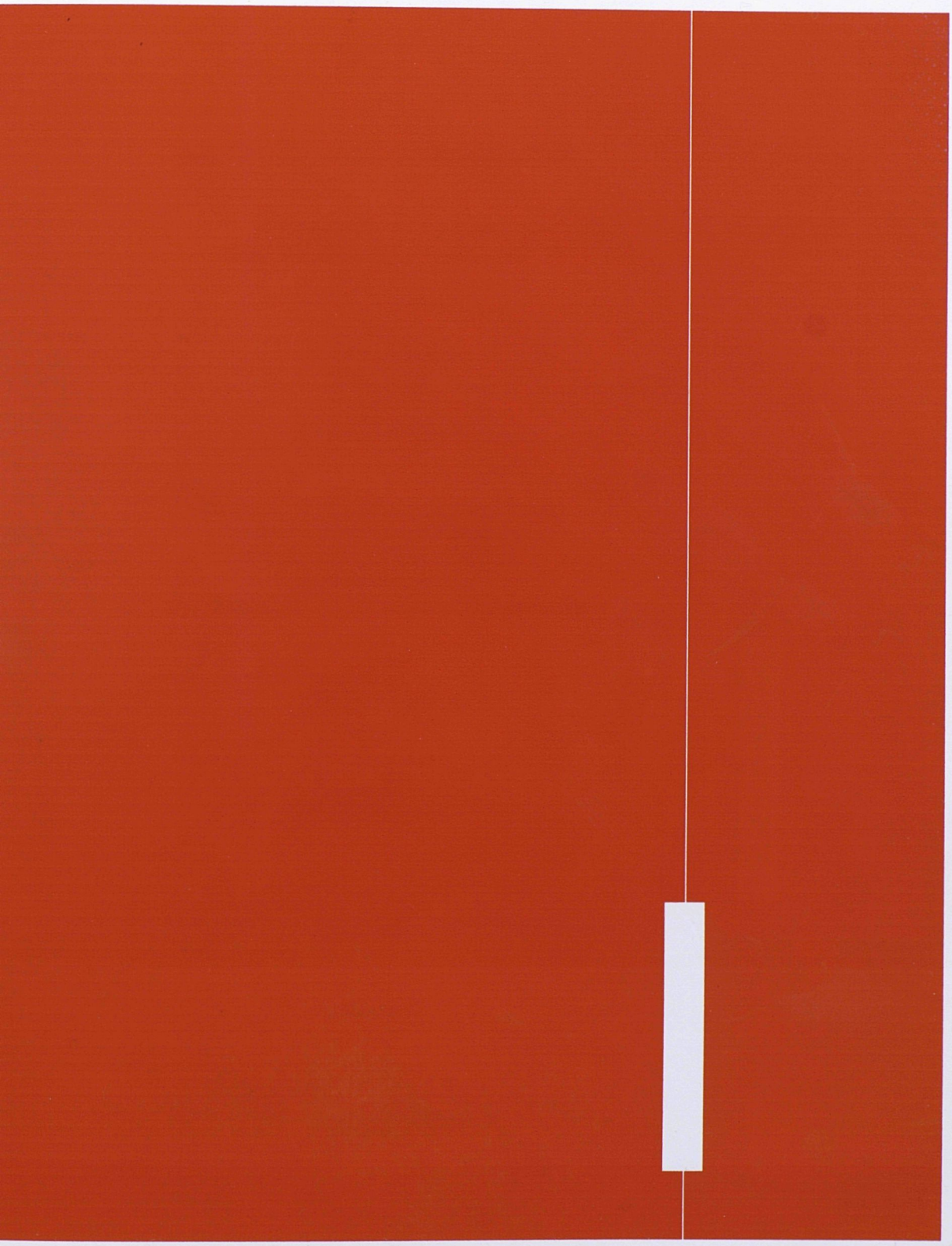

ARCHITECTURE OF THE NEGATIVE

COMMUNITY CENTER FOR RANSOM CANYON , TX

by
JEFF PALMER

A THESIS
IN
ARCHITECTURE

Submitted to the Architecture Faculty
of the College of Architecture
of Texas Tech University in
partial fulfillment of
the Degree of the Masters of Architecture

DECEMBER 2004

PREFACE

1. UNDERGROUND CITY OF NIPPUR (THE WALLS ARE WHITE DUE TO LACK OF MOISTURE)

THE "HOLLOW EARTH" THEORY

There is a legend that is told of a kingdom that exists underneath the surface of Earth known as Agartha. This kingdom is the home of an immensely intelligent and scientifically advanced civilization that possesses ancient knowledge and expertise far beyond that of human beings. Eons ago, a revolt erupted among competing cities. Many generations witnessed evolutionary corruption of their environment, their civilization, and their souls, though not all were corrupt. The select individuals that had the ability to achieve a peaceful and enlightened state foresaw the imminent

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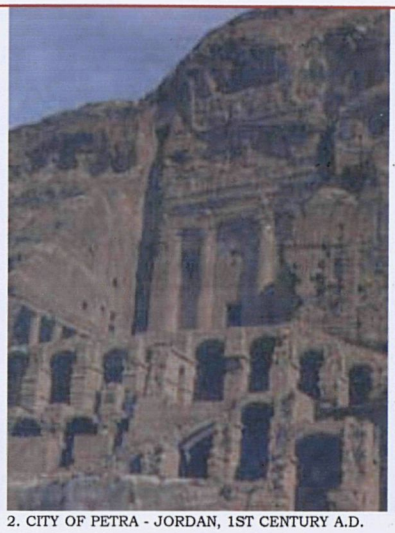


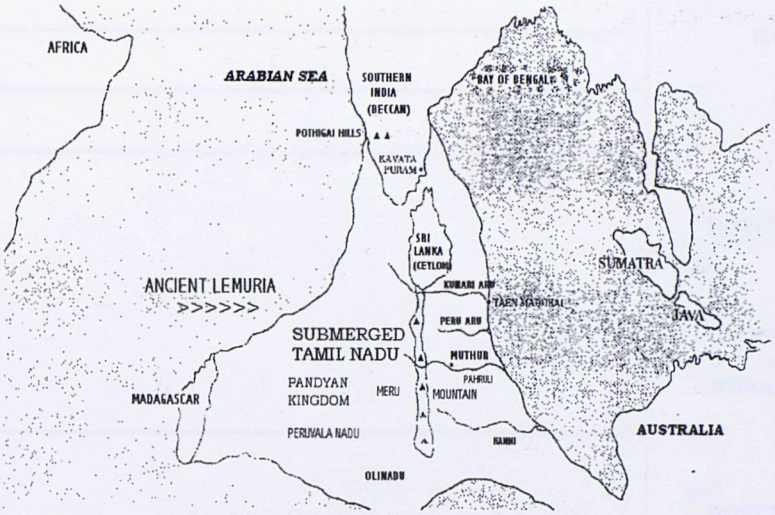
2. CITY OF PETRA - JORDAN, 1ST CENTURY A.D.

demise of their race. They saw how evil spread across the land in the form of apocalyptic-scale wars whose thermonuclear technology wiped the Earth's surface clean of all evidence of life. As the wars ceased, only small traces of life existed in the form of ruins of the once cherished civilizations. Some of the most advanced cities of the time such as Atlantis and Lemuria disappeared with only legends to support their existence. The only evidence of these past civilizations is secretly kept in subterranean safe houses that preserve the ancient teachings, technologies and transcripts that were treasured by the advanced cultures.

3. ATLANTIS

Agartha is the name given to the underground kingdom that thrives beneath us to this day. Its capital city, Shamballa the Lessor, is known throughout the mysterious empire. It is the leader of the smaller satellite colonies that stretch across the globe just under the surface, in mountains, caves, and canyons. The main entrances to Agartha are the North and South Poles, but some of the lesser known entrances include the Himalayan Mountains, the Pyramid of Giza in Egypt, and small canyons throughout the Southwest United States.

This civilization still remains a secret to most because of the private and reserved tendencies of its people.



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Contact with these people is limited because although they are mentally advanced, they are physically weak, and the judgmental remarks and actions of human beings are detrimental to their health. Unity between Agartha and the surface is dependent on a balance of cultural purity and positive spirituality. It has been said that the people of Agartha are waiting for us to reach their state of enlightenment and come to the same conclusion they did by realizing the futility of war and violence.

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PREFACE

THESIS STATEMENT:

The unexpected changes and diversities of society cause difficulty for architects to create structures that will be applicable by tomorrow's standards. To achieve an eternal architecture, designers must invert the traditional methods of architectural design and explore the negative. Architecture of the negative gives the impression of no beginning and no end; it denies time.

PROJECT SCOPE:

The city of Ransom Canyon, Texas is in need of a small public library that could serve the community as a library and a community center. The library will house a small collection for loaning and public internet access, while the community center will provide meeting rooms, civic offices, and other departments needed to support the community.

CONTEXT STATEMENT:

The town of Ransom Canyon is located in Lubbock County, Texas about seven miles east of the city of Lubbock. The name Ransom Canyon has been used since the days when the Comanche Indians would relinquish their captive prisoners back to their families for trade or money. The town as it exists today is relatively young, with its origination tracing back to the early 1960s. The site chosen for the placement of the library is located atop the easternmost cliff that overlooks the lake. This location will allow for easy visibility from all areas to the library as well as fantastic views of the lake and the setting sun from the facility.

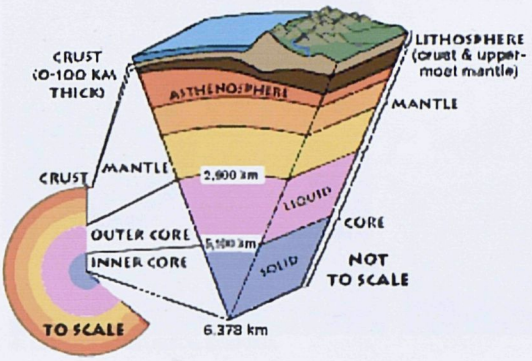
THEORY

ARCHITECTURE OF THE NEGATIVE

5. CLUSTER OF GALAXIES

THEORY INTRODUCTION:

The unexpected changes and diversities of today's society create difficulty for architects to design structures that will be relevant by tomorrow's standards. It would be safe to say that most architects envision a distant future in which their contribution to society still exists and functions with an understood acceptance of its being, not with questions of its creation. This perception in essence displays the idea of an eternal architecture. A quote by Alfred, Lord Tennyson states, "In time there is no present, in eternity no future, in eternity no past." This statement implies that time is a state of existence that is always positive, moving forward and changing. Eternity is the negative of both the beginning and the end of such an existence. Eternity is the absence of what we as humans know in the realm of creation and termination. Man and all man-made objects are relative to time, including architecture.



6. SECTION OF EARTH LAYERS

Traditionally, architectural design is time-stamped by styles, trends, materials, and available technology. Architecture of this type is born and it eventually dies. To achieve an eternal architecture, one must invert the traditional methods of architectural design and explore the negative. Architecture of the negative gives the impression of no beginning and no end; it denies time.

The planet Earth and its surface on which we thrive is life's oldest tangible resource, and it is the surface upon which all living things can evolve, interact, and build. In terms of time, the most recent physical creations that scatter this surface are still available to be discovered by whoever is interested, and promptly deleted when they are no longer relevant to public standards. Traditionally, architectural form and space are defined by the addition of objects to a surface. Physical objects that did not exist now do, and implanted in these new objects are allusions to their period of creation. To define form or space by the

7. SUN, MOON, EARTH

removal of a base material acknowledges what already exists and accepts that the material affects the nature of what is created within it. What remains is a perception of space that exists without the addition of a physical object. This technique allows the architecture to become one with our oldest resource and inherit the qualities of the earth, not the trends of its creator.

