Schematic Design Models



Models in Plan



Schematic Models



All of these images show the schematic models in proportion to where they would be on the site and 3 site sections are behind them.



These sketches were done throughout first semester. They are early attempts to plan out spaces in each building schematically. In the Bicycle Manufacturing Shop, it made sense to use the existing structure as the manufacturing area while the new structure attached would contain the offices, exhibition space, and testing areas. Each sketch shows program and form through plans, sections, elevations and/or perspective.

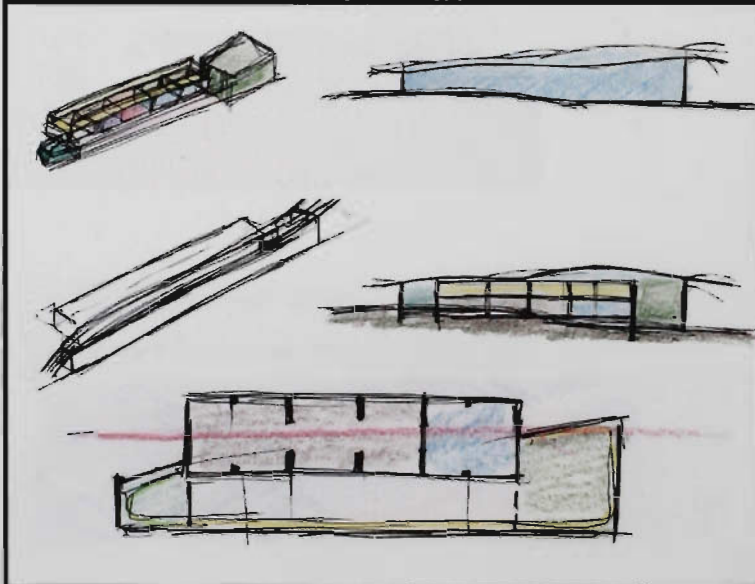
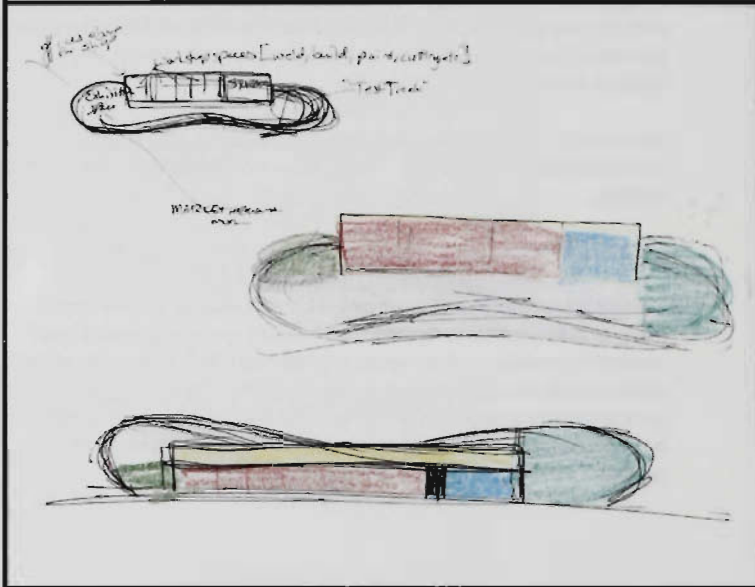
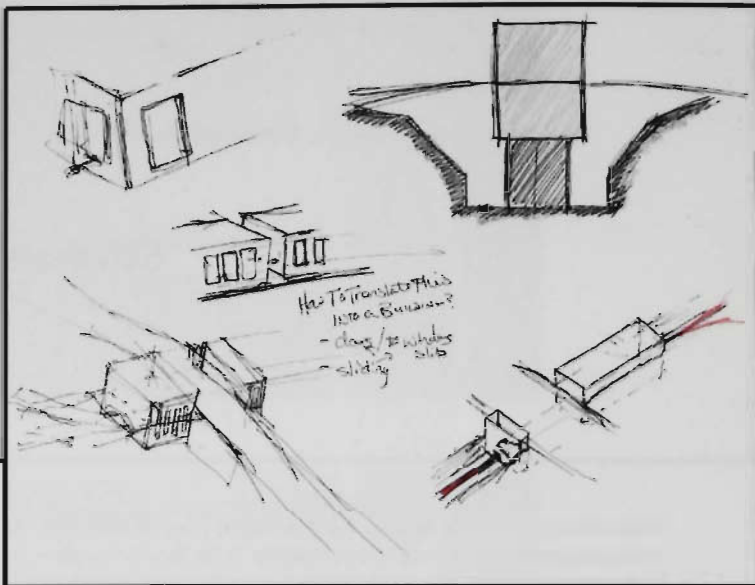
The drawings tried to keep linear form to emphasize the importance for pedestrian flow down toward the river. A main pedestrian path would cut between the buildings.

Lessons Learned

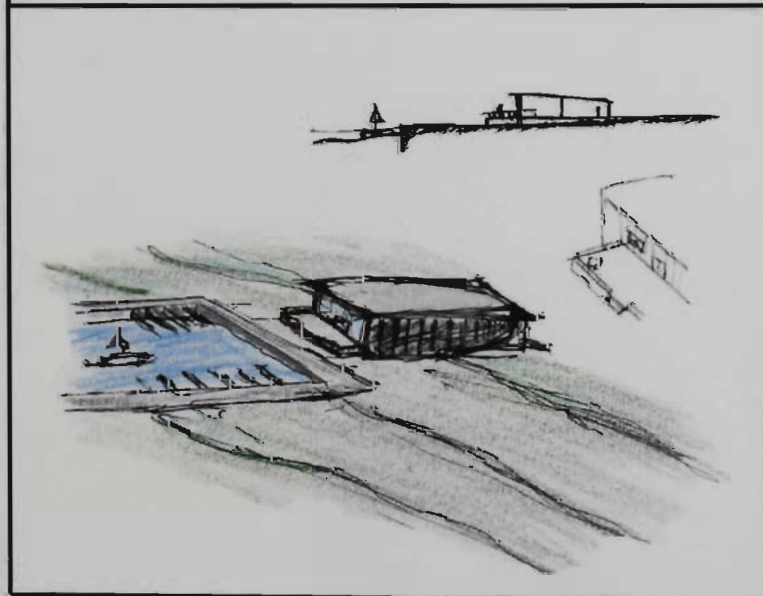
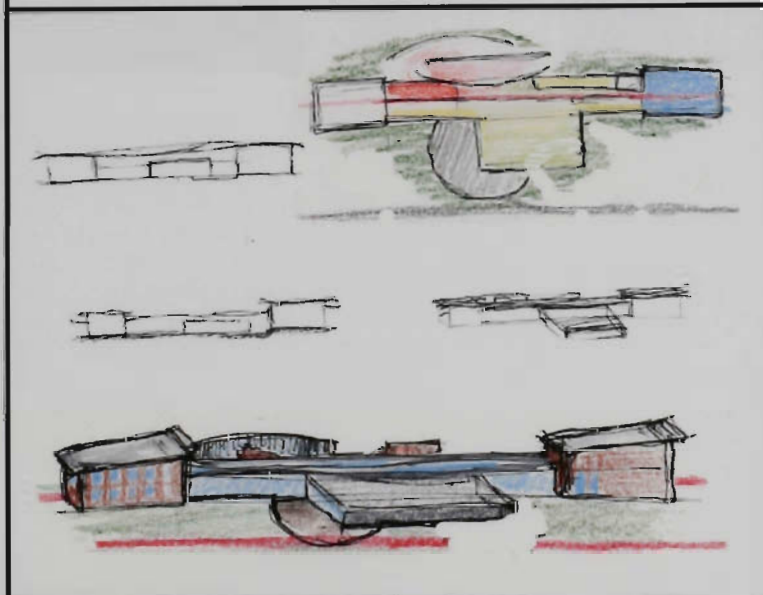
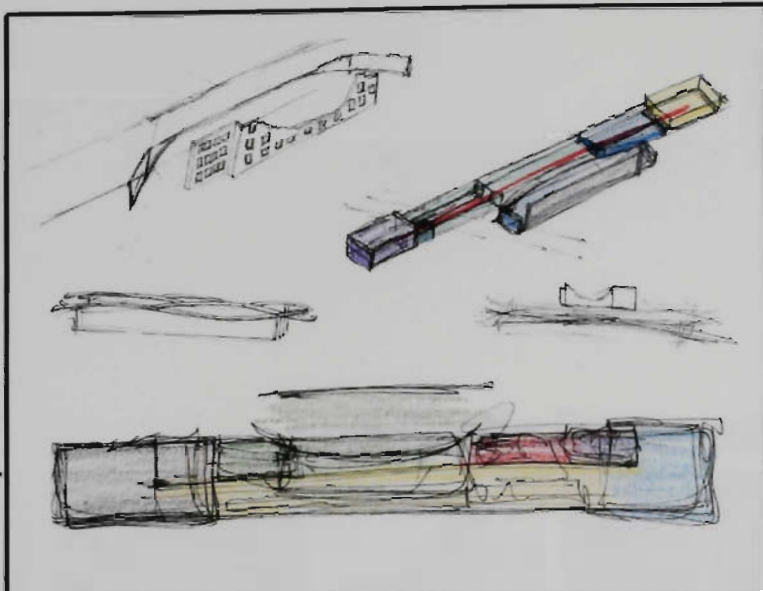
Through the schematic design process, it became obvious that the areas I chose to build were not perfect yet. The buildings were not grounded and I needed to re-create an infrastructure and come up with a master plan before I moved on with the design process for each building. The building would then have to adapt to a larger context and become more believable. Also, less park would be needed. I could build up the riverfront (as it should be) and keep a pedestrian friendly strip with park, paths and plaza areas.



Schematic Sketches



The first set of sketches are of the interpretive art museum and the idea of the bicycle path going under and through it. The second set are of the bicycle manufacturing shop playing with the idea of fluidity and speed. The last set is another way of programming the bicycle manufacturing building with linearity in mind.



The first two sets of sketches look at how to program the market / restaurant space. They both contain two anchors (destination points) at each end to increase pedestrian traffic and to continue the linear path down toward the river. The last set of sketches looks at a marina/boat shop at the end of a channel being re-created.

Final Design Presentation



Final Design

Thesis Intent

My thesis deals with the way sites are transformed over time, and how recognition of this temporal condition can influence the making of place. Any building site can be thought of as a palimpsest. As sites are transformed through time, traces of past stories and human inhabitation are inevitably left behind. I believe these traces could serve to influence the re-design of a place, which could then be understood as simply another step in a continuous process of transformation. In general, architecture can transform ideas, needs and desires into space. A site that has a rich cultural history has the potential to be amplified through architectural intervention. Therefore, the objective of this project was to develop an area and design buildings that successfully respect and recognize their surroundings while subtly expressing historical cultural memory. The intention was *not* necessarily to attempt to preserve or restore a lost condition, but to simply allow the recognition of past conditions to influence the making of a new project.

