

If You Build It, They Will Come

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INTRODUCTION

People who live in cities, small towns, or rural frontiers, all have distinctive requirements for the buildings they choose. What choices are made depend upon a variety of factors: climate, type of soil, access to building materials, cultural and historical values, and aesthetic issues. First settlements use surrounding resources: log cabins in the woods, sod houses on the prairie, mud brick in the desert. More mature areas, with established transportation systems, have access to other resources and more sophisticated tools and can take other aspects into consideration. The proposed use of the building inspires builders to look for other materials, artists to design meaningful clues, architects to design space to be inviting or intimidating, welcoming or forbidding.

BACKGROUND

Houston had several distinct disadvantages in 1836, the year it was founded. People who read the Allen brothers' advertisements must have been severely disappointed when they first encountered the reality: long, hot summers, small streams, or bayous, of inconsistent navigability, clay soils hard to plow and sow, and an incredible number of small but persistent mosquitoes. Yet there was plenty of land, numerous giant trees to fell, possible trade routes with nice flat land on which to build roads to the larger rivers, a huge underground aquifer, and an optimism probably born from both hope and desperation. How did they make living here tolerable? How did they manage to continue steady growth throughout the past, while other settlements failed? What kinds of living spaces and workspaces did they create that allowed them to live and work and prosper here? These questions are the same all settlements faced in the beginning. The answers the people found are in the buildings they left behind.

The Early Years

Houston is a commercial city. It is fitting that it began as an advertisement. Augustus C. and John K. Allen, supply agents during Texas' war for independence, decided to become land speculators and secure the seat of the national government for whatever land they could acquire. They bought the land around the convergence of Buffalo and White Oak Bayous, 15 miles from Galveston Bay, because no one else would sell them their land. Their advertisement, coupled with the fortuitous city name, and the fact that J. K. Allen was a member of the Texas Legislature and managed to have the new capital located there, saw the growth of a wooded prairie from one inhabitant to 1500 in less than one year. The city was laid out in a grid pattern, similar to Philadelphia and appropriate to the flat landscape, with two public squares, one as a marketplace, one for the not yet existent courthouse.

What types of dwellings did they build? The first dwellings were canvas tents with rough wood poles made from saplings for support. The next were the rough log cabins, one room with a fireplace, a plank door, and canvas covers for the window. Cabin walls were notched to fit and the cracks were filled with clay, abundant in the Houston soil. In most frontier houses, this cabin was considered temporary until the necessary tools and time arrived to plane the wood to make planks for smooth, finished doors, floors, and walls. Clapboards covered the exterior; boards overlapping each other, with plaster interiors. The original cabin would be supplemented with another with a narrow space between the two. Called a dogtrot house, the juxtaposition would create a breezeway, and provide a cooling breeze between the two cabins, (the Venturi effect) something most welcome in Houston's climate. Eventually, this breezeway would be closed to make a hallway, with a door at one or both ends so that the breeze could still be captured when necessary, and a stairway allowing access to the now enclosed attic. The shape of the roof would also change, with dormer windows that could be opened in the summer to capture the breeze during the hot nights. As more people moved to Houston and a sawmill and cotton mills were built, people used the same floor plan while building frame houses. Expanding this design by adding two more rooms behind the main room of each cabin, with shared fireplaces, created the four square Georgian plan. Immigrants also brought floor plans from other parts of the country, including the New England cottage style with a traditional pitched roof to lessen the weight of snow, popular despite the absence of such danger. Most houses also had a veranda, porch, or gallery at the front door, to provide an additional cool place to sit out of the sun. The wealthy settled in the plats of land around the courthouse and south of market square. Others built away from the waterfront, often living over the businesses they ran.

While there were some attempts to establish manufacturing, most businesses in early and later Houston businesses centered on trade. Houston became a place of commerce, trading goods from inland, such as cotton, lumber, hides, sugar, and livestock, for finished products such as furniture, dry goods, hardware brought up Buffalo Bayou from the port of Galveston. The first business building was a long one with several stores sharing the same walls and roof, similar to the strip shopping centers of today. Stores would have one large room in the front and a storage area behind. Buildings were also made of wood, clapboard walls for the exterior, a long veranda shading the front entrances, and a wooden sidewalk.

Early Houston was beleaguered by a number of drawbacks. Roads were unpaved, so were muddy in the rain and dusty in the dry season. An attempt to pave the roads with seashells was not successful; the dust increased and the seashells, bleached by the sun, were blindingly white. Plagues of cholera, smallpox and most commonly yellow fever caused those who could afford it to leave the town during the summer months. The capital was moved from Houston in 1839. Wild animals and unfettered livestock roamed the town. Fistfights and gunfights were not uncommon. Saloons and bordellos

outnumbered churches and schools. Houston was a frontier town, and required a frontier spirit to succeed there.

After the Civil War, citizens of Houston began to take charge. Attempts had been made to bring order previously; the first constables, two in number, were hired in 1838, and there had been attempts to establish a cultural climate with irregularly scheduled entertainment, such as locally produced plays and traveling circuses. At one time, Houston had four newspapers. Railroads had been started and encouraged. After the civil war, however, Houston began to change in earnest from a frontier town to a major city. Railroads had originally been built north of the conjunction of Buffalo Bayou and White Oaks Bayous, the original turning basin, and immigrants from Ireland, Scotland, Germany, and eastern and southern Europe moved to the other side of the tracks and built their own communities. They provided the work force for the manual labor of loading and unloading, of continuing the emphasis on trade rather than production, which marked the first few years of Houston's existence. When they made enough money, they moved to the other side of the tracks. Germantown was originally in northeast Houston. Their spires, large clock towers, peaked roofs, and decorated gables influenced houses and business buildings from the 1860s on, and culminated in the design of the second city hall, built on Market Square.

Freed slaves moved to the city to find work, and they did. John Henry "Jack" Yates prospered as a minister, and educator, and spokesperson for the African-American community. Other ex-slaves came for economic opportunities and settled south of downtown in the Third Ward and west of downtown in Freedmantown, creating their own communities. One of their architectural contributions was the row house, or shotgun house. This dwelling is three rooms behind each other, with a door between each, set in line. The shotgun description comes from the saying that with all doors open, a person could shoot a gun from the front door through the back with out hitting a wall. Others believe "shotgun" is a corruption of an African word meaning either power or peace. This type has been traced back to dwellings in West Africa. However, others adopted this type, as it also provided a breeze through the house with a minimum of materials.

The Late Nineteenth and Early Twentieth Century

By the turn of the twentieth century, Houston was a busy town, but the town businessmen and major politicians looked for ways to bring more money into the city. The Hogg brothers speculated in various ventures, and in 1923 set up a real estate development far west of downtown, called River Oaks, advertising the high terrain (about 20 more feet) and cool breezes, and large tracts for privacy and sanitation advantages. It was also a restricted neighborhood. Buffalo Bayou had been dredged to remove sand bars, and dredged again to remove snags. After a hurricane leveled Galveston in 1900, Houston city fathers obtained permission and government funds to complete the Ship Channel and create a new turning basin away from downtown, which now became a center for financial transactions that actually took place miles away. At the Cotton Exchange

Building, commodity futures were traded from New Orleans to Matagorda, for cotton fields and loaded barges miles away. Then came the oil discovery at Spindletop, and Houston was on its way. As a minor port with 17 railroads, Houston was ready and able to take on the challenge of supplying the United States with oil, as fast as it could be pumped and refined. The Ship Channel was widened and deepened to take on the barrels of black gold that would go floating by.

