The **LAST** Strong Hold

A Museum for Adobe Walls

by

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a thesis in architecture

Submitted to

the College of Architecture of

Texas Tech University

in partial fulfillment of

Master of Architecture

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Date
Acknowledgments

But as for you, be strong and do not give up, for your work will be rewarded.
II Chronicles 15:7

I would like to thank my parents, friends, professors, and everyone else who has pushed me along the way. These people kept me focused in one way or another and never let me get off track.

A special thanks to the people at the Panhandle Plains and Hutchinson County Museums for all the helpful research questions.
Table of Contents

Theory.............................................................................................................................................................. 1

Facility............................................................................................................................................................ 24

Context........................................................................................................................................................... 77

Design Process............................................................................................................................................... 98

Final Proposal.............................................................................................................................................. 108
Preface

In 1864, the U. S. Cavalry out of New Mexico marched down the Canadian River, into present day Hutchinson county, to wage war on the Kiowas in the area. Kit Carson's, leader of the attack, destination was a small abandoned fort known as Adobe Walls. This engagement came to be known as the first Battle of Adobe Walls.

Ten years later buffalo hunters began to frequent the area. A small community was built for the local buffalo hunters coming down from Kansas and it was still named Adobe Walls. The small community had all the amenities of a larger town.

In 1874, a large group of mostly Kiowas and Comanches, led by Quanah Parker, attacked the small community. The results were the same as the first Battle of Adobe Wall, the Native Americans had failed in making a devastating blow. The second Battle of Adobe Walls proved to be the beginning of the end for the Plains Indians. These battles paved the way for the Red River War and this proved to be the beginning of the end for the Plains Indians.

From the previous story I had decided that Hutchinson County needed a museum to commemorate the Native Americans that lived in the area.
Abstract

Theoretical Statement-
The architecture of museums, articulated through wayfinding principles, enhances the experience of the users by efficiently designing circulation and space.

Facility Statement-
To collect, preserve, exhibit and interpret the historical, and cultural heritage of the Native American tribes of the Texas Panhandle; to provide for the education, inspiration, and benefit of the people in the Texas Panhandle as well as those throughout the world with interest in the life, culture, and existence of the historical Plains Tribes of Texas.

Context Statement-
The facility will be located on the banks of the Canadian River in Hutchinson County, Texas. Hutchinson County lies in the Texas Panhandle, in West Texas.
Theory Section

Introduction..................................................................................................................2
- Introduction
- Research Question
- Thesis Statement
- Problem Statement

Theory.............................................................................................................................3
- Wayfinding
- Metaphor and Code
- Multivalent Architecture
- Sustainability

Issues.............................................................................................................................12
- Wayfinding
- Multivalence
- Sustainable Architecture

Precedents..................................................................................................................15
- High Art Museum
  - Richard Meier
- Sainsbury Wing/ National Gallery
  - Venturi, Scott Brown and Associates, Architects
- Guggenheim Museum
  - Frank O. Gehry

Endnotes.......................................................................................................................23
Introduction

Traditionally museums were designed in such a way that patrons could only go through them one way. This process allowed the museum visitors to see all of the exhibits and journey through the museum with only one path to chose.

Contemporary times have changed the way museums are configured. Today museums are designed so that patrons can choose which exhibits they want to view.

However, this can be a challenging task in museums. Museums usually have many different exhibit halls with different circulation patterns that come from previous rooms. This can make museums, especially larger ones, seem like a maze of corridors and spaces.

Wayfinding in museum design should help visitors on their journey through the museum with no frustration. With the use of wayfinding principles the museum should be a safe, frustration-free, and stress free building. Decision making in a museum should be a meaningless task and not something that takes away from the experience that patrons have in a museum.

Contemporary museum design should let the patrons choose the exhibit they want to see or allow them to view the events of the museum chronologically for a better understanding of what the museum is about.

Thesis Statement
The architecture of museums, articulated through wayfinding principles enhances the experience of the users by efficiently designing circulation and space.

Research Question
Can contemporary museum designs allow a design that lets a patron choose the exhibits they see and at the same time allow for others to walk through the building in a historical event progression?

Problem Statement
Can wayfinding aid museum design by creating circulation paths that are safe, frustration free, and stress free?

Architecture should not resemble mazes. Architecture should respond to the concepts of simple navigation through wayfing principles. Many patrons are turned off from buildings when they begin to feel stress from being lost or unable to find what they are looking for.
Wayfinding

Wayfinding is the term introduced to describe the process of reaching a destination, whether in a familiar or unfamiliar environment. It refers to the ways in which people orient themselves in physical space and navigate from place to place.

In modern times, wayfinding is used in the context of architecture to refer to the user experience of orientation and choosing a path within the built environment, and it also refers to the set of architectural and design elements that aids orientation.

Spatial Orientation

To describe spatial orientation, or to use the more appropriate term "wayfinding," as spatial problem solving is to subsume a number of cognitive abilities responsible for information processing, decision making, and also for the transformation of decisions into behavioral actions. Anyone of these cognitive abilities might be crucial to success or failure in reaching a destination. Compared to the more traditional static view of spatial orientation, spatial problem solving is more apt to describe the dynamics involved when people find their way. A person's ability to comprehend the surrounding environment and his position in it becomes only part of a much larger field of interest.

A wayfinding task is completed when the person concerned reaches a desired destination. The solution to the wayfinding problem posed by the task is the sequence of behavioral actions leading from origin to destination.

Basic Wayfinding Task

I. Learning a new route.
II. Returning to the point of origin (retracing steps).
III. Linking known routes to new configurations.
IV. Learning a route from a small display and making a journey.
V. Pointing to the directions of locations visited on a journey.
VI. Learning a route from a non-aligned display.
VII. Understanding the overall layout of a visited setting.

Wayfinding is composed of three specific but interrelated processes:

I. Decision making and the development of a plan of action.
II. Decision execution, which transforms the plan into appropriate behavior at the right place in space.
III. Information processing understood in its generic sense as compromising environmental perception and cognition, which, in turn, are responsible for the information basis of the two decision-related processes.
Wayfinding is problem solving. Making a journey and reaching a destination are wayfinding goals. Attaining these goals requires action and behavior. If you have a journey that you are taking for the first time, you will be confronted with many problems. In this journey you will need a plan of action.

All the decisions for solving a wayfinding problem are not just floating around in your brain. Decisions are related to each other; they are order. For example, when you brush your teeth you will need to make some very specific decisions: get toothbrush, get toothpaste, put toothpaste on toothbrush, put toothbrush in mouth, and move toothbrush back and forth. Not only do you have to make these decisions, you have to execute them in a certain order.

A decision plan not only contains the relevant decisions, but it reflects the logic that links the decisions to the problem. The same logic is used in wayfinding decisions.

Wayfinding is also continuous problem solving. The problem of reaching an unfamiliar destination can normally not be solved in all its details before engaging on a journey. Even with the best intentions, the wayfinder cannot develop a detailed decision plan simply because all the required information is not necessarily available. It is only when a person is provided with all the information in the actual setting that the decision plan can be completely formulated.

Wayfinding is problem solving under uncertainty. Adequate information is not always available, and what information there is, is often unclear and ambiguous. Wayfinding must cope with uncertainty by keeping problem solving flexible.

Wayfinding is spatial problem solving. The information used to make wayfinding decisions is, at least in part, of a spatial nature. It involves a certain understanding and manipulation of space. It involves a certain ability to cognitively map spaces that cannot be perceived from one vantage point alone.

Does it make sense to talk about wayfinding for familiar journeys as well, and should we still be thinking in terms of problem solving?

A familiar journey can be seen as an ensemble of actions or behavior leading from a point of origin to a destination. To take a familiar route is nothing other than the execution of an already reordered decision plan and is therefore also a part of wayfinding and problem solving. The only difference is that the emphasis has shifted from decision making to decision execution.

Cognitive Mapping-
A process composed of a series of psychological transformations by which an individual acquires, codes, stores, recalls, and decodes information about the relative locations and attributes of phenomena in their everyday spatial environment.
Wayfinding
Spatial Problem Solving

Spatial Planning (83)

The difficulty of a wayfinding task is affected by two major physical factors: the layout of the setting and the quality of the environmental communication. The layout is defined by its spatial content, its FORM, its ORGANIZATION, and its CIRCULATION. Environmental communication includes all of the architectural, audible, and graphic expressions that provide the essential information for wayfinding.13

Principles in spatial planning include: establishing a sense of place, group large spaces into distinct smaller ones, providing directional cues, each location should have its own identity, have different regions of visual and textual character.14

Phases of Spatial Planning 15

I. Identification of the constituent spatial units.
II. Grouping of spatial units into destination zones.
   a. The need for human contact or privacy.
   b. The necessity for information exchange.
   c. The sharing of certain services.
III. Organization and linkage of units and zones.
   a. Types of linkage: linear, centralized, composite, and networks of circulation.

Decision planning is the experience that a person goes through in reaching a destination. This diagram is similar to the process of brushing your teeth. The diagram to the left shows how a person would go through a building and get to their destination.

Practical Considerations for Circulation 16

I. The main circulation between the entrances or exits of a setting and the major destination zones.
II. The circulation from one major destination zone to another.
III. The circulation within a major destination zone.
Metaphors and Codes

Codes

A code is a system of symbols, letters, or words given certain arbitrary meanings. In architecture the codes are used in the design of a building and we interpret them the same way we would interpret any other types of codes. For example, we use shipping containers to build an apartment building and make it appear to be a birdcage. However, someone else could say it appears to be a group of sugar cubes. On one hand we have the “bird- cage” and on the other the “sugar cubes.” Codes are important because architects use them in developing and interpreting ideas.

Metaphors

A metaphor is a rhetorical trope (figure of speech) defined as a direct comparison between two or more seemingly unrelated subjects. Metaphor and simile are both terms that describe a comparison: the only difference between a metaphor and a simile is that a simile makes the comparison clear by using "like" or "as." For example, “the girl is a dog” is a metaphor, but a simile would be “the girl is like a dog.” The first example is comparing two unrelated objects, but the second example is making the comparison clear using “like” or “as.”
Metaphors and Codes

Metaphor vs. Cliché

Clichés are not to be confused with metaphors. A cliché is a trite or overused expression or idea.\(^{29}\) Let us look at an example from the 1950’s. People invariably see one building in terms of another, or in terms of a similar object; in short, as a metaphor.\(^{31}\) The more unfamiliar a building is, the more they will compare it metaphorically to what they know. This matching of one experience to another is a property of all thought, particularly that which is creative. Thus, when precast concrete grilles were first used on buildings in the late fifties, they were seen as “cheese-graters,” “beehives,” “chain-link fences,” while ten years later, when these forms became a norm in a certain building types, they were seen in functional terms: “this looks like a parking garage.” From metaphor to cliché, from neologism (new word, expression, or usage) through constant usage to architectural sign, this is the continual route traveled by new and successful forms and techniques.\(^{32}\) Therefore, an overuse of metaphors can lead to clichés. If these metaphors turn into clichés the whole idea of designing in code is lost. Thus, the stereotypical garage emerges with its cheese-grater style.
Regional Code

Kisho Kurikawa, a Japanese architect, built the Nakagin Capsule Building (1972) in Tokyo. The building is made from stacked shipping containers which had a most unusual overall shape. They look like stacked sugar cubes, or even more, like superimposed washing machines, because the white cubes all had round windows in their center. The containers are not meant to look like washing machines, which would have been an unfortunate overtone for living, but Kurikawa had another interpretation of the building. In Japan, they build concrete-box bird nests with round holes and place them in trees. Thus, these “bird nests” are built for itinerant businessmen who visit Tokyo. Therefore, we see a difference in the interpretation of the metaphor.

From the example of the “bird nests,” we see how codes can be interpreted differently from one region to another. The basic point is that codes of perception underlie the way we see architecture and value it. A famous illustration, the duck-rabbit figure, gives an excellent example of perception. The illustration shows both a rabbit and a duck, depending on which way you look at it. One view may predominate, according to either the strength of the code or according to the direction from which we see the figure first. The general point is that code restrictions based on personal learning and background culture guides a reading of architecture.
Regional Code

Sydney Opera House

One building that is an example of regional coding is Jorn Utzon’s Sydney Opera House (1974). The building is yet another example of regional coding because of its metaphors issued by the highly controversial roof. This building provoked an abundance of metaphorical response because the forms are both unfamiliar to architecture and reminiscent of other visual objects. When this building was designed the press was amazed, enthusiastic, indignant, and mocking of it. The project garnered a range of opinions and metaphors. The metaphors issued forth were that it was a yacht, a team of copulating turtles, a bloody crocodile, and a huddle of Danish porcelain salt-shakers. Some other critics say that the superimposed shells resemble the growth of a flower over time. Local context guides the reading, and limits the metaphor to travel along certain routes. A witty building is one which permits us to make extraordinary, but convincing associations. Although the opera house was an extremely controversial project, the future showed that it has risen to the point of international recognition and a national symbol for Australia, with a certain amount of wittiness.

“Wit” has been defined as “the unlikely copulation of ideas together,” and the more unlikely but successful the union, the more it will strike the viewer and stay in his mind. A witty building is one which permits us to make extraordinary, but convincing associations.
Multivalent Architecture

The direction that many architects, in the beginning of Post Modernism, were moving towards was a pluralistic language which incorporates traditional and modern elements, vernacular, and high art meanings. These architects were not concerned with the way buildings communicate one way or another, but with their underlying pluralism.

If pluralism is going to amount to anything it will really have to become more tough-minded. The architect will have to be trained in four or five styles and trained as an anthropologist, or at least a good journalist, to learn and be able to use the particular architectural codes that prevail among the subcultures that persist in any large city. He will have to learn the particular metaphors and symbolic signs which have a short-lived potency, and the slow-changing traditional signs, and use all of these in wit and precision. This was not going to be an easy thing to do because the other part of his training, in the new technologies and abstract methodologies of planning, will inevitably remove him, as they have done in the past, from the users of his buildings. He will build for multinational and large corporations and indefinable clients; he will still love the manipulation of pure form and the high game of Architects’ Architecture. All these forces will alienate him from the people who ultimately use his buildings and there is little hope of changing these forces.

A multivalent architecture, opposed to a univalent building, combines meanings imaginatively so that they fuse and modify each other. A multivalent architecture, like the inclusive building, makes use of the full arsenal of communicational means, leaving out no area of experience, and suppressing no particular code.

Casa Batllo
Antonio Gaudi
Catalonia, Spain (1907)

Death Mask View
Symbolically, Gaudi’s work followed the local Christian and social meanings existing in Barcelona at the time. Gaudi was not intimidated by vulgarity, he would write various slogans across the tops of his buildings.