Site

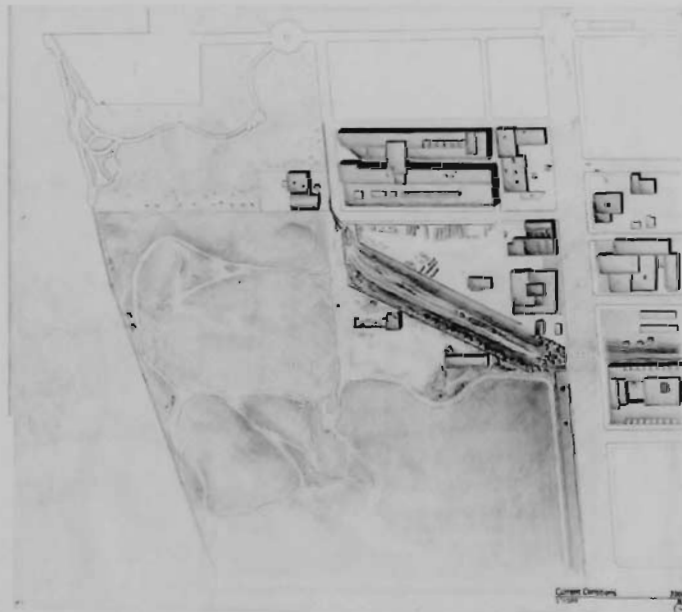
I chose the former Uniroyal site on Detroit's Riverfront out of the three analyzed. The surrounding streets are East Jefferson, Mt. Elliot and the MacArthur Bridge to Belle Isle. In considering possible sites, I was hoping to find a condition that would have some general significance in the history of the area, without any specific relationship to a precise historical event that might demand that the site be treated as a museum. In thinking about the history of Detroit, it seemed that the transformation of the city into an industrial center and then into a challenging post-industrial landscape could serve as a starting point for the selection of a site. I chose the site because it is very representative of this dramatic shift.

Design Intent

In each building designed, I tried to respond to the problem in a unique way but in each case, expressing connections between old and new building was essential. Each building guides pedestrian flow from Jefferson down toward the river, emphasizing its importance to the site. Building form and landscape design issues were also influenced by past lines. Digging up old foundations and re-using them was one way of doing this. The way people moved through the site also influenced how they may move through the site again. The bicycle paths were directly related to old train routes and the new street grid was delivered from the width of the old ribbon farms and river's edge. The large plaza area resulted from an old foundation and the channel re-creates a portion of a past river's edge. The buildings that remained on the site from the industrial era were to be re-used and gain a new life.

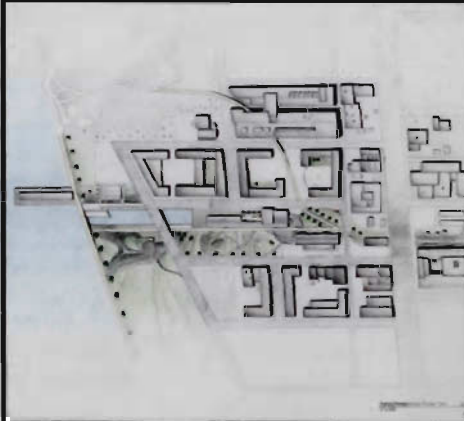
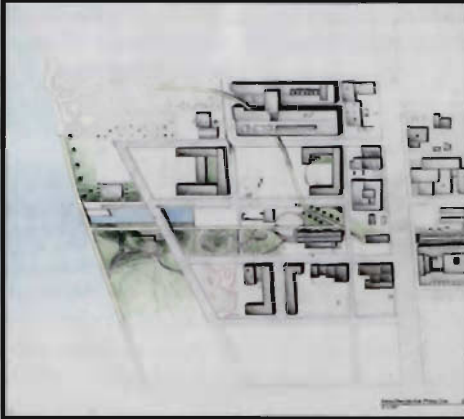
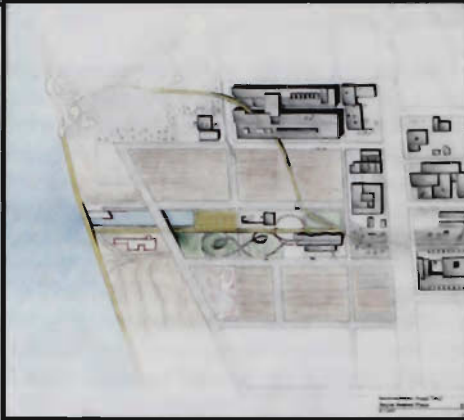
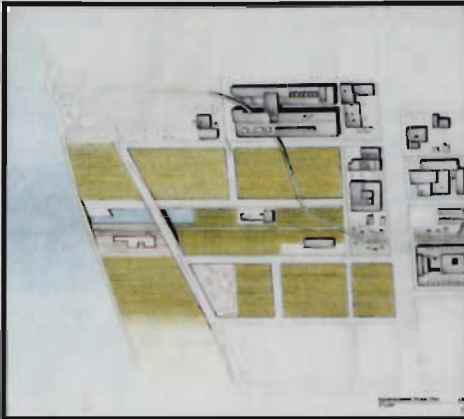
The site's dramatic shift throughout time provides a great base for the thesis project. The design decisions made and the 'final project' are based off historical cultural memory. However, it is crucial to remember that this project is not the end of the site's transformation. Thirty years after this project is built, the site would start to change once again. The design decision keep that in mind and did not try to find a final solution to a barren site. The project simply jump started a new life to a abandoned site.

These five site plans simulate how the project would be built. The first phase is brownfield bioremediation. The site has contaminated areas and must be cleaned up before buildings and people can inhabit the site once again. Re-introducing an infrastructure and creating a channel would be early in the redevelopment phase as well. Once the blocks and streets were in place, first phase of building would take place. The bike paths, park and manufacturing building would all be built after the infrastructure was established.



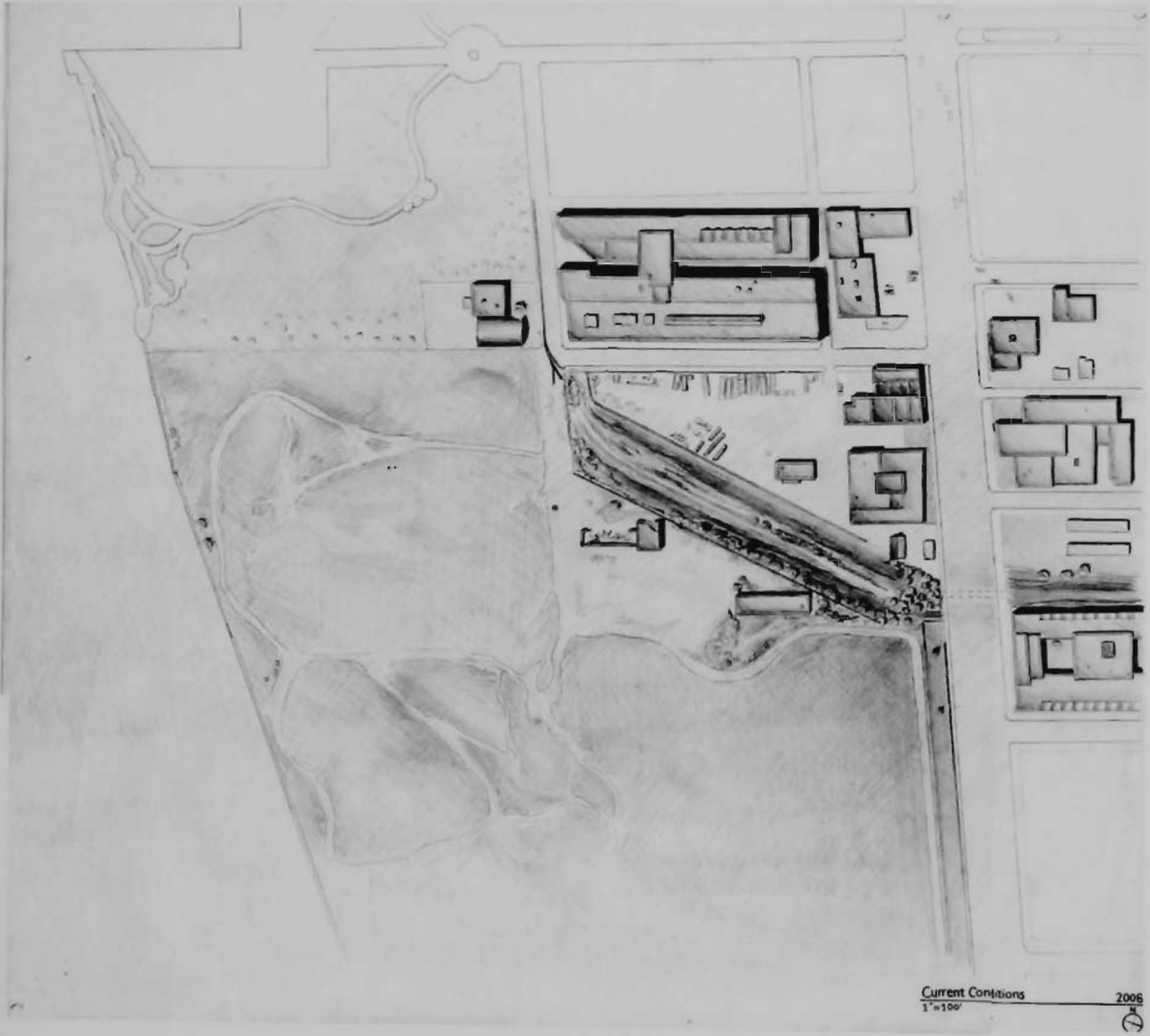
Current Conditions

Site Plans

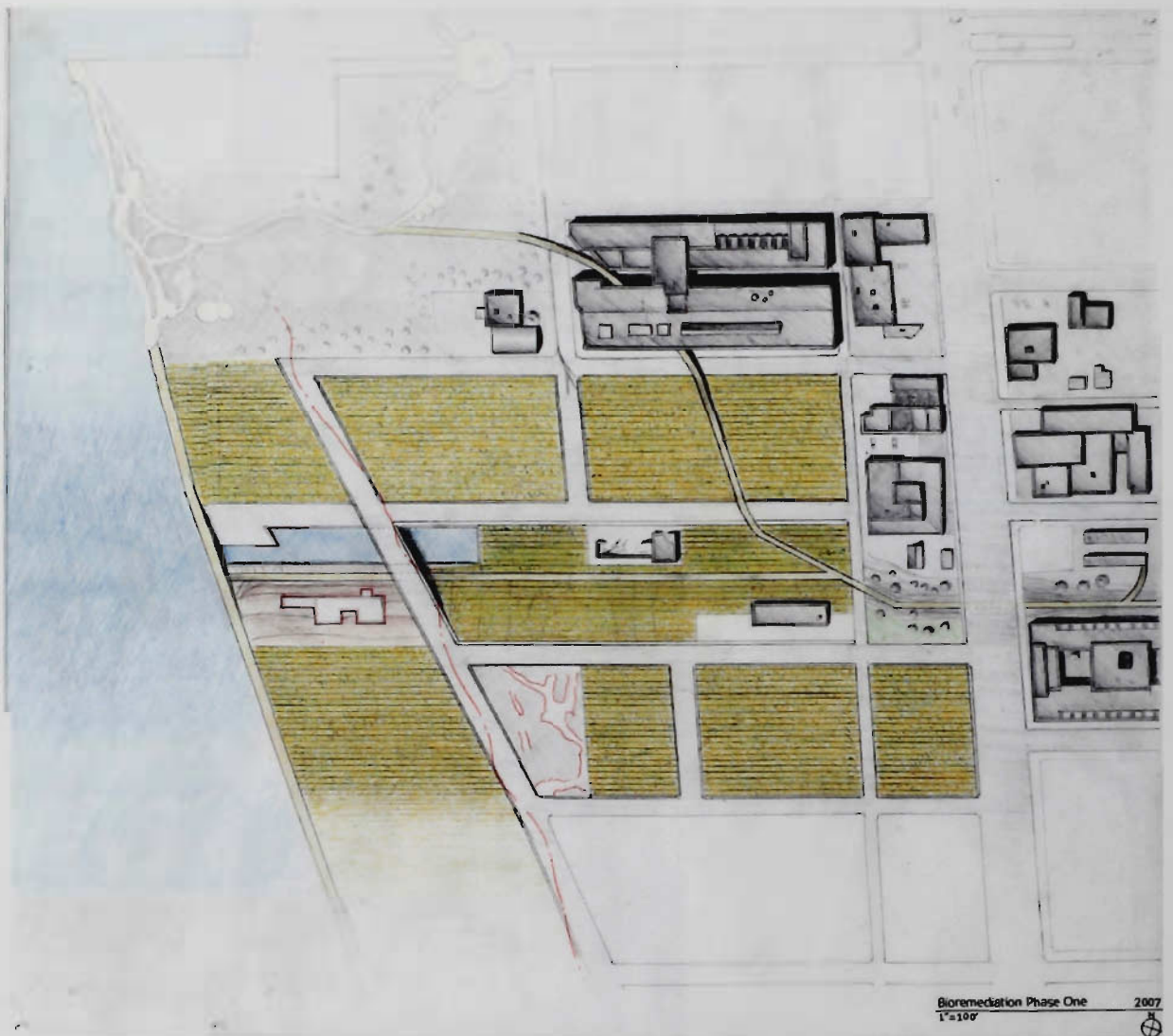


These four site plans are the next steps in the transformation of the site. The top plan is bioremediation phase one. The next one is bioremediation phase two. The third is first phase residential. The last one is second phase retail/residential

