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United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES MULTIPLE PROPERTY DOCUMENTATION FORM

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X New Submission _ Amended Submission

A. Name of Multiple Property Listing

Historic Buildings and Structures of the San Antonio Zoo

B. Associated Historic Contexts

- Twentieth Century Zoos in the United States
- Development and Evolution of the San Antonio Zoo
- Architectural and Design Influences at the San Antonio Zoo

C. Form Prepared By

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D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

DSHPO 2/16/24

Signature and title of certifying official (Deputy SHPO, Texas) Date

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Signature of the Keeper Date

E. STATEMENT OF HISTORIC CONTEXTS

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The San Antonio Zoo was founded at its current location in 1914, but its early development was stalled due to the onset of World War I. By the early 1920s, the San Antonio Parks Commissioner, along with a group of zoo boosters, set out to implement a barless, cageless zoo, inspired by the work of Carl Hagenbeck. Sited within a former rock quarry and adjacent to the headwaters of the San Antonio River, early buildings, structures, and enclosures were constructed using local limestone, lending the property a rustic "natural" feeling that had only recently become popular in zoo design. With the onset of the Great Depression, the leadership at the San Antonio Zoo secured federal funding from New Deal era programs to expand the facilities at the zoo, and numerous new buildings and structures were constructed in keeping with the rustic aesthetic already established. Development once again slowed with the onset of World War II but was revived in the post-war era. Although native limestone was utilized in many post-war structures, the design incorporated elements of sanitary modernism in its sleeker forms, unique geometries, and occasional use of modern materials like concrete, steel, and glass. Over time, the zoo has continued to evolve, guided by the changing expectations of zoogoers, advancements in the care and keeping of animals, the advent of conservation programs, and technological advances in building construction and design preference. The resulting property is a unique blend of historic resources set in a lush, verdant setting that despite modern infill and consistent change has maintained its feeling as an early twentieth century natural, rustic zoo.

Twentieth Century Zoos in the United States

Origins of Zoological Gardens – Menageries and Cabinets of Curiosity

The practice of keeping animals for display can be dated to the fourth and fifth centuries BCE in ancient Egyptian and Chinese civilizations.[1] The origins of the modern zoo, however, are attributed to the period of European exploration and colonization in the fifteenth and sixteenth centuries, when European explorers traveled the earth and returned with stories, drawings, and paintings of the exotic animals and wildlife they witnessed on their expeditions. Amidst the romantic era of the Renaissance, and a particular fascination with nature, the European aristocracy became enamored of these rare animals and began to collect them.[2] These early animal collections became status symbols, representing the social and political power of Europe's elite, and the more foreign, exotic, or unique a species was, the more highly valued.[3]

Cabinets of curiosity, which held taxidermy specimens of exotic animals, developed in tandem with the rise of 16th century European botanical gardens. This ultimately evolved into the development of menageries, privately held collections of the aristocracy. Although public access to these exotic animals existed during the fifteenth and sixteenth centuries in exhibitions or through traveling shows, it wasn't until the seventeenth and eighteenth centuries that fixed, public gardens with menageries and curiosity cabinets became widespread visitor attractions.[4] The establishment of railroads in Europe in the mid-nineteenth century facilitated the rapid spread of innovations, and by the late nineteenth century numerous zoological gardens had been established in the larger European cities, such as the zoological gardens at Jardin de Plantes in Paris and Regents Park in London.[5] As European colonialism spread, collections of exotic animals became symbols of empire, as vast herds of native species were hunted for sport and extensive expeditions brought live specimens home. At its core, "trophies from colonial hunts, like the animals of a zoo, bore witness to the 'conquest of lands that had been discovered and colonized.'"[6]

Zoological gardens weren't established in the U.S. until after the Civil War. Some of the earliest zoos opened in New York, Cincinnati, and Chicago in 1868, and Philadelphia in 1874. The Atlanta Zoo, which opened in 1889-1892, was the

[1] Eric Baratay and Elisabeth Hardouin-Fugier, *A History of Zoological Gardens in the West* (London: Reaktion Books Ltd, 2002), 17.
[2] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 29.
[3] Anita Guerrini and Michael A. Osborn, "Animals in Circulation: The "Prehistory" of Modern Zoos," in *The Ark and Beyond, the Evolution of Zoo and Aquarium Conservation,* Minteer, et al, eds. (Chicago: University of Chicago Press, 2018), 15.
[4] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 55-58.
[5] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 79.
[6] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 113.

only early zoo established in the southern United States. Between 1885 and 1900 twenty zoos opened in cities throughout the U.S.[7] Traveling circuses and menageries had existed before these zoos in the early nineteenth century, popularized in large part by P.T. Barnum, and continued to operate thereafter. Zoos differentiated themselves through the promotion of their educational and scientific importance to stand out against these "follies" and spectacles.

Whereas the eighteenth and nineteenth century development of zoological gardens and menageries in Europe was in large part rooted in colonialism and a desire for controlling the wild, nineteenth century zoological developments in the U.S. were largely rooted in a desire to return to the wild. The proliferation of zoos and parks in the U.S. in the late nineteenth century is attributed to the rapid urbanization of the industrial age, which saw an exodus from rural areas into crowded cities, and lack of available natural spaces for recreation.[8] As one scholar noted, "the first zoos in the United States were created as part of the urban parks movement in the mid-nineteenth century America to create restorative retreats from the stresses of urban life. They appeared in the same decades as the first urban and national parks and reflected a similar belief in the health benefits of contact with nature."[9] In line with the development and expansion of public parks, zoos were an additional avenue of adding outdoor green spaces for the enjoyment of the hardworking city dweller, promoted in large part by conservationist and naturalist William Temple Hornaday.[10] Hornaday was one of the earliest proponents of the "natural" zoo in the U.S., featuring varied topography and naturalistic landscape features, but accessible to children, the elderly, and with ample shade. Hornaday later helped design and plan the Bronx Zoo, of which he became director. Subsequently, many early zoos in the U.S. were built on land annexed from adjacent public parks or areas already altered by previous use.[11]

In *Nature Civilized*, Elizabeth Hanson argues that turn-of-the-century zoos operated as a bridge between the natural and the urban worlds, stating, "As efforts to reconcile urban artifice with wild nature in a landscape of peace and harmony, parks—including zoos—balanced nature and culture; they were middle landscapes."[12] A middle landscape is defined as a border space between wild nature and domestication and provides a framework through which to understand the cultural significance of the urban zoo.

Early Twentieth Century Zoos – Barless, Cageless Zoos

The turn of the twentieth century marked a pivotal moment in the evolution of zoos. First, zoos had successfully established themselves as cultural institutions, much like theaters and museums, differentiating themselves from the public perception of circuses and traveling menageries as mindless, seedy attractions.[13] This helped zoos secure funding from wealthy patrons and local civic organizations. Second, zoos began courting children and families as a core audience, rather than adults seeking to promenade, which was soon reflected in the design of buildings and structures within early twentieth century zoos.

At the same time, the rise of Progressive Era idealism, which emphasized ethics, morality, and humane treatment, spilled over into the animal world as advocates began to urge for better treatment of enclosed animals.[14] Efforts to preserve wildlife also ensued, and in 1900 the passage of the Lacey Act sought to enforce protections of native species throughout the U.S. In 1905, with their populations dwindling, William Hornaday led the charge to establish the American Bison

[7] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 93.
[8] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 100.
[9] Pamela M. Henson, "American Zoos: A Shifting Balance between Recreation and Conservation," in *The Ark and Beyond, the Evolution of Zoo and Aquarium Conservation,* Minteer, et al, eds. (Chicago: University of Chicago Press, 2018), 66.
[10] Elizabeth Anne Hanson, *Nature Civilized: A Cultural History of American Zoos, 1870-1940, Dissertation* (U. of Pennsylvania 1996), 27-28.
[11] Hanson, *Nature Civilized,* 29-32.
[12] Hanson, *Nature Civilized,* 15.
[13] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 209.
[14] Jeffrey Nugent Hyson, *Urban Jungles: Zoos and American Society, Dissertation* (Cornell University: 1999), 135-136.

Society, which included breeding efforts from privately held herds. In 1913 Hornaday went on to publish *Our Vanishing Wild Life*, which outlined wild animal conservation efforts of the era, although it largely excluded discussion of zoos.[15]

One of the most significant moments in early zoo development came when animal dealer Carl Hagenbeck constructed the first barless zoo on his private property near Hamburg, Germany in 1907, called Tierpark. Hagenbeck had traveled through the U.S. in the 1890s performing trained animal acts and was also known for his inhumane practice of exhibiting "exotic" humans, including Inuits, Somalis, and Buddhist priests. Hagenbeck decided he wanted his own zoo, where animals could be displayed in open-air exhibits free from cages, appearing as they would in their natural habitat.[16]

In 1900 Hagenbeck bought a farm and hired engineers, architects, and sculptors to construct moats, hedges, artificial rocks, and winding pathways which would give a sense that humans were roaming freely with dangerous animals. Hagenbeck's zoo mixed various animal species together and featured panoramas of vegetation. Unlike other public zoos of the era, Hagenbeck's zoo organized animals zoogeographically (by location/habitat of origin), rather than taxonomically (similar species from various locations grouped together).[17] Hagenbeck's design was revolutionary in that it allowed animals to be kept outdoors and gave them more freedom of movement. Furthermore, it capitalized on changing social and cultural movements of the early twentieth century.

Hagenbeck's theories of zoo design were quickly adopted in the United States. While bars and cages had historically provided zoogoers with a sense of safety and security against the savage wild animals contained therein, during the Progressive Era they evoked cruel imprisonment and obscured the viewing experience. Following Hagenbeck's revolutionary zoo, William Hornaday began promoting similar ideals of "natural" animal enclosures in the U.S. However, despite an emphasis on "natural" exhibits, zoo designers did not emulate the animals' natural habitats, rather "zoo planners interpreted the natural world, rather than mirroring it."[18] Ultimately, these natural exhibits were designed with the visitor in mind, and not the animals. Thus, American zoos began constructing barless, cageless zoos with large enough enclosures to allow the animals to behave, if not exactly like they did in the wild, a close enough approximation for the public.

One of the first U.S. zoos to adopt the idea of a barless, cageless zoo came in 1912 when the Denver Zoo announced plans for a moated bear display with artificial mountain that emulated the Colorado Rockies, although it was not completed until 1918. This was followed by similar displays in the St. Louis Zoo in 1919, with additional exhibits added in the 1920s within natural granite rock formations.[19] These early "natural" zoos in the U.S. drew upon local landscape features, as one zoo historian stated:

> The way zoos adopted local geology as important to civic culture was similar to the way in which Americans as a nation adopted natural wonders as natural treasures. In these displays, zoo planners conceived the natural setting as an invitation for visitors to gaze in wonder not only at animals, but also at the technical skill and the faithfulness to reality with which these illusions were constructed.[20]

Thus, for viewers of early twentieth century zoos, exact replicas of natural habitats were not required. Rather, exhibits should balance both a sense of the natural world but also an artificiality that reassured the viewer that while the animal may *feel* free, they were very much still in a controlled environment.

The San Antonio Zoo, founded in 1914, was an early adopter of the "natural," barless, cageless zoo concept in the U.S. In 1925 a Fort Worth newspaper boasted that the San Antonio Zoo had grown to include 10 acres and 100 steel cages, and "it is a great attraction, popular alike with visitors to San Antonio and home folk—a sort of perpetual show where it doesn't

[15] Vernon N. Kisling, Jr., "Historic and Cultural Foundations of Zoo Conservation: A Narrative Timeline," in *The Ark and Beyond,* 43.
[16] Vicki Croke, *The Story of Zoos: Past, Present and Future* (New York: Scribner, 1997), 144-145.
[17] Croke, *The Story of Zoos,* 145.
[18] Hanson, *Nature Civilized,* 241.
[19] Hanson, *Nature Civilized,* 269, 277.
[20] Hanson, *Nature Civilized,* 282.

cost anything to see the menagerie."[21] Several years later, Hagenbeck's son Heinrich, who consulted on cageless zoos throughout the U.S. visited the San Antonio Zoo and remarked that it had "the finest natural possibilities of any place he has ever seen." He consulted with the local architecture firm Adams & Adams on plans for development of the zoo, and the firm, with Gerard M. Baker as chief designer, later conceived many of the early "natural" exhibits at the zoo.[22] In the early decades of its existence, the zoo was free to the public, until growing costs of keeping the animals and maintaining the facilities resulted in the implementation of admissions fees in 1940.[23]

Shortly after Hagenbeck's visit to San Antonio, the idea of a natural barless, cageless zoo was adopted by the San Antonio Zoological Association and the Park's Commissioner. The zoo's location in a former quarry provided the ideal environment for this type of exhibit, and in 1929 ground was broken on the new Barless Bear Terraces (Resource Nos. 11, 13, and 14) and Primate Paradise (no longer extant). Constructed using the backdrop of the limestone quarry walls, and separated from the public by moats, the exhibits opened in November 1929 to a crowd of 75,000.[24] San Antonio's barless bear pits were unique amongst moated exhibits in the U.S. in that they combined both natural and artificial rock. Bear shelters were concealed within artificial rock mounds made of reinforced concrete, and plaster casts were taken directly from natural rock formations within the zoo to give the artificial rock the most realistic look possible. The local newspaper boasted they were "considered by all who have seen them to be the latest and most modern development in zoo construction."[25]

Between 1890 and 1930 more than one hundred zoos were established across the U.S. [26] As zoos progressed, the iron bars and cages which suggested wild, dangerous animals that needed to be tamed and controlled gave way to barless, cageless exhibits that allowed visitors to feel a sense of kinship with the animals, and a subsequent proximity to the natural world.

The Inter-War Years—The Era of Showmanship

As zoos rapidly opened in multiple states it became clear that some standards for the wellbeing of the animals needed to be adopted. In 1924 the American Association of Zoological Parks and Aquariums (AAZPA) was established as an affiliate to the American Institute of Park Executives, with a focus on animal wellbeing and the technical aspects of animal keeping.[27] Despite the intent of the AAZPA, lack of cooperation and communication between zoos, which closely guarded their knowledge of animal husbandry and best practices in order to maintain a competitive edge, largely prohibited any major progress of the organization in its first few decades.[28]

As zoos became more established in the late 1920s through 1940s, they began to walk a line between promoting their civic and educational value while also establishing themselves in "the growing culture of commercial amusements."[29] With a slightly better animal survival rate than previous eras, zoo management focused on acclimatization and assimilation. Once an animal became accustomed to captivity and the presence of large crowds, they began to interact with the public, begging for food or behaving uncharacteristically to attract attention, possibly out of boredom. This interaction was particularly pleasing to visitors, and zoo management began to adopt practices formerly utilized by circuses, training animals to perform and interact with an audience.[30] Interactive exhibits, pony rides, fairground rides, and concerts were all held in zoos to attract tourists and promote spending money on hot dogs and concessions. Some zoos

[21] C.M. Meadows, Jr., "Donors Help City Finance Zoo Expense," *Fort Worth Record-Telegram*, December 28, 1925, 9.
[22] "Hagenbeck in S.A. to Confer on Zoo," *The San Antonio Light*, March 4, 1929, 7A.
[23] "Zoo Charges Entrance Fee," *San Antonio Express,* July 21, 1940, 11.
[24] Matthews, *A History of the San Antonio Zoo*, 15.
[25] "Animals in Zoo have Latest Style," *San Antonio Light,* November 3, 1929.
[26] Henson, "American Zoos: A Shifting Balance between Recreation and Conservation," 70.
[27] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 213.
[28] Kisling, Jr., "Historic and Cultural Foundations of Zoo Conservation: A Narrative Timeline," 45.
[29] Hyson, *Urban Jungles,* 10.
[30] Baratay and Hardouin-Fugier, *A History of Zoological Gardens,* 190.

even hired publicity directors to work full-time promoting their facilities on the radio, on television, in print, and getting sponsorships from businesses. [31]

The era of showmanship is evident in the proliferation of barless, cageless zoos, that while promoted as better for the animals, also had the added benefit of making the zoo-going experience more theatrical. They further broke down the perceived barriers between animal and human and:

> They allowed zoos to proclaim themselves places of humanitarian concern while making animals more "entertaining" than ever. They were, even as their strongest supporters admitted, mere "illusions" of wilderness, perfectly suited to an era of show business.[32]

The San Antonio Zoo also played into the dichotomy between showmanship and educational value. In 1929 Randolph William Hearst donated two young chimpanzees, Buster and Sissy, along with 10-year-old Jerry, to the San Antonio Zoo, and the group were quickly put to work conducting performances, "acting" in promotional videos, and appearing in various motion pictures.[33] At the same time, the zoo actively promoted both its educational value, as well as its "natural" setting. Director Sullivan stated,

> As a source of education, the zoological Park does valiant service, as it not only provides the "pavement bound" city dweller with an opportunity to see, to study, and to love nature's wild children of the forest, the stream and the mountain, that would otherwise be denied them, but it is also a source of never ending inspiration to artists sculptors, and naturalists, who spend hundreds of hours in the park, in pursuit of their studies.[34]

During the Great Depression, zoos were hard hit as people had limited funds for recreational outings; at that time, the San Antonio Zoo was still free to the public. Overall, the wealth of zoos in the U.S. declined by nearly 30 percent, and many lost local subsidies.[35] However, zoos as entertainment and recreation were available to a wide swath of the American public, spanning class, race, ethnicity, and geography. Thus, zoos of the period argued that their broad appeal and accessibility made them vitally important to quality of life, especially during times of crisis. As a result, many zoos successfully lobbied for federal funds made available during the New Deal legislation of the 1930s. With the availability of public funds, numerous zoos underwent large expansions during the 1930s, including the San Antonio Zoo.[36] By 1939, barless zoos were standard in the U.S.[37]

Post-War Zoos – Captive Breeding and Sanitary Modernism

The onset of World War II temporarily halted most non-defense-related development in the U.S. In the post-World War II era, however, zoos underwent yet another period of reinvention. As the zoo-going public became more aware of animal welfare, so did their desire to learn more about the day-to-day lives of animals and develop deeper relationships with them. This shift was partially attributed to the advent of barless, cageless zoos because, "while caged animals, imprisoned and diminished, provoke mockery, species in semi-liberty retain their dignity and arouse interest."[38] Perhaps the epoch of back-to-back wars and conflict had created a need for connection, because unlike previous eras, post-war zoogoers did not see animals as either dangerous beasts or mere entertainment, instead they saw similarities and sought friendship.

