

Fort Boggy State Park

FACILITY DEVELOPMENT PLAN





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Prepared by Drew Carman
Texas Parks and Wildlife Department
State Parks Division
Planning and Geospatial Resources

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Signatory Approval: Fort Boggy State Park – Facility Development Plan

Prepared:

Drew Carman
Park Planner
State Parks Division

Reviewed:

Chris Beckcom PGR Manager State Parks Division

Wesley Hamilton Park Manager Fort Boggy State Park Park Superintendent State Parks Division

David Riskind
Director of Natural Resources
State Parks Division

Michael Strutt
Director of Cultural Resources
State Parks Division

Justin Rhodes Regional Director Parks Region 4 State Parks Division

Approval:

Brent Leisure Director State Parks Division ABBerley 22 My 14

Signature / Date

Signature / Date

Stull

Signature / Date

Signature / Date

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Introduction

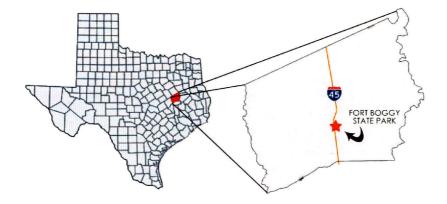
Executive Summary

Fort Boggy State Park is located in Leon County, five miles south of Centerville, Texas on Interstate Highway 45. The property was donated to Texas Parks and Wildlife Department by Mrs. Eileen Sullivan in 1986 and opened in 1992. The 1,847-acre park is halfway between Dallas and Houston making it only a two hour drive by highway from each. A master plan (1995) and interpretive plan (1993) were prepared for Fort Boggy SP by the Stephen F. Austin State University School of Forestry. While portions of the plan may have helped guide minor improvements of the property, the overall facility development on the site is minimal in comparison to other state parks of similar caliber. Therefore, with a relatively small degree of recreational support facilities, there is a clear opportunity to address programming of infrastructure to provide a clear and cohesive vision for the future.

This Facility Development Plan is a dynamic document, subject to modifications as visitor use patterns change. To better conserve and protect the park's natural and cultural resources, changes may be made to the plan when a monitoring program documents unacceptable impact to park resources. Changes or unforeseen circumstances might also precipitate a need for plan revisions. Should a review team propose changes; such changes will be made available to the public for comment prior to their implementation.

Site Description

The park is located near the western limit of the mixed pine hardwood forest and the eastern limit of post oak savanna in the watershed of Boggy Creek, a tributary of the Trinity River. Elevations within the park site range between 260 and 430 feet above mean sea level. Boggy Creek forms a broad, flat flood plain that occupies approximately 250 acres of the park. There are substantial areas of wetland in the flood plain of Boggy Creek and an approximately 15 acre, man-made lake. The uplands are rolling hills with steep sided, rapidly eroding gullies. There are five major habitat types represented on the park: bottom-land hardwoods; upland hardwoods; wetlands; pastures; and, brush land. Because of the variety of habitats present, Fort Boggy State Park contains a diverse flora community, with about 700 plant species having been recorded on the park. Due to the diversity of plant communities, the park has a great diversity of wildlife and excellent opportunities for wildlife viewing. 82 archeological sites of various kinds and time periods have been documented on the park. 30 are prehistoric, 18 are historic, 20 are multiple components, 12 are historic roads and 2 are historic fence boundaries.



1 - Texas, Fort Boggy Vicinity Map

Fort Boggy State Park Chronology

- 1985 1100 acres acquired by donation from Eileen Sullivan of Centerville, TX.
- 1989 747 acres acquired by donation from Eileen Sullivan of Centerville, TX.
- 1993 Interpretive Plan for Fort Boggy State Park, completed by Jim Islied and Mike Legg, Stephen F. Austin State University, College of Forestry.
- 1994 Cultural Resource Survey of Fort Boggy State Park completed by James E. Corbin, et al. TPWD.
- 1995 Master Plan for Fort Boggy State Park (unofficial), completed by Legg, Sullivan, et al., Stephen F. Austin State University, College of Forestry.
- 1996 Project Proposal, Interim Use Proposal and Master Plan. TDCJ & TPWD
- 1996 Fort Boggy State Park Resource Management Plan, draft. TPWD
- 2005 Fort Boggy State Park Site Abstract completed. TPWD
- 2006-2012 Plant Community, Fuel Model, and Rare Species Assessment for Fort Boggy
 State Park. Raven Environmental Services, Inc.
- 2011 Archaeological Investigations at Fort Boggy State Park, Leon Co. TX Center for Archaeological Studies, TX State University
- 2012, 2013 Cultural Resources Investigation Reports Encana Oil and Gas, Pinkston 1H
 Well Site and Access Road & Crain Minerals B IH Well Site and Access Road

Statement of Intent

TPWD Mission

To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

State Parks Mission

Manage state parks and historic sites to conserve natural and cultural resources, provide recreational and educational opportunities, and foster an understanding of the diversity of Texas' lands and heritage for all generations.

Site Mission

The mission of Fort Boggy State Park is to manage and conserve this natural part of East Texas Oak Woods and Prairie Community, its cultural resources and to provide recreational opportunities and interpretive education that relay the significance of its natural and cultural resources.

Site Purpose

The Site Abstract of Fort Boggy State Park (2005), which articulates the purpose, existing conditions, and management goals, states:

"The purpose of Fort Boggy State Park is to provide Texas citizens with nature-based recreational experiences, with an emphasis on interpretation of the park's rich natural and cultural resources."

Planning Goal

This project will create a Facility Development Plan for Fort Boggy State Park to support public and operational use. The objective of this plan is to address current and future public use and outline facility development associated with these uses. This report will identify the issues and opportunities connected with the current facilities and make recommendations to modify, replace or improve the functions for visitor services. Additionally, new facility development will be considered including: expanded trail systems, trail heads, parking, cabins, a group picnic pavilion, restroom & comfort stations, additional day-use sites, and additional sites for overnight visitation opportunities.

Planning Process

The planning process for the Facility Development Plan will involve three components: 1. Resource Assessment and Evaluation, 2. Public Participation, 3. Element Programming.

Resource Assessment and Evaluation

The Resource Assessment and Evaluation phase consists of planning efforts that include a compilation of data and information regarding the natural and cultural resources of the site. A critical element to the planning process, the evaluation establishes the location of significant resources such as federal and state threatened and endangered species, key habitats and natural

communities, archeological and historical sites. Finally, the physical characteristics of the site such as topology, soils, geology, hydrology, vegetative cover, land use and human developments are compiled and analyzed. Overlaying these inventories guides the planner in determining appropriate locations for desired facilities.

Public Participation

Public comment is received throughout the planning process. Comments are acquired through public meetings, personal conversations, and unsolicited communication.

The Texas Parks and Wildlife Department is a public agency and therefore accountable to the people of Texas. Persons telephoning the Department may speak directly to individual staff to express concerns and comments regarding park planning projects. Direct communication is not limited to telephone conversations. When project team members encounter private individuals concerned with a park planning project, comments are noted and recorded in the same respect as a public meeting. Unsolicited letters are often received regarding planning projects. Comments received at all stage of the process are reviewed and evaluated by the planning team in the context of the project.

This Facility Development Plan scheduled two public comment meetings; the dates were November 14, 2013, and January 9, 2014. These meeting were advertised in local papers and the TPWD website and held at the Leon Co. Courthouse in Centerville, TX. Participation at both included community members from equestrian groups, RV & hiking enthusiasts, and the local friends groups. State officials from both the Texas House and State Senate had representatives in attendance. Notes from the public comment meeting are presented at the end of this report.

Programming

Programming of facilities is the result of the professional evaluation of the site characteristics as well as the TPWD objectives for the site. This plan proposes modifications and upgrades to visitor and administrative facilities at Fort Boggy State Park through facility programming.

Overview of Laws, Regulations, Policies

Parks and Wildlife Code § 13.020. Local Public Hearings On Park Development Plans.

 Before the commission approves a park master development plan, the department must hold a public hearing to receive comments on the plan in an area near the location of the new park site.

TPWD Policy LF-02-02. Design and construction Minimum Standard Requirements. National Environmental Policy Act of 1970, P.L. 91-190, 83 Stat. 852, 16 U.S.C. Sec. 4321 et seq.

 Establishes policy, sets goals and provides means for carrying out the national policy for environmental protection. Endangered Species Act of 1973, as amended, P.L. 93-205, 87 Stat. 884 16 U.S.C. Sec. 1531 et seq.

Protects listed threatened or endangered species and their habitat.

Parks and Wildlife Code – title 5. Wildlife and Plant Conservation, Subtitle B., Chapter 43, Chapters 67 & 68.

 Relates to the protection of listed threatened and endangered species and other non-game species.

Texas Administrative Code, Title 31, Code §59.64.

• Defines the TPWD Commission policies for use, management and development of agency lands.

American with Disabilities Act of 1990, Public Law 101-336 and Texas Labor Code, Chapter 21. Texas Department of Licensing and Regulation, Elimination of Architectural Barriers.

Defines the accessible design criteria for built environments.

Texas Administrative Code, Title 34, Code §19.31. Requirements to use Design Standards.

 Requires that state agencies use the energy and water conservation design standards promulgated by the State Energy Conservation Office (SECO) when constructing new state buildings or conducting major renovations of existing state buildings.

Texas Administrative Code, Title 31, Code §61.Contracts for Public Works.

 Outlines the guidelines for solicitation, submission and receipt of bids and the solicitation, evaluation and selection of Proposals.

Texas Administrative Code, Title 30, Code §7.113. Adoption of Memoranda of Understanding between the Texas Parks and Wildlife Department and the Texas Natural Resource Conservation Commission.

• Establishes the coordination of program responsibility and procedural mechanism for the National Flood Insurance Program (NFIP) minimum regulations.

Texas Administrative Code, Title 9, Chapter 191. Texas Antiquities Code.

 Outlines the guidelines for locating, protecting, and preserving cultural resource sites in Texas.

Landscape Analysis

Natural Environment

As described by Cultural Resource Survey of Fort Boggy State Park, "Fort Boggy State Park is within Gould's (1975) Post Oak Savannah Vegetational Area. The topography is that of gently rolling sandy hills transected by streams. Marshes, swamps and bottomland hardwoods line Boggy Creek and the lower portions of its tributaries, while oak savanna and tall-grass prairie occur on the more xeric hills. Mesic slope forest occurs in between. A small reservoir was constructed in the Park's SE corner. Deep sands occur over much of the Park as a result of the weathering of its most common geologic 2-Fort Boggy State Park Entrance



formations, the Sparta and Weches. Boggy creek, which runs through the property, is a major tributary to Trinity River. Elevations in the park range between 260ft. and 430ft. A lake and several ponds are present along with some wet flats. Average annual precipitation for the park is about 40 inches. Average annual low temperature is about 54 F and the average annual high temperature is about 78 F. The average annual temperature is a comfortable 66 F.

