Falls Lake State Recreation Area General Management Plan

North Carolina Department of Natural and Cultural Resources

Division of Parks and Recreation

Piedmont Region

November 2017

I. MISSION AND PURPOSE

MISSION STATEMENT:

The North Carolina Division of Parks and Recreation exists to inspire all its citizens and visitors through conservation, recreation and education.

Conservation: To conserve and protect representative examples of North Carolina's natural beauty, ecological features, recreational and cultural resources within the state parks system; **Recreation**: To provide and promote safe, healthy and enjoyable outdoor recreational opportunities throughout the state; and **Education:** To provide educational opportunities that promote stewardship of the state's natural and cultural heritage.

Our purpose: The State of North Carolina offers unique archaeologic, geologic, biologic scenic and recreational resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendants.

PARK PURPOSE:

Shoreline

Falls Lake is an important statewide recreational and scenic values for its biological significance. The significant values include archeological and geological resources. Eight major recreational areas comprise Falls Lake State Recreation Area (SRA). They permit public access to the lake and provide a variety of recreational activities compatible with natural resources, including: swimming, boating, fishing, picnicking, trail use, and natural and cultural resource interpretation. Overnight recreational opportunities are offered at tent-and-trailer campgrounds and group campgrounds.

Falls Lake State Recreation Area provides outstanding scenic vistas of open water and the predominantly natural lake shoreline. Unlike many earlier Corps of Engineer projects, the entire shoreline of Falls Lake is protected by public ownership. Scenic stream openings, bluffs, beaches and rock outcrops punctuate the undulating topography of the forested shoreline. This same diverse topography has created a lake with varied scenic qualities such as open water, narrow curving channels, coves and long finger-like inlets. Falls Lake SRA provides a large, open-space sanctuary within a surrounding urban area.

The length and breadth of this project has protected exceptional wildlife habitats in aquatic and terrestrial environments that provide excellent opportunities for environmental education and the interpretation of biological resources. The 240-mile shoreline protects pockets of specific habitats, provides major wildlife corridors connecting upstream and downstream river basins, and links to other public greenways. The 12,410-acre lake is a major oasis for wintering water birds and a stopover place for numerous migrating species. It is a nesting place for our national symbol, the American Bald Eagle, and a variety of songbirds, shore birds, and raptors. The 44-acre B.W. Wells Interpretive Area provides representative forest communities, geomorphic landform, and an opportunity to provide environmental education programs and nature study area.

Several archaeological, historic, or culturally significant sites are present. Native American Indian sites have been identified at the Rolling view and Sandling Beach areas. The existing historic home of Confederate Brigadier General James Mangum, built about 1838, is located at Beaverdam and is listed on the National Register of Historic Places. Numerous representative period structures as well as cemeteries are scattered across Falls Lake State Recreation Area.

Falls Lake lies within two geologic provinces: the Raleigh belt east of N.C. 50 and the Durham Triassic basin to the west. The Jonesboro Fault, a break in the earth's crust where the rocks to the west drop down, divides these two provinces. The more recent rocks of the Durham Triassic basin are sedimentary, formed 220 million years ago as rivers washed clay, sand, and rock fragments into narrow troughs or basins. Examples of sedimentary rocks found in the northwest section of the project area are sandstones, mudstones, and conglomerates. Rocks within the Raleigh belt are much older rocks, either igneous or metamorphic in origin. Common metamorphic rocks include both gneiss and schist. Igneous examples are diorite, gabbro, and ultramafic (iron-rich) rocks such as soapstone. In the past, soapstone was quarried and used as a building stone and cemetery headstone. Many rock outcrops of the Raleigh belt occur along the narrowly dissected eastern portion of the lake.

Falls Lake State Recreation Area exists as a unit of the N.C. State Parks System primarily because of its important recreational and scenic values and for its biological significance. Other significant values include archaeological and geological resources. The Division is charged with preserving these and other values and providing park experiences that promote pride in and understanding of natural heritage of North Carolina.

II. HISTORY

The Federal Flood Control Act of 1965 (PL 89-298) authorized the ACOE to construct Falls Lake for purposes including flood control, water supply, recreation, fish and wildlife enhancement, and stream flow regulation for water quality control. Lake construction took place from 1978-1981. Per the Federal Water Project Recreation Act of 1965 (PL 89-72), North Carolina agreed to pay 50 percent of the project costs allocated to recreation and recreation development and to assume all costs of operation, maintenance, and replacement of the recreation facilities.

In 1971, the N.C. General Assembly authorized state administration of Falls Lake for recreational purposes and operation, maintenance, and replacement of facilities provided for such purposes (SB 560-1971). One year later, the state entered a cost-sharing agreement with the U.S. Army Corps of Engineers (COE) for the construction of recreation facilities and the acquisition of recreation land. Following completion of a mutually acceptable master plan by a private contractor in 1981, the COE contracted various site design and construction projects to complete initial recreation development. On September 23, 1983, Governor James B. Hunt signed a 50-year lease with the COE to use approximately 38,680 acres of land and water at Falls Lake for public park, recreation, fish, wildlife, and other natural resource management purposes. Approximately 5,000 of these acres are allocated to the Division of Parks and Recreation and managed as Falls Lake State Recreation Area.