In the 1940s the practices of collecting and displaying animals radically changed, as countries formerly under colonial rule tightened restrictions on exports of animals, and the era of animal-gathering expeditions significantly slowed. Furthermore, the advent of tranquilizer darts in the 1950s made wild capture less stressful on the animals resulting in less

[31] Baratay and Hardouin-Fugier, *A History of Zoological Gardens*, 213.
[32] Hyson, *Urban Jungles*, 229.
[33] Matthews, *A History of the San Antonio Zoo*, 17.
[34] "Scenic Setting is Distinct Advantage," *San Antonio Light.*
[35] Baratay and Hardouin-Fugier, *A History of Zoological Gardens*, 216.
[36] Hyson, *Urban Jungles*, 331.
[37] Hyson, *Urban Jungles*, 219.
[38] Baratay and Hardouin-Fugier, *A History of Zoological Gardens*, 218.

death and disease, and airplane transport was much quicker than by sea. Wildlife and conservation advocates promoted better protections for wild animals, and as the costs of procuring new animals rose, zoos increased efforts to improve the lives and overall health of their existing animals.[39]

Concurrent with these developments, rapid suburban growth in the post-war era saw families leaving the urban cores of cities, while the proliferation of the automobile allowed families to travel further distances for recreation and entertainment. The growth of the family entertainment industry, which included shopping malls, drive-in theaters, theme parks, and road trips, competed with zoos for visitors. In conjunction with the rise of television, families had more options for recreation and entertainment than ever before. As a result, zoos had to adapt, adding children's zoos, petting areas, zoo trains, kiddie rides, concessions, and increasing their publicity.[40]

A pivotal moment in the development of zoos in the post-war era came in 1950 when Swiss zoo director Heinie Hediger published *Wild Animals in Captivity*. The book argued that faux natural exhibits did nothing for the overall well-being of the animals. Rather, Hediger argued that proper care of animals, from food, housing, and enrichment activities, and an understanding of their natural behaviors and needs, were more essential to an animal's health than the illusion of a natural environment. Hediger's assertions, coupled with changing preferences in architecture in the post-war era, saw a significant shift in new animal enclosures during the 1950s. Zoos began adopting "sanitary modernism," using clean lines, sculptural and abstract forms, and the use of concrete, tile, and glass.[41] However, the sleek, easy-to-clean concrete boxes of the 1950s bothered visitors, who didn't want to see "wild" animals in enclosures that resembled prison cells.

The 1960s ushered in yet another era of change, as televised nature programs, especially *Wild Kingdom,* sparked interest in wildlife and conservation. Conservation efforts were also promoted in part by the publication of Rachel Carson's *Silent Spring* in 1962, which outlined the effects of pollution and urban expansion on native wildlife and the environment. Zoos began to experiment with or expand upon captive breeding programs, which they argued were superior to collecting animals from the wild in both cost and humane treatment of the animals. Concurrently, advances in veterinary medicine, animal behavioral science, and field biology put zoos back on the forefront of animal science. [42] In 1966 the Animal Welfare Act was passed by the U.S. Department of Agriculture, and "regulated the treatment of animals for research, teaching, testing, exhibition, transport, and by dealers."[43] By around 1960, trained animal acts in zoos were largely obsolete, with the exception of marine parks or bird sanctuaries.[44]

Emphasis on environmental protection and animal conservation grew in the 1970s. In 1970 the U.S. Environmental Protection Agency (EPA) was established, in 1972 the US Marine Mammal Protection Act was passed, followed by the Endangered Species Act (ESA) of 1973. Additional legislation throughout the 1970s strengthened the protection of a variety of animal and plant species, both wild and in captivity.[45] In the 1970s, the rise of animal welfare organizations also resulted in criticisms of zoos. As a result, in 1972 AAZPA incorporated as a separate entity from the National Recreation and Park Association, and in 1974 the AAZPA established a voluntary process for accreditation. In 1976 AAZPA adopted a code of ethics for the treatment of animals, including the requirement that zoo animals not be sold to hunting ranches, and in 1984 made accreditation mandatory for membership in the AAZPA. [46] Changes to the AAZPA improved cooperation amongst zoos and expanded the professional and conservation focus of the field.

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[39] Hanson, *Nature Civilized*, 303.
[40] Hyson, *Urban Jungles*, 362.
[41] Hyson, *Urban Jungles*, 443-444.
[42] Croke, *The Story of Zoos*, 161.
[43] U.S. Department of Agriculture, "Animal Welfare Act," https://www.nal.usda.gov/animal-health-and-welfare/animal-welfare-act, accessed May 9, 2022.
[44] Baratay and Hardouin-Fugier, *A History of Zoological Gardens*, 211.
[45] Kisling, Jr., "Historic and Cultural Foundations of Zoo Conservation: A Narrative Timeline," 48.
[46] Croke, *The Story of Zoos*, 161; Association of Zoos & Aquariums, "About AZA Accreditation," accessed January 23, 2018, https://www.aza.org/what-is-accreditation?locale=en#:~:text=AZA%20has%20been%20the%20primary,AZA%20standards%20when%20evaluating%20institutions.

Concurrently, suburbanization and widespread automobile ownership meant that people could easily travel further outside the city for entertainment. Subsequently, during the 1970s numerous new zoos were constructed on large, sprawling parcels of land that allowed animals more acreage to roam, and urban zoos had to modernize to continue attracting visitors.[47] The 1960s and 1970s also saw the returning ideal of "natural" zoo exhibits, in contrast to the stark sanitary modernism of the 1950s. As one scholar succinctly noted:

> Victorian zoogoers had enjoyed lush gardens and stately buildings, visitors in the twenties and thirties favored the theatrical display of moated enclosures, and baby-boomers preferred sanitary modernism's domesticated control. For the sixties and seventies, it was naturalism that best fit the popular mood of environmental concern while still providing plenty of entertainment.[48]

At the San Antonio Zoo, this return to "natural" environments was at the forefront of Zoo director Louis DiSabato's 1971 master plan. DiSabato claimed that the aim was to "let visitors feel they are in the natural environment…not visiting a zoo," with animals living alongside other species as they do in nature. [49]

Late Twentieth Century Zoos - Conservation and Education

The 1980s was a period of massive spending on zoos. In some cases, this meant bigger enclosures and improved habitats, but in large part the money was spent on emphasizing the viewer experience, with elaborate exhibits and high-tech displays.[50] During this time it was reported that a billion dollars was spent at 143 accredited zoos nationwide. With a booming economy, zoos tore down old exhibits and replaced them with new, more "realistic" ones, with mixed success.[51] In addition to replacing many of the sterile concrete and tile enclosures erected during the era of sanitary modernism, zoos began experimenting with combined exhibits that mixed species normally found together in the wild. Some improvements, including the addition of murals or artificial vegetation, were purely cosmetic and primarily for the benefit of the viewer, while others, like the increased emphasis on enrichment activities for animals to keep them engaged and active, resulted in tangible benefits to many zoo animals.

In 1981 AAZPA began participating in Species Survival Plans, a cooperative effort amongst zoos for population management and conservation of endangered species, beginning with the Siberian tiger, golden lion tamarin, and other species.[52] In 1994 the AAZPA shortened their name to the American Zoo and Aquarium Association (AZA). As of 1997 there were 149 AZA accredited zoos in the U.S. The organization inspects care of animals, zoo financial stability, ethics, education, science, and conservation. Zoos are reviewed every five years.[53]

As the threat of climate change, global warming, and encroachment of human development in the twentieth century continues to impact the wildlife habitat, zoos and aquariums have stepped up their efforts and roles in wildlife conservation. This includes broad collaboration between facilities in the captive breeding program, sending researchers and veterinarians to study endangered populations, hosting fundraisers for wildlife organizations, and complex tracking of captive and wild animal populations. [54]

The built environment of zoos has also evolved since the idea of natural zoos was first conceived in the early twentieth century, although making animal habitats appear "natural" is still a core tenant of zoo design. Design and technology has advanced and many new techniques have been adopted to further this ideal, including the use of angled windows to make enclosures appear larger, employing strategic sightlines by elevating some exhibits above viewers, employing heat-

[47] Hyson, *Urban Jungles*, 454.
[48] Hyson, *Urban Jungles*, 460.
[49] Matthews, *A History of the San Antonio Zoo*, 39.
[50] Croke, *The Story of Zoos*, 25.
[51] Croke, *The Story of Zoos*, 73.
[52] Kisling, Jr., "Historic and Cultural Foundations of Zoo Conservation: A Narrative Timeline," 48.
[53] Croke, *The Story of Zoos*, 161.
[54] David Grazien, *American Zoo, A Sociological Safari* (Princeton: Princeton University Press, 2005 – Ebook), 119.

emitting rocks for reptiles, providing ample enrichment to coax animals into exhibits, concealing back-of-house facilities, and finding substitute flora and fauna that emulates a species' native habitat.[55] Although the concept is not new, the advances in design technology have made the ability to make elaborate simulated environments more immersive than ever, providing visitors with 'nonformal science education' that "reinforces that no species exists in isolation from its environment."[56] The most successful of these techniques, however, is utilizing and incorporating a zoo's surrounding native landscape, such as at the Arizona-Sonora Desert Museum in Tucson, into the overall design concept. At the San Antonio Zoo, this was uniquely achieved from the outset, with the rock quarry walls forming the backdrop of numerous enclosures and the crisp waters pumped from the artesian well filling the canals and aquarium and feeding the lush vegetation. Large live oak trees still adorn the landscape, along with a variety of native plant species, including palms, huisache, and bald cypress, interspersed with non-native vegetation of bamboo, banana, and plumbago.

Throughout their long history, zoos throughout the U.S. have captured the interest, imagination, and awe of the public, as well as serving as valuable tools for both recreation, conservation, and education. Zoos are also unique historic resources that reflect changing cultural attitudes and the broader relationship between humans and their environment. Sociologist David Grazein aptly states:

> The zoo's built environment is simulation and reality all at once, an ersatz environment for wildlife and a sustaining habitat in its own right… Perhaps more than any other urban attraction in the American metropolis, zoos cannot help but represent nature as a man-made creation, a product of collective imagination, ecological stewardship, and not a little chutzpah… Zoos reveal the symbolic boundaries we use to differentiate culture and nature…It is in this manner that zoos and aquariums serve as repositories of human culture and collective belief….But zoos reflect not only the culture of nature, but the contemporary city itself. Both zoos and cities are alchemies of man and beast, art and science, concrete and dirt, order and chaos. With its dense human populations and companion animals, networked ecosystems of termites and mass transit, sewer rats and migratory birds, disease and contagion, man-made parks and community gardens, night fishermen and rooftop beekeepers, the city is a jungle. In the urban metropolis, the boundaries between office towers and polluted sky, busy harbors and stoic seas, and civilized society and wilderness itself are forever blurred, just as in a zoo."[57]

In the early twenty-first century, zoos continue to try and find a balance between education, conservation, recreation, and amusement. As of 2022, there are 238 AZA-accredited institutions and 15 AZA-certified facilities in the U.S.[58]

Development and Evolution of the San Antonio Zoo

Turn of the Century San Antonio

In the mid to late 1800s, the City of San Antonio was growing rapidly. The town was largely agrarian until the arrival of the railroads, which opened the region up to increased settlement and industrialization. As new buildings were required to house the growing population and industry, the abundant native limestone became a popular construction material. The city leased the limestone bluffs north of the city as quarries, and Rock Quarry Road (present-day St. Mary's Street) was used to haul stone from the quarries to construction sites throughout San Antonio. In 1880 Alamo Roman Portland Cement Company was founded, reportedly the largest cement manufacturer west of the Mississippi, and leased the City's quarry until 1908, when it relocated to Alamo Heights.[59] Historically, the area off of Rock Quarry Road consisted of scattered agricultural homesteads, the county poor house, the quarry, and following the Mexican Revolution, became

[55] Grazien, *American Zoo, A Sociological Safari*, 20-24.
[56] Dennis P. Doordan, "Nature on Display," *Design Quarterly*, no. 155 (1992): 34.
[57] Grazien, *American Zoo, A Sociological Safari*, 163-164.
[58] Association of Zoos and Aquariums, "AZA Accredited and Certified Members," accessed January 17, 2023, https://www.aza.org/inst-status?locale=en.
[59] Kristi Miller Ulrich, *A Historic Standing Structure Survey of a Portion of the San Antonio Zoo, Bexar County, Texas* (Prepared for the San Antonio Zoological Society and the Center for Archeological Research at the University of Texas at San Antonio, 2012), 14.

home to numerous Mexican refugees or seasonal workers who constructed *jacals* (small houses of vertical wood posts with dried earth infill) from materials on hand.

In 1899 wealthy businessman Colonel George W. Brackenridge, owner of the San Antonio Water Works Company, deeded hundreds of acres along the San Antonio River to the City of San Antonio for use as a park, later known as Brackenridge Park. The quarry, located within Brackenridge Park, continued to produce limestone, cement, and lime during its operation, and several kilns, mills, and worker housing was located on site.[60]

San Antonio's first zoo was founded in San Pedro Park, approximately 2 miles southwest of the present-day San Antonio Zoo. Traveling menageries featuring live animals established exhibits within San Pedro Park in the late nineteenth century, and in 1910 a permanent collection of animals was housed in the park and the public was charged a fee for admittance. However, not content to pay a fee to visit animals in a publicly-owned park, the public lobbied the City to provide a freely accessible zoo or menagerie.[61] In 1912 George Brackenridge fenced in an area south of Brackenridge Park (near the present-day golf course) where he kept a small herd of animals, including buffalo, deer, and elk, which were freely accessible to the public. [62] People began donating a variety of species to the informal collection, and eventually it was deemed necessary to provide additional space and more permanent enclosures for the growing group of animals.

Brackenridge and Lambert Establish a Zoo

J. Ray Lambert was born in Virginia and moved to San Antonio in 1892 to work as a stonemason. Lambert assisted in the construction of the Bexar County Courthouse, and subsequently entered city politics where he worked as a city alderman for fourteen years. In 1915, the City of San Antonio selected Lambert to serve as the first San Antonio Parks Commissioner, and during his tenure Lambert oversaw the design and construction of some of the City's most celebrated parks and recreational sites, including improvements in Brackenridge Park (NR 2011), the Brackenridge Golf Course, the Japanese Tea Garden, and the San Antonio Zoo.[63]

In 1914 Lambert drove through the Mexican settlement located near the former rock quarry and noted that the overhanging cliffs and caves would be an ideal location for animal enclosures. By that time, George Brackenridge was in dire need of new space to house his growing collection of animals, and Lambert suggested that the quarry site was well-suited for his purpose. That year the City evicted the Mexican residents occupying the area and Brackenridge's herd was relocated to quickly constructed enclosures at the former quarry site, marking the beginning of the San Antonio Zoo.

Before long, residents of San Antonio began offering Lambert a variety of animals and he directed park staff to begin constructing animal cages on the site. After Lambert was offered a pair of lions, he directed workmen to blast a partial cage out of the adjacent rock cliff, which was used along with iron cages to house them. Two bears from Yellowstone Park followed, and the zoo was firmly established.[64] The rock terraces further inspired Lambert and Brackenridge to construct a cageless zoo, a new idea for zoo design only recently invented in Europe, pioneered by Carl Hagenbeck. The onset of World War I temporarily halted development at the zoo, however by 1917 the zoo boasted a wide variety of small and large animals, ranging from racoons, possums, various birds, a wolf, and a camel. [65] In addition to its unique siting within a former rock quarry, the property also had another distinct feature, the San Antonio River, which flowed along the southeastern edge of the property. A former Spanish Colonial *acequia* (irrigation canal) also traversed the grounds, and

[60] Ulrich, *A Historic Standing Structure Survey of a Portion of the San Antonio Zoo, Bexar County, Texas*, 14.
[61] Ulrich, *A Historic Standing Structure Survey of a Portion of the San Antonio Zoo*, 37.
[62] Wilbur L. Matthews, *A History of the San Antonio Zoo* (San Antonio Zoological Society, 1989), 4.
[63] The Cultural Landscape Foundation, "J. Ray Lambert," accessed January 17, 2023, https://www.tclf.org/j-ray-lambert.
[64] "It's just like home to them," *The San Antonio Light*, January 21, 1917, 9.
[65] "It's just like home to them," *The San Antonio Light.*

these watercourses were diverted through a series of canals to provide water to the animals and exhibits, and provided the zoo with its distinct "natural" setting.[66]

Early Zoo Leadership

In the early years of the zoo's operation Colonel Brackenridge organized a zoological group within the Scientific Society of San Antonio to advocate for the San Antonio Zoo. When Brackenridge died in 1920, Ray Lambert urged the group to continue advocating for the cageless zoo and to expand their membership. In 1926, prominent leaders of this zoo advocacy group included Albert Steves, Sr. (Steves Lumber Company and Steves Sash and Door Company), W.B. Tuttle (President of San Antonio Public Service Company and owner of San Antonio Electric and Gas Systems), William M. McIntosh (Publisher of the *San Antonio Light*), Theodore W. Friedrich (Friedrich Refrigeration and Air Conditioning Co.), and Fred A. Sullivan. Also included in the group was 18-year-old Fred W. Stark, a college student with an aptitude for the care of birds and mammals who worked at the zoo during his vacation periods.[67]

By 1925 the zoo reportedly had ten foxes, three ring-tailed lemurs, three skunks, two badgers, two black bears, two wild boars, two javelinas, three bobcats, three coyotes, several big cats, six coati mundi, numerous cattle, elk, deer, birds, and two ringtail monkeys, all of which had been donated to the zoo. The zoo had also purchased two grizzlies, two ocelots, numerous monkeys, birds, and two elephants.[68] Ray Lambert continued to serve as Parks Commissioner until 1927, when Jacob Rubiola took up the position.[69]

Many of the early zoo boosters headed business institutions throughout San Antonio, and contributed generously to zoo improvements, including buildings and enclosures, procurement of animals, and solicitation of additional funds. In 1927 the group decided to form a formal zoological society, and by 1928 had recruited over 80 members.[70] In January 1928 they officially formed the San Antonio Zoological Association (SAZA), a non-profit organization. A contract was signed with the City of San Antonio that allowed the SAZA to operate the zoo and in January 1929 the corporate charter for the SAZA was approved by the Texas Secretary of State. The agreement between the City and SAZA stipulated that the organization would provide all animals for the zoo and contribute to improvements, while the City would continue to pay staff salaries.[71] Furthermore, all entrance fees were split between the City and the SAZA, with the SAZA paying a monthly $50 fee for concessions and retaining all profits.[72] Until that point, the San Antonio Zoo was operated by the City Parks Department, but in 1931 the SAZA officially took over operation of the zoo, with Fred Sullivan selected as the first director.[73]

In collaboration with Mayor of San Antonio Charles "Mac" Chambers, SAZA solicited architectural drawings for additional cageless units at the zoo by well-known San Antonio architecture firm Adams & Adams. Hiring an established architecture firm signaled the importance that Zoo leadership placed on overall design and setting, and their recognition that the place itself, and not just the animals, needed to appeal to the public's imagination.