Dragon’s Tail View
The Casa Batlló represents this struggle in its metaphors: the dragon or “Spain” is being slain by that three-dimensional cross (the tail hanging off the roof) wielded by Barcelona’s patron saint, St. George. The bones and skulls refer to the dead martyrs who have been victimized in the struggle. This is coded with enough subtlety to be apparent only to those who care to read it in depth.
## Sustainability

Sustainable Architecture— is an approach to architectural design that emphasizes the place of buildings within both local ecosystems and the global environment. Sustainable architecture tries to minimize the negative environmental impact of buildings by enhancing efficiency and moderation in the use of materials, energy, and development space.²⁹

### Overview of Sustainability

**Optimize Site Potential**³⁰

Creating sustainable buildings starts with proper site selection. The location, orientation, and landscaping of a building affect the local ecosystems, transportation methods, and energy use. Siting for physical security has become a critical issue in optimizing site design. The location of access roads, parking, vehicle barriers, and perimeter lighting must be integrated into the design along with sustainable site considerations. Site design for security cannot be an afterthought. Along with site design for sustainability, it must be addressed in the preliminary design phase to achieve a successful project.

**Optimize Energy Use**³¹

With America’s supply of fossil fuel dwindling, concerns for energy security increasing, and the impact of greenhouse gases on world climate rising, it is essential to find ways to reduce load, increase efficiency, and utilize renewable energy resources in federal facilities.

**Protect and Conserve Water**³²

In many parts of the country, fresh water is an increasingly scarce resource. A sustainable building should reduce, control, or treat site-runoff, use water efficiently, and reuse or recycle water for on-site use when feasible.

“Most simply, the idea of sustainability, or ecological design, is to ensure that our actions and decisions today do not inhibit the opportunities of future generations.”

Doerr Architecture³⁶

### Use Environmentally Preferable Products³³

A sustainable building should be constructed of materials that minimize life-cycle environmental impacts such as global warming, resource depletion, and human toxicity. These environmentally preferable materials are defined by “products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.”

As such, they contribute to improved worker safety and health, reduced liabilities, reduced disposal costs, and achievement of environmental goals.

**Enhance Indoor Environmental Quality**³⁴

The indoor environmental quality of a building has a significant impact on occupant health, comfort, and productivity. Among other attributes, a sustainable building should maximize day lighting; have appropriate ventilation and moisture control; and avoid the use of materials with high-VOC emissions. Additional consideration must now be given to ventilation and filtration to mitigate chemical, biological, and radiological attack.

**Optimize Operational and Maintenance Practices**³⁵

Designers are encouraged to specify materials and systems that simplify and reduce maintenance requirements; require less water, energy, and toxic chemicals and cleaners to maintain; and are cost-effective and reduce life-cycle costs.
Issues

1. Wayfinding A common problem of many large buildings today is that people that are unfamiliar with the buildings tend to get lost or confused by the layout. This problem causes stress and frustration on visitors that are new to the building. It is through the ideas of wayfinding (spatial problem solving) that designers can form more efficient configurations. The three considerations for an efficient wayfinding design are form, space, and circulation. It is through these three considerations that decision making is made simple when taking a journey through a building.

Performance Requirement 1
The design should focus on the form, space, and circulation while maintaining an efficient organization of the spaces.

Performance Requirement 2
Movement through the building should have good environmental communication by controlling what the patrons perceive (light, materials, landmarks within building, etc.) in each space.

Performance Requirement 3
Stress, frustration, and safety should be addressed by the configuration and accessibility of each zone in the building.

Goal
The design should make decision making and processing a simple task when beginning a journey through the buildings.

In the past museums were designed in a way that people would progress through a museum. In this kind of scheme there is only one way to go through the building. Therefore, in a museum, people were forced to look at all exhibits instead of ones that were of interest to them. With this type of configuration wayfinding was not an issue because everyone was funneled through one area.

Present contemporary museum designs lets patrons choose which area they want to go to or they can take the “time line” route. For this type of configuration wayfinding ideas become more apparent. The use of a spatial organization and circulation are important in this configuration.
Issues

2. Multivalence A metaphor can turn architecture from a building to an expression from a region. The use of codes in architecture should educate and describe certain aspects of a region, the history of a region, and/or problems that the region has gone through. These metaphors and codes should provide a sense of understanding for the region and be relevant to people unfamiliar with the region.

Performance Requirement 1
Certain elements should trigger emotions about the history of the site (forms, views, paths, etc.) these elements will be in the built and natural environment.

Performance Requirement 2
The placement of the building should articulate the way of life from the region.

Performance Requirement 3
Metaphors should not be apparent from just one glance of the building. The design should be heavily coded for a mixture of opinions about the meaning behind the design.

Goal
The design should express the history of the site through the use of metaphors and codes from a regional point of view.
Issues

3. Sustainable Design In today’s society fossil fuels are dwindling, there are concerns for energy supply, and the impact of greenhouse gases on the world climate are rising. It is essential to find ways to reduce load, increase efficiency, and utilize renewable fuel resources in federal facilities.

Performance Requirement 1
The uses of energy in this building should be as efficient as possible. The site is in a remote location so energy is not readily available.

Performance Requirement 2
The building should be constructed of materials that minimize life-cycle environmental impacts like: global warming, resource depletion, and human toxicity.

Performance Requirement 3
The health and safety of employees and visitors should be comfortable and productive.

Goal
The design should have efficient energy use, materials that have a long life, and promote healthy indoor life.

[Diagram of sustainable design components: Air Intake, Rain Catcher, Heat/Cold Exchanger, Light and Rain Catcher]
Precedents

High Museum of Art (1980)
Richard Meier
Atlanta, Georgia

Program

The High Museum of Art is a 130,000 sq. ft. museum with 52,000 sq. ft. of gallery space for permanent collections and temporary exhibitions. The galleries are organized in six levels so that the museum can accommodate any size loan exhibition. There is a 200-seat auditorium, a museum shop, a café, administrative, storage, educational workshops, classrooms, and support facilities.

Nature of Collection

The collection, multifarious and growing, ranges from early American and French decorative arts to contemporary painting and sculpture. It contains fine works from many periods, including the Renaissance, Baroque, and Rococo. The core of the collection is American paintings, especially those of Copley, Peale, Inness, Sargent, Hartley, and Marin. There are important holdings of prints, photographs, American furniture, silver, and glass, French and oriental ceramics, and African art. It is the largest publicly owned collection in the Southeast.

Structure and Materials

The structure of the building is a structural frame and slabs of reinforced concrete. On the exterior, a granite base, which encloses the support facilities, forms a datum for the porcelain-enamed steel panels above. Interior wall and ceiling surfaces: painted gypsum wallboard with a plywood backup in exhibition areas. Flooring: granites on the main level, wood on the upper floors.

Lighting

A large skylight over the atrium and seven pyramidal skylights over upper-level exhibition area bring controlled natural light into the movement spaces. Daylight enters the galleries from the atrium and a few exterior windows. The general and specific levels of illumination in exhibition areas are maintained by artificial means, a combination of recessed and track spot fixtures.

Circulation

The semicircular interior ramp connects all level and permits large numbers of visitors to circulate.
Precedents

High Museum of Art (1980)
Richard Meier
Atlanta, Georgia
Precedents

Sainsbury Wing/ National Gallery (1991)
Venturi, Scott Brown, and Associates
London England

Design

By means of a suspended walkway, the wing is connected to and reflects the original National Gallery building, designed by William Wilkins in 1838, while maintaining its own identity as a work of contemporary architecture. It is faced with the same Portland limestone and observes the cornice height of the original.

Elements of the Wilkins façade are replicated on the new building, but used in innovative and unexpected ways alongside contrasting features for small metal columns to create a new rhythm and harmony.

Features of the new wing include the following:

- A new ground level entrance, providing at-grade access to the entire combined National Gallery. This entrance is handicapped accessible, an important program consideration as museums reach to growing and diverse audiences.

- A grand processional stair, visible through a large glass wall that overlooks the Wilkins building and Trafalgar Square. The stair leads from the lobby to third floor permanent galleries displaying the Early Renaissance collection.

- Sixteen gallery rooms arranged in three parallel rows on the same level as the floors of the original National Gallery.

The sequence of old and new galleries create an enfilade – the French system of aligning internal doors so that a vista is obtained through a series of rooms when all the doors are open.

Lighting

The galleries are laid out in a gently implied hierarchy of small, medium, and large rooms, each lit by a delicately balanced and automatically controlled combination of natural and artificial light.

Clerestories with an elaborate system of sensor-operated louvers, allow filtered natural light into each
Precedents

High Museum of Art (1980)
Richard Meier
Atlanta, Georgia

gallery space for optimal viewing conditions and energy efficiency. Through the clerestories, one is also made aware of the changing light outside.

The gallery ceiling lunettes, covers, and lanterns recall Sir John Soane's Dulwich College Picture Gallery.

This basic arrangement, a sequence of connected rooms, top-lit to leave large areas of blank wall for the display of pictures, has become a model followed by many art gallery architects.

Wayfinding

Some galleries contain windows that overlook other interior spaces or offer glimpses of the outside, offering light and helping visitors orient themselves within the building.

A grand processional stair and public elevators combine to provide visual access to galleries and public facilities such as:
- Conference rooms
- A restaurant
- A 350 seat lecture theater
- An enlarged museum book/gift shop
- An interactive information center.
Background and Program

In the last two decades, with the decline of the shipbuilding, steel, and iron refining industries, Bilbao elected to emphasize culture in its efforts to attract new businesses and create a tourist industry. The museum is a major element of a comprehensive urban redevelopment program and architectural renaissance. Because of its location in an industrial corridor, it provides the focus for numerous other large-scale improvements that are transforming the city. Plans for a new cultural institution for Bilbao date back to the late 1980s, when the Basque administration began formulating a redevelopment program for the city. A museum of modern and contemporary art was conceived to be an essential part of this plan.

In 1991, Basque officials approached the Solomon R. Guggenheim Foundation to propose that it participate in Bilbao’s redevelopment program. A preliminary agreement was reached that year, leading to the establishment of the Guggenheim Museum Bilbao Foundation to manage the new institution. The Basque administration brings to the relationship its political and cultural authority, land, and financial resources for both capital improvements and total operating support. The Solomon R. Guggenheim Foundation provides the core collection for the new museum and offers curatorial and management expertise as well as programming.

Site

The 301,000 sq. ft. Guggenheim Museum Bilbao creates a dramatic and highly visible landmark for Bilbao. It stands on an irregularly shaped site that marks the center of a cultural triangle formed by the Museo de Belles Artes, the Universidad de Deusto, and the Old Town Hall.

A water garden surrounds the building, linking the site with the river and promenade. The auditorium, restaurant, and book/gift shop are accessible from the main plaza well as from within the museum, enabling them to operate independently of the museum’s hours and to support the urban life of Bilbao.
Precedents

Guggenheim Museum (1997)
Frank O. Gehry
Bilbao, Spain

Design and Materials

The museum is composed of interconnected building blocks, clad in limestone, which house exhibition spaces and public facilities. These are:

- Galleries 113,520 Sq. Ft.
- Public Spaces 26,900 Sq. Ft.
- Library 2,150 Sq. Ft.
- Auditorium (350 seats) 6,500 Sq. Ft.
- Administrative office 12,900 Sq. Ft.
- Retail/Bookshop 4,000 Sq. Ft.
- Restaurant 5,000 Sq. Ft.
- Café 2,600 Sq. Ft.

Individual building components are unified into a single architectural composition by the Guggenheim Museum Bilbao's signature roof, a composition of twisting, curving, and jutting forms made of titanium a metal rarely used in construction, but suited to the saltwater marine environment of Bilbao.

The central feature of Gehry's design is a 165-ft-high atrium, more than one and a half times the height of the rotunda of Frank Lloyd Wright's building in New York. Flooded with light from glazed openings in the roof, the atrium is served by two glass enclosed elevators and curvilinear pedestrian catwalks that connect with two stairways, providing views of exterior.

Galleries

Three levels of galleries are organized around the central atrium. Included are those designed for the presentation of large-scale works of art and site-specific installations that could not be mounted in more conventional museums.

Lighting

Natural light enters galleries through skylights with adjustable blinds whose spectrum-controlled glass limits the penetration of ultraviolet light. Galleries are artificially illuminated by a lighting system mounted on exposed catwalks suspended from the ceiling.
Precedents

Guggenheim Museum (1997)
Frank O. Gehry
Bilbao, Spain

Bilbao linked together opposite functions and meanings into a multivalent blend and, in particular, its provocative shapes called forth a series of metaphors. Critics spontaneously called it, among other things, an explosion of light, a ship hitting the rocks or a collision in a harbor, a star burst of energy, unstoppable white lava, overlapping waves, fish thrashing, a constuc-tivist artichoke, and a shiny sequined swimmer about to come out of her bathing suit. Metaphors are carrying over from one idea to another, a metamorphosis of categories and it is this ability to be both suggestive and elusive.
Precedents

Guggenheim Museum (1997)
Frank O. Gehry
Bilbao, Spain
Endnotes

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Facility Section

Introduction.................................................................25
  -Introduction
  -Facility Type
  -Facility History
  -Mission Statement

Facility Issues.............................................................28
  -Circulation
  -Education
  -Security
  -Lighting
  -Mechanical Systems
  -Fire Protection and Security

Space Requirements....................................................34
  -Spatial Analysis
  -Spatial Summary
    -Public
    -Private

Precedents......................................................................68
  -The Rock and Roll Hall of Fame and Museum
    -I. M. Pei
  -U. S. Holocaust Memorial Museum
    -James Ingo Freed
  -Route 66 Museum (Oklahoma)
    -Rand Elliot

Endnotes...........................................................................76
Introduction

Museums collect and care for objects of scientific, artistic, or historical importance and make them available for public viewing through exhibits that may be permanent or temporary. Most museums offer programs and activities for a range of audiences, including adults, children, and families, as well as those for more specific professions. Programs for the public may consist of lectures or tutorials by the museum faculty or field experts, films, musical or dance performances, and technology demonstrations. Some times, museums concentrate on the local region's culture.

Modern trends in museums have broadened the range of subject matter and introduced many interactive exhibits, which give the public the opportunity to make choices and engage in activities that may vary the experience from person to person. With the advent of the internet, there are growing numbers of virtual exhibits, i.e. web versions of exhibits showing images and playing recorded sound.

Museums are usually open to the general public, sometimes charging an admission fee. Some museums have free entrance, either permanently or on special days of the year.

Museums are usually not run for the purpose of making a profit. There are governmental museums, non-governmental or non-profit museums, and privately owned or family museums.

History Museums

History museums cover the knowledge of history and its relevance to the present and future. Some cover specialized aspects of history or a particular locality; others are more general. Such museums contain a wide range of objects, including documents, artifacts of all kinds, art, archaeological objects. Antiquities museums specialize in more archaeological findings.

A common type of history museum is a historic house. A historic house may be a building of special architectural interest, the birthplace or home of a famous person, or a house with an interesting history. Historic sites can also become museums, particularly those that mark significant occurrences.

Another type of history museum is a living museum. A living museum is where people recreate a time period to the fullest extent, including buildings, clothes and language.