Buildings downtown grew taller, from three to seven to nine stories, made from brick and then wrought iron to avoid possibility of fire, which had consumed some homes and businesses and had devastated Chicago in 1871. Businesses and houses adopted Victorian embellishments, with peaked roofs, balustrades, gingerbread decorations, and columns of marble or painted wood. Fire was a constant worry in a wood frame town. Wealthier homes had summer kitchens built, whole rooms separate from the main house, to avoid cooking heat during the summer and to lessen the possibility of fire at any other times. Poorer folks cooked outside. The wealthier left town during the summer, as they always had, but still built their larger, multi room houses facing the prevailing winds from the southeast. Business architects also began to add limestone, brought by railroad, from west Texas. Homes and businesses were built narrowly, one room deep, with windows facing southeast that could be opened to catch the faint breezes. Downtown market streets shaded the sidewalks with canopies to catch a breeze and shield customers from the sun. Gaslights and rotating ceiling fans became common. With the addition of electric streetcars, people could live further from downtown, and the first planned community, the Heights, was built to the northwest. A planned community with covenants, or deed restrictions, was a new idea for Houston, and while zoning remained a hostile concept to most residents, the Heights grew and the space between the Heights and downtown filled in with other residential communities and small businesses. Homes in the Heights were designed for the working class, but some larger Victorian homes were built in the area. Most, however, were mail order Craftsman bungalows, shotgun houses, or smaller imitations of Victorian or Southern Plantation mansions. Lots in the Heights were small, but deep, with a carriage house in the back and an alley behind.

Houston was a segregated city. Immigrants settled near other immigrants. African Americans created their own communities inside the city limits. Their architecture reflected their countries of origin and the money available. Germans brought the gingerbread house.

The Julia Ideson Library building was designed in 1926 by Ralph Adams Cram, and reflects the architectural sensibilities of the time. The exterior was supposed to be totally limestone, but city budget constraints only allowed the front entrance to be covered. The rest of the building is red brick with a Spanish tile green roof. The building is L-shaped, and narrow, one room deep. The reading room has large arched windows on three sides, and high ceilings, which were necessary in 1926 to encourage cool breezes. Former reading porches have been glassed in, overlooking a partial courtyard. Buff brick married with limestone can be seen in other notable buildings from the early twentieth century,

in the Neils Esperson Building downtown, the oldest buildings at Rice University, and the homes in the Broadacres subdivision. Influential architects of this time period were William Ward Watkin, Alfred C. Finn, and Birdsall P. Briscoe. In the late 1930s and through the 1940s, the west Texas shell limestone in an Art Deco architecture style was used exclusively in City Hall, the older buildings at the University of Houston, and the original section of the Museum of Fine Arts. Downtown businesses covered their old brick with limestone façades to update them.

The Later Twentieth Century

The 32-story Neils Esperson building, topped with a terra cotta faced tempietto dominated the Houston skyline until the 1960s, when the Tenneco Building brought a new style of architecture, Bauhaus, to downtown. Located at 1010 Milam Street, it is an early example of the glass and steel skyscraper that came to dominate. Air conditioning and money to be made in the oil business brought other corporations to the city, and it seemed that each new addition required a taller, more impressive, building as a monument to prosperity. Humble, Texaco, and smaller oil companies were already in Houston, but when Tenneco and Shell arrived, the building boom was underway. Architects such as I. M. Pei and Philip Johnson were called in to construct distinctive but economical towers. When the need for a new central library became acute, the city built a three-story glass, steel and stone building right next to the old brick and limestone. The contrast in styles could not be more obvious. Those who could not afford to build downtown created their own satellite skylines to the west: Greenway Plaza, the Galleria area. (For a more complete discussion about the personalities and innovations of this time period, see Felo Mack's curriculum unit from this seminar, entitled "Exploring International Style Architecture in Houston").

With the cheap oil and the building of controlled access freeways with frontage roads, and a loop around the city, the suburbs grew further out, following the freeways. The style of homes changed. Ranch houses with brick façades or wood siding became the norm. For example, Sharpstown, 20 miles southwest of downtown, was developed on both sides of Highway 59. The developers included an air conditioned shopping mall as an incentive. Because there was no city wide zoning ordinance, smaller businesses located along side the freeways or major roadways. More neighborhood developers filled in the spaces between the freeways with planned communities, schools, and shopping areas. Older neighborhoods closer to downtown became neglected. The Astrodome, the first enclosed air conditioned stadium, opened in 1965, on the outskirts of town. The Texas Medical Center started as a small group of hospitals just south of downtown, and has become a major business asset, drawing patients from around the world.

The new freeways cut the city into four quadrants. A freeway loop around the city linked the outskirts together. The east-west freeway followed old railway lines, but the north-south freeways cut old neighborhoods in two. These neighborhoods were predominantly African-American, because the land was cheaper there and the tenants,

many renters, easier to move. A second loop outside the first was completed in the 1990s, as the outskirts moved further outward. The second loop is a tollway, reflecting the change in philosophy about the building of highways and who should fund them. The city of Houston grew larger, surrounding communities such as Bellaire and South Houston, thanks to a sympathetic state legislature that limited annexation opportunities to home rule cities in 1912 and then 1963. Parts of Houston extend into the next county.

The building boom went bust in the 1980s. The oil crises of the 1970s that had depressed the rest of the country had invigorated Houston's economy, but when the rest of the country rebounded, Houston slid into its own local recession. No new skyscrapers were built until the Enron Corporation built a second building in late 1990s. New buildings downtown concentrated on entertainment. A new convention center, a baseball park, a concert hall, a center for the performing arts, all built with public money and private donations. Downtown office buildings dating back to the turn of the century have been transformed into apartment lofts and restaurants. Many did not survive the building boom of the 1960s and 70s. In the old neglected neighborhoods surrounding downtown, there is new home construction. Small lots that held a bungalow home are being transformed into townhouses for three or more families. Some neighborhoods have resisted this change, but a lack of deed restrictions or city ordinances do not provide for legal remedies.

Conclusion

Houston at the beginning of the twenty-first century is a city in transition, as many cities are. The economy is still energy dependent, but less so than a century before. People and businesses continue to move to the outskirts and another loop around the city is being built, in stages. Houston is still a low-density city, dependent upon the automobile to move from place to place. Houston Metro, the bus system, still does not serve the entire city or the suburban communities surrounding the city that are still waiting to be annexed. A rail system linking downtown to the old Astrodome, now Reliant Arena, only connects commercial areas: Downtown business and entertainment with suburban entertainment, with stops at the Medical Center and the Museum District in the middle. A new tollway will connect west Houston with the central business district. With over 600 square miles in area, Houston still has plenty of green space. Not public green space, but still green space. One can see cows and horses grazing from the new tollway, the second loop. In some inner city neighborhoods, one can hear roosters crowing and goats bleating from small backyards. In southwest Houston, the street signs are in both English and Chinese. Immigrants from other countries and emigrants from other parts of the United States work in both low and high paying jobs. And they all aspire to live in a house, not an apartment or loft, with a car and a good school near a shopping mall and a grocery store. Homes must have at least three bedrooms and 1½ baths, although 2 is preferred, with air conditioning and at least a small yard with flowers or room to plant vegetables. What their workplace looks like seems less important than in the past. Strip centers and one

story commercial parks with brick façades on one side and aluminum siding on the rest is the most commonplace business construction at this time.

The architecture of Houston is still in flux. Attempts to preserve the past are sporadic and have had limited success. The cost of updating an older home with new plumbing and DSL connections is much less than razing and new construction. Is that not what Houston has always been about? A dynamic city, always looking to the future, with a population fixed on that one thing – the next new thing. As long as there is money in it.

THE CLASSROOM, THE STRATEGIES, AND THE ACTIVITIES

This unit is designed for a high school level United States History class. Students are expected to be relatively mobile in order to complete the outside class assignments. This unit is a companion lesson to “The Highest Law?” a curriculum unit published by the Houston Teachers Institute in 1999. That unit was designed for a geography class. The U.S. History teacher may want to look at that unit for more information about Houston and zoning issues. If the students have already been introduced to the geographic concepts in that unit by the geography teacher, the history teacher should have a head start. The activities in this unit should be spaced over several weeks to allow time to complete outside assignments.