Architecture of the negative implies an eternal characteristic of existence. It is a type of architecture that's presence is partnered with everything that has always been known. It involves a negative interdependence with society – it neither affects the trends of society, nor is it affected by them. In architecture of the negative there is no future and no past.

Architecture of the negative affects form, space, and balance. Form is augmented by taking away from one object and adding to another. New form is created by turning solid into void. Negative space becomes evident

8. CHURCH AT LALIBELA, ETHIOPIA

when the perception of known space is inverted and it seems that the space actually defines the volume, not the volume defined by the structure. Balance is defined when the negative space counteracts with the positive and balances the composition. The two are needed for mutual completion. Without the negative the positive is out of control.

Negative Form

Solids must be walked around to be understood in three-dimensionality. If viewed as a simple two-dimensional figure, the unseen portion may not complete the form as expected. The viewer's positions must change to gain different views. Coherence is achieved through gradually changing positions. Through excavation, solid and void become interdependent; what is taken from the solid form is removed and added to the surrounding emptiness. Physical penetration and removal of material to define

9. PLANET SILHOUETTE AND SUN

form acknowledges that a base already exists. The base itself affects the space that is created within it.

Negative Space

One must understand space to comprehend the qualities of architecture of the negative. Space always exists, either as a container waiting to be filled, or defined by objects already existing on the ground. These physical objects obstruct the view of space thus creating a structure of new separate spaces. Negative spaces can only be perceived as an inversion of the solid structure. By creating empty spaces that feel solid, viewers can become aware of how space, although hollow, can imply the expansion of itself to receive its visitors.

Balance

Balance is established when positive and negative spaces are maintained in a state of equal or satisfying proportion. This harmonious proportion is determined by

10. EARTH

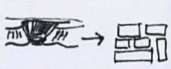
the human being. The human is the proverbial pivot point of the scale for what is to be considered "balanced." Balance, like space, is psychological. We need the presence of perceivable objects in order to comprehend space – and balance. The perceptible objects are positive, while the space in between is considered negative. If either of the elements is out of control, the arrangement of parts is considered out of balance. Traditionally the positive elements of a design are created with the negative spaces being their left-overs. The negative spaces have an unexploited power because they are what allow for the positive to be recognized. The human being's unique ability to perceive a harmonious perceptual order of positive and negative elements allows for a designer to manipulate the design of the negative space to define balance.

GOAL:

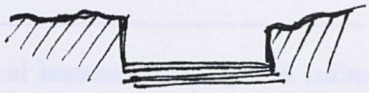
Materials should be acquired from the area of the site instead of materials that reflect modern technology.

PERFORMANCE REQUIREMENTS

1. P.R. – All visible materials should be similar to natural surroundings.



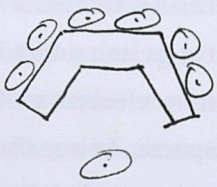
USE MATERIAL FROM THE SITE



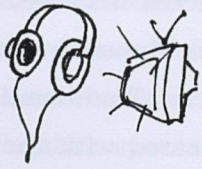
RAMMED EARTH

2. P.R. – When needed, new materials should be used in specifically designated areas.

COMPUTER CENTERS

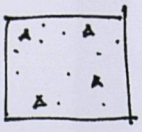


MEETING ROOMS

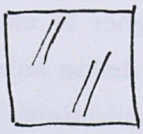


AUDIO/ VISUAL ROOMS

3. P.R. – Material choice should be low maintenance.



CONCRETE



SELF-CLEANING GLASS

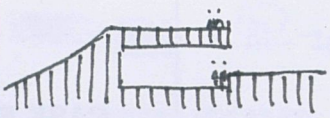
GROUND TREATMENTS

GOAL:

The style used should disregard trendy architectural movements in order to achieve a style-less architecture.

PERFORMANCE REQUIREMENTS

1. P.R. – The design should mimic its natural surroundings and blend in with the landscape.



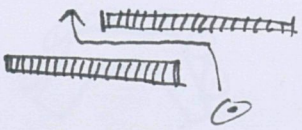
ELEVATIONAL BERM

CLIFF-SIDE ELEVATION

BEHIND TREELINE

2. P.R. – The built form should be revealed to the visitor almost unexpectedly.

COVERED VOID



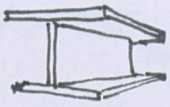
SLIDE BETWEEN TWO PLANES

WINDING PATH

3. P.R. – The use of new technologies should be instituted only when needed by the users.

ELEVATORS

SECURITY SYSTEMS



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GOAL:

Upon arrival, the facility should provide a surprising welcome for the users to experience a sense of discovery.

PERFORMANCE REQUIREMENTS

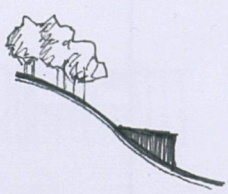
1. P.R. – The image of the structure should be unified with the landscape.

HIDE BEHIND LANDSCAPE

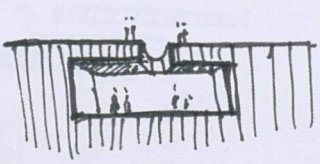
CARVED INTO LANDSCAPE

BURIED UNDER LANDSCAPE

2. P.R. – The form should become a recessive landmark, like the canyon.

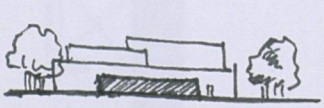


DOWN A HILL

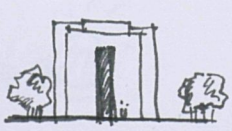


COVERED ATRIUM

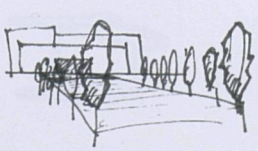
3. P.R. – The facility should use different scales of form to elaborate on the event of entry.



LOW AND WIDE ENTRANCE



TALL AND SLENDER ENTRANCE



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BLUR - THE MAKING OF NOTHING

ARCHITECT - DILLER AND SCOFIDIO

PROJECT - PAVILION FOR THE SWISS EXPO .02

SUMMARY:

The Blur project was a media pavilion for the Swiss Expo .02. What is interesting about Blur is that its two main materials were steel and fog. The project is set in Yverdon on Lake Neuchatel whose lake water is used to produce artificial fog controlled by computer systems that augment its output relative to the weather that is affecting it. According to Diller and Scofidio, this project is weather as a primary encounter with nature and the obsession by humans to modify the weather. This project becomes theoretically eternal because its principle function is to mimic an everlasting natural

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element – the weather.

To further the atmosphere of blurriness and the absence of space, Blur incorporates a sort of "dress code" into the project. To keep from getting your clothing dampened from the fog, "brain coats" are supplied as a form of protection. The brain coats are checked out by the visitor who proceeds to complete a personality survey. The results are programmed into a computer system in the coat. The coats illuminate red when a compatible match approaches and glows green when a contradicting personality advances. The lights intensify with the relative strength of the match.

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BLUR - THE MAKING OF NOTHING

ARCHITECT - DILLER AND SCOFIDIO

PROJECT - PAVILION FOR THE SWISS EXPO .02

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UNIVERSITY ART MUSEUM OF CALIFORNIA STATE UNIVERSITY AT LONG BEACH

ARCHITECT - PETER EISENMAN

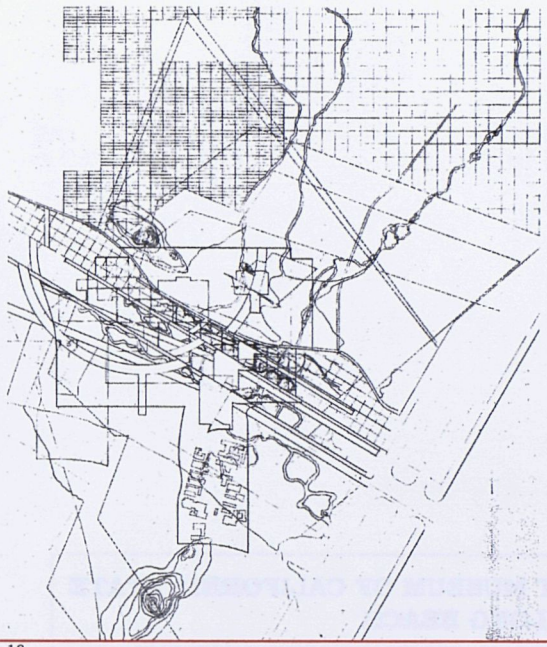
PROJECT - UNIVERSITY ART MUSEUM, 1986

SUMMARY:

The idea of the University Art Museum was to create a timeless structure that acknowledged a series of significant dates throughout the history of California, such as:

- 1849 Settlement of California
- 1949 Creation of the campus
- 2049 Rediscovery of the Museum

The relationship between nature and man is recognized through the changing conditions of civilized areas versus natural patterns. Peter Eisenman says that the purpose of the project was to,



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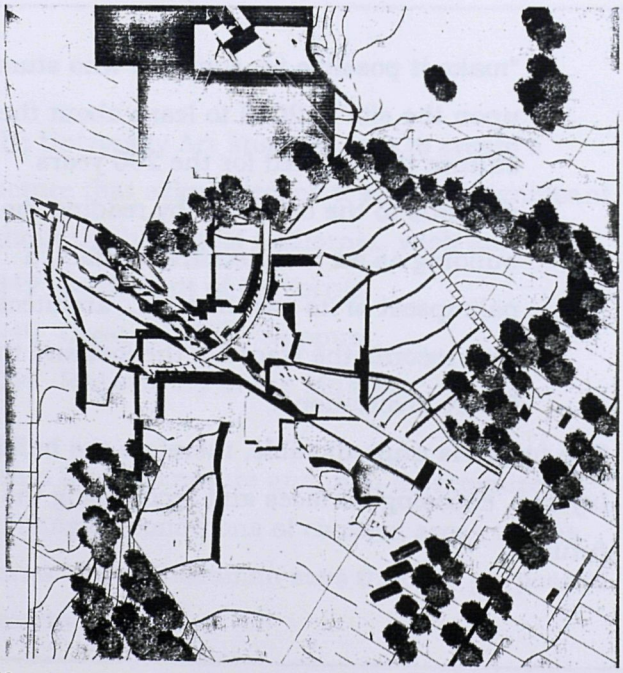
> "make it possible for someone who stumbles upon the site in 2049 to learn about the culture that existed for the 200 years previous to the discovery by reading the building as an architectural artifact, a palimpsest of its own history... architecture that records the traces of the lost and the future civilizations."

The future is unpredictable, therefore the building is layered, exposing surfaces and recognizing the unknown future.

