



Dimensions

Michael Wiegmann

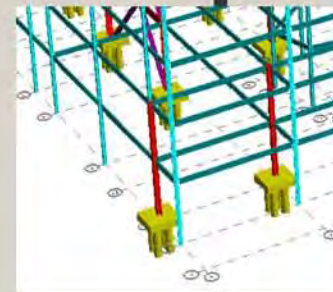
Bachelor of Architectural Engineering - Penn State

Dimensions

Cover Photograph

Jean Nouvel's Kultur und Kongresszentrum
Luzern, Switzerland - Taken June, 2007

Jean Nouvel's work has a multidimensional quality and is filled with mystery. The first glance never tells the full story, and only an in-depth look can verge upon revealing everything the work has to say. I not only find this fascinating, but believe this is a fundamental element of architecture, where the literal dimensions of space and time merge with those that are abstract, such as culture, ecology, and the metaphysical. I hope to demonstrate -through this portfolio - my capacity to grasp these dimensions, and ability to integrate this capacity with my engineering education, in the future role of architect.



Inspiration

My architecture study abroad experience in Rome was a journey of self discovery. It began with the mystery afforded by the eternal city and was followed by the exploration and discovery of my love for architecture. It ended by inspiring me to pursue a career in the architecture profession.

Applied Inspiration

The senior thesis project is the culmination of my education as an architectural engineer at Penn State. It centers on the analysis and redesign of the 480,000 square foot Temple University Multipurpose Health Science Center, which is currently under construction in downtown Philadelphia. The gravity and lateral structural system has already been analyzed and will be redesigned in the spring semester along with an architectural element, while incorporating sustainability into the design.

The architecture studios at Penn State have complimented my training as a structural engineer by allowing me to explore my interest in architecture. My studio project for the architecture study abroad program in Rome was the design of a museum on Tiber Island. I began by sketching and historically analyzing the island, and then designed a museum that would draw cues from the local context while obtaining its own prominence.

The third studio project centers on researching and designing a mixed use community in State College, PA, and then to design in detail one of the buildings on the site. It was a group project, and our aim was to create a sustainable building that would serve as a center for our community. We conceptually designed it to be an abstracted reminder of Penn State's Old Main building, with Doric columns replacing with solar panels.

The Rebuilding after Hurricane Katrina studio provided the opportunity to work with a Gulf Coast family to design a green and affordable prototype home to aid the rebuilding process in the region. It was rewarding to not only work with professionals and a real client on an integrated design team, but to also meet the challenge of designing a home within the context of a community whose architectural memory had been eradicated.

3rd Dimension

These large and small scale travel sketches describe my ability to think spatially. Two of the three sketches from Rome, show my ability to think spatially in a free flowing graphic matter, while the multiple-point perspective and the sketch emphasizing the force lines of gothic arches from a German cathedral in Münster describe my ability to do so in a more conceptual manner.

4th Dimension

The element of time is a fascinating element of architecture because buildings provide a tangible history of the events and people who constructed and were affected by them. The image of a decayed Roman column from Hadrian's Villa provides a literal example, while the hypothesized images detailing the decay of a gated stairway on Tiber Island are more figural.

Cultural Dimension

Having grown up with a dual American-German citizenship, the exploration of other cultures has always fascinated me. Through my travel, whether it was taking the time to sketch on the mall in Washington DC., canoeing by Holland's villages along the canals, or exploring Berlin's landmarks and museums, I always strived to learn more about the cultural element which plays such a crucial role in the way we build.

Ecological Dimension

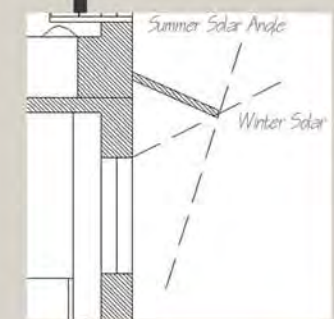
The concept of sustainability was introduced to me during my first architecture studio at Penn State, where I calculated solar angles for window openings and detailed wall sections with heavy insulation. Since then I have increasingly incorporated sustainability and green design into my endeavors, whether it was through studios or helping build Penn State's Solar Decathlon house. The work of the architecture firm from Zurich, Switzerland where I held my apprenticeship furthermore taught me that sustainability should be more than a catch-word used to flout a firm's ideology.

Metaphysical Dimension

There are some elements in architecture which cannot be seen. Human emotions, trauma, memory, and history all affect buildings, and are equally affected by buildings. An understanding of these elements is crucial to not only creating architecture that is responsive to its metaphysical context, but also one that will truly inspire.

Details

I have been fortunate to have a broad background, with a strong education in structural engineering and building systems from Penn State, and experience in seeing the world from different perspectives, cultures, and viewpoints. The image presented is not a photograph but rather my painting of a building on the grounds of Drodningholm Royal Palace in Stockholm, Sweden, which I visited several years ago. The enlarged image to the right presents the idea that I have the ability to see more than the big picture.





"Roman Rain" - 18"x24" Acrylic on Canvas

Mystery

Exploration



Discovery

Inspiration



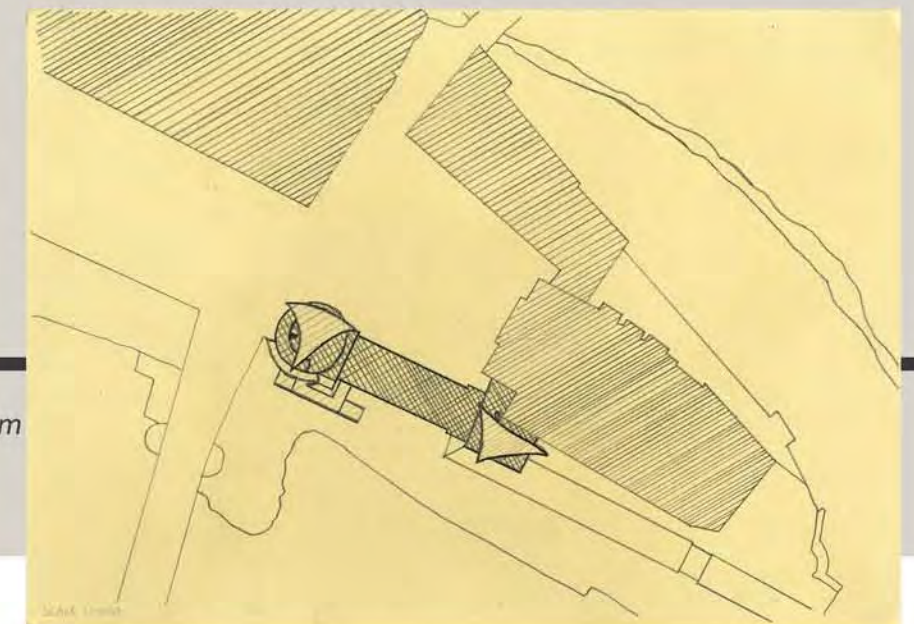
Elements of Inspiration: Tiber Island, Rome – Taken May, 2005

Rome Design Studio: Tiber Island Historical Society Museum.