In the early 1930s, Sunday crowds reportedly drew in between 20,000 and 35,000 visitors, many traveling from surrounding cities and towns to view the exotic animals on display. The zoo staff publicized that it had the lowest mortality of any zoo in the country.[74] In 1931 director Sullivan noted that the zoo also had polar bears, chimpanzees, black leopard, Bengal tiger, cheetah, American jaguar, mountain lion, African lion, sea-lions, elephants, and a variety of birds.[75]

[66] Ulrich, *A Historic Standing Structure Survey of a Portion of the San Antonio Zoo*, 38.
[67] Matthews, *A History of the San Antonio Zoo*, 9.
[68] C.M. Meadows, Jr., "Donors Help City Finance Zoo Expense," *Fort Worth Record-Telegram*, December 28, 1925, 9.
[69] Matthews, *A History of the San Antonio Zoo*, 7.
[70] Matthews, *A History of the San Antonio Zoo*, 10.
[71] Matthews, *A History of the San Antonio Zoo*, 14.
[72] Matthews, *A History of the San Antonio Zoo*, 21-22.
[73] Matthews, *A History of the San Antonio Zoo*, 7.
[74] "Zoo's Civic Value Told Rotarians," *San Antonio Express*, November 28, 1931.
[75] "Scenic Setting is Distinct Advantage," *San Antonio Light*, February 26, 1931.

New structures and enclosures were continuously being constructed, and by 1931 included an Anthropoid House that housed chimpanzees, several aviaries, and a new hippo house (Resource No. 79) and outdoor pool (Resource No. 80).[76]

In the early 1930s, while still attending college, the young Fred Stark was put in charge of the large number of birds housed at the zoo.[77] In 1932 Stark completed his education and became curator of birds at the San Antonio Zoo.[78] In 1934 Sullivan relinquished his post and Fred Stark was selected as the new director of the zoo.[79] Shortly thereafter Richard A. (Dick) Friedrich was selected as Zoo president. Richard was the son of early Zoo booster and founding member of the SAZA Theodore W. Friedrich, and thus had a long association with the zoo. Stark and Friedrich assumed their roles at the zoo amidst a difficult era, the Great Depression, which made securing funding for zoos especially challenging. Nonetheless, they successfully secured WPA funding for a vast Zoo expansion program during that time. Together, Stark and Friedrich ushered in a new era at the zoo which lasted nearly three decades and saw considerable expansion of enclosures, facilities, concessions, and animal variety. In 1934 the zoo reportedly had 1,528 animals of over 250 species.[80]

New Deal Era Zoo Improvements

The stock market crash of 1929 and subsequent Great Depression had a profound impact on the nation, and the development of the San Antonio Zoo as well. Fortunately, President Franklin D. Roosevelt signed a series of New Deal legislative initiatives aimed at providing funding for infrastructure improvements, promoting the arts, and putting Americans to work. One of the most expansive of these programs was the Works Progress Administration (WPA), established in 1934.

Zoos, faced with a shortage of funding, had to convince the public and the government that they were worthy of public expenditure, stressing that they were institutions of civic value rather than mere amusements. Public funding of zoos was controversial, and many argued that with so much of the population suffering financially, public funding should be reserved for people, including infrastructure improvements, schools, and work programs. However, others saw the public value of zoos, which were typically either free to the public or had low admissions costs, allowing families an opportunity for affordable entertainment during a difficult time.[81]

Under the leadership of Fred Stark, the San Antonio Zoo was able to procure WPA funding for numerous improvements and by 1935 Stark was overseeing over 100 WPA workers as they dug moats and sunken exhibits throughout the zoo.[82] The zoo claimed that their moats were the only natural zoo moats in the world, formed out of real limestone ledges rather than artificially created.[83] Additional early WPA projects included impala and gazelle exhibits, the camel section, dik-dik and crane enclosures, and the Peccary House.[84] WPA workers also began work on the Donkey Trail, an interactive trail that extended from the donkey pen near the southwest boundary of the zoo to the northeast section near the Buffalo Pasture. For a brief time, children could ride the donkeys along the trail through the zoo, although safety concerns ultimately forced the amusement to close in 1936.[85] Between 1938-1940 the WPA completed the Birds of Prey Aviaries, which housed hawks, condors, eagles, and vultures near the former Zoo entrance. They also excavated areas for the rhino exhibit and completed additions to Monkey Island (no longer extant). The WPA funded or constructed the Commissary (later Monkey House – Resource No. 5), Elephant House (Resource No. 42), Reptile House (Resource No. 22), and a series of moats and masonry walls, among other improvements. To save on costs, WPA workers quarried local stone and

[76] *San Antonio Zoological Park Official Guide – First Edition* (San Antonio Zoological Society, 1934), VI.
[77] Matthews, *A History of the San Antonio Zoo*, 18.
[78] Matthews, *A History of the San Antonio Zoo*, 18.
[79] Matthews, *A History of the San Antonio Zoo*, 19.
[80] Matthews, *A History of the San Antonio Zoo*, 18.
[81] Victoria McCollum, *The Architecture of Keeping Animals: Preservation Responses to Changing Animal Welfare Ideals in Mid-sized American Zoos, Thesis,* (Clemson University, 2018), 36.
[82] Matthews, *A History of the San Antonio Zoo*, 26.
[83] "Just Zoo-ming Along," *San Antonio Light*, March 29, 1959, 131.
[84] Matthews, *A History of the San Antonio Zoo*, 26.
[85] Matthews, *A History of the San Antonio Zoo*, 28-29.

cut through additional limestone cliffs to construct barless pits for the animals.[86] In addition to the cost savings of using the cliffs and local limestone, the use of these natural materials was in keeping with the prevailing philosophy of "natural" zoo exhibits. While other zoos across the country were undergoing expansion projects with federal funds, none had the abundance of natural stone at their disposal like the San Antonio Zoo. Instead, most zoos utilized concrete in their New Deal-era zoo building campaigns, making the San Antonio Zoo a unique "natural" zoo that actually incorporated native materials into the construction of its buildings, structures, and exhibits.[87]

In 1938 Parks Commissioner Jacob Rubiola announced that due to the ability to construct new units at the zoo using existing rock quarry walls, the city saved $5,500 in construction costs. Furthermore, the WPA provided $32,000 for the construction of new pens to complete the African Panorama.[88] The WPA also helped fund a sea lion pool, numerous walks, drives, curbs, and sewer lines, and assisted with landscaping in the form of tree plantings. In 1939 it was reported that Zoo improvements had totaled $183,483 in federal funds, with the City contributing an additional $54,119.[89]

In 1940, still well within the era of showmanship, the zoo continued to provide entertainment to entice visitors. The sea lions, Slim, Muggs, Butch, and Winky, gave daily performances where they passed beach balls, balanced on ladders, and twirled fire torches, along with other balancing acts and tricks. Watti, Babe, and Moat the elephants also put on a show, creating pyramids, acting out line and hula dances, skipping, and performing a balance act known as "walking the plank." When not performing, the elephants gave rides to Zoo patrons. Other animals in the zoo were similarly engaged in a variety of shows, including Rabbit the mule's see-saw act, the big cat show with lions and tigers, and the famous chimpanzees Buster and Sissy. At that time, the understanding of animal behavior was still wildly misunderstood, even among well-meaning zookeepers. As evidence of the evolution of animal knowledge, a brochure published by the zoo in 1941 stated that hippos were "not dangerous, easily domesticated" animals.[90] In fact, hippos are now recognized as extremely aggressive and territorial, are listed as one of the top ten most dangerous animals on the African continent, and are responsible for approximately 500-3,000 deaths per year.[91]

In 1940, the San Antonio Zoo implemented an admission fee for the first time since its founding, charging 15 cents for adults and 10 cents for children, with free admission on Wednesdays.[92] Around that time, the zoo encompassed nearly 70 acres and was home to 1,750 animals and birds.[93] In 1942 the zoo drew in 398,206 visitors; that year admissions had risen to 17 cents for adults, 11 cents for children over 12, and free for those under 12. Wednesday remained a free day.[94] That year, the Reptile House (Resource No. 22) was the last improvement completed at the San Antonio Zoo with WPA funding. It featured 18 glass-front displays housing over 100 snake varieties. It cost $25,000 to construct, of which SAZA paid $8,000.[95]

Postwar Development at the San Antonio Zoo

During World War II development at the zoo slowed. Wartime shortages and lack of funding meant that the zoo needed to cut expenses, and the zoo reduced exhibits of rare and heavy-eating animals which they planned to replace following the war. Certain animals, including Brahman cattle, were returned to their donors for care during this time, while smaller animals were sold off. Purchase of new animals was put on hold and improvements were limited to only those necessary,

[86] "S.A. Zoo 'Slum Problem' is Eliminated," *San Antonio Light,* June 25, 1939, 18.
[87] McCollum, *The Architecture of Keeping Animals*, 37.
[88] "Rubiola Cites Cash to be Saved at Zoo," *San Antonio Light*, September 15, 1939, 7; "398,206 Total Visitors At Zoo in 1942," *San Antonio Light,* February 28, 1943, 44.
[89] "S.A. Zoo 'Slum Problem' is Eliminated," *San Antonio Light,* June 25, 1939, 18.
[90] *A Guide to the San Antonio Zoo*. (San Antonio Zoological Society, 1941), 2.
[91] National Geographic, "Hippopotamus," accessed January 19, 2023, https://www.nationalgeographic.com/animals/mammals/facts/hippopotamus.
[92] "No Change Made in Fee for Children," *San Antonio Express,* August 17, 1940, 1.
[93] *A Guide to the San Antonio Zoo*. (San Antonio Zoological Society, 1941), 2.
[94] "398,206 Total Visitors At Zoo in 1942." *San Antonio Light,* February 28, 1943, 44.
[95] Matthews, *A History of the San Antonio Zoo,* 29.

including replacing roofs on feed rooms, animal shelters, and the commissary that were damaged due to hail.[96] With wartime rationing over, in the late 1940s the building program at San Antonio Zoo revived, adding an ape house and bird cages. The reptile house was enclosed, and a rhinoceros was ordered.[97] Around that time, the zoo dug a large artesian well that pumped cool, fresh spring water into the canals and ponds within the zoo at a consistent 72-73 degrees, which provided the ideal water temperature for animals year-round. The water being pumped from the well was reportedly so clear and fresh that it did not require any filtering before being pumped into exhibits in the Aquarium.[98]

In 1946 Zoo president Richard Friedrich paid a large sum for the zoo's first penguins, which were accommodated in a new Penguin House (Resource No. 39) with a mechanical system from his Friedrich Refrigeration Company that helped maintain sub-freezing temperatures for the birds. Two years later the Richard Friedrich Aquarium (Resource No. 7) was completed, touted as the world's greatest. Friedrich praised Stark for its success owing to the extensive research he had conducted on the best aquariums around the world. [99] The aquarium was designed by well-known architect Atlee B. Ayres and cost approximately $60,000.[100] The new aquarium, with its distinct plaster shell entrance and inset seashells, indicated the zoo's longstanding commitment to creating a visually pleasing, "natural" aesthetic within the zoo property. In May of 1947, the zoo reported an attendance of 27,004 adults and 19,280 children, which amounted to $4,778 in attendance income.[101]

In 1951 a dispute arose surrounding the long-standing agreement between SAZA and the city over the operation of the zoo and Friedrich and Stark spearheaded negotiations with then-mayor Jack White. The city argued that the zoo was frequently incurring a deficit, and that perhaps the city should take over management of the zoo. Friedrich countered that if the SAZA was removed as operator of the zoo, it had the potential to become politically operated.[102] Fearing a complete takeover of Zoo operations, Stark and Friedrich negotiated a new contract, which gave the city three-fifths of admissions and increased the concession fee from $50 to $200 per month.[103]

In addition to the physical improvements at the zoo, in the 1950s Fred Stark was instrumental in initiating captive breeding programs (particularly birds) at the zoo. After attending a 1956 zoo conference in Chicago, Stark announced that one of the only 16 known whooping cranes remaining in the world was headed to the San Antonio Zoo to begin a captive breeding program in cooperation with the U.S. Fish and Wildlife Service (USFS). Several years later, Rosie the whooping crane successfully produced baby chick "Tex," although subsequent breeding attempts were not as successful. Nonetheless, due to its temperate climate, abundant water sources, and stellar management practices under Fred Stark, throughout the second half of the twentieth century, the San Antonio Zoo was the only zoo world-wide to consistently feature a whooping crane.[104]

Stark's experience with and love of birds continued to pay dividends when Frederick C. Hixon became a proponent of the San Antonio Zoo and active member in the SAZA in the late 1950s. Shortly after, Stark convinced Hixon to finance the construction of a bird house. Hixon paid Thomas Pressly, Zoo architect, to collaborate with Stark on the plans and design, and subsequently provided significant funding for its completion. As part of their preparation, Hixon, Stark, and Pressly traveled to zoos across the country to view a variety of aviaries and large bird collections, eventually meeting with New Jersey-based private bird collector Edward Marshall Boehm. Boehm then traveled to San Antonio to tour the bird collection at the zoo, and after being impressed by Stark's outstanding facilities, generously donated 100 rare birds for the new bird house. Completed in 1966 the Hixon Bird House (Resource No. 70), designed in the round with a simulated

[96] "Expenses Cut, Replacements Due After War," *San Antonio Light,* April 14, 1944, 18.
[97] "Ground Breaking Ceremonies for $60,000 Aquarium Held," *San Antonio Express,* February 6, 1948, 22.
[98] Mike Cantu, "Spring Invaluable to S.A. Zoo," *San Antonio News,* October 28, 1964, 12C.
[99] Matthews, *A History of the San Antonio Zoo,* 21.
[100] "Ground Breaking Ceremonies for $60,000 Aquarium Held," *San Antonio Express,* February 6, 1948, 22.
[101] "19,280 Children 27,004 Adults Visit Zoo," *San Antonio Express,* June 6, 1947, 4.
[102] Matthews, *A History of the San Antonio Zoo,* 21-22.
[103] "Keep Zoo Out of Politics, Society Asks Commission," *San Antonio Express,* June 26, 1951, 19.
[104] Matthews, *A History of the San Antonio Zoo,* 29.

rainforest at the center surrounded by glassed-in exhibits with natural vegetation, was the pride of Fred Stark and his long love of birds.[105]

In 1962 Richard "Dick" Friedrich passed away, and his wife Gertrude succeeded him as zoo president until her death in 1971. The family left a significant bequest to the SAZA upon their deaths.[106] During his tenure, Richard Friedrich was the zoo's largest contributor and fundraiser and was especially successful at securing new animals and raising funds for new exhibits, facilities, and expansion programs.[107]

In 1964 Fred Stark successfully negotiated with the King Ranch in Kingsville, as well as other large ranch owners, for grazing animals from Asia and Africa. Under the program, initiated in 1965, the zoo would receive the animals supplied by the ranches at no cost in exchange for the return of said animals after a successful breeding program, along with half of the additional offspring. Under the breeding program hundreds of grazing animals were produced, to the point where the San Antonio Zoo was able to sell surplus animals to other zoos amounting to a sizable income.[108]

Fred Stark died in 1967 after over three decades of devoted service to the San Antonio Zoo. During his time as director, Stark had lived on-site at the zoo, along with sick and young animals whom he personally cared for, sometimes in his home.[109] Fred Stark was a unique zoo director whose combined business acumen, successful fundraising, animal management practices, and overall love of the zoo was a fundamental aspect of the zoo's continued success throughout his tenure. The combined dedication of Friedrich and Stark to the success and expansion of the San Antonio Zoo between the 1930s and 1960s allowed the property to continue to grow and expand. Their knowledge and appreciation of animals earned the zoo an excellent reputation among conservationists, fellow zoo directors, and the zoo-going public.

