Forming a Culinary Architecture

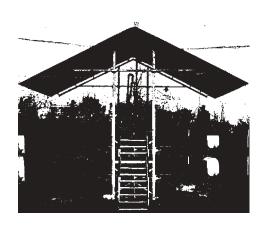
by
Charles P McSorley
A design thesis submitted to the Graduate Faculty of Virginia Polytechnic Institute & State University in partial fulfillment of the degree of Master of Architecture
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Approved
Approved
Paul Emmons, Chairman
Marco Frascari
Susan Piedmont - Palladino
Joseph Wheeler

Religion, society, nature; these are the three struggles of man. These three conflicts are at the same time, his three needs: it is necessary to believe, hence the temple; it is necessary for him to live, hence the plow and the ship. But these three solutions contain three conflicts. The mysterious difficulty of life stems from all three. Man has to deal with obstacles under the form of superstition, under the form of prejudice, and under the form of the elements. A triple ananke (necessity) weighs upon us: the ananke of dogmas, then ananke of laws, the ananke of things ...

-Victor Hugo

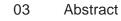








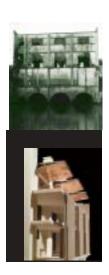




04



Introduction





08 Process: The Making
The Search
Beyond Materiality
Becoming Site
Institution-In the Making
Constructing Aphorism

20 Final Work: The Made

Parts to the Whole

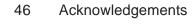
Plan as Generator

Sectional Narrative

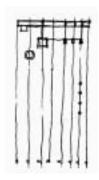
Elevation of Edicule

Recipies for Detail

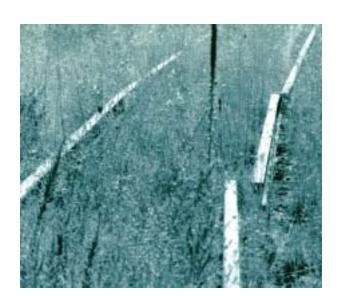
44 Conclusions







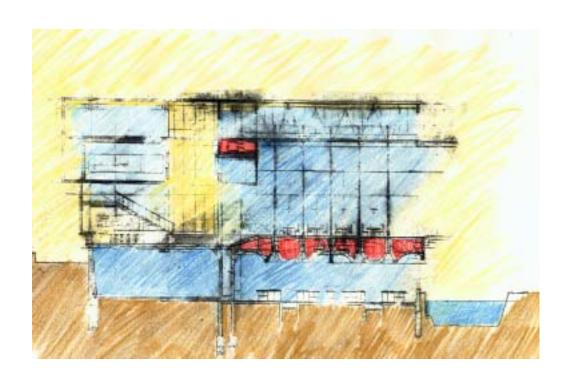
50 Vita



ABSTRACT

Architecture seeks to find harmony between pragmatics and poetics through phenomenological relationships of tectonics, placement, and culture. The choreography of these events, both physical and metaphysical, leads to a depth in the art of place making. The act of building in a certain way or attitude is read as *aphorism* – the statement imbedded in the physical existence of a construction is manifest in the way which its existence is made.

We (civilization) make both out of physical need and desire, the question in art is whether our motive is purely physical or becomes spiritual. How is institution achieved? What defines *place* and how is it made? Does tradition bind us to the past or is it the freedom to inform the present and beyond?



Building Program

The focus of the building program is to provide a place of academic study and active instruction for a two-year curriculum Culinary Arts program. Emphasis is placed on learning by doing, so the instruction and demonstration spaces become the primary elements of the program. A level of interaction beyond instruction is also to be provided by the juxtaposition of a working restaurant within the school allowing an active pariticipation in the setting of the city.

Instruction spaces

Skills kitchen- individual work-stations to learn and demonstrate instructed skills and techniques

Instruction kitchen- Collective work-space for students to be instructed and to practice carried out designated tasks within an active kitchen environment

Demonstration kitchen- Space for observation by student and demonstration by instructors. The task here is also for demonstrations by students to a public audience.

Pastry studio/Bakery- Specific spaces for preparation of pastries and baked goods.

Academic spaces

Classrooms (4)-for general education and instruction courses
Library- To provide a place of study and resources
Gallery- Exhibit space for traveling exhibits, student work, or reception

Administration

Reception and Office- to include faculty offices, operations office for restaurant, conference rooms, and support space

Restaurant

Full Commercial Kitchen - for daily operations of restaurant at evenings and weekends. To include all services necessary to operation such as dishwashing and prep areas.

Dining Room - Tables and seating to support formal dining for 120 people. To include necessary wait stations and host areas

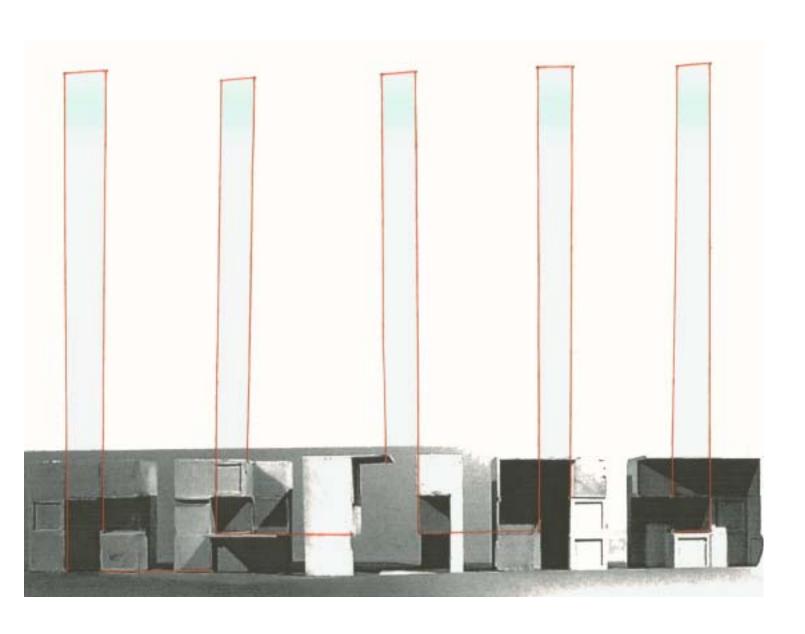
Support spaces

Cold Storage Dry Storage Restrooms Mechanical









Design Program

A building always begins with the foundation.

-Luigi Snozzi

A design thesis is about beginnings just as much as it is about conclusions; the two are interdependent on process. It is this way of thinking about the significant act of making that remained present throughout the exploration. The program resulted out of questions towards symbolism and implications of *making* as an art. The fine art of cooking was chosen as a catalyst for exploration because it parallels architecture through a common theme: to make extraordinary out of basic necessity. Repitition of a theme in these arts leads to the next level of inquiry by providing a set of basic principles and then expounding upon them by personal interpretation and available ingredients. It is why a meal never comes out identical each time given the same recipe or why in architecture a building comes out different each time given the same program.

The organization of the thesis is a composition of *aphorisms*: clear statements concerning a condition or set of conditions existing in the built world. The intertwining of the physical and the phenomenological served as the marrow imbedded in the question. The program is addressed in such a way, a tripartite program, one of material, one of physical requirements, and one of symbolism acting as an instrument of fusion, stitching all into one. One cannot address such a question without thinking of representation. The question became how to represent material with regards to perception.