Flora

There are five major habitat types represented in the property: bottom-land hardwoods, upland hardwoods, wetlands, pastures, and brushlands. Using the plant community classification system developed by Diamond, et. al, (1987). the vegetative communities are as follows: Water Oak-Sweetgum Series, Post Oak-Black Hickory Series, Sugarberry-Elm Series, and Little Bluestem-Brownseed Paspalum Series The brush land area is simply an early successional area of Post Oak-Black Hickory Series. However, Diamond indicates that research is needed in the transition zone on the western end of the Pineywoods to improve classification schemes. According to Master Plan for Fort Boggy State Park (1995) the results of the forest inventory at Ft. Boggy State Park indicates that on the mesic areas that Southern Red Oak plays a dominant role in the forest. This is probably due to the fact that Ft. Boggy is on the western fringe of the Loblolly Pine-Oak Series and the eastern edge of the Post Oak-Black Hickory Series. The result is an area in which Southern Red Oak and Post Oak seem to form the dominant portion of the canopy on mesic sites.

The hardwood areas show little or no evidence of logging activity. The dominant over story vegetation includes several species of the oak family mixed with a variety of other hardwood species. The brush land consists primarily of areas that were intended to be converted to pasture and have moved to a brush land successional stage dominated by yaupon and honey locust. The flora occurring in the pasture areas are very different in species composition from the historic flora

communities. However, enough species remain that recovery is possible. The current pasture areas have been maintained by grazing and shredding.

In Nixon's contribution to Cultural Resource Survey of Fort Boggy State Park (1995) he describes Fort Boggy State Park as containing a variety of habitats and rich flora. For a complete vegetational survey, refer to Cultural Resource Survey of Fort Boggy State Park (1995) as well as Keith (2010) Plant Community, Fuel Model, and Rare Species Assessment for Fort Boggy State Park.

There are six major plant communities represented in the Park. The deep quartzite sands found throughout most of the Park are highly permissive to rainfall and yet contain impermeable lenses of clay and mudstone resulting in ten (10) springs where these contact points reach the surface. There are also areas of sandstone outcrops in the southern half of the Park. The combination of very dry and perennially wet soils, as well as the permanent surface waters of Boggy Creek and its tributaries, provide habitat for six plant communities and twenty-three plant associations; a very diverse and rich flora for a park of 1,847 acres.

Using the plant community classification system developed by Diamond, et al. (1987), Keith (2010) found six vegetative communities as follows: Buttonbush marsh and shrub swamp along Boggy Creek and the lower ends of its tributaries, Overcup Oak swamp in two small locations on the fringes of these permanently wet streams, Sugarberry-Elm forest on the mesic to hydric stream floodplains, Water Oak-Sweetgum on the mesic terraces and slopes, Post Oak-Black Hickory savanna on the xeric hills and Post Oak-Blackjack Oak savanna on the highest hill tops and sandstone outcrops. Keith also identified areas of old fields and pastures, some of which contain recovering Little Bluestem-Brownseed Paspalum tall-grass prairie as well as significant areas of old growth (150 years old +) sand post oak (Quercus margarettae) savanna mostly in the northern portion of the Park (Post Oak-Black Hickory plant community).

The post oak savanna and tall-grass prairie plant communities have changed greatly due to the long history of grazing, fire suppression, farming and forest clearing at the Park. In some of these areas the tree canopy has been removed, while in others the grassland component has either been removed or greatly reduced. Typically some combination of the two has occurred while in some of the old farm fields and pastures the natural plant community has been entirely replaced by weedy annuals or non-native pasture grasses.

Trees more commonly found in more northern or wetter portions of Texas occur within the Water Oak-Sweetgum mesic forest type where near surface groundwater produces ideal growing conditions. These trees have attained a large size and include southern red oak, sweetgum, white oak, American elm, and black gum. Tall bottomland forest occurs within the floodplain of Boggy Creek and its tributaries. The forested bottoms that had been cleared for farming are slowly recovering.

The draft resource management plan for the Park lists a total of nine (9) vegetation series as occurring; however, past disturbances as described above prevent their full expression and some signature plants are missing, thus the differences between that draft and Keith's later work. Unlike many State Parks, the flora of Fort Boggy still contains most of its original species albeit in often greatly reduced coverage. Therefore, as management through prescribed fire continues and the impacts of past disturbances fade, the plant communities should respond through increased dominance of the vegetation that typifies the nine potential vegetation series.

Notes from site visits with the natural resources coordinator outline a planning goal of maintaining one of the oak savannah and prairie areas without a regularly used trail or pipeline passing through. This will minimize the introduction of invasive species and to leave part of the park unfragmented.

Fauna

Faunal surveys in Fort Boggy State park by Corbin, et al. (1994) in both Cultural Resource Survey of Fort Boggy State Park (1994) and Master Plan for Fort Boggy State Park (1995) identify four major habitat types; upland pasture, wet meadow, woodland, and hardwood forest. Corbin, et al. (1994) describes each category of fauna in these habitats as followed.

Avifauna

The study identified 88 species of avifauna within the park; 32 were unique to winter and 28 to spring. Compared to other studies in east Texas, there is a relatively low proportion of resident species, indicating the high use of the park locale by seasonal birds. Cardinals were the most common resident and were recorded at every study site. Carolina wrens were also common year round most other resident species were restricted to woodlands or mesic plants communities.

The beaver ponds attracted a variety of wetland species. Ducks are common during the winter. Other wetland species recorded as incidental sightings, are considered resident and nest in the park. Other incidental sightings (21 species), which included owls and turkeys, half were considered resident. Notably absent from the avifauna population was the northern bobwhite quail; none were heard or seen in the park locale.

Small mammals

Small mammals were represented by ten species, with the white footed mouse, cotton rat, and fulvous harvest mouse the most common. Most of the captures/sightings of all small mammals were within the ungrazed forested areas and the wet meadow sites; it was obvious that modern grazing practices and grazing management has impacted these populations.

Midsize and large mammals

Midsized mammals were not surveyed, but subjective observations were made. Nine banded armadillos are especially abundant in the wooded areas; squirrels are common in these areas as well. Eastern cottontails are present but in relatively low numbers. Raccoon numbers appear to be

high. Obviously, beaver are common; ponded areas actually increased during the two years of the Fort Boggy Study period. Bobcat and mink tracks occur in creek bottoms as well.

Spotlight counts of white tailed deer (winter and summer) and very obvious browse lines indicate that the park locale is badly overpopulated (19 deer/h). Deer were often encountered during the archaeological survey as well; the archaeologist also had a pre-dawn sighting of an immature cougar.

Herptiles

Sixteen species of herptiles were recorded during the winter survey and 25 species during the spring; the highest numbers of species were recorded on the unmanaged woodland during the winter and on the wet meadows during the spring. Skinks were the most abundant species during all seasons, followed by the ribbon snake. It should be noted that the observation techniques probably did not adequately sample the large snakes that should have been foraging on the abundant small mammals. Nevertheless, the absence of greater roadrunners within the park locale suggests relatively low herptile populations.

Threatened and Endangered Species

All development and management is directed at allowing the site to be put to its best use for the public, while protecting and improving natural resources on the park site. Although 33 threatened and endangered species exist in Leon Co. ¹, 24 have some potential for occurring within or near Fort Boggy State Park, no known endangered, threatened or rare species have been documented within the Park (TNDD, 2010 and Keith, 2010). However, an uncommon Texas endemic plant, Centerville Brazos Mint (*Brazoria pulcherrima*), that is not on TPWD's rare species list does occur in an old field in the eastern portion of the Park east of the manager's residence and along the ROW of IH 45. Both sites are in deep sandy soils outside of the Development Zone.

A total of five (5) threatened, endangered, or rare species though not documented in the Park have a significant likelihood of occurring within it (Keith, 2010). These include:

1. Houston Toad (Endangered)

Houston Toads are found in pine and oak woodlands underlain by deep pockets of sandy soil where temporary pools of water are available for breeding. Populations of the Houston Toad have been documented in Leon County and the habitat for the species does occur within the Park. If a population is discovered in the park, mitigation measures should be taken to reduce mortality of toads.

2. Henslow's Sparrow (Rare)

¹ TPWD Annotated County List of Rare Species, 2012

Henslow's sparrows have been documented in Leon County and in all likelihood occur within the park during the fall through spring period. This species uses the tall grasses and herbs found in the Park's remnant prairies and old fields. Conservation and restoration of these habitats through prescribed fire will increase this bird's habitat within the Park.

3. Bald Eagle (Rare)

Different populations of the Bald Eagle winter and nest within the area of the Park and may use the lake for feeding on fish and waterfowl. The bald eagle is no longer listed as a threatened or endangered species, but its nests are protected by the Bald Eagle Protection Act. A Bald Eagle pair will use the same set of nesting sites for many years. No nesting sites have been found within the Park, however, if any are found within the Park they should be protected from disturbance.

4. Southeastern Myotis (Rare)

This bat is found within Leon County and most likely occurs within the Park. It uses caves and large hollow trees as maternity colonies though none have been found in the vicinity of the Park. It roosts in caves, hollow trees, and man-made structures such as buildings or culverts, especially those near water. It prefers oak-hickory and pine-oak forest and feeds near or over water. Any roost sites that are found as well as its mesic and bottomland forest habitat should be protected from disturbance.

5. Canebreak Rattlesnake (State Threatened)

This species has been documented in Leon County but not within the Park. Its habitat is mesic forests and hilly woodlands near water therefore in all likelihood it occurs within Fort Boggy SP. Its preferred habitat in the Park occurs within the mesic slope forest (Water oak – Sweetgum Forest), bottomland hardwood forests (Sugarberry – Elm and Overcup Oak Forest), and other forest and woodlands near water. There is a high likelihood of hibernacula within the rocky overhangs found in the south and east slopes above the Park's Lake as well as other rock outcrops within the Park. This snake should be protected from direct mortality through the education of park visitors, and its slope and hilly forested habitats protected to the extent possible.

Human Impact

Natural systems have levels of tolerance to disturbance. This sensitivity must be determined in order to develop strategies for avoiding or minimizing human impacts (Leatherman 1982). One of our greatest challenges is balancing the two goals of the park system: recreational use of resources and conservation of these same resources.

According to Corbin, et al. (1995), since at least the mid-1800's the land now compromising the Fort Boggy State Park Site has had home sites associated with it. Until the 1930's it appears that the land was used for farming and some grazing. At that time the land was consolidated under one owner, Joe Sullivan, and managed for cattle grazing and recreational opportunities such as hunting, fishing, and swimming. While human impact to the landscape is evident throughout the tract, it is minimal in some areas. Approximately 30% of the forested area has been cleared and maintained in pasture. Other than mowing and a minimal planting of improved pasture grasses, the site has been left alone.