The San Antonio Zoo in the Late Twentieth Century

Louis R. DiSabato became the new zoo director in 1968. Only 37 at the time he was hired, he had previously worked at zoos in Ohio and later served as the zoo director at the Columbus Zoo. He also designed a new zoo for the city of Rochester, New York, although lack of funding prevented it from ever coming to fruition. When DiSabato accepted the position in San Antonio, he stated "There is a certain quaintness about this zoo and the city. It's really Old World and I want to keep that flavor and add to it. I want a park-like atmosphere. I want things modern but not modernistic."[110]

DiSabato and Zoo architect Thomas Pressly had big plans for the zoo and developed a million-dollar master plan, which included Africa, North and South America, and Australia sections with "natural habitat" exhibits, a children's zoo, animal hospital, service area, and educational facility.[111] Throughout the 1970s and 1980s many of DiSabato's improvements were made at the zoo, including completion of the Animal Health Center (1972), the Congo Falls Gorilla exhibit (1976), Animal Nursery (1981), Everglades exhibit (1982), Hixon Visitor Center (1982), Straus Education Center (1983-1986), Galapagos Island exhibit (1984), Pelican Island exhibit (1984), Seal Island (1985), playground (1986), Shark exhibit (1986), and the Children's Zoo (1987), among others.[112] Throughout the 1980s and 1990s the zoo continued to expand, upgrade, or renovate existing facilities, and add themed areas like the Amazon Rain Forest, the Cliffside Grottos, the Rift Valley Track, and the Outback.

DiSabato continued the work of his predecessor, Fred Stark, in the zoo's successful animal breeding programs, including snow leopards, golden lion tamarins, and the American flamingo. In 1972 a male white rhinoceros calf was born at the San Antonio Zoo, the first successfully bred in captivity outside of Africa.[113] In addition to the zoo's work with animal

[105] Matthews, *A History of the San Antonio Zoo,* 31.
[106] Matthews, *A History of the San Antonio Zoo,* 25.
[107] Matthews, *A History of the San Antonio Zoo,* 20.
[108] Matthews, *A History of the San Antonio Zoo,* 34.
[109] Matthews, *A History of the San Antonio Zoo,* 36.
[110] Jim Brigance, "New Director Has Big Plans for S.A. Zoo," *San Antonio Light*, January 6, 1969.
[111] Matthews, *A History of the San Antonio Zoo,* 38-39.
[112] Matthews, *A History of the San Antonio Zoo,* 44-50.
[113] Matthews, *A History of the San Antonio Zoo,* 80-81

conservation, DiSabato also initiated a plant conservation program, and the zoo was designated a plant rescue center by the U.S. Department of the Interior.[114]

Although zoos nationwide, including the San Antonio Zoo, experienced declining visitation during the 1970s, interest was revived in the 1980s. In San Antonio, the zoo attributed its particular draw to "the terrain, a naturally rocky, rugged landscape which most zoos try to imitate by construction."[115] In 1987 the San Antonio Zoo had grown to 3,000 animals and 700 species.[116] In 1989 the zoo participated in 27 species survival plans, which consisted of inter-zoo exchanges for captive breeding of endangered species. That year, it had 3,500 specimens of 700 species.[117]

In 1988 SeaWorld San Antonio, a hybrid aquarium and theme park, opened, providing fierce competition for the San Antonio Zoo. After SeaWorld's opening, attendance at the zoo briefly declined, dropping from 1.1 million in 1985 to just over 889,000 in 1988. However, by 1991 the zoo reported an annual attendance of 960,000 visitors, 69 percent of whom came from out of town.[118] Under DiSabatos' leadership, the zoo embarked on modernizing the facility, removing many of the barred exhibits and cages that had been installed in previous eras, and "moving into a more natural display of animals that mixes species as they would be in the wild." Additionally, the zoo made efforts to expand their commercial offerings, adding various gift shops, food stands, and restaurants. [119]

In 1994 J. Stephen McCusker, former vice president of the board of American Association of Zoological Parks and Aquariums, took over the position of executive director at the zoo after DiSabato retired. That year, the size, quantity, and variety of species at the San Antonio Zoo made it one of the top ten zoos in the country.[120]

The Modern San Antonio Zoo (2000-present)

In the twenty-first century, the San Antonio Zoo continues to provide recreational and educational amusement for children and families in San Antonio and throughout Texas. Its natural setting within a former limestone quarry is unparalleled, and while the zoo has continued to evolve based on the growing knowledge of animal welfare, throughout its over 100 years of operation it has endeavored to maintain its unique, rustic setting and diverse array of animals. In the 2014-2015 year the zoo had over 1 million visitors and hosted numerous special events including a Zoo Run, Halloween Zoo Boo, Zoobilation Ball, and Zoo-La-La Feast. That year it reported net assets over $38 million.[121] While the COVID-19 pandemic in 2020 temporarily dropped Zoo admissions to 559,000, during that time the zoo adapted and offered a drive-thru zoo experience and virtual events to continue to raise funds for the zoo's continued operation. That year they also successfully bred two endangered salamanders, the Texas blind salamander and the reticulated flatwoods salamander.[122] Thus, the San Antonio Zoo serves a variety of functions, as a cultural institution, a conservation organization, an educational tool, and an area of historical significance spanning over 100 years.

Architectural and Design Influences at the San Antonio Zoo

Development of Rustic Architecture and Design at the National Park Service

In the late nineteenth and early twentieth century, the United States experienced a period of immense expansion and growth. As Anglo and European settlement pushed west, explorers, naturalists, and artists began to celebrate the beauty and abundance of America's vast wilderness, which ushered in a period of environmental romanticism. In the late

[114] Ulrich, *A Historic Standing Structure Survey of a Portion of the San Antonio Zoo*, 48.
[115] Mark Hanna, "Animals Roam Rocky Terrain at San Antonio Zoo," *Austin American Statesman,* June 19, 1983, 57.
[116] Danny Mogle, "Don't Forget San Antonio Zoo," *The Tyler Courier,* September 27, 1987, 65.
[117] Matthews, *A History of the San Antonio Zoo*, 75.
[118] Stefanie Scott, "Preserving the future, S.A. Zoo a leader in species survival," *San Antonio Express-News*, September 8, 1991, 1M.
[119] Stefanie Scott, "Preserving the future, S.A. Zoo a leader in species survival," *San Antonio Express-News*, September 8, 1991, 1M.
[120] Dan Calderon, "Local Zoo to get new boss," *San Antonio Express-News,* August 31, 1994, 1D.
[121] San Antonio Zoological Society, "2015 Annual Report," accessed June 8, 2022, https://sanantoniozoo.app.box.com/s/nypre5pxburea9etm38gn4vrib7r13k8.
[122] San Antonio Zoological Society, "2020 Annual Report," accessed June 8, 2022, https://online.fliphtml5.com/hxzzu/eeuj/#p=1.

nineteenth century, the first national parks were established to celebrate and preserve these unique landscapes. The construction of railroads to the west brought major developments to national parks, as they allowed the easy transport of construction materials, along with skilled architects and engineers. At the same time, landscape architecture and natural design was being espoused by Andrew Jackson Downing, Frederick Law Olmsted, and H. H. Richardson, and other contemporaries. Site planning and landscaping were carefully considered in the design and layout of buildings and structures in national parks at the turn of the century. California-based architects, including Bernard Maybeck, began experimenting with the use of native materials in construction, and designing site-specific structures that harmonized with the surrounding environment.[123]

The development of national parks, in conjunction with the rise of environmental romanticism and the exploration of natural, site-specific design, resulted in the construction of numerous rustic hotels, lodges, and recreational facilities in national parks throughout the U.S. in the early twentieth century. The Old Faithful Inn (NR 1973, NHL1987), constructed in 1903, is an excellent example of turn of the century rustic design, with its log frame structure, wood shingle roof, and volcanic stone foundation. So too is the Leconte Memorial Lodge at Yosemite (NR 1977, NHL 1987). Over time, regional variations of rustic design began to emerge, some based on indigenous building techniques, others on the stylistic preferences of different architects.[124]

The National Park Service was officially established in 1917 and over the subsequent decade numerous new buildings and structures were constructed throughout national parks, many conforming to the precedent of utilizing natural materials and non-intrusive designs that blended in with the landscape.

Depression Era New Deal relief programs strengthened wildlife conservation, constructed infrastructure, boosted affordable housing stock, and provided unemployment relief. In 1933, the Civilian Conservation Corps (CCC) was created, which employed "an army of young men" in the nation's forests and parks to complete simple manual labor tasks. That year, the Federal Emergency Administration of Public Works was also created, later known as the Public Works Administration (PWA), which funded thousands of infrastructure projects over the subsequent decade. The PWA employed more skilled laborers that were adept at rustic construction, and the funding allowed the NPS to design and construct numerous new rustic buildings and structures in parks throughout the country.[125] In 1935, a second phase of the New Deal furthered the goals of the earlier legislation, and that year the Work Progress Administration (WPA) was created with the goal of providing jobs and improving infrastructure. [126]

By the late 1920s and early 1930s, with increasing budgets and attendance in national parks, a distinct, rustic architecture and landscape architecture style began to crystallize. In addition to designing buildings that harmonized with the environment, designers also took care to design structures, including roads and road-related structures, shelters, and gateways, utilizing native and rustic materials.[127] Concurrent with the development of rustic design in national parks, state parks, along with smaller-scale local and privately-owned parks and recreation areas began to adopt the aesthetic language of the NPS's rustic architecture movement.

In 1935, the National Park Service Division of Planning published *Park Structures and Facilities*, which outlined the design philosophy of rustic park architecture. This included:

- Designing buildings in harmony with their setting through native vegetation, natural colors, and foundations that appear as natural outcrops or rock footings.
- Stones, logs, and other native materials used in proportion with their natural setting.

[123] William C., Tweed, Laura Soulliere, and Henry G. Law, *Rustic Architecture: 1916-1942 (*National Park Service: 1977) accessed January 10, 2023, https://www.nps.gov/parkhistory/online_books/rusticarch/part1.htm.
[124] Tweed et al, *Rustic Architecture,* https://www.nps.gov/parkhistory/online_books/rusticarch/part1.htm.
[125] Tweed et al, *Rustic Architecture,* https://www.nps.gov/parkhistory/online_books/rusticarch/part5.htm.
[126] The Living New Deal, "New Deal Timeline," accessed January 10, 2023, https://livingnewdeal.org/what-was-the-new-deal/timeline/.
[127] Tweed et al, R*ustic Architecture* ,https://www.nps.gov/parkhistory/online_books/rusticarch/part4.htm.

- Avoidance of vertical emphasis.
- Utilizing rough-hewn, minimally processed natural materials to avoid a man-made look.
- Maintaining consistency and harmony between other buildings and structures within the same landscape.
- Maintain irregularity of rock size and shape in masonry work, "the variety of nature being preferably to the regularity of man."[128]

In the late 1930s and early 1940s, the federal relief programs were still in operation, but their size and purview began to dwindle. At the National Park Service, the man-power, physical labor, and cost required to construct rustic style architecture and landscape architecture became burdensome at the scale required to complete the necessary improvements. Furthermore, the nascent staff of designers that had begun at the park service in its early years of foundation had ballooned into a large workforce of educated professionals, keen to broaden the scope of park design and incorporate elements of modernism into new buildings. Combined with the abundance of new materials, advancements in building technology, emphasis on efficiency and functionality, and expansion of the parks system, the rustic style began to decline by the 1940s. [129]

The heyday of rustic park architecture, which encompassed the mid-1910s through mid-1930s, although short-lived, inspired a trend of design that expanded well past park boundaries. In tandem with the humanistic ideals of the Progressive Era, early twentieth century zoo design also adopted many of the tenants of rustic park architecture and landscape architecture, which is particularly evident at the San Antonio Zoo.

Rustic Design at the San Antonio Zoo

The San Antonio Zoo was established and designed in the early twentieth century, concurrent with an era of environmental romanticism embodied through the development of rustic design in the burgeoning national parks. Early Zoo enclosures utilized the existing rock quarry walls, both because it was economical and because it conformed to the prevailing trends emerging in early twentieth century zoo design for "natural" zoos. Improvements in the zoo halted during World War I, and little construction appears to have occurred during the early- to mid-1920s.

The abundance of both funding and manual labor provided through federal relief programs of the New Deal era was particularly attractive to the leadership at the San Antonio Zoo. In San Antonio, the WPA and other work relief programs funded hundreds of new schools, bridges, apartment complexes, recreational facilities, post offices, and municipal buildings throughout the 1930s and early 1940s. WPA-funded projects in San Antonio included the Alamo Stadium (NR 2011), Olmos Park Basin, the Hipolito F. Garcia Post Office (NR 2000), the Stinson Field Terminal, the San Antonio Riverwalk (NR 2018), and improvements at the San Antonio Zoo.[130]

In keeping with the rustic, natural feeling of the zoo, buildings constructed with federal funding in the 1930s and early 1940s utilized native limestone and consisted of random, coursed, or squared rubble masonry. Buildings constructed during this time, as well as other structures such as bridges, enclosures, and retaining walls, are largely devoid of extensive decorative details. Some New Deal-era resources do exhibit some stylistic or architectural features (such as the Hippo House), but these are minimal and simple designs reflective of the era.

Many of the WPA-era buildings and structures are still extant at the San Antonio Zoo. Although some of the structures and enclosures required alterations due to changing knowledge of animal welfare and the need for more space, the remaining WPA features within the San Antonio Zoo lend the property its distinct feeling. Constructed using native Texas limestone, they are distinct among WPA-era zoo construction, which most often utilized concrete, and contribute to the overall natural, rustic setting of the zoo.

[128] Tweed et al, *Rustic Architecture,* https://www.nps.gov/parkhistory/online_books/rusticarch/part5.htm.
[129] Tweed et al, *Rustic Architecture,* https://www.nps.gov/parkhistory/online_books/rusticarch/part6.htm.
[130] Nicholas Frank, "How WPA Projects Transformed San Antonio," *San Antonio Report,* accessed January 17, 2023, https://sanantonioreport.org/preservation-seminar-to-examine-how-wpa-projects-transformed-san-antonio/.

In addition to rustic limestone buildings and structures, several of the historic resources within the San Antonio Zoo exhibit distinct craftsmanship or methods of design, including the use of faux bois and board-formed concrete. Some later historic resources constructed at the zoo also utilized these methods in order to create a consistent, harmonious aesthetic.

Faux Bois

Faux bois, a technique of creating rustic, imitation wood out of cement or concrete, can be traced back to Europe, Asia, Mexico, and the U.S. as early as the eighteenth century. The technique was most often used in landscape design and can be found in parks and "follies" throughout the world. Faux bois typically consists of tinted cement that imitates the natural, rustic nature of wood in the manner of tree trunks, logs, branches, or hewn logs with textured faux bark and knot holes that were hand carved into the cement. The technique was used on a variety of structures, including fences, benches, bridges, shelters, gates, fountains, tables, and buildings. [131]

One of the most well-known craftspeople to utilize the faux bois technique in Texas was Mexican-born Dionicio Rodriguez. Rodriquez was skilled at creating unique, rustic faux bois designs throughout the U.S. between 1924 and the early 1950s. Rodriguez designed many works in Texas, and particularly in San Antonio, including on private residences, residential and commercial works for Charles Baumberger (founder of Alamo Portland Cement Company), and in numerous parks throughout San Antonio, including Brackenridge Park adjacent to the San Antonio Zoo. One of his most prominent works in San Antonio is the entrance gate to the Japanese Tea Garden in Brackenridge Park.[132]

Rodriguez was known to work with many other rustic, faux bois craftsmen of the era, including Basilio, Sam Murray, Tony Lopez, Dionicio Rosales, and others, however Dionicio is largely regarded as one of the foremost practitioners of the art in the U.S. For more information on Rodriguez and the technique of faux bois, see the *Sculpture by Dionicio Rodriguez in Texas Multiple Property Submission.*[133] Although no evidence exists to suggest that Rodriguez was responsible for any works within the San Antonio Zoo, his work in the adjacent Brackenridge Park likely inspired many of the examples of faux bois later constructed in the zoo, and his known association with Charles Baumberger, a patron of the zoo, may have influenced the decision to include this technique within the rustic setting of the zoo. It's possible that one of Rodriguez's apprentices or assistants may have created the faux bois features within the zoo.

There are several buildings and structures within the San Antonio Zoo that exhibit the distinct faux bois technique (including, but not limited to, Resource No. 37), and good extant examples may be historically significant as representative examples of this distinct, early twentieth century artistry.

Raw, Board-Formed Concrete

While the use of architectural or structural concrete can be traced back as far as the ancient Romans, the technology was lost after the fall of the Roman empire, not to be rediscovered until the late eighteenth century. In 1824 Portland cement was patented, by the mid-1800s builders began utilizing steel to reinforce concrete, and by the 1920s prestressed concrete was introduced.[134]

As the development of architectural concrete progressed, the process required creating structural systems within which to pour the viscous material while it cured. Creating concrete walls required fabricating wood form-work, often supported by bracing, which supported the wood sheathing forms. When the concrete set and the forms were removed, the plywood sheathing left an impression of the wood pattern on the raw concrete.[135] In the early twentieth century, the surface and treatment of the concrete after it cured was largely dependent on its usage. Exposed or raw concrete, which typically left the formwork impressions in place, was often delegated to utilitarian areas in warehouses, factories, military facilities, and

[131] Patsy Light and Maria Pfieffer. *Sculpture by Dionicio Rodriquez Multiple Property Listing* (National Park Service, 2004), accessed January 10, 2023, https://atlas.thc.texas.gov/NR/pdfs/64500904/64500904.pdf, E-3-E-4.
[132] Light and Pfieffer. *Sculpture by Dionicio Rodriquez*, E-9.
[133] Light and Pfieffer. *Sculpture by Dionicio Rodriquez*, E-3-E-4.
[134] Edward Allen and Jospeh Iano, *Fundamentals of Building Construction, Fifth Edition* (New Jersey, John Wiley and Sons, 2009), 516.
[135] Francis D.K. Ching, *Building Construction Illustrated Fourth Edition* (New Jersey: John Wiley and Sons, 2008), 5.07.

on bridges and dams. In more public spaces, the concrete would either be smoothed or concealed behind a more "upscale" material such as stone veneer, stucco, or plaster.