Current Conditions



Bioremediation Phase One

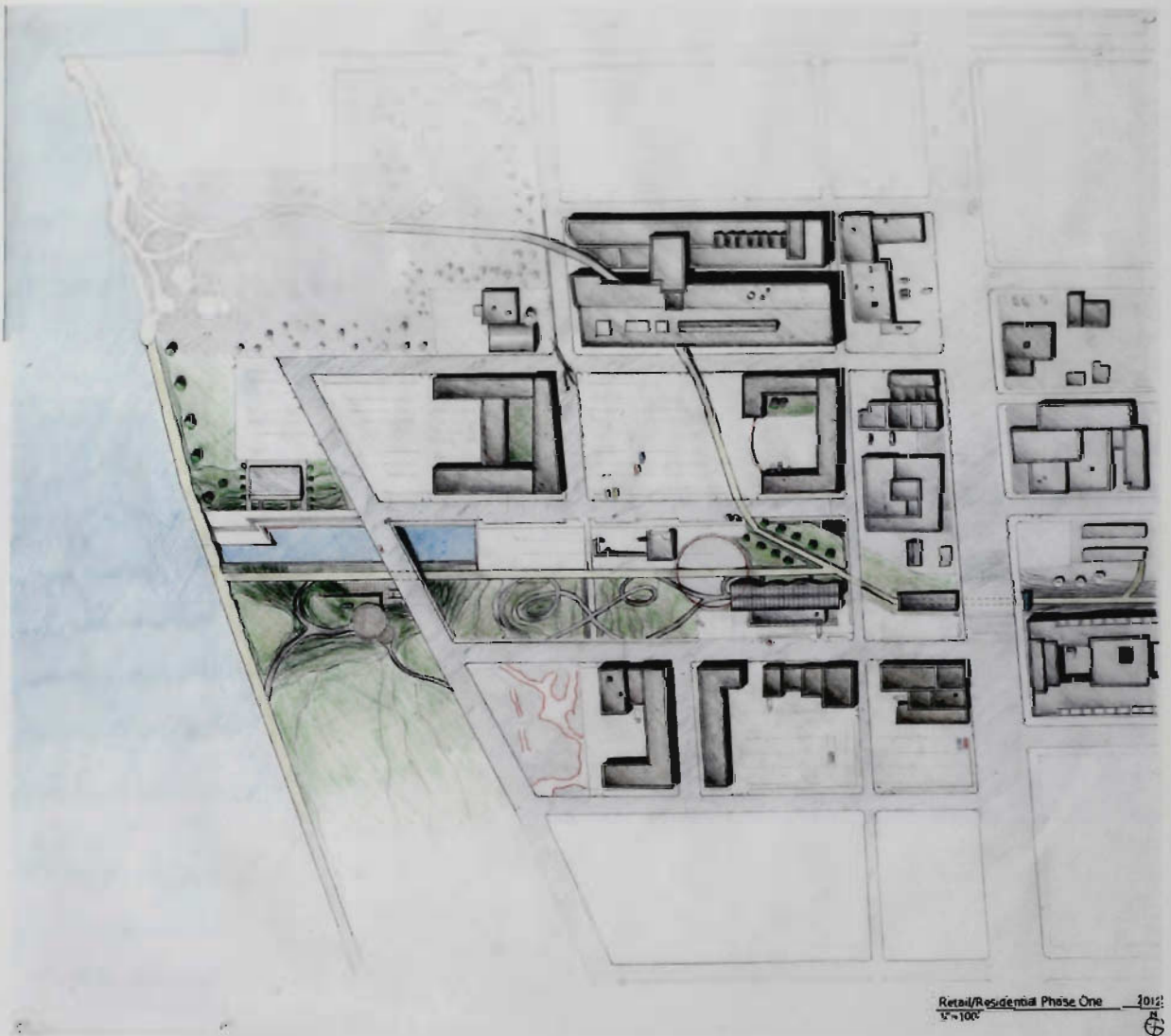


Bioremediation Phase Two



Bioremediation Phase Two/
Bicycle Reiged Phase
1"=100' 2010

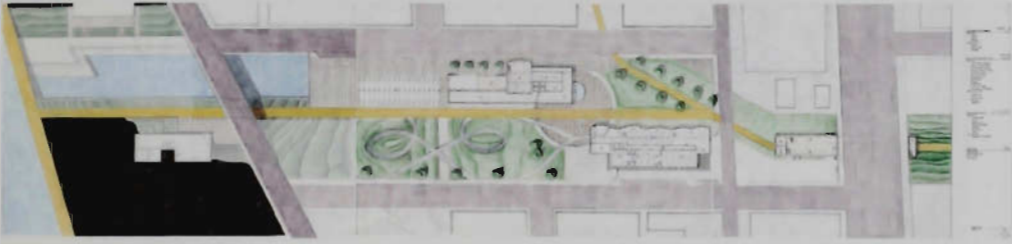
Retail/Residential Phase One

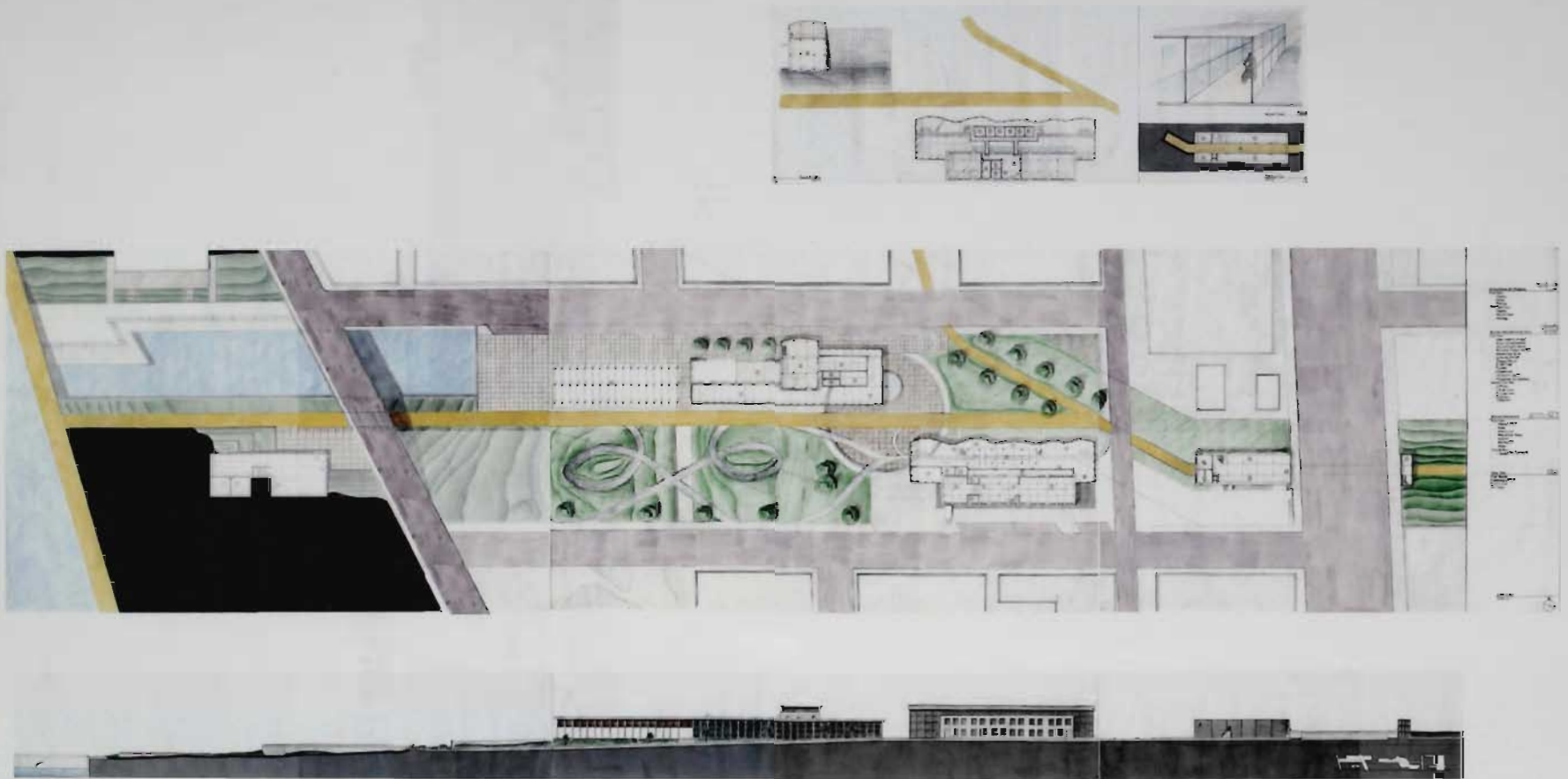


Retail/Residential Phase Two



Floor Plans





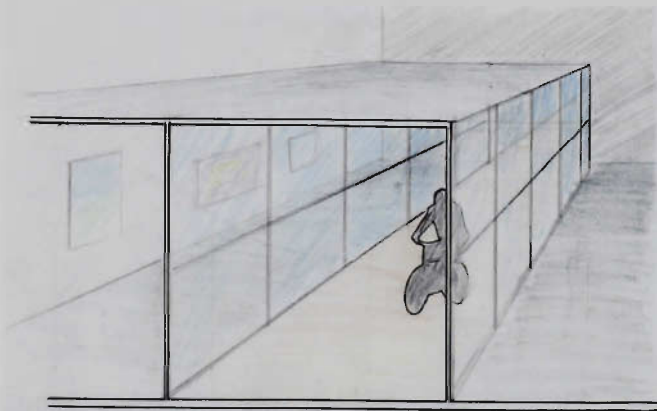
Floor Plans

The top drawing is the second floor of the bicycle manufacturing shop and market and the basement level of the interpretive art museum. The second drawing is the first floor plans of all of the buildings on the pedestrian friendly area of the site. The last drawing is a site section from Jefferson down to the river, showing the topography change of about 25'.