Natural History Museums

Museums of natural history and natural science typically exhibit work of the natural world. The focus lies on nature and culture. Exhibitions may educate the masses about dinosaurs, ancient history, and anthropology. Evolution, environmental issues, and diversity are major areas in natural science museums.

Museum Ethics

I. Museums preserve, interpret and promote aspects of the natural and cultural inheritance of humanity.
II. Museums that maintain collections hold them in trust for the benefit of society and its development.
III. Museums hold primary evidence for establishing and furthering knowledge.
IV. Museums provide opportunities for the appreciation, enjoyment, understanding and management of the natural and cultural heritage.
V. Museums hold resources that provide opportunities for other public services and benefits.
VI. Museums work in close collaboration with the communities from which their collections originate as well as those they serve.
VII. Museums operate in a legal manner.
VIII. Museums operate in a professional manner.
Facility History

Public Museums

Early museums began as the private collections of wealthy individuals, families or institutions of art and rare or curious natural objects and artifacts. These were often displayed in so-called wonder rooms or cabinets of curiosities.

The first public museums in the world opened in Europe during the 18th century’s Age of Enlightenment:
- Museo Sacro, (Rome 1756)
- British Museum in London, (1759)
- Uffizi Gallery (Florence 1765)
- Belvedere Palace of the Habsburg Monarchs (1781)

These public museums were generally inaccessible to all but the aristocracy. It was extremely difficult to gain entrance. In London for example, prospective visitors to the British Museum had to apply in writing for admission. Even by 1800 it was possible to have to wait two weeks for an admission ticket. Visitors in small groups were limited to stays of two hours.

The first truly public museum was the Louvre Museum in Paris, opened in 1793 during the French Revolution, which enabled for the first time in history free access to the former French royal collections for people of all status. The fabulous art treasures collected by the French monarchy over centuries were accessible to the public. The National Museum of Arts's Conservatory was charged with organizing the Louvre as a national public museum and the centerpiece of a planned national museum system.

“Museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artefacts and specimens, which they hold in trust for society.” [1]
Mission Statement

To collect, preserve, exhibit and interpret the historical, and cultural heritage of the Native American tribes of the Texas Panhandle; to provide for the education, inspiration and benefit of the people in the Texas Panhandle as well as those throughout the world with interest in the life, culture, and existence of the historical Plains Tribes of Texas.

Major Themes and Research:
- supporting research and information that will provide understanding about the presence of the buffalo, horses, buffalo hunters, and the Comanche and Kiowa nations in the Canadian River Valley.
- the importance of the wars that occurred in present day Hutchinson County, Texas.
- the museum will illustrate almost twenty years of change that occurred in the Texas Panhandle.
### Issue

1. **Circulation** Articulation of circulation through a design is critical. Purposeful design of circulation can make a structure more understandable, which allows the users to easily go through the building. Also, carefully choreographing the circulation can give the designer some control over how the users experience the architecture. This allows the designer to create drama, anticipation and revelation in space.

**Goal**
The circulation through the museum should engage and lead the patrons, creating an interest in the culture of Native Americans and an interest in the building.

**Performance Requirement 1**
Use of different floor materials and creating a defined path.

**Performance Requirement 2**
Uses of light to create areas of interest to the museum patrons.

**Performance Requirement 3**
Create points of interest in the building to lead to next exhibits.
Issues

2. Educate  The primary function of a museum is to educate and enlighten the public about history, art, and science. The facility seeks to educate patrons about the life and culture of the Native Americans that lived in the Texas Panhandle.

Goal
The museum exhibits as well as the design of the building should educate patrons about the life and culture of Native Americans.

Performance Requirement 1
Native American culture will be expressed through distinct forms used in the design.

Performance Requirement 2
Abstract forms will also be used for key view points within the building.

Performance Requirement 3
Space should resemble the struggles the Native Americans in this area faced in the 1860’s and 18070’s.
Issues

3. Security  One function that is should be taken with great significance in a museum facility is the security of the building. The security of the building should be as sophisticated as possible because of the priceless antiquities that are stored in museums.

Performance Requirement 1
The use of closed circuit television (CCTV) should be used in exterior and interior spaces.

Performance Requirement 2
Motion detectors should be placed as accordingly in exhibit areas.

Performance Requirement 3
Access control should be used through out the private areas of the building as well as when the museum is closed to the public.

Goal
To protect and preserve the valuable artifacts that the museums stores with in the building.
Lighting

The goal of architectural and display lighting is to provide an environment that meets both the visual needs of the museum visitor and the conservation needs of the collection.

Lighting should:
- Help to establish the context and style of the building by embellishing important architectural details while seeking to elicit an emotional response from the visitor.
- Recognize that a space intended to be perceived as grand or romantic involves a different approach from one designed as efficient or modern.
- Incorporate incandescent sources for their color and ability to highlight objects and surfaces, and fluorescent sources for their longevity and efficiency.

Incandescent lamps
- Incandescent reflector lamps such as PAR and AR (parabolic and aluminum reflectors) are almost always the most successful means of providing direct light. Beam spreads can be manipulated by using spread lenses, either frosted or prismatic. Louvers reduce glare.

Fluorescent Lamps
- Fluorescent sources possess the advantages of long life and easy maintenance. They are most often used for ambient lighting.

Objects Sensitive to Light: 50 lux or 5 Footcandles
- Textiles, tapestries, costume
- Watercolors, prints, and drawings, Manuscripts
- Miniatures
- Paintings in distemper media
- Wallpapers
- Gouache
- Dyed leather
- Most natural history exhibits, including botanical specimens, fur, and feathers

Objects Insensitive to Light: 300 lux or 30 Footcandles
- Metal
- Stone
- Glass
- Ceramics
- Jewelry
- Enamel

Objects Less Sensitive to Light: 200 lux or 20 Footcandles
- Oil and tempera paintings
- Undyed leather
- Horn, bone, and ivory
- Oriental lacquer

Objects Insensitive to Light: 300 lux or 30 Footcandles
- Metal
- Stone
- Glass
- Ceramics
- Jewelry
- Enamel
Mechanical Systems

Critical Conservation Environments

The following standards are critical to conserving collections:

-Systems that serve spaces for the following should be designed for maximum stability of temperature and humidity: galleries, registrar, and preparation, collection conservation, and collection storage.

-Space conditions should be maintained at 70°F and 50 percent relative humidity year-round. The system should introduce the minimum outside air required by occupancy, pretreated to conservation condition-temperature and relative humidity requirements-and delivered via an independent outside air pretreatment system.

-Systems should be designed to operate 365 days a year, 24 hours a day.

-Special attention should be directed to the temperature and relative humidity requirements for photographs, metals, and other works on paper for spaces where lower temperature and/or humidity may be necessary.

-Offices and other general support areas where artwork may be present should be maintained at 75°F with a maximum of 55 percent relative humidity (RH) year-round.

Air System Standards

The following standards should be maintained for air systems:

<table>
<thead>
<tr>
<th>Area</th>
<th>Environment</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Storage</td>
<td>70°F / 50% RH</td>
<td>24 hrs.</td>
</tr>
<tr>
<td>Registrar</td>
<td>70°F / 50% RH</td>
<td>24 hrs.</td>
</tr>
<tr>
<td>Education</td>
<td>75°F / 60% RH (Max)</td>
<td>10 hrs.</td>
</tr>
<tr>
<td>Restaurant</td>
<td>75°F / 60% RH</td>
<td>10 hrs.</td>
</tr>
<tr>
<td>Kitchen</td>
<td>80°F / NA</td>
<td>10 Hrs.</td>
</tr>
<tr>
<td>Reception Area</td>
<td>70°F / 50% RH</td>
<td>24 Hrs.</td>
</tr>
<tr>
<td>Auditorium</td>
<td>75°F / 60% RH (Max)</td>
<td>10 Hrs.</td>
</tr>
<tr>
<td>Galleries</td>
<td>70°F / 50% RH</td>
<td>24 Hrs.</td>
</tr>
<tr>
<td>Administration</td>
<td>75°F / 60% RH (Max)</td>
<td>10 Hrs.</td>
</tr>
<tr>
<td>Conservation</td>
<td>70°F / 50% RH</td>
<td>24 Hrs.</td>
</tr>
</tbody>
</table>
Security and Fire Systems

Security

Security for a museum should be controlled from a central security panel located in the security office and operated in conjunction with a central security operator’s console. The security system should use the following subsystems and devices:

- Closed circuit television (CCTV), both internal and external
- Magnetic door contacts
- Motion detectors
- Card readers or similar access-control system
- Infrared door shunts
- Electric door strikes
- Guard tour stations
- Panic alarms

The system should also use:

- Pagers
- Two-way radios
- Intercom and telephone communications

The central system should monitor, record, and process information accumulated by the system on:

- Local printers
- Tape drives
- Videotape
- Computer hard disc

The system should be served by emergency power and have a dedicated, uninterruptible power supply. It should be capable of being monitored from off-site locations.

Fire Protection

Museums should be protected by a combination of fire standpipes and sprinklers. The building should be fully sprinklered and contain hazard zones such as book storage, archives, and other areas of risk, including galleries, art storage, and the like.

Generally, the building should be served by a conventional wet pipe sprinkler system. Where there is no danger of damage to the collection from an accidental discharge, a double interlock preaction type of system should be used. Systems known as flo-control sprinklers can also be used in high-risk areas.
Spatial Analysis

Lobby/ Entry

Function: The lobby is to function as a place for museum employees to greet and welcome the visitors. The lobby will also be a waiting area for museum patrons

Users: All
Number of Users: 1-400+
Net Sq. Ft. = 1200 Sq. Ft.

Activity Level: Extreme

Primary Uses: Waiting Area, Entry, Tour Beginnings, Greeting

Equipment: Tables and Chairs, couches, Reception Desk, Computer Information Stations, Kiosk

Adjacencies: Restrooms, Galleries, Gift Shop, Theater, Learning Center, Research/Library, Museum Café, Administrative Offices

Materials:
Floors: Tile
Walls: Gypsum Wall and Exposed Concrete or Adobe
Ceiling: Exposed Structure

Character of Space
The lobby should express the nature of the museum. It should prepare the patrons for the culture of the museum’s topics. The lobby just be a friendly greeting area that visitors feel a sense of comfort.

Lobby Relationship Diagram
Spatial Analysis

Native American Gallery

Function: This gallery will be for the history of Native Americans in the Texas Panhandle. No specific tribe or nation will be mentioned in this galleries.

Users: All
Number of Users: 1-100

Activity Level: High

Primary Uses: Holding of Artifacts, Viewing, Interactive Exhibits

Equipment: Computers, LCD’s, Cabinets for Exhibits, Security Equipment

Adjacencies: Comanche Gallery, Lobby, Theater

Materials:
Floors: Mixture of Carpet and Tile
Walls: Gypsum Wall and Exposed Concrete or Adobe
Ceiling: Acoustical Tiles

Character of Space
The Native American gallery should show the history of the Native Americans. The gallery should have minimal or no natural lighting and have high security. Circulation around the space should flow with other galleries.
Spatial Analysis

Comanche Gallery

Function: The Comanche gallery will be strictly for the viewing of Comanche history, no other Native American history will be in this gallery.

Users: All
Number of Users: 1-100

Activity Level: High

Primary Uses: Holding of Artifacts, Viewing, Interactive Exhibits

Equipment: Computers, LCD’s, Cabinets for Exhibits, Security Equipment

Adjacencies: Kiowa Gallery, Native American Gallery, Lobby

Materials:
Floors: Mixture of Carpet and Tile
Walls: Gypsum Wall and Exposed Concrete or Adobe
Ceiling: Acoustical Tiles

Character of Space
The Comanche gallery should express the culture and life of the Comanche Nation. The gallery should have minimal or no natural lighting and have high security. Circulation around the space should flow with other galleries.
Spatial Analysis

Kiowa Gallery

Function: The Kiowa gallery will be strictly for the viewing of Kiowa history, no other Native American history will be in this gallery.

Users: All
Number of Users: 1-100

Activity Level: High

Primary Uses: Holding of Artifacts, Viewing, Interactive Exhibits

Equipment: Computers, LCD’s, Cabinets for Exhibits, Security Equipment

Adjacencies: Comanche Gallery, Buffalo Gallery, Lobby

Character of Space
The Kiowa gallery should express the culture and life of the Kiowa Nation. The gallery should have minimal or no natural lighting and have high security. Circulation around the space should flow with other galleries.

Materials:
Floors: Mixture of Carpet and Tile
Walls: Gypsum Wall and Exposed Concrete or Adobe
Ceiling: Acoustical Tiles
**Spatial Analysis**

**Buffalo Gallery**

Function: The Buffalo gallery will show the history of the buffalo and the way the Native Americans used them. The gallery will also show the Buffalo Hunters history.

Users: All  
Number of Users: 1-100  
Net Sq. Ft. = 1000 Sq. Ft.

Activity Level: High

Primary Uses: Holding of Artifacts, Viewing, Interactive Exhibits

Equipment: Computers, LCD’s, Cabinets for Exhibits, Security Equipment

Adjacencies: Kiowa Gallery, Horse Gallery, Lobby

Materials:
Floors: Mixture of Carpet and Tile  
Walls: Gypsum Wall and Exposed Concrete or Adobe  
Ceiling: Acoustical Tiles

**Character of Space**

The Buffalo Gallery should express the history of the animal. The gallery should have minimal or no natural lighting and have high security. Circulation around the space should flow with other galleries.
Spatial Analysis

Horse Gallery

Function: The Horse gallery will show the history of the horse and the way the Native Americans used them.

Users: All
Number of Users: 1-100
Net Sq. Ft. = 1000 Sq. Ft.

Activity Level: High

Primary Uses: Holding of Artifacts, Viewing, Interactive Exhibits

Equipment: Computers, LCD’s, Cabinets for Exhibits, Security Equipment

Adjacencies: Kiowa Gallery, Horse Gallery, Lobby

Materials:
Floors: Mixture of Carpet and Tile
Walls: Gypsum Wall and Exposed Concrete or Adobe
Ceiling: Acoustical Tiles

Character of Space
The Horse Gallery should express the history of the animal. The gallery should have minimal or no natural lighting and have high security. Circulation around the space should flow with other galleries.
Spatial Analysis

Adobe Walls History Gallery

Function: The Adobe Walls History Gallery will show the history of the Adobe Walls area. The gallery will show the beginning (1840) until the end of the trade posts history (1875).

Users: All
Number of Users: 1-100

Activity Level: High

Primary Uses: Holding of Artifacts, Viewing, Interactive Exhibits

Equipment: Computers, LCD’s, Cabinets for Exhibits, Security Equipment

Adjacencies: Horse Gallery, First Battle of Adobe Walls Gallery, Lobby

Materials:
Floors: Mixture of Carpet and Tile
Walls: Gypsum Wall and Exposed Concrete or Adobe
Ceiling: Acoustical Tiles

Character of Space
The Adobe Walls History Gallery will give an impression of the fort with recreations and artifacts. The gallery should have minimal or no natural lighting and have high security. Circulation around the space should flow with other galleries.
Spatial Analysis

First Battle of Adobe Walls Gallery

Function: The First Battle of Adobe Walls Gallery will tell the history of the battle and what the implications were leading up to it and after it occurred.