Material Program

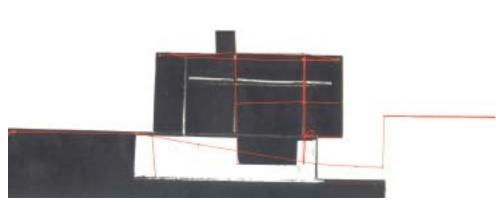
I had referred to the program as the "School of Culinary Arts" during a studio pinup and it was suggested the name did not quite match the intention of the thesis. Given the intentions, the thought process led to a new title for the program: School of Culinary Architecture". The statement made profound sense to me as the concern of both architect and chef labor with the joining of materials in such a way to bring out the full flavor. The decision was made early to use a basic palette of materials and work to transform the ingredients to fit physical and phenomenological characteristics -- to provide a notation of how an element such as a wall is composed. Masonry, Metal, Concrete, Glass, and Wood are the elements of construction available to the builder and each relies on its own set of rules for composition.

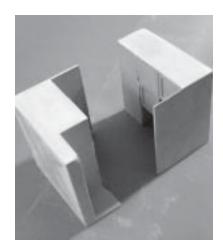
Masonry noted the *earth bound* parts of the building, providing a cool and dry place of work and towers of fire in which to cook.

Concrete provided a *shell*, under which instruction could take place, and above which dining could take place.

Steel provided an armature in which to dwell; a *place setting* for academics and dining.

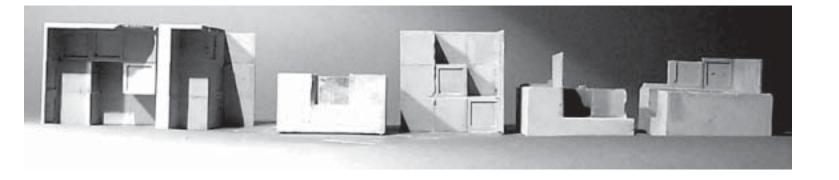
Glass provided means for light to *season* the composed ingredients **Copper** provided the lid to keep the proper temperature and moisture content. **Wood** was used as an element of inhabitation, providing *warmth* where needed.





8 9 Study Models: A language between what is formed and what is seamed is set forth

PROCESS



-Birgitta Trotzig







The Search

We want civilization to be a good thing. We want our habitats and artifacts to become part of the place and to substantiate our wish to belong. We want our things, like those of the civilizations we admire, to form an allegiance with land so strong that our existence is seen as an act of adoration, not an act of ruin. We are only happy when this occurs, where we have managed to make something replace what we have taken. Always we must start from that initial, crucial puzzling recognition: that we are seeking justification... through economy and respectful use. That is why farms, barns, and silos always seem appropriate and beautiful. That is why we like pig pens and deplore theme parks, because it is not necessary that buildings be beautiful, but it is necessary that they are necessary.

W.G. Clark

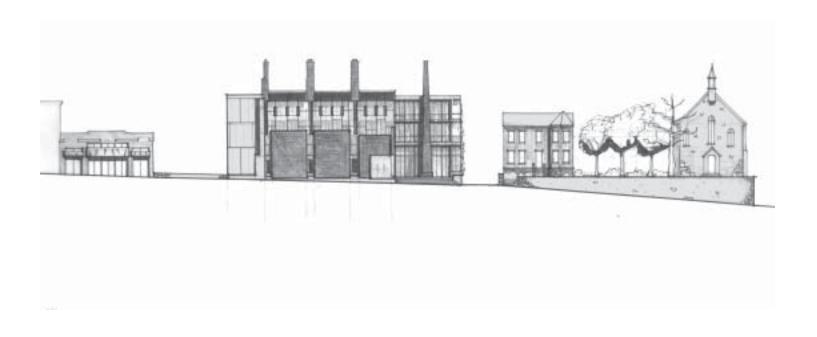
Time and again throughout the process I was searching for the essence of what I was trying to emphasize through built conditions. The discoveries were not always found in the prize pieces of Modern Architecture, but also through the mundane and the pragmatic. The impact of these findings is in the clarity in which function was expressed. The form of the grain silo, the elements which compose a power station, the lessons of ruin...taught in solemn silence.

The commonplace between what I found was not in a building "type" or historical period, but rather a culmination of truth in the use of materials and a clear anchoring to a specific site. Stone was used for obvious reasons at the cliff dwellings of Mesa Verde, while concrete was most likely chosen for structural and weathering reasons at a hydro-electric power station. Site and use dictated material choices .











Becoming Site

Thanks to human labor the city contains the fire of volcanoes, the sand of the desert, the jungle, the steppes, the flora and fauna...all of nature
- Luigi Snozzi

Georgetown is made up of a rich strata with layers dating back to the 18th and 19th Centuries. One of the most significant layers is that of the Chesapeake and Ohio Canal, an early trade route connecting the resources of the mountains of Western Maryland with a then burgeoning capital city. The canal traverses below and/or parallel to the main thoroughfares making a secondary avenue. The significant alteration to the urban fabric is made manifest by this "street behind the street" since what is normally perceived as the back or lower level of a building in this case is actually fronting the canal. The experiential effect of traversing the path along the canal is like a section cut through the working part of a city, revealing the inter-workings or the serving spaces.

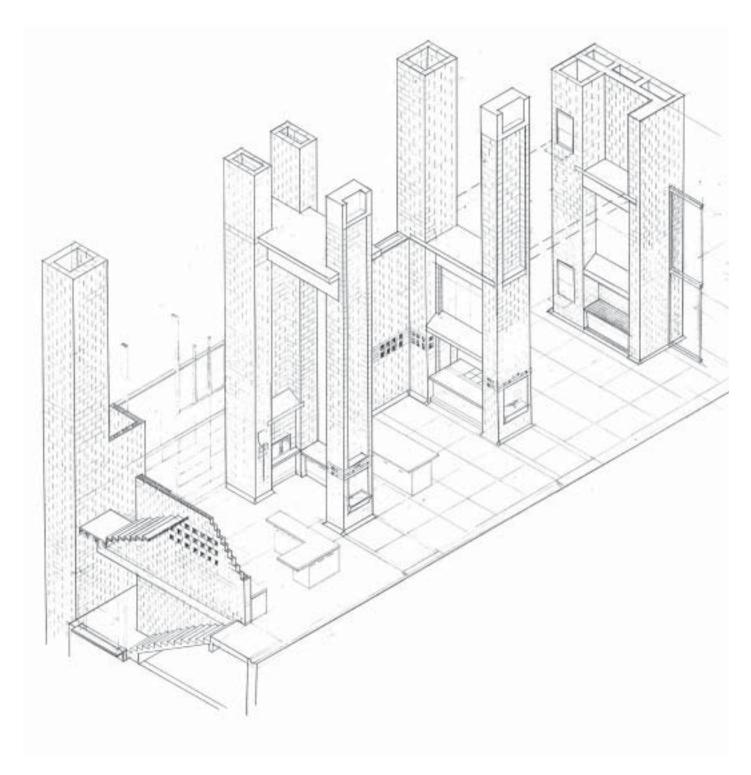
The intention of the building massing is to reinforce the experience along the Chesapeake and Ohio Canal and to form connection to the street edge. The base of the building accepts its position of being part of a larger network of serving spaces in Georgetown and programmatically houses the working kitchens. The volume under the vaults speaks of the nearby bridge which traverses the canal, while the containment of the earth through retaining walls provide distinctive edges, intersections and axis. The vocabulary of the site is borrowed and interpreted to make a set of rooms for the art of cooking.

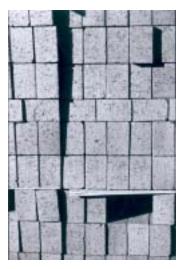
The retaining wall vocabulary is experienced when approaching the site; the Grace Church and its proper, is raised on a plinth created by a rough hewn stone retaining wall immediately to the South, while from the North the stone walls of the arched bridge course up to street level to form edge. The building massing acts to transition between the underworld of the canal with the raised plinth of the church by gently leveling out from street grade across the entire front facade. A set of brick walls come forward to meet the street and are left spaced apart for a set of windows between for viewing of the kitchen, while overhead the cantilever of the roof acts as a welcoming and sheltering gesture. The massive walls then recede at the South corner and large glazed surfaces are pulled back to form entry while revealing a freestanding chimney, which provides an urban marker for the culinary school as well as an implied signage. The organization of the layered facade allowed for a gradual stepping up of building height and tied the new into the existing composition of the street.