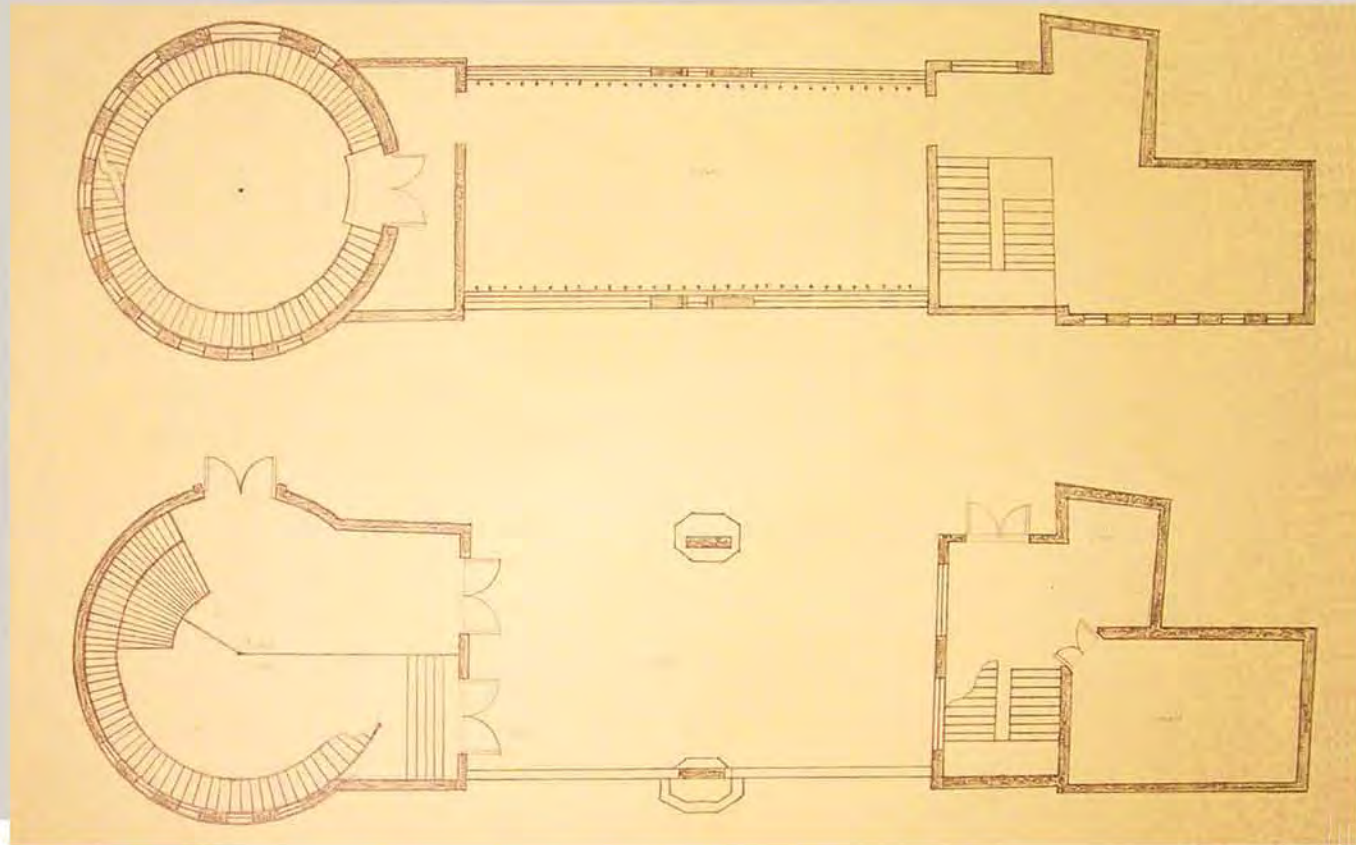
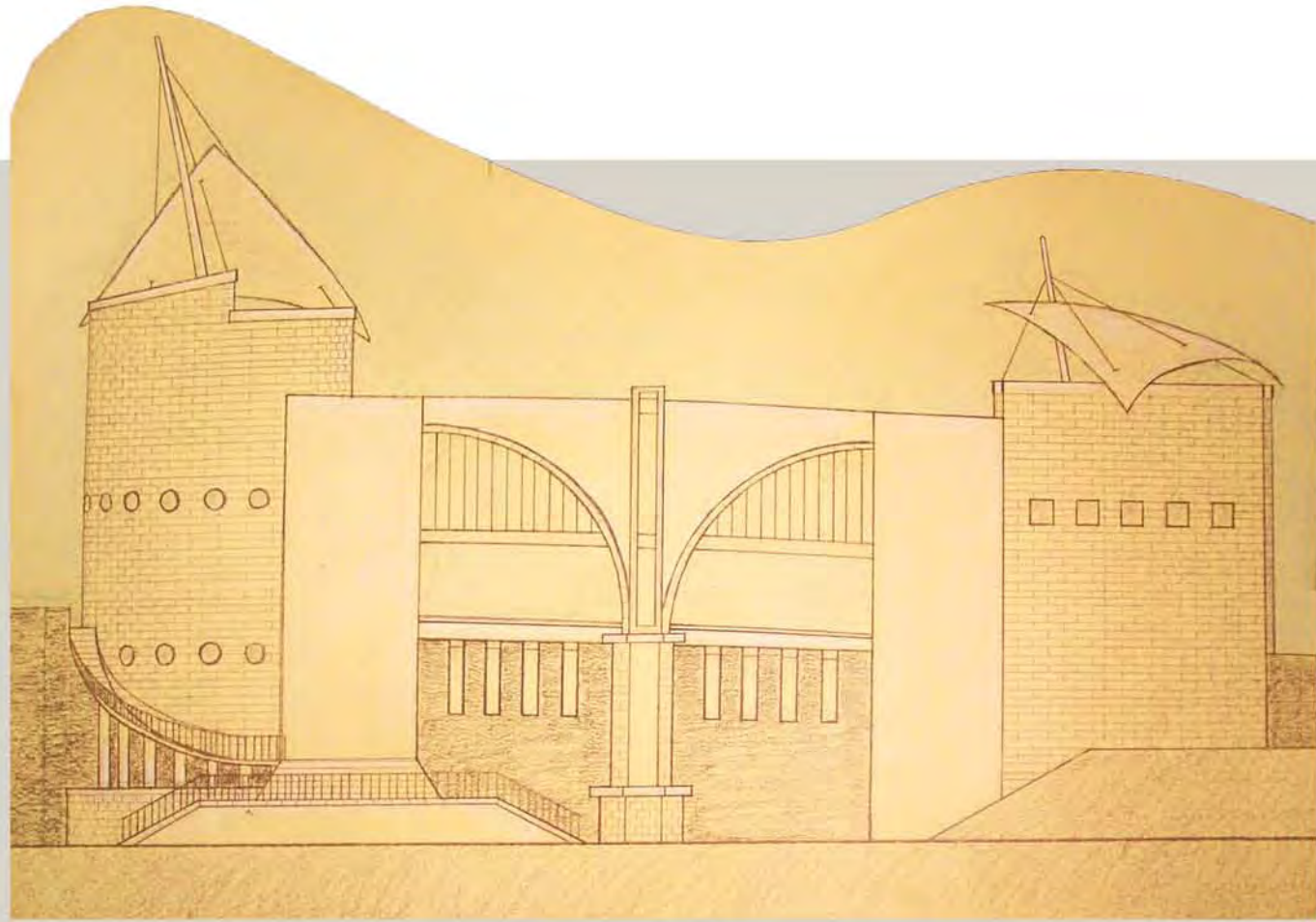