Objectives

These objectives are directly from the Texas Essential Knowledge and Skills. They are purposefully broad. The teacher can narrow the objectives as needed for classroom use.

113.32.c.2 The student understands the political, economic, and social changes in the United States from 1877 to 1898.

113.32.c.5 The student uses geographic tools to collect, analyze and interpret data.

113.32.c.9 The student understands the impact of geographic factors on major events.

113.32.c.10 The student understands the effects of migration and immigration on American society.

113.32.c.11 The student understands the relationship between population growth and modernization on the physical environment.

113.32.c.20 The student understands the relationship between the arts and the times during which they were created.

113.32.c.23 The student understands the influence of scientific discoveries and technological innovations on daily life in the United States.

113.32.c.24 The student applies critical thinking skills to organize and use information acquired from a variety of sources, including electronic technology.

113.32.c.25 The student communicates in written, oral and visual form.

113.32.c.26 The student uses problem-solving and decision-making skills, working independently and with others, in a variety of settings.

Strategies

The basic strategy used here is to move from the general to the specific. The first activities are designed as abstract models to introduce basic information and terms. The later activities focus on specific exploration of the local area. This will require some work for both teacher and student. Teachers may choose to limit the examination of architecture to the models only, then allow the students to do their research on the Internet. Websites are listed in the resource section to facilitate that, although doing a web search using key words can be more effective as going directly to the sites listed below.

Activities

Activity One

Distribute to the students the key code and the 1865 map of River City (see Appendix). The teacher can use transparencies or create a packet containing all of the maps and key codes. Ask them to generate statements to describe the area and the placement of buildings. For example, “The school is near the church.” “The stable is next to the hotel.” “The saloon is across the street from the depot.” Allow them to speculate about the use of the unlabeled buildings. Then have them think about the type of building materials that might have been used. Have the students imagine that the town is their town. What would 1865 people have used in their area? In most cases, wood would be the answer, but the teacher can have the students speculate about other materials available in other parts of the country. In the southwest, for example, the buildings might be of adobe and clay, and in the great plains, they might be made of sod and wood, in the east of brick and wood. Ask students to consider other questions: why was there so much open land between buildings? (area to graze horses, garden plots, outhouses, etc.) Examine the maps of River City in 1881 and 1900. Ask students to describe the changes they observe. Statements should make hypotheses to explain why that building was placed in that location, and what changes that building might have experienced over time. (indoor plumbing, for example). Students will then be charged to draw a map of their local neighborhood or an important part of town, showing major building locations and use. This can be an individual assignment or group work, but the area should be specified by the teacher to insure uniformity and inclusion of certain buildings important in the history of the neighborhood, such as schools, government buildings, and major businesses. Allow students at least one weekend to do the research.

Activity Two

Students share their maps with the class. Discussion should include speculation about building materials, original owners and intended use, reasons for building placements, etc.

Activity Three

Use the Building Materials Information Sheet to discuss materials used in early times up to the present (see Appendix). Bring in examples of the types of materials available in your area. Many of these can be found at a local lumber store, the city dump, or homebuilders. The teacher can ask the students to bring in examples of building materials. Show the students the diagrams of the early types of homes, and discuss types of materials that were used in the area. The teacher can visit websites listed below for more information, or assign the students to do the research.

Activity Four

Now students should begin to examine actual building materials and architecture models available at certain times in their own location. The teacher can use the fictitious town as a timeline guide or develop one based on the local community. What did the original settlers use? What did later residents do? From where did the materials come? What tools were used in planning and building? The teacher can show the students examples of different buildings, materials, and tools used at different times, using a book or a website from the resources list. At this point the teacher should have selected some buildings in the area for the students to research. Buildings should include a variety of types: one or more businesses, a factory, one or more government buildings, tourist attractions and monuments, cemeteries, at least one building whose use as changed over time (example - a former factory made over into apartments), homes and personal living spaces. The teacher can identify the buildings for the students or allow the students to make their own choices, depending on the size of the town or city where one lives. Resources should include those listed in the resources section here and any resources the teacher has in the immediate area, such as the local library, the city or town records, a local heritage society, and the offices of local periodicals. This assignment should be given well in advance of a due date.

Activity Five

A field trip to view at least one building. This can be a homework assignment. Students should observe the building, sketch a rough diagram, list building materials, and describe the original use of the building. Allow speculation if there is no authority to consult for actual history. Houston field trip sites are included below.

Activity Six

This activity is optional, a look at political decisions that influenced buildings, such as building codes and zoning requirements. This will require teacher research of local requirements to make the presentation. Students can become interested by giving students lists of innovations (first indoor plumbing, first gas light access, first electric light, first air conditioning, first Internet wiring, etc.) to place on a timeline. Teachers may want to

bring in artifacts for illustration: kerosene lamps, coal or wood used for cooking, a quilt used in the winter, fans used in the summer, etc.

Activity Seven

Should be the presentation of student findings, and discussion that culminates in a generalization about the architecture in the town.

HOUSTON FIELD TRIPS

Background Information

The first two tours were chosen because the buildings are open to the public and because they demonstrate contrasts in architectural design. Tours in neighborhoods or businesses are problematic due to limited access. However, a walking tour of an older neighborhood can be rewarding if the right tour guide or book is on hand.

Houston Libraries

The Julia Ideson Building and the Central Library are a study in architectural contrasts over time. The Julia Ideson Building, 500 McKinney Avenue, named for the first librarian, was designed in 1926 by Ralph Adams Cram, and reflects the architectural sensibilities of the time. The exterior was supposed to be totally limestone, but city budget constraints only allowed the front entrance to be covered. There are found ornaments linking Texas to its historical past, including France, Spain, and the Confederacy, but interestingly excluding Mexico. The building is red brick, with a Spanish tile green roof. The building is L-shaped, based on a pattern of a house in which Cram had lived, and inspired by the oldest university in Spain. The main floor of the library used to be where the librarian's desk was located. People would ask the librarian for a book, and she or he would retrieve it from the stacks, then take the book to the reading room. The reading room has large arched windows on three sides, and high ceilings, which were necessary in 1926 to encourage cool breezes. The area where the books are kept are still off limits to casual readers, although now these are archives of rare books and records. It is three stories high, and books are accessed by stationary stairways and sliding ladders. Former reading porches have been glassed in, overlooking a partial courtyard and the pond across the street in front of the city hall. A WPA painting on the stairway is an interesting portrait of the original library board members. Tapestries from the 1930s hang in the main hall, illustrating the makers' ties to early Houston and the Confederacy. In a lower hallway is another WPA mural of Spanish exploration in Texas. The rear of the building is unadorned, functional. This illustrates the concept that the back of a building was less important, inconsequential, at the time it was built.

The Central Library, 400 McKinney Avenue, was built in 1976. It shares a brick plaza with the Ideson building. The front of this building faces the short L of Ideson, but is taller, and faces the older building that has turned its side to the newer structure with light and defiance. Eugene Aubry, the architect, used modern materials and ideas to create a space that is wide, open, welcoming to the public. The steel and concrete construction allowed for large expanses of glass windows on most sides, and allow the user to look out and others to look in. The building is octagonal. All resources are available for casual browsers to access.

Students can examine the use of the buildings, design, intent of architects, which makes them feel more welcome, which looks more “like a library.”