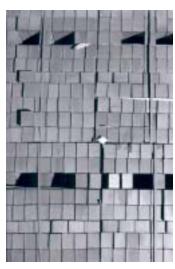


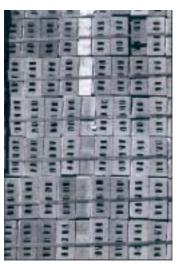












The difficulty of Architecture is... we must first make **something**, before we can attempt to make it better.

- Paul Emmons

How could the construction of the walls express the task in which it encompassed?

It was the preparation and use of the elemental ingredients at the heart of the material program. The way of material inspiration was in its unaltered form seeking it at the source, much like a chef seeks out the proper ingredients in the right season. The approach leads to a tangible way of making, working *with* the material, transforming it by its internal qualities. The formation of the parts of the building were composed with the whole in mind, but by retaining an autonomy. Basic, perhaps primitive, concepts were applied.

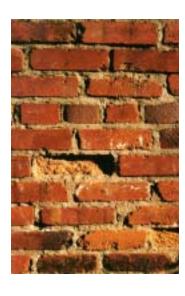
Stacking- In the instance of the cold and wet storage areas, the coursing of the masonry seemingly dissolves or melts to make openings.

Forming-The narrative is further reinforced by the primary structure holding the dining level; it becomes the table on which the meal takes place.

Joining-The steel, wood, and glass elements that provide the table setting of the upper level enclosure and armature. Each performs to its own rules and the connections had to remain mindful of this. Steel can attempt to span and even suspend in the case of the gallery space because of its tensile nature; masonry continued to rise to the sky by way of tapering the chimneys with concrete members acting as ties at floor to floor intervals.

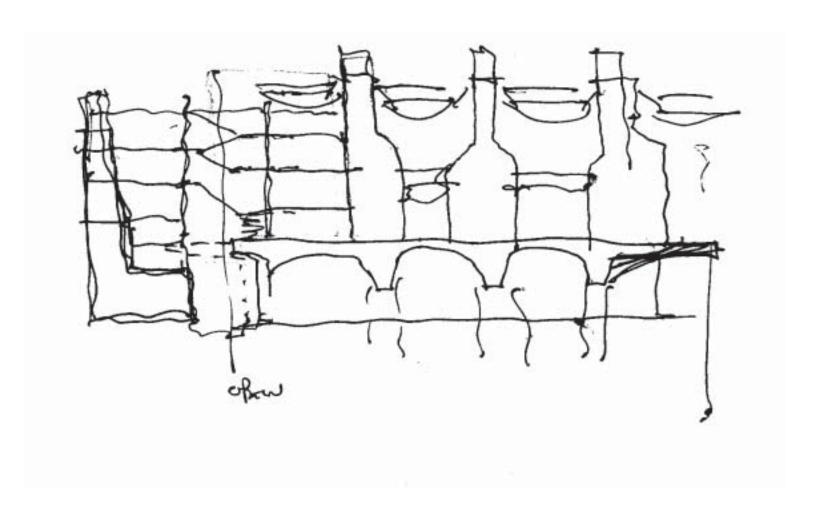
Weaving- This concept is explored with the materials mainly in the formation of the facade walls in relation to the filtering of light. The South wall becomes a weaving of wood, acting as a vitrine for vegetation while the West wall attempts both to shade from the harsh sun and filter the warm kitchen air out of the building.

Preparation of the meal became an act which took place in the weight of the structure, either in the walls or in the base; the dining room became the set table, the grand served space.















Institution...In the Making

The institutions of man come from the inspirations of man.

-Louis I Kahn

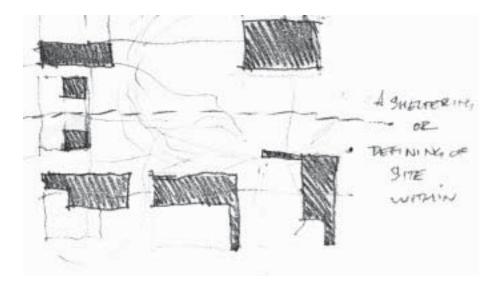
Cooking is an institution as one of the primary arts in humanity. It exists out of pure necessity but the continuity results from the desire to re-create and re-define. The duality of need and desire result in a kinetic flow of inspiration sparking making and remaking, preparing and consuming. The common thread between architecture and cooking is the all consuming appetite for defining through a set of actions resulting in the tangible form.

The notion of institution is explored through the project by the following tripartite approach: the building *program* serves for the functions of an institution of learning; the site *context* offers its own semblance of institution; the art of *making* serves as institution in the active and continual sense. The *three fold necessity* becomes apparent in the organization of the building.

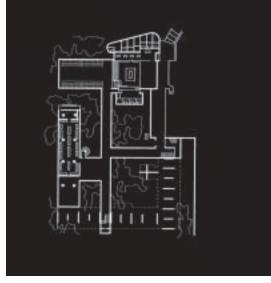
The program responded to the physical and mental aspects of institution - providing place for both the lessons of the mind (classrooms) and of the senses (the kitchen studios). The organization of the building (in plan and section) and the tectonic arrangement of materials provided the spiritual or intuitive aspect necessary for the creation of institution. The clarity of the plan is in its simplicity: the perimeter or the working parts serve the center, whether the particular center be a hall for cooking or a banquet room. The result is like an "inhabitable cloister", bringing to mind the interweaving of adjacent spaces of Le Corbusier's La Tourette or in section a series of thick walls encompassing a court, much like Frank Lloyd Wright's Larkin Building.

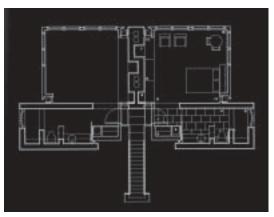
The treatment of materials serve as architectural notation of function. The purposeful articulation of the set of rooms is both to inform the students and visitor alike of a culmination of ingredients to create a complete meal and to inspire a fusion of flavors. For this reason the concrete and masonry base is set apart like a table to give place the materials of the upper levels ("place setting" elements of steel, glass, wood, and copper).

Architecture in the most distilled of explanations may be summed up in the "art of making connections" across scales and time. Connection can become exponential in architecture from the moment the first thought of joining of structure to landscape is made; for every other connection stems forth from the way this first act is achieved . Institution can only be made through the connection of the world of thought to the physical reality of civilization.







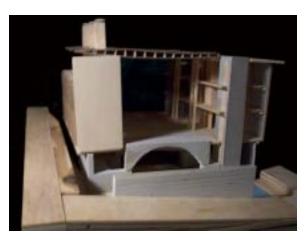


















Constructing Aphorism

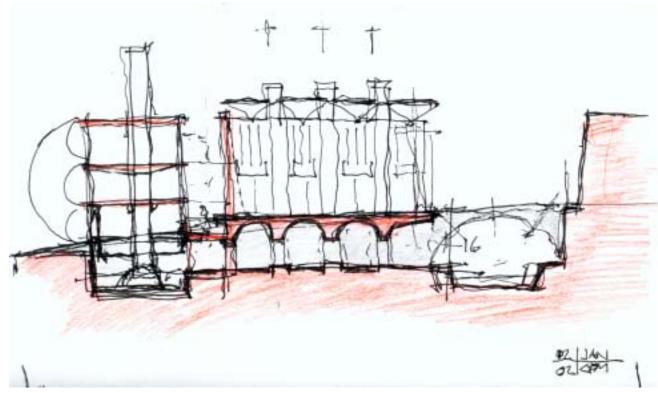
A real tradition is not the relic of a past that is irretrievably gone; it is a living force that animates and informs the present.