However, the rise of the second wave of modernism in the post-war era and its emphasis on truth of materials saw an increased interest in the use of raw concrete as an aesthetic preference. In the 1950s, renowned architect Le Corbusier coined the term *béton brut*, which translates to "rough concrete" to describe his work on the Unite d'Habitation in France and the use of raw, unfinished concrete. Eventually, the term evolved into the word "Brutalist" to describe the imposing, concrete designs of the post-war era, and it evolved from a utilitarian and functional material to one that purposefully expressed the modernist ideals.

At the zoo, the use of raw concrete and visible formwork can be found within exhibit walls throughout the property. The early usage of raw, board-formed concrete signifies the hierarchy of materials of the early twentieth century, with the largely utilitarian material being relegated to animal enclosures and walls. However, some later examples of board-formed concrete within the zoo have been deliberately used as an aesthetic feature, with exaggerated painted or tinted concrete meant to evoke natural wood, in line with the rustic aesthetic of the zoo. Some examples of board-formed concrete within the zoo may be significant as good examples of the evolution of board-formed concrete as an architectural building material, and for their specific contribution to the rustic setting of the zoo.

Architects of the San Antonio Zoo

Adams & Adams

Many of the buildings and structures completed during the New Deal-era building program at the San Antonio Zoo were completed by the San Antonio architectural firm Adams & Adams, including numerous quarry wall exhibits, the old Zoo restrooms, the Commissary/Monkey House (Resource No. 5), the Elephant House (Resource No. 42), the Hippo House (Resource No. 79), and the Baumberger Moats (Resource No. 54). W.C. Thraikill was the contractor.[136] Some of the buildings featured modest stylistic elements, like the Spanish Revival Commissary and Rustic Moderne Hippo House, while others, like the Elephant House, were simply Rustic stone structures to house the animals. All these features utilized the local limestone in their construction, giving the zoo a cohesive, natural feeling that blended in with its surrounding environment. Furthermore, the use of stone made these facilities durable and easy to clean, while still being aesthetically appealing to the visitor.

Born in 1885 in Nebraska, Carleton Adams and his family moved to San Antonio in 1890. Adams went on to study architecture at Columbia University, graduating in 1909 and returning to San Antonio. Along with his uncle Carl C. Adams he co-founded the firm Adams & Adams. Adams & Adams were key figures in the development and design of numerous residences in the Monte Vista neighborhood of north San Antonio. [137]

Carl Adams died in 1918 and Max C. Friedrich took over as associate of the firm with Carleton Adams. The firm constructed numerous residences throughout San Antonio, although they specialized in large commercial and public buildings. Adams was known to experiment with a variety of styles, but most popularly the Spanish Colonial-Revival and later Art Deco styles, evident on some of the buildings at the zoo.[138] They also utilized tenants of the Beaux Arts style of design, particularly on their 1919 design for the San Antonio Drug Company Building (NR).

In the 1920s, the San Antonio Zoological Association (SAZA) retained Adams & Adams to draw up designs for their barless, cageless zoo. After meeting with zoo consultant Heinrich Hagenbeck, the firm designed plans for numerous new buildings and structures within the zoo, many of which are extant in 2022. Several sources cite Gerard M. Baker as the chief designer working for Adams & Adams on the zoo project. Although little appears to be known about Baker, one

[136] Jenny Hay, *Historic Resources Survey of the Cultural Landscape of the San Antonio Zoo* (City of San Antonio Office of Historic Preservation, 2017), 7-9.
[137] Long, "Adams, Carleton W. (1885-1964)."
[138] Long, "Adams, Carleton W. (1885-1964)."

newspaper article indicates that he had been previously employed constructing cageless animal enclosures at the St. Louis Zoo.[139]

In the 1930s, much of Adams & Adams work was funded by the WPA, including the Thomas Jefferson High School (1929-1932, NR 1983), a sprawling campus inspired by Spanish Renaissance (also known as Spanish Colonial Revival) architecture, with hipped roofs of red tile, elaborate cast stone details, carved wooden doors and beams, and ornate auditorium. The school was featured in *Life Magazine* and *National Geographic* for its innovative design and beauty.[140] The firm also worked as the campus architect for Texas A&M University in the 1940s, where Carleton Adams designed the Memorial Students Center. [141]

The firm continued operating until Carleton Adam's sudden death of a heart attack in 1964.[142] Notable buildings designed by Adams & Adams include:

- Protestant Orphan's Home, San Antonio
- National Bank of Commerce, San Antonio
- F.W. Woolworth Building (Alamo Plaza NR District 1977)
- Trinity Methodist Church San Antonio (1920)
- St. James Methodist Episcopal Church, Waco (1924, NR 2019)
- Great American Life Insurance Building, San Antonio (1925)
- Charles Baumberger House, San Antonio (1929)
- G.A. Stowers House, San Antonio (1925)
- Thomas Jefferson High School (1929-1932, NR 1983)
- Robert E. Lee Hotel, San Antonio (1938 Addition, NR 1996)
- San Antonio Drug Company (1919, NR 1994)
- State Highway Building, Austin (1932)
- King Ranch Home "Santa Gertrudis" Kingsville (1913-1917, NHL 1964)
- Kerr County Courthouse, Kerrville
- Sames-Moore Building, Laredo
- Nixon Office Building, Corpus Christi
- West Texas Utilities Building, San Angelo (NR
- Texas State Library and Archives Building, Austin (1958)

Ayers and Ayers

Atlee B. Ayers was born in 1873 in Hillsboro, Ohio, however, his family relocated to Texas in 1879, arriving in San Antonio in 1888. Ayers left Texas in 1890 to study architecture at the Metropolitan School of Architecture, part of Columbia University. While in New York, Ayers won the first prize in the school's design contest, ultimately graduating in 1894. Ayers returned to San Antonio, where he accepted positions with several architecture firms, before spending a brief stint in Mexico. It was likely during this time that Ayers was inspired by the architecture of Mexico, which in turn impacted his later regional Spanish Colonial Revival designs. In 1900 Ayers returned to Texas and formed a partnership with Charles A. Coughlin which lasted until 1905 when Coughlin died.[143] In 1915 Ayers was selected as the state architect

[139] "Move for South's First Cageless Zoo Launched Here," *San Antonio Express*, December 30, 1928, 15.
[140] Lee Ann Husky and Betty Ann Janert, *Thomas Jefferson High School National Register of Historic Places Nomination Form* (National Park Service, 1983), 8-1.
[141] Maria Watson Pfieffer and Brent Lane. *San Antonio Drug Company National Register of Historic Places Nomination Form* (National Park Service, 1994), 8-16.
[142] Pfieffer and Lane, *San Antonio Drug Company*, 8-16.
[143] Anonymous, "Atlee B. Ayers."

of Texas, during which time he designed the Texas School for the Blind, Texas State Office Building (NR 1998), and numerous other municipal buildings. [144]

In the early decades of the twentieth century, Ayers designed numerous residences in the Classical Revival style, predominantly in the Alta Vista and Monte Vista neighborhoods of San Antonio. Home to wealthy suburbanites who could afford architect-designed residences hired Ayers to design their stately mansions. Characteristics of his prominent residences included imposing facades punctuated with Corinthian columns, pedimented entrances, large porches, and sometimes porte cocheres. [145] Ayers' work includes buildings inspired by Craftsmen, English Tudor, Mediterranean, Beaux Arts, Italian Renaissance, Eclectic, and other styles.[146]

In 1924 Ayers and his son Robert M. Ayers formed an architecture firm, and throughout the 1920s and 1930s designed numerous Spanish Colonial residences throughout San Antonio. [147] Hallmarks of his work during that time included the use of stucco façades, detailed tile work, and symmetry of massing, [148] In the 1930s, the firm experimented with the emerging Art Deco style, evident on their design of the "Taj Mahal" as it was colloquially known, an administration building on the Randolph Air Force Base. Throughout his career, Ayers designed over 500 buildings and his architectural style came to characterize residential and municipal design in San Antonio, and throughout Texas. Ayers died in 1969 at the age of 96 and continued practicing architecture until his death.[149]

The Aquarium (Resource No. 7) at the San Antonio Zoo was designed by Ayers and completed in 1948. Notable works by Ayers include:

- Villa for George W. Brackenridge (unknown date)
- Woman's Club of San Antonio (1904-5, NR 1996)
- City Public Service Company Building (1921, NR 1995)
- Smith-Young Tower (1927, NR 1991)
- John Nance Garner House (NHL 1976)
- Halff House (1908)
- Cameron County Courthouse (1912, NR 1998)
- State Office Building (1918, NR 1998)
- Hogg House (1924)
- Refugio County Courthouse (1917, NR 2002)
- Plaza Hotel (1926, NR 2017 San Antonio Riverwalk Historic District)
- Mannen House (1926)
- Newton House (1927)
- Atkinson house, later Marion Koogler McNay Art Museum (1928)
- Jesse Oppenheimer residence (1924)
- Administration Building at Randolph Air Force Base "Taj Mahal" (1931, NR 1987)
- Neisner's Building Streamlined Moderne (1948)
- Borden's Creamery (1945-6, NR 2021)

[144] Anonymous, "Atlee B. Ayers."
[145] Lucille Stanford, *David J. and May Bok Woodward House National Register of Historic Places Nomination Form* (National Park Service, 1996), 8-20.
[146] San Antonio Registry, "Atlee B. Ayers," accessed December 5, 2022, https://www.sahouseregistry.com/atlee-b-ayres.
[147] Anonymous, "Atlee B. Ayers."
[148] Katie Friel, "Meet Atlee Ayres, the visionary architect who helped design modern San Antonio," *My San Antonio*, January 26, 2022, https://www.mysanantonio.com/real-estate/article/Atlee-Ayres-architect-San-Antonio-mcnay-freeman-16801054.php.
[149] Friel, "Meet Atlee Ayres."

Thomas Pressly

Thomas Pressly was born in San Antonio in 1929. In 1950 Pressly earned his degree from Washington and Lee University in Virginia and enlisted in the U.S. Airforce when the Korean War broke out. Following his service, in 1953 Pressly enrolled at UT Austin to study architecture, which he completed in 1957. That year, Pressly and his wife Emily returned to San Antonio and in 1961 he opened his own architecture practice. [150] Pressly was eventually hired by the San Antonio Zoo to serve as their official architect and designed several of the distinct post-war buildings within the zoo, including the Hixon Bird House, for which he was later awarded an honor by the San Antonio chapter of the AIA for outstanding design in 1970.[151] In addition to his work at the zoo, Pressly designed residences, lake houses, and ranches throughout Texas. In 1986 Thomas retired from architecture and he and his wife relocated to Ireland where he pursued his passion for painting. The couple returned to the U.S. and settled in Louisiana in 1992. Pressly died in 2014. [152] Other works by Pressly include portions of the San Antonio Riverwalk.

[150] "Thomas Pressly Obituary," accessed December 5, 2022, https://www.legacy.com/us/obituaries/sanantonio/name/thomas-pressly-obituary?id=7133705
[151] "Architects Set Awards," *San Antonio Express*, October 2, 1970, p62.
[152] "Architects Set Awards," *San Antonio Express*, October 2, 1970, p62.

F. ASSOCIATED PROPERTY TYPES

The San Antonio Zoo has been in operation for more than a century, and during that time the evolution of animal welfare standards, safety and sanitation measures, and visitor preferences, have all resulted in numerous changes throughout the zoo property. Alterations to buildings, circulation networks, landscaping, and infill with modern buildings and structures have all rendered the zoo a disparate grouping of historic and non-historic buildings, structures, objects, and features, making listing of the property as an historic district untenable. While it is anticipated that most historic resources within the zoo will be listed individually under the MPDF, there do appear to be concentrations of historic resources within the zoo that retain sufficient historic integrity to be listed as clusters or discrete districts. To qualify, a majority of the resources proposed within these groupings or discrete districts must meet the registration requirements for property types within the San Antonio Zoo, and the resources must be contiguous.

Additionally, as this MPDF was submitted in 2024, the historic-age cut-off for buildings and structures falling within the purview of the MPDF is 1974. However, the passage of time may render later buildings or structures within the zoo boundary as historically or architecturally significant, and thus the document may require subsequent updates to incorporate historic resources constructed after 1974.

The resources covered by this multiple property form are restricted to buildings and structures within the San Antonio Zoo. National Park Service Bulletin 16A defines these resource types as:

- Building: "Created principally to shelter any form of human activity."
- Structure: "Used to distinguish from buildings those functional constructions made usually for purposes other than creating human shelter."[153]

Registration Requirements and Areas of Significance for Buildings and Structures in the San Antonio Zoo

As a whole, the San Antonio Zoo is significant in the area of Entertainment/Recreation, but this area of significance may not be applicable to every zoo building if nominated individually. Many of the property types outlined in this section, however, may be individually significant under Criterion A in the area of Entertainment/Recreation if they reflect important developments in zoo standards and practices in the evolution of American zoos and the San Antonio Zoo. Those properties built with federal funding under New Deal programs, specifically the WPA, would be more appropriately nominated under Criterion A in the area of Politics/Government.

Property types associated with the zoo are organized primarily by the time period during which they were constructed. As development and management best practices for the care and keeping of animals evolved throughout the twentieth century, so did the design and functionality of the buildings and structures within the zoo. Furthermore, the evolution of the visitor experience guided the development of resources within the zoo. Many of the historic resources within the zoo, particularly from the early twentieth century, are simple, rustic buildings and structures constructed of local materials. However, some buildings within the zoo were designed by noted San Antonio or Texas architects, or feature distinct designs or methods of construction, and thus may have additional significance under Criterion C for Architecture.

To be individually listed in the National Register, a historic resource within the zoo must retain integrity of location, setting, design, materials, workmanship, association and feeling, but need not retain their original function. Due to the evolution of zoo design and best practices, many buildings and structures within the zoo have changed function or been retrofitted to conform to updated zoo standards. Historic resources with additions or alterations may be eligible if the original building or structure is largely intact, if the character-defining features are extant and legible, and if the resource otherwise retains a majority of the seven aspects of integrity.

[153] National Park Service, *National Register Bulletin 16B, How to Complete the National Register Registration Form,* accessed January 4, 2023. https://www.nps.gov/subjects/nationalregister/upload/NRB16A-Complete.pdf, 15.

The period of significance for individual properties, clusters, or discrete districts associated with the San Antonio Zoo begins as early as 1914 when the zoo was established and ends as late as 1974, the 50-year cut-off for historic-age resources per NPS guidance. As previously stated, the passage of time may render later buildings and structures within the zoo historically significant and may reveal additional historic contexts, periods, or areas of significance associated with zoo development or architecture. In the future, this MPDF cover document may be amended to incorporate later developments at the San Antonio Zoo.

Integrity

Due to the nature of zoos, and the evolution of best practices regarding animal welfare, alterations to historic resources are prevalent on historic buildings and structures throughout the zoo, particularly on interiors and with animal enclosures. Many alterations were completed during the period of significance and reflect the evolution of zoo management over time, and thus may be significant in their own right. Thus, alterations to a historic-age resource do not always diminish a resource's integrity to such a degree that would preclude it from listing under this cover document.

Generally acceptable alterations to historic buildings and structures include:

Additions: As noted, the nature and evolution of zoos makes additions and alterations to features within the zoo commonplace. Additions are acceptable if they do not obscure the character-defining features of the building or structure, do not overtake the historic resource in massing or scale, and do not prohibit the building or structure's ability to convey their association with areas of significance identified in the historic context. Furthermore, additions completed before the historic cut-off date of 1974 may be assessed for their own historical or architectural significance and their reflection of the evolution of zoo design and best practices.

Windows: Replacement windows do not necessarily detract from the overall integrity of historic resources if they retain their original configuration and are generally consistent with the original design, or are part of a renovation conducted during the period of significance that has achieved its own historical significance. Furthermore, replacement windows that are non-public facing, small in scale, or infilled windows are acceptable if a majority of the original configuration and original windows are intact.

Entrances/Exits: Some buildings and structures within the zoo are accessed by hundreds of thousands of people annually, which results in significant wear and tear on features such as doors and floors. Additionally, changes in accessibility accommodations may have necessitated replacement doors, widening of openings, and installation of ramps on public-facing buildings. Furthermore, doors and gates used for animal enclosures may have been changed to accommodate different requirements of a variety of species who may have been housed in these enclosures over the zoo's long tenure. For doors utilized by humans, acceptable alterations include replacement doors compatible with the original design, doors widened to accommodate Americans with Disabilities Act (ADA) guidance, if they are consistent with the building's overall design and are generally in the original location, and doors that are no longer operational but still remain in their original location. For animal enclosures, replacement doors, widened openings, and new gates may all be acceptable as long as they do not detract from the character defining features of the building or structure.

Exterior Building Walls: Exterior walls, especially those clad in masonry, should remain intact. Exterior walls of additions should be compatible with the original design and materials. Application of paint to historically unpainted surfaces alone does not automatically render a property ineligible.

Interior: Due to the nature of zoos and the evolution of animal welfare, the interiors of many buildings and structures within the San Antonio Zoo have been reconfigured over time and can accommodate a fair amount of change without dramatically impacting their historic integrity. Character-defining features, distinct architectural features, or works of master craftsmen, including faux bois details, should be largely extant and legible. Removal

of interior walls, particularly those in spaces that are not open to the public, and reconfiguration of interior spaces to accommodate the changing needs of the zoo, is generally acceptable.