Houston Museum District

The Museum of Fine Arts Houston, 1001 Bissonnet Avenue, consists of two main buildings, one built in three-four stages over a period of 50 years, the other in one. The original building was designed by William Ward Watkin with Ralph Adams Cram, consulting, to complement the with Hermann park on one side and Rice University on the other. The original limestone entrance is no longer an entrance, but looks out on a courtyard containing contemporary sculpture, low hedges, one bench, a tribute to the Houston Garden Club, and massive oak trees. The limestone exterior includes Doric columns and a “roster of genius,” carved names of classic artists. One can see former windows that have been covered since air conditioning was installed. Skylights have also been covered. The roof is flat, with an angled, Spanish tile, faux façade. The second stage extended the wings of the museum, as money became available to expand. This was the first public art museum in Houston, funded privately the Houston Art League, a group of wealthy wives and daughters of wealthy businessmen. An extension to the back was added in the 1950s and follows the same limestone exterior. The 1970s brought a dramatic change to the exterior and interior of the building. Ludwig Mies van der Rohe, member of the Bauhaus movement, was contracted for the final extension. His addition is glass, steel, and concrete, with large tinted windows facing north and extending the triangular shape of the building into a gentle curve, the new main entrance of the building.

Rafael Moneo was commissioned to design the addition, the Audrey Jones Beck Building, to house the growing art collection. The building was placed across the street (connected by a special tunnel designed by James Turrell) facing the eastern side of the original buildings. It is light brown brick, with lantern shaped rooftop light monitors. The entrance includes a wide breezeway with cutout window spaces and a horizontal water fountain. As one looks through each window, one can see a different architectural face of the older museum.

The Lillie and Roy Cullen Sculpture Garden is north of the main Museum of Fine Arts Building. Designed by Isamu Noguchi, it includes a variety of modern sculptures.

The grounds and the walls defy the usual flatness of Houston's terrain, with artificial hills and a curving walkway. Each piece is in the open, yet seems to stand-alone. There are no obvious benches or places to sit. The garden is in front of the Glassell School of Art, a building fronted by glass bricks that are dark by day and revealing by night. The glass bricks do not reflect the sculpture, but act as a mute observer of the scene, the glass seemingly observing those who observe the garden.

The Contemporary Arts Museum, 5216 Montrose Boulevard, is a massive, pointed edged, mirrored building, which sits directly west of the Sculpture Garden. The architect, Gunnar Birkets, designed it in 1972, and was attempting to deflect the Mies influence in the Museum of Fine Arts. The interior is designed to resemble an artist's loft. It is an interesting building, as one sees the traffic and passersby reflected in the stainless steel exterior.

Possible questions for students: Compare and contrast the different styles of the older building and the new one. What was the inspiration? What materials were used? Why did styles change? What accommodations have been made to climate? To accessibility? How are the art works lighted? Displayed?

While the nearby churches are not part of the museum district, they do offer an interesting contrast to the surrounding area. St. Paul's United Methodist Church, 5501 Main Boulevard, sits north of the Beck Building. It is in a neo-Gothic cathedral style, using steel instead of flying buttresses for support of the high ceilings and massive windows. Designed in the late 1920s by Alfred C. Finn, the softly colored limestone exterior is the most impressive church in the area. This was the church that Audrey Jones Beck's grandfather, Jesse Jones, a tireless promoter of Houston and advisor to President Franklin D. Roosevelt, was on the building committee. The First Presbyterian Church, 5300 Main Boulevard, just north of the parking lot it shares with the Museum of Fine Arts, is lost behind wonderful, tall, old oak trees. Hobart Upjohn designed a massive church in the classical tradition, and it is rather imposing, from the front.

Sam Houston Park

Sam Houston Park, located at 1100 Bagby, is a collection of old Houston buildings open to the public. The park has been administered by the Harris County Heritage Society since 1956. The buildings are well maintained and furnished for the appropriate period. The oldest place, called the Old Place, is a cabin built in 1825, eleven years before Houston was founded. The most recent was built in 1905, the Staiti House. Most of the houses were moved from other locations. Tour information is available from the Harris County Heritage Society, which is located in the Long Row building.

Neighborhood Tours / Downtown

Houston is a large city today, with a great variety of architecture and interesting sites in many different places. I strongly recommend that the Houston teacher invest in a copy of Stephen Fox's *Houston Architectural Guide* or have the school library acquire a copy. The teacher can then design a tour appropriate to their own neighborhood or assign students to take a tour through the book. The Houston teacher can also visit websites for more information and pictures: *Glass, Steel and Stone*, and *165 Years of Houston History*. The teacher outside of Houston can use local resources to do the research or have students do it as they create their own tours. Some starting places for tours include the Skyline District of downtown Houston, Market Square in downtown, the Heights, the University of St. Thomas/Montrose, the Rice University area/Broadacres, Project Row Houses, Riverside/University of Houston and Texas Southern University, and the Old Sixth Ward Historic District.

APPENDIX

Building Materials Information Sheet

When people began to build shelters, they used materials that were readily available. Early pioneers in America faced the same challenge. They had to use what was there.

Dirt is readily available almost everywhere. It can be used to make three types of structures: adobe, brick, and sod. The adobe shelter is made of a mixture of dirt and water, straw, clay, and sometimes dung. Adobe bricks can be formed and dried in the sun. Adobe can be eroded by rain, so it must be painted or white washed. Adobe structures are most often found in areas with little rainfall. The other type of brick is made of clay but then fired in a kiln to make it very hard and resistant to the weather. These require little care once formed. Sod houses are the least permanent. These shelters are made of the top layers of a grassy field. The sod was usually 12" x 18" x 4", and the sod plates were stacked on top of each other to form walls. The major drawback with the sod house was the difficulty in keeping it clean and free of insects and worms that live in the soil. Sod interiors were coated with whitewash or covered with paper for this reason.

Shelters can also be made of grasses and wood. Grasses can be woven together to form mats for walls. Wood can be used to make a cabin of logs, with bark taken off or left on, with clay stuffed between them to seal the interior. Wood can also be planed and made into boards, which are nailed to a wooden frame, and overlapped to prevent the outside from coming inside. This is called clapboard. Because the walls are thinner, interior walls are coated with plaster or paper. Exterior walls must be painted to prevent weather damage.

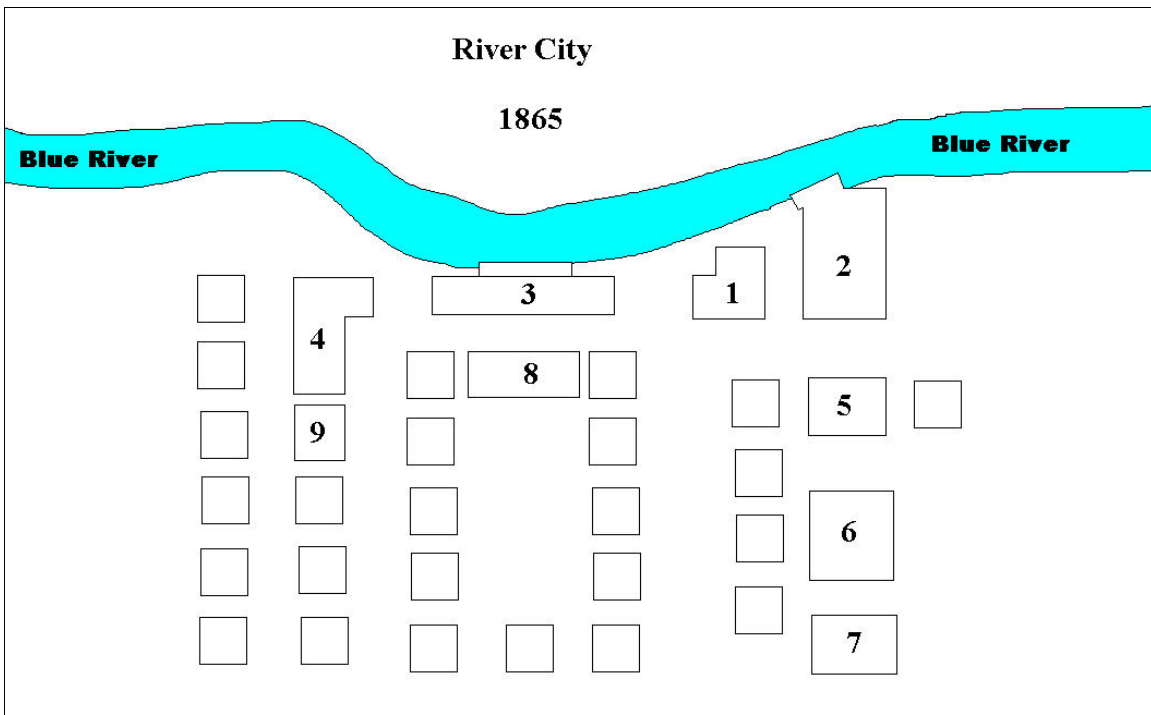
Roofing materials vary with the type of house. Adobe can be formed into tiles to make a roof. Grasses can be woven to form a roof. Wooden shingles coated with tar also worked well.