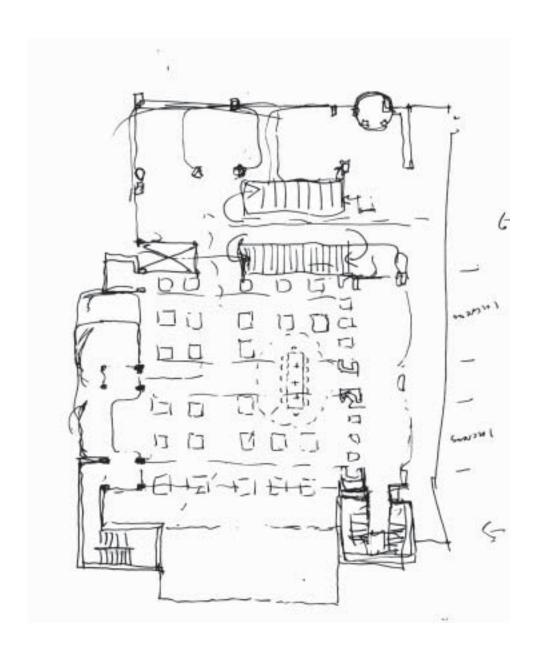
—Igor Stravinsky

The attitude of making (both in *making* a meal and *making place* for a meal) is not isolated. Modern Architecture positions itself on the realization of what can be was only possible by what has been, a rich tradition remaining generative instead of stagnant. The attempt through the project was to make a clear statement about Architecture and the relation to craft. Materiality is only one realization; material must be transformed into a complete composition to provide the proper nourishment. Emphasis must be placed on the quality of the ingredients but also upon the skilled proportioning required to mold an idea into a complete form. Time becomes a necessity and the architect (and chef alike) must realize this to achieve something worthy, one must give proper time to preparation and the process of making.

In our modern world, both architecture and cooking are plagued by a production driven society. Our streets and our plates are set with unfulfilling and unhealthy quantities of products that have saved "time" at the expense of taste. The end result, in both situations, is a saccharin flavor ultimately un-nourishing, uninspiring, and un-fulfilling to our senses. Intuitively the truth is known to our minds; materials and processes have connotations engaging the senses in a collective way. Memory gives us a sensory record of time.

In a particular and specific way, the objective of the thesis serves as an architectural *aphorism* - a standard of conduct for building integrity. The belief time is an *ingredient* which has no substitute and art and architecture must serve at all points. I believe these are the questions behind the thesis. It is always difficult to verbalize thoughts about architecture and there is always something lost in translations. It is knowing internally, yet desiring to be true to an idea that creates the beautiful struggle of making where the outcome is never quite enough. The desire to ever be defining and re-defining is the tradition of architecture and therefore justifies the architect's thoughts and process.





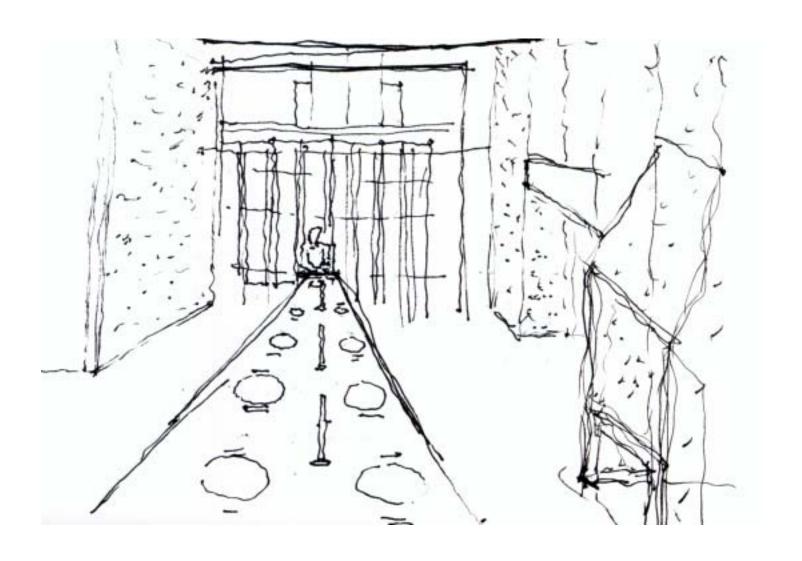


40 41 Level Minus One: Sketch of Instruction "grotto"; study model



9. Loading Dock

7. Wood Fired Brick Oven8. Bakery/Pastry Kitchen

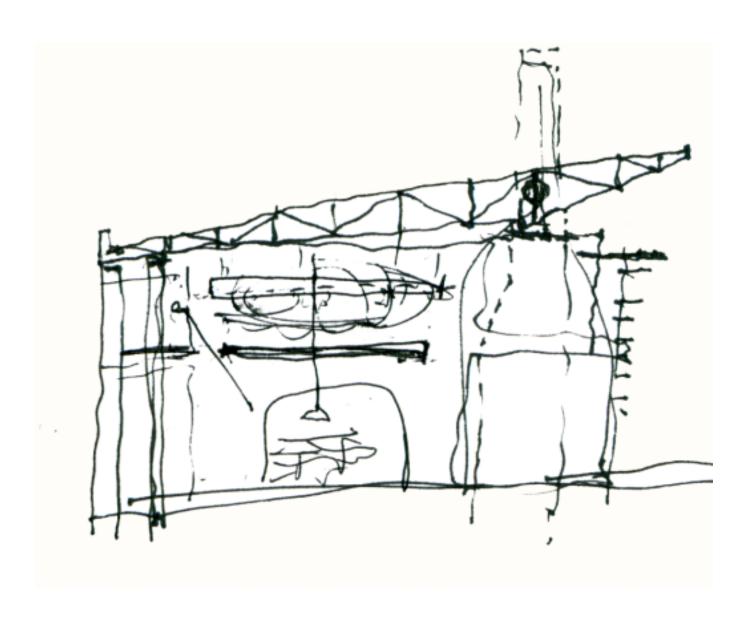




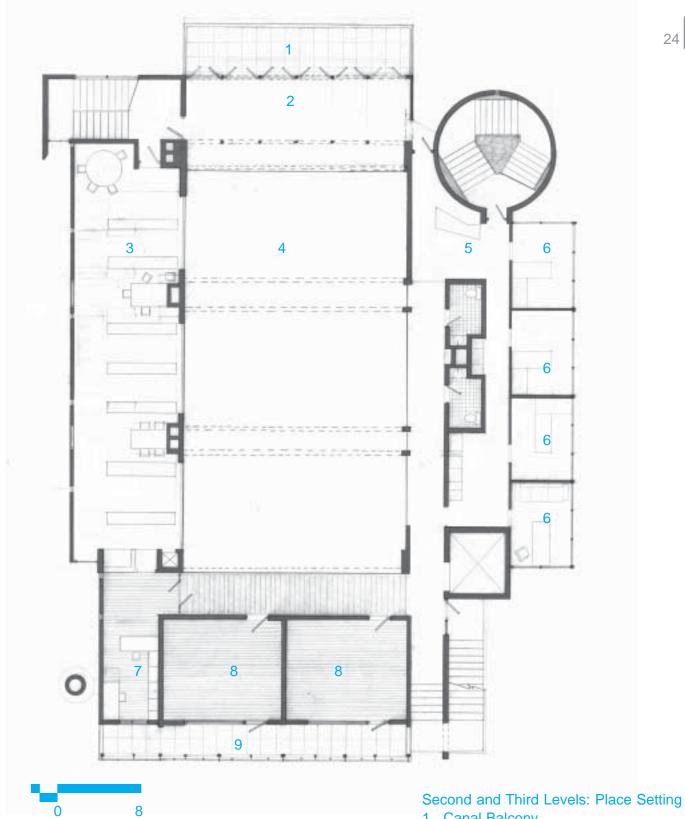
43 44 Entry Level: Sketch of Dining Room; Study Model