Users: All
Number of Users: 1-100

Activity Level: High

Primary Uses: Holding of Artifacts, Viewing, Interactive Exhibits

Equipment: Computers, LCD's, Cabinets for Exhibits, Security Equipment

Adjacencies: Adobe Walls History Gallery, Second Battle of Adobe Walls Lobby

Materials:
Floors: Mixture of Carpet and Tile
Walls: Gypsum Wall and Exposed Concrete or Adobe
Ceiling: Acoustical Tiles

Character of Space
The First Battle of Adobe Walls Gallery will give an impression of the battle with recreations and artifacts. The gallery should have minimal or no natural lighting and have high security. Circulation around the space should flow with other galleries.
Spatial Analysis

Second Battle of Adobe Walls Gallery

Function: The Second Battle of Adobe Walls Gallery will tell the history of the battle and what the implications were leading up to it and after it occurred. This gallery will be the only gallery that tells the story of the settlers that defended the small post.

Users: All
Number of Users: 1-100

Activity Level: High

Primary Uses: Holding of Artifacts, Viewing, Interactive Exhibits

Equipment: Computers, LCD’s, Cabinets for Exhibits, Security Equipment

Adjacencies: First Battle of Adobe Walls Gallery, Lobby

Character of Space

The Second Battle of Adobe Walls History Gallery will give an impression of the fort with recreations and artifacts. The gallery will show the intentions and outcomes of both sides. The gallery should have minimal or no natural lighting and have high security. Circulation around the space should flow with other galleries.

Materials:
Floors: Mixture of Carpet and Tile
Walls: Gypsum Wall and Exposed Concrete or Adobe
Ceiling: Acoustical Tiles

Second Battle of Adobe Walls Gallery Relationship Diagram
Spatial Analysis

Museum Café

Function: Due to the location of the museum, a café will allow visitors and patrons to relax. This will benefit the museum by not forcing people to drive back to the nearest town.

Users: All
Number of Users: 1-50
Net Sq. Ft. = 1000 Sq. Ft.

Activity Level: Medium

Primary Uses: Rest Area, Restaurant

Equipment: Tables and Chairs, Couches

Adjacencies: Food Service Area, Lobby, Restrooms, Janitorial Closet 1

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Acoustical Tiles

Character of Space
The café should be a place to relax that continues with style of the building. The café should be located so that it captures the views of the area.
Spatial Analysis

Museum Gift Shop

Function: The Museum Gift Shop is for the visitor of the museum who would like to purchase items that are relevant to the nature of the museum. Museum gift shops are the only means of capital a museum receives from visitors.

Users: All
Number of Users: 1-20
Net Sq. Ft. = 700 Sq. Ft.

Activity Level: Medium

Primary Uses: Selling museum gifts

Equipment: Computer, Security System Equipment

Adjacencies: Lobby, Museum Café, Museum Shop Office

Materials:
Floors: Carpet
Walls: Gypsum Wall
Ceiling: Acoustical Tiles

Character of Space
The Museum Gift Shop should be located in a place that is directly connected to the lobby and forces visitors to walk through or in close proximity to.
Spatial Analysis

Public Restrooms

Function: The Public Restrooms are for public use. Men’s and Women’s facilities.

Users: All
Number of Users: 1-5
Net Sq. Ft. = 2@ 600 Sq. Ft.

Activity Level: Low-Medium

Primary Uses: Toilet Facilities

Equipment: Fixtures

Adjacencies: Lobby, Museum Café

Character of Space
The restrooms should continue with the same style of the museum.

Materials:
Floors: Tile
Walls: Tile and Gypsum Wall
Ceiling: Gypsum Tiles

Restrooms Relationship Diagram
Spatial Analysis

Research/ Library Area

Function: The Research Area will allow visitors to follow up on any history that the museum has to offer. The research center will also house a library adjacent to it for comfort while doing research.

Users: All
Number of Users: 1-50
Net Sq. Ft. = 2500 Sq. Ft.

Activity Level: Medium

Primary Uses: Research, Reading

Equipment: Computers, Desks, Couches, Tables and Chairs, Scanners, Copiers

Adjacencies: Learning Center, Lobby, Administration

Materials:
Floors: Carpet
Walls: Gypsum Wall
Ceiling: Acoustical Tiles

Character of Space
The Research Center and Library should be a comfortable learning environment that is separated from the goings on in the museum.
Spatial Analysis

Learning Center

Function: The Learning Center will promote the further education of the Native Americans. The learning center will be a place of learning for adults and children. Special times of the year will have special events.

Users: All
Number of Users: 1-40
Net Sq. Ft. = 1000 Sq. Ft.

Activity Level: Medium

Primary Uses: Education, Classes, Special Events

Equipment: Computers, Desks, Couches, Tables and Chairs, Scanners, Copiers

Adjacencies: Lobby, Research Center/Library

Materials:
Floors: Carpet
Walls: Gypsum Wall
Ceiling: Acoustical Tiles

Character of Space
The Learning Center should function like the Research Center. This should be a comfortable and relaxing with plenty of natural lighting.

Learning Center Relationship Diagram
Spatial Analysis

Theater

Function: The Theater will serve the visitors that have no previous knowledge of the museum and its purpose. The theater will begin the tour for those who are not going to a specific exhibit.

Users: All
Number of Users: 1-100
Net Sq. Ft. = 1000 Sq. Ft.

Activity Level: High

Primary Uses: Movies Shown, Special Exhibits, Museum Tour Beginning

Equipment: Screens, Projectors, Seating

Adjacencies: Lobby, Native American Gallery, Restrooms

Materials:
Floors: Carpet
Walls: Gypsum Wall
Ceiling: Acoustical Tiles

Character of Space
The Theater should have the feel of a movie theater, but on a smaller scale. It should also maintain the style of the rest of the museum, and have the best technology available.
Spatial Analysis

Security Center

Function: The Security Center will house some equipment for monitoring the building and the guards for the museum.

Users: Private
Number of Users: 1-3
Net Sq. Ft. = 500 Sq. Ft.

Activity Level: Medium

Primary Uses: Monitoring, Safety of Building

Equipment: Computers, Desks, Chairs

Adjacencies: Administration, Galleries, Security Storage Room

Character of Space
The Security Center should be a place of safety and comfort for the security workers of the complex.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Acoustical Tiles
Spatial Analysis

Server Room

Function: The Server Room will serve as storage for all the servers in the complex.

Users: Private
Number of Users: 1-2
Net Sq. Ft. = 500 Sq. Ft.

Activity Level: Low

Primary Uses: Storage

Equipment: Servers

Adjacencies: Electrical Room

Character of Space
The Server Room should be maintained at a lower temperature level due to the heat of the servers.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Gypsum Tiles

Server Room Relationship Diagram
Spatial Analysis

Electrical Room

Function: The Electrical Room will serve as the storage location for all electrical equipment.

Users: Private
Number of Users: 1-2
Net Sq. Ft. = 500 Sq. Ft.

Activity Level: Low

Primary Uses: Storage

Equipment: Electrical Equipment

Adjacencies: Server Room, Security Center, Security Storage Room, Mechanical Room

Character of Space

The Electrical Room should be at a centralize location and have close access to mechanical, server, and security storage rooms incase of power outage.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Gypsum Tiles

Electrical Room Relationship Diagram
Spatial Analysis

Mechanical Room

Function: The Mechanical Room will store equipment like HVAC systems and hot-water heaters.

User: Private
Number of Users: 1-2
Net Sq. Ft.: 750 Sq. Ft.

Activity Level: Low

Primary Uses: Storage

Equipment: Mechanical Equipment, HVAC, Hot-Water Heaters

Adjacencies: Electrical Room

Character of Space
The Mechanical Room should allow ample room for HVAC systems for easy maintenance.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Gypsum Tiles

Mechanical Room Relationship Diagram
Spatial Analysis

Employee Lounge

Function: The Employee Lounge should function as a place to rest for employees during lunch or work breaks.

Users: Private
Number of Users: 1-10
Net Sq. Ft. = 400 Sq. Ft.

Activity Level: Medium

Primary Uses: Lunchroom, Relaxing

Equipment: Sink, Microwave, Refrigerator, Storage Compartments, Vending Machines, Table and Chairs

Adjacencies: Administration, Private Employee Restrooms

Character of Space
The Employee Lounge should be one place that the employees can relax and take a break from the work environment.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Acoustical Tiles
Spatial Analysis

Private Employee Restrooms

Function: The Employee Restrooms will be private and not for use of the public.

Users: Private
Number of Users: 1-3
Net Sq. Ft. = 2@ 250 Sq. Ft.

Activity Level: Medium

Primary Uses: Toilet Facility

Equipment: Fixtures

Adjacencies: Administration, Employee Lounge

Character of Space
The Employee Restrooms should function like the public restrooms and keep the style of museum the same.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Gypsum Tiles
Spatial Analysis

Janitorial Closet 1

Function: Janitorial Closet 1 will be used in the Museum Café and Food Service areas.

Users: Private
Number of Users: 1
Net Sq. Ft. = 150 Sq. Ft.

Activity Level: Low

PrimaryUses: Janitorial Storage

Equipment: Cleaning Equipment

Adjacencies: Museum Café, Food Service Area

Character of Space
The Janitorial Closet should be kept in a remote location, yet have easy access for quick clean-up purposes.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Gypsum Tiles

Janitorial Closet 1 Relationship Diagram
Spatial Analysis

Janitorial Closet 2

Function: Janitorial Closet 2 should be located in a location that can clean the gallery areas and administration areas, but be close to the public restrooms.

Users: Private
Number of Users: 1
Net Sq. Ft. = 150 Sq. Ft.

Activity Level: Low

Primary Uses: Janitorial Storage

Equipment: Cleaning Equipment

Adjacencies: Galleries, Administration, Public Restrooms, Lobby, Museum Shop

Character of Space

The Janitorial Closet should be kept in a remote location, yet have easy access for quick clean-up purposes. This closet will serve a large portion of the building.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Gypsum Tiles

Janitorial Closet 2 Relationship Diagram
Spatial Analysis

General Storage

Function: The General Storage will be used for anything from extra lights to additional cleaning equipment.

Users: Private
Number of Users: 1-3
Net Sq. Ft. = 700 Sq. Ft.

Activity Level: Low

Primary Uses: Storage

Equipment: Cleaning Equipment, Mechanical Equipment, etc.

Adjacencies: Administration, Mechanical Room, Server Room, Electrical Room

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Gypsum Tiles

Character of Space
The General Storage will serve the administration area best. The location should remain around the Mechanical, Electrical, and Server Rooms.
Spatial Analysis

Collections Storage

Function: The Collection Storage will provide an area for exhibits that are not currently on display or new arrivals that have not been put out onto the floor to view.

Users: Private
Number of Users: 1-15
Net Sq. Ft. = 1000 Sq. Ft.

Activity Level: Medium

Primary Uses: Collection Storage and Protection

Equipment: NA

Adjacencies: Galleries, Administration, Security Center

Character of Space

The Collection Storage needs to be a secure area that has a low number of occupants and is in close relationship to the security office and administration.

Materials:
Floors: Tile
Walls: Gypsum Wall
Ceiling: Gypsum Tiles

Collections Storage Relationship Diagram
Spatial Analysis

Food Service Area

Function: The Food Service Area will function as a kitchen that serves the Museum Café. Food service will be minimal at the complex.

Users: Private
Number of Users: 1-20
Net Sq. Ft. = 1000 Sq. Ft.

Activity Level: High

Primary Uses: Food Preparation

Equipment: Refrigerators, Washers, Microwaves, Stoves, Ovens, etc.

Adjacencies: Museum Café, Food Storage

Materials:
Floors: Tile
Walls: Tile, Stainless Steel
Ceiling: Gypsum Tiles

Character of Space
The Food Service area should circulate with the Museum Café to best serve the visitors of the museum.

Food Service Area Relationship Diagram
Spatial Analysis

Museum Shop Office

Function: The Museum Shop Office will store the business documents and keep up with the day to day operations of the shop.

Users: Private
Number of Users: 1
Net Sq. Ft. = 200 Sq. Ft.

Activity Level: Low

Primary Uses: Business Office

Equipment: Safe, Filing Cabinets, Computer, Desks, Storage

Adjacencies: Museum Shop

Character of Space

The Museum Shop Office should be an environment that is safe and out of view from normal circulation.

Materials:
Floors: Carpet
Walls: Gypsum Board
Ceiling: Acoustical Tiles
Spatial Analysis

Museum Curator Office

Function: The Museum Curator Office is for the head of the museum. The office should have enough room for three to four people and be adequate for meetings.

Users: Private
Number of Users: 1-4
Net Sq. Ft. = 250 Sq. Ft.

Activity Level: Low

Primary Uses: Office

Equipment: Filing Cabinets, Computer, Desk, Storage

Adjacencies: Lobby, Employee Lounge, Private Restrooms, Additional Administration

Materials:
Floors: Carpet
Walls: Gypsum Board
Ceiling: Acoustical Tiles

Character of Space
The Museum Curator's office should be the an extravagant place to hang advertisements and such for the museum. It should have ample shelving for the curator.
Spatial Analysis

Administration Offices

Function: The Administration Offices will be used for additional staff at the museum and will be used by multi employees.

Users: Private
Number of Users: 1-2
Net Sq. Ft. = 150 Sq. Ft.

Activity Level: Low

Primary Uses: Office

Equipment: Filing Cabinets, Computer, Desk, Storage

Adjacencies: Lobby, Employee Lounge, Private Restrooms, Museum Curator Office

Character of Space
The Administration Offices should be similar to the Curator’s office only with less space.

Materials:
Floors: Carpet
Walls: Gypsum Board
Ceiling: Acoustical Tiles
Spatial Analysis

Collection Workshop

Function: The Collection Workshop is for the exhibits that require some construction or special needs. This area will have a loading/unloading dock for exhibits.

Users: Private
Number of Users: 1-20
Net Sq. Ft. = 1000 Sq. Ft.

Activity Level: Medium

Primary Uses: Workshop, Storage

Equipment: Tools for Construction, Storage, Dock

Adjacencies: Collection Storage

Character of Space

The Collection Workshop will be a fairly open space that allows for movement, construction, and some storage of exhibits.

Materials:
Floors: Tile
Walls: Gypsum Board
Ceiling: Acoustical Tiles

Collection Workshop Relationship Diagram
Spatial Analysis

Security Storage Room

Function: The Security Storage Room will provide additional storage for security office. The storage will house back up power systems for the security equipment.

Users: Private
Number of Users: 1-2
Net Sq. Ft. = 500 Sq. Ft.

Activity Level: Low

Primary Uses: Workshop, Storage

Equipment: Power Generators, Security Servers, Additional Security Supplies

Adjacencies: Security Center, Electrical Room, Server Room

Character of Space
The Security Center should serve much like the Server Room and have adequate cooling and ventilation.