Hydrological Analysis

The 1995 Master Plan outlines the water resources occurring on the Fort Boggy State Park property as small but varied. A number of small drainage systems flow from the upland area of the park into Boggy Creek that roughly bisects the north and south portions of the park. A substantial flood plain is associated with the Boggy Creek. Most of the creeks are permanently flowing streams, while much smaller drainage and many small bogs and springs flow intermittently. On the larger eastern portion of the property, a man-made lake (Sullivan Lake, approximately 15 acres) exists. Water resources and the lack thereof in certain places help create the diversity of habitats on the park site.

Cultural Analysis

Archeological and Historical Summary

Complete archeological and historic surveys can be found in the Cultural Resource Survey of Fort Boggy State Park, 1994, 2011, 2012, 2013. These documents provide an understanding of cultural resources of the property. The surveys identified and described 82 archeological sites of various kinds and time periods have been documented on the park. 30 are prehistoric, 18 are historic, 20 are multiple components, 12 are historic roads and 2 are historic fence boundaries. Other recent surveys have identified additional resources as well. The interrelationships of all the sites are discussed in length in the report; Archaeological Investigations at Fort Boggy State Park, Leon Co. TX – Center for Archaeological Studies, TX State University. Moreover, a draft Resource Management Plan of Fort Boggy State Park (TPWD, Corbin, 1996, p 145-147) explains the Cultural Analysis is as follows:

Prehistoric Cultural Background

The prehistoric cultural background of the project area can be outlined in fairly broad terms for this time period. The earliest temporal/cultural period is the Paleo-Indian Period (10,000-6,000 B.C.). Sites from this era are rare and the presence of the hunter/gather cultures that typify this period is indicated by scattered finds of projectile points of the type that identify these cultures elsewhere. A San Patrice dart point base was located at one site. It is a transitional Paleolithic, early Archaic representation that dates the site to roughly 10,000 YA.

Also, more than one site had cultural material deeper than 120cmbs. Perttula, el al. recommends deep testing in areas where deep impacts would occur near relict meander scars as the likelihood of encountering very early population evidence is high.

Sites from the Archaic Period (ca 6,000 B.C.-200 B.C.) are more common in eastern Texas and in the project area, although sites representing the earlier portion of this period are generally uncommon. Archaic cultures still followed a hunting and food collecting lifestyle. The greater occurrence of sites and artifacts, particularly in the later portions of this period, suggest higher population densities and a successful adaptation to the post-Pleistocene environment of Texas.

The Archaic Period is followed by the Early Ceramic Period (200 B.C.-A.D. 700), the period in which the hunter/gatherer population densities reach a maximum. Sites with Early Ceramic components are not uncommon in the project region. This period is characterized by the appearance of usually undecorated sandy paste pottery which is joined, by the end of the period, by a suite of small projectile points indicating the presence of the bow and arrow.

The following Late Prehistoric Period

(A.D. 700-1700) is differentiated from the preceding period by shifts in arrowpoint styles and form of ceramics indicating the presence of Caddoan style cultures, or at least the influence of these cultures. Sites from the later portion of this era are not well documented. Historically, the project area is in the western portion of the area inhabited by Caddoan speaking groups, particularly the Hasinai Caddo (Newcomb 1961). It is not known at this time if some of the sites which contain Caddoan ceramics are in fact Caddo sites or represent trade with groups to the east. Spanish Colonial period documents indicate that during the following Historic Period, historic Caddoan (Tejas, Hasinai) hamlets did occur west of the Trinity, particularly along or near the El Camino Real.

Historical Cultural Background

The first Europeans to move through the general area were probably LaSalle and members of his group. It is clear that they followed the early portion (the OSR) of the El Camino Real, following the well-known aboriginal trail into the Neches River valley. Later Spanish entradas and explorers used this same route as the Spanish colonized eastern Texas; the Austins and other intrepid Euro-American entrepreneurs also followed the same route.

The post-1800 history of the Boggy Creek park area is classic picture of the transition



3- Fort Boggy Historical Marker

from frontier Texas to present-day rural Texas. In 1839, Robert Rogers, Sr. began selling pieces of a thirteen and a half labor tract of land situated on Boggy Creek. In October of 1839 through April of 1840, James and J.A. Irwin purchased approximately 1100 acres of this tract in three separate, but contiguous, parcels. Just six months later the Irwins assigned the land to D.M. Brown and left the area. This property and other portions of the original Rogers grant were sold off in large chunks to incoming settlers who in turn deeded or sold the property to their children.

During the early 1900's, occupation of the park area changed. The old settler families had either died off or moved away, and the farms had become smaller and poorer. By the late 1920's and early 1930's, few people actually resided on the farms on the property. This was due in part to the Great Depression and the depletion of the soil from poor agricultural techniques. Most of the property had been foreclosed upon or purchased and was owned by J.H. Adkisson. The property, now approximately 1800 acres, was subsequently sold to Joe and Eileen Sullivan. Although the Sullivan's did not reside on the property, they did make improvements, such as the lake, bath house, corral, and picnic table, which remain on the location.

The use of the deed records and maps for the Robert Rogers Survey, the census records, and the 1933 USDA aerial photographs have allowed reconstruction of a part of the historical development and land use for a significant portion (particularly the central and eastern portion of the park locale). A relatively completed chain of title for the eastern two-thirds of the park and the later portion of a chain of title for the southwestern portion of the park has been constructed. A more complete detailing of the extant historical resources for the park locale may be found in the archaeological survey report for Fort Boggy State Park.

Architectural Resources

Other than the architectural data which can be derived from the stone and/or brick fireplace foundations, chimneys, and foundation blocks, architectural resources are extremely rare in the park locale. One of the archaeological sites includes a standing structure that is visible on the 1933 USDA aerial photograph. Another site has a corral, a bath house converted from a structure that was move onto the property, and a picnic table.

Existing Facilities

The following is a brief description of the existing facilities at Fort Boggy State Park and recommendations, if needed, for improvements.

Headquarters – A semi-permanent building at the main entry of the park serving as a visitor entry portal, staff office, workroom, storage, and staff restroom. Future developments warrant a new design for a permanent headquarter and visitor facility. The water, electrical and septic systems are in good condition and should be incorporated into a new design. A new headquarters should have high priority for future development.

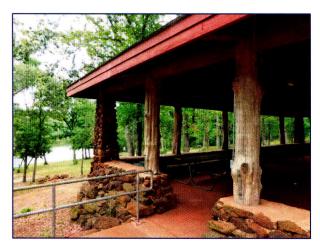
Maintenance Buildings – Located near the manager's residence on the North portion of the property, the maintenance buildings serve as a shops, storage, and general service buildings for the park's equipment. The roof has minor leaks and should be addressed with general park upkeep. Expanded maintenance buildings should be considered based on future development needs.

Manager's Residence – The manager's residence is located on the north portion of the property near the maintenance buildings. 4- Fort Boggy State Park Headquarters The structure is a small single wide trailer that



shows significant signs of age and wear. This facility should be replaced. A new manager's residence should have high priority in future development plans.

Day Use Pavilion -Open air pavilion made of rock façade base with heavy timber posts and



5- Fort Boggy State Park Day Use Pavilion

roof structure. It sits at the top of the day use area hill, overlooking the lake. Amenities include picnic tables and a BBQ pit in the rear. It can accommodate up to 50 people and is a rentable facility. The structure remains in good condition, however, a slight amount of silt and rainwater runs from the sidewalk to the floor of the pavilion during heavy rain events. This should be addressed with general park upkeep and repair.

Day Use Comfort Stations - The main restroom facility is located above the Lake Day Use area. It has a similar aesthetic as the Pavilion.

having been built at the same time. The facility is in good condition, but has a similar problem of silt and water accumulating on the entry platform in certain spots during and after heavy rain events. This should be addressed with general park upkeep and repair.

Boat Ramp – With the exception of low water levels affecting use, the Boat Ramp is in good condition. During drought or low water level conditions, the boat ramp remains closed.

Fishing Pier – The pier is in good condition. Pier pontoons should be checked for cracks to prevent taking on water. This should be addressed with general park upkeep and repair.

Pedestrian Trail Bridges – Existing trail bridges around the Lake Trail are in good condition. Repairs are needed for the staff-only access bridge on maintenance trial north of the park

6- Sullivan Lake Dam



7 - Recreation at Sullivan Lake

headquarters. This should be addressed with general park upkeep and repair.

Swimming/Fishing Areas – Sand should be added to beach area due to erosion issues of main Day Use area. This should be addressed with general park upkeep and repair.

Dam – The Fort Boggy dam was built by the Sullivan Family. The resulting impoundment (Sullivan Lake) is one of the main attractions to the state park. A small leak has been identified in the dam, per TPWD engineer's investigation, 2013. Repairs should be addressed through the Infrastructure Division.

Disclaimer of Obligation

This facility program describes the preferred and recommended park facility intent, types, counts and location. The contents of this program do not constitute a Texas Parks & Wildlife Department obligation or mandate to construct or expend public funds to develop the facilities depicted herein.

Planned Management Zones

Land Use Zones

Land Use Zones provide the outline guidance to the conservation and recreational patterns expressed through the facility development of a state park. Fort Boggy has been classified into two types of zones, Development and Natural Zones. Zones not only serve on-going management, but can be used to prescriptively guide facility development.

Natural Zone

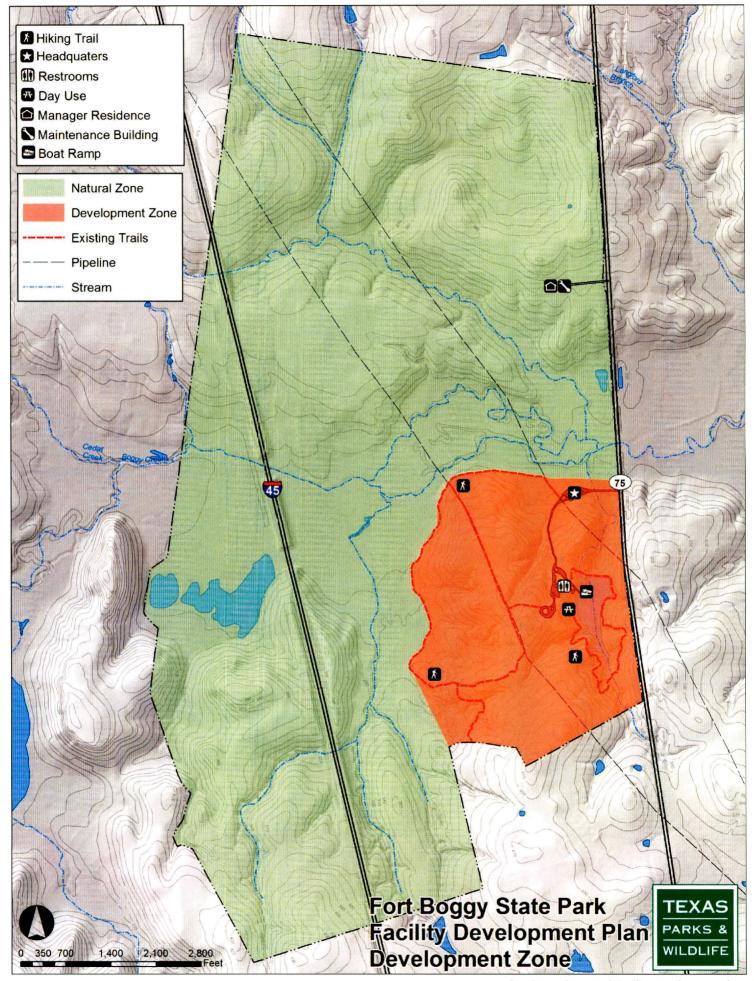
The primary objective in natural zones is the protection, restoration and stewardship of natural and cultural resources while providing for public use and enjoyment. Conflict between public use and protection of the resource will be weighted in favor of the resource. Natural zones are managed toward general native flora and fauna recovery and natural diversity. All areas in Fort Boggy State Park that falls outside of a Development Zone are classified as a Natural Zone and any facility development in these areas, beyond hiking trails, is neither programmed nor desirable. The portion of the property west of highway 45 is designated a Natural Zone and the only programed recreation should be future trail expansions.