Function: Buildings and structures within the San Antonio Zoo may have changed function one or more times during their use. This does not preclude their eligibility for listing if the building retains its character-defining features and is still able to convey its historical significance.

Landscape Features and Structures: Landscape features and structures, such as bridges, retaining walls, moats, enclosure walls, and small-scale animal enclosures should retain original materials or be replaced in-kind. Distinct techniques such as board-formed concrete or faux bois should remain largely intact and legible. Repointing of mortar on masonry features is acceptable if it is compatible with the existing. Replacement of masonry in-kind is also acceptable.

Signage/Displays: Large-scale signage or displays affixed to buildings or structures do not necessarily detract from a resource's integrity since they are consistent with the function of the property as a zoo. Signage that is appropriate in scale and does not overwhelm a resource's character-defining features is acceptable.

Unacceptable alterations include:

Additions: Large scale additions which obscure the main façade of the original building or structure or that are imposing in massing or scale to such a degree that they overtake the original resource may preclude a historic resource's ability to convey its significance and negatively impact its historic integrity. Furthermore, non-historic-age additions that do not conform to the original design, materials, or workmanship evident on the original historic resource may negatively impact integrity and may preclude eligibility. This does not include wire mesh or metal animal enclosures affixed to the exterior of buildings for use as animal enclosures.

Windows: Replacement windows that do not conform to the original configuration, scale, location, or design of the original building may negatively impact a resource's integrity. If reconfiguration of windows or infilled windows was completed during the period of significance as part of an alteration of the resource's function, this may be acceptable on a case-by-case basis.

Entrances/Exits: As noted above, the nature of zoos and the various requirements of buildings and structures may have resulted in changes to entrances, exits, and animal gates and enclosures. However, relocation or infill of major entrances or exits, particularly on buildings or structures accessible to the public, is not acceptable. If an entrance or exit is no longer operational, the door should remain in its original location. Incompatible replacement doors on primary, public-facing facades may preclude a resource's ability to convey its historical significance. Back of house replacement entrances/exits may be acceptable. Relocation of animal entrances, exits, and gates is acceptable if it does not dramatically impact the overall integrity of design, materials, workmanship, feeling, or association.

Exterior Building Walls: Exterior building walls should retain their original materials, particularly masonry, or feature replacement in-kind. Some back-of-house exterior walls may accommodate replacement with differing materials on a small scale, but public-facing exterior walls should be original or consistent with the original design and materials. Metal cages, wire mesh, or fencing affixed to exterior stone walls for animal enclosures do not necessarily preclude a building or structure's potential eligibility for listing due to the nature and purpose of zoo enclosures.

Interior: As noted above, interior spaces of historic resources within the San Antonio Zoo can accommodate a fair amount of change, based on the unique nature of the resources themselves. Removal of distinct, character-

defining features or the works of master craftsmen may impact a resource's eligibility. However, removal of some interior architectural elements to accommodate more humane animal enclosures may be acceptable. Furthermore, some resources originally built as animal enclosures may no longer be adequate for animal use, and thus conversion or adaption to a different function may allow continued use of the building or structure.

Landscape features: Replacement of masonry materials with incompatible alternatives, such as concrete block, different stone type (replacement of limestone with granite, for example), or differing masonry pattern (for example, coursed ashlar masonry where original was random rubble) is generally not acceptable. Removal of original distinct features, such as faux bois or board formed concrete details, may negatively impact a resource's historic integrity. Relocation of landscape features or structures may also impact their historic integrity.

Signage/Displays: Any signage or display that permanently alters a historic resource' exterior facade, such as painted over masonry, may preclude a resource's ability to convey its historical significance.

San Antonio Zoo Property Types

Property type classifications within this MPDF are derived from a review of previous surveys conducted of historic resources within the San Antonio Zoo. They include:

1. Early Twentieth Century Zoo Buildings and Structures (1914- c.1935)
2. New Deal Era Buildings and Structures (c.1935-1942)
3. Postwar Buildings and Structures (c.1945-1974)
4. Architect-designed Buildings (Adams & Adams, Atlee B. Ayers, Thomas Pressley) (1914-1974)
5. Buildings and Structures with Distinct Design/Construction Techniques (1914-1974)

1. Early Twentieth Century Zoo Buildings and Structures

The San Antonio Zoo was founded in 1914 within the former site of a rock quarry, and many of the early animal enclosures were constructed adjacent to the existing quarried limestone ledges. This allowed for ease of construction because one large wall was already carved out of stone. The unique location was also ideal for animals because the site within the quarry reportedly ran 20 degrees cooler during the summer months.[154] As the zoo continued to expand, and new buildings and structures were added to the facility, builders continued to utilize the quarry walls for exhibits. Native limestone continued to be the preferred material for the construction of retaining walls, auxiliary buildings and structures, animal enclosures, and visitor buildings, among other resources.

Early twentieth century historic resources include buildings and structures constructed between 1914 and ca. 1935 of native or rustic materials, including limestone and wood, to create a "natural" environment for both the animals and visitors. They also include exhibits designed in conjunction with the adjacent rock quarry walls, which is a distinct, character-defining feature of the San Antonio Zoo.

Criteria, Areas, and Period of Significance: Early twentieth century zoo buildings and structures may be eligible under Criterion A: Entertainment/Recreation at the local level for their reflection of the trend towards "natural," barless, cageless zoos that was proliferating across the U.S. during that time period. They may also be significant under Criterion C: Architecture at the local level if they reflect the incorporation of the unique site within the former rock quarry or are good examples of early twentieth century Rustic style architecture. The period of significance for Early Twentieth Century Zoo Buildings and Structures is 1914 to ca. 1935, the time period prior to New Deal-era funding at the zoo.

[154] Ulrich, *A Historic Standing Structure Survey of a Portion of the San Antonio Zoo*, 37.

2. New Deal Era Buildings and Structures

In keeping with the rustic, natural feeling of the zoo, buildings constructed with federal funding in the 1930s and early 1940s utilized native limestone and consisted of random, coursed, or squared rubble masonry. Buildings constructed during this time, as well as other structures such as bridges, enclosures, and retaining walls are largely devoid of extensive decorative details. Some New Deal-era resources do exhibit some stylistic or architectural features (such as the Hippo House), but these are minimal and simple designs reflective of the era.

Many of the New Deal-era buildings and structures are still extant at the San Antonio Zoo. Although some of the structures and enclosures required alterations due to changing knowledge of animal welfare and the need for more space, the remaining WPA features within the San Antonio Zoo lend the property its distinct feeling. Constructed using native Texas limestone, they are unique among WPA-era zoo construction, which most often utilized concrete, and contribute to the overall natural, rustic setting of the zoo.

Criteria, Areas, and Period of Significance: Buildings and structures associated with the New Deal-era of development at the San Antonio Zoo are significant under Criterion A: Politics/Government at the local level and may be significant under Criterion C: Architecture at the local level as an expression of New Deal-era rustic architecture and landscape design. New Deal-era buildings and structures may also have significance under Criterion C if they are good examples of distinct construction techniques, such as faux bois. The period of significance for New Deal-era Buildings and Structures is ca. 1935 to 1942, reflecting the time period during which federal New Deal initiatives funded improvements at the zoo.

3. Post-war Buildings and Structures

The post-war era was a time of significant growth and expansion at the San Antonio Zoo. As elsewhere in the country and in Texas, post-war Zoo buildings and structures reflected a shift in the architectural preferences from natural, rustic design towards more sleek, modern construction with abstract and sculptural forms, such as the Hixon Bird House (Resource No. 70). The end of wartime materials shortages, combined with advances in building technology, also allowed for the usage of more modern materials such as glass, steel, and concrete. Although design preferences saw buildings and structures at the San Antonio Zoo evolve, the zoo still maintained the use of native materials and Rustic design, with a more modern aesthetic.

Criteria, Areas, and Period of Significance: Resources associated with the mid-century development of the San Antonio Zoo are significant under Criterion A: Entertainment/Recreation at the local level if they reflect the evolution of zoo design and best practices during this era. Buildings and structures associated with the mid-century developments at the San Antonio Zoo may also include early twentieth century resources that were renovated or updated during the mid-century to reflect the changing attitudes towards animal welfare or the growing importance of centering the visitor experience during that time. Mid-century buildings and structures may also have significance under Criterion C: Architecture at the local level if they reflect the period of sanitary modernism, or are significant examples of works by master architects. The period of significance for Post-war Buildings and Structures is ca. 1945 to 1974, reflecting the period beginning at the end of World War II and encompassing the sanitary modernism stage and the return to "natural" exhibits in the 1960s and 1970s.The cut-off date is based on the NPS's 50-year cut-off for historic-age buildings.

4. Architect-designed Buildings and Structures (Adams & Adams, Atlee B. Ayers, Thomas Pressley)

A majority of the buildings and structures within the San Antonio Zoo are simple, rustic resources devoid of distinct architectural styles or decorative details. Constructed of native limestone, concrete, or wood, many were funded by federal relief programs of the 1930s and 1940s by local masons or builders and the architect or designer is unknown. However, the presence of plaques on some buildings and structures does provide the names of architects for several resources within the zoo, particularly those designed by the firm Adams & Adams with federal funding. Additional resources designed by well-known local architects include the Aquarium (Resource No. 7) by Atlee B. Ayers and the Hixon Bird House

(Resource No. 70) designed by Thomas Pressley. Additional research may reveal the names of other known architects that have contributed to buildings and structures within the zoo.

Criteria, Areas, and Period of Significance: Historic resources that were designed by well-known architects may have significance under Criterion C: Architecture at the local level if they are intact examples of master architects designing for the unique, rustic setting of the San Antonio Zoo. They may also be significant if they are good examples of a distinct style, period, or method of construction or possess high artistic value. The period of significance is 1914 to 1974, reflecting the historic-age period for Buildings and Structures within the zoo.

5. Buildings and Structures with Distinct Construction Techniques

There are several buildings and structures within the San Antonio Zoo that exhibit distinct techniques or methods of construction that may qualify a historic resource for listing. These include, but are not limited to, the use of faux bois or board-formed concrete. These methods and techniques contribute to the zoo's overall "natural," rustic design that lends the San Antonio Zoo its distinct feeling. They are also reflective of broader trends in architecture and design.

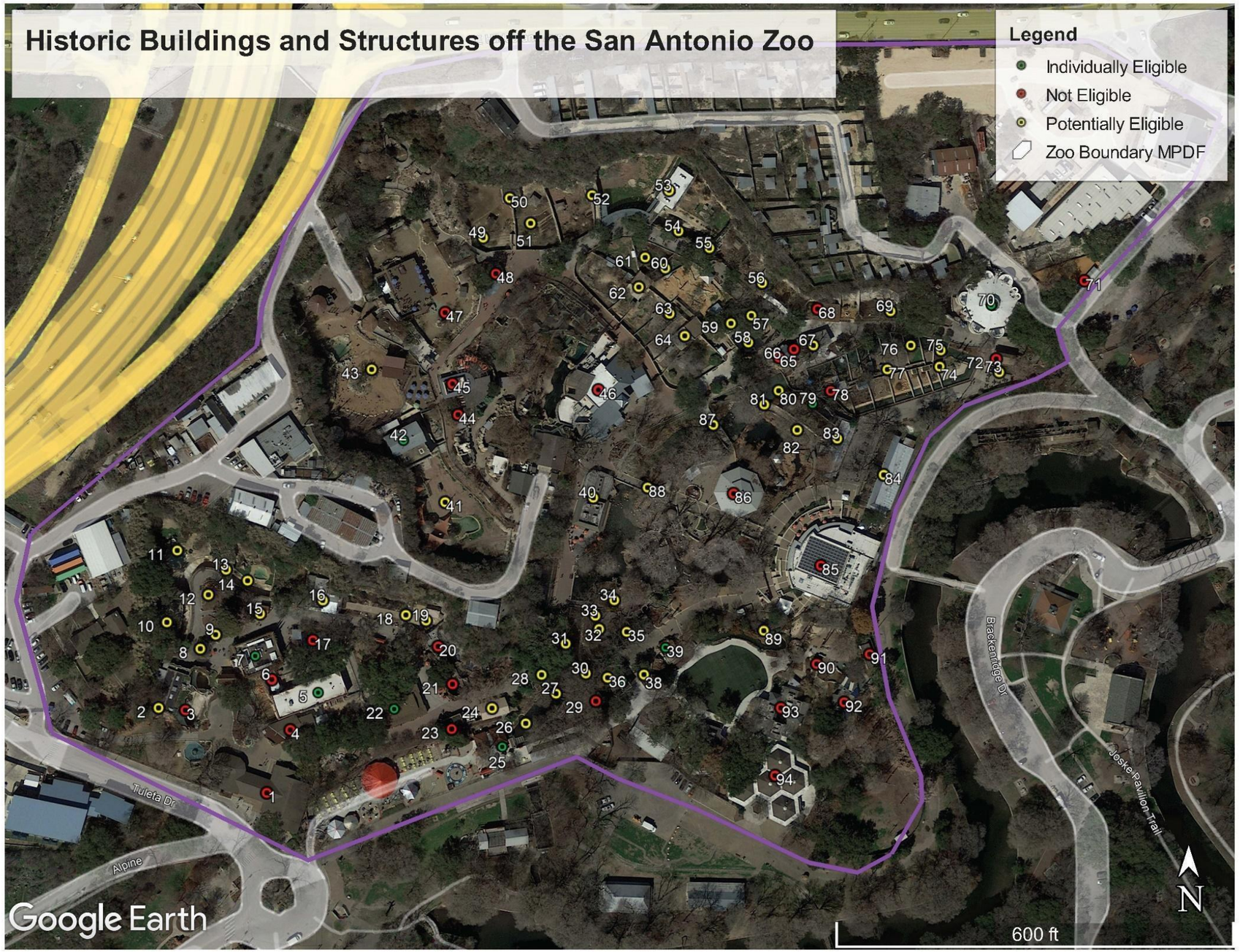
Criteria, Areas, and Period of Significance: A building or structure that that exhibits distinct construction techniques, such as the use of faux bois or board formed concrete, may be eligible for listing under the MPDF under Criterion C: Architecture if they retain a majority of their historic integrity. The period of significance is 1914 to 1974, reflecting the historic-age period for Buildings and Structures within the zoo.

G. GEOGRAPHICAL DATA

The focus of this MPDF is the buildings and structures within the San Antonio Zoo, in north-central San Antonio, Texas. The San Antonio Zoo is part of a large, 208-acre parcel (ID # 1174649) that also encompasses Brackenridge Park and the Japanese Tea Garden (Legal Description NCB A49 PART OF A-2, A-4, A-52 (208 AC)) and is owned by the City of San Antonio. The overall Zoo property included in this MPDF encompasses roughly 34.5 acres of the parcel, including some back of house breeding pens and auxiliary buildings. It does not include auxiliary buildings located north of US 281 or parking facilities or structures west of Tuleta Drive. The zoo boundary included in this MPDF is roughly bound on the north by Hildebrand Drive, on the east by Brackenridge Road, on the south by the pathway just north of the San Antonio River, and on the west by Tuleta Drive and US 281/McAllister Freeway.

See maps on the following pages.

Zoo Boundary, representing the entirety of the property enclosed by fences and walls, with controlled pedestrian and vehicular access.


Historic Buildings and Structures off the San Antonio Zoo
Legend
Individually Eligible
Not Eligible
Potentially Eligible
Zoo Boundary MPDF
Tuleta Dr
Alpine
Brackenridge Dr
Joske Pavilion Trail
Google Earth
600 ft
N

H. SUMMARY OF IDENTIFICATION AND EVALUATION METHODS

Previously Surveyed Resources

A survey of a limited number of historic resources as well as the development of a substantial historic context was completed in 2012 by Kristi Miller Ulrich from the Center for Archeological Research at the University of Texas at San Antonio (see "A Historic Standing Structure Survey of a Portion of the San Antonio Zoo, Bexar County, Texas"). Ulrich's survey did not find any of the resources individually eligible for listing in the NRHP and provided a recommendation by Linda Henderson of the Texas Historical Commission to complete a survey of all standing structures in the park and evaluation of the complex as a whole.

A majority of the historic resources at the San Antonio Zoo were surveyed in 2017 by Jenny Hay from the City of San Antonio's Office of Historic Preservation. Findings were summarized in a report entitled "Historic Resources Survey of the Cultural Landscape of the San Antonio Zoo," and keyed to a GIS map.[155] Hay evaluated the site as a cultural landscape, recommended a period of significance extending from 1914 to 1968, and identified the following contributing structures:

- Quarry Wall Exhibits (various resource numbers)
- Ticket Booth (Resource No. 37)
- Old Zoo Restrooms (Resource No. 25)
- Monkey House/Commissary (Resource No. 5)
- Elephant House (Resource Nos. 41 and 42)
- Baumberger Moats (Resource No. 54)
- Hixon Bird House (Resource No. 70)
- Aquarium (Resource No. 7)

Since 2017, additional research has revealed that the Reptile House was enclosed during the period of significance. It was previously thought that the building was enclosed in 1995 per a plaque installed on the primary façade.

In 2022, Post Oak resurveyed the San Antonio Zoo resources and updated the inventory spreadsheet developed in 2017 by the City of San Antonio's Office of Historic Preservation to confirm the integrity and historic significance of each resource identified within the site. Additional research was conducted on each resource to verify the date of construction. For resources where an exact date of construction was unavailable, relevant source materials, historic aerial photographs and maps, building materials, style, and massing, in addition to the professional judgment of architectural historians who exceed the SOI qualifications standards, informed the approximate date of construction.