- a. boiling / gas fire
- b. roasting / embers
- c. grilling / wood fire2. Dining Room
- 3. Bar
- 4. Garde Kitchen
- 5. Dish/Glassware Pantry
- 6. Dining Entry/Maitre'd Station
- 7. Open to Below
- 8. Main Entry Hall

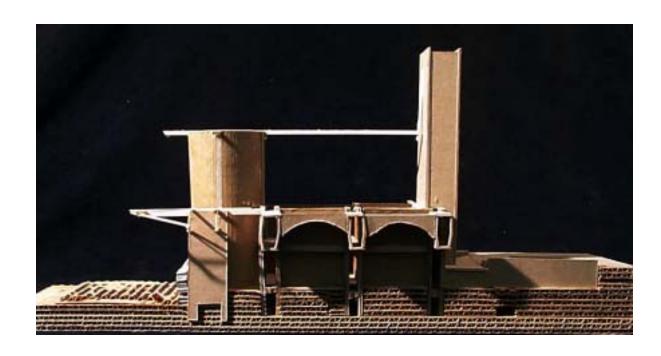


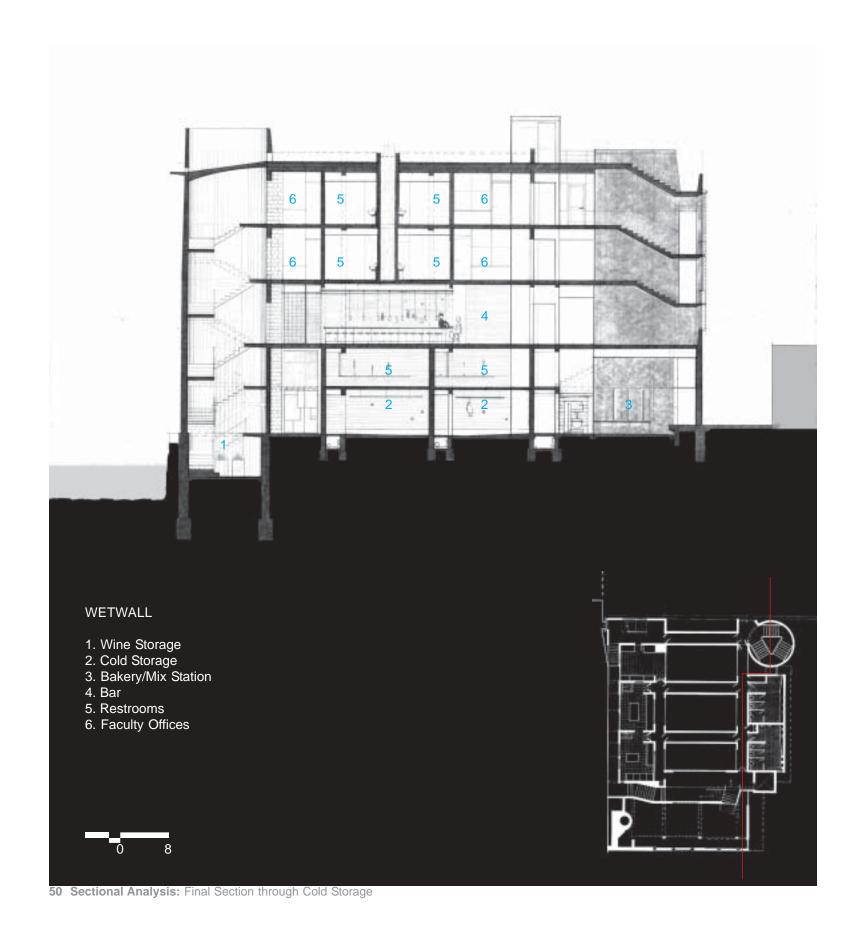


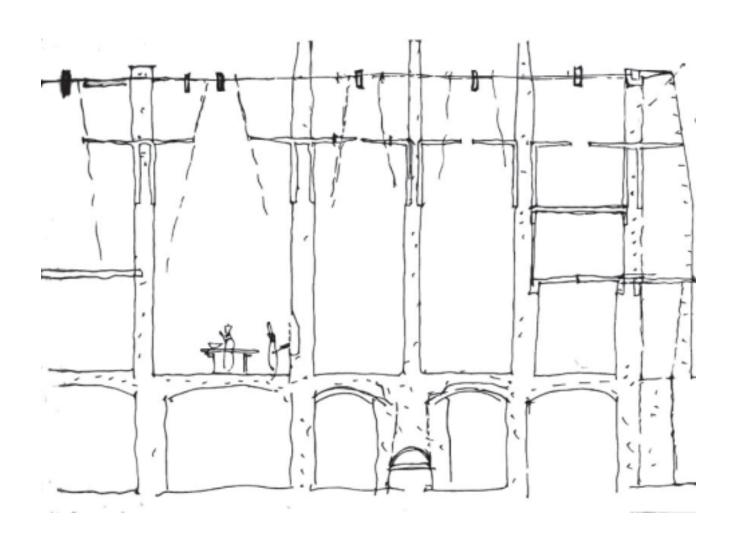


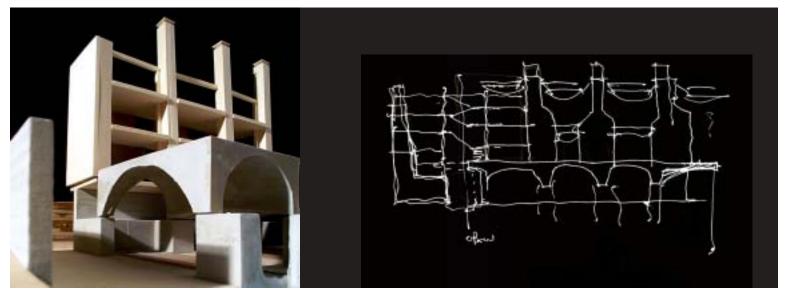
- 1. Canal Balcony
- 2. Gallery
- 3. Library
- Open to Main Dining Room
 Faculty Conference
 Faculty/Staff Office