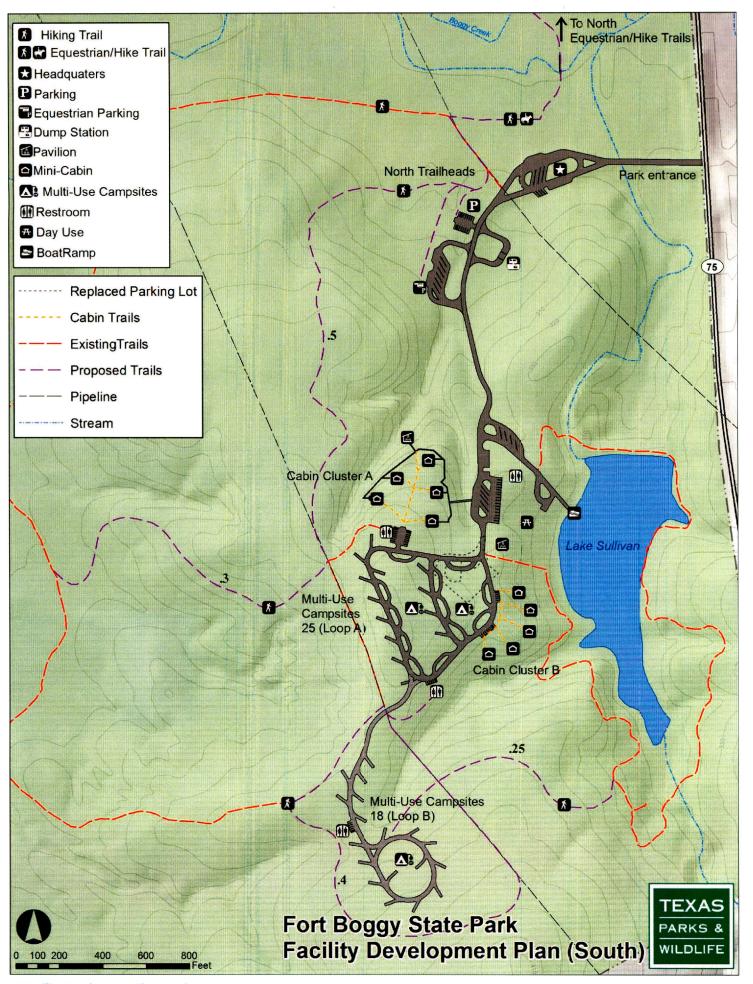
Development Zone

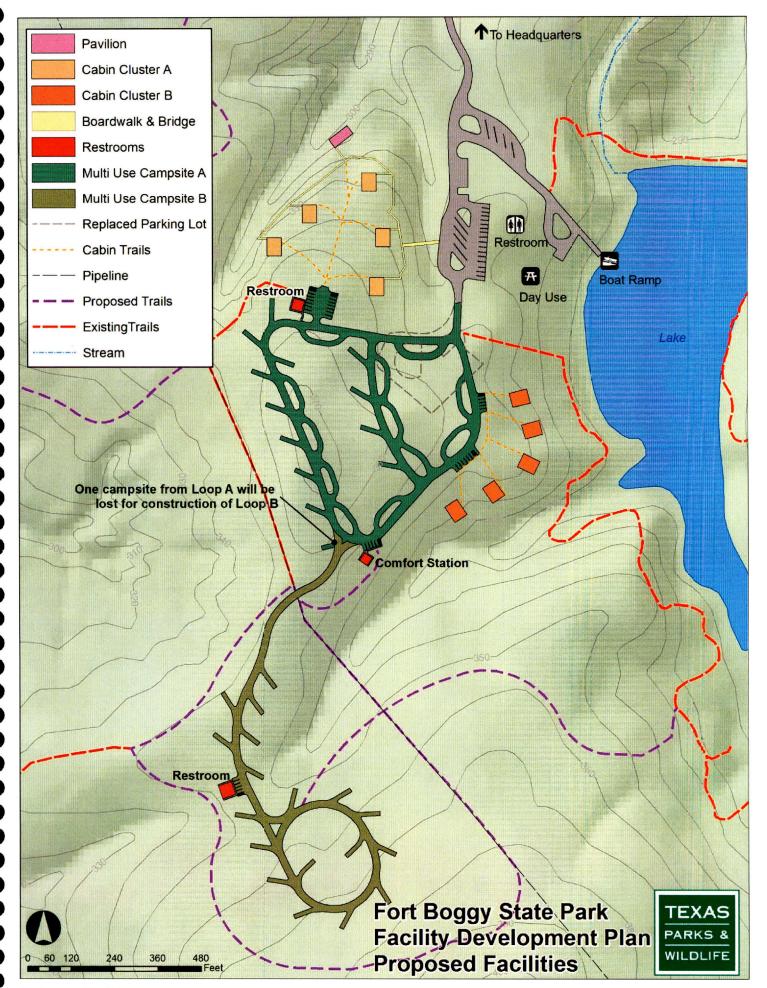
The development zone focuses upon the locations and activities desired by the public for outdoor resource-based recreational opportunities and is managed and maintained for concentrated visitor use. These facilities may include overnight camping, day use, trails, and other similar recreational uses.

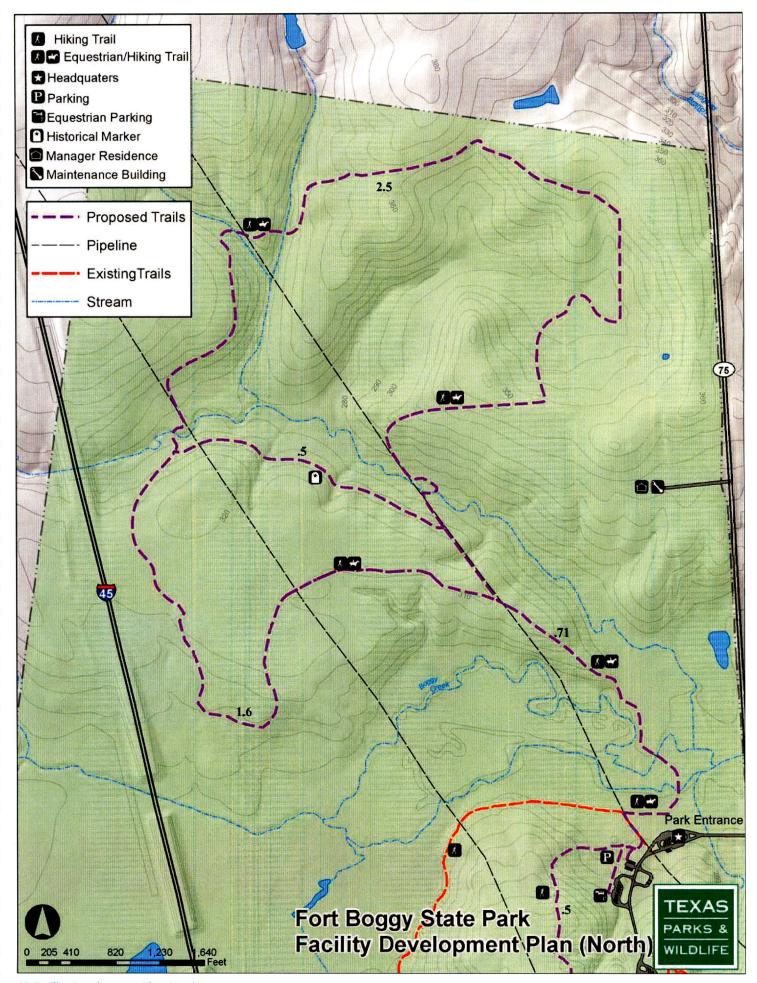
All facility development should be integrated into the natural park landscape to give the visitor an authentic outdoor experience. Development should not dominate the park's natural or cultural resources. In addition, thoughtfully planned development should incorporate a hierarchy of recreational uses while always considering environmental, aesthetic, and cultural properties of the park. Activities that are incorporated into the facility development include: nature and pleasure walking, hiking, fishing, hunting (per regulations), picnicking, bicycling, camping, and other overnight use.

The Development Zones contain all built facilities at Fort Boggy State Park. This Facility Development Plan's objective is to expand the recreational facilities already present in the park to









give the visitor more recreation options. Any design and construction work must follow standard building codes set forth by the International Building Code Council, as adopted by TPWD policy.

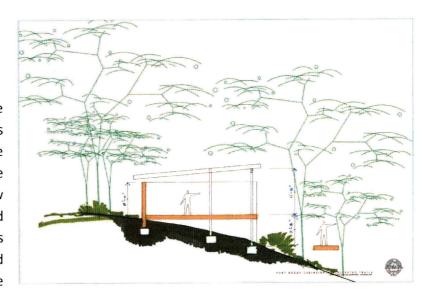
List of developments by priority:

- ⇒ Overnight Cabins (Cluster A)
 - Bridge and Decking for Cabin Access
- ⇒ Equestrian and Hiking Trails
 - Equestrian Parking Lot, Trail Head
- ⇒ Managers Residence
- ⇒ Multi-use RV Camping loop (Loop A)
 - Restrooms for Multi-use RV Camping loop
 - Dump Station
- ⇒ Headquarters / Visitor Center
- ⇒ Overnight Cabins (Cluster B)
- ⇒ Overlook Pavilion
- ⇒ Multi-use RV Camping loop (Loop B)
 - Restroom for Multi-use RV Camping loop

Recreation Facilities

Cabins

10 overnight cabins will be established for visitor use as depicted in figure 10. The cluster "A" cabins (5 total) are located on the nose of a shallow ridge, overlooking a wooded drainage area. This site was chosen for the viewshed offered by the ridgeline among the



trees in a mix upland

upland 14- Cabin Conceptual Detail

hardwood forest. When building the cabins, care must be taken to maintain the surrounding tree cover and nestle the cabins into the landscape. Each should be oriented to maximize the overlook view down the drainage area. By doing so, the visitor will not only get the intended viewing experience, but will be shielded by the rear wall from noise that could be associated with future

park development, more specifically, the multi-use RV loop "A". The cabin sites are ideal for park visitors with limited camping equipment or those that prefer more substantial shelter. Each cabin will include amenities such as air conditioning, a lantern hook, picnic table, fire ring, external water service, electrical service and an outdoor grill. The typical cabin is an approximately 16'x20' weather tight structure with lockable doors constructed along the ridge grade, such that each cabin will have an overlook into the treetops. By constructing the cabins along the ridge rather than cutting into grade, the front portion of the cabin will be raised on stilts, giving the visitor a feeling of being in a tree house floating above the landscape. The design aesthetic should be in keeping with the TPWD and local vernacular. Until further funding and development occur, the day-use comfort station will provide sanitary services to the cabin cluster "A." Parking for cabin use will be designated in the parking lot across the adjacent drainage, accessible by the boardwalk and foot bridge. See figure 14 for cabin details.