UNIVERSITY ART MUSEUM OF CALIFORNIA STATE UNIVERSITY AT LONG BEACH

ARCHITECT - PETER EISENMAN

PROJECT - UNIVERSITY ART MUSEUM, 1986



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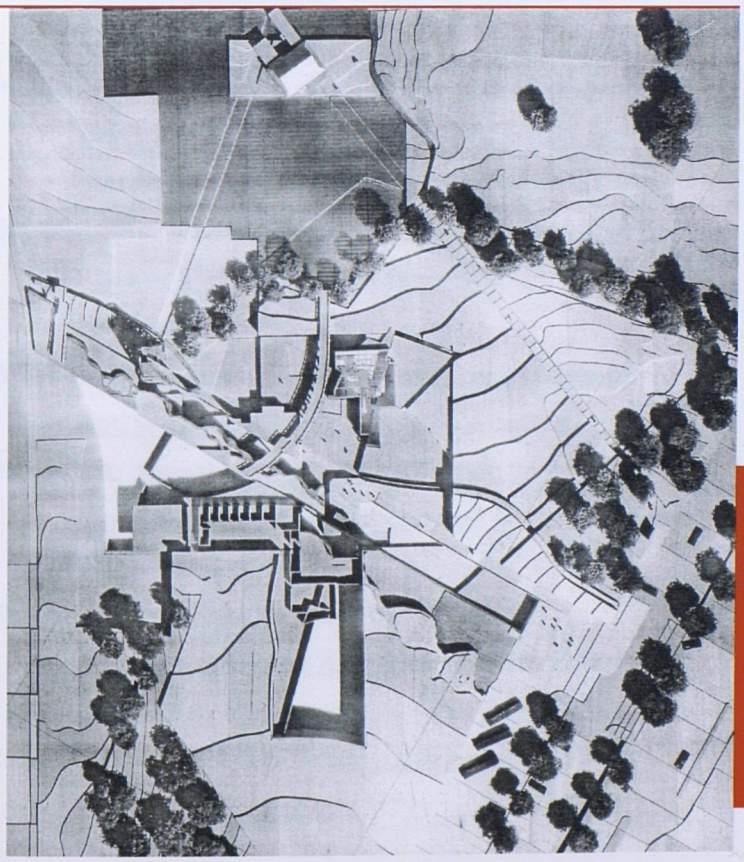

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RANSOM CANYON, TEXAS

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CONTEXT INTRODUCTION:

The physical context of the area is the flat expanses of the South Plains of West Texas. The flatness of the plains provides an easily definable relationship between the solidity of the earth and the emptiness of the sky. The essence of space is perceptible through the relationship of the human figure to its physical surroundings. In the South Plains there are very few physical objects upon which to gain a personal scale. The space stretches wide and deep into the horizon. The only disturbance to the uniformity of the plains is the existence of voids in the earth in the form of canyons. The West Texas town of

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Ransom Canyon lies in a deep cut of the South Plains known as Yellow House Canyon. The canyon exists due to the slow removal of earth administered by a head stream of the Brazos River. A new dimension of space is defined due to the absence of earth which was once a part of the monotonous flat plains. The permanence of the canyon and its everlasting effect on the earth can be mimicked in the architectural design of a building such as a library. A library that displays the image of permanence and familiarity with its surroundings would entice more users to visit and partake of its vast knowledge and wisdom.

RANSOM CANYON, TEXAS

BUILT:

Ransom Canyon is unique to West Texas for many reasons. One aspect of Ransom Canyon is that the city has no overhead utilities stretching across streets or blocking views. They have no streetlights, which allows for a calm and relaxed night where visitors and residents can enjoy nature. Residents in fact are the primary reason for the existence of the city. Almost all of the structures are houses that scatter the canyon-sides in neighborhood clusters. The only other built forms are the City Hall, a small Volunteer Fire Department, and a few other indiscriminate industrial structures.

SOCIAL/ PSYCHOLOGICAL:

Ransom Canyon is a small community consisting of about 1,000 residents. The main social events of the city include town meetings, which by law, are required to occur within the city limits. Ironically, almost all of the residents' social events in which they are involved take place outside the city limits, such as work, school, and entertainment. The residents actually commute from Ransom Canyon to the tri-county area.

ECONOMIC:

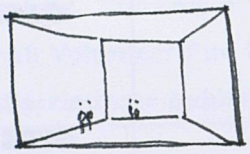
The beauty of the area and the uniqueness of culture attract many interested buyers to the community of Ransom Canyon. Ransom Canyon gains approximately ten homes per year, with an average of two persons per home. Therefore, the projected growth over the next ten years will be roughly 200 new citizens. As of now, the city has no school system; high school students from the north part of town attend Roosevelt ISD, and those from the south attend Slaton ISD. College students attend both Texas Tech University and South Plains College.

GOAL:

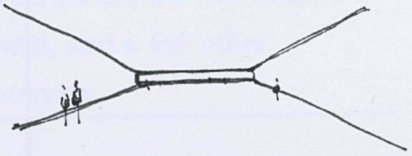
The design should utilize the existing void in the landscape to influence the design.

PERFORMANCE REQUIREMENTS

1. P.R. – Define the spaces so that they seem to be expanding.



SIMPLE, FORMAL SPACES



WIDE AND DEEP SPACES

2. P.R. – Forms should not protrude into the canyon.

FORMS THAT ARE FLUSH WITH CANYON WALLS

FORMS THAT ARE INSET INTO CANYON WALLS

3. P.R. – The design should incorporate the appropriate construction techniques to define void spaces.

REMOVAL OF EARTH

RAMMED EARTH

PRESERVE EXISTING LANDSCAPE

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GOAL:

To create a structure that complements the relationship of solid and void, while inflicting minimal destruction of environmental factors.

PERFORMANCE REQUIREMENTS

1. P.R. – Design in accordance to existing patterns of land forms.

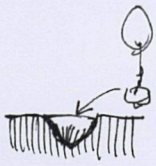
DO NOT DISTURB WATER FRONT

CANYON AS A PROMINANT FEATURE

2. P.R. – Due to their rarity in the area, retain the existing trees.

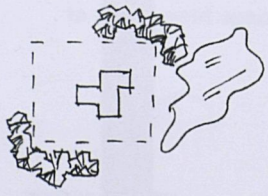
DO NOT UPROOT EXISTING TREES

PLANT NEW TREES

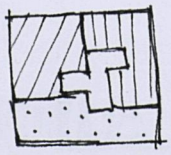


MOVE TREES

3. P.R. – Design for the possibility of extending the site in the future.



ALLOW SPACE FOR EXPANSION



ZONING

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BRUNO HOUSE

ARCHITECT - ROBERT BRUNO

PROJECT - RESIDENCE

SUMMARY:

The Bruno House sits high in the easternmost section of Ransom Canyon. Robert Bruno, architect and owner of the residence, created this form of practical sculpture under his own manpower. The house is constructed out of steel and glass, and it almost seems to want to jettison straight off the canyon walls. A grand window faces to the west and captures an elegant view of the town, and conversely the choice of site provides an exceptional view of the house from the canyon below.

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30. VIEW FROM SITE TO NORTHWEST

31. VIEW FROM SITE TO EAST

32. VIEW FROM SITE TO SOUTH

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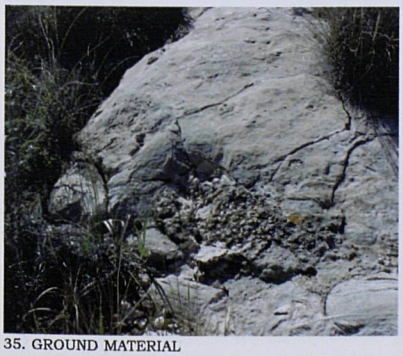
33. CANYON - SIDE

34. VEGETATION



35. GROUND MATERIAL

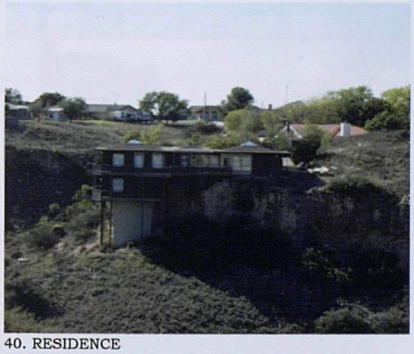
RANSOM CANYON, TEXAS

36. LIBRARY

37. CITY HALL

38. RESIDENCE

39. RESIDENCE



40. RESIDENCE

41. RESIDENCE

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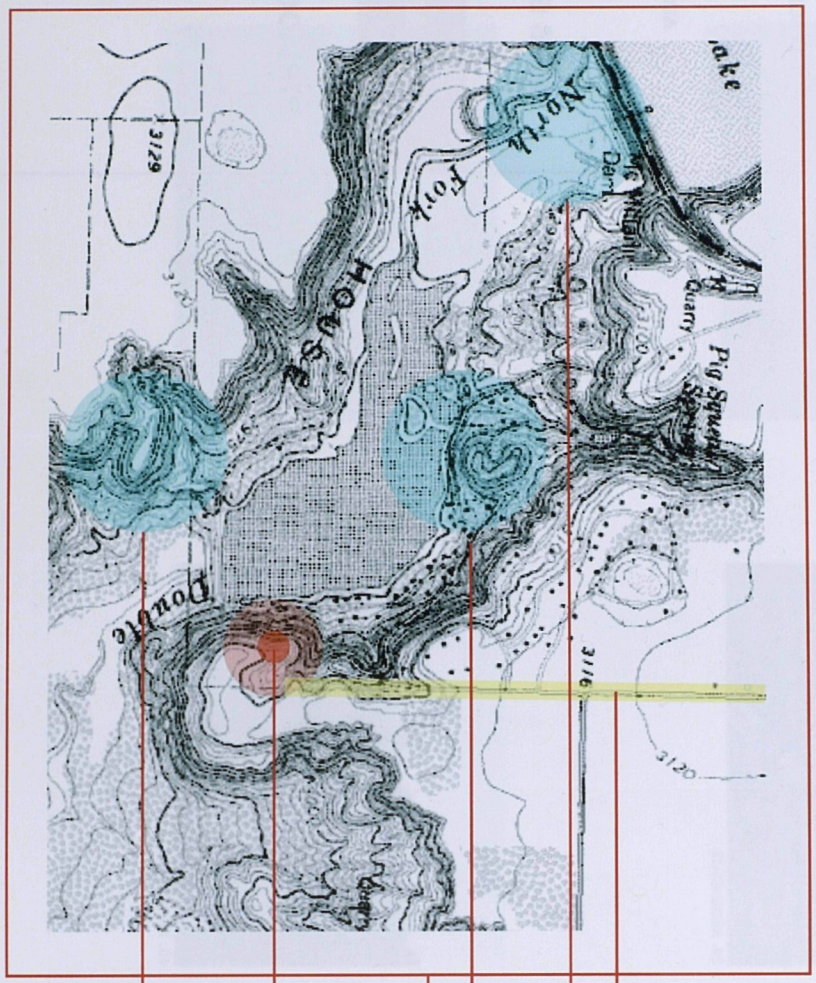

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MAIN TRAFFIC FLOW

VIEW OF DAM

VIEW OF UNDEVELOPED HILL

PROPOSED SITE

VIEW OF CANYON-SIDE

ANALYSIS:

The proposed site has no utility distractions such as light poles or power lines. The site's main access ends in a cul-de-sac, therefore there is not a heavy flow of traffic through the area. The site is high on the easternmost canyon-side, which eliminates almost all noise generators, plus it provides excellent views of the city below.

RANSOM CANYON, TEXAS

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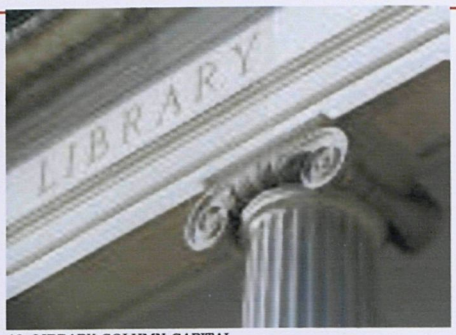
Ransom Canyon: The History of... Available from http://www.ransomcanyon.com/history.htm Accessed 19 October 2002.

Verrett, Melissa. Telephone Interview. 20 October 2002.