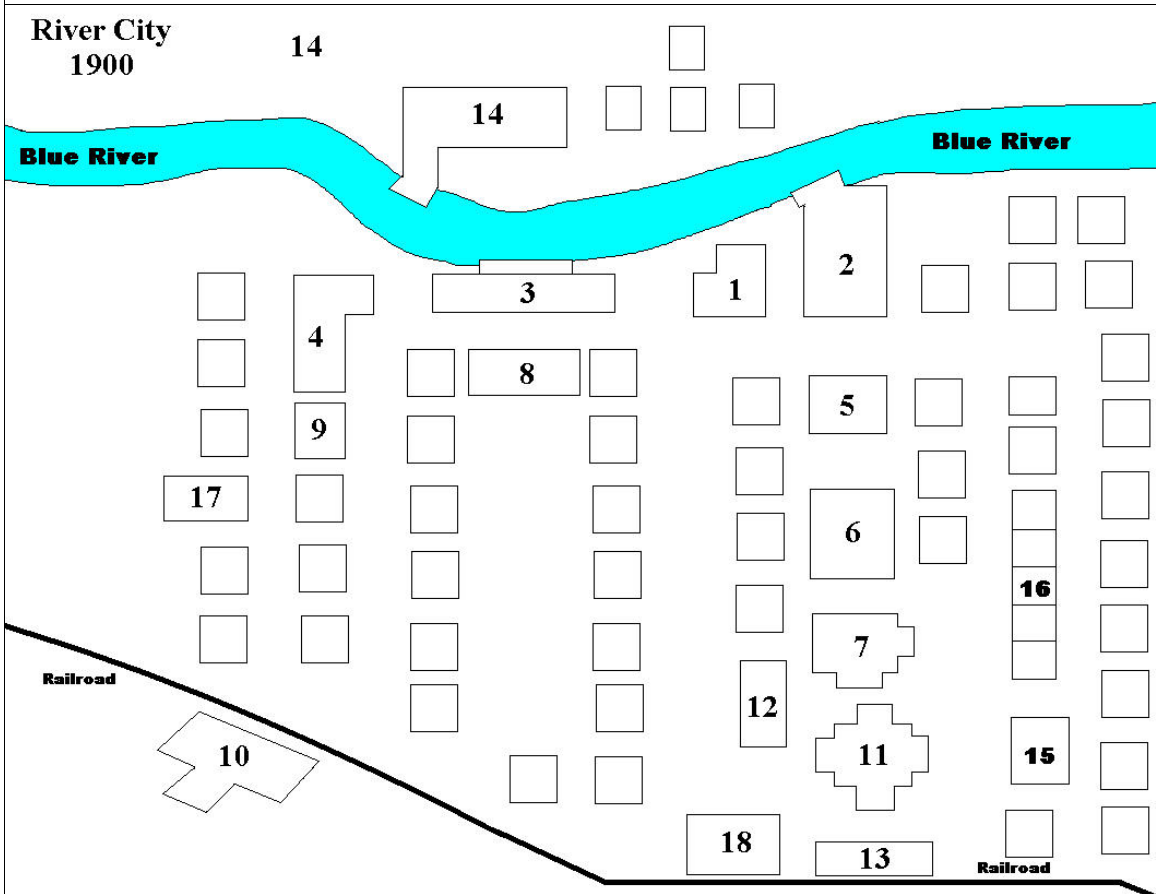
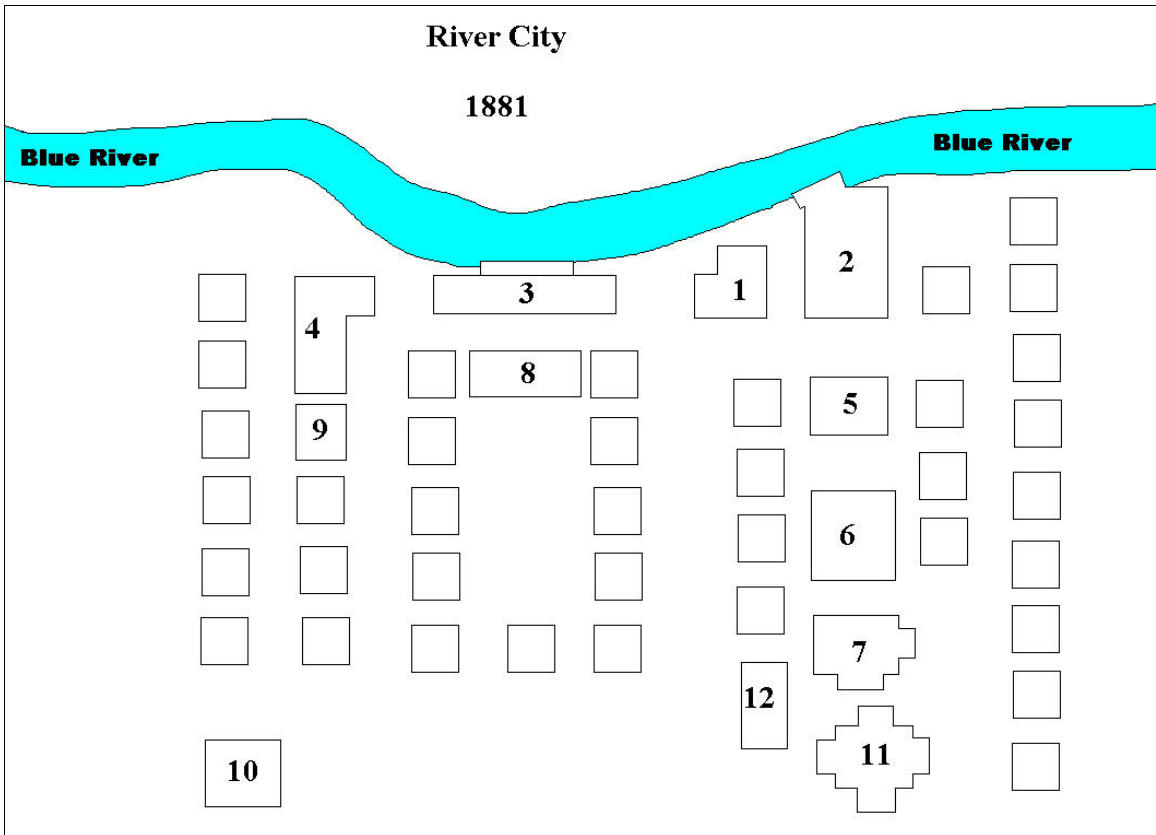
Cement is ground stone fired to high temperatures. Concrete is water mixed with cement, then allowed to dry. This material is long lasting and weather resistant, but too heavy to use to build walls, unless the supports are made of steel.