Security Storage Room Relationship Diagram
Spatial Analysis

Food Storage Room

Function: The Food Storage Room will serve as dry storage and will have a large freezer for the Food Service Area.

Users: Private
Number of Users: 1-2
Net Sq. Ft. = 500 Sq. Ft.

Activity Level: Low

Primary Uses: Food Storage

Equipment: Large Deep Freeze, Dry Storage Facility

Adjacencies: Food Service Area

Character of Space

The Food Storage Room should be a clean environment that is directly connected to the Food Service Area. An additional entrance/exit should be connected to this space.

Materials:
Floors: Tile
Walls: Tile, Stainless Steel
Ceiling: Gypsum Tiles

Food Storage Room Relationship Diagram
## Spatial Summary

### Public Areas

<table>
<thead>
<tr>
<th>Areas</th>
<th>Number of Users</th>
<th>Net Sq. Ft.</th>
<th>Gross Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lobby/ Entry</td>
<td>1-400</td>
<td>1200</td>
<td>1440</td>
</tr>
<tr>
<td>Native American History Gallery</td>
<td>1-100</td>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>Comanche Gallery</td>
<td>1-100</td>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>Kiowa Gallery</td>
<td>1-100</td>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>Buffalo Gallery</td>
<td>1-100</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Horse Gallery</td>
<td>1-100</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Adobe Walls History Gallery</td>
<td>1-100</td>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>First Adobe Walls Battle Gallery</td>
<td>1-100</td>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>Second Adobe Walls Battle Gallery</td>
<td>1-100</td>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>Museum Café</td>
<td>1-50</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Museum Gift Shop</td>
<td>1-20</td>
<td>700</td>
<td>840</td>
</tr>
<tr>
<td>Public Restroom</td>
<td>1-5</td>
<td>2@ 600</td>
<td>2@ 720</td>
</tr>
<tr>
<td>Research/Library Area</td>
<td>1-50</td>
<td>2500</td>
<td>3000</td>
</tr>
<tr>
<td>Theater</td>
<td>1-100</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Learning Center</td>
<td>1-40</td>
<td>1000</td>
<td>1200</td>
</tr>
</tbody>
</table>

Room Total = 16  
Users = NA  
Net = 22,600 Sq. Ft.  
Gross = 27,120 Sq. Ft.
## Spatial Analysis
### Private Areas

<table>
<thead>
<tr>
<th>Areas</th>
<th>Number of Users</th>
<th>Net Sq. Ft.</th>
<th>Gross Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security Center</td>
<td>1-3</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>Server Room</td>
<td>1-2</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>Electrical Room</td>
<td>1-2</td>
<td>500</td>
<td>600</td>
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<tr>
<td>Mechanical Room</td>
<td>1-2</td>
<td>750</td>
<td>900</td>
</tr>
<tr>
<td>Employee Lounge</td>
<td>1-10</td>
<td>400</td>
<td>480</td>
</tr>
<tr>
<td>Private Employee Restrooms</td>
<td>1-3</td>
<td>2@ 250</td>
<td>300</td>
</tr>
<tr>
<td>Janitorial Closet 1</td>
<td>1</td>
<td>150</td>
<td>180</td>
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<tr>
<td>Janitorial Closet 2</td>
<td>1</td>
<td>150</td>
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<tr>
<td>General Storage</td>
<td>1-3</td>
<td>700</td>
<td>840</td>
</tr>
<tr>
<td>Collections Storage</td>
<td>1-15</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Food Service Area (Museum Café)</td>
<td>1-20</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Museum Shop Office</td>
<td>1</td>
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<tr>
<td>Museum Curator Office</td>
<td>1-4</td>
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</tr>
<tr>
<td>Administration Offices</td>
<td>1-2</td>
<td>3@ 150</td>
<td>3@ 180</td>
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<tr>
<td>Collection Workshop</td>
<td>1-20</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Security Storage Room</td>
<td>1-2</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>Food Storage Room</td>
<td>1-2</td>
<td>500</td>
<td>600</td>
</tr>
</tbody>
</table>

Room Total = 20  Users = NA  Net = 9,050 Sq. Ft.  Gross = 10,860 Sq. Ft.
Precedents

The Rock and Roll Hall of Fame and Museum (1995)
I. M. Pei
Cleveland, Ohio

Site

The Rock and Roll Hall of Fame and Museum was designed to be as spectacular and explosive as rock-and-roll music itself. Situated in downtown Cleveland, overlooking the harbor and Lake Erie beyond, the 143,000 square foot building is a focal point of the city's waterfront development. Along with new parklands and a cluster of new museums, it is planned to transform the lakefront into a center for family entertainment and cultural events.

Design

The building is anchored by a 165 feet tower that rises out of Lake Erie. A cantilevered theater projects over the water on one side, balanced on the other by a circular drum conceived as a performance-space-in-the-round.

The tower is connected to a transparent four-sided glass tent that opens onto a paved public plaza. Designed for outdoor entertainment, the plaza creates a welcoming entry to the promenade that threads its way alongside the Cleveland Harbor.

The plaza is actually the landscaped roof of the museum's main exhibition space, which tucked below ground to maximize use of the site's change of grade provides a controlled environment for the museum's highly interactive acoustical and video installations.

Circulation

The interior is organized vertically with floor plates that decrease in size as they ascend, documenting the evolution of rock and roll from its beginnings to the most avant-garde expressions through varied programming and state-of-the-art media presentations.

Visitors rise from the main sub-grade exhibition space to the ground-level lobby and then to various programmed spaces on the upper floors. Among these are: a bookshop, a café, a radio broadcasting studio, and supplementary exhibition areas two theaters.

At the top of a ceremonial stair is the Hall of Fame itself—a contemplative fiber-optic chamber that comprises the literal and symbolic apex of the entire design. A rock-and-roll archive, part of the complex, augments the Hall of Fame's standing as a uniquely American icon.

Unique features

The color and movement of people circulating on the balconies, bridges, stairs, and escalators that crisscross up and down create an exciting visual counterpoint to the rock-and-roll theme. Visitors are not merely spectators but active participants in a design that reveals itself through spaces glimpsed and experienced.

The building is a stage. Animated at night by computer-controlled light, it creates a civic identity as it expresses the museum's energy and openness.
Precedents

The Rock and Roll Hall of Fame and Museum (1995)
I. M. Pei
Cleveland, Ohio
Precedents

The Rock and Roll Hall of Fame and Museum (1995)
I. M. Pei
Cleveland, Ohio
Precedents

U. S. Holocaust Memorial Museum (1993)
James Ingo Freed
Washington D. C.

Background and Purpose

The United States Holocaust Memorial Museum was authorized by an act of Congress in 1980 to create a permanent living memorial, funded by private donations and built on federal land, to the more than 10 million people, Christians and Jews alike, who perished in the Holocaust. Located some 400 ft from the Washington Monument, the museum is distinct from the heroic monuments on the National Mall, yet joins them as one of the symbolic presences through which society reaffirms its values.

Meaning in Structural Expression

By employing construction techniques from the industrial past, the structure itself plays an important role in evoking memories of that past. For example:
- Structural members are built up from steel plates and double angles riveted together.
- The brick is load bearing; turnbuckles connect tie rods, and the structure is exposed.

The tectonic language is used to explore the fateful misperception that technology is inherently good. The same scientific advances and technological developments embraced in pursuit of a better life were also called upon to perfect the machinery of the Holocaust.

Site

The Museum stands on a prominent site, easily seen by passersby as well as those planning visits. Its main entrance is on 14th Street, a busy artery into and out of the city and a major pedestrian corridor from the Mall to the Bureau of Engraving and Printing. Fronted by a limestone screen designed to mix with its classic neighbors—the Bureau of Engraving and Printing on one side and the Auditor's Building on the other—the museum is carved to stand out among them, creating an open plaza where school groups and others may gather off the street.

Circulation

Because the Holocaust Museum is devoted to a historic event rather than to display art, its exhibits are ordered in a linear progression.
Precedents

U. S. Holocaust Memorial Museum (1993)
James Ingo Freed
Washington D. C.
Precedents

U. S. Holocaust Memorial Museum (1993)
James Ingo Freed
Washington D. C.
Precedents

Route 66 Museum (1995)
Rand Elliot
Clinton, Oklahoma

Background and Purpose

Completed in 1932, Route 66 is a 2,400-mile two-lane highway, passing through eight states on its way from Chicago, through Oklahoma, and on to Los Angeles. For decades, Route 66 was the road to the promised land, California.

A storytelling museum, mixing scholarship, museology, and pop culture, the Route 66 Museum investigates the impact of this highway on American life.

The museum, operated by the Oklahoma Historical Society, is described by its architect, Rand Elliot, as "a cross between a cheap bar and a motel. We don't have our Whitney or our Guggenheim out here. What we have is a renegade outlaw kind of tradition-a rich, interesting, history, and Route 66 is part of that."

Program

The program for the museum had the following objectives.

- To trace the history and culture of Route 66 by examining:
  Technological innovations brought about by the automobile and road building.
  Development of arterial, regional, and national service businesses that changed the economics and landscape of Oklahoma.
  The effects of these changes on Oklahomans.

- To collect materials from television, radio, film, and books dealing with highway transportation in Oklahoma

- To interpret the history of transportation and Route 66 through educational events, activities, and exhibits that increase the general public's curiosity and knowledge.

- To promote heritage tourism along the length of historic Route 66.

- To seek statewide community appreciation for the Route 66 heritage.

- To stimulate preservation of Oklahoma Route 66 properties.

The following design criteria emerged from the program:

- Tell the story of Route 66 in chronological order.

- Communicate Route 66's sense of adventure.

- Emphasize the relationship between personal freedom and automobile travel.

- Highlight America's first Main Street.

- Incorporate an authentic Phillips 66 gas station to help recall the spirit of the time.
Precedents

Route 66 Museum (1995)
Rand Elliot
Clinton, Oklahoma

Exhibits
An exhibit concept included the following:
- Circulation loop allowing visitors to experience travel along the way.
- Organization around automobiles, travel, words and phrases, world events, and popular culture of the period.
- Personal travel diary on cassette to guide visitors through the museum.
- Installations of artifacts, video images, movies, and memories of the period.

A typical exhibit, reminiscent of the 1950s, includes:
- A diner interior, complete with booths, counter, and stools.
- A vintage jukebox with 45 rpm records.
- A neon arrow sign.
- A 1952 Ford sedan.
Endnotes

4 Ibid. p. 251
5 Ibid. p. 251
6 Ibid. p. 251
7 Ibid. p. 251
8 Ibid. p. 251
10 Ibid. p. 251.
11 Kliment. p. 252
12 Ibid. p. 252
13 Ibid. p. 154
14 Ibid. p. 154
15 Ibid. p. 162
16 Ibid. p. 162
17 Ibid. p. 162
18 Ibid. p. 183
19 Ibid. p. 184
Context Section

Introduction.................................................................78
-Introduction
-Context Statement

Historically.................................................................79
-Native Americans
-Comanches
-Kiowas
-Adobe Walls

Site Analysis.................................................................86
-Dimensions
-Locations
-Views
-Photographs
-Climate
-Demographics

Precedents.................................................................94
-Chikatsu-Asuka Historical Museum
  -Tadao Ando
-Vulcania: The European Centre of Volcanism
  -Hans Holien
-Fukui Prefectural Dinosaur Museum
  -Kisho Kurokawa

Endnotes.................................................................97
Introduction

The United States history has a long and prestigious history, but it usually is always dedicated to the Anglo Settlers that came from Europe and not about the true discover of this land, the Native Americans. Up until recent times many history books would have you believe that Native Americans, or Indians as they use to call them, were crazy misfits that cared more about killing and pillaging than about family and morals. Native Americans were believed to be ignorant, unsophisticated people, however, some tribes, the Kiowas for example, has social classes and a democratic form of government not unlike what many nations have today.

Native Americans in recent years have been receiving more attention and treated with more respect than in the past. The United States is beginning to have more museums that are dedicated to the Native American ways of life, including the National Museum in Washington D.C.

In 1864, the U.S. Calvary out of New Mexico marched down the Canadian River, into present day Hutchinson county, to wage war on the Kiowas in the area. Kit Carson’s, leader of the attack, destination was a small abandoned fort known as Adobe Walls. This engagement came to be known as the first Battle of Adobe Walls.

Ten years later buffalo hunters began to frequent the area. A small community was built for the local buffalo hunter coming down from Kansas and it was still named Adobe Walls. The small community had all the enmities of a larger town.

In 1874, a large group of mostly Kiowas and Comanches, led by Quanah Parker, attacked the small community. The results were the same as the first Battle of Adobe Wall, the Native Americans had failed in making a devastating blow. The second Battle of Adobe Walls proved to be the beginning of the end for the Plains Indians. These battles paved the way for the Red River War and this proved to be the beginning of the end for the Plains Indians.

Context Statement
The facility will be located on the banks of the Canadian River in Hutchinson County, Texas. Hutchinson County lies in the Texas Panhandle, in West Texas.
Historical Information

Native American History

The Plains Indian culture area was the last to develop in North America, beginning around 1620 with the introduction of the horse into New Mexico by the Spanish. It was characterized by the horse, the buffalo, the tipi, and the Sun Dance. There were eleven typical of the Plains Indian culture: Kiowas, Kiowa Apaches, Comanches, Cheyennes, Arapahos, Assiniboine, Blackfeet, Crows, Gros Ventre, Teton-Dakotas and Sarsis. Buffalo furnished most everything they needed in this culture: food, clothing, tipis, tanned hides, fur robes, bedding, rawhide, leather, saddles, bridles, canteens, horn for spoons, and hooves for glue. The bow was shortened by the plains Indians for use on horseback, and vessels had to be strong. Everything was adapted for quick packing and fast movement, often for matters of life or death.

Men and women wore skin garments, moccasins, leggings, and fur robes for coats in winter. Jewelry was used by both men and women, much of it fashioned from Mexican coins. Men wore their hair in long braids wrapped in fur strips, and men and women parted their hair in the middle. Women wore the hair braided or hanging loosely. Over the right ear, men wore a portion of the hair cut short, a tribal symbol. Also the men wore moccasins, of tribal cut, with a flap that dragged the ground, usually with many beads. Men wore breech clouts, and women wore a pull-on shift dress to below the knees.
Historical Information

Kiowas

The Kiowa tribe’s roots begin in Yellowstone and the Missouri rivers in present day Montana. They hunted with the bow and arrow with their only domesticated animal, the dog. According to legend the tribe was divided because of hunting quarrels. The winners of the quarrel moved southeastward to live with friends, the Crows. The Crows taught them to ride horses and introduce them to the buffalo, an animal they had not seen up to this point. The earliest documentation of the existence of the Kiowas was in 1682 when Rene Robert Cavelier was told about them by a captive Pani boy at Fort St. Louis.