FACILITY

COMMUNITY CENTER



43. LIBRARY COLUMN CAPITAL

FACILITY INTRODUCTION:

Libraries are a written collection of information from the past. Knowledge and wisdom are centralized in a container where they are accessible to the public. The fundamental use of a library is in fact a negative activity when compared to the traditional activities of most buildings. It is negative in the sense that the bulk of the communication of information is likely to happen outside the building. This is the distinction between a public library and other buildings where the communication occurs within the building. The design of a library should express this negative activity as well as the preservation of

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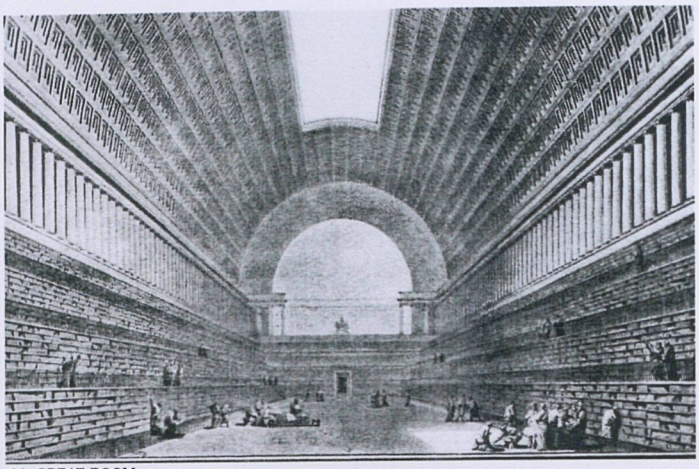
its information and the acknowledgment of the past. Constructing a library through excavation supports the physical link to the past by exposing underlying histories and the process of its own formation. Space is defined by transforming solid into void, and doing so revealing negative space in the landscape giving the impression of longevity and authenticity.

HISTORY OF THE LIBRARY:

Libraries have essentially existed since the creation of the written word. Ever since the ability to write became a symbol of intellectual advancement,



44. GREAT ROOM

humans have understood the value of the written word. The history of the library can be divided into three distinct traditions of design. The Romans were the first to develop a sort of display area for the writings of their time. The first documented library structure was the Roman Colonial Library at Ephesus in Asia Minor. This structure consisted of simple collections of written thoughts on papyrus scrolls that lined the walls of a great open room. The walls of this room were composed of shelving alternating with small niches to accommodate sculptures. This type of design placed the main emphasis on the book and the symbolically important room that contained it.

45. BOOK CUPBOARD

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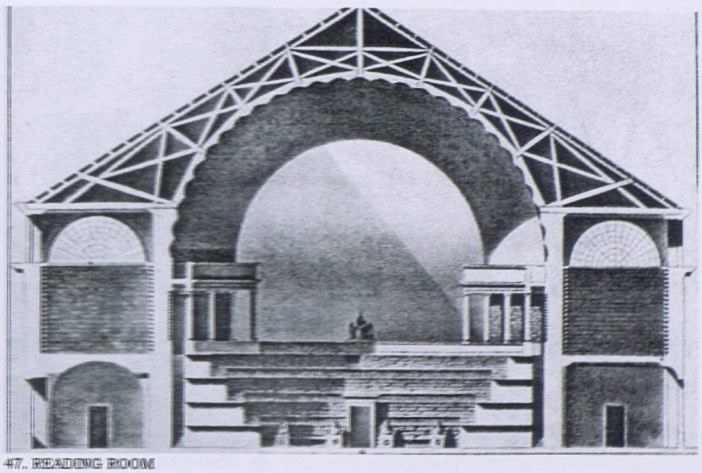
The second tradition of the library was of a Monastic influence. Monks participated in long, solitary periods of study. These tedious sessions called for a comfortable setting in which the reference material was within easy reach and the mind could escape through adjacent windows. Study areas like this were basically small niches lining the perimeter of a room and they were known as carrels. The design of a carrel consisted of a perpendicular window space which contained shelving to organize the reading material. The number of available volumes was limited, therefore this arrangement became the most

46. READING ROOM

logical solution. The tradition developed through this style now gave more emphasis to the reader and less to the book.

The Middle Ages introduced new buildings that were designed with the sole purpose of housing reading material. The first were college libraries, evident in the 14th century campuses such as Oxford or Cambridge. This type of exclusive library housed an entire collection of volumes that allowed for immediate access by the reader. The only difficulty in actually accessing a copy was that the rareness of books still demanded heavy protection, and called for such drastic measures as being



47. READING ROOM

kept in cupboards that required two keys to open. After the invention of the movable type in the 1500s, library design began to experience a trend of reviving the first design tradition. Once again large symbolic rooms were adorned with shelf after shelf of books, and continued this way throughout the 1830s when available volumes began to reach into the 200,000's. In the early 19th century a visionary designer, Leopoldo della Santa, separated the library into collection space, reading space, and office space. This new design type began the third tradition in library design. This design tradition is still used today, with the only difference being that during della Santa's

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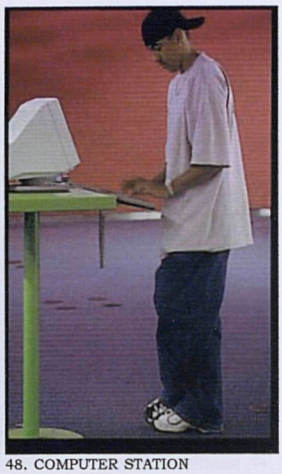

48. COMPUTER STATION

time, the staff members retrieved the material and delivered it to the reader. This period also experienced the invention of the metal press, the foot-operated cylinder press, and the mechanical steam press, all of which contributed to an increase of published titles. Library designers began to separate uses into specialized section such as research, newspapers, and journals. The abundance of material in the late 19th century eventually led to the borrowing element that we are so familiar with today. The lending of books and other material became a common practice that was an attempt to broaden the educational potentials of the library.

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The image of the library of the late 19th century has changed very little in comparison to the libraries of today. With the introduction of the computer and its powerful ability to store vast amounts of information in a small space, the next most logical advancement of the library would seem to involve the decline of the book. However, the online availability of the internet only enhances the accessibility of books and other reference material. The long term status of books, regarding their decline or their perseverance, is unknown, but just as past events of the library has proved, over time change will occur.

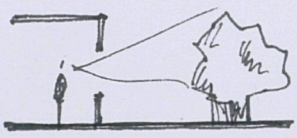
GOAL:

Public areas should be easily accessed and exited by users as well as staff.

PERFORMANCE REQUIREMENTS

1. P.R. – The visitors should experience a sense of orientation within the building.

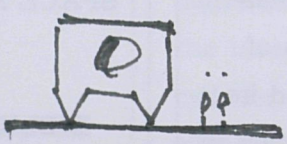
FOCAL POINT



FRAMED VIEWS

DEFINED PATHS WITH LANDMARKS

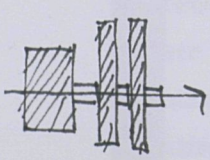
2. P.R. – The facility organization should provide obvious destinations for the visitors.



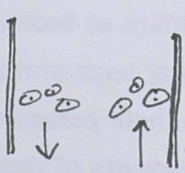
SCULPTURE AS FOCAL POINT

DIRECT PATHS

3. P.R. – The design should encourage a generous flow of information throughout the public spaces.



DIRECT FLOW OF INFORMATION



WIDE PATHS

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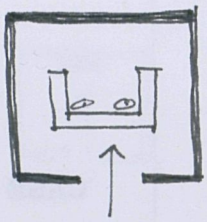
GOAL:

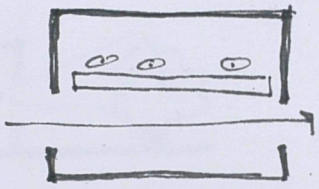
The facility should establish a clear separation of public and private areas.

PERFORMANCE REQUIREMENTS

1. P.R. – Place security counters in prominent areas.

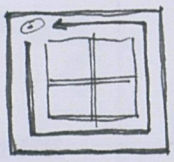


COUNTER AT ENTRY

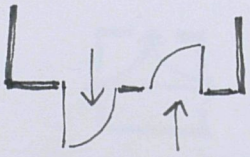


COUNTER OFF TO THE SIDE

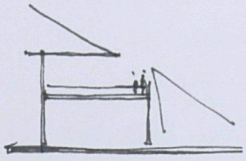
2. P.R. – Provide visual access to circulation and exit areas.



CIRCULATION AROUND A CENTER SPACE

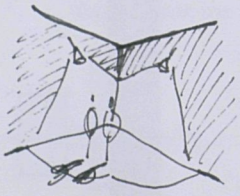


ENTRY AND EXIT AT ONE PLACE



HIGH POSITION LOOKING DOWN

3. P.R. – Provide security lighting to discourage intruders.



LIGHTING AT CORNERS

PATHS OF LIGHT

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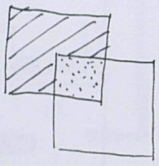
GOAL:

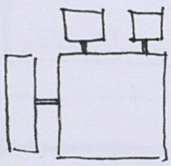
The facility should provide for individual tasks as well as social interaction.

PERFORMANCE REQUIREMENTS

1. P.R. – The plan should accommodate change in use requirements for the next 10 – 20 years.

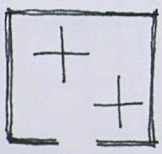


DO NOT OVERLAP SEPARATE ACTIVITIES

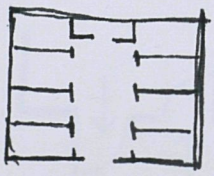


ALLOW FOR EXPANSION OF ACTIVITIES

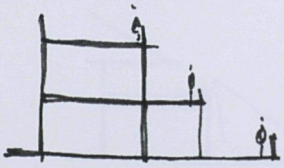
2. P.R. – Provide modular spaces instead of fixed spaces.



PARTITIONS

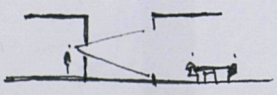


BOOTHS



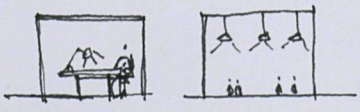
MULTIPLE LEVELS

3. P.R. – Identify a separation between the joint use of spaces.



VIEWS INTO SEPARATE SPACES

SOUND BARRIERS



DIM LIGHT IS MORE PERSONAL
BRIGHT LIGHT IS MORE SOCIAL

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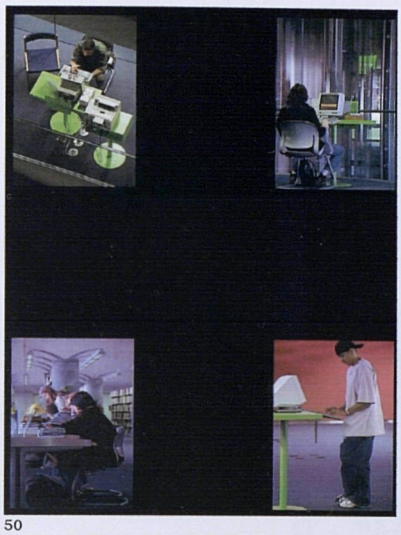
PHOENIX CENTRAL LIBRARY

ARCHITECT - BRUDER DWL ARCHITECTS

PROJECT - PUBLIC LIBRARY 1995

SUMMARY:

The Phoenix Central Library is known to the locals as "the Mesa" because it blends with the landscape due to its copper exterior. The library sits upon the horizon as a monolith without any regard to scale and with no sign of apparent inhabitation. The context deals with a low density of inhabitants with vast empty spaces between buildings. The design had to address the urban sprawl into the landscape of natural Phoenix. The civilized population expands into the Arizona landscape only stopping around natural formations such as mountains, canyons, or rivers. These natural formations act as



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monuments and have taken on the role of symbolic landmarks for the city, similar to the St. Louis Arch or the Statue of Liberty.