West Façade of St. Bartholomaei's

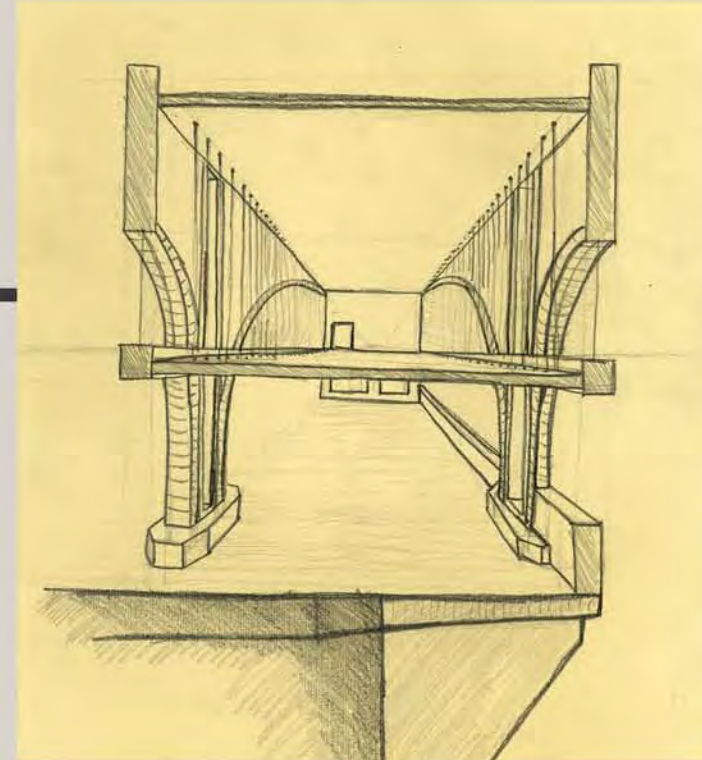
Island Section facing St. Bartholomaei's and site of museum.



Site Plan: The museum re completes Tiber Island's Plaza



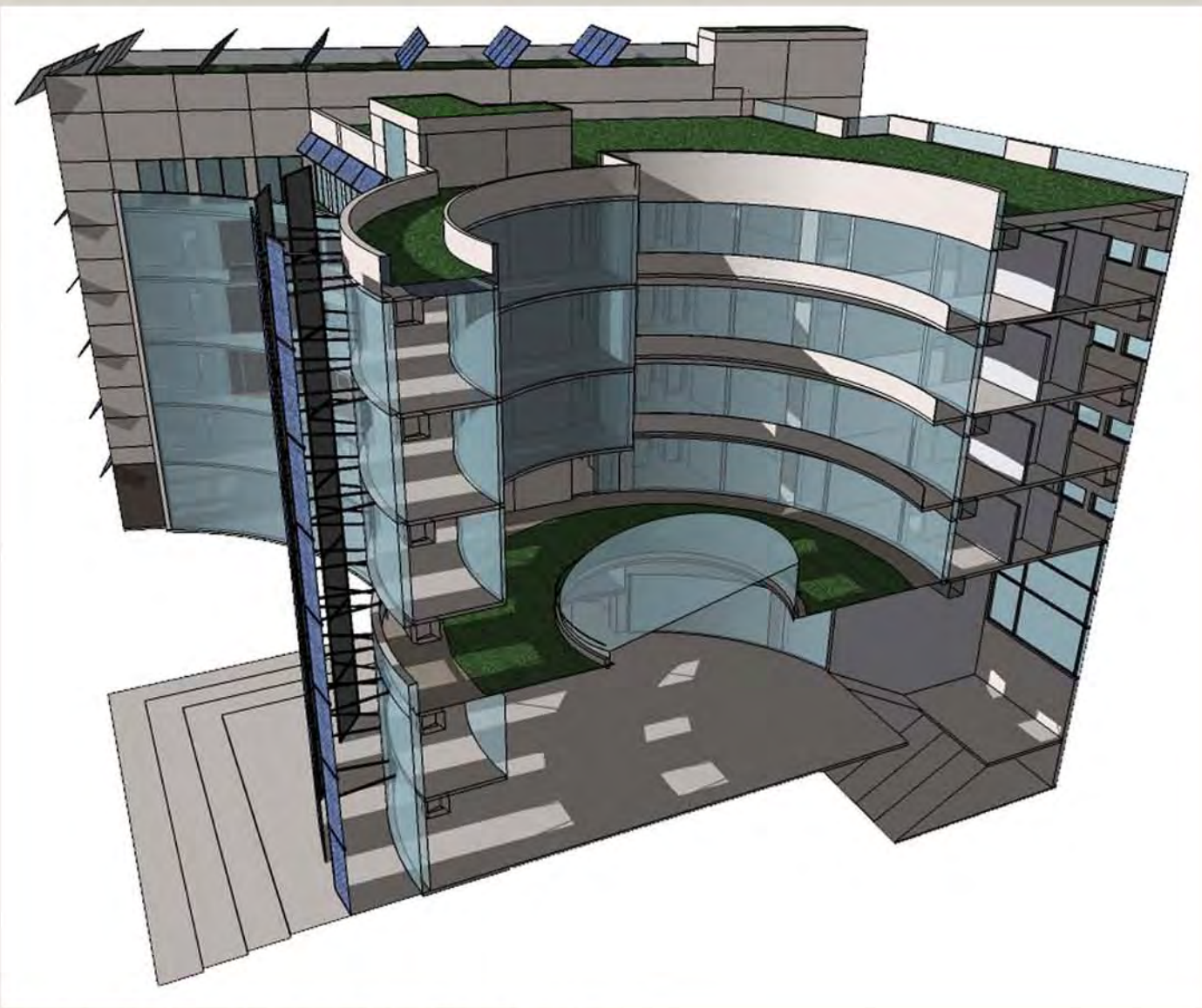
South Elevation, Ground Floor Plan, 2nd Floor Plan