Cabin cluster "B" (5 total) are located along the ridgeline south of the current day use area. The same site orientation should be used for the layout of these cabins, maximizing viewshed of lake while shielding the visitor from noise and views of the multi-use RV camping loop. Cabin cluster "B" should be serviced by the comfort station on the multi-use RV camping loop "A", or by the comfort station in the day use area. These cabins should have the same design and aesthetic as the cabin cluster "A" to keep consistency in the park vernacular.

Bridge and Boardwalk

The overlook pavilion and the cabin cluster "A" will be connected with a raised boardwalk. The boardwalk system will reduce the footprint on the natural environment that would otherwise be



15- Pedestrian Bridge Aesthetic

much greater if the path to the cabins was asphalt or concrete, thereby not fracturing the microenvironment. This raised boardwalk should be at least 5' wide and ADA compliant. The boardwalk should also incorporate multiple benches and small visitor gathering areas throughout, maximizing viewsheds and providing opportunities for nature and wildlife viewing. The visitor's walk to the cabin should be just as much of a park experience as the cabin itself.

The access bridge from the parking lot to the boardwalk shall also be

ADA compliant and the design aesthetic should be in keeping with the TPWD and local vernacular. Low voltage lighting and handrails where needed should be incorporated throughout the boardwalk

for visitor safety. The layouts and aesthetic of the bridge, boardwalk and cabins should give the visitor a feeling of floating just above the landscape, as to experiencing the park's natural environment while maintaining a minimal footprint. When considering layout of all of these facilities, viewshed and overlooks should be considered paramount.

Overlook Pavilion

Neighboring the 5 cluster A cabins will be a +/- 500 square foot overlook pavilion. This pavilion is to be used as a small group gathering area by the visitors occupying the cabins. It is not intended to be used as a day use facility. The architectural aesthetic should be similar in nature to the adjacent cabins and the facility should connect to the boardwalk system and excising utilities. The pavilion should be oriented such that the overlook capitalizes on the viewshed facing north by northwest. Picnic tables, an oversize grill, and a hose bibb should be placed at the pavilion for visitor convenience.

Northern Area Trail Expansion

The trail system in the northern portion of the park is equestrian, mountain bike, and pedestrian hiking use. The total length of trails is approximately 6.5 miles; however, numerous means of looping can extend that distance to up to 10 miles. The trail system takes advantage of routing visitors through many of the natural communities throughout the park. The visitor experiences the full breadth of natural ecological communities the park offers through the north trail system. First, the visitor experiences the bottomlands crossing over Boggy Creek on footbridges. As the visitor makes there way uphill along the trail route, they will be guided through both dry and mesic upland forests, as well as open prairie grasslands. The Fort Boggy historical marker acts as a destination for hikers



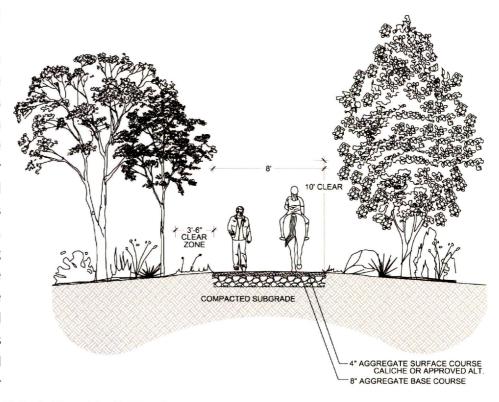
16 - Typical Multi-Use Trail Yield Signage

or equestrian riders. Along with the granite monument currently onsite, a seating area such as a picnic table or benches should be installed for day use visitors.

In instances where the trail must traverse drainages, appropriate equestrian/pedestrian accessible bridges will be built. These bridges should be of the same character to those on the Lake Trail. The trial should also be marked with wayfinding and interpretive signage throughout. Multi-use trail yield signage should be posted periodically throughout the trail system where applicable.

Northern Area Trail Head Parking Lots

Two parking lots shall be constructed for the pedestrian trail head as well as the equestrian trail head. Separating the parking areas pedestrians and equestrian uses ensures staging safer areas. Moreover, larger parking spaces are required in the equestrian lot due to the oversized vehicles needed to pull trailers as well as room for staging and horses for preparing trails.



17- Typical Equestrian Trail Detail

The hiking trail head

parking should have at least 12 parking spaces, and two accessible parking spaces. All parking spaces will be 10' wide by 20' deep and include wheel stops. Flat or ribbon curbing will be used if necessary to aid in the continuance of natural sheet flow for run-off water. There should be an orientation kiosk with trail information and maps located at the trail head. A standard hose bibb should also be available for visitor convenience. See figure 16 for design detail.

The equestrian trail head shall consist of 10 parking spaces and one accessible space. All parking spaces will be 18'x55' at minimum to allow ample room for vehicles and horse trailers. The parking should be set back at least 60' from the main road and vegetation in between should remain where possible for privacy. Amenities such as water trough, trail signage, picnic table, and hitching posts shall be available for user convenience. Visitors are required to remove horse and pack animal manure from site.

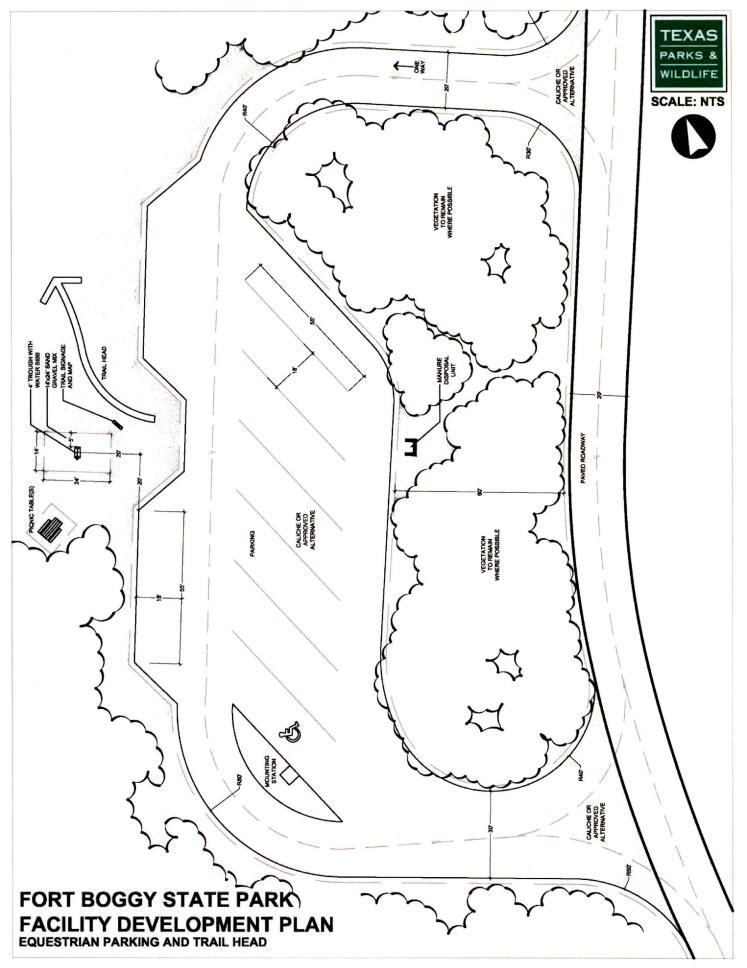
Southern Area Trail Expansion

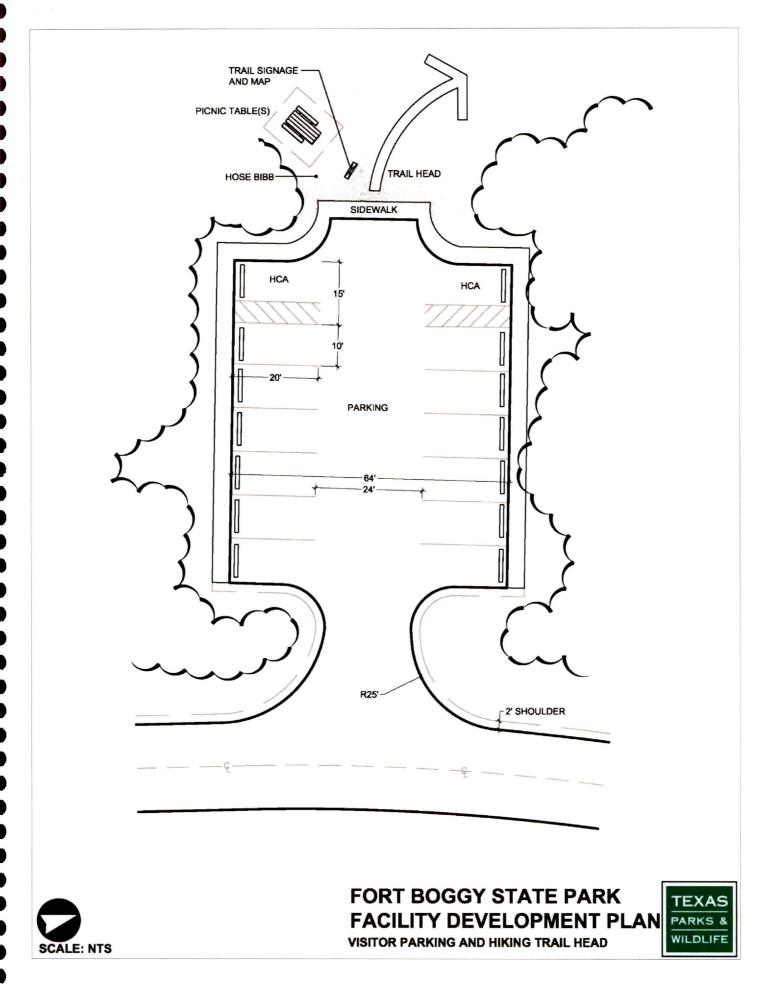
The current trial loop in the southern portion of the park will remain open for pedestrian use only. In addition, three more pedestrian-only trials are outlined for development. These trails will largely act as connectors from various facilities proposed in this plan. Equestrian and bike use is not permitted on any trail in the southern portion of the park. By limiting the use to pedestrian-only, these trails will be more narrow and enclosed tighter underneath the canopy, providing the visitor with a more intimate hiking experience.