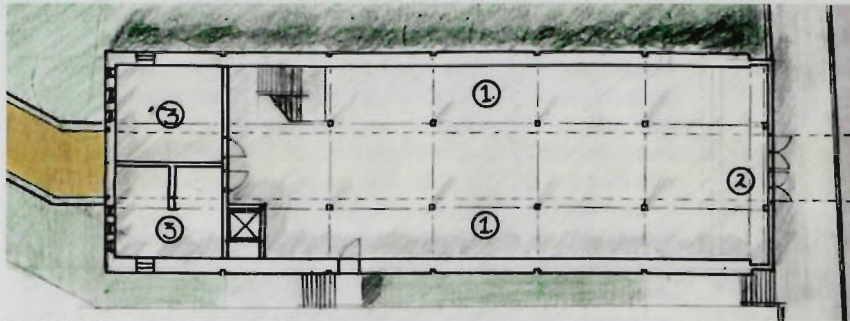
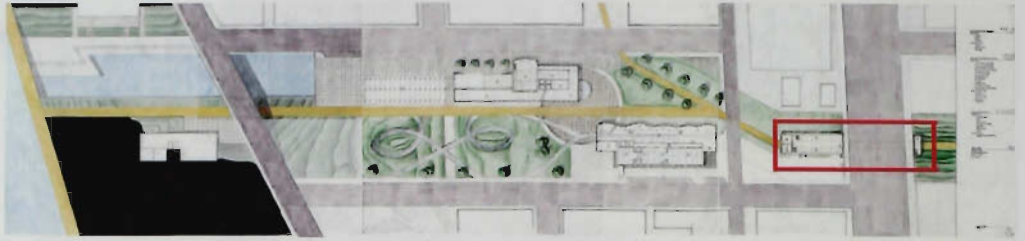
Interpretive Art Museum

The Interpretive Art Museum helps to reveal the historical cultural memory of the site. The building gives a presence on Jefferson Avenue on both sides of the street and is a transition point for the bikers coming out of the tunnel under the street into the park. The Jefferson level contains art gallery space, offices, ticket sales and restrooms. The lower level, that the bike path goes through, contains art gallery space and storage rooms. The idea is that the bikers can slow down and enjoy the art behind glass walls before continuing their ride.

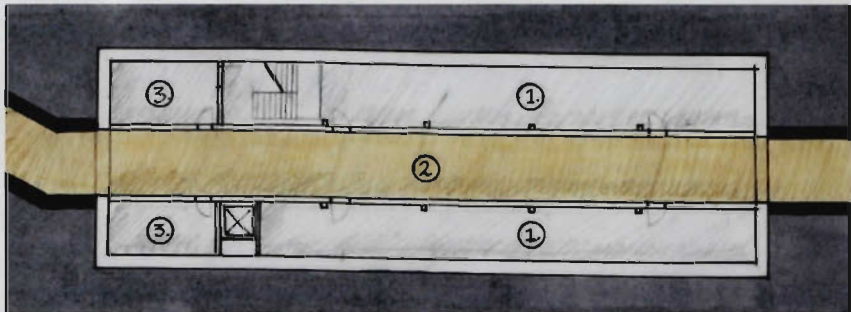
The design is based off of a railcar dimensions and look to remember that trains once dominated this part of the site. The tunnel has gone from a transportation spot to more of a residence. Many homeless live under the street and the art and experience would want to embrace this condition/transition.



Drawings

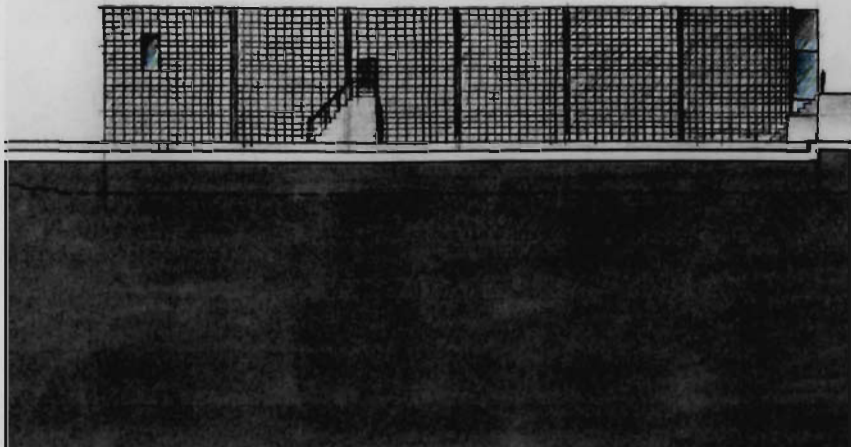


First Floor Plan

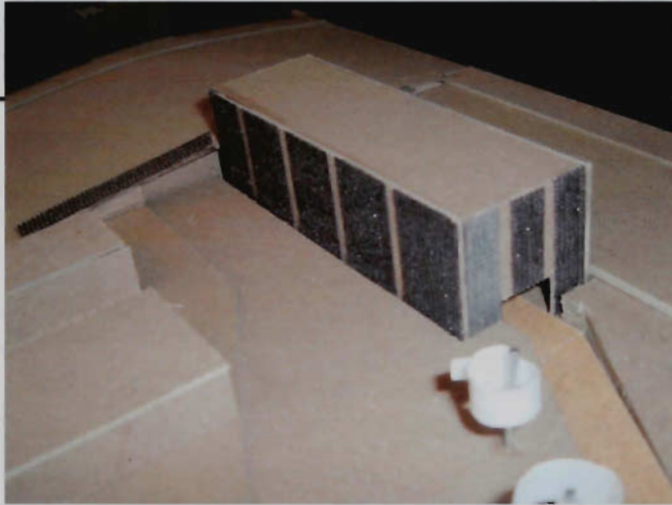
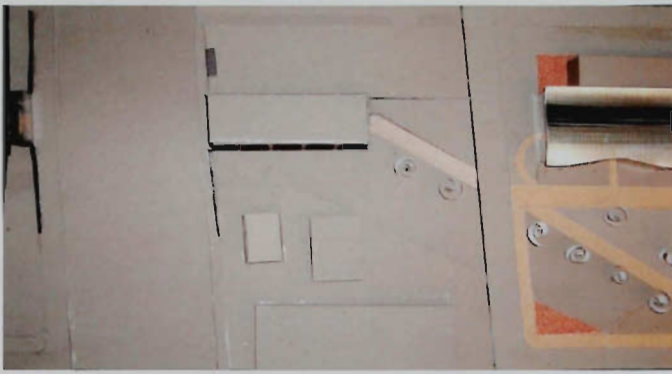


Second Floor Plan

- First Floor
- 1 Art Gallery
- 2 Entry
- 3 Offices
- Basement Floor
- 1 Art Gallery
- 2 Bike Path
- 3 Storage



North Elevation



These are some images of the museum in the site model.

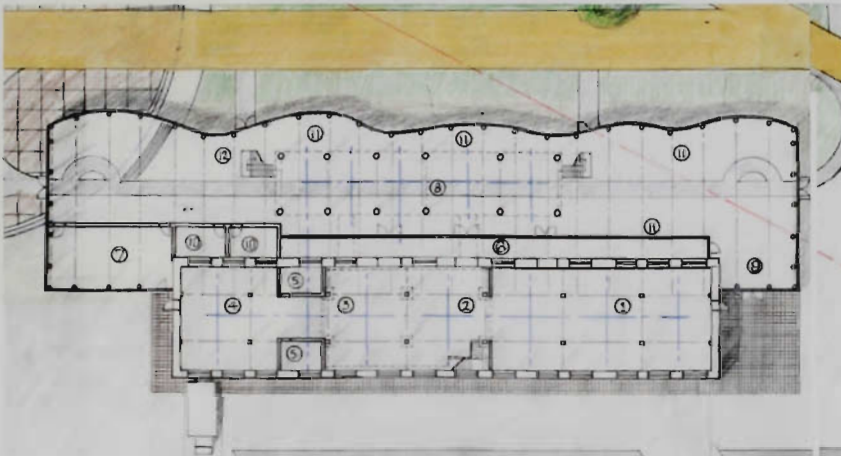
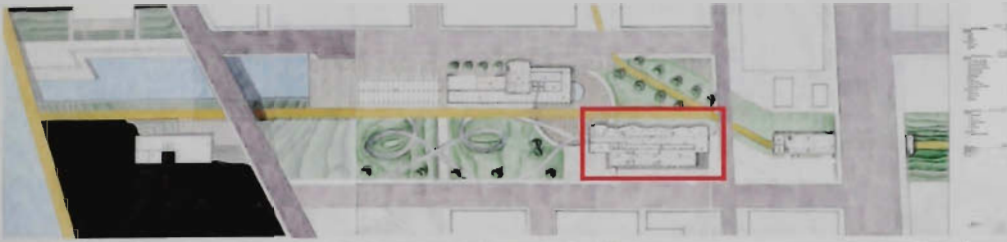
Bicycle Manufacturing Shop

The Bicycle Manufacturing Shop relates back to the idea of manufacturing and transportation on the site. The building uses the existing building furthest from the river as the manufacturing space. The manufacturing process takes place solely in the existing structure and re-creates its industrial purpose. The process begins at the north end with raw material storage and moves south to the pipe cutting/welding area, assembly, finishing and complete product storage. The structure and the walls would remain as they are and everything added into the building would clearly be "new" and more modern. On the second floor of the existing structure are a break room, locker room, kitchen, and rest rooms.

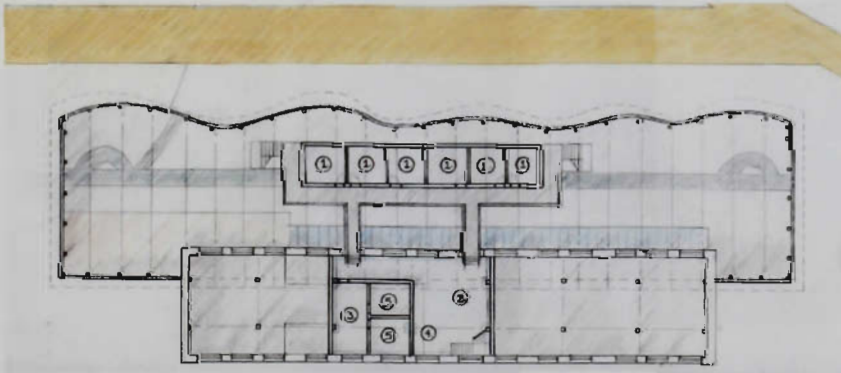
The portion attached to the existing structure wanted to be light and made of materials that would distinguish between old and new while also help selling the product manufactured [bicycles]. The structure is made entirely of steel and glass. The new portions contains the lobby, exhibition spaces, and offices. A bicycle test track runs throughout the building and extends out into the park and main bicycle paths. A viewing corridor is also in the new structure to allow potential clients to observe the manufacturing process from start to finish without distracting the workers.

The connections between old and new were important to me. I tried to express as many connection points as possible. Part of the new structures roof is supported by the existing columns in the old building. The floating offices bridge into the old building and notch into the masonry wall.