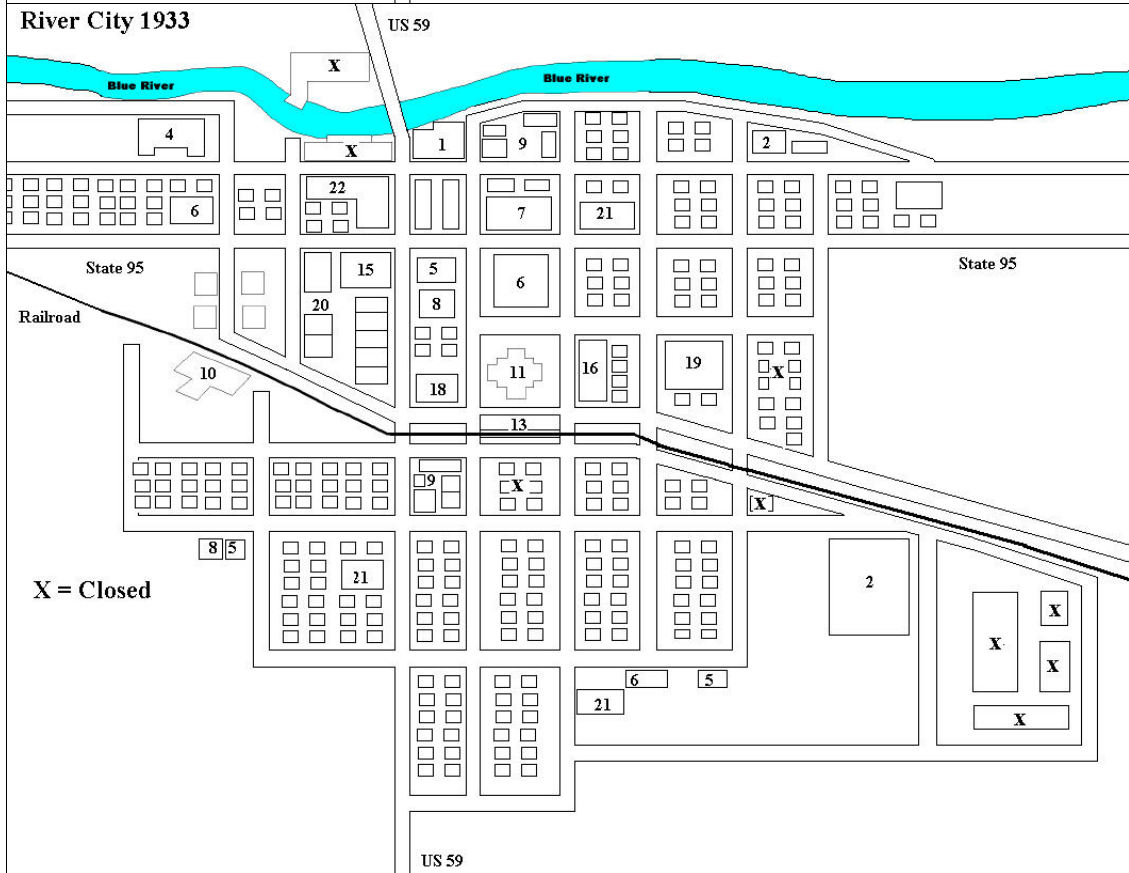
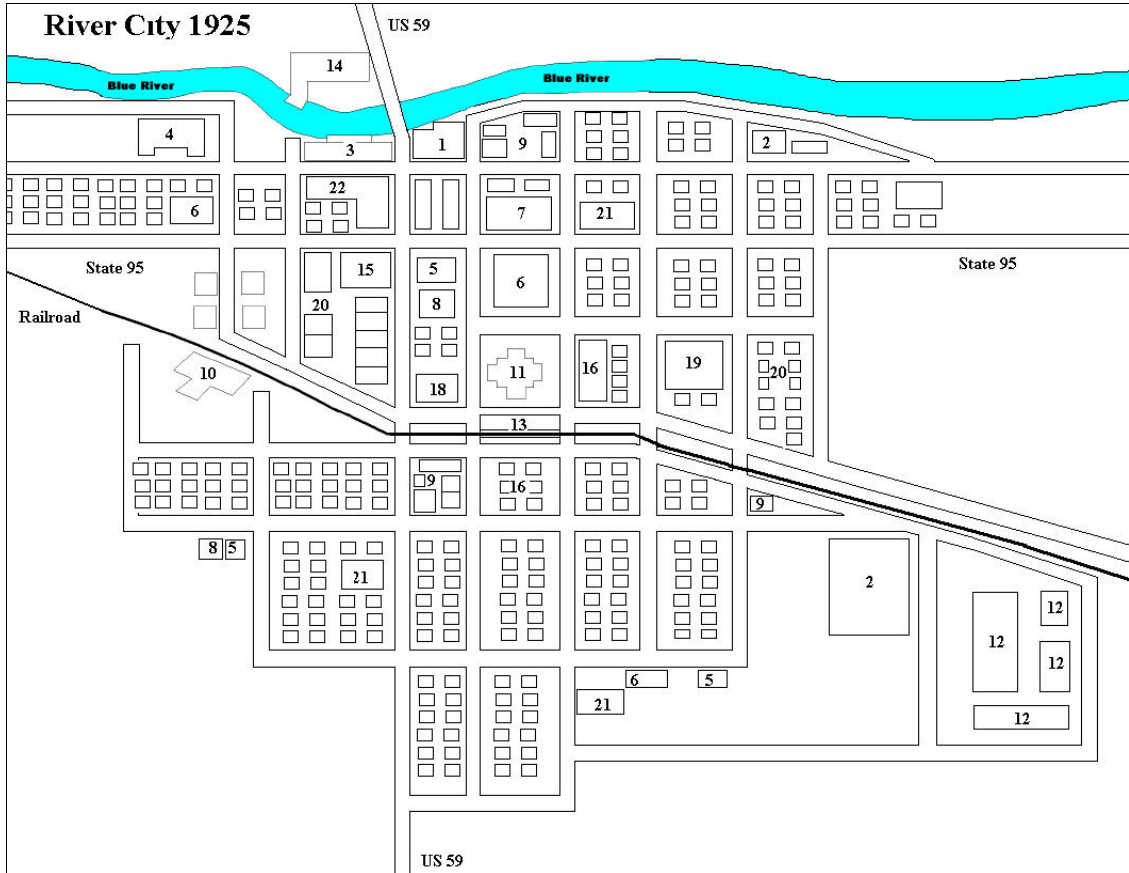
Today, shelters can be made from a wide variety of materials. Many homes have wooden frames, brick or wooden exteriors, interior walls of sheetrock, and roofs made of asphalt shingles. However, some buildings have been made of recycled automobile tires and plastic milk cartons. Plastic and metal exteriors can be found as vinyl and aluminum siding.