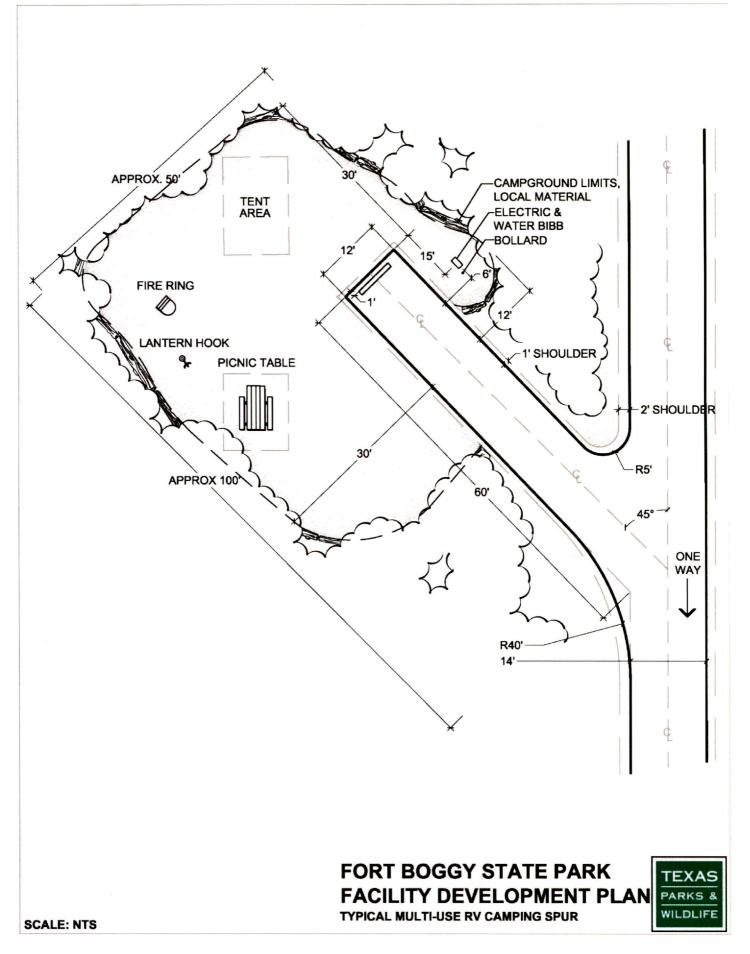
Multi-Use Campgrounds

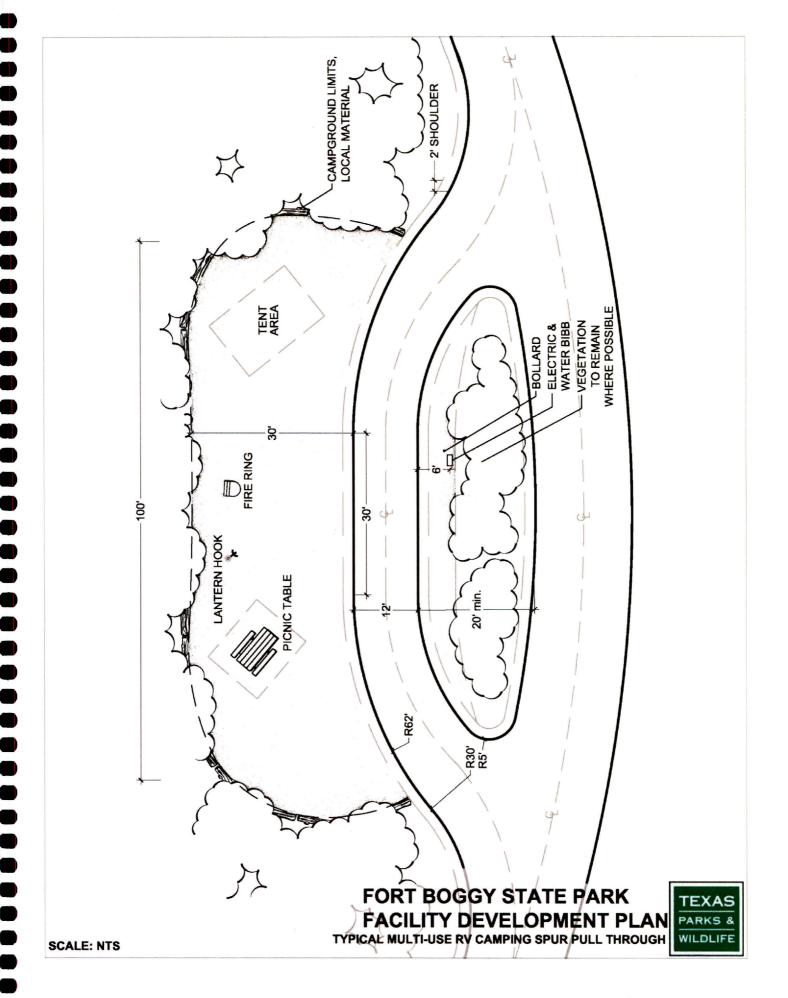
The multi-use campground loop "A" begins in the area currently occupied by a parking lot and trail head. Road type for the entry road as well as spur loops should be Type II-A Classification, paved, 18' wide. Half of the camping options are pull-out spaces, set at +/- 45° angles from the road so that the visitor backs in. The other sites are pull-through to add variety to the camping options. The loop "A" campgrounds calls for a total of 25 camping sites (including the host site); 12 pull-throughs and 13 pull-outs. At least five campsites from loop "A" shall be ADA compliant. Each camping unit will provide water service and 50/30-amp electrical service. Site amenities shall include a picnic table, lantern hook, and fire ring. There should also be 2 service sinks in the campgrounds, adjacent to the restroom. A host site is designated adjacent to the entry road, as marked. The host site shall be 20' wide and include the same amenities as the visitor site, but will also be equipped with wastewater services. This service shall connect with the proposed restroom facility. Each campsite should be numerically designated in a logical manner. Disturbance of each site during construction should focus on maximizing the campground's appeal. This can be achieved by minimizing large tree removal, working with natural grade and customizing individual placement of the site prior to construction based on functionality and aesthetics. See figure 12 for loop "A" campground layout.

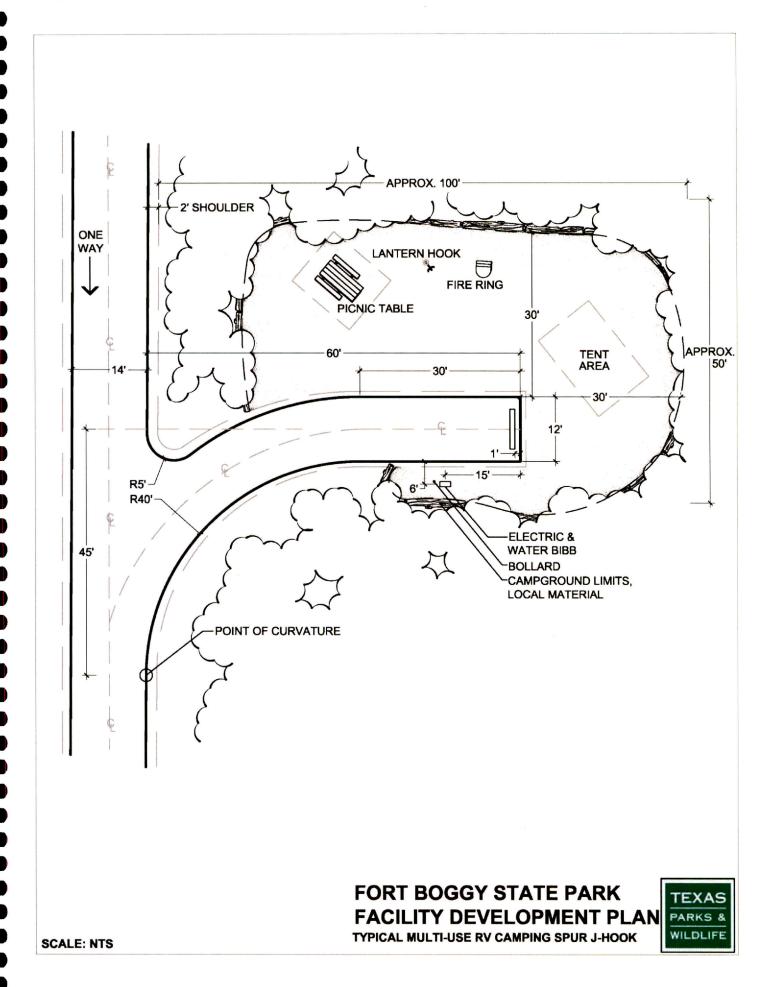
The multi-use campground, loop "B", is located south west of the main development area. This loop extends off of the loop "A" multi-use campground, adding an additional 18 campsites. At least four campsites from loop "B" shall be ADA compliant. The majority of these sites are set at +/- 45° angles from the road so that the visitor backs in; however, the two internal spurs are a "J hook" design. A restroom facility with an adjacent host site will service this campground. Only host sites will have wastewater services. One campsite on the "A" loop will be removed for the entry road into the loop "B", bringing the total number of sites to 42 upon full build out. See figures 21-22 for camping spur detail drawings.











Administrative and Support Facilities

Headquarters/Visitor Center

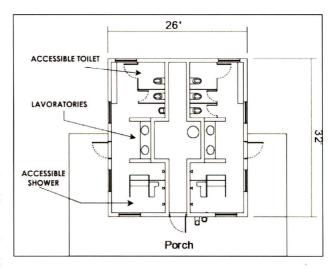
Development of a Headquarters and Visitor Center at Fort Boggy is critical to the overall success of the park. With expanded facilities come increase visitor numbers and hours of operation. Providing a new headquarters and visitor center upon entering the park will give patrons a starting point for the state park experience. The Headquarters is the place where the visitor can access information, maps, pay fees, learn about the park, and ask any question to park staff. The Headquarter is also the "face" of the park and the first thing a visitor experiences upon entering. As such, it is critical that the architecture compliment the local and TPWD vernacular. The new headquarters will be located at the site of the current building and shall be ADA compliant. Parking and road circulation will remain the same. The new headquarters should, at a minimum, be a 1 sq. ft. building with space for a visitor reception area with interpretive displays, 3 offices for administration needs, public restrooms, storage, and a break area. The new facility will tie into existing septic system and be located roughly in the same area as the current headquarters.

Manager's Residence

The existing manager's residence is in very poor condition. A new residence should be constructed consisting of \pm 1800 sq. ft., 3 bedroom, 2 bathroom house with covered parking for two vehicles. The new building will replace the current residence, tying into existing utilities. At minimum, the residence shall abide by state energy regulations and be ADA compliant. Additionally, effort should be placed on design that emphasizes energy efficiency, proper site orientation, aesthetics and cost effectiveness.