- 7. Librarian/Reference Office
- 8. Classroom
- 9. Vitrine Balcony

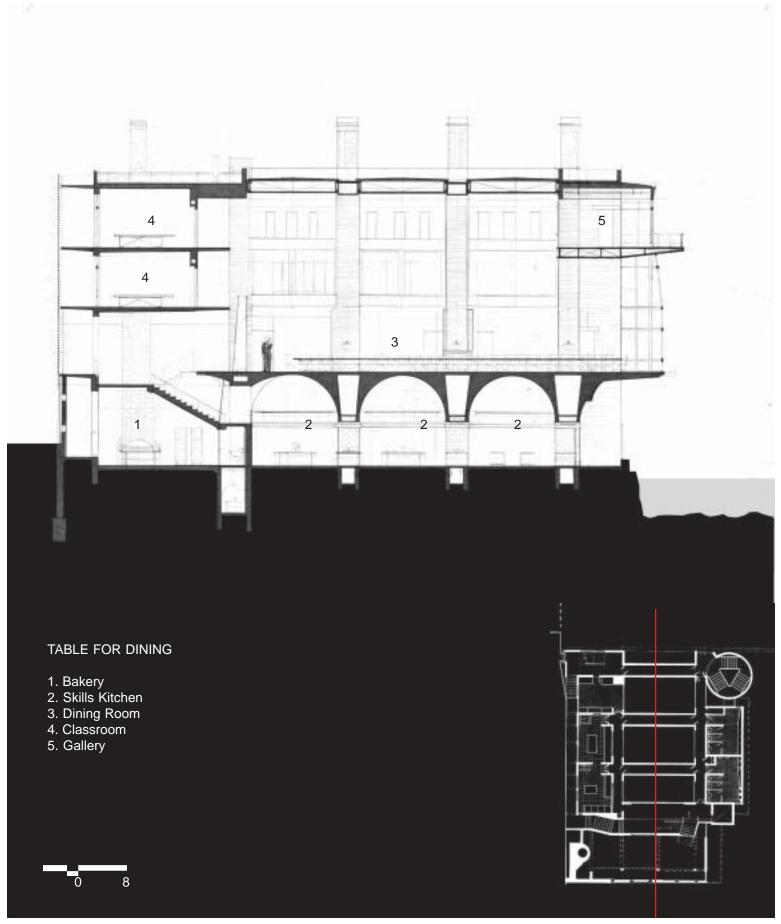






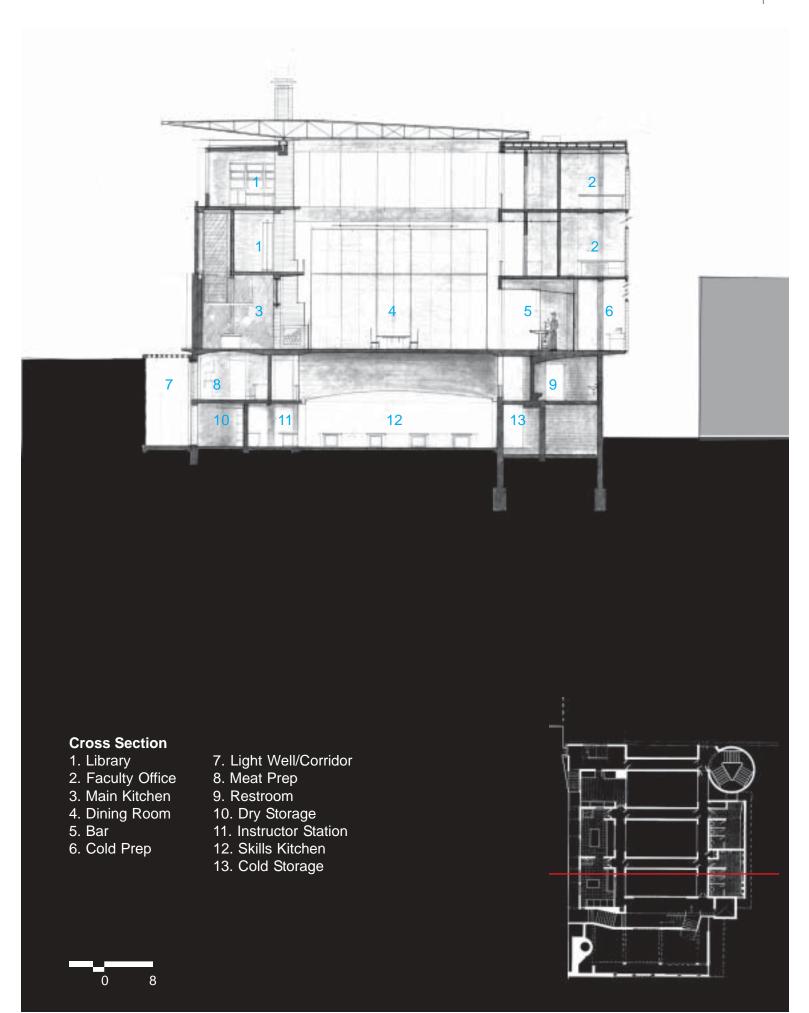


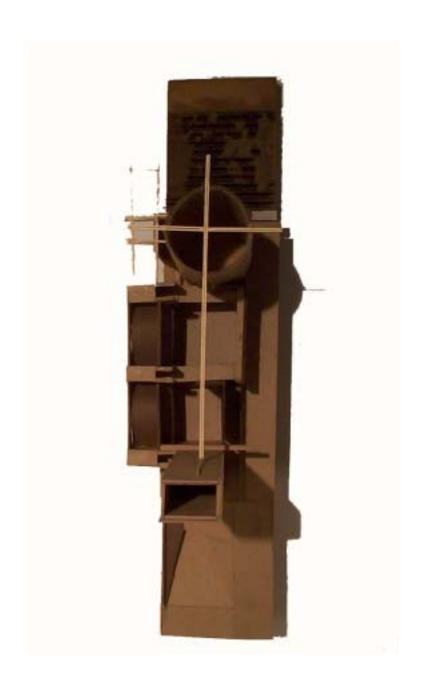
51 52 53 Sectional Analysis: Sketch: Forming a Room of Chimneys; Final Model: Inhabitable vaults; Sketch: vaults support chimneys



54 Sectional Analysis: Final Section of dining plinth and instruction spaces beneath

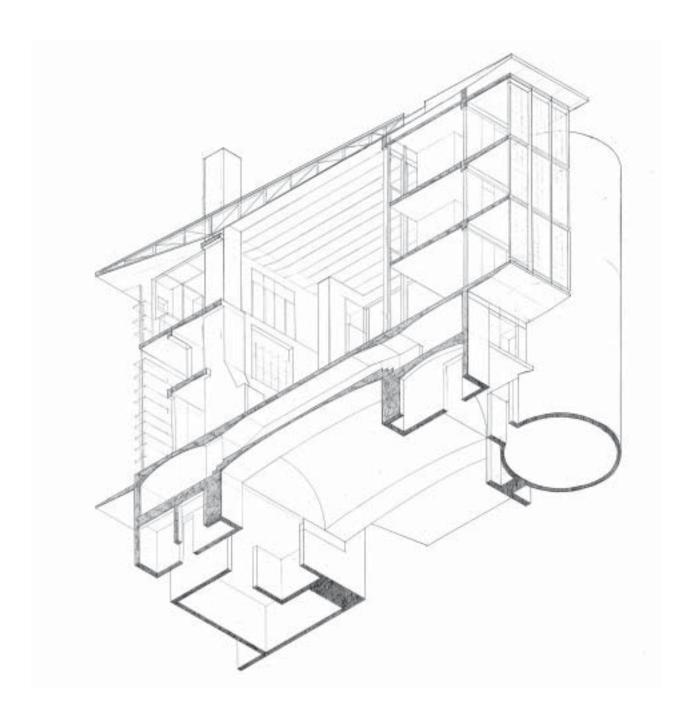








57 58 59 Study Model: Developing material language Final Model: Spacial experiences of materiality



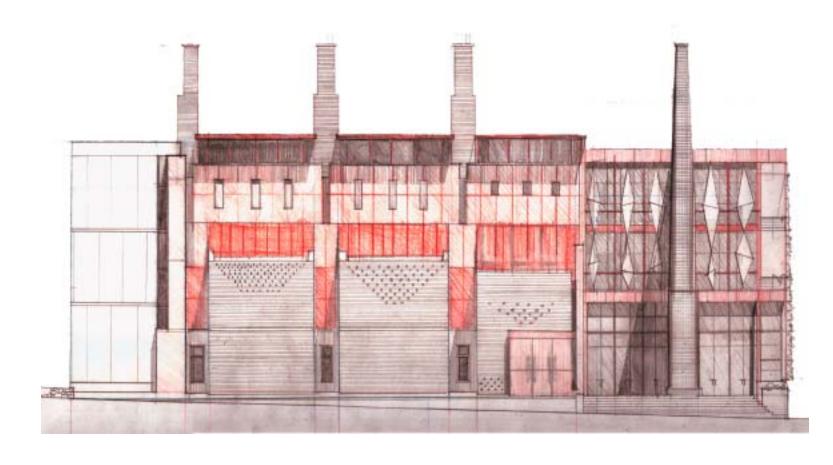
View From Underworld / Worms Eye

The glazed tile vaulted ceiling of the instruction kitchens gives the primary structure for the dining room above. The table formed by the vaults provides a place for steel to rest upon. Wood, copper, glass and masonry are then weaved to form space inside the frame. The copper clad roof wraps underneath to pull strands of evening light into the dining space.