"The two compressed entry crevasses burrow toward the building's core to reveal a vertical chasm, a shaft of space connecting the ground floor all the way to the library's stainless steel rooftop monitor. The building's circulation is organized around this vertical atrium."

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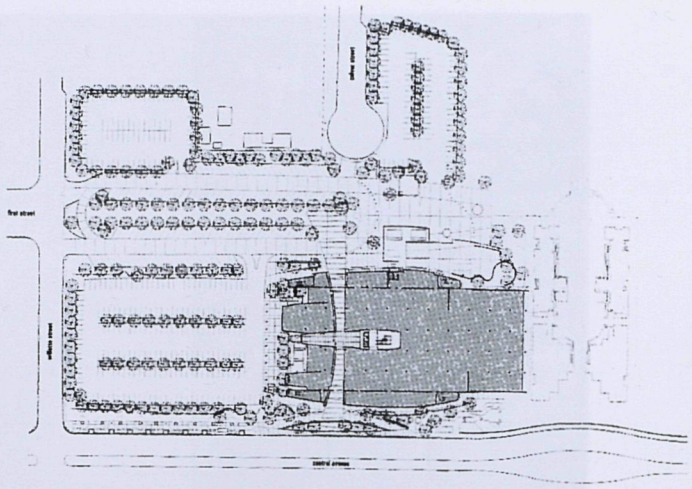

Site plan

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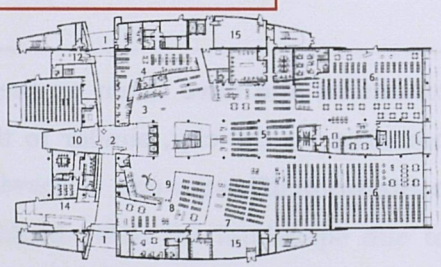
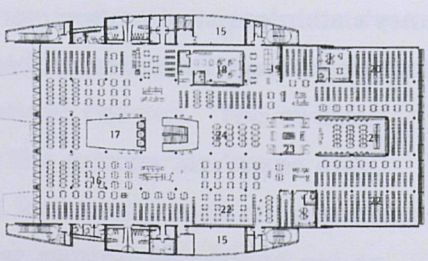
PHOENIX CENTRAL LIBRARY

ARCHITECT - BRUDER DWL ARCHITECTS

PROJECT - PUBLIC LIBRARY 1995



First floor plan



Second floor plan

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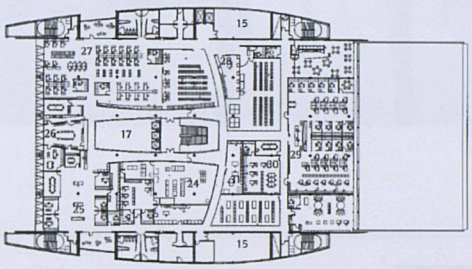
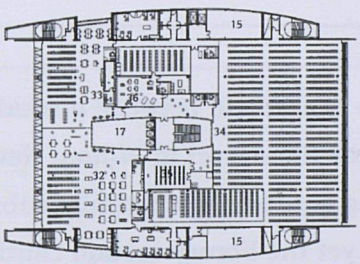
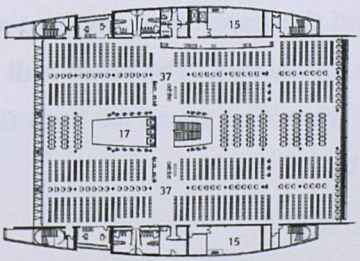


Third floor plan



Fourth floor plan



Fifth floor plan

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T HOUSE

ARCHITECT - SIMON UNGERS

PROJECT - RESIDENCE, 1992

The T House is a hybrid between a residence and a 10,000 volume library set in Wilton, New York. The house's living quarters are partially submerged into the sloping site, yet the library section cantilevers 14 ft on each side at a 90 degree angle directly above the living area. The library is a 44 ft long by 16 ft wide, double-high space with the second level containing the collection, and the lower level designated for reading and admiring the landscape. The entry hall of the house doubles as a transition space for both the living area and the library above.

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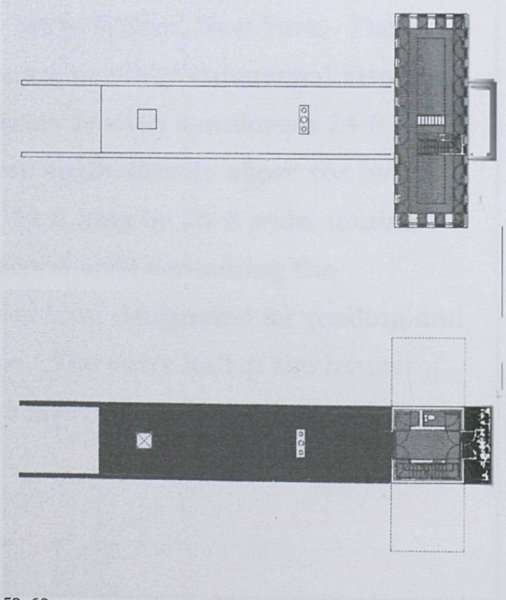
T HOUSE

ARCHITECT - SIMON UNGERS

PROJECT - RESIDENCE, 1992



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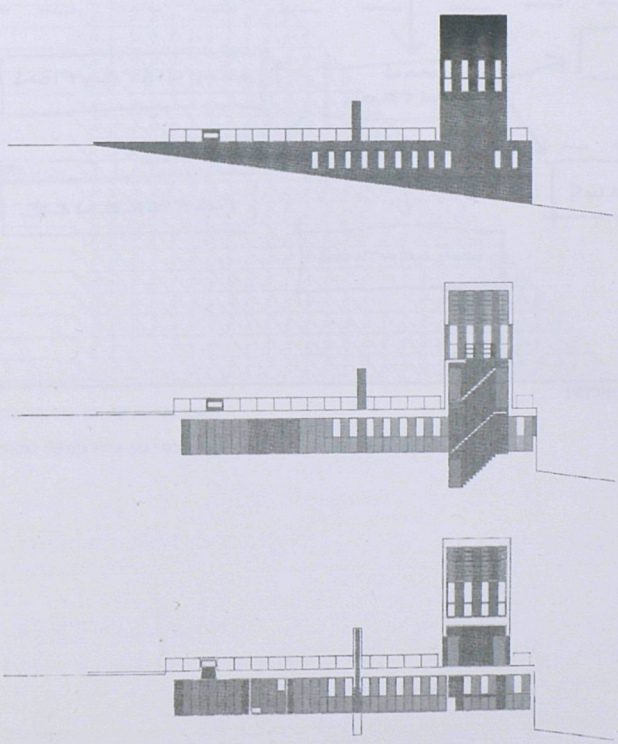

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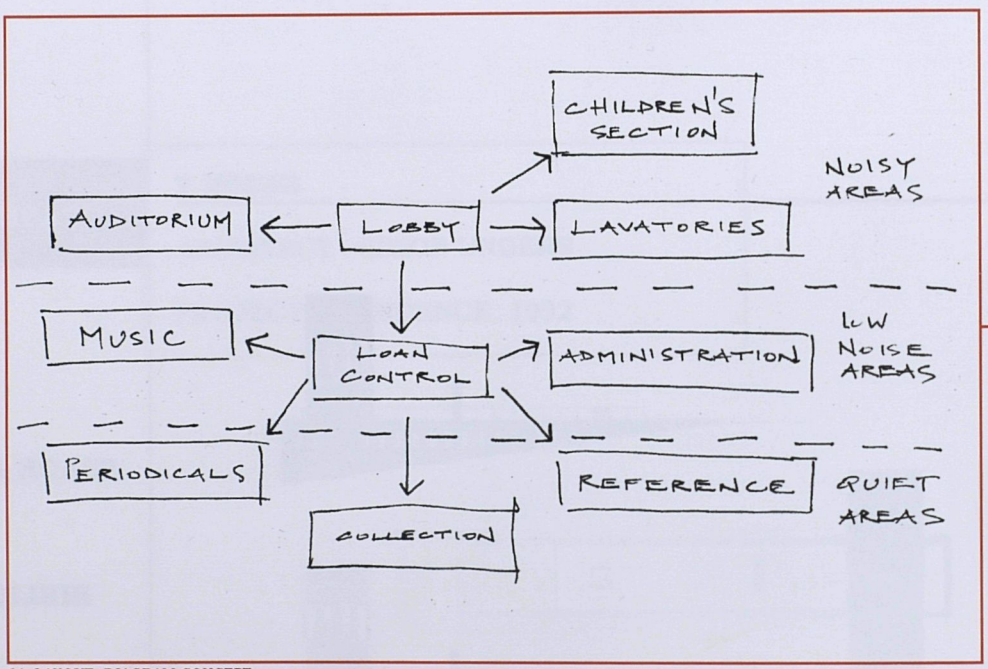

64. LAYOUT DIAGRAM CONCEPT

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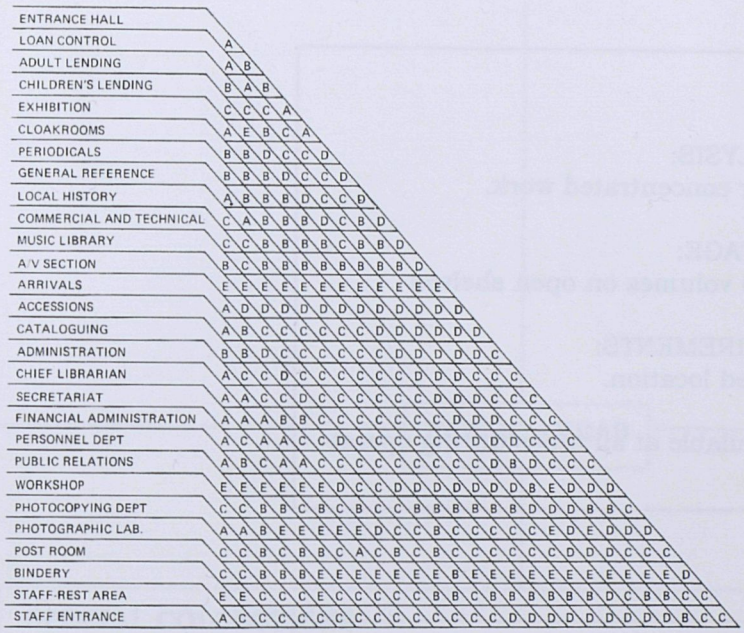

A - DENOTES EXTREME LEVEL OF ADJACENCY

D - DENOTES LOWEST NEED FOR ADJACENCY

65. ADJACENCY DIAGRAM

LENDING DEPARTMENT

ACTIVITY ANALYSIS:
Users browse and select their own material.

SQUARE FOOTAGE:
45 sf for every 1,000 volumes

DESIGN REQUIREMENTS:
1. Ideally, direct access from entrance hall.
2. Simple arrangement of shelving.
3. Convenient traffic lines.

REFERENCE

ACTIVITY ANALYSIS:
A quiet area for concentrated work.

SQUARE FOOTAGE:
30 sf per 1,000 volumes on open shelves

DESIGN REQUIREMENTS:
1. Decentralized location.
2. Quiet area.
3. Must be available at all times during operating hours.

SEATING/ READING

ACTIVITY ANALYSIS:
Readers claim an area to read their material.

SQUARE FOOTAGE:
4 readers per table at 7sf per reader

DESIGN REQUIREMNTS:
1. Separate spaces.
2. Layout is influenced by access to collection.
3. Possibly located on perimeter walls.

PERIODICALS/ NEWSPAPERS

ACTIVITY ANALYSIS:
Located in the Reference section of the library.

SQUARE FOOTAGE:
9 sf per reader

DESIGN REQUIREMENTS:
1. Decentralized location.
2. Quiet area.
3. Provision of windows.