The Kiowas had taken the first step basic to the acquisition of the Plains Culture by learning to ride the horse and by hunting, on horseback, and using the buffalo as food. Using horse, slaves, and guns, the Kiowas evolved into completely nomadic ways. They pillaged and created war until they were the most feared tribe on the plains. They always had the most horses out of any of the other tribes on the plains. Around 1790 the Kiowas made a lasting peace with the Comanches and traded prisoners and horses with them.

The Kiowas had their own social level within the tribe. The first rank was the Onde (aristocrats) who were great warriors, important sub-chiefs, ten priests owning medicine bundles, and wealthy associated with war and religion. The second rank, the Odegupa, consisted of small sub-chiefs, medicine men, and people of limited belongings. The third rank were called the Kaan, they were the poor people. The Kaan made up around half the tribe. The last social group were the Dapom, who were thought to be crazy or misfits. In this system rank was changeable, up or down. People could move up by getting honors or rank down with meanness or misdeeds.

Kiowa Chief

For a short time during his trip to the East in 1863, Yellow Buffalo performed at P. T. Barnum’s American Museum. This portrait was taken across the street, at Mathew Brady’s studio.
Historical Information

Kiowas

Social organization was fairly simple with the Kiowas. Kiowas belonged to the same type of kinship system as the Cheyenne, known as the generation or classification type, where collateral and lineal relations are classed together. Mothers were close to their sons, but the father was the one that pushed him into greatness. Kiowas did not use corporal punishment, instead the elders would shame and ridicule them. A family depended on the son to become the eventual provider for the family. The son’s success was more important than a girl, but a girl could bring wealth to the family by marrying someone in exchange for gifts. The grandparents were important for they served as companions, teachers, and storytellers about history and religion.

Marriage was usually arranged by gifts of horses to the parents by the man or his family. Divorce was a simple process, but was uncommon. If a divorce took place the gifts were returned. A man could divorce if his wife committed adultery or he could cut off her nose and a woman could also divorce the man, but would usually consult her father first.

In religion, the Kiowas were polytheistic and animistic. They had a general belief that there were supernatural agencies. The great tribal ceremony was the Sun Dance in the first part of summer. During the Sun Dance the tribe came together for around ten days. The sun was believed to be one of the many spirit forces to Kiowas. The Sun Boy was also a great supernatural and mythic hero and legends related told of his adventures. The Taime was a sacred image of the human form that was the central figure in the Sun Dance. Peyote was the worship of the cactus that involved them actually eating bds of a cactus. The Sun Dance served as a religious and social event in the tribe. The Kiowa kept pictograph calendars of events in history and the Sett’an was their annual calendar.

Polytheistic: belief in or worship of more than one god.
In polytheistic belief, Gods are conceived as complex personages of greater or lesser status, with individual skills, needs, desires and stories. The Gods are not always omnipotent or omniscient; rather, they are often portrayed as similar to humans in their personality traits, but with additional individual powers, abilities, knowledge or perceptions.

Animistic: 1: a doctrine that the vital principle of organic development is immaterial spirit.
2: attribution of conscious life to objects in and phenomena of nature or to inanimate objects.
3: belief in the existence of spirits separable from bodies.

Animism, originally means the doctrine of spiritual beings. It is often extended to include the belief that personalized, supernatural beings endowed with reason, intelligence and volition inhabit ordinary objects as well as animate beings, and govern their existence. More simply, the belief is that "everything is alive", "everything is conscious" or "everything has a soul". It has been further extended to mean a belief that the world is a community of living persons, only some of whom are human. It also refers to the culture or philosophy which these types of Animists live by, that is, to attempt to relate respectfully with the persons (human, rock, plant, animal, bird, ancestral, etc.) who are also members of the wider community of life.
Historical Information

Comanches

The Comanches were exceptional horsemen who dominated the Southern Plains for many years, and they played a prominent role in Texas frontier history throughout much of the eighteenth and nineteenth centuries. The Comanches were from a branch of the Northern Shoshones, who roamed the Great Basin region of the western United States. The Comanches acquired horses, and that acquisition drastically changed their culture. Their new mobility allowed them to leave their mountain home and their Shoshone neighbors and move onto the plains of eastern Colorado and western Kansas, where game was plentiful. By moving south, they had greater access to the mustangs of the Southwest. The warm climate and abundant buffalo were additional incentives for the southern migration. A large area of the South Plains, including much of North, Central, and West Texas, soon became Comanche country. It was after their arrival on the Southern Plains when the tribe came to be known as the Comanches, a name derived from the Ute word Komántcia, meaning "enemy," or, literally, "anyone who wants to fight me all the time." Although the tribe came to be known historically as Comanches, they called themselves Nermernuh, or "the People."

Five major bands played important roles in recorded Comanche history. The southernmost band was called Penateka, or "Honey Eaters." North of Penateka country was the band called Nokoni, or "Those Who Turn Back." Two smaller bands, the Tanima ("Liver-Eaters") and the Tenawa ("Those Who Stay Downstream"), shared the same range of the Nokonis. Still farther north was the range of the Kotsotekas, or "Buffalo-Eaters." The northernmost band was known as the Yamparikas, or "Yap-Eaters," a name derived from that of an edible root.
**Historical Information**

**Comanches**

Buffalo was the Comanches life line that provided food, clothing, and shelter for them. Because of their skills as traders, the Comanches controlled much of the commerce of the Southern Plains. They bartered buffalo products, horses, and captives for manufactured items and foodstuffs. The familiar Plains-type tepee constructed of tanned buffalo hide stretched over sixteen to eighteen lodge poles provided shelter that was portable for the Comanches. Their clothing, made of bison hide or buckskin, consisted of breechclout, leggings, and moccasins for men, and fringed skirt, poncho-style blouse, leggings, and moccasins for women. Buffalo robes provided protection from cold weather.

The horse was what clearly defined the Comanche way of life. It gave them mobility to follow the buffalo herds and the advantage of hunting and conducting warfare from horseback. Horses also became a measure of Comanche wealth and a valuable trade commodity. In horsemanship the Comanches had no equal. Children learned to ride at an early age, and both men and women developed exceptional equestrian skills.

Democratic principle was strongly implanted in Comanche political organization. Each tribal division had both civil or peace chiefs and war chiefs, but traditionally the head civil chief was most influential. Leaders gained their positions through special abilities or prowess, and retained their power only so long as they maintained the confidence of band members, who chose their leaders by common consent. Tribal decisions were made by a council of chiefs presided over by the head civil chief. Comanche society permitted great individual freedom, and that autonomy greatly complicated relations with European cultures.
Historical Information

First Battle of Adobe Walls

The first battle of Adobe Walls occurred on November 26, 1864, in the vicinity of Adobe Walls, the remains of William Bent’s abandoned adobe fort near the Canadian River in what is now Hutchinson County. The battle was one of the largest engagements between whites and Indians on the Great Plains.

Col. Christopher (Kit) Carson, commanding the First Cavalry, New Mexico Volunteers, was ordered to lead an expedition against the winter campgrounds of the Comanches and Kiowas, believed to be somewhere on the south side of the Canadian. On November 10 he arrived at Fort Bascom with fourteen officers, 321 enlisted men, and seventy-five Ute and Jicarilla Apache scouts and fighters he had recruited from Lucien Maxwell’s ranch near Cimarron, New Mexico. Two days later the column, supplied with two mountain howitzers under the command of Lt. George H. Pettis, twenty-seven wagons, an ambulance, and forty-five days’ rations, marched down the Canadian into the Panhandle of Texas. Carson’s destination was Adobe Walls, where he had been employed by Bent nearly twenty years earlier. After a delay caused by snowstorms the column set up camp for the night of November 25 at Mule Springs, in what is now Moore County, thirty miles west of Adobe Walls. Two of Carson’s scouts reported the presence of a large group of Indians, who had recently moved into and around Adobe Walls with many horses and cattle. Carson immediately ordered all cavalry units and the two howitzers to move forward, leaving the infantry under Lt. Col. Francisco P. Abreau to follow later with the supply train. After covering fifteen miles Carson halted to await the dawn.

At about 8:30 A.M. Carson's cavalry attacked Dohäsan’s Kiowa village of 150 lodges, routing the old chief and most of the other inhabitants, who spread the alarm to several Comanche groups. Pushing on to Adobe Walls, Carson forded up about 10 A.M., using one corner of the ruins for a hospital. One of the several Indian encampments in the vicinity, a Comanche village of 500 lodges, was within a mile of Adobe Walls. The Indians numbered between 3,000 and 7,000, far greater opposition than Carson had anticipated.

With supplies and ammunition running low by late afternoon, Carson ordered his troops to withdraw to protect his rear and keep the way open to his supply train. Seeing this, the Indians tried to block his retreat by torching the tall bottomland grass near the river, but Carson set his own fires and withdrew to higher ground, where the battery continued to hold off the attacking warriors. At dusk Carson ordered a force to burn the Kiowa and Kiowa-Apache lodges, which the soldiers had attacked that morning. The Kiowa-Apache chief, Iron Shirt, was killed when he refused to leave his tepee.

Concerned with protecting the supply wagons and Abreau's infantry column moving up from Mule Springs, Carson decided to retreat. The reunited forces encamped for the night, and on the morning of November 27 Carson ordered a general withdrawal from the area.
Historical Information

Second Battle of Adobe Walls

The second battle of Adobe Walls occurred on June 27, 1874, when a buffalo hunters' camp, built in the spring of that year in what is now Hutchinson County, about a mile from the adobe ruins known as Adobe Walls was attacked by a party of about 700 Plains Indians. The attackers were mostly Comanches and Kiowas, under the leadership of Quanah Parker and Isa-tai. Most of the hunters at the camp were awake repairing a broken ridgepole when the Indians charged at dawn. The defenders, twenty-eight men and one woman, gathered in (Jim) Hanahan's Saloon, (Charlie) Myers and Leonard's Store, and (Charles) Rath and Wright's Store and repelled the initial charge with a loss of only two men. One more man was lost in later charges, which continued until about noon, and a fourth man was accidentally killed by the discharge of his own gun. The Indians, who had been urged into the fight by a medicine man, Isa-tai, conducted a desultory siege for about four or five days but made no other attacks. On the second day a group of fifteen or twenty of the Cheyennes appeared on a high mesa overlooking the post. Their appearance led to the famous gunshot of William (Billy) Dixon, when Dixon, inside the stockade, shot an Indian off his horse seven-eighths of a mile away. Hunters in the vicinity were notified of the attack on Adobe Walls, and by the end of the fifth day there were more than 100 men at Adobe Walls. A rescue party arrived after the Indians had given up the fight and retired. The significance of this fight is that it led to the Red River War of 1874-75, which resulted in the final relocation of the Southern Plains Indians to reservations in what is now Oklahoma.
Site Location

Adobe Walls Site, Hutchinson County, Texas

Site Dimensions
East Line = 3300 Ft.
West Line = 3800 Ft.
South Line = 1600 Ft.

Site Area
2,630,000 Sq. Ft.

North Latitude
35 degrees 54 minutes 3 seconds
West Longitude
101 degrees 10 minutes 10 seconds

Elevation
3,054 Ft. (above sea level)

Distances to towns and cities:
Stinnett: 16 miles
Borger: 21 miles
Amarillo: 60 miles
Lubbock: 165 miles
Dallas: 330 miles
Site Views

Adobe Walls Site, Hutchinson County, Texas

Site Photographs

Panoramic from atop mesa. P1

Adobe Walls Site, Hutchinson County, Texas

Site Photographs
P1-Panoramic from atop mesa.
P2-West from atop mesa
P3-North from atop mesa.
P4-South from atop mesa.
P5-Fire pit on top of mesa.
P6-East-Southeast from atop mesa.
P7-Southeast from atop mesa.
P8-East from atop mesa.
P9-East mesa.
P10-First Adobe Walls Battle Marker
P11-Native American Historical Marker
Site Photographs

West from atop mesa. P2

North from atop mesa. P2

South from atop mesa. P3

Fire pit on top of mesa. P4
Site Photographs

East-Southeast from atop mesa. P6

Southeast from atop mesa. P7

East from atop mesa. P8

East mesa. P9
Site Photographs

First Adobe Walls Battle Marker, P10

Native American Historical Marker, P11
Climate
Borger, Tx

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Demographics

City's in Hutchinson County

Adjacent Counties

Hansford County (north)
Roberts County (east)
Carson county (south)
Moore County (west)

Major Highways

State Highway 136 (Texas)
State Highway 207 (Texas)
State Highway 152 (Texas)

City's in Hutchinson County

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<th>City</th>
<th>Population</th>
<th>Total Area</th>
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<td>2,235</td>
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<td>Borger, Texas</td>
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<td>Other/Rural Areas</td>
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Population Total Area

Roberts County (east) 203 .01 Sq. Mi.
Carson county (south) 2,235 1.2 Sq. Mi.
Hansford County (north) 434 2.0 Sq. Mi.
Moore County (west) 14,032 8.7 Sq. Mi.

Surrounding Cities and Towns
Precedents

Chikatsu-Asuka Historical Museum (1994)
Osaka, Japan
Tadao Ando
Precedents

Vulcania: The European Centre of Volcanism (2000)
St. Ours-les-Roches
Hans Holien
Precedents

Fukui Prefectural Dinosaur Museum (2000)
Katsuyama City
Kisho Kurokawa

Interior View Photograph

Exterior View Photograph

Section 1

Section 2

Floor Plan
Endnotes

1 Handbook of Texas Online, s.v. ","
   http://www.tsha.utexas.edu/handbook/online/articles/K
2 Ibid.
3 Handbook of Texas Online, s.v. ","
   http://www.tsha.utexas.edu/handbook/online/articles/Ii/
4 Ibid.
5 Ibid.
6 Handbook of Texas Online, s.v. ","
   http://www.tsha.utexas.edu/handbook/online/articles/A
   A/qea1.html (accessed October 24, 2006).
7 Ibid.
8 Ibid.
9 Ibid.
10 Handbook of Texas Online, s.v. ","
   http://www.tsha.utexas.edu/handbook/online/articles/A
   A/bta1.html (accessed October 24, 2006).
11 Ibid.
12 Ibid.
Design Process Section

Schematics.............................................................99
- Schematic Design 1
- Schematic Design 2

Preliminaries..........................................................103
- Preliminary Design
Schematic Design 1

Design 1

The first schematic design focused on large patron areas that the galleries could wrap around. The purpose for this layout is so museum patrons could walk in and out of any gallery. At the same time patrons could follow a path in the galleries and view the events chronologically. The museum has a full restaurant and food service area on the northwest part of the building. This area is located on a direct axis from the entrance and is in close proximity with the restrooms. Near the entrance a gift shop can be found. This shop will be visible to people entering and exiting the museum.

The second floor contains all administration offices along with service areas (server, electrical, etc.). A research center and library will also be housed on this level. The research center will aid researchers and archeologist that travel to this area. Due to its remote location this is an ideal fit for the museum.

The site for this schematic design is located on the second battle ground on the west side of the county road.