WEST ELEVATION

Copper Panels & Roofing

Brick Masonry

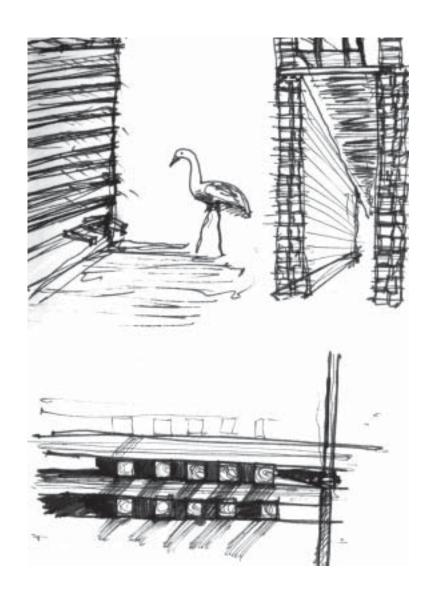
Cast Concrete

Glass Panels

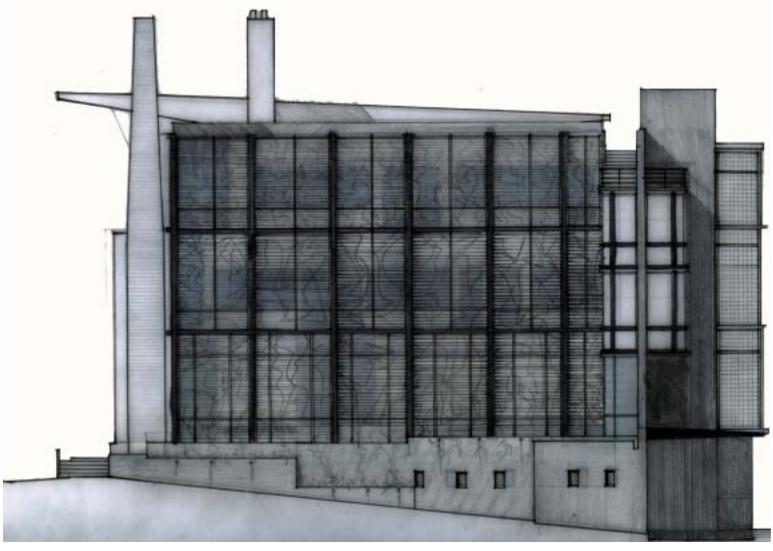
Steel

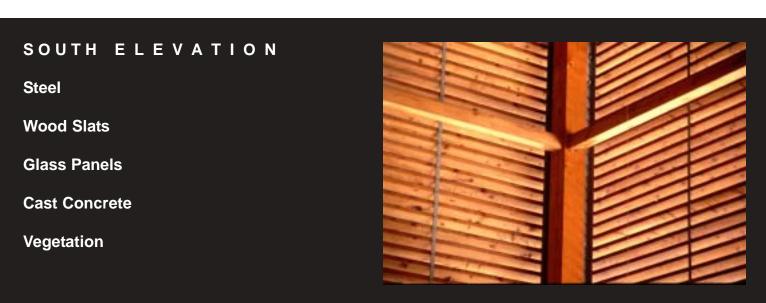
Linen Screens

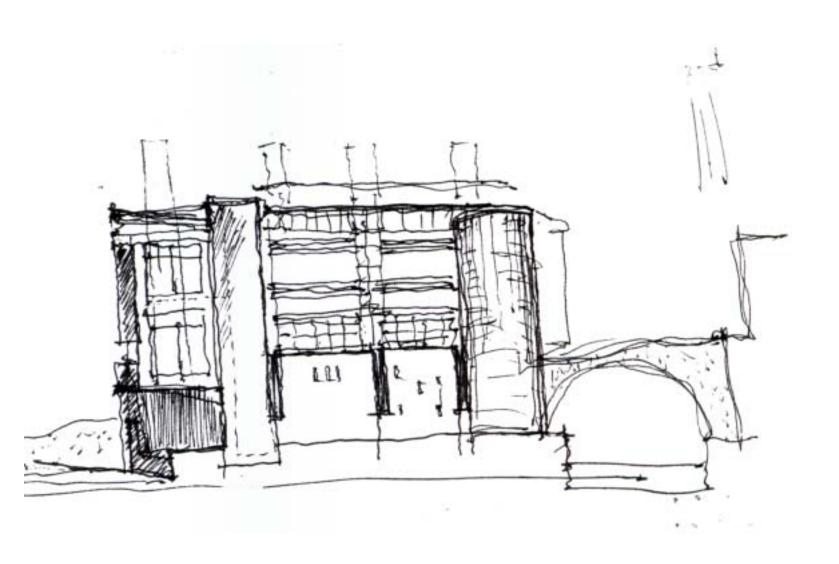






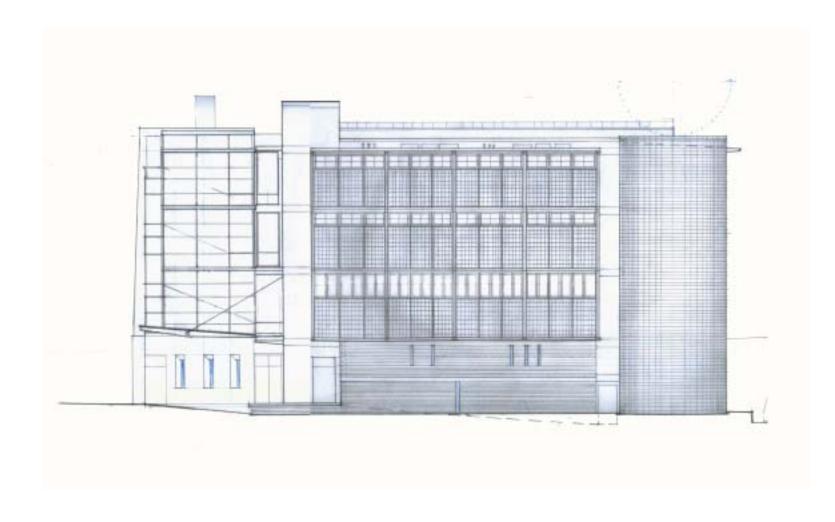






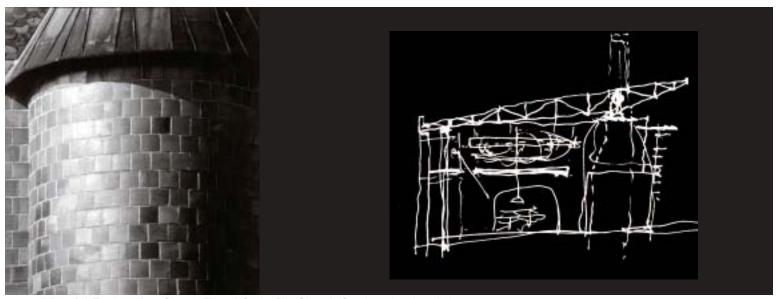


74 75 76 Sketch Developing North Facade; Wall Study Building with modern materials in a time honored method