The 2017 City of San Antonio survey of the zoo did not include an evaluation of back-of-house buildings and structures, including breeding pens, storage facilities, staff quarters, and additional auxiliary buildings. These buildings and structures are largely utilitarian, and many are not of historic-age. Furthermore, changes in animal welfare knowledge, the variety of species held at the zoo, and the administrative needs of the zoo have necessitated numerous changes to back-of-house facilities. Thus, this area of the zoo does not have a high degree of historical significance or retain sufficient historic integrity and was thus also excluded from Post Oak's 2022 inventory update. However, additional survey or background research may reveal the presence of historically or architecturally significant back-of-house buildings and structures within the San Antonio Zoo and their omission from the MPDF does not automatically preclude their inclusion under this cover document.

[155] The GIS map of the 2017 Zoo survey is no longer available online.

Furthermore, due to their ubiquity within the zoo the 2017 survey did not include all small-scale features like fountains, benches, lighting, and pathways. Over the course of its long tenure, the zoo has altered circulation patterns, reconstructed stone walls, and added or updated numerous small-scale features throughout the zoo. Due to vegetative cover and the density of resources on the property, historic aerial photographs do not contain sufficient quality or detail to accurately identify and date these features. As a result of the complexity involved in accurately dating them, the 2022 Post Oak resurvey also excluded many of these small-scale features. However, some examples of small-scale features, including stone walls and faux bois detailing, where historic photographs, WPA-era plaques, or other background research could accurately date them, were included in the inventory of resources.

Some animal enclosures, landscape features, or small-scale buildings or structures were included in the inventory table (**Section K**) with recommendations for eligibility. However, due to the density of historic resources within the San Antonio Zoo and the difficulty in accurately dating small-scale features, the list of these features is not exhaustive and there may be additional landscape or small-scale features within the zoo boundaries that are eligible for individual listing or as contributing resources to discrete district or cluster under this MPDF cover document, pending additional research or documentation.

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J. HISTORIC PHOTOGRAPHS, MAPS, AND FIGURES

Historic Figure Log

Figure 1: 1915 Map showing Brackenridge Park and the zoological Garden, courtesy of the San Antonio Light, December 24, 1915, page 1.

Figure 2: Ca. 1940 Map of the San Antonio Zoo, courtesy of *A Guide to the San Antonio Zoo* (1941), courtesy of UTSA Special Collections Library.

Figure 3: 1941 historic aerial of the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 4: Ca. 1930 historic aerial of the barless bear terraces at the San Antonio Zoo, courtesy of University of Texas at San Antonio.

Figure 5: Undated photograph of former entrance to the San Antonio (Resource No. 37), courtesy of the Institute of Texan Cultures at UTSA.

Figure 6: Ca. 1930 historic aerial of the barless bear terraces at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 76 Ca. 1936 photograph of elephant house and exhibit (Resource Nos. 41 and 42) under construction at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 8: Ca. 1936 photograph of hippo house (Resource No. 79) under construction at the San Antonio Zoo courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 9: Ca. 1936 photograph of monkey house/commissary (Resource No. 5) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 10: Ca. 1941 photograph of aviary (Resource No. 84) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 11: Ca. 1942 photograph of reptile (Resource No. 22) at the San Antonio Zoo prior to enclosure, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 12: Ca. 1936 photograph of hippo house and pool (Resource No. 79) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 13: Ca. 1942 photograph of hippo house and pool (Resource No. 79) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 14: Ca. 1940 photograph of monkey island (no longer extant) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 15: Ca. 1942 photograph of zoo exhibits and llama at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 16: 1939 photograph of Zoo director Fred Stark and child on pony cart in front of Monkey House/Commissary (Resource No 5), courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 17: 1959 photograph of bird exhibits, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 18: 1936 photograph the famous chimpanzees Buster and Sissy, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 19: 1937 photograph of zoo experts and Fred Stark (far right) in front of elephant exhibit (Resource Nos. 41 and 42), courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 20: 1963 aerial photograph of the San Antonio Zoo, courtesy of USGS Earth Explorer.

Figure 21: 2023 Map of the San Antonio Zoo, courtesy of https://sazoo.org/map/, accessed January 11, 2023.

Figure 1: 1915 Map showing Brackenridge Park and the zoological Garden, courtesy of the San Antonio Light, December 24, 1915, page 1.

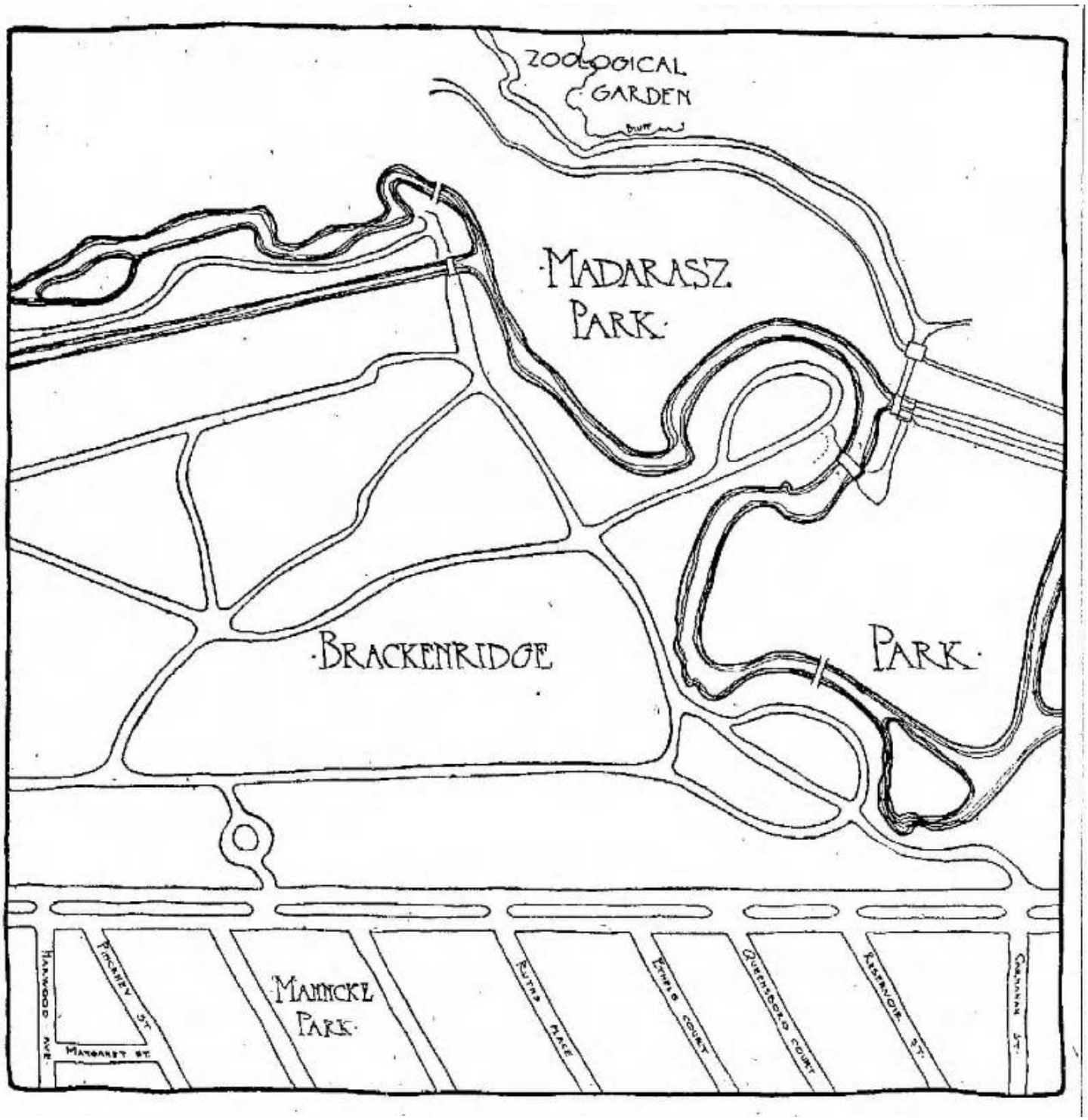

Figure 2: Ca. 1940 Map of the San Antonio Zoo, courtesy of *A Guide to the San Antonio Zoo* (1941), available at UTSA Special Collections Library.

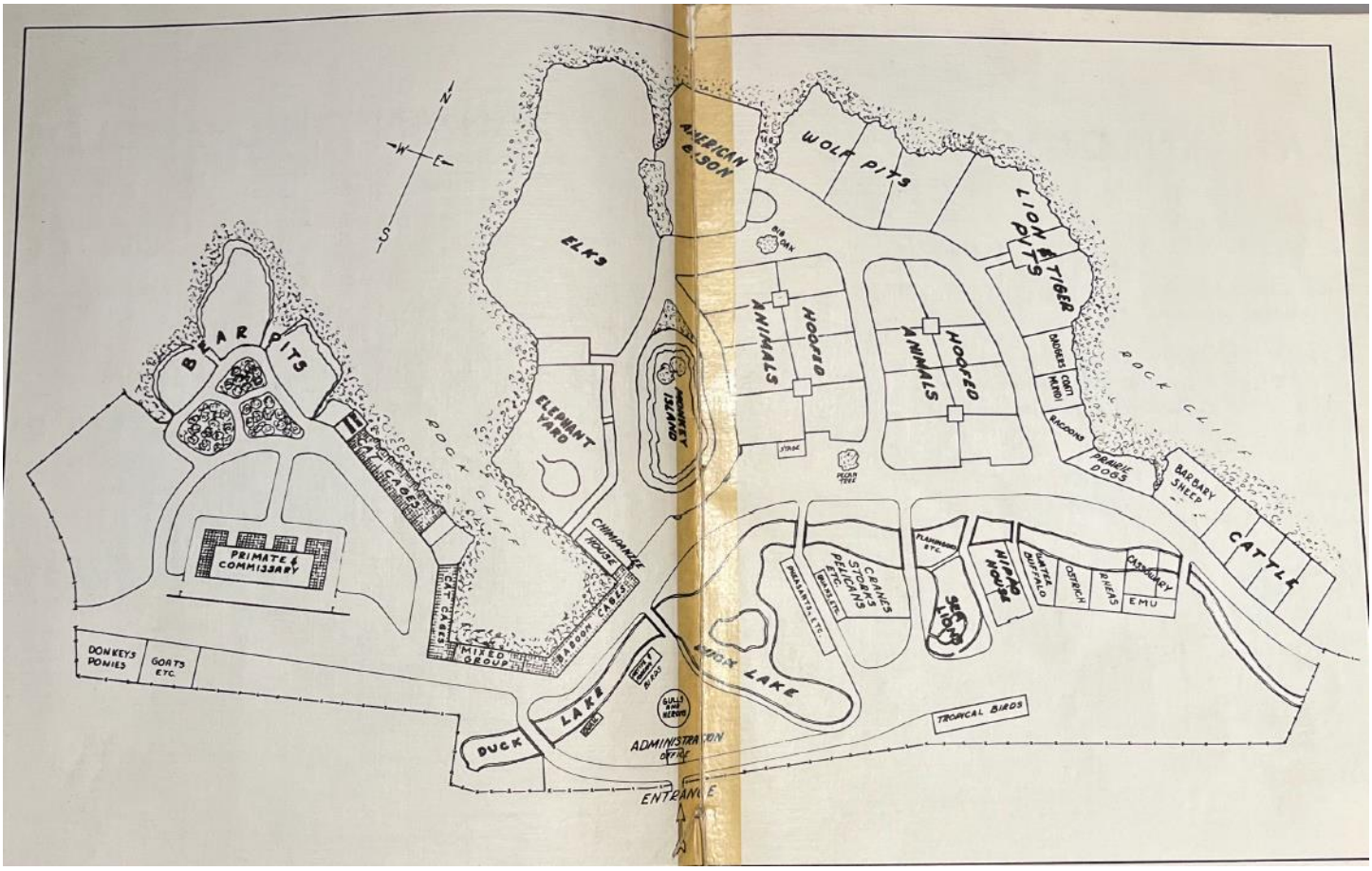

Figure 3: 1941 historic aerial of the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

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Figure 4: Undated photograph of former entrance to the San Antonio (Resource No. 37), courtesy of the Institute of Texan Cultures at UTSA.

Figure 6: Ca. 1930 historic aerial of the barless bear terraces at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 7: Ca. 1936 photograph of elephant house and exhibit (Resource Nos. 41 and 42) under construction at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 8: Ca. 1936 photograph of hippo house (Resource No. 79) under construction at the San Antonio Zoo courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 9: Ca. 1936 photograph of monkey house/commissary (Resource No. 5) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 10: Ca. 1941 photograph of aviary (Resource No. 84) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 11: Ca. 1942 photograph of reptile house (Resource No. 22) at the San Antonio Zoo prior to enclosure, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 12: Ca. 1936 photograph of hippo house and pool (Resource No. 79) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 13: Ca. 1942 photograph of hippo house and pool (Resource No. 79) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 14: Ca. 1940 photograph of monkey island (no longer extant) at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

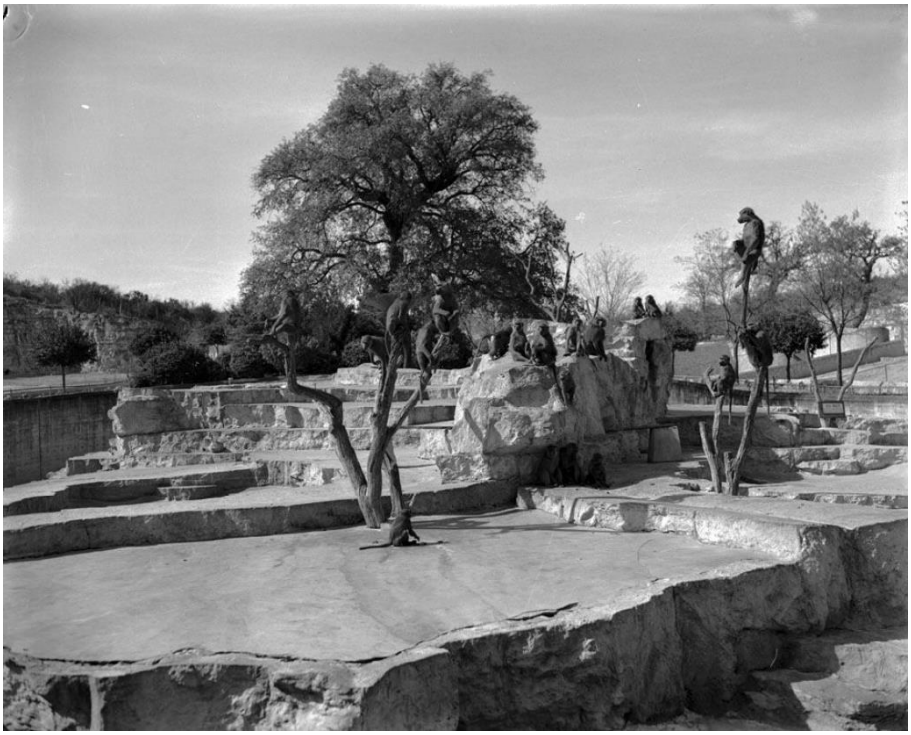


Figure 15: Ca. 1942 photograph of zoo exhibits and llama at the San Antonio Zoo, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

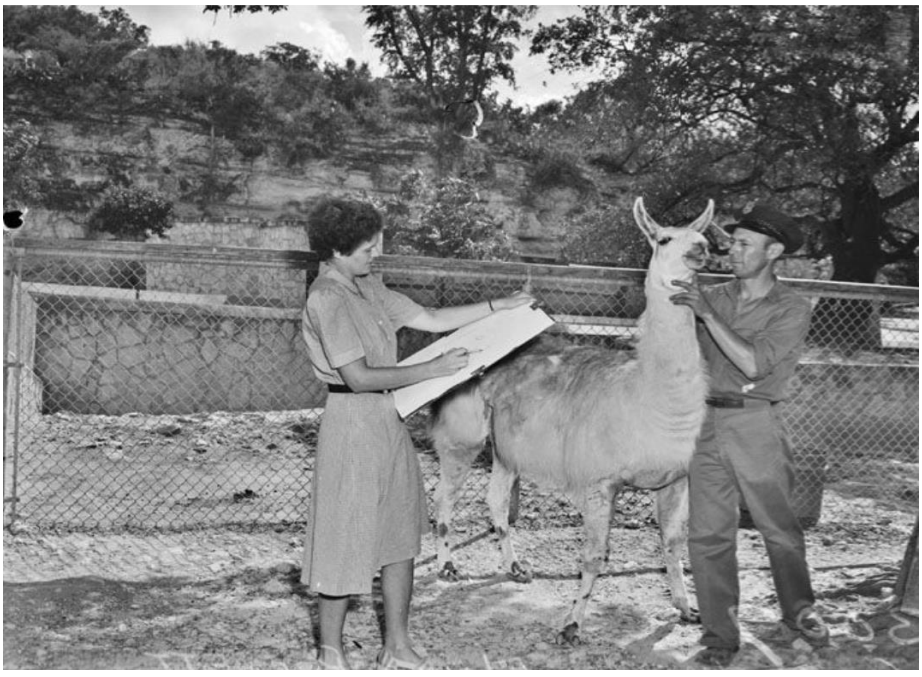


Figure 16: 1939 photograph of Zoo director Fred Stark and child on pony cart in front of Monkey House/Commissary (Resource No 5), courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 17: 1959 photograph of bird exhibits, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 18: 1936 photograph the famous chimpanzees Buster and Sisssy, courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 19: 1937 photograph of zoo experts and Fred Stark (far right) in front of elephant exhibit (Resource Nos. 41 and 42), courtesy of the San Antonio Light Photograph Collection at the UTSA, Special Collections.