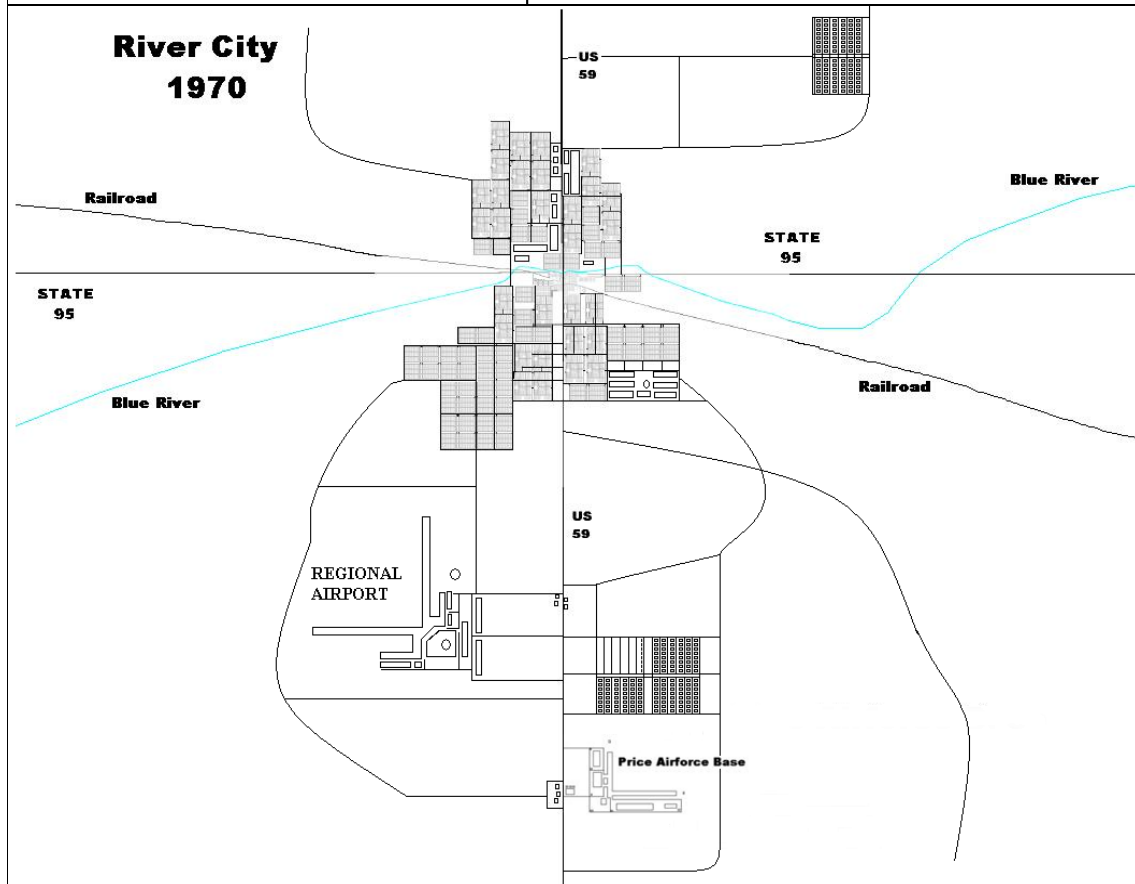
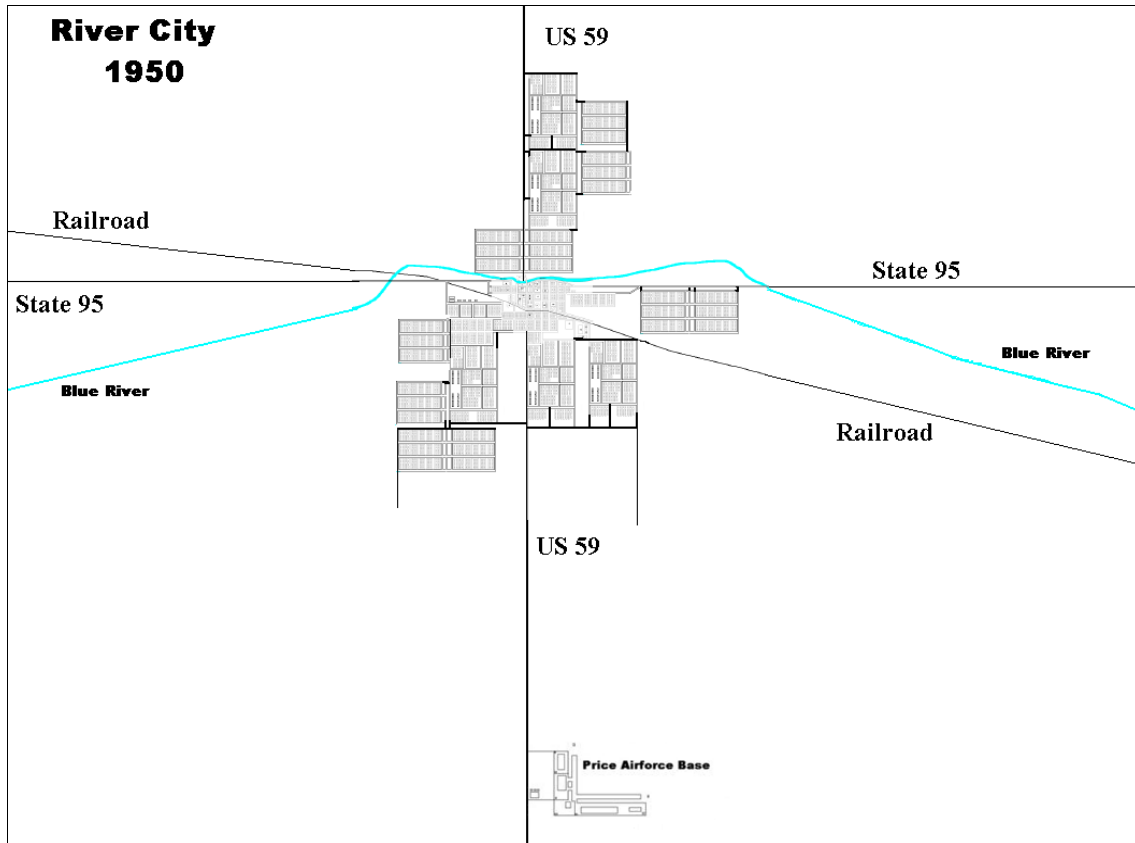
BUILDING LIST

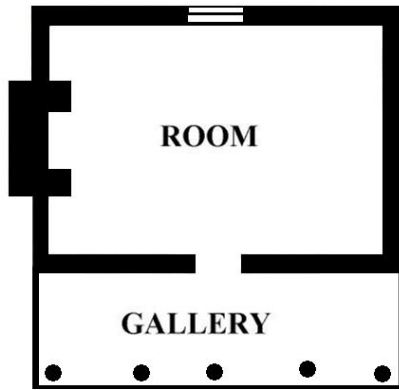
1865	1881	1900	1925	1933	
1 Cotton Gin	1 Cotton Gin	1 Cotton Gin	1 Cotton Gin	1 Cotton Gin	
2 Warehouse	2 Warehouse	2 Warehouse	2 Warehouse	2 Warehouse	
3 Depot	3 Smith Coal Co.	3 Oxford Shoe Factory	3 Oxford Shoe Factory	3 Oxford Shoe Factory	Closed
4 Hotel / Boarding House	4 Hotel	4 Hotel	4 Hotel	4 Hotel	
5 General Store	5 General Store	5 General Store	5 Grocery / Market	5 Grocery / Market	
6 School	6 School	6 School	6 New School	6 New School	
7 Church	7 Church	7 Church	7 Church	7 Church	
8 Saloon	8 Saloon	8 Saloon / Restuarant	8 Restaurant	8 Restaurant	
9 Stable	9 Stable	9 Stable	9 Bars / Gas Station	9 Bars / Gas Station	Closed
	10 Dance Hall	10 Smith Coal Co.	10 Smith Coal Co.	10 Smith Coal Co.	
	11 Court House	11 Court House	11 Court House	11 Court House	Closed
	12 Laundry	12 Laundry	12 Foundry	12 Foundry	Closed
		13 Rail Road Depot	13 Rail Road Depot	13 Rail Road Depot	Closed
		14 Timber Mill	14 Timber Mill	14 Timber Mill	Closed
		15 Saloon / Restuarant	15 Theatre	15 Theatre	
		16 Doctors Lawyers	16 Doctors Lawyers	16 Doctors Lawyers	Closed
		Dentist	Dentist	Dentist	
		Sheriff	Sheriff	Sheriff	
		Post Office	Post Office	Post Office	
		Drug Store	Drug Store	Drug Store	
		17 Church	17 Church	17 Church	
		18 Hotel	18 Hotel	18 Hotel	
			19 Hospital	19 Hospital	
			20 Offices and Stores	20 Offices and Stores	Closed
			21 Church	21 Church	
			22 County Courthouse	22 County Courthouse	