Prior to 1978, flooding of the Neuse River caused extensive damage to public and private properties including roadways, railroads, industrial sites and farmlands. The Falls Lake Project was developed by the US Army Corps of Engineers to control damaging floods and to supply a source of water for surrounding communities. Construction of the dam began in 1978 and was completed in 1981. In addition to recreation opportunities, Falls Lake now provides flood and water-quality control, water supply, and fish and wildlife conservation.

III. THEMES AND INVENTORY

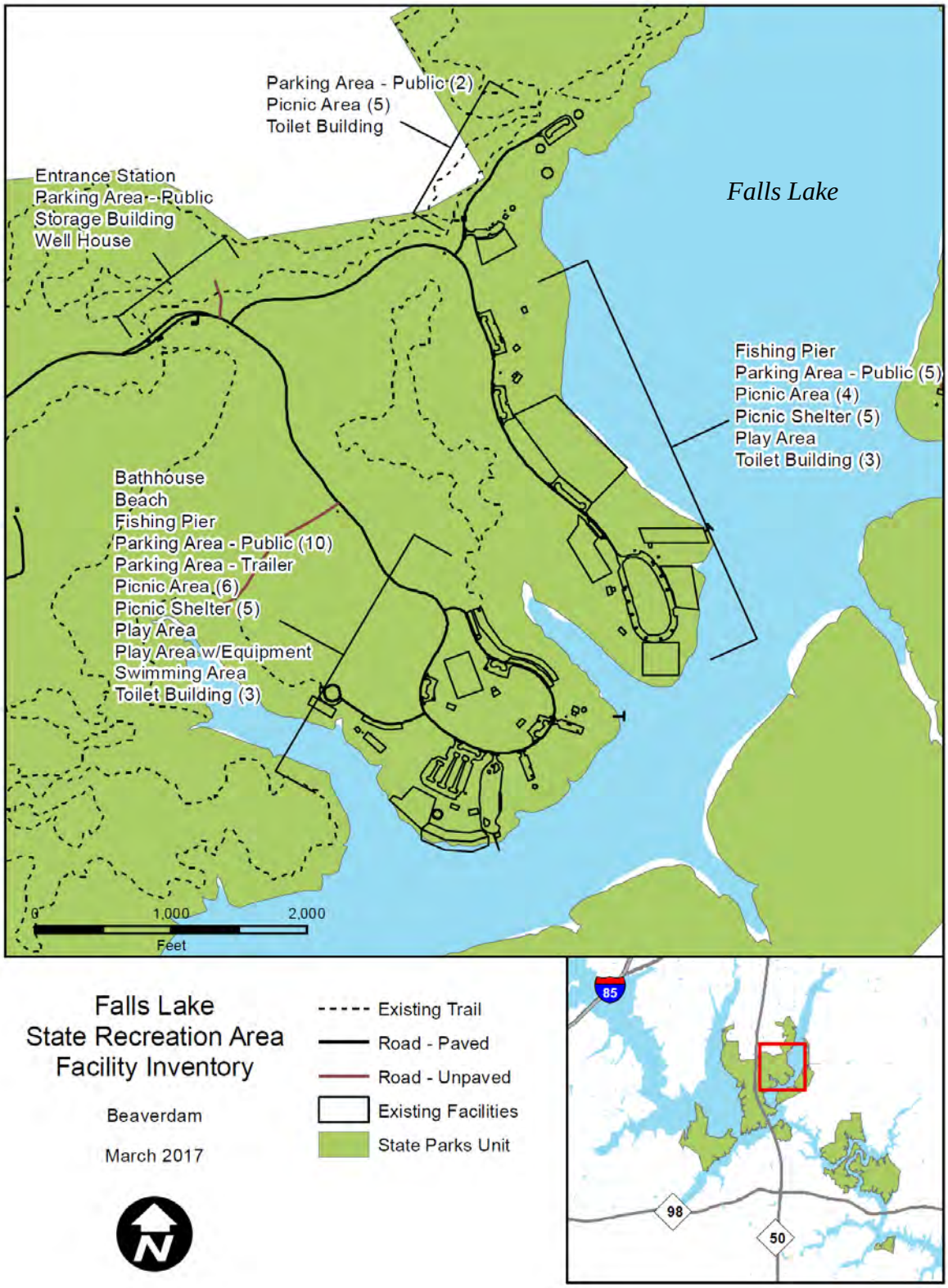
The significant archeological, geologic, scenic, recreational and biological resources of North Carolina should be represented in the State Park system. These resources, as cited in the State Parks Act, are divided into sub-categories called resource "themes". There have been 108 themes identified that should be protected to preserve representative examples of unique resources. For this General Management Plan only, themes that are of high significance to this State Recreational Area are shown.