Restrooms

Although utilitarian in nature, restroom facilities greatly add to the quality of visitor's park experience. In conjunction with the development of the multi-use campgrounds, the associated restrooms or comfort station that service the area should be constructed. The facilities should be built in accordance with current TPWD design standards using durable, vandal resistant materials. Windows, natural light and high ceilings should be incorporated into the architectural aesthetic of the buildings. Each restroom should have adjacent parking for visitor convenience. At



23- Typical Restroom Layout

minimum the parking shall include six parking spaces and one accessible space. Access to the facility should be ADA compliant, consisting of a concrete sidewalk connecting the facility with the parking.

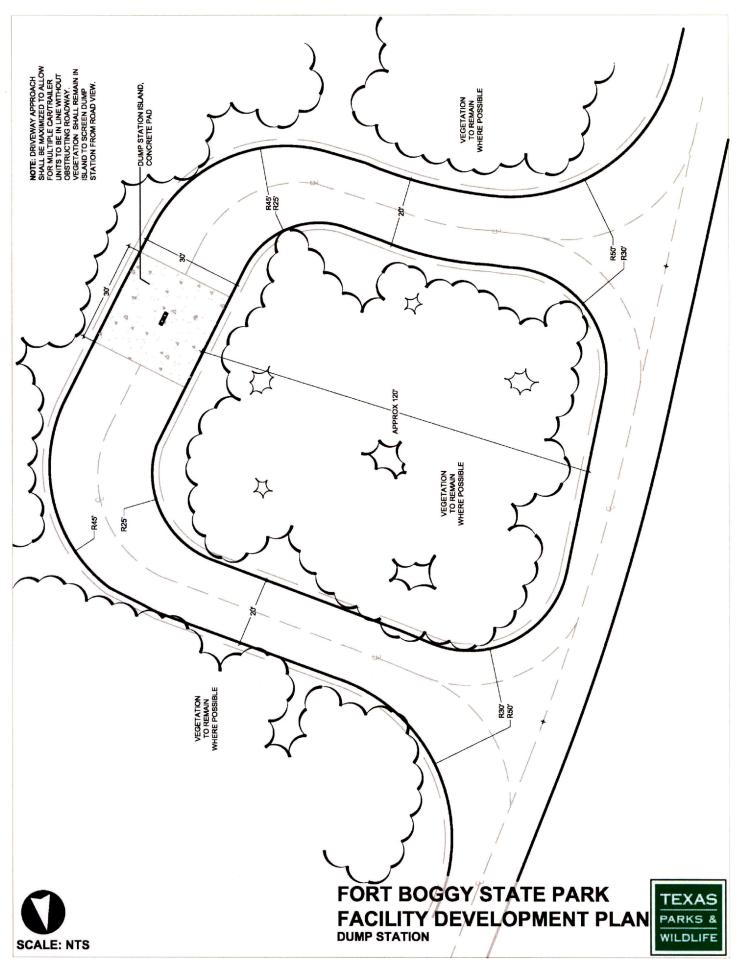
Fixture Type	Mens	Womens
Water Closet ADA	1	1
Water Closet	1	2
Urinal	1	0
Lavatories	2	2
Shower ADA	1	1
Shower	1	1
Hand Dryer	1	1
Other Accessories	As needed	As needed

Each restroom facility should have, at minimum, the fixtures outlined in Table 24. The comfort station will have the same, with the exception of the showers. Much like the campsites, the restrooms should be placed in a non-intrusive way in the landscape. Soil survey shows the area adjacent to the facilities where drain fields will be located to be in Hearne fine sandy loam, and Hatliff fine sandy loan series soils. Both are sandy loams and therefore have moderately to rapidly permeability characteristics.

24- Restroom Fixtures (minimum)

Dump Station

A Trailer Dump Station should be constructed across the main roadway from the north trailhead parking lot as shown in figure 25. It should be built as depicted, in accordance with TPWD design standards and will connect into the existing septic system. The dump station should also be provided with a hose bibb and trash receptacles. Care should be taken to not disturb the large vegetation inside the pull-off area to screen the view from the main road. Placement of the dump station site is for visitor convenience as a final stop before leaving the park. The dump station approach shall maximize vehicle holding capacity to allow for multiple car/trailer units to be in line without obstructing the roadway.



Park System

Utilities

This utilities narrative is a general discussion to guide the design of the electrical service, water system and wastewater system. It is general by intent, to allow a professional engineer the latitude to design appropriate systems to see that all the utility needs are met.

Water service – The system must adhere to all local, and state regulations and should provide adequate pressure and quantities throughout the park. In general, lines should be located along or under roadways, trails, or other disturbed areas to minimize on impact to the natural environment and provide adequate access for maintenance. Water services should be distributed to the following proposed facilities, as well as provisions for future expansion if needed:

- Headquarters
- Restrooms / Comfort Station
- Manager's Residence
- Cabins
- Individual Multi-Use Campground Sites
- Dump Station
- Trailheads

Wastewater service – It is anticipated that 3 new septic systems will be constructed for the restrooms and comfort station. The dump station will tie into the septic lines that service the headquarters and current day use area. All wastewater systems must adhere to local and state regulations. Each system should be gravity flow if possible, and incorporate multiple drainfields to allow for system management. Moreover, each system should be designed for the most maintenance free and economically practical manner.

Electrical Services – Proposed electrical services should be provided at the following locations for full implementation of the facility development plan:

- Headquaters –building service
- Dump station lighting
- Manager's residence building service
- Equestrian and hiking trail head parking lots lighting
- (2) Restrooms, (1) comfort station building service
- Multi-use RV camping loops 42 sites, 50/30 amp service

- (10) cabins building service
- Deck and bridge lighting
- A wireless internet antenna should be installed on the day use pavilion.

Any new electrical service should comply with all local and state regulations. When possible, new electric lines should be installed underground.

Light and Night Sky

Just as our other natural and cultural resources are maintained, it is imperative that our night sky be preserved. Any light installations must avoid light pollution and maintain the night sky consistent with the International Dark Sky Association guidelines. All light sources should be shielded to only allow light projection below the horizontal, i.e. downward and not level or upward. TPWD recognizes the value in actively modeling proper lighting.

Public Comment Summary

Two public comment meetings were held for the Fort Boggy Facility Development Plan.

TPWD conducts public meetings to invite and encourage public input, comments, and participation. At a public meeting, members of the community have the opportunity to learn more about the facility development planning efforts and provide their input on future needs for the park. All residents, business owners, civic groups, schools and universities are encouraged to attend. Each public meet was advertised in 3 local papers, the TPWD website, and fliers distributed to the park manager. A copy of the public meeting advertisements can be found in the appendix. Both meeting were held at the Leon Co. courthouse, 130 E. St. Mary St. Centerville, TX 75833.

Public meeting, Thursday November 14, 2013.

48 members of the community attended representing a wide variety of park user interests. Among the participants were representatives from the Friends of Fort Boggy, East Texas Mounted Search and Rescue, Central Texas Mounted Search and Rescue, American Competitive Trail Horse Assoc., Texas Equestrian Trail Riders Assoc., and representative from Senator Schwartzer and Representative Ashby's office.

Topics discussed included: Lack of equestrian facilities in the park, high demand from equestrian groups for trail riding in this area, incorporate the west side of the property for equestrian recreation opportunities, timelines for construction, camping opportunities for equestrian riders, carriage/buggy trails (8ft x 12ft top clearance) should be incorporated into the plan, hours of operation, support for the RV facilities.

Public meeting, Thursday January 9th, 2014.

19 members of the community attended including many of the same groups from the previous public meeting. A revised facility development plan was presented addressing the issues raised in the November meeting. The revised facility development plan is largely the same as the final version here. Minor changes include various amenities around the trail heads (hose bibs, watering station for the horses, picnic tables, etc).

Topics discussed included: funding and timeline for construction, priority of construction components, manager's residence, and hours of operation in the park.

FORT BOGGY STATE PARK

PUBLIC MEETING

The Texas Parks and Wildlife Department (TPWD) will be hosting a public meeting at the Courthouse in Centerville, 130 E. St. Mary, Centerville, TX 75833. The department is seeking public input for the Fort Boggy State Park Facility Development Plan. This document will outline future recreation for the park and provide a framework for new park development.

At the public meeting, members of the community will have the opportunity to learn more about the facility development planning efforts and provide their input on future needs for the park. All residents, business owners, civic groups, schools and universities are encouraged to attend.



Thursday, November 14, 2013 7:00pm, Courthouse in Centerville 130 E. St. Mary Centerville, TX 75833

If you are interested in attending this event and have special communication or accommodation needs, please contact Drew Carman at 512-389-8499 by Monday November 11th.

For more information, please contact Drew Carman at 512-389-8499 or by email at drew.carman@tpwd.texas.gov



26- Public Meeting 11/14/2013

FORT BOGGY STATE PARK

PUBLIC MEETING

The Texas Parks and Wildlife Department (TPWD) will be hosting a second public meeting at the Courthouse in Centerville, 130 E. St. Mary, Centerville, TX 75833. The department is seeking public input for the Forty Boggy State Park Facility Development Plan. This document will develop a future recreation plan for the park and provide a framework for new park development.

At the public meeting, members of the community will have the opportunity to learn more about the facility development planning efforts and provide their input on future needs for the park. All residents, business owners, civic groups, schools and universities are encouraged to attend.



Thursday, January 9th, 2014 7:00pm, Courthouse in Centerville 130 E. St. Mary Centerville, TX 75833

If you are interested in attending this event and have special communication or accommodation needs, please contact Drew Carman at 512-389-8499 by Thursday, January 2nd, 2014.

For more information, please contact Drew Carman at 512-389-8499 or by email at drew.carman@tpwd.texas.gov



Public Comment Meeting Notes

Public Comment Meeting, Fort Boggy State Park, November 14, 2013

Regarding equestrian trails and campsites, what is the trail width? Can equestrian trails be designed bigger to accommodate buggies?

Andy Stewart, East Tx mounted Search and Rescue: We would like you to put in 10-15 miles of trail, overnight parking, with a minimum trail length – 10mi.

What about local users?

How much do cabins cost? What is the amount return on the cabins?

Can the campsites be equestrian friendly on the bottom loop?

Have a unique opportunity to develop equestrian use and facilities at the park. Don't make cookie cutter park. Texas history. Need to take equestrian use and put it high on the priority list.

We need better highway signage on I45.

Campsites/RV need water and electricity.

It appears equestrian trails would be cost effective.

Expo Center, 8 miles from Centerville will bring business and visitors to the park.

When will the park open?

Can we eliminate some camping and do equestrian on west side?

Can there be remote gate to access the west side?

What is the goal of the park?

-sustainable, revenue generating, recreational opportunities

Can TPWD manage trail use by day – different trail are used different days of the week?

Why is the park closed during the week?

Byran, TX – equestrians use 600 ac, 50 miles of trails as an example.