Figure 20: 1963 aerial photograph of the San Antonio Zoo, courtesy of USGS Earth Explorer.

Figure 21: 2023 Map of the San Antonio Zoo, courtesy of https://sazoo.org/map/, accessed January 11, 2023.

K. INVENTORY TABLE OF HISTORIC BUILDINGS AND STRUCTURE IN THE SAN ANTONIO ZOO

The following inventory table was created using data compiled by the City of San Antonio in their 2017 survey of the San Antonio Zoo, updated by Post Oak in 2022-23. As noted within the MPDF, the inventory table is not exhaustive and does not include all back-of-house buildings and structures, small-scale features or landscape features, art or signage, or any potential archeological features. Some small-scale features, enclosures, and exhibits included in the inventory table serve as representative examples of property types or distinct methods of construction, and there may be additional examples that could be combined to form a cluster or discrete district. Additional surveys may reveal other historic resources within the zoo boundary that may be eligible for listing under this MPDF. Several historic resources within the San Antonio have been preliminary determined individually eligible for listing under this cover document. Many of the historic resources within the zoo may also be eligible for listing, either individually or as contributing resources to a discrete district or cluster, pending additional research and/or documentation. Resources that were either not of historic-age (constructed in or before 1974) or were dramatically altered were designated as not eligible for listing under this cover document.

Furthermore, due to the fluid nature of zoo design and exhibits, current uses of buildings or structures listed in the inventory may change over time. Some buildings and structures are listed as projects completed with the assistance of the WPA, however this is not exhaustive. Additional New Deal-funded buildings and structures are extant within the San Antonio Zoo and may include some included in the inventory table that are not currently noted as such.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	1	29.462341°/ -98.473602°	Zoo entrance		Ca. 1965	Not eligible (integrity)	Large ca. 1985 addition on west elevation and southeast portion of south elevation.
	2	29.46268499/ -98.47417921	Facility structure along Tuleta		Ca. 1960	Potentially eligible or contributing to discrete district	Probably door replacements.
	3	29.46267564/ -98.47405046	Red-ruffed lemur		1973-1986	Not eligible (non-historic-age)	
	4	29.462595°/ -98.473548°	Guest services		Ca. 1975	Not eligible (non-historic-age)	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	5	29.46274804/ -98.47341746	Monkey House	Commissary/ Monkey House	1937 Adams & Adams	Individually eligible	New planters, new slab under enclosures abutting building, removal of cages.
	6	29.462802°/ -98.473639°	Butterfly gift shop		Ca. 2000	Not eligible (non-historic-age)	
	7	29.46289984/-98.47372055	Aquarium	Aquarium	1948 Atlee B. Ayers	Individually eligible	Possibly an addition on south side.
	8	29.4629302/-98.47372055	Vegetation island	Vegetation island	Ca. 1929	Potentially eligible or contributing to discrete district	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	9	29.46298858/-98.47391099	Vegetation island	Vegetation island	Ca. 1929	Potentially eligible or contributing to discrete district	
	11	29.463339/-98.474101	American black bear	Barless Bear Pits	1929 Adams & Adams	Potentially eligible or contributing to discrete district	
	12	29.46315439/-98.47394854	Vegetation island	Vegetation island	Ca. 1929	Potentially eligible or contributing to discrete district	
	13	29.463259/-98.473865	Spectacled Bear	Barless Bear Pits	1929 Adams & Adams	Potentially eligible or contributing to discrete district	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	14	29.463213/-98.473761		Barless Bear Pits	1929 Adams & Adams	Potentially eligible or contributing to discrete district	
	15	29.46307499/-98.47369909	Concessions		Ca. 1950	Potentially eligible or contributing to discrete district	Addition on east side with shed roof.
	16	29.46313103/-98.47339869	Komodo dragon house	Giraffe House	Ca. 1942	Potentially eligible or contributing to discrete district	On northwest side, wooden poles and new cement on facade.
	17	29.46296523/-98.47344428	Butterfly		2007	Not eligible (non-historic-age)	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	18	29.46307032/ -98.47299904	Gibbon house	Cat Cages	Ca. 1938	Potentially eligible or contributing to discrete district	
	19	29.46304696/ -98.47290248	Francois Langur	Cat Cages	Ca. 1938	Potentially eligible or contributing to discrete district	Faux stone on east wall.
	20	29.46293954/ -98.47284347	Small cat house		Ca. 1975	Not eligible (non-historic-age)	May have adapted or utilized former structure

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	21	29.46278307/ -98.47277373	Small cat grotto		Ca. 1975	Not eligible (non-historic-age)	May have adapted or utilized former structure
	22	29.46268031/ -98.47305268	Reptile house		1942 Adams & Adams	Individually eligible	1950s enclosure of front porch.
	23	29.46259858/ -98.47277641	Crossroads Cafe	Concessions	Ca. 1960	Not eligible	Utilitarian, non-distinct structure. New thatched roof.
	24	29.462684/ -98.472584	Leopard's Lair	Store and restrooms	Ca. 1960	Potentially eligible or contributing to discrete district	Still retains some original limestone masonry features, although features a new thatched roof.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	25	29.46252501/ -98.47253501	Restrooms	Old Zoo Restrooms	Ca. 1939	Potentially eligible or contributing to discrete district	
	26	29.46262193/ -98.47242236	Maguari stork			Potentially eligible or contributing to discrete district	CMU shelter in southeast corner, acequia feature along east side.
	27	29.462744/ -98.472278	Pedestrian Bridge	Pedestrian Bridge	Ca. 1939	Potentially eligible or contributing to discrete district	Pyramid cap over rail, ramp on east side.
	28	29.462822/ -98.472347	Jaguar Falls		Ca. 1980	Not eligible (non-historic-age)	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	29	29.46271301/ -98.47208709	Marmoset		Ca. 1950	Potentially eligible or contributing to discrete district	
	30	29.46282744/ -98.47213537	Ocelot		Ca.1985	Not eligible (non-historic-age)	
	31	29.46295121/ -98.47223192	Amazon River forest		Ca. 1980	Potentially eligible or contributing to discrete district	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	32	29.463012/ -98.472072	Pelican pier		Ca. 1940	Potentially eligible or contributing to discrete district	Thatch roof added.
	33	29.463067/ -98.472090	Support building		Ca. 1941	Potentially eligible or contributing to discrete district	Cedar posts and shade structure removed. Thatch roof added.
	34	29.463132/ -98.471999			Ca. 1940	Potentially eligible or contributing to discrete district	Thatch roof added.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
Not available	35	29.46300026/ -98.47193956	Amazonia creatures of the night		Ca. 1950	Potentially eligible or contributing to discrete district	
	36	29.462810/ -98.472031			Ca. 1935	Potentially eligible or contributing to discrete district	
	37	29.462798/ -98.471962	First aid	Ticket Booth	1938-1948	Individually eligible	New door and shed shade over door, window being replaced with picture window. Good example of use of faux bois and Rustic architecture.
	38	29.462823/ -98.471857	Auxiliary building		Ca. 1940	Potentially eligible or contributing to discrete district	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	39	29.46293487/ -98.47175449	Anaconda	Penguin House	Ca. 1946	Potentially eligible or contributing to discrete district	Thatch roof added.
	40	29.46355956/ -98.4721005	Riverview Restaurant	Unknown	Ca. 1960	Potentially eligible or contributing to discrete district	Addition on north elevation.
	41	29.46354088/ -98.47281396	Elephant	Elephant exhibit	1941 WPA	Potentially eligible or contributing to discrete district	
	42	29.4638001/ -98.47301781	Elephant House	Elephant House	1941 WPA	Individually eligible	Addition on north elevation added ca.1995.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	43	29.46409902/ -98.47317338	Giraffe	Elk exhibit	Ca. 1917	Potentially eligible or contributing to discrete district	Reconstructed giraffe house; new platform. Building not historic-age. One of the oldest exhibits in the zoo.
	44	29.4640383/ -98.47278178	Longnecks		Ca. 2010	Not eligible (non-historic-age)	
	45	29.463908/ -98.472754	Restroom		Ca. 2000	Not eligible (non-historic-age)	
	46	29.46401262/ -98.47207636	Africa entrance		Ca. 2008	Not eligible (non-historic-age)	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	47	29.46433956/ -98.47281933	Rhino	American Bison exhibit	Ca. 1917	Potentially eligible or contributing to discrete district	Structure on west side probably added between 1966-1973. Split sometime after 1955 - has had various divisions through the years. One of the oldest exhibits in the zoo.
	48	29.464505/ -98.472574	Gift shop		Ca. 2000	Not eligible (non-historic-age)	
	49	29.46465832/ -98.47263694	Addax enclosure	Wolf Exhibit	Ca. 1941	Potentially eligible or contributing to discrete district	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	50	29.46482647/ -98.47250819	Savannah service building	Wolf exhibit	1942-1954	Potentially eligible or contributing to discrete district	
	51	29.46471904/ -98.47240627	Dama gazelle	Wolf exhibit	Ca. 1941	Potentially eligible or contributing to discrete district	Shade structure, likely 1970s. Doors added between enclosures on both sides, pyramid cap on front retaining wall.
	52	29.464839/ -98.472108			Ca.1940	Potentially eligible or contributing to discrete district	

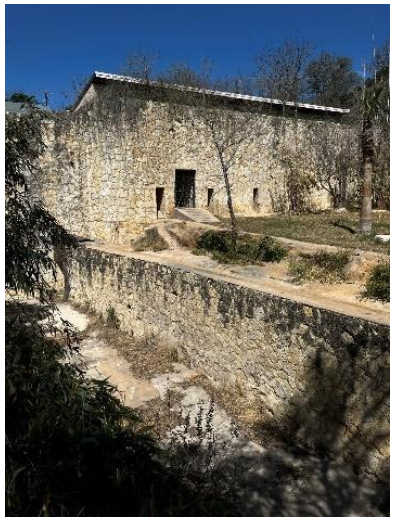
Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	53	29.46485916/ -98.47173303	Tiger house	Cat house	Ca. 1934-1942 WPA	Potentially eligible or contributing to discrete district	Rooftop addition. Added doors to enclosure, ramps from exhibit to interior.
	54	29.464686/ -98.471687	Big cats	Baumberger Moats	Ca. 1938 WPA	Potentially eligible or contributing to discrete district	Several of the moats have been infilled for safety purposes. One appears to remain extant.
	55	29.46461395/ -98.47153723	Staff by bush dog		Ca. 1935 WPA	Potentially eligible or contributing to discrete district	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	56	29.464465/ -98.471282	Australian Aviary	Raccoons	1935-1937 WPA	Potentially eligible or contributing to discrete district	New windows but original doors, concrete added under roofline; ramp added.
	57	29.46432671/ -98.47133473	Matschie's Tree Kangaroo	Storage, facility use	Ca. 1960	Potentially eligible or contributing to discrete district	Shade structure, climbing structure.
	58	29.464213/ -98.471350	Lory landing	Hoofed Animals	Ca. 1938	Potentially eligible or contributing to discrete district	Rear addition with vertical wood paneling. Corrugated metal shade porch and wall on east side, doors removed. Deck and shade structures of wood and metal with netting over.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	59	29.46429402/ -98.47143397	Behind Matschie's Tree Kangaroo	Storage, facility use	Ca. 1960	Potentially eligible or contributing to discrete district	Addition of screening wall on east façade.
	60	29.46452755/-98.47175181	Cassowary	Hoofed Animals	Ca. 1938	Potentially eligible or contributing to discrete district	Good example of faux bois and Rustic concrete.
	61	29.46457425/ -98.47184971	Blue Duiker	Hoofed Animals	Ca. 1938	Potentially eligible or contributing to discrete district	Good example of faux bois.
	62	29.46444815/ -98.47188056	Africa round center	Hoofed Animals	Ca. 1938 WPA	Potentially eligible or contributing to discrete district	Possible replacement stone near top of building.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	63	29.464335/ -98.471731	Reeve's Muntjac	Hoofed Animals	Ca. 1938 WPA	Potentially eligible or contributing to discrete district	Doors clearly replaced with composite material and new concrete surround. Shade structure on west wall.
	64	29.464241/ -98.471658	Babirusa 2	Hoofed Animals	Ca. 1938 WPA	Potentially eligible or contributing to discrete district	Pool looks very recent, at least top portion. French drain in bottom. Newer shade structure on west wall.
	65	29.46414923/ -98.47120196	Lory cafe		Ca. 2000	Not eligible (non-historic-age)	
	66	29.46418426/ -98.47112954	Lory cafe storage		Ca. 2000	Not eligible (non-historic-age)	

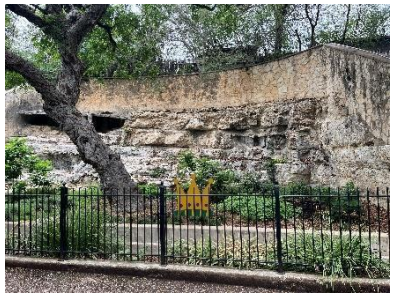
Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	67	29.46420061/ -98.47103566	Restroom	Restrooms	Ca. 1965	Potentially eligible or contributing to discrete district	Handrails and ramps, slab for concessions and Mold-o-rama.
	68	29.464355/ -98.471014	Matschie's Tree Kangaroo	Sheep/Goats	Ca. 2018	Not eligible (non-historic-age)	Either reconstructed or significantly expanded in 2018.
	69	29.4643454/ -98.47066015	Nubian ibex	Cattle	Ca. 1940	Potentially eligible or contributing to discrete district	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	70	29.46437108/ -98.47017199	Hixon Bird House	Hixon Bird House	1966 Thomas Pressly	Individually eligible	Side entrances probably new doors.
	71	29.464475/ -98.469718	Petting zoo		Ca. 2013	Not eligible (non-historic-age)	Petting zoo is a new enclosure; barn and shade structure are both metal with shed roofs; built relatively recent.
	72	29.46414339/ -98.47015053	Snack-A-Roos		Ca. 2004	Not eligible (non-historic-age)	New construction
	73	29.46408734/ -98.47013712	Red eared slider		Ca. 1929	Potentially eligible or contributing to discrete district	Wall has been rebuilt, but retains pre-zoo materials. May be part of former acequia.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	74	29.464111/ -98.470425	Gharial enclosure	Waterfowl	Ca. 1950	Potentially eligible or contributing to discrete district	New retaining wall with metal fence, old fence removed from interior wall.
	75	29.46417959/ -98.47041875	Crested screamer	Waterfowl	Ca. 1950	Potentially eligible or contributing to discrete district	New fence.
	76	29.46420061/ -98.47056359	American Alligator	Waterfowl	Ca. 1950	Potentially eligible or contributing to discrete district	
	77	29.464099/ -98.470678	Swan goose	Waterfowl	Ca. 1950	Potentially eligible or contributing to discrete district	Building in back southeast corner. New wooden door, new fence.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	78	29.464025/ -98.470923°			Ca. 1975	Not eligible (non-historic-age)	New shed enclosure with newer stone .
	79	29.46395423/ -98.47104102	Malayan tapir	Hippo House	Ca. 1936 WPA	Individually eligible	
	80	29.46400911/ -98.47120464	Capybara	Hippo exhibit	Ca. 1931-1936	Potentially eligible or contributing to discrete district	Pyramid topper on exterior wall, wall repair/ replacement on southeast side of ramp.
	81	29.46395073/ -98.47127438	Bridge	Part of sea lion exhibit	Ca. 1915	Potentially eligible or contributing to discrete district	Guard rails. Potentially covered original steps in cement.

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	82	29.46384331/ -98.47111613	Capybara walls		Ca. 1938	Potentially eligible or contributing to discrete district	Good example of faux-bois and Rustic design.
	83	29.46380711/ -98.47092301	Birds/doves/frogmouth/pheasants		Ca. 1938 WPA	Potentially eligible or contributing to discrete district	
	84	29.46365531/ -98.47070038	Palm Cockatoo	Tropical Birds	Ca. 1938 WPA	Potentially eligible or contributing to discrete district	New rear metal doors; alterations to chain link enclosure.
	85	29.46327582/ -98.47100616	Beastro Restaurant		Ca. 2014	Not eligible (non-historic-age)	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	86	29.46357708/ -98.47142458	Carousel		Ca. 2014	Not eligible (non-historic-age)	
	87	29.463865/ -98.471521	Pedestrian bridge	Pedestrian bridge	Ca. 1935	Potentially eligible or contributing to discrete district	
	88	29.463005/ -98.471282	Pedestrian bridge	Pedestrian bridge	Ca. 1935	Potentially eligible or contributing to discrete district	

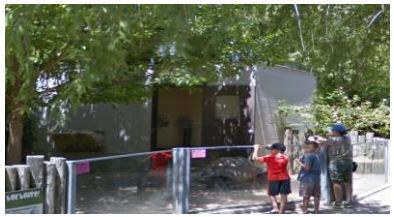
Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	89	29.46300493/ -98.47128242		Enclosure	Ca. 1935	Potentially eligible or contributing to discrete district	Building may have been relocated
	90	29.462867/ -98.471029	Tortoise		Ca. 1990-2000	Not eligible (non-historic-age)	Flat roof cinder block structure.
	91	29.462907/ -98.470775	Back of house		Ca. 1990-2000	Not eligible (non-historic-age)	
	92	29.46270834/ -98.47089887	Tortoise		Ca. 1990-2000	Not eligible (non-historic-age)	

Photo (if available)	MPDF ID#	Latitude/ Longitude	Current Use*	Historic Use*	Year-Built/ Architect	Eligibility	Notes on eligibility or alterations
	93	29.46268499/ -98.47120196	Toadally	Terrapin	Ca. 1990-2000	Not eligible (non-historic-age)	
	94	29.46240708/ -98.47123146	Education center		Ca. 1980	Not eligible (non-historic-age)	

- end -