Table 1 - Theme Table

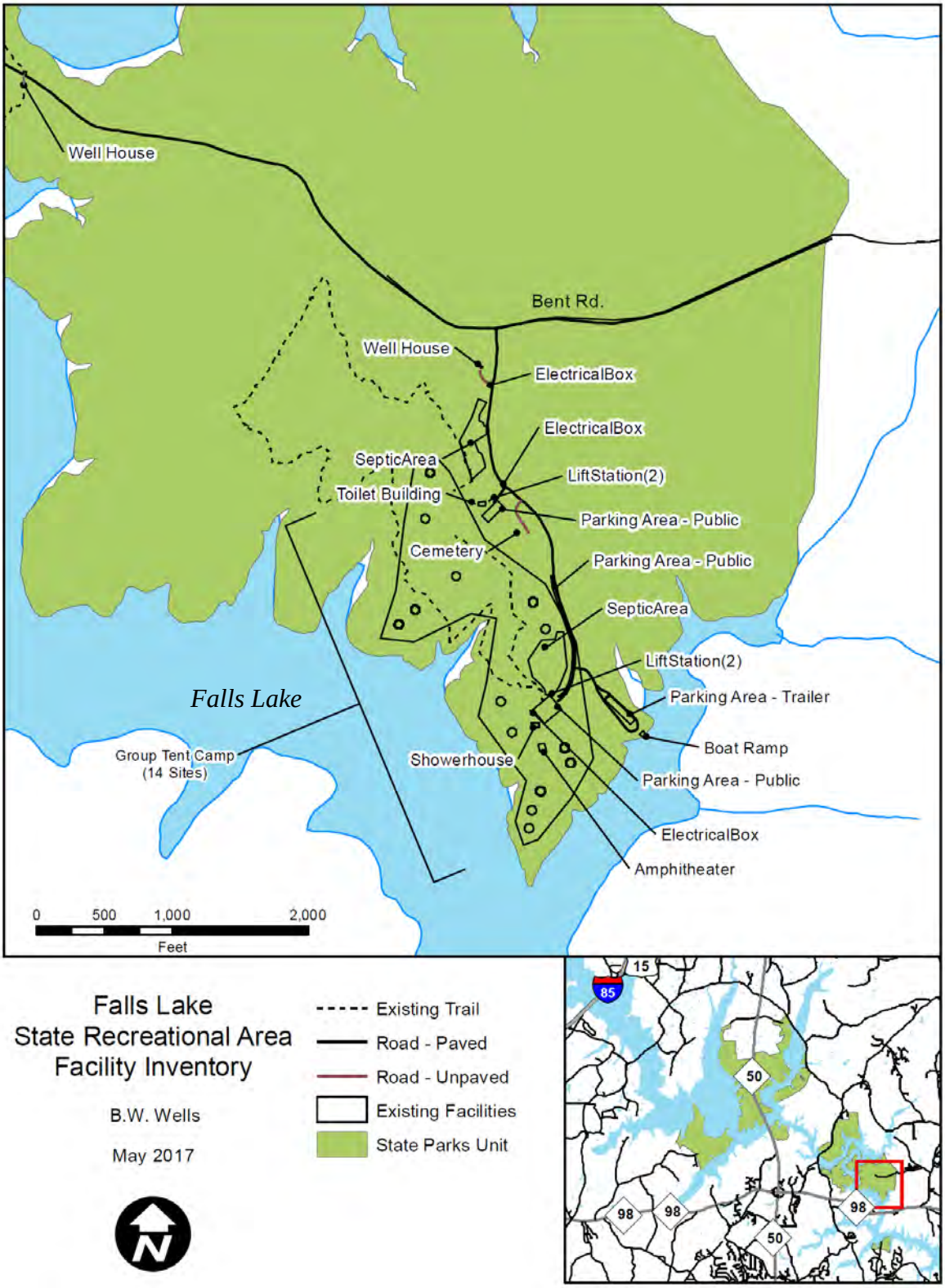
Theme Type	Theme	Falls Lake Significance	State Parks System Representation
Archeological/Historic	Cemetery	High	Adequate
Archeological/Historic	Rural-Domestic	High	Adequate
Archeological/Historic	Underwater	High	Moderate
Archeological/Prehistoric	Burial/Cemetery	High	Moderate
Archeological/Prehistoric	Campsite/Activity Area	High	Adequate
Archeological/Prehistoric	Underwater	High	Adequate
Archeological/Prehistoric	Village	High	Moderate
Archeological/Standing Structure	Rural-Domestic	High	Adequate
Biological	Low Elevation Cliffs and Rock Outcrops	High	Moderate
Geological	Metamorphic Features	High	Adequate
Geological	Sedimentary Features	High	Moderate
Scenic	Forests	High	Moderate
Scenic	Meadows/Grasslands	High	Little
Scenic	Reservoirs/Lakes	High	Adequate
Scenic	Scenic Vistas	High	Moderate

*See the System wide Plan for references to Theme and Inventory terms. Themes have both actual and "potential" future needs to be at a park.

FACILITY INVENTORY – BEAVERDAM