PUBLIC AREAS

SPECIAL COLLECTIONS

ACTIVITY ANALYSIS:
Viewing film and tapes and listening to music.

SQUARE FOOTAGE:
12 sf per person

DESIGN REQUIREMENTS:
1. Centralized location.
2. Close relation to storage of audio/ visual components.
3. Temporary equipment set up.

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MEETING/ SEMINAR SPACE

ACTIVITY ANALYSIS:
Accommodate readings, lectures and exhibitions.

SQUARE FOOTAGE:
6 sf per person to accommodate 15-25 people

DESIGN REQUIREMENTS:
1. Locate to be used independently.
2. Movable acoustic room dividers.
3. Audio/ visual capabilities.

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COUNTERS/ SERVICE DESK

ACTIVITY ANALYSIS:
Issue and return of loaned books, registration, exit security.

SQUARE FOOTAGE:
Approximately 15 sf area

DESIGN REQUIREMENTS:
1. Linear counter with work room behind.
2. Must be in prominent position.
3. Requires storage of books, trolleys, and lost and found.

PHOTOCOPYING SERVICE

ACTIVITY ANALYSIS:
Copying of reference material or material that cannot be loaned.

SQUARE FOOTAGE:
Approximately 15 sf of area

DESIGN REQUIREMENTS:
1. One or two machines near the entrance.
2. Easily accessible from public areas.
3. Should not disturb readers or quiet areas.

CATALOG (COMPUTER CONSOLES)

ACTIVITY ANALYSIS:
The key to the contents of the library.

SQUARE FOOTAGE:
Consoles placed at various points throughout the library.

DESIGN REQUIREMENTS:
1. Close to entrance
2. Should not be a source of distraction to the readers.

OFFICES AND WORKROOMS

ACTIVITY ANALYSIS:
Accommodates accessioning cataloging, processing, and dispatch/ arrival.

SQUARE FOOTAGE:
20% of total area of public space

DESIGN REQUIREMENTS:
1. One space divided into work areas for all funcitons.
2. Adaptable to change.

ADMINISTRATIVE AND WORK AREAS

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TOWN HALL

ACTIVITY ANALYSIS:
Meeting room for town assemblies.

SQUARE FOOTAGE:
6 sf per person for 150 people

DESIGN REQUIREMENTS:
1. Separate hours from library.
2. Audio/ visual capabilities.
3. Accessible from outdoors.

SERVICE COUNTER

ACTIVITY ANALYSIS:
Customers pay bills such as utilities and taxes.

SQUARE FOOTAGE:
Allow for 150 sf

DESIGN REQUIREMENTS:
1. Located close to or at the entry.
2. The counter needs a cash register.
3. Security attention.

MAYOR'S OFFICE

ACTIVITY ANALYSIS:
Mayor meetings, municipal work.

SQUARE FOOTAGE:
Allow for 200 sf

DESIGN REQUIREMENTS:
1. Include secretary's office.
2. Windows to outdoors.
3. Views into other office areas.

BOOKSTACKS

ACTIVITY ANALYSIS:
Browsing for a selection of material.

SQUARE FOOTAGE:
20 sf per 1,000 volumes

DESIGN REQUIREMENTS:
1. Related to a seating formation.
2. Limit the length of shelving to incorporate structural grid.
3. Design with an open plan.

ARCHIVE BOOK STORAGE

ACTIVITY ANALYSIS:
Closed access of rare and valuable material.

SQUARE FOOTAGE:
Depends on amount of material

DESIGN REQUIREMENTS:
1. Do not locate within danger area for water damage.
2. Minimized outdoor climate interference.
3. Supervised access only.

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AUDIO/ VIDEO STORAGE

ACTIVITY ANALYSIS:
Open access to various public departments.

SQUARE FOOTAGE:
Determined by location.

DESIGN REQUIREMENTS:
1. Close relation to audio/ visual department.
2. Design for a controlled environment.

ENTRANCE HALL

ACTIVITY ANALYSIS:
Flow of public entrance and exit along with waiting and information display.

SQUARE FOOTAGE:
Determined by careful planning of area needed in relation to the size of the library.

DESIGN REQUIREMENTS:
1. Accommodate normal flow of public.
2. Requires a waiting area/ lobby.
3. Easily identifiable from outside.

PUBLIC LAVATORIES

ACTIVITY ANALYSIS:
Used by the public throughout the day.

SQUARE FOOTAGE:
Men:
Water closets - 2 for up to 200 persons
Urinals - 2 for up to 1,000 persons
Wash basins - 1 for each 60 persons
Women:
Water closets - 2 for up 75 persons, then one for each 50
Wash basins - 1 for each 60 persons

DESIGN REQUIREMENTS:
1. Accessible to meeting and studying facilities.
2. Available when library is closed.
3. Do not place in a prominent location.

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STORE ROOMS

ACTIVITY ANALYSIS:
Aplace to store furniture, cleaning supplies, stationary, and general equipment.

SQUARE FOOTAGE:
Allow for approximately 150 sf.

DESIGN REQUIREMENTS:
1. Rooms can have a fairly shallow depth.
2. Should be close to the dispatch/ arrival area.
3. Should be accessible from workrooms and offices.

COMMUNITY CENTER

LENDING DEPARTMENT	
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SEATING/ READING	
SPECIAL COLLECTIONS	
MEETING/ SEMINAR SPACE	
COUNTER/ SERVICE DESK	
PHOTOCOPYING SERVICE	
CATALOG/ COMPUTER CONSOLES	
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SPACE SUMMARY

1000 SF	
700 SF	
300 SF	
8000 SF	
200 SF	
5300 SF	
300 SF	
600 SF	
700 SF	
1400 SF	
5000 SF	
1000 SF	
4000 SF	
400 SF	
500 SF	
28140 SF	
33768 SF	

COMMUNITY CENTER

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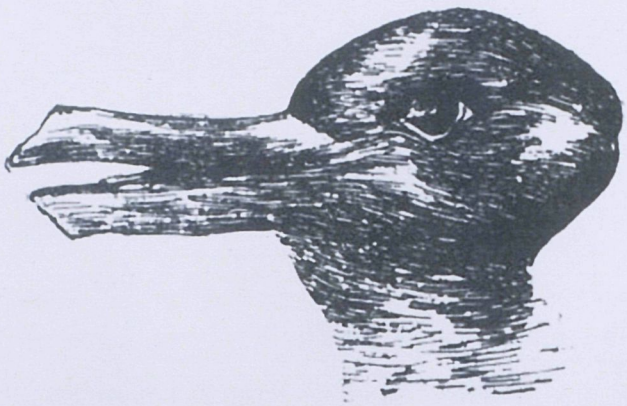
SOLUTION

TO BE AND NOT TO BE



66. THE DUCK-RABBIT

SOLUTION INTRODUCTION:

Throughout the architecture program at Texas Tech University, I have discovered that the interplay between the presence and absence of architecture has been a prominent theme in my work - presence in the sense of structure and mass, but absence in the sense of void between building and landscape. My thesis, Architecture of the Negative, is a conceptual demonstration of how designers can use space as a material substance, similar to a solid or liquid, only in vaporous form.

In today's trendy and rapidly changing society, it is becoming difficult for architects to create structures that will be applicable by tomorrow's standards. To achieve an eternal architecture, designers must invert the traditional method of perception and explore the negative.

I let the theme of "Negative" reveal itself in all aspects of the project; including the site and the facility. Negativity related to the site is

67. MY WIFE AND MOTHER-IN-LAW

revealed in the form of a canyon. The flat expanses of the South Plains provide an undeniable distinction between earth and sky, the only major interruption being canyons – voids in the earth carved by water, wind, and time. Because of the abundance of flatness, it is easy to perceive the void of the canyon as the solid it once was. This is the crucial step in perceiving Architecture of the Negative.

In terms of facility, most buildings communicate the majority of information within the structure, whereas in a library, the most prolonged operations performed by the user take place elsewhere - outside the building. Therefore, conditions must be created so that actions by the user are simple and unobstructed; the solution is to make space the generating form.

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3D CAD GENERATED TERRAIN

SCHEMATIC EXCAVATION MODEL

SCHEMATIC EXCAVATION MODEL

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The design process began by distinguishing between positive and negative space. I decided that space was going to be the form generator and the structure was going to be like a jacket surrounding the designed space. Initially, the design concept was intended to imitate the erosion of the earth. This erosion could take form through natural or primitive man-made methods. This method resulted in a cave-like design that, I believe, could have caused negative emotions related to being underground.

TO BE AND NOT TO BE

3D CAD GENERATED TERRAIN

SCHEMATIC EXCAVATION MODEL

SCHEMATIC EXCAVATION MODEL

SCHEMATICS:

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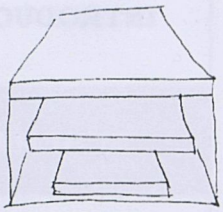
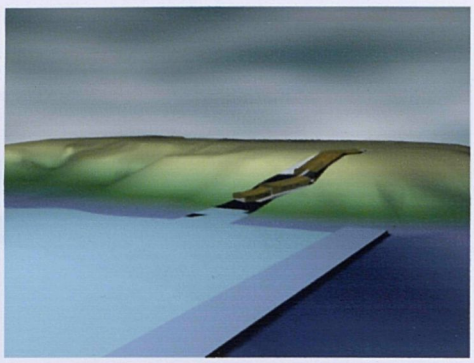
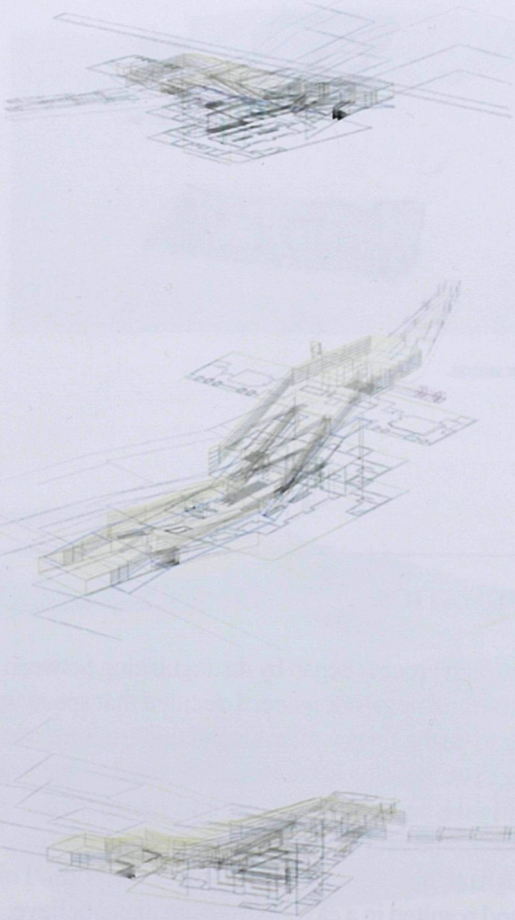


CONCEPT DIAGRAM



CONCEPT 2 - VIEW EAST



CONCEPT 2 - WIREFRAME

CONCEPT 2 - VIEW SOUTHEAST

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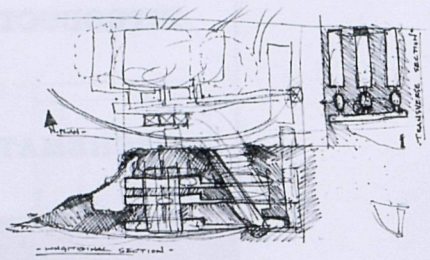
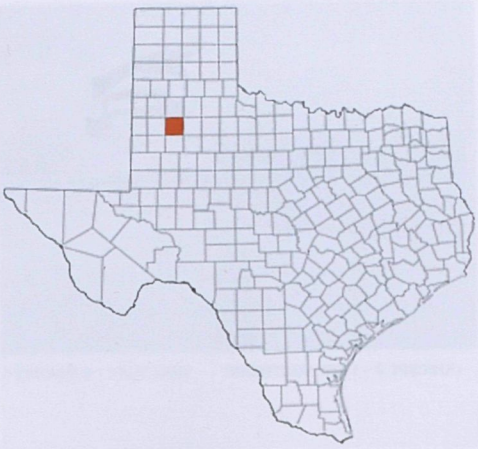
DEVELOPMENT:

Including my schematic design, three concepts were developed into built form. The schematic concept was the rock-hewn cave design that was abandoned due to a possibly negative association with underground space. The second design concept was based on a reversal of a fictitious void left behind by years of water erosion evident through three stages of time. When water flow was heavy (stage one), the eroded void was wider and deeper, stage two was less flow, and stage three was even less. The resulting form resembled an upside down three-tiered ziggurat. This concept was developed into 3D form, but not to the level of specific construction details. The concept was abandoned because it began to lose balance between positive and negative space. The negative space became so overwhelming that it assumed the role of positive and balance was lost. The third and final design demonstrated a successful balance between solid, void, volume, and structure.