Section of suspended gallery space.



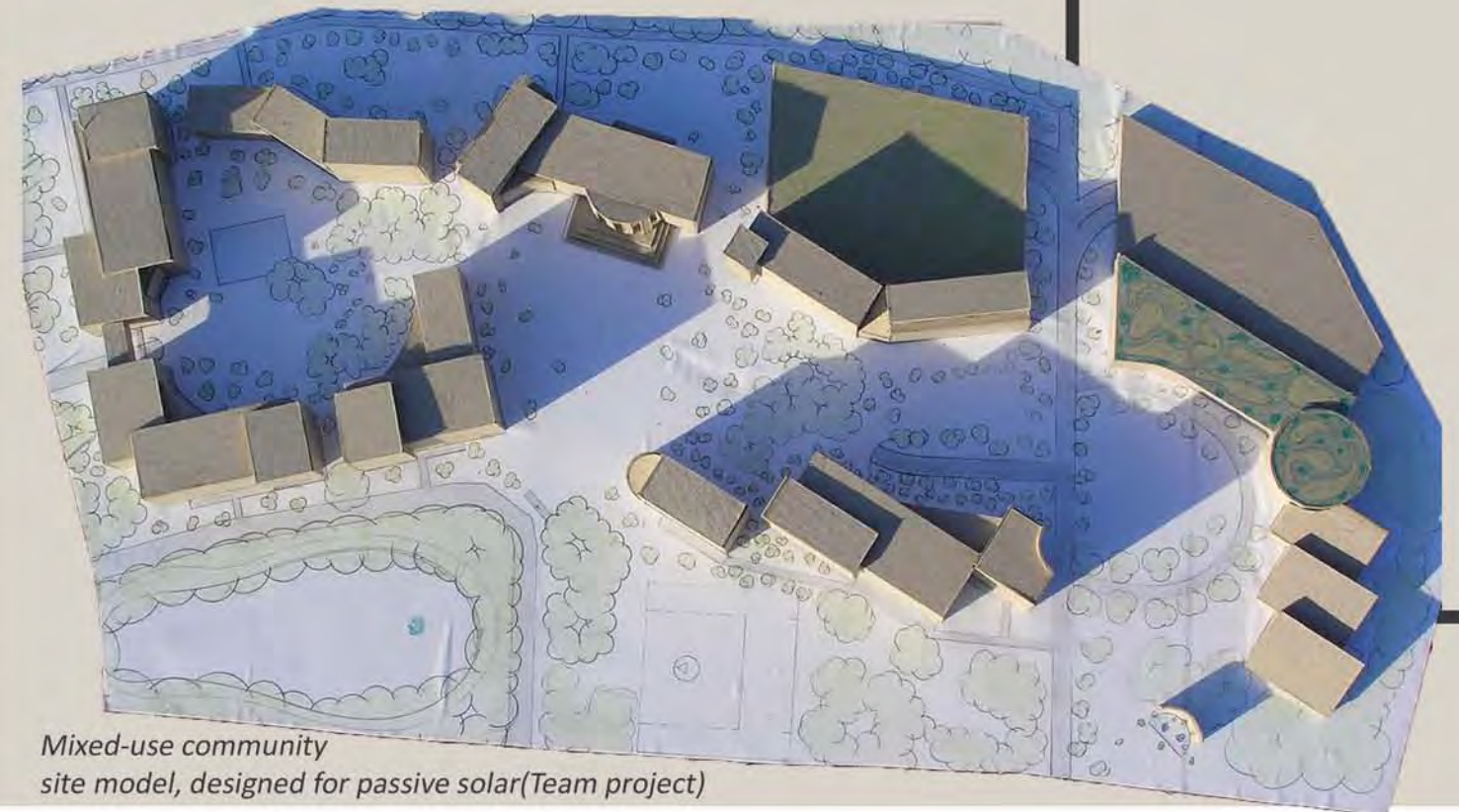
Perspectives of site before and after construction



Section of Atrium: Sketchup Model (Team Project)



Development of Cities Through Time

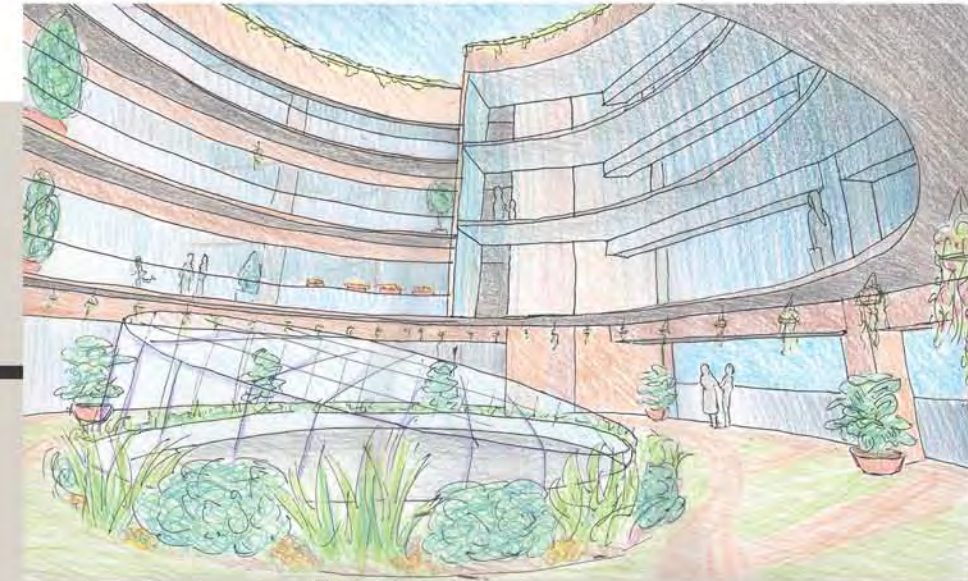


Mixed-use community site model, designed for passive solar (Team project)

Design Studio: R&D of mixed-use community and midrise building.



Physical model of mixed-use building (Team Project)



Perspective of atrium garden
- ink & colored pencil



South elevation - Sketchup
(Team Project)



Perspective of common room
- ink & colored pencil



Perspective of Home: Sketchup Model (Team Project)

Design Studio: Rebuilding after Hurricane Katrina.

Protection

Shutters, Porches, Awnings



Presentation slides to client: Storm protection and reclaiming southern building tradition (Team project)

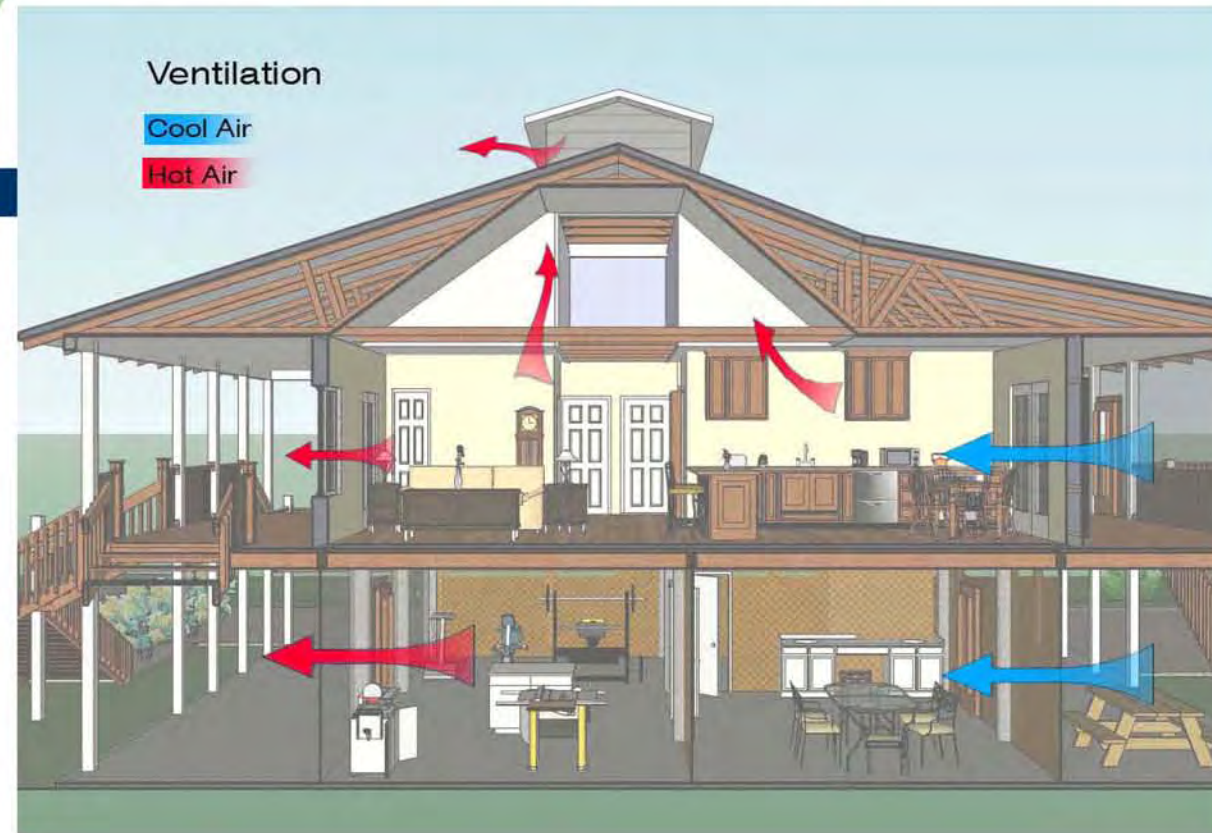
Style

Southern Deep Porches



Sustainability

Energy Savings: Ventilation

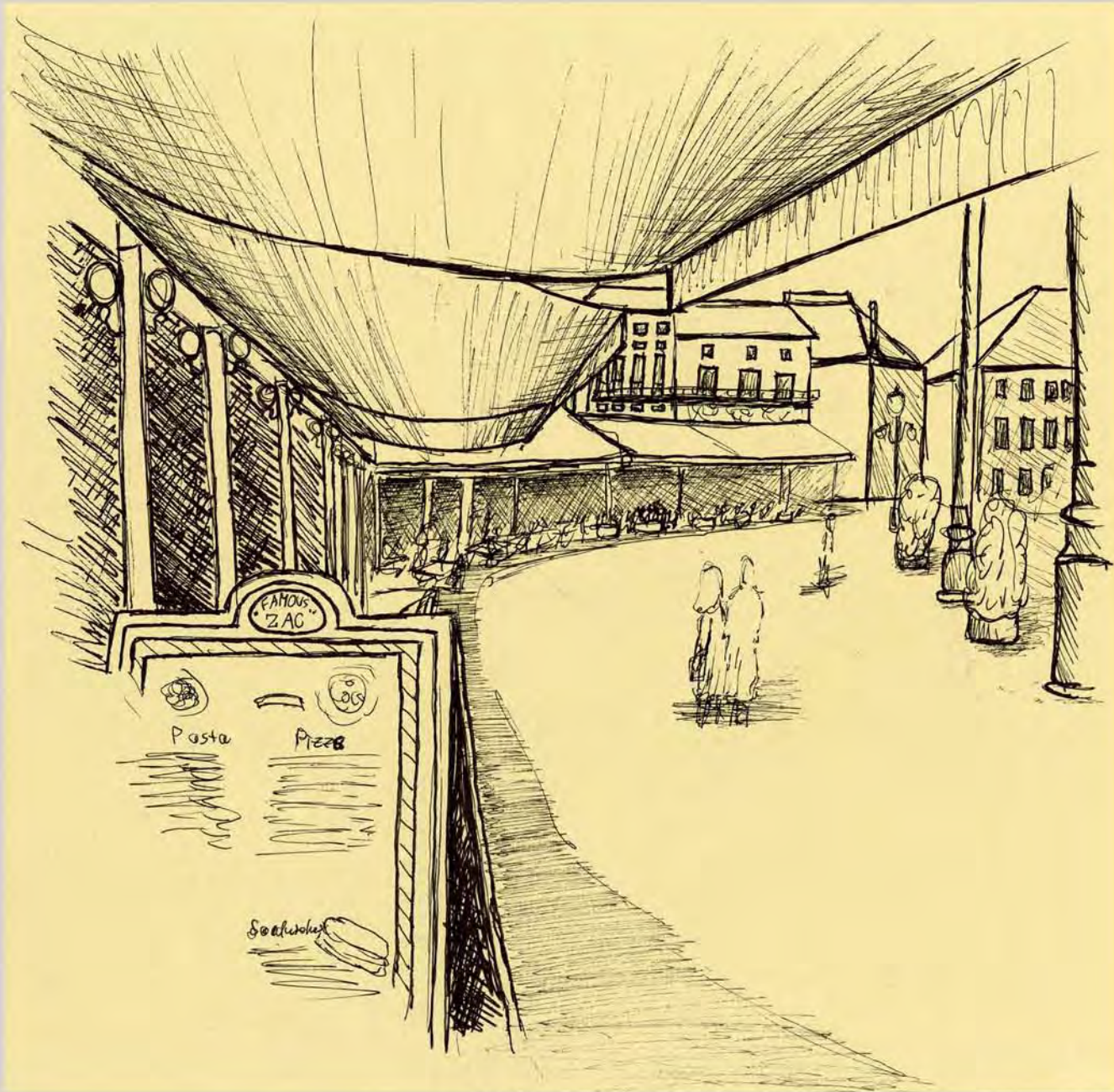


Presentation slide to client: Ventilation Diagram (Team Project)



Presentation to client: Construction Phases (Team project)





"Café Verona" – Verona, Italy 2005 - Ink on Paper



"Arches of the Lambertikirche"
- Münster, Germany 2007 - Pencil on Paper



"Perspective of St. Bartholomeo's"
- Rome, Italy 2005 - Pencil on Paper

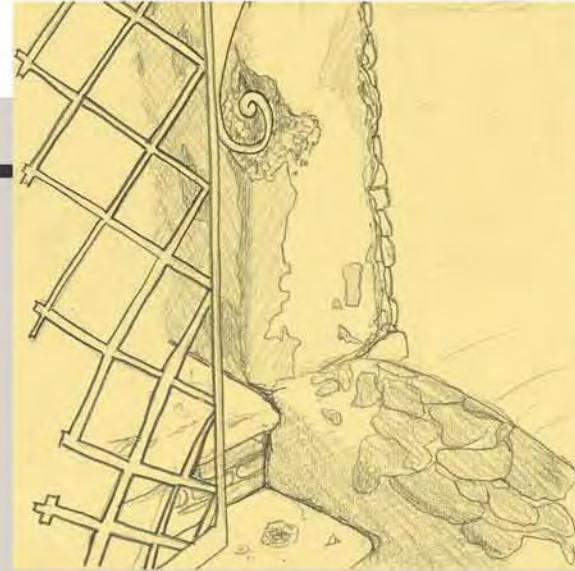
"Piazza Venezia" - Rome, Italy 2005- Ink on Paper



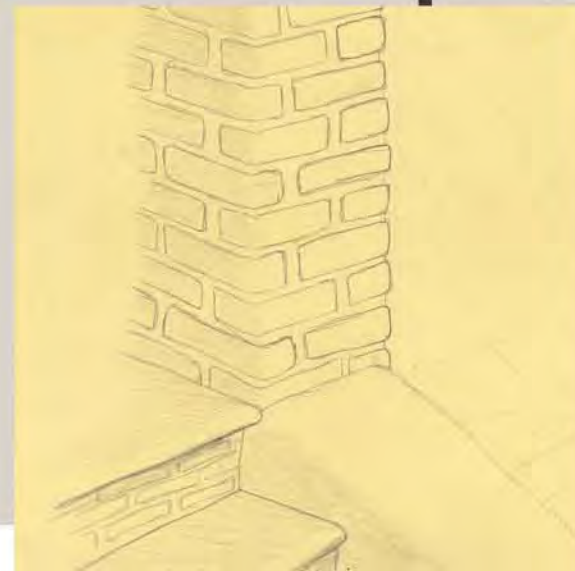


"Column at Hadrians Villa" - Italy, 2005 - Pencil on Paper

4th



*"Gate Time-lapse Series"
- Rome, Italy 2005 -
Pencil on Paper*



"The Gate Today" - Rome, Italy 2005 - Pencil on Paper



"National Museum of the American Indian"
- Washington D.C., 2006 - Travel Journal

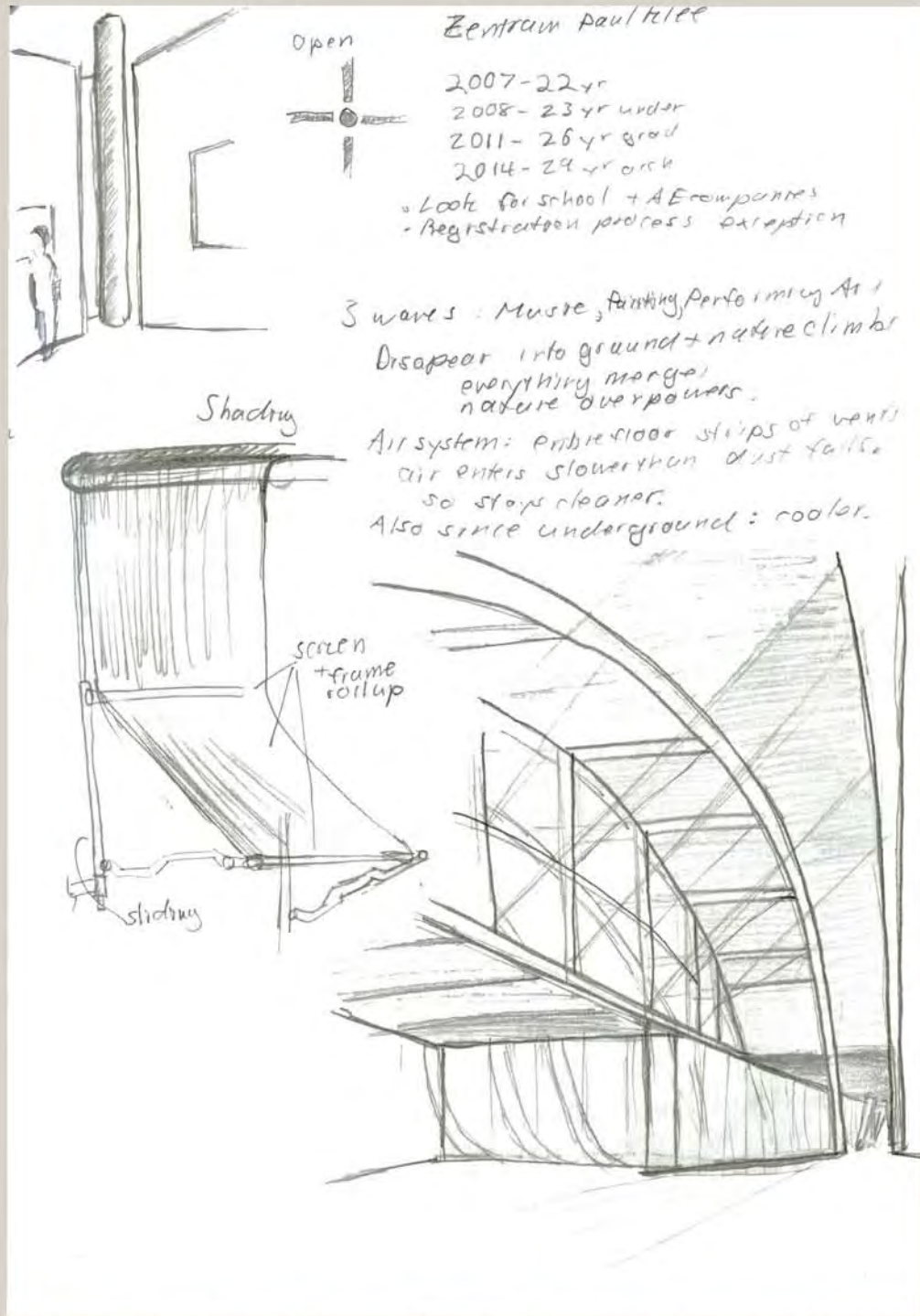


"Kirchner, Mies, Kaiser Wilhelm Gedächtniskirche"
- Berlin, Germany 2005 - Travel Journal

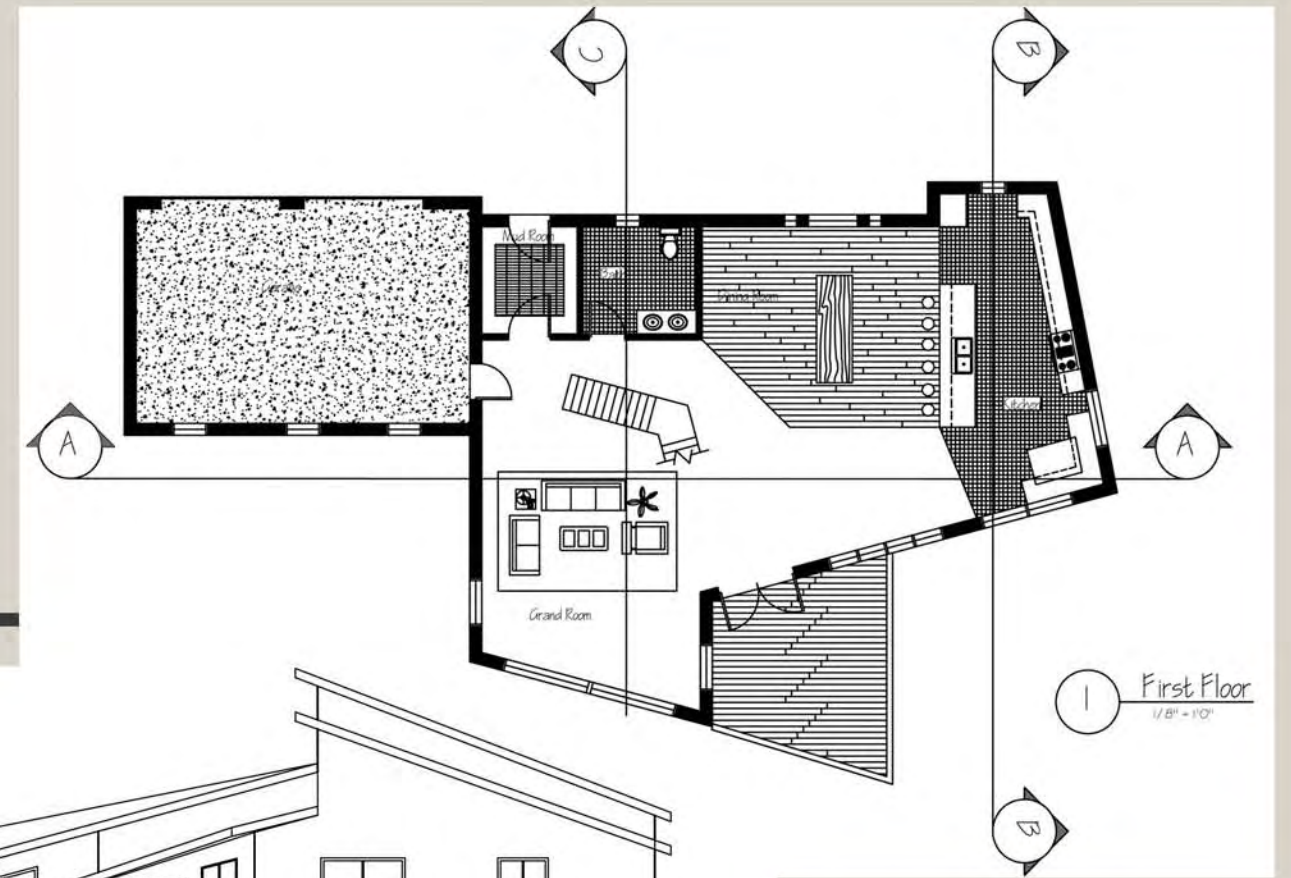


"Canoeing in Holland" - Stavoren, Netherlands 2005 - Travel Journal

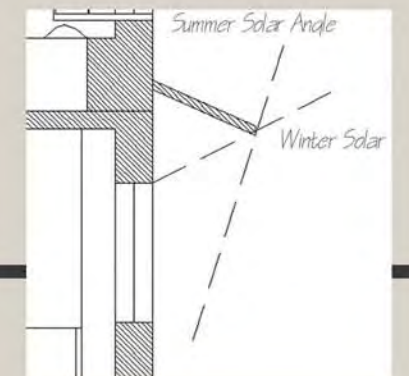




"Study of Renzo Piano's Zentrum Paul Klee Shading and Ventilation Devices"
 - Bern, Switzerland 2007 - Travel Journal



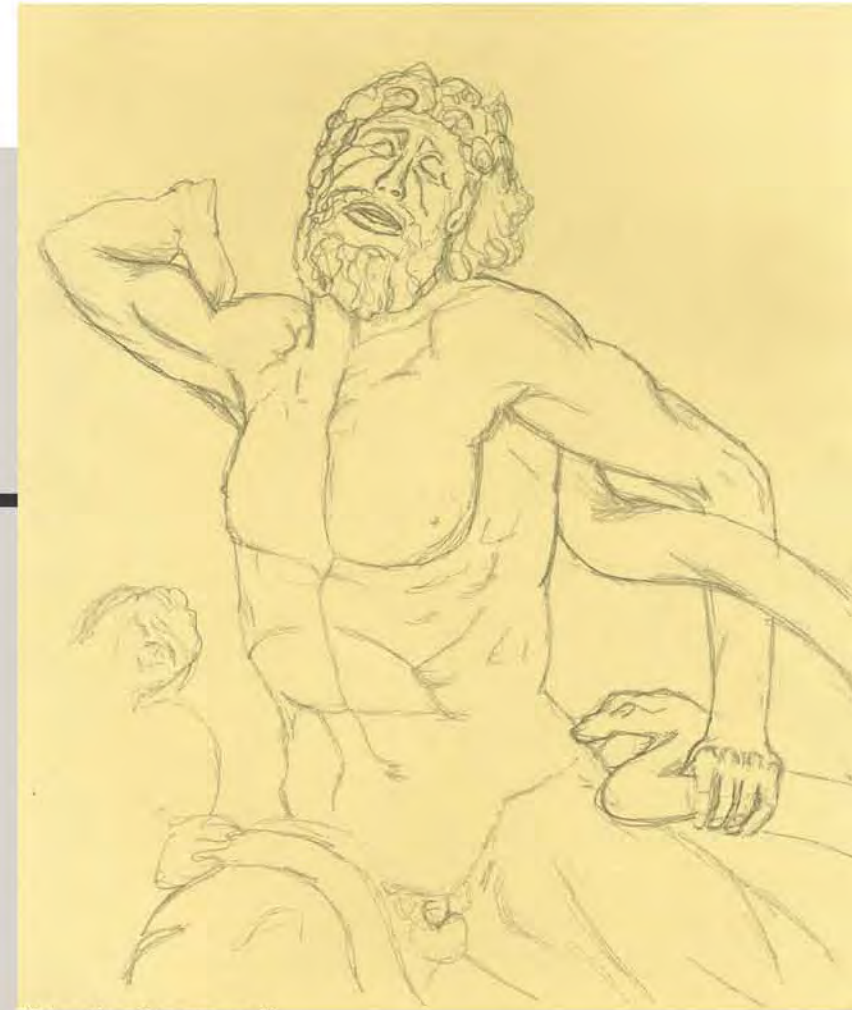
"Passive Solar House" - AutoCAD
 (Team Project)



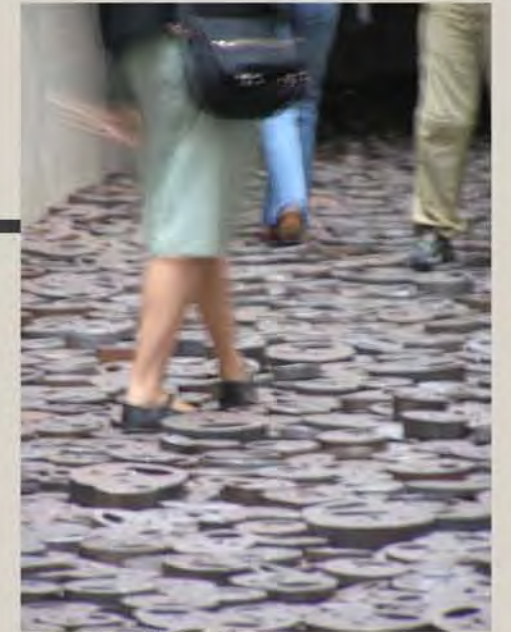


"Guitar and backdrop" - Charcoal on Paper

Metaphysical



"Death of Laocoon"
- Rome, Italy 2005 - Pencil on Paper



"Fallen Leaves in the
Memory Void"
- Berlin, Germany 2005



"Rest after sorrow" - Acrylic on Canvas



*"Drodningholm Royale Palace" - Stockholm, Sweden - 22"x30" Acrylic on Canvas,
based off own 5"x7" photograph (Work in Progress)*

Details