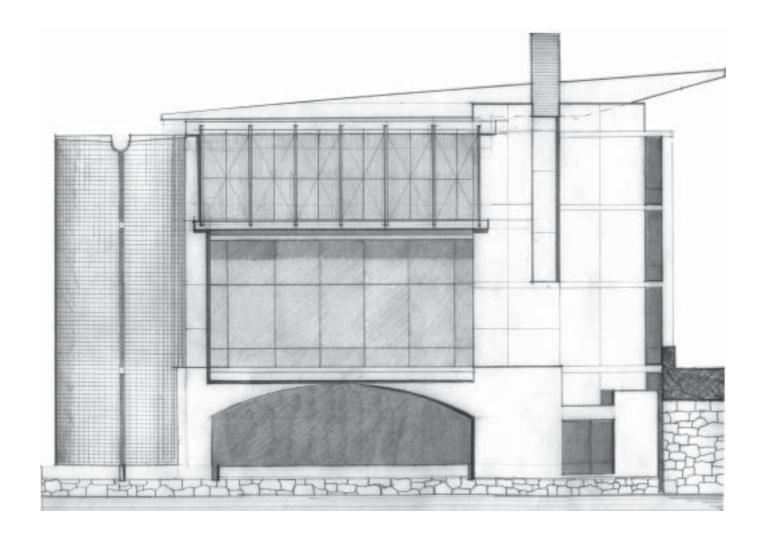


E A S T E L E V A T I O N Steel Glass Block Glazed Masonry

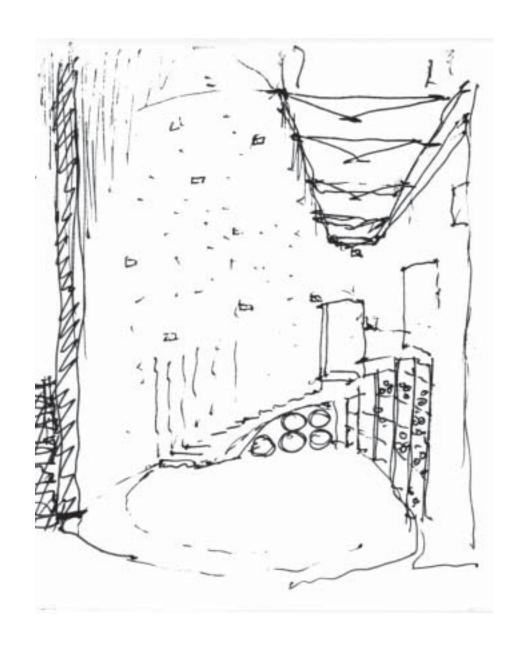
77 78 East Elevation Masonry is used as structure and then infill only within a frame; Final Model: Materiality & Structure revealed



79 80 Material Exploration Glazed Tile of Grain Silo; Sketch Section showing dining space



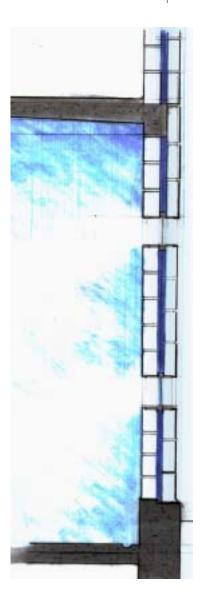






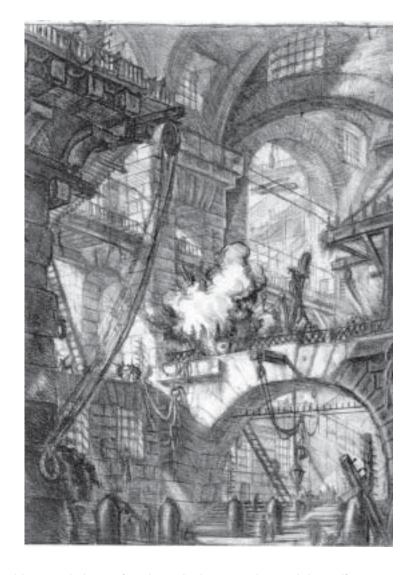
83 84 85 Wet Spaces: Wine Cellar forms a destination at bottom of stair tower; Interior elevation in restroom; Tower and canal edge





Glazed Masonry helped to achieve the wet wall in the building. Although a set of interior spaces the inhabitant included large amounts of moisture to keep perishable items and prepare them for use. Openings in the walls were treated primitively, like if the moisture itself had disolved the wall at the course lines and etched opening out of the wall. The suggestion of this was reinforced by the decision to conceal as much of the glazing frames as possible and to place glazing between masonry layers to retain pure aperatures.





Architecture is born of real needs, but goes beyond them; if you want to discover her, observe the ruins. -Luigi Snozzi

Conclusion

In everything that nature makes, nature records how it was made. In the rock is a record of the rock.

In man is a record of how he was made...

...The inspiration to learn comes from the way we live.

Through our conscious being we sense the role of nature that made us.

Our institutions of learning stem from the inspirations to learn, which is a sense of how we were made.

- Louis I Kahn

In design, an ending is always just a beginning. The continuity of a designer's thought process is never indeed broken. An architectural thesis is important for this very reason. By devoting time to a question or set of questions in the format of a thesis project an architect, whether relatively new to the discipline or a seasoned practitioner, is forming and re-forming why they design in the first place. Through this living there is life.

The entire lesson of a thesis comes down to the execution. In the same way a chef having a recipe alone does not fill the stomach, an architect having a theory about a roof only does not keep the rain off of one's head. There can be no alchemy without the kinetics of action.

The process has been the greatest teacher, dishing out a healthy dose of failures, most of which resulted in small triumphs. The way of working led to a healthy balance between supposition and realization. From the outset it was in my mind to build in model form most of the building components out of the actual materials of construction. If something was to be cast, then it was cast, if layered or shingled then the process was adopted. The process in turn informed the next layer of information.

Representation graphically was also experimental at times, when drafting a line to represent an idea did not seem to fit, a needle and thread were used to help get beyond the two-dimensionality of paper. The information gained here was the reality that every decision had at least a back and a front and the architect is demanded to think in these terms.

The process of documentation began to spell out the shortcomings of the design as well as the strengths. As I flip through, I would like to see more details about how materials join and weave together or rather to have those notions in my mind staring back at me in print. This appetite for learning and discovery is what keeps tradition as an active force.

The triple *ananke* through solution and conflict is what has formed the physical world around us. Nature struggles with itself, nature struggles with man, man with nature, and man with mankind. Design is a difficult thing, and it should be; we owe it to ourselves to become equipped to design well.









90 91 92 93 Traveling through thesis process; Commitee members give "thumbs up"; Interior Perspective of Skills Kitchen; Chef Landau, director of Culinary Architecture (I learned it all from him)

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Architecture results out of commonplace and the project presented in this documentation bears witness of that. The architect is not isolated from the place of inspiration or from those who inspired, numerous individual events and persons contributed to the realization of the thesis. Every attempt has been made to recognize the participants whether active or passive, inanimate or animate.

J. Stoeckel instructed of the lessons within; the world explored in the architect's studio. Bill Galloway spoke of the architect's view of the outside; to make a studio of the world. At the Washington-Alexandria Architecture Center, I learned how the two join to make architecture.



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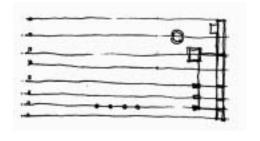








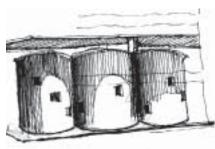




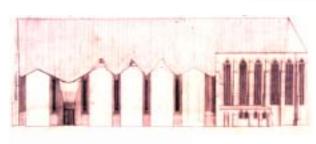






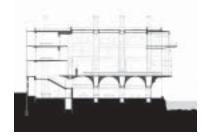












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