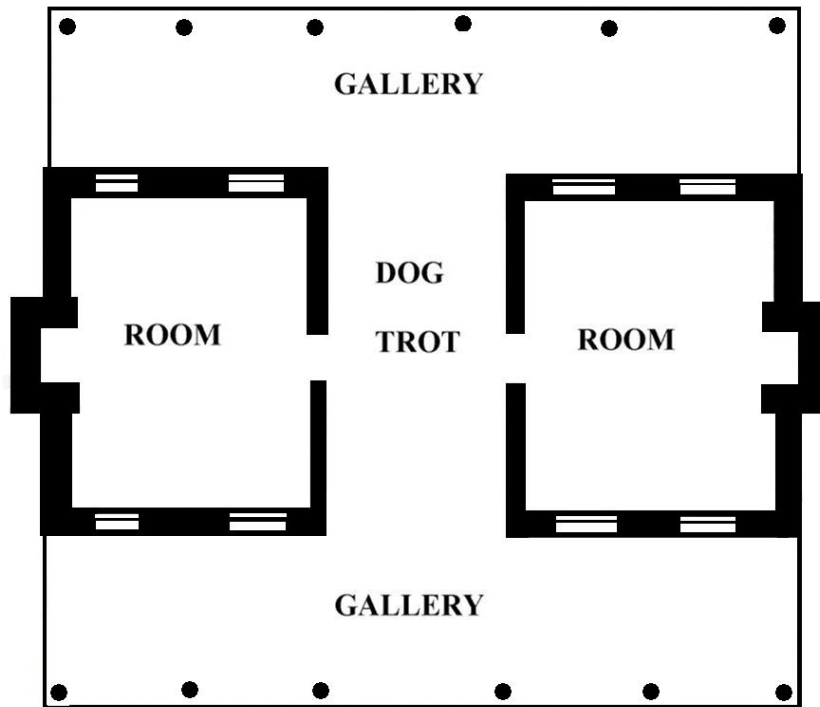




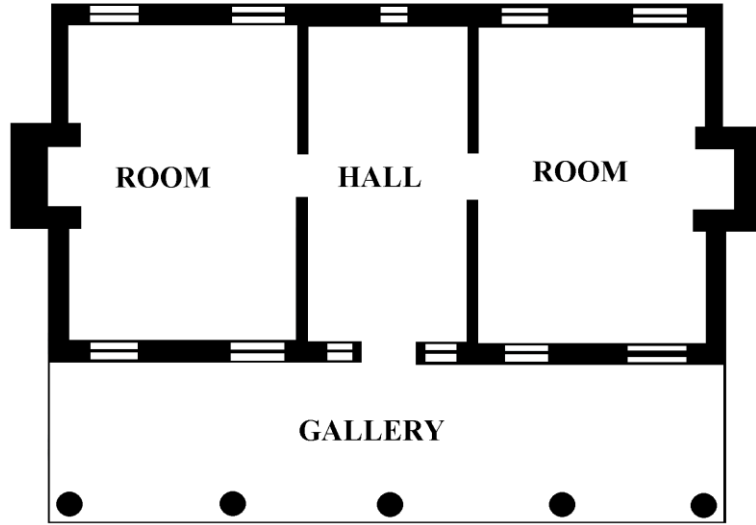




**TYPICAL CABIN
PLAN**

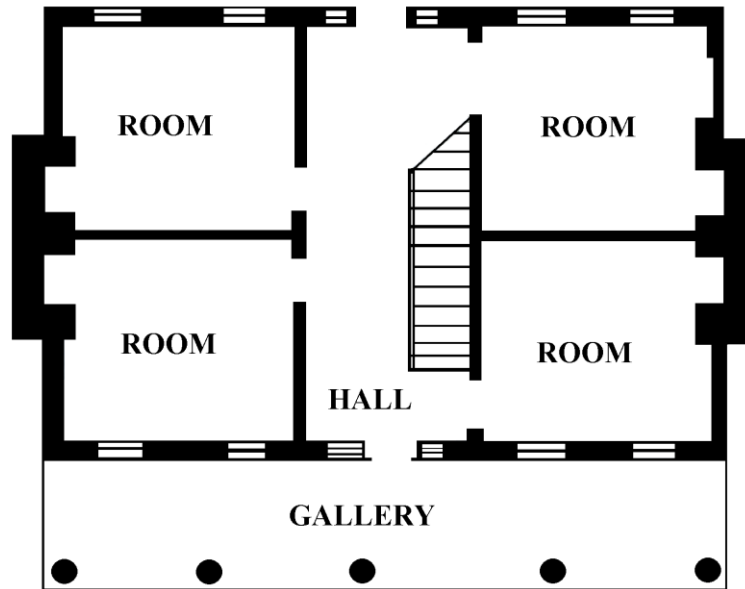


TYPICAL DOG TROT HOUSE



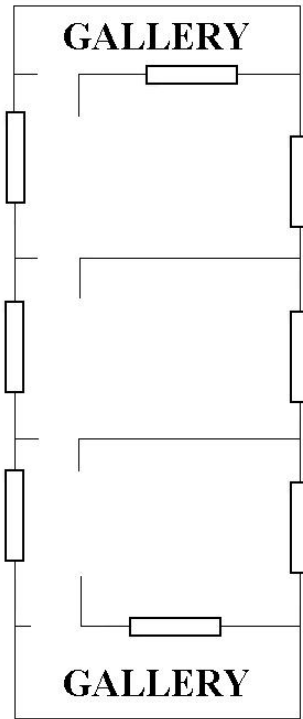
FIRST FLOOR

A PIONEER HOUSE WITH
DOG TROT ENCLOSED

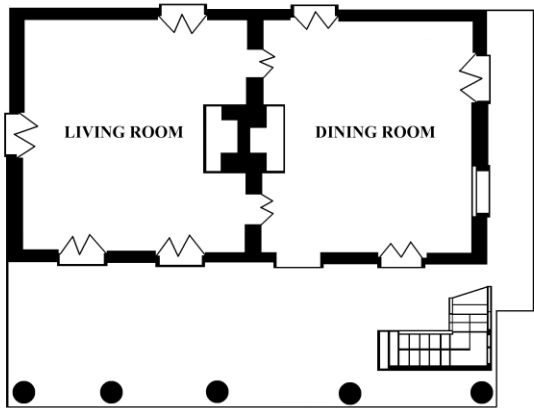


FIRST FLOOR PLAN

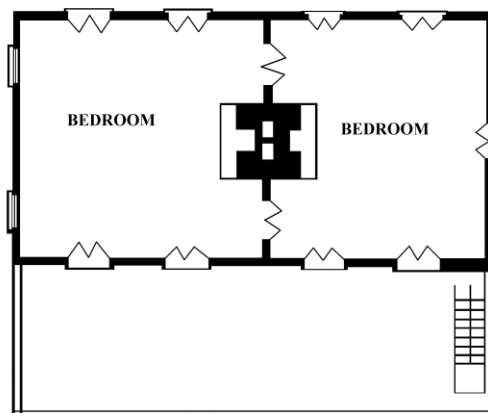
FINAL DEVELOPMENT
2 STORY, 8 ROOMS



SHOTGUN HOUSE



FIRST FLOOR PLAN



SECOND FLOOR PLAN

SPANISH CUSTOM HOUSE
BAYOU ST. JOHN

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Take a tour of Sam Houston Park, or book a tour online.

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