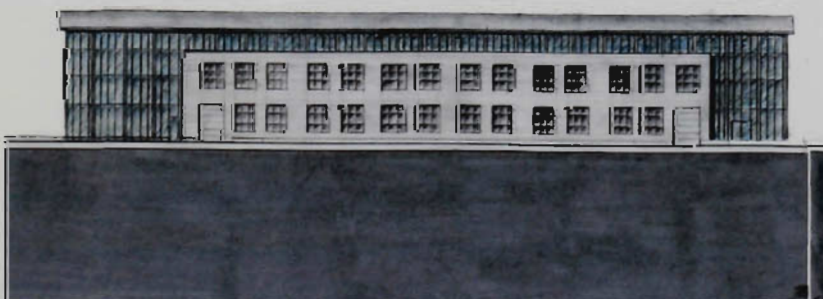




First Floor Plan



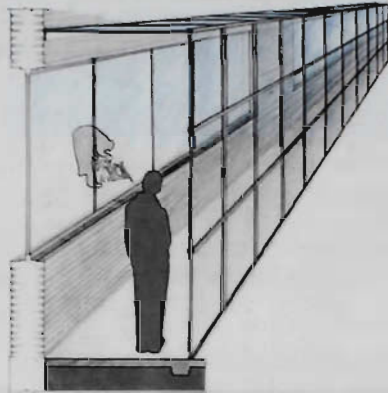
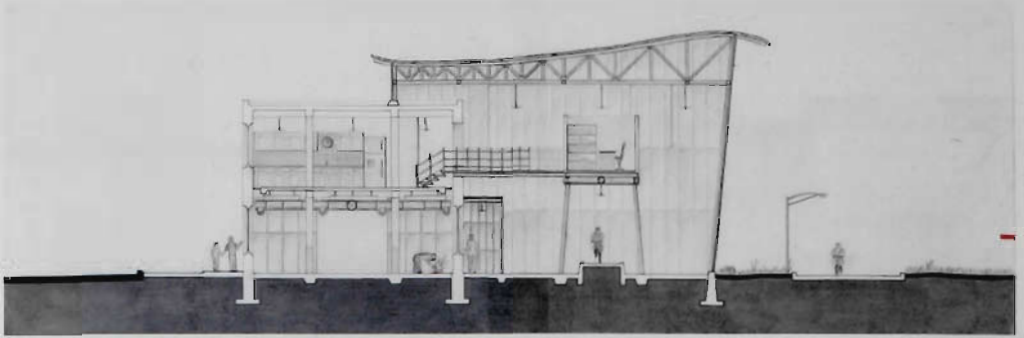
Second Floor Plan



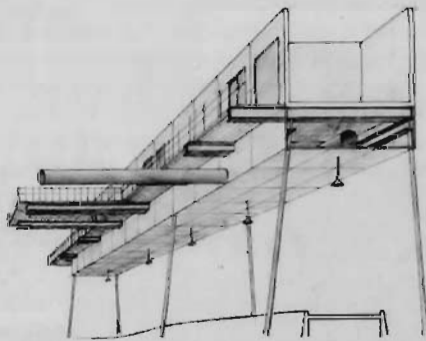
North Elevation

- First Floor Plan
- 1 Raw Material Storage
- 2 Pipe Cutting/Welding
- 3 Assembly/Finishing
- 4 Finished Product Storage
- 5 Mechanical Room
- 6 Viewing Corridor
- 7 Design Offices
- 8 Test Track
- 9 Lobby
- 10 Restrooms
- 11 Exhibition Space
- 12 Customer Service
- Second Floor Plan
- 1 Offices
- 2 Break Room
- 3 Locker Room
- 4 Kitchen
- 5 Restrooms

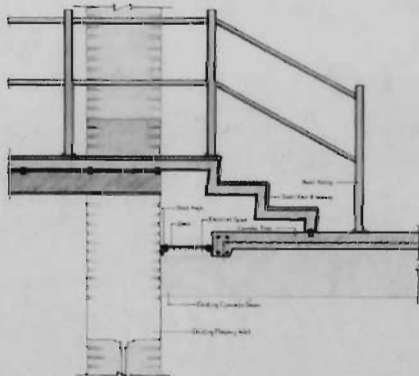
Drawings



Viewing Corridor

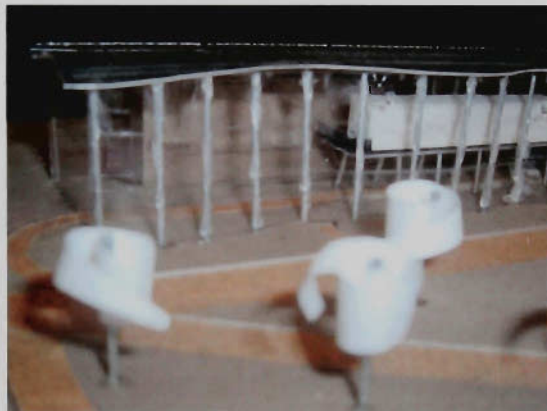
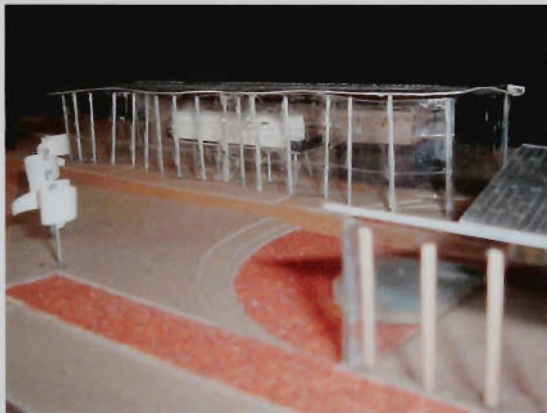
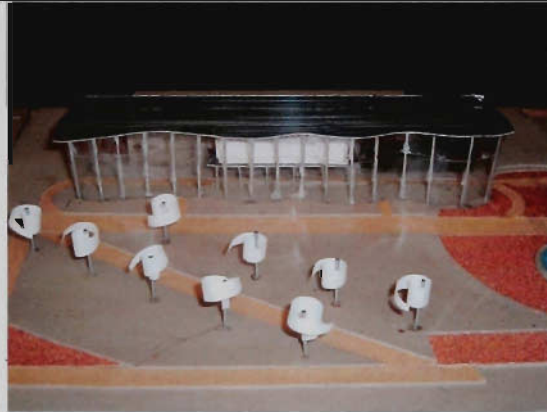
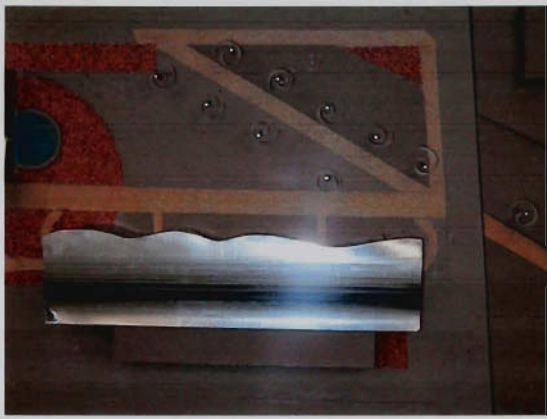


Floating Offices and Test Track



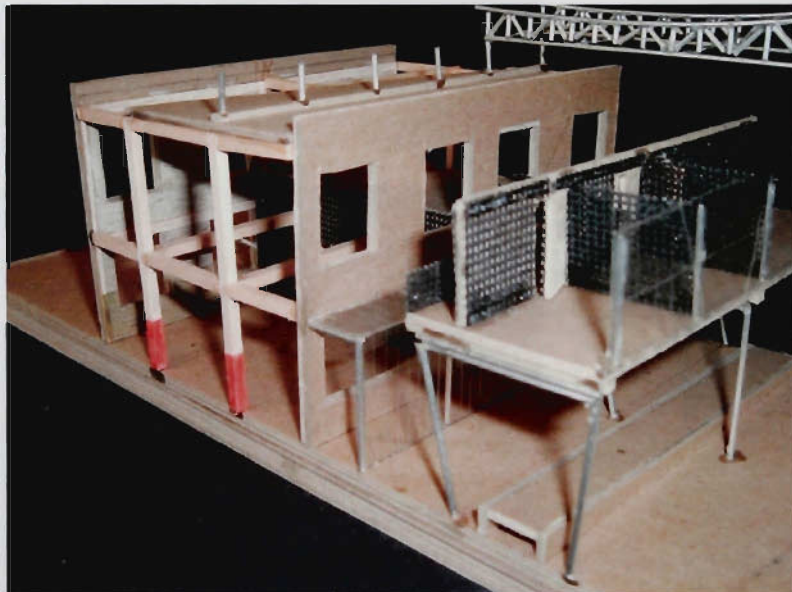
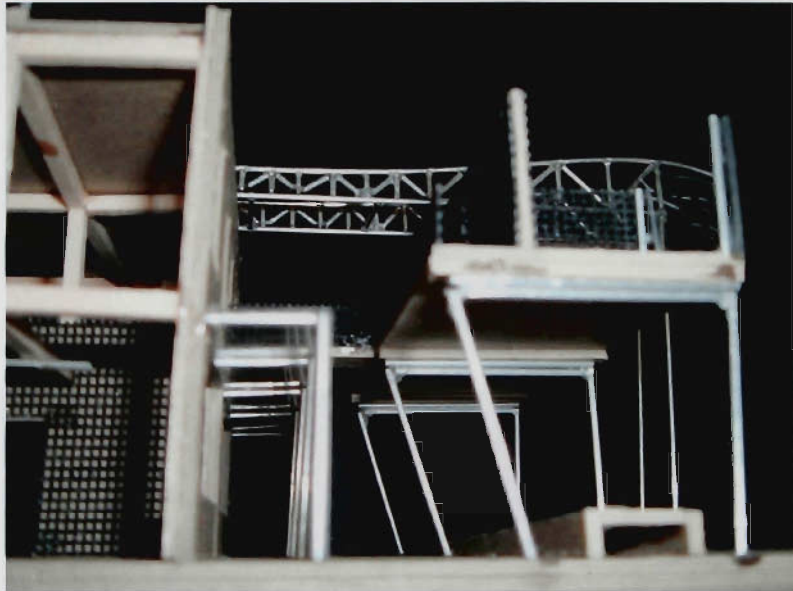
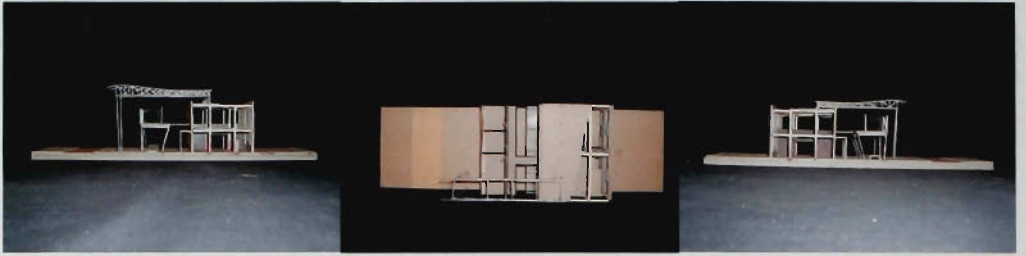
Bridging Detail

The top image is a section showing the new structure attached to the existing building. The viewing corridor allows clients to see the entire manufacturing process from start to finish. The bridging detail is literally and metaphorically a bridging between old and new. The steel stairs notch into the masonry wall and drop to the new concrete slab. The slab stops short of the existing wall where glass connects the two.

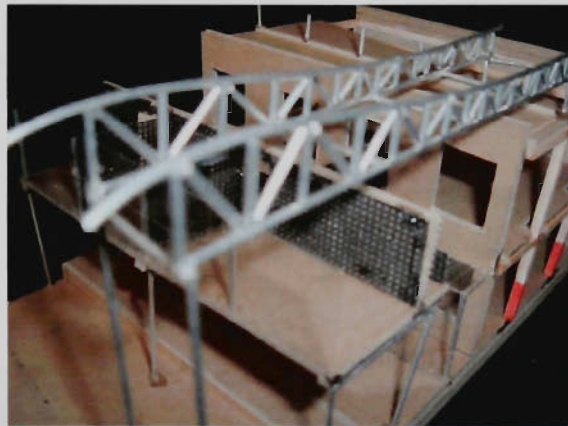
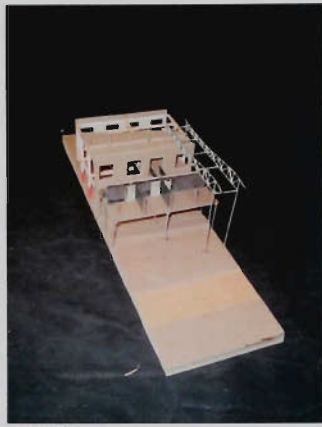


These images are of the bicycle manufacturing shop in the large site model.

Section Model



The top images show the section model in elevation and plan. The other two images show spacial conditions, structure, tectonics, and old/new relationships.