TO BE AND NOT TO BE



EXCAVATION SKETCH



68. LUBBOCK COUNTY

FINAL DESIGN:

Conceptually, the final design creates an impression that the structure has always existed under the surface of the canyon walls, and the presence of man, coupled with the forces of nature, eventually revealed the building for what it is. This design exhibits Architecture of the Negative because it is designed through the removal of material from an already existing solid. The paths of circulation were carved into earth and paths of light were carved into the building materials. Not only were voids introduced in relation to nature, but also in relation to the man-made aspect of the project. Although it is an emerged structure, light is allowed to enter the interior - directly from the west and south, and indirectly from the east, due to an oversized light shaft that becomes a skylight for level (-3).

The Community Center for Ransom Canyon, Tx is essentially a Town Hall and Public Library. The Town Hall is located on level (-1), the main Civic level that contains the Mayor's office, staff office, a meeting room, and an assembly room. The Public Library is located on levels (-2), which contains the circulation desk, the electronic catalog, staff office, reserved section, reference section, and periodicals; and (-3), which houses the general collection, special collection, reading rooms, and storage.

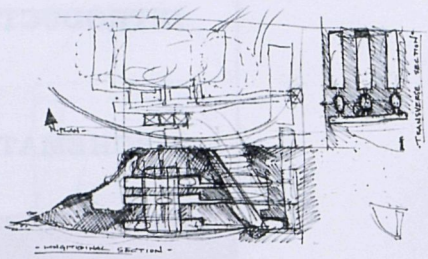
Upon approaching the structure from the north, on the lower road, visitors would see only the slope of the hill until they come

69. PROPOSED SITE

close enough to notice a concrete form emerging from the earth. The concrete members that make up the structure of the building create a skeleton-like jacket that surrounds and seems to protect a glass-enveloped rectangular volume. The form seems inaccessible except for a sloped, paved path that stretches into the hill. The sloped driveway penetrates the canyon wall and allows users to access the below ground car park from the lower road, which then connects to the upper road. Users can approach the building from either the below ground car park on the east or by travelling down a series of stairs that are carved into the canyon wall on the west. The entrance doors are accessed after traversing a bridge that parallels the sloped driveway.

The interior was designed to give the impression that space is a material substance that possesses a generating force. The concrete floors seem to float away from the perimeter columns, and the partition walls seem to float over the floors. This effect is achieved by creating voids where one would expect solids in the materials that are introduced throughout the design. The structural system is comprised of custom designed concrete members that illustrate a more dynamic form to emphasize the creative force of a void. The concrete members are combined with 24" square columns that support a one-way flat slab concrete floor. Attached to the perimeter columns, at floor level, is a steel connection that connects to the joists and provides a support for the concrete slab. The connection was designed to allow the floor slab to appear to be disconnected from its supporting column.

TO BE AND NOT TO BE



EXCAVATION SKETCH

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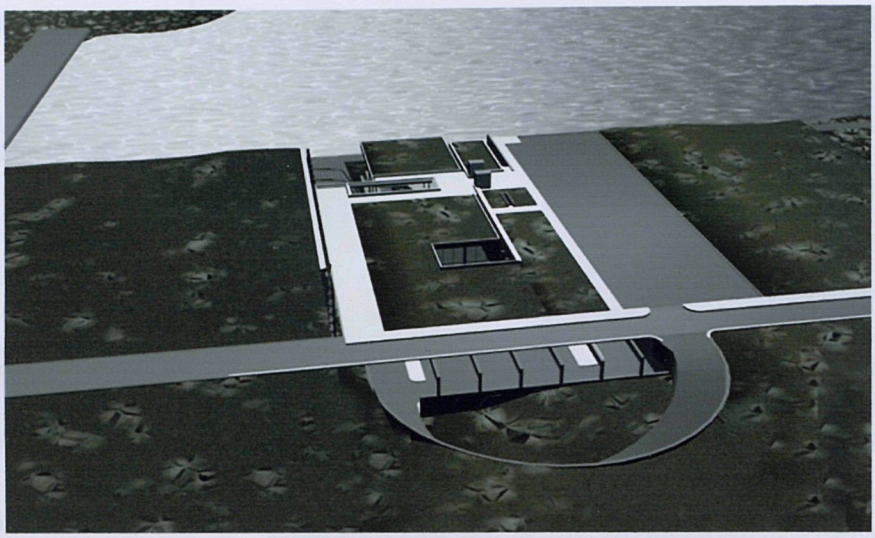
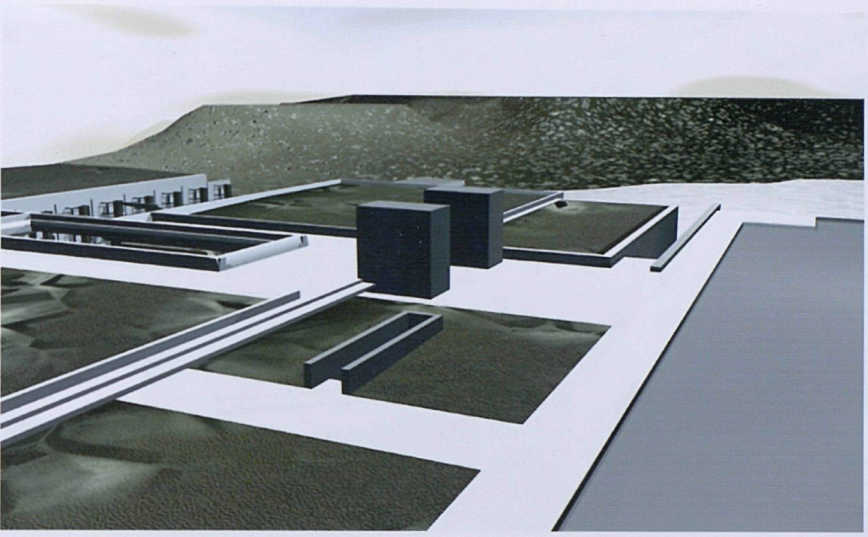
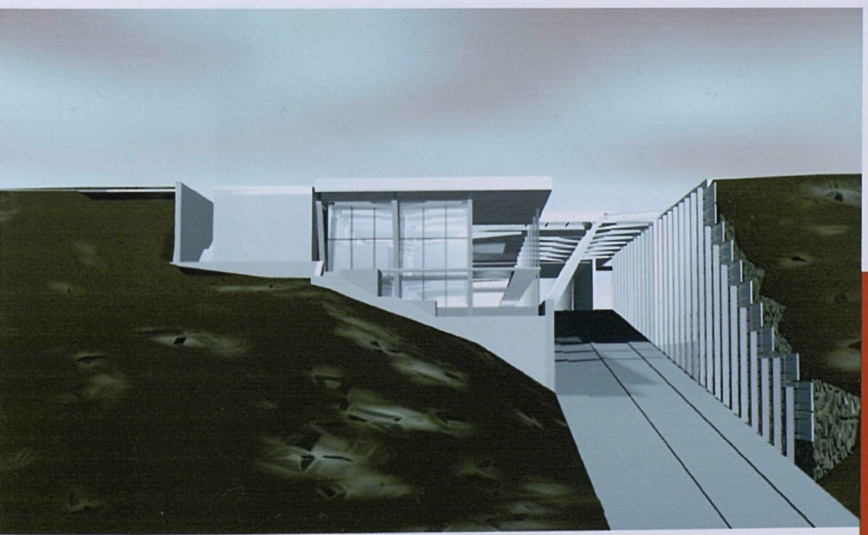


BIRD'S EYE VIEW WEST

VIEW NORTHEAST



VIEW WEST FROM PARKING LOT



EAST ELEVATION

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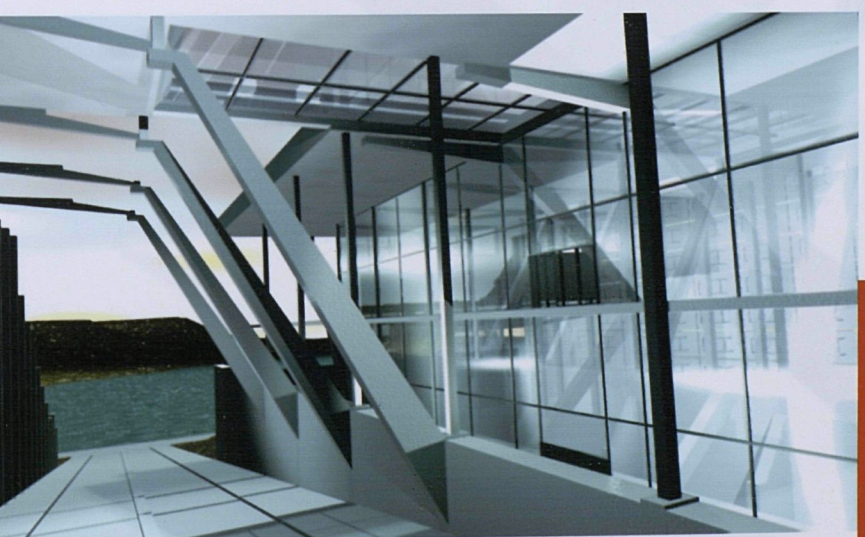
LEVEL (-1) ENTRY HALL