Spaghetti trails – equestrian users are ok with that.

Equestrian users want big gravel parking lot; it would make awful lot of people very happy.

Friends groups calls for participation from Equestrian group. Need interpretive staff. Can pipeline be used as trails? Topographic limits. Need birding and native trails as destination. Expo Center again. Equestrian users will add best value. Huston Area Carriage Association, ACTHA.org TTC requires minimum of 12 miles of trail, restrooms and showers and hose bibb. Public Comment Meeting, Fort Boggy State Park, January 9th 2014 Support for the revised plan. How many miles of equestrian trails are added? When will this plan be implemented? What is the order that these facilities will be built? Can the trails in the south be open occasionally for equestrian related events, to get more mileage? Why is there no equestrian overnight camping? Where does funding come from? Can volunteers help build the trails or local contractors for the buildings? Manager residence needs improvements.

Construction Estimate

Targeted year for estimate: 2014

Project Estimate Assumptions:

- Property is already owned/leased by TPWD.
- Property is within a 2 hour drive of major metropolitan area.
- Electrical Utility service is available at fronting highway to park.
- · All Electrical service in park is run underground.
- Municipal Water/Wastewater Utility Systems are not available to service property.
- Road design performed by A/E Consultant, constructed through TxDOT.
- TPWD Infrastructure Division would manage project and hire consultants to perform design.

Cost Estimate Range for the	\$6,720	152		\$8,736,199
Development	Ψ0,720	,,102		ψ0,700,100
ltem	Quantity	Unit	Cost	Extension
Park Systems				
Park Signage	1	LS	\$15,000	\$15,000
Park Systems Total				\$15,000
Campground "A" - 25 Multi Use Sites				
Entrance Road	0.02	MI	\$520,904	\$10,418
Loop Road	0.44	MI	\$520,904	\$229,198
Road Gate	1	EA	\$6,511	\$6,511
Parking @ 29	1139	SY	\$65	\$74,035
Wheel Stops	42	EA	\$38	\$1,596
Restrooms -1 @ 1200 SF Ea	1200	SF	\$260	\$312,000
Comfort Station - 1 @ 625	625	SF	\$241	\$150,625
Sidewalks	300	LF	\$14	\$4,200
Campsite	24	EA	\$5,079	\$121,896
Camp Host Site	1	EA	\$7,032	\$7,032
Information Kiosk	1	EA	\$7,162	\$7,162
Service Sinks	2	EA	\$7,162	\$14,324
Waterlines	3104	LF	\$15	\$46,560
Septic System & Field	2	LS	\$65,113	\$130,226
Electric Service - Underground Primary	2032	LF	\$20	\$40,640
Electric Service - Underground Secondary	1068	LF	\$18	\$19,224
Transformer - Pad Mounted	3	EA	\$8,465	\$25,395
Building Site Re-vegetation	2	LS	\$3,256	\$6,512
Landscape Re-vegetation General	1	AC	\$3,646	\$3,646
Campground "A" - Total				\$1,211,200
Campground "B" - 18 Multi Use Sites				
Entrance Road	0.1	MI	\$520,904	\$52,090
Loop Road	0.31	MI	\$520,904	\$161,480
Road Gate	1	EA	\$6,511	\$6,511
Parking @ 6	235	SY	\$65	\$15,253
Wheel Stops	24	EA	\$38	\$912

Restrooms -1 @ 1200 SF Ea Sidewalks Campsite Camp Host Site Information Kiosk Service Sinks Waterlines Septic System Field Electric Service - Underground Primary Electric Service - Underground Secondary Transformer - Pad Mounted Building Site Re-vegetation Landscape Re-vegetation General	1200 116 17 1 1 2464 1 900 1564 2 1	SF LF EA EA LF LS LF LF AC	\$260 \$14 \$5,079 \$7,032 \$7,162 \$7,162 \$15 \$65,113 \$20 \$18 \$8,465 \$3,256 \$3,646	\$312,000 \$1,624 \$86,343 \$7,032 \$7,162 \$7,162 \$36,960 \$65,113 \$18,000 \$28,152 \$16,930 \$3,256 \$3,646
Campground "B"	uni Sentrumanti en manciona.			\$829,627
Cabin Cluster, "A"				
Parking @ 24 Auto	0	SY	\$65	\$0
Road - Paved	0 50	MI LF	\$46 \$14	\$0.00 \$700
Sidewalks Cabins - 320 SF Ea	5	EA	\$56,320	\$700 \$281,600
Pavilion @ 1	1	EA	\$12,046	\$12,046
Waterlines	1028	LF	\$15	\$15,420
Electric Service - Underground Primary	500	LF	\$20	\$10,000
Electric Service - Underground Secondary	1028	LF	\$18	\$18,504
Transformer - Pad Mounted	2	EA	\$8,465	\$16,930
Boardwalk Bench	2	EA	\$651	\$1,302
Access Boardwalk	1028	LF C^	\$92 \$100,000	\$94,576
Access Bridge Building Site Re-vegetation	1 5	EA LS	\$100,000 \$3,256	\$100,000 \$16,280
Landscape Re-vegetation General	1	AC	\$3,230 \$3,646	\$3,646
Cabin Cluster A Total		7.0	40,010	\$571,004
Cabin Cluster, "B"				
Sidewalks	154	LF	\$14	\$2,156
Cabins - 320 SF Ea	5	EΑ	\$56,320	\$281,600
Waterlines	500	LF	\$15	\$7,500
Electric Service - Underground Primary	500	LF	\$20	\$10,000
Electric Service - Underground Secondary	1105	LF	\$18	\$19,890
Transformer - Pad Mounted	1	EA	\$8,465	\$8,465
Building Site Re-vegetation	5	LS	\$3,256	\$16,280
Landscape Re-vegetation General	1	AC	\$3,646	\$3,646
Cabin Cluster B Total				\$349,537
Headquarters Complex	4000	<u>С</u> Г	#224	C424 200
Headquarter Building Flagpole	1800 1	SF LS	\$234 \$2,800	\$421,200 \$2,800
Security Lighting	1	EA	\$2,600 \$2,474	\$2,600 \$2,474
Office Furnishings	3	EA	\$6,511	\$19,533
Information Kiosk	1	EA	\$7,162	\$7,162
Waterlines	100	LF	\$15	\$1,500

Septic System Field	1	LS	\$65,113	\$65,113
Electric Service - Underground Primary	100	LF	\$20	\$2,000
Electric Service - Underground Secondary	100	LF	\$18	\$1,800
Transformer - Pad Mounted	1	EA	\$8,465	\$8,465
Building Site Re-vegetation Landscape Re-vegetation General	1 0.5	LS AC	\$3,256 \$3,646	\$3,256 \$1,823
Headquarters Complex Total	0.5	AU	Ψ3,040	\$537,126
Treadquarters complex rotar				Ψοσί,12ο
Staff Residence				Company of the Company
Staff Residence - 1 @ 1800 SF Ea	1800	SF	\$163	\$293,400
Access Road	0.05	MI	\$520,904	\$26,045
Building Site Re-vegetation	1	LS	\$3,256	\$3,256
Landscape Re-vegetation General	1	AC	\$3,646	\$3,646
Staff Residence Total				\$326,347
Trail Systems				
Hike/Bike Trails @ 1.2 mi	6336	LF	\$7	\$44,352
Equestrian Trails @ 6 mi	31680	LF	\$10	\$316,800
Trail Structures @ .5 per Mile	3	EA	\$5,157	\$15,471
Hiking Trail Head Parking Equestrian Parking	756 2835	SY SY	\$65 \$65	\$49,140 \$194,275
Trail Signage - Carsonite Markers	8	MI	\$112	\$184,275 \$896
Picnic Sites, Single ADA	4	LS	\$2,474	\$9,897
Trail Signage - Detailed	2	LS	\$15,000	\$30,000
Water line	744	LF	\$15	\$11,160
Drinking Fountian / Hose Bibb	2	EΑ	\$391	\$782
Security Light	2	EΑ	\$2,474	\$4,948
Transformer - Pad Mounted	2	EA	\$8,465	\$16,930
Landscape Re-vegetation General	1	AC	\$3,646	\$3,646
Trail System Total				\$688,297
D 01.1:				
Dump Station			A 500.004	200.400
Road	0.07	MI	\$520,904	\$36,463
Grinder Pump, Lift Station	1.07	MI	\$65,113 \$21,487	\$69,671
Dump Station Dump Station Concrete	1 100	LS SY	\$21,487 \$52	\$21,487 \$5,200
Waterline	484	LF	\$15	\$7,260
Individual Hose Bibb	1	LS	\$137	\$137
Wastewater Line - Gravity	343	LF	\$29	\$9,947
Landscape Re-vegetation General	0.37	AC	\$3,646	\$1,349.02
Security Lighting	1	LS	\$2,474	\$2,474
Day Use Area Total				\$153,988
Construction Total				\$4,682,127
Construction Contingency	15%			\$702,319
Project Costs				
A/E Consultant Services - New Construction	8%			\$374,571
A/E Consultant Reimbursable/Additional	4%			\$187,286

Services		
Survey and Testing	2%	\$93,643
Cultural Resource Management	3%	\$140,464
Master Planning Consultant	Allowance	\$0
TPWD Project Management and Review	Allowance	\$250,000
	Not	
TPWD Interpretive Master Plan	Included	\$0
TPWD Inspection	2 Years	\$115,520
Projects Cost Total		\$1,161,484
Project Contingency	15%	\$174,223
Project Grand Total		\$6,720,152
Upper Range Value @ 30%		\$8,736,199
Cost Estimate Range for the	40.700.450	40 700 400
Development	\$6,720,152	\$8,736,199

References and Literature Cited

- Diamond, D., D.H. Riskind, and S.L. Orzell. A framework for plant community classification and conservation in Texas. Texas Journal of Science, 1987.
- Corbin, James et al. Cultural Resource Survey of Fort Boggy State Park. Texas Parks and Wildlife Department, 1994.
- Leatherman, S.P, Barrier Island Handbook, University of Maryland. College Park, Maryland, USA, 1982.
- Legg, Michael et al. Master Plan for Fort Boggy State Park, Leon County, Texas. Stephen F. Austin State University, 1995.
- Keith, Eric. Plant Community, Fuel Model, and Rare Species Assessment for Fort Boggy State Park.
 Raven Environmental Services, Huntsville, TX. 2006, further investigation in 2010, 2011, 2012.
- Texas Parks and Wildlife Department, Fort Boggy State Park Resource Management Plan Draft. Parks Region 3, August 1996.
- Isleib, Jim & Mike Legg. Interpretive Plan Fort Boggy State Park. Stephine F. Austin State University, 1993.
- Texas Parks and Wildlife Department. Plant communities of Texas (series level). TPWD, Texas Natural Heritage Program. Austin, TX, 1993.
- Texas Parks and Wildlife Department, Lower Colorado River Authority, Canyon of the Eagles Park Master Plan. TPWD, January 1997.



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