On the site there are three markers that explain the significance of the area and patrons will be able to visit them during visits to the museum. The entrance to the museum will be on the east side of the building looking back at the mesas in the Canadian River Valley.
Schematic Design 1

Design 1 Response

The first scheme has many problems with it. The first major problem is that the site is the actual war ground from the second battle. According to the Texas Historical Commission no changes to the site are allowed. Another problem with this site is that there are a few graves present and archeologist have not fully excavated this site.

The building has its own set of problems as well. The gallery arrangement makes the patron lobby a very large area. The size of the lobby will not be feasible for a museum of this size. The galleries should have a better flow through them instead of a in-and-out approach. The restaurant is also to large for this project and should be a small café. The administration and research area have a nice flow and are separated, but are still to large for a museum of this size. The museum has an urban context to it and does not appear to be a rural museum.
Design 2

The second scheme lays out a different concept and plan. This plan is only one floor and is spread out over the site. The site is located on the same piece of land that design one was on.

This design’s galleries are arranged in the same way that design one has. The lobby area is not as large. The theater and shop are located in this area. The patrons have the same opportunity to move through the galleries as in the first design. The restaurant is the same size as the previous design, but the food preparation area is designed for easy access for deliveries. The restrooms are in a great location for both the restaurant and the lobby for patrons to be close to at all times.

The administration areas and research center are located in a separate location. The service areas are located close to the administration for easy access to them.

The lobby and hallways have been designed with glass roofs so that daylight will provide most of the light for the museum. The two large voids that split the museum are to offer a feeling of division. This symbolizes the division between the Native Americans and Anglo-Americans.
Schematic Design 2

Design 2 Response

The first major problem is that the site is the actual war ground from the second battle. According to the Texas Historical Commission no changes to the site are allowed. Another problem with this site is that there are a few graves present and archeologist have not fully excavated this site.

The building has many problems, but also has a great concept behind. The reviewers did like the concept about splitting the two areas with large voids; however the elevations on these sides were plain. The elevations also did not have a good sense of human scale. The glass roofs proved to be too much of a problem in this area. Although this area gets little rain, the roofs would have trouble draining the water off of them. The extreme heat of the area was another factor taken into consideration. The gallery area had smaller square footage yet there is still a lot of wasted space in the area. The administration and service areas were designed well, but service roads to the collection areas would take away from the south elevation.
Preliminary Design

For the preliminary design phase the site was moved to the east side of the road. The site is now against the mesas. The reason for the move were because of the historic battle grounds and this will give museum patrons a better view of the site.

This design faces show the two schematics becoming one. The building is split into two parts with a large void down the middle. When patrons enter they approach from the east and find themselves in step-backed ceiling lobby. On axis is the elevator lobby and to the south is the gallery area. The north side of the building has the administration area and library/research area.

The High Art Museum in Atlanta is the primary precedents I used for this design. The noticeable gallery is where this precedents is shown. The gallery has a large atrium and the galleries are stepped back by floors. In wayfinding this is an example of how one can see where they are going and then look back to see where they have been. The gallery area has three different levels and each stair to next level reveals views to the war grounds. The third level allows museum patrons to go onto a balcony that looks over the entire site.

The exterior of the building contains many curtain walls for maximum views and natural lighting away from the galleries. Concrete panels will cover the exterior of the building.
Preliminary Design

Legend

1 Admin. Office 3
2 Admin. Office 2
3 Admin. Office 1
4 Employee Lounge
5 Museum Curator Office
6 Janitor Closet 1
7 Storage
8 Private Men’s Restroom
9 Private Women’s Restroom
10 Security Storage
11 Security Center
12 Server Room
13 Electrical Room
14 Mechanical Room
15 Information Center
16 Collection Storage/Work Area
17 Loading Dock
18 Theater
19 Men’s Restroom
20 Women’s Restroom
21 Lobby/Gift Area
22 Native American Gallery
23 Comanche Gallery
24 Kiowa Gallery
25 Buffalo Gallery
26 Horse Gallery
27 Adobe Walls History Gallery
28 Outdoor Reading Area
29 Library Research Center
30 Learning Center
31 Food Service Area
32 Food Storage Area
33 Outdoor Dining
34 Museum Cafe
35 Adobe Walls First Battle Gallery
36 Adobe Walls Second Battle Gallery

FIRST FLOOR PLAN
Preliminary Design

Legend
1. Admin. Office 3
2. Admin. Office 2
3. Admin. Office 1
4. Employee Lounge
5. Museum Curator Office
6. Janitor Closet 1
7. Storage
8. Private Men’s Restroom
9. Private Women’s Restroom
10. Security Storage
11. Security Center
12. Server Room
13. Electrical Room
14. Mechanical Room
15. Information Center
16. Collection Storage/Work Area
17. Loading Dock
18. Theater
19. Men’s Restroom
20. Women’s Restroom
21. Lobby/Gift Area
22. Native American Gallery
23. Comanche Gallery
24. Kiowa Gallery
25. Buffalo Gallery
26. Horse Gallery
27. Adobe Walls History Gallery
28. Outdoor Reading Area
29. Library Research Center
30. Learning Center
31. Food Service Area
32. Food Storage Area
33. Outdoor Dining
34. Museum Cafe
35. Adobe Walls First Battle Gallery
36. Adobe Walls Second Battle Gallery

SECOND FLOOR PLAN
Preliminary Design

Legend

1 Admin. Office 3
2 Admin. Office 2
3 Admin. Office 1
4 Employee Lounge
5 Museum Curator Office
6 Janitor Closet 1
7 Storage
8 Private Men’s Restroom
9 Private Women’s Restroom
10 Security Storage
11 Security Center
12 Server Room
13 Electrical Room
14 Mechanical Room
15 Information Center
16 Collection Storage/Work Area
17 Loading Dock
18 Theater
19 Men’s Restroom
20 Women’s Restroom
21 Lobby/Gift Area
22 Native American Gallery
23 Comanche Gallery
24 Kiowa Gallery
25 Buffalo Gallery
26 Horse Gallery
27 Adobe Walls History Gallery
28 Outdoor Reading Area
29 Library Research Center
30 Learning Center
31 Food Service Area
32 Food Storage Area
33 Outdoor Dining
34 Museum Cafe
35 Adobe Walls First Battle Gallery
36 Adobe Walls Second Battle Gallery

Third Floor Plan
Preliminary Design

Preliminary Design Response

The moved site was very important to the preliminary design. This was a noticed change that helped the project. The building does not disturb any of the historical site and more views are available from the new site.

The building did not have good remarks. It appeared to be in an urban setting instead of a rural museum design. The wayfinding with the stepped galleries was well received; however once again this was to much wasted space. The administration and research areas were divided nicely, but the building appeared to be two separate buildings that were in contrast instead of joining with the large solid wall.

The approach to the entrance was not liked because it took patrons directly to the elevators. Also the entry corridor is much to long. Instead entering with a café or shop would have been more welcoming instead of an office look. This design was scraped and a new design began to emerge as the final presentation was two months away.
Final Proposal Section

Final Design

- Site Plan
- Floor Plans
- Area Plans
- Structure and HVAC
- Building Sections
- Elevations
- Perspectives
- Presentation Boards
Final Proposal Section

Site Design
The site is nestled against one of the sixty-foot mesas that surround the area. The approach to the building extends the length of the parking lot. This approach is on direct axis to the entrance of the building with a role of vertical elements (exterior lights) guiding the way. This path is paved with brown paver stone with a strip of concrete down the middle. This strip is another way of directing people into the museum. These elements are described in wayfinding as landmarks and paths.

The south side of the building has an outdoor café along with a path to a gathering area. The gathering area is on the east side (circle represents the way Native Americans set up camps) and is meant for adults and children. This will be an ideal area for school children to have lunch or outdoor celebrations.

The parking lot is medium size due to the low number of occupants at any one time. The lot has a place for school buses to park and enough area for them to be able to exit easily. Following the same paths as school buses, loading trucks have their own path. The path leads to the collections loading dock, and can be used for deliveries to the food preparation area.

From the building both battle sites are visible along with the famous mesa. To the north and south groves of elm trees can be seen making this a peaceful, rural area.
Floor Plans

Upon entering the museum three axis are present. The first axis is from the front entrance doors to the café. This axis is blocked by a glass wall that is in between the lobby and café. This serves as a sound and privacy barrier. The next axis is from the elevator lobby to the theater. This axis runs left to right after entry. The last axis runs north to south from the first gallery to the gift shop. This axis serves as a direct view into the gift shop after exiting the last gallery. With this axis you also have a direct line into the first gallery that should be traveled through.

The galleries are designed so that patrons enter the first one and travel chronologically through the museum gallery. At the east end of the gallery are the collection areas. The museum should have collection storage, collection workshop, and a loading dock for the artifacts.
Final Proposal Section

Legend
1. MUSEUM ENTRY
2. INFORMATION CENTER
3. GIFT SHOP OFFICE
4. FOOD STORAGE
5. FOOD PREP. AREA
6. THEATER
7. NATIVE AMERICAN GALLERY
8. COMANCHE GALLERY
9. KIOWA GALLERY
10. COLLECTION STORAGE
11. COLLECTION WORKSHOP
12. LOADING DOCK
13. HORSE/BUFFALO GALLERY
14. 1ST BATTLE GALLERY
15. 2ND BATTLE GALLERY
16. MEN’S RR
17. WOMEN’S RR
18. ELEVATOR LOBBY
19. ELECTRICAL RM.
20. MUSEUM CAFE
21. OUTDOOR CAFE
22. JANITORS STORAGE
23. JANITORIAL
24. SERVER ROOM
25. SECURITY CENTER
26. SECURITY STR.
27. CURATOR OFFICE
28. EMPLOYEE LOUNGE
29. WORK ROOM
30. GENERAL STORAGE
31. PRIVATE MEN’S RR
32. PRIVATE WOMEN’S RR
33. MUSEUM OFFICE 1
34. MUSEUM OFFICE 2
35. MUSEUM OFFICE 3
36. MEN’S RR
37. WOMEN’S RR
38. LIBRARY/RESEARCH
39. OUTDOOR READING AREA
40. PLUMBING RM.
41. MECHANICAL RM.

Floor Plans Cont.

The administration areas are separated from the rest of the museum. The museum has three regular offices and one curator office. Around the administration area are the service areas. An electrical, sewer, and security area is located in this area. The security area is located directly after you enter the administration area.

The small café is located on the main axis after you enter the building. The café has a small food service area and small freezer storage. The café also has an outdoor patio that visitors can visit.

The second floor has a research area with a small library. The research area will be used for anyone who wants to research the Adobe Walls area or for the archeologists that sometimes visit the area. The second floor has an outdoor reading area for patrons to relax and view the site. The basement will be used for all mechanical systems and water heating devices. The HVAC units will be placed here so that large units will not be placed on the roof.
The Last Strong Hold
Native American Museum

Final Proposal Section

NATIVE AMERICAN GALLERY
- Gallery dedicated to Native American life from the beginning of history

COMANCHE GALLERY
- Gallery dedicated to the life of the Comanche Indians and why they lived in the area of Adobe Walls

KIOWA GALLERY
- Gallery dedicated to the life of the Kiowa Indians and why they lived in the area of Adobe Walls

ANIMAL GALLERY
- Gallery to for the education of animals that lived in the area of Adobe Walls and how the Native Americans in the area thrived from them

FIRST BATTLE GALLERY
- Gallery for the education of the First Battle of Adobe Walls

SECOND BATTLE GALLERY
- Gallery for the education of the Second Battle of Adobe Walls

THEATER
- Museum patrons will be able to begin the museum experience with a film about Adobe Walls

MUSEUM GIFT SHOP
- Shop for merchandise that is significant to the museum and the Adobe Walls site

MUSEUM CAFÉ
- Café for museum patrons to rest or have dinner before driving to their designations

RESEARCH/LIBRARY
- The research area will be used as a library or an area that research about the area can be conducted
Structural and HVAC Plans

The structure of the building will be concrete masonry units with spot columns for support. CMU load bearing walls will be used for all exterior walls. Interior partitions will be six inch steel studs with gypsum wall board. Wide flange beams with open web steel joists will be used for the roofs and floors.

The HVAC system is a four pipe system that will allow both heat and air conditioning to be used on the same day. Two different units will be used for the building, one for the administration area and the other for the gallery area. Therefore one can be on while the other off on certain days where one area is vacant.

The structure will be easily installed on the site due to using masons and small machinery. This area is a rural area that heavy machinery could not get to.
Final Proposal Section

BUILDING SECTION 1

BUILDING SECTION 2

BUILDING SECTION 3
Final Proposal Section

West Elevation
The west elevation shows the vast stone paneled wall. The two tall windows provide light for the two planters that are located beside the elevator shafts.

East Elevation
The east elevation shows the different use of brick, limestone, and stone panels. This reveals the different areas of the building from the exterior. The outdoor café is shown in this elevation. A large shading device protects this area.

South Elevation
The south elevation shows the outdoor reading area and the shading device that protects the outdoor café. The large outdoor area are also shown to the right. This area is protected by a circle of trees.

North Elevation
The north elevation has the entry from the parking lot. The stone panels on the gallery side show the tall ceilings and daylight that comes through the windows.
Final Proposal Section

Perspectives
The aerial perspective shows the entire site. The area to the south shows a good view of the outdoor areas. This perspective shows what the site looks like from the top of the closes mesa. The bottom perspective shows the entry sign. This perspective also shows the lights that follow the stone path. The retaining walls are also shown in this view with the stone covering them.
Final Proposal Section

Perspective
The top perspective shows the outdoor café from the inside café glass. In this view, the large shading device is shown shading the area. The different types of stone and paver stone are shown. The bottom left perspective shows the outdoor café and the large limestone wall. The outdoor reading area is located directly above the café. From this area, the entire site can be seen. The bottom right perspective shows the interior of the café. In this perspective, the entry can be seen through the glass. This is the axis that is cut off so people can see how to get to the café, but give it some privacy.
Final Proposal Section

THE LAST STRONG HOLD
THE STORY OF ADOBE WALLS

MATTHEW A. HART
MARCH 2007
INSTRUCTOR: GARY SMITH
ADVISOR: DR. CLIFTON ELLIS

Context
Facility
Theory Proposal

NATIVE AMERICAN MUSEUM
HUTCHINSON COUNTY, TEXAS

In recent years, the Native American Museum has become a popular destination for tourists and cultural enthusiasts. The museum houses a vast collection of artifacts and exhibits that showcase the rich history and culture of the Native American people. The building itself is a modern interpretation of traditional Native American architecture, featuring adobe walls and natural materials. The design is intended to reflect the values and traditions of the Native American community.

THE LAST STRONG HOLD

This project is a response to the need for a new museum in Hutchinson County, Texas. The proposed design is inspired by the adobe walls of traditional Native American architecture. The building will be constructed using sustainable materials and techniques, reflecting the values of environmental stewardship.