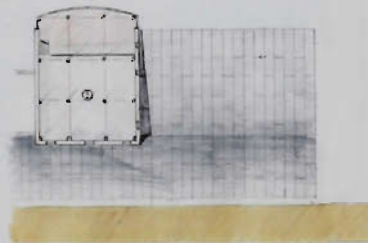
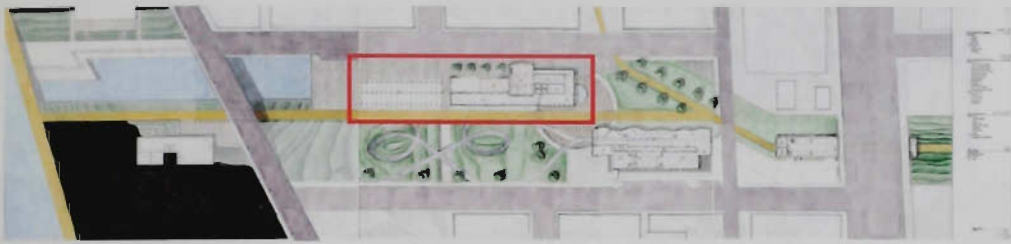
The top three images show the section model from arial views. The last three images show the curved trusses, floating offices and scale.

Market/Restaurant

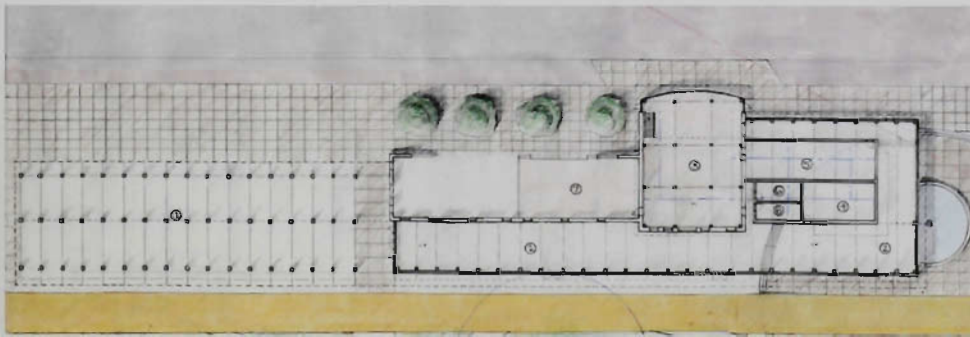
The Market/Restaurant building relates back to the idea of food production and the agricultural history of the site. The building has an indoor/outdoor market, a restaurant and cafe. The organization of the market continues the linear link between Jefferson and the river. The existing ruin contains a restaurant with a mezzanine level and outdoor patio. The new structure is mainly made out of timber and glass. The design is meant to be light and gentle. The existing ruin helps support the trusses of the market and the roof of the restaurant. The details between the existing structure and the new are delicate.

The ruin becomes engulfed by the new structure with an area except where the existing wall has collapsed. This area becomes a gathering space and contains the outdoor patio for the restaurant. The tectonic difference of the old masonry with the new timber (perhaps Douglas Fir), glass and metal roofing is a nice transition.



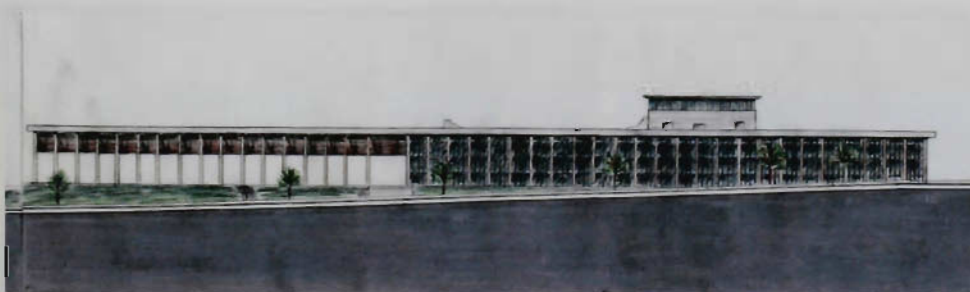


Second Floor Plan



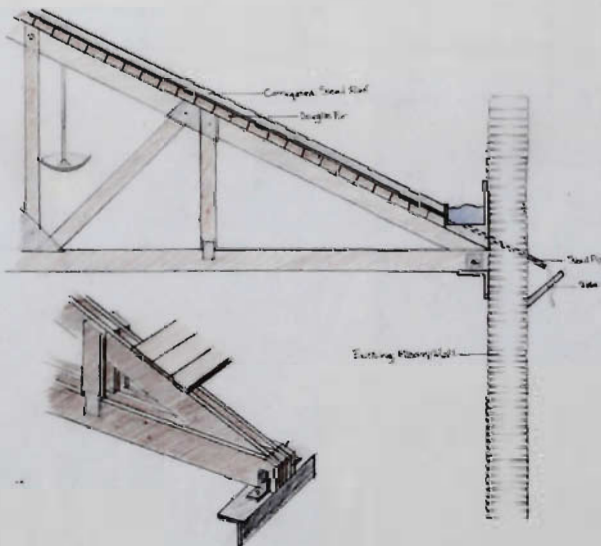
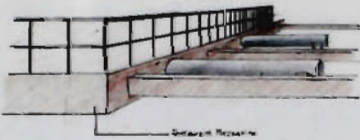
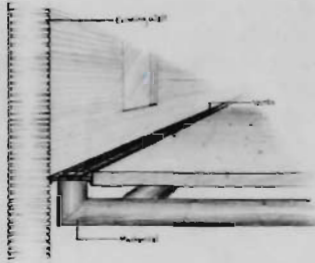
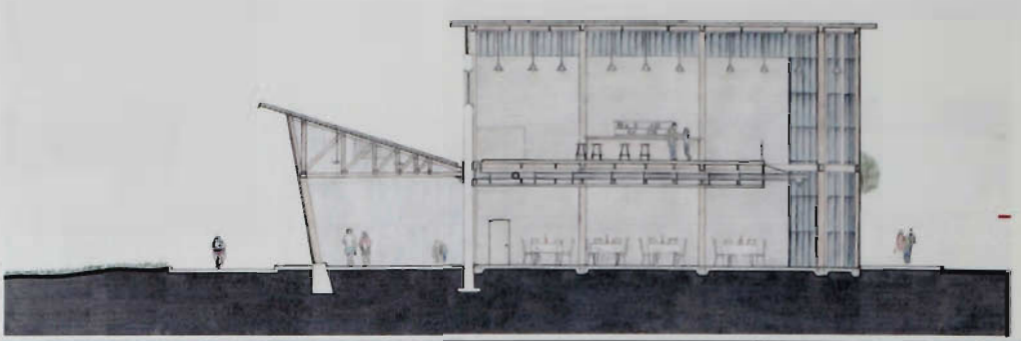
First Floor Plan

- First Floor Plan
- 1 Market Space
- 2 Cafe
- 3 Restrooms
- 4 Mechanical Space
- 5 Kitchen
- 6 Restaurant
- 7 Patio
- Second Floor Plan
- 1 Mezzanine Space

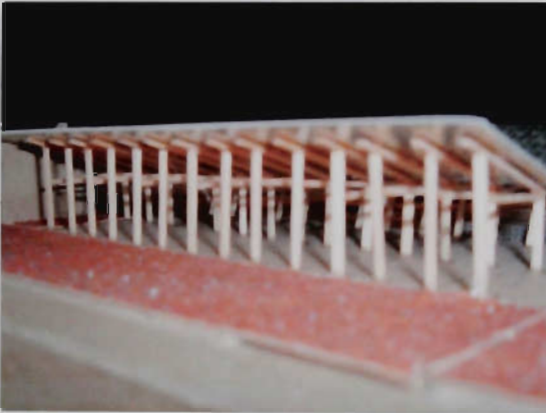


North Elevation

Detail Drawings

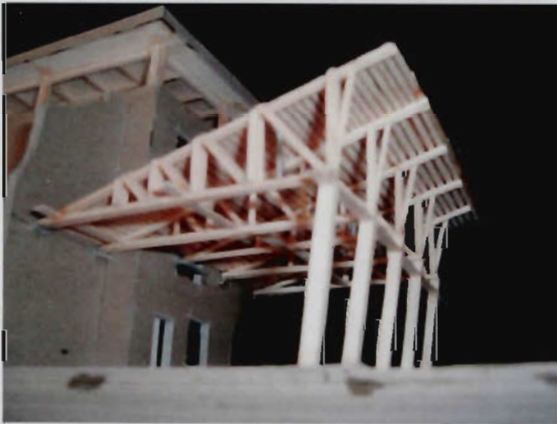


The top drawing is a section cut through the market space and the restaurant area. The other drawings are details throughout the building.



These are some images of the Market in the site model.

Section Model

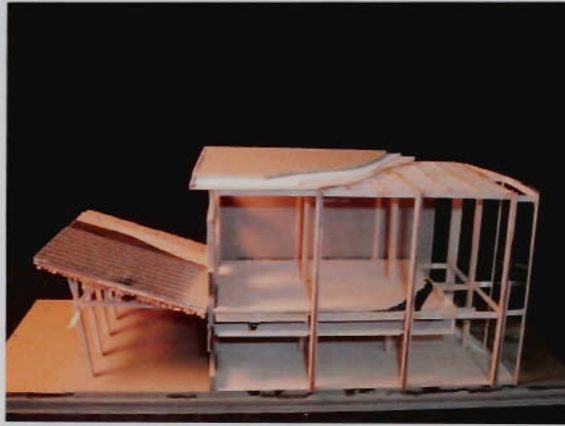


The top images show the section model in elevation and plan. The other three images show the model from a worm's eye view.





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The top three images show the section model from aerial views. The last three images show the roof and mezzanine construction and detail.

Section Model



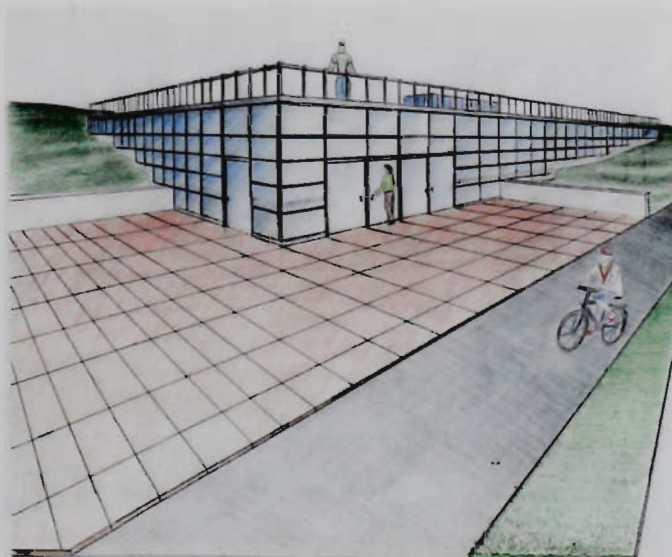
These images show the
roof construction in
detail.