LEVEL (-3) GENERAL COLLECTION

EVEL (-2) REFERENCE SECTION



VIEW WEST FROM DRIVEWAY

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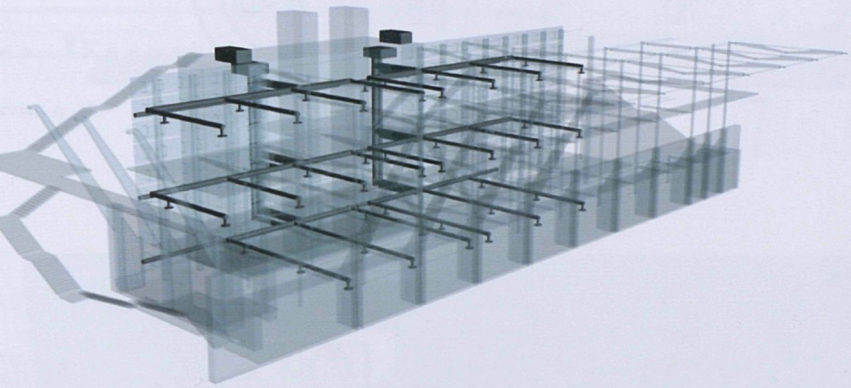
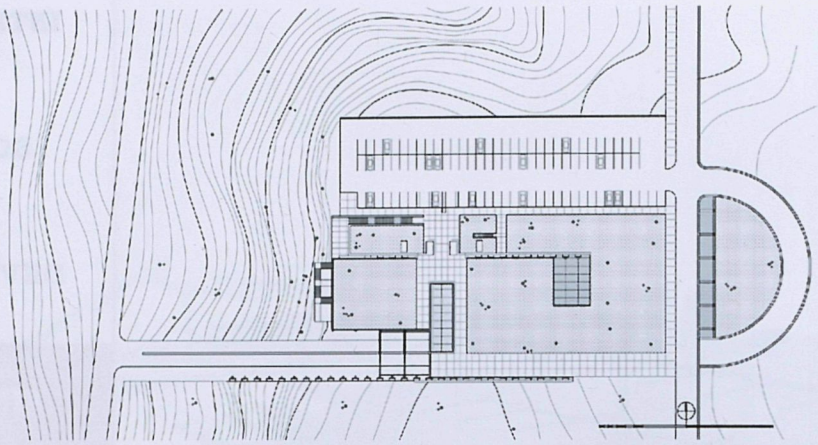


HANICAL SYSTEM

ICAL JOIST

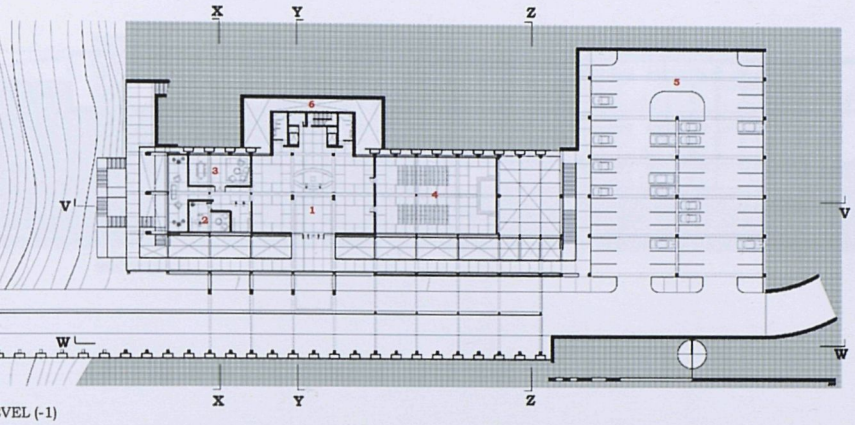
TYPICAL RETAINING COLUMN

TO BE AND NOT TO BE

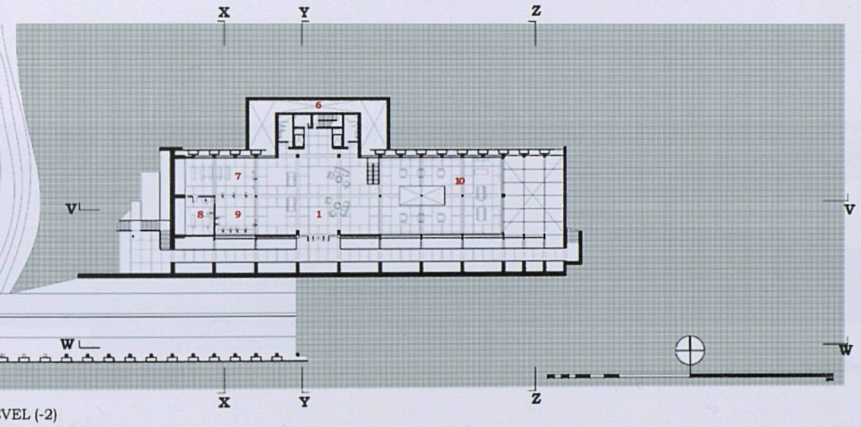


SITE PLAN

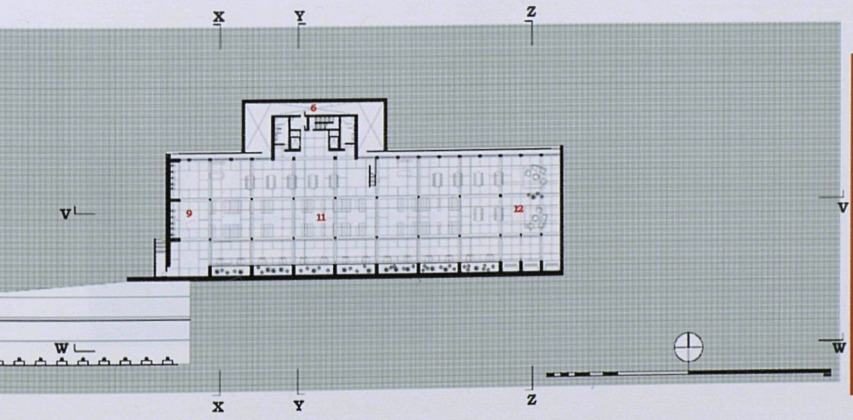
1	ENTRY
2	MAYOR
3	MEETING
4	ASSEMBLY
5	CAR PARK
6	MECHANICAL
7	CIRCULATION
8	OFFICE
9	CATALOG
10	REFERENCE
11	GENERAL COLLECTION
12	SUN ROOM



VEL (-1)



VEL (-2)



VEL (-3)

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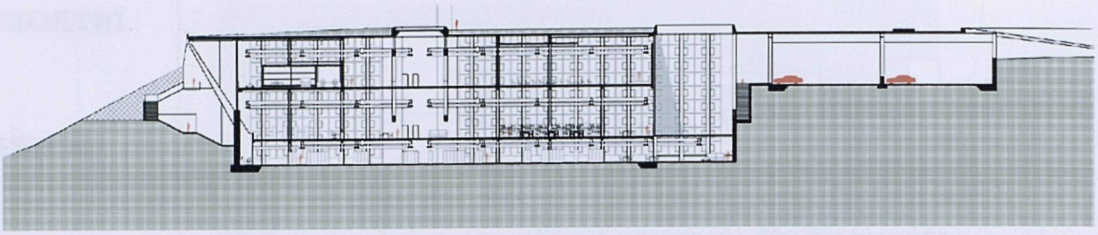
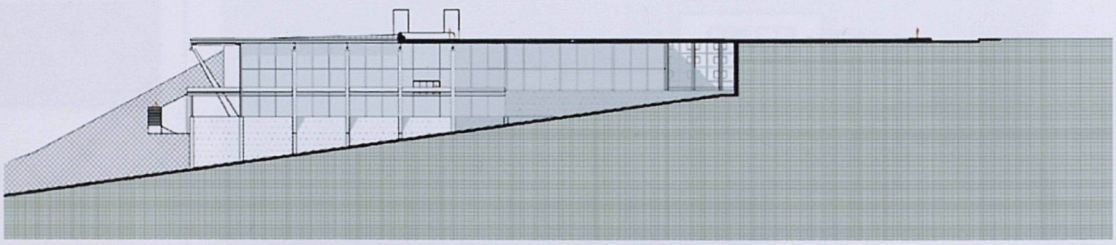
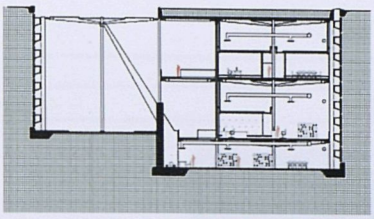


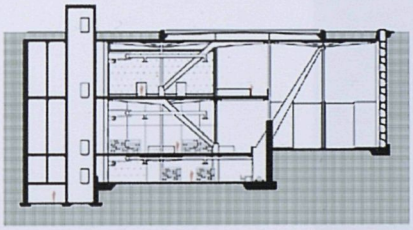
SECTION VV



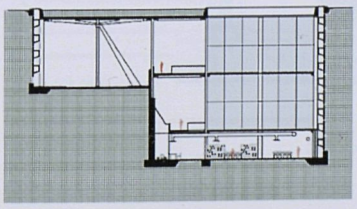
SOUTH SECTION ELEVATION WW



SECTION XX



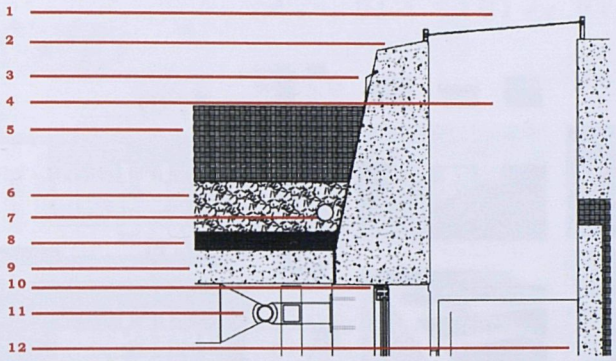
SECTION YY



SECTION ZZ

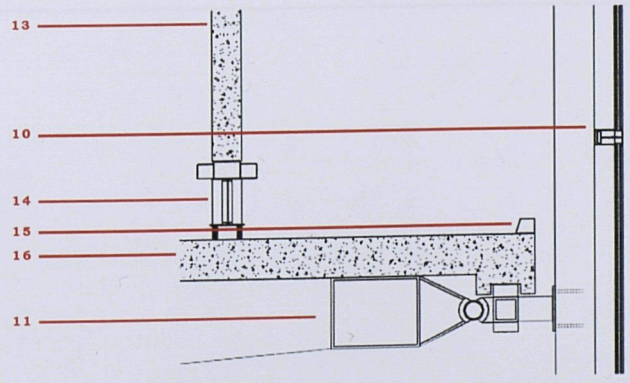
TO BE AND NOT TO BE

WALL SECTION U



DETAIL U/01

1	SKYLIGHT
2	CONCRETE PARARPET
3	FLASHING
4	2' AIR SPACE
5	EARTH
6	CRUSHED STONE
7	4" DRAIN PIPE
8	POLYSTYRENE FOAM
9	CONCRETE SLAB
10	ALUMINUM WINDOW UNIT
11	STEEL JOIST SYSTEM
12	RETAINING PANEL
13	CONCRETE PARTITION
14	STEEL WINDOW UNIT
15	ALUMINUM FLOOR TRIM
16	8" CONCRETE FLOOR SLAB



DETAIL U/02

FINAL PRESENTATION

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ILLUSTRATIONS:

1. Nippur www.01uchicago.edu
2. Petra www.acsamman.edu.jo
3. Atlantis www.spiritweb.org
4. Lemuria www.spiritweb.org
5. Galaxy Cluster origins.jpl.nasa.gov
6. Earth layers www.aqd.nps.gov
7. Sun, Moon, Earth www.primetimes2.com
8. Lalibela www.unesco.org
9. Planet and Sun
10. Earth www.msss.com

11, 12, 13, 14, 15, 16, 17 – Blur Project

18, 19, 20 – University Art Museum of California State

21, 22 – Ransom Canyon

23, 24, 25, 26, 27, 28, 29 – Bruno House

30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42 – Ransom Canyon

43. Library column capital www.library.eku.edu
44. Great room
45. Book Cupboard www.r-alston.co.uk
46. Reading room www.lib.washington.edu
47. Reading room
48. Computer station
49, 50, 51, 52, 53, 54, 55, 56 – Phoenix Central Library
57, 58, 59, 60, 61, 62, 63 – T House
64. Space Layout concept
65. Adjacency Diagram
66. The Duck-Rabbit
67. My Wife and Mother-in-Law
68. Texas and Red Lubbock County
69. Ransom Canyon Satellite Photo