THERAPEUTIC STATEMENT

The design of the museum is intended to provide a healing and restorative environment for visitors. The use of adobe walls and natural materials is intended to create a sense of tranquility and serenity. The museum will also serve as a space for cultural education and community outreach.

FACILITY SCHEDULE

The proposed museum will include exhibits on the history of the Native American community in Hutchinson County, as well as a research library and a community gathering space. The building will be designed to be energy-efficient and to have a minimal environmental impact.

QUALIFYING BOARD

This project was presented to the qualifying board as part of the final proposal for the Native American Museum in Hutchinson County, Texas. The design was well-received and received positive feedback from the board members.
Theory Images List

A1-Maze
A2-Decision Plan Diagram
A3-Sugar Cubes
A4-Concrete Grills
A5-Nakagin Capsule Building
A6-Nakagin Capsule Building
A7-Duck-Rabbit Diagram
A8-Cartoon Turtles Copulating
A9-Sydney Opera House
A10-Casa Batllo
A11-Casa Batllo
A12-Past Museum Layout
A13-Contemporary Museum Layout
A14-Buffalo&Abstract
A15-Tipi&Floor Plan
A16-Heat Cold Exchanger
A17-Light and Rain Catcher
A18-Center Atrium, High Museum of Art
A19-High Museum of Art
A20-Ground Floor Plan, High Museum of Art
A21-Interior Perspective, High Museum of Art
A22-Section, High Museum of Art
A23-North Elevation, High Museum of Art
A24-Sainsbury Wing at The National Gallery
A25-South Elevation, Sainsbury Wing at The National Gallery
A26-Section, Sainsbury Wing at The National Gallery
A27-Section, Sainsbury Wing at The National Gallery
A28-Exterior Image, Guggenheim
A29-Atrium, Guggenheim
A30-Exterior Image, Guggenheim
A31-Exterior Night Shot, Guggenheim
A32-Gift Box Metaphor, Guggenheim
A33-Goose Metaphor, Guggenheim
A34-Ship and Women Metaphor, Guggenheim
A35-Group of Fish Metaphor, Guggenheim
A36-Canopy North Elevation, Guggenheim
A37-Floor Plan, Guggenheim
A38-North and South Elevation, Guggenheim
# Facilty Images List

<table>
<thead>
<tr>
<th>Number</th>
<th>Image Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>Belvedere Palace</td>
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<tr>
<td>B2</td>
<td>Museo Sacro</td>
</tr>
<tr>
<td>B3</td>
<td>British Museum</td>
</tr>
<tr>
<td>B4</td>
<td>Uffizi Gallery</td>
</tr>
<tr>
<td>B5</td>
<td>Buffalo Hunters</td>
</tr>
<tr>
<td>B6</td>
<td>Buffalo Hides</td>
</tr>
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<td>B7</td>
<td>Buffalo</td>
</tr>
<tr>
<td>B8</td>
<td>War Paint</td>
</tr>
<tr>
<td>B9</td>
<td>Comanche Chief, Quanah Parker</td>
</tr>
<tr>
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</tr>
<tr>
<td>B11</td>
<td>Lone Wolf with Wife</td>
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<td>Floor Materials</td>
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<td>Bright Lighting</td>
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<td>B14</td>
<td>Hidden from normal view.</td>
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<tr>
<td>B15</td>
<td>Sun Dance</td>
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<tr>
<td>B16</td>
<td>Shield</td>
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<td>B17</td>
<td>Tipi</td>
</tr>
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<td>B18</td>
<td>Space</td>
</tr>
<tr>
<td>B19</td>
<td>Security 1</td>
</tr>
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<td>Security 2</td>
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<td>Security 3</td>
</tr>
<tr>
<td>B22</td>
<td>Security Keypad</td>
</tr>
<tr>
<td>B23</td>
<td>Integrated Video System</td>
</tr>
<tr>
<td>B24</td>
<td>Lobby Relationship Diagram</td>
</tr>
<tr>
<td>B25</td>
<td>Native American Gallery Relationship Diagram</td>
</tr>
<tr>
<td>B26</td>
<td>Comanche Gallery Relationship Diagram</td>
</tr>
<tr>
<td>B27</td>
<td>Kiowa Gallery Relationship Diagram</td>
</tr>
<tr>
<td>B28</td>
<td>Buffalo Gallery Relationship Diagram</td>
</tr>
<tr>
<td>B29</td>
<td>Horse Gallery Relationship Diagram</td>
</tr>
<tr>
<td>B30</td>
<td>Adobe Walls History Gallery Relationship Diagram</td>
</tr>
<tr>
<td>B31</td>
<td>First Battle of Adobe Walls Gallery Relationship Diagram</td>
</tr>
<tr>
<td>B32</td>
<td>Second Battle of Adobe Walls Gallery Relationship Diagram</td>
</tr>
<tr>
<td>B33</td>
<td>Museum Café Relationship Diagram</td>
</tr>
<tr>
<td>B34</td>
<td>Museum Gift Shop Relationship Diagram</td>
</tr>
<tr>
<td>B35</td>
<td>Restrooms Relationship Diagram</td>
</tr>
<tr>
<td>B36</td>
<td>Research Center and Library Relationship Diagram</td>
</tr>
<tr>
<td>B37</td>
<td>Learning Center Relationship Diagram</td>
</tr>
<tr>
<td>B38</td>
<td>Theater Relationship Diagram</td>
</tr>
<tr>
<td>B39</td>
<td>Security Center Relationship Diagram</td>
</tr>
<tr>
<td>B40</td>
<td>Server Room Relationship Diagram</td>
</tr>
<tr>
<td>B41</td>
<td>Electrical Room Relationship Diagram</td>
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<td>B42</td>
<td>Mechanical Room Relationship Diagram</td>
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<tr>
<td>B43</td>
<td>Employee Lounge Relationship Diagram</td>
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<tr>
<td>B44</td>
<td>Private Employee Restrooms Relationship Diagram</td>
</tr>
<tr>
<td>B45</td>
<td>Janitorial Closet 1 Relationship Diagram</td>
</tr>
<tr>
<td>B46</td>
<td>Janitorial Closet 2 Relationship Diagram</td>
</tr>
<tr>
<td>B47</td>
<td>General Storage Relationship Diagram</td>
</tr>
<tr>
<td>B48</td>
<td>Collections Storage Relationship Diagram</td>
</tr>
<tr>
<td>B49</td>
<td>Food Service Area Relationship Diagram</td>
</tr>
<tr>
<td>B50</td>
<td>Museum Shop Office Relationship Diagram</td>
</tr>
<tr>
<td>B51</td>
<td>Museum Curator Office Relationship Diagram</td>
</tr>
<tr>
<td>B52</td>
<td>Administration Offices Relationship Diagram</td>
</tr>
<tr>
<td>B53</td>
<td>Collection Workshop Relationship Diagram</td>
</tr>
<tr>
<td>B54</td>
<td>Security Storage Room Relationship Diagram</td>
</tr>
<tr>
<td>B55</td>
<td>Food Storage Room Relationship Diagram</td>
</tr>
<tr>
<td>B56</td>
<td>Rock and Roll Hall of Fame and Museum</td>
</tr>
<tr>
<td>B57</td>
<td>Interior Photograph of Atrium</td>
</tr>
<tr>
<td>B58</td>
<td>Level L (Plaza)</td>
</tr>
<tr>
<td>B59</td>
<td>Level G (Promenade)</td>
</tr>
<tr>
<td>B60</td>
<td>Level 2</td>
</tr>
<tr>
<td>B61</td>
<td>Building Section</td>
</tr>
<tr>
<td>B62</td>
<td>Exterior Photograph Rock &amp; Roll Hall of Fame and Museum</td>
</tr>
<tr>
<td>B63</td>
<td>Level 3</td>
</tr>
<tr>
<td>B64</td>
<td>Level 5</td>
</tr>
<tr>
<td>B65</td>
<td>Level 6</td>
</tr>
<tr>
<td>B66</td>
<td>U. S. Holocaust Memorial Museum</td>
</tr>
<tr>
<td>B67</td>
<td>U. S. Holocaust Memorial Museum</td>
</tr>
<tr>
<td>B68</td>
<td>West Elevation</td>
</tr>
</tbody>
</table>
Facility Images List

B69-North Elevation
B70-South Elevation
B71-Concourse Level
B72-First Floor Plan
B73-Second Floor Plan
B74-Transverse Section
B75-Third Floor Plan
B76-Fourth Floor Plan
B77-Fifth Floor Plan
B78-Route 66 Museum
B79-WOW Room
B80-Route 66 Museum
B81-Diner Exhibit
B82-Floor Plan
## Context Images List

<table>
<thead>
<tr>
<th>Image Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Map of Texas</td>
</tr>
<tr>
<td>C2</td>
<td>Map of Texas Panhandle</td>
</tr>
<tr>
<td>C3</td>
<td>Map of Native American Nations in Texas</td>
</tr>
<tr>
<td>C4</td>
<td>Plains Indian's Hair Styles</td>
</tr>
<tr>
<td>C5</td>
<td>Lone Wolf with Wife (1855)</td>
</tr>
<tr>
<td>C6</td>
<td>Yellow Buffalo</td>
</tr>
<tr>
<td>C7</td>
<td>Comanche Men</td>
</tr>
<tr>
<td>C8</td>
<td>Comanches on Horseback</td>
</tr>
<tr>
<td>C9</td>
<td>Bison Grazing</td>
</tr>
<tr>
<td>C10</td>
<td>Kit Carson</td>
</tr>
<tr>
<td>C11</td>
<td>Kiowa Chief Santana</td>
</tr>
<tr>
<td>C12</td>
<td>The Battle of Adobe Walls Painting, (1908)</td>
</tr>
<tr>
<td>C13</td>
<td>Native American Monument Adobe Walls Site</td>
</tr>
<tr>
<td>C14</td>
<td>Adobe Walls Site, Hutchinson County, Texas</td>
</tr>
<tr>
<td>C15</td>
<td>Adobe Walls Site, Hutchinson County, Texas</td>
</tr>
<tr>
<td>C16</td>
<td>Panoramic from atop mesa. P1</td>
</tr>
<tr>
<td>C17</td>
<td>Adobe Walls Site, Hutchinson County, Texas</td>
</tr>
<tr>
<td>C18</td>
<td>West from atop mesa. P2</td>
</tr>
<tr>
<td>C19</td>
<td>North from atop mesa. P2</td>
</tr>
<tr>
<td>C20</td>
<td>South from atop mesa. P3</td>
</tr>
<tr>
<td>C21</td>
<td>Fire pit on top of mesa. P4</td>
</tr>
<tr>
<td>C22</td>
<td>East-Southeast from atop mesa. P6</td>
</tr>
<tr>
<td>C23</td>
<td>Southeast from atop mesa. P7</td>
</tr>
<tr>
<td>C24</td>
<td>East from atop mesa. P8</td>
</tr>
<tr>
<td>C25</td>
<td>East mesa. P9</td>
</tr>
<tr>
<td>C26</td>
<td>First Adobe Walls Battle Marker. P10</td>
</tr>
<tr>
<td>C27</td>
<td>Native American Historical Marker. P11</td>
</tr>
<tr>
<td>C28</td>
<td>Predominate Winds in Mar.</td>
</tr>
<tr>
<td>C29</td>
<td>Predominate Winds in Jun.</td>
</tr>
<tr>
<td>C30</td>
<td>Predominate Winds in Sep.</td>
</tr>
<tr>
<td>C31</td>
<td>Predominate Winds in Dec.</td>
</tr>
<tr>
<td>C32</td>
<td>Surrounding Cities and Towns</td>
</tr>
<tr>
<td>C33</td>
<td>Aerial Photograph</td>
</tr>
<tr>
<td>C34</td>
<td>Exterior View Photograph</td>
</tr>
<tr>
<td>C35</td>
<td>Longitudinal Section 1</td>
</tr>
<tr>
<td>C36</td>
<td>Longitudinal Section 2</td>
</tr>
<tr>
<td>C37</td>
<td>Ground Floor Plan</td>
</tr>
<tr>
<td>C38</td>
<td>Basement Floor Plan</td>
</tr>
<tr>
<td>C39</td>
<td>Exterior View Photograph</td>
</tr>
<tr>
<td>C40</td>
<td>Axon Sketch</td>
</tr>
<tr>
<td>C41</td>
<td>Section 1</td>
</tr>
<tr>
<td>C42</td>
<td>Section 2</td>
</tr>
<tr>
<td>C43</td>
<td>Section 3</td>
</tr>
<tr>
<td>C44</td>
<td>Site Plan</td>
</tr>
<tr>
<td>C45</td>
<td>Interior View Photograph</td>
</tr>
<tr>
<td>C46</td>
<td>Exterior View Photograph</td>
</tr>
<tr>
<td>C47</td>
<td>Section 1</td>
</tr>
<tr>
<td>C48</td>
<td>Section 2</td>
</tr>
<tr>
<td>C49</td>
<td>Floor Plan</td>
</tr>
</tbody>
</table>
Design Process Images List

D1- Schematic Design 1 First Floor Plan
D2- Schematic Design 1 Second Floor Plan
D3- Schematic Design 1 Site Plan
D4- Schematic Design 1 Perspective
D5- Schematic Design 2 First Floor Plan
D6- Schematic Design 2 Site Plan
D7- Schematic Design Perspective 1
D8- Schematic Design Perspective 2
D9- Schematic Design Perspective 3
D10- Preliminary Design Southwest Perspective 1
D11- Preliminary Design West Elevation
D12- Preliminary Design South Elevation
D13- Preliminary Design North Elevation
D14- Preliminary Design Southwest Perspective 2
D15- Preliminary Design First Floor Plan
D16- Preliminary Design Second Floor Plan
D17- Preliminary Design Third Floor Plan
D18- Preliminary Design Northwest Perspective
D19- Preliminary Design Southwest Perspective
D20- Preliminary Design West Perspective
Final Proposal Images List

E1- Final Proposal Site Plan
E2- Final Proposal Basement Plan
E3- Final Proposal First Floor Plan
E4- Final Proposal Second Floor Plan
E5- Final Proposal First Floor Area Plan
E6- Final Proposal Second Floor Area Plan
E7- Final Proposal Foundation Detail
E8- Final Proposal Floor Connection Detail
E9- Final Proposal Parapet Detail
E10- Final Proposal First Floor Structural and HVAC Plan
E11- Final Proposal Basement Structural and HVAC Plan
E12- Final Proposal Second Floor Structural and HVAC Plan
E13- Final Proposal Wall Section
E14- Final Proposal Building Section 1
E15- Final Proposal Building Section 2
E16- Final Proposal Building Section 3
E17- Final Proposal West Elevation
E18- Final Proposal East Elevation
E19- Final Proposal South Elevation
E20- Final Proposal North Elevation
E21- Final Proposal Aerial Perspective
E22- Final Proposal North Perspective
E23- Final Proposal Outdoor Café Perspective 1
E24- Final Proposal Outdoor Café Perspective 2
E25- Final Proposal Café Perspective
E26- Qualifying Board
E27- Final Board