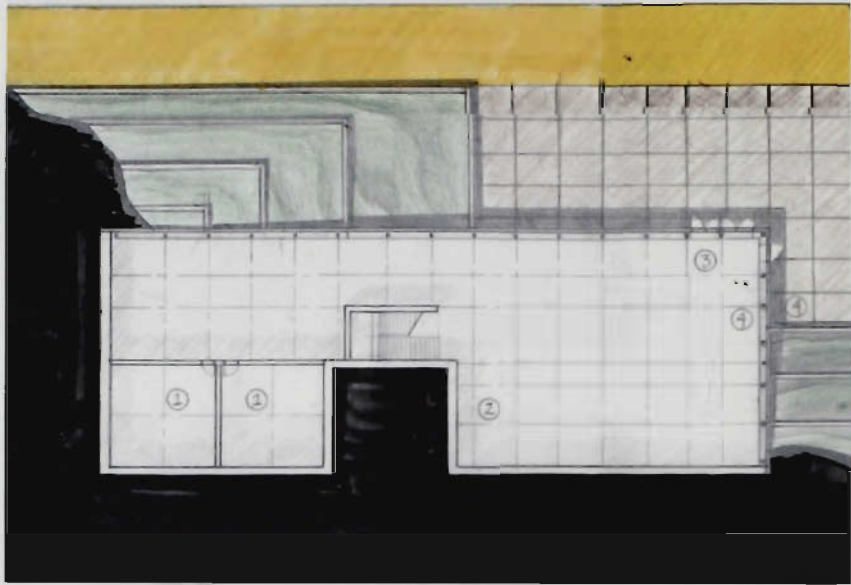
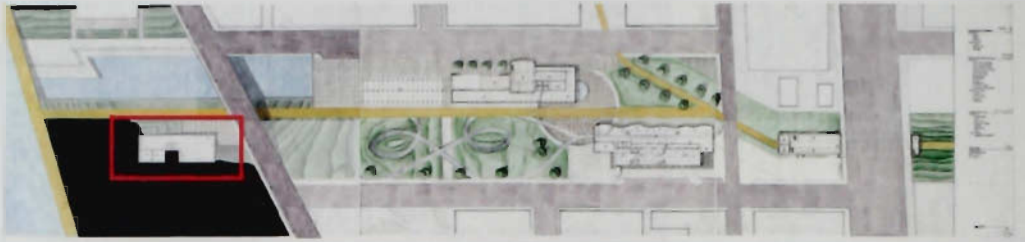
Bicycle Stop

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The Bike Stop is a destination for bikers to stop and work on their bikes, use the restroom or just hang out. The bike stop drops down toward the channel, creating a nice resting area for bikers. The location of the building was based on where old foundations are buried. The existing footings are revealed and serve as a foundation for a new structure. The glass walls are attached to these footings and the south end is made of rammed earth walls. Just a small corner of the building is cut out of the earth. This building is open for bikers to stop and grab something out of a vending machine or refill their tires.



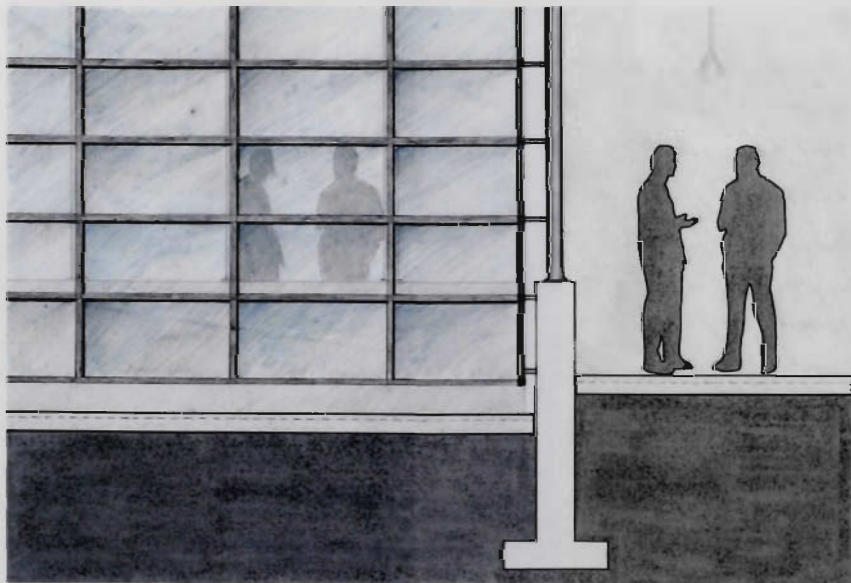
Drawings



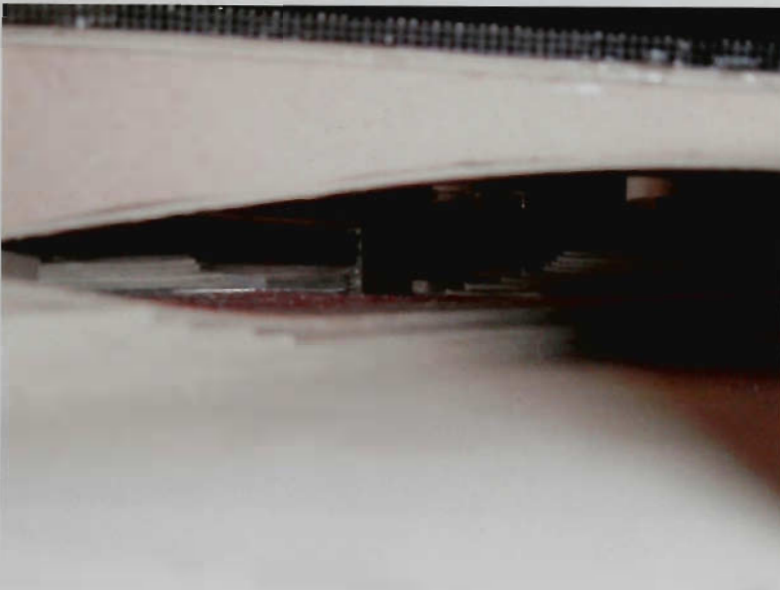
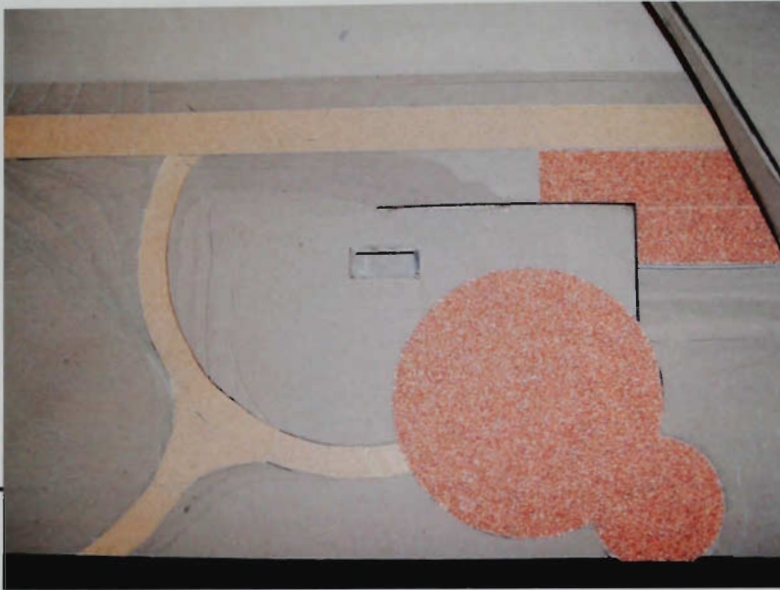
Floor Plan

- Floor Plan
- 1 Restrooms
- 2 Vending Machines
- 3 Entry
- 4 Air Tanks

The bottom drawing shows how the glass wall attaches to the existing foundation in section and then shows what it would look like in elevation toward the left.

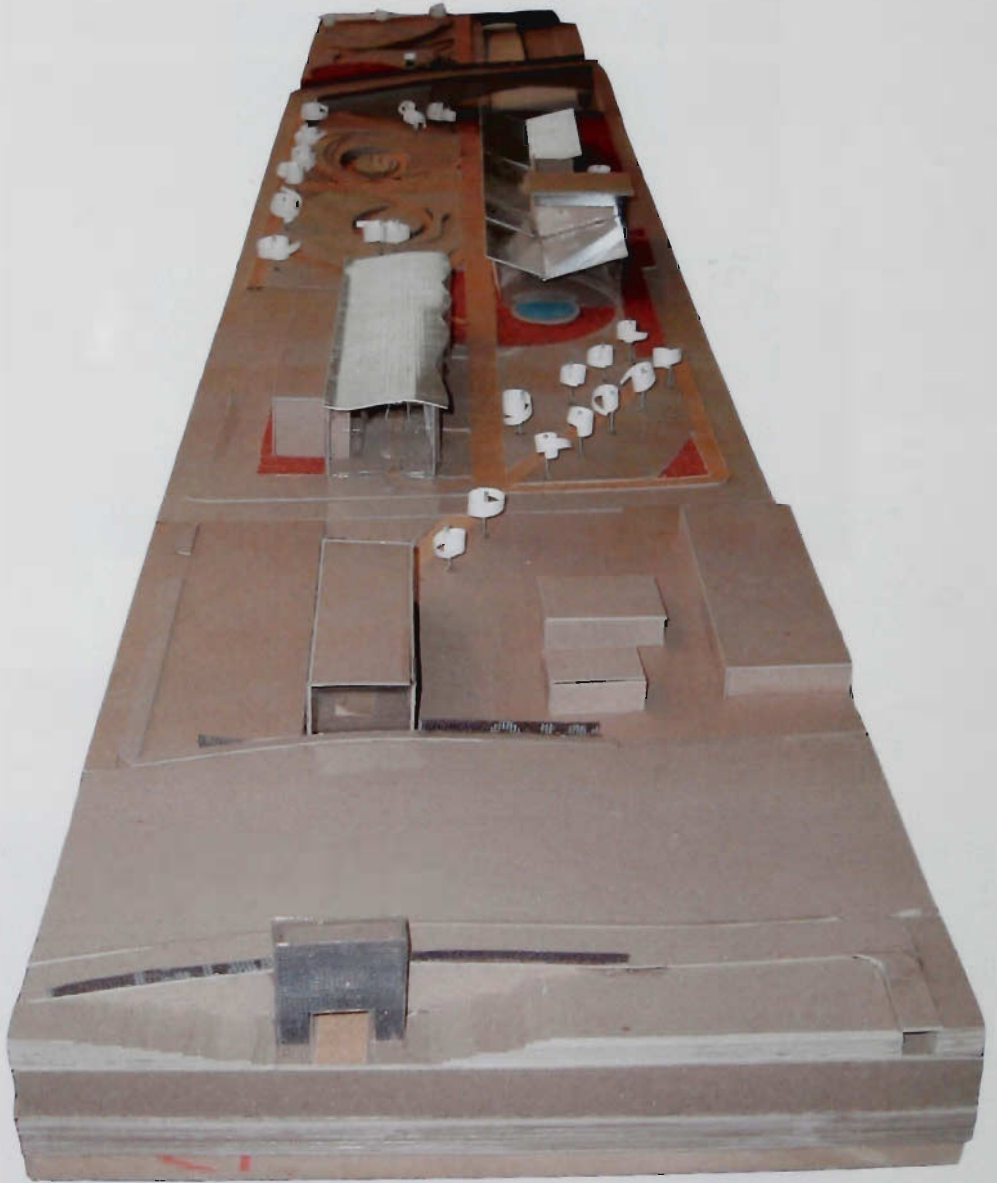


Section-Elevation



The first image is a top view of the bike stop. The second image shows the south elevation of the bike stop. The last image shows the bike stop from under the bridge.

Site Model



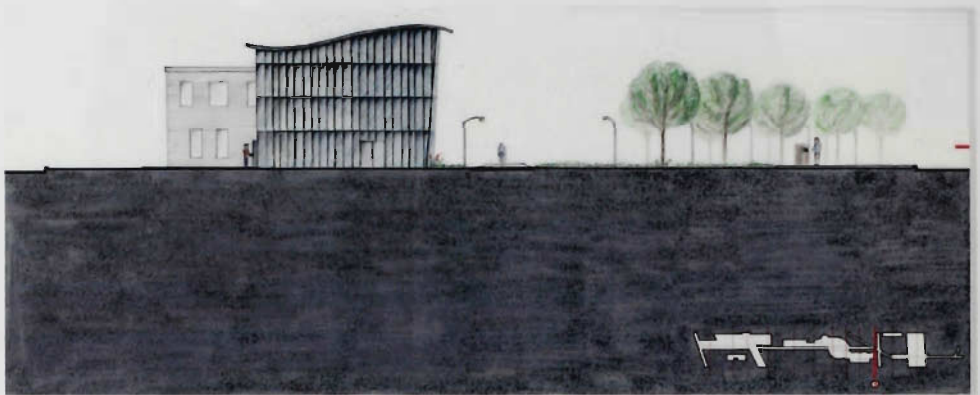
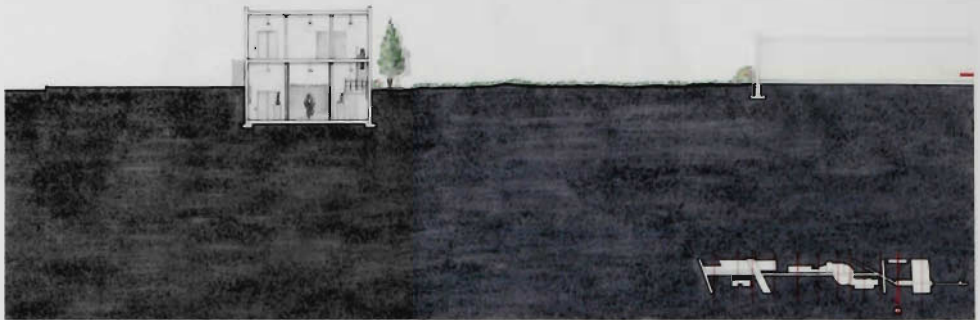
The site model shows the organization of the building, how the bike path connects Jefferson to the River and tectonics of buildings.



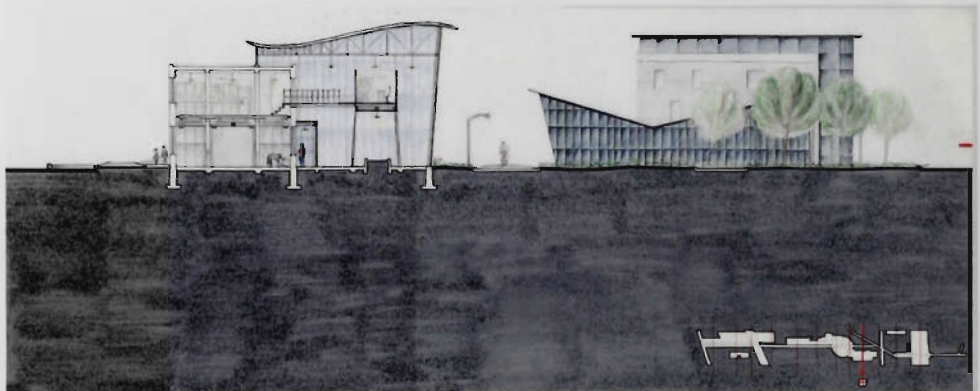
The site model here goes from Jefferson (top) down to the river (bottom). The model shows the topography change and the new channel being pulled in.



Site Sections

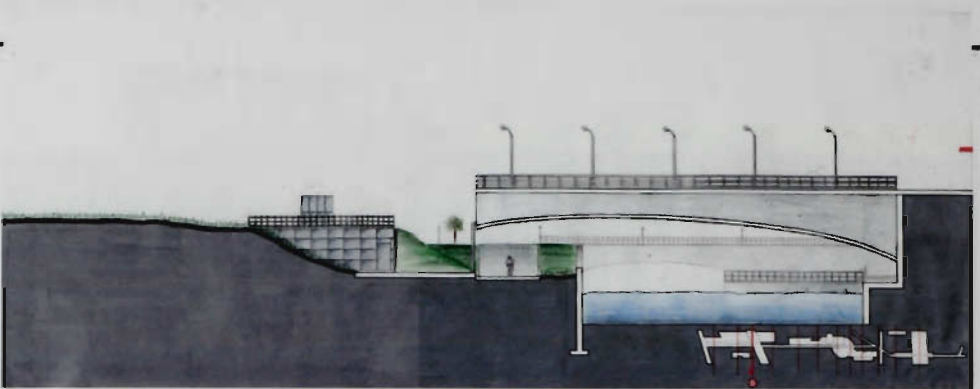


The site sections were intended to show how a person/biker may experience and move through the site.





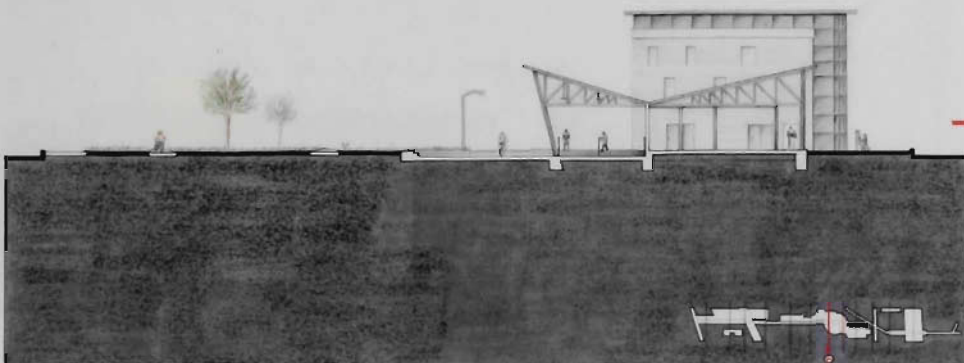
Site Sections



At this point in the series of section the site drops down closer to the level of the channel. The bicycle path dips down but then goes back up to the boardwalk level.



Conclusion



These site sections show the topography change. The red mark on the right of each section refers to where Jefferson would be.

Project Conclusion

Lessons Learned

This thesis project was not simple or easy at any point. There were many times that the project could have went downhill but it did not. Of course there are always going to be things [as architects] that we want to change but that does not mean all projects are unsuccessful. The project proved that the thesis is correct. A designer can re-develop a site by recognizing a site's historical cultural memory and using that to drive a design. By no means is this the best way to design a project. In fact, designing this way could often be wrong. This project proves that rich site conditions are needed in order for the thesis to work. Through the process I struggled to find an appropriate program. I eventually became content with one but not until an enormous amount of site analysis. Perhaps an indepth site analysis must occur before any program can be considered. Some may argue that program should be decided first and then adapted by the site's history but I do not think that is necessarily correct either.

The most important thing to realize out of this process is that a site that has been transformed as much as the Riverfront should not just be built over without at least considering the past conditions. Too many opportunities are missed by ignoring the past. Architects should know their site well before jumping into design (both past and present conditions). Once again, the past should not always influence the new design but an indepth site analysis can help decide that for each individual.

Project Successes

The master planning and program worked well with the thesis. Adapting the future Riverfront decisions was also a good move and made the project more believable and grounded. The site analysis and design decisions based off of the analysis were very successful. The overlay drawings and site section really told the story of what the thesis was trying to accomplish.

Project Failures

Though the architecture was not bad, it did not really reach a level that set it apart from other projects. The decisions for materials and style were good but there was more opportunity to engage the existing conditions. The connections between old and new were good initially but were all too similar and did not really push the boundaries like a Carlos Scarpa (then again, who does do it like him!). If I was starting again, I think I would also approach the project more like an archeologist and let the unveiling of the site really influence where and what was built.

Endnotes and Annotated Bibliography

Endnotes

Abstract

- 1 Bastea, Eleni, "Memory and Architecture"
- 2 Leatherbarrow, David, "The Roots of Architectural Intervention"

St. Mary's Church Conversion and Library

- 1, 2 Grey, Elenor, "Ships in Time"
-The new ship also is acoustically and thermally separate from the old church, not to compromise division between temporal and spiritual uses. Grey points out that "the place is a metaphor of decent society, in which church and state are separate but symbiotically and symbolically interwoven".
3. <http://www.detail.de/Archiv/De/HoleDetail/14707>
-Images and details.

Castelvecchio

- 1 Murphy, Richard, "Carlo Scarpa and the Castelvecchio".
- 2 <http://www.comune.verona.it/Castelvecchio/cvsito/english/index1.htm>
- 3 <http://www.studiocleo.com/gallerie/scarpa/castelvecchiomusmain.html>

Project Program

- 1 Gallagher, John, "A Survey of Detroit's History and Development"
- 2 <http://www.historydetroit.com/>

Sony Center

- 1 http://www.murphyjahn.com/english/frameset_intro.htm
-Helmut Jahn describes his goals and successes of the Sony Center design.
- 2 http://www.sonycenter.de/sonycenter_eng/
- 3 Blaster, Werner, "Helmut Jahn: Transparency"

Studebaker Plant

- 1 <http://detroityes.com/webisodes/2005/04-Studebaker/01-Studebaker.htm>
- 2 <http://www.ci.detroit.mi.us/plandevl/advplanning/>

Continental Motors Plant

- 1 <http://detroityes.com/webisodes/2005/04-Studebaker/01-Studebaker.htm>
- 2 <http://www.ci.detroit.mi.us/plandevl/advplanning/>

Uniroyal Site

- 1 <http://detroityes.com/webisodes/2005/04-Studebaker/01-Studebaker.htm>
- 2 <http://www.ci.detroit.mi.us/plandevl/advplanning/>
- 3 <http://www.detnews.com/2004/realstate/0405/15/b01-151814.htm>
- 4 <http://www.reuther.wayne.edu/faces/ironworkers.html>

Annotated Bibliography

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Books

Bastea, Eleni. "Memory and Architecture". University of New Mexico Press, Albuquerque, 2004.

-Introduction, Chapters 1 & 4

Blaser, Werner. "Helmut Jahn: Transparency". Basel, Boston, Birkhäuser, 1996.

-Sony Center information.

Gelemer, Mark. "A History of American Architecture: Buildings in their Cultural and Technological Context". University Press of New England, Hanover, London, 1999.

Ghirardo, Diane. "Out of Site: A Social Criticism of Architecture". Bay Press, Seattle, 1991.

-Introduction.

Goat, Linda and David Wang. "Architectural Research Methods". John Wiley and Sons, Canada, 2002.

-Interpretive-Historical Research and Qualitative Research.

Hyde, Charles K. "Detroit: An Industrial History Guide". Detroit Historical Society, 1980.

-History of Industries in Detroit.

Leatherbarrow, David. "The Roots of Architectural Intervention". University of Cambridge, New York, 1993.

-Part I: Limited Sites (Chapters 1, 2, 4, 6, 7)

Magazines

Baniassed, Essy. "Brian MacKay-Lyons". Tuns Press, Canada, 1998, 2000.

-Examples of cultural history/site developing a style of architecture.

Grey, Elenor. "Ships in Time". Architectural Review. June 1999: 50(4).

-Klaus Block Architekt project.

Jodido, Philip. "Renault Square Com, France". Architectural Record. August 2005, pg. 100-105.

-Factory into mixed-use building.

Vees-Gulani, Susanne. "From Frankfurt's Goethehaus to Dresden's Frauen kirche: Architecture, German Identity and Historical Memory". The Germanic Review, Spring 2005: 80(2).

-Historical Memory in Architecture.

Websites

<http://www.medialabeurope.org/hc>. "Palimpsest: a layered video manuscript of social interaction". Ben Piper.

<http://www.detail.de/Archiv/De/HoleDetail/14707>
-Klaus Block Architekt plans and sections.

<http://www.comune.verona.it/Castelvecchio/cvsito/english/index1.htm>
-Castelvecchio images.

<http://www.studiocleo.com/gallerie/scarpa/castelvecchiomusmain.html>
-Castelvecchio images.

<http://www.historydetroit.com/>
-Industrial Ruins of Detroit.

http://www.murphyjahn.com/english/frameset_intro.htm
-Helmut Jahn design issues for Sony Center and images.

<http://cidetroit.com>
-Used for Detroit demographics, images, and future plans for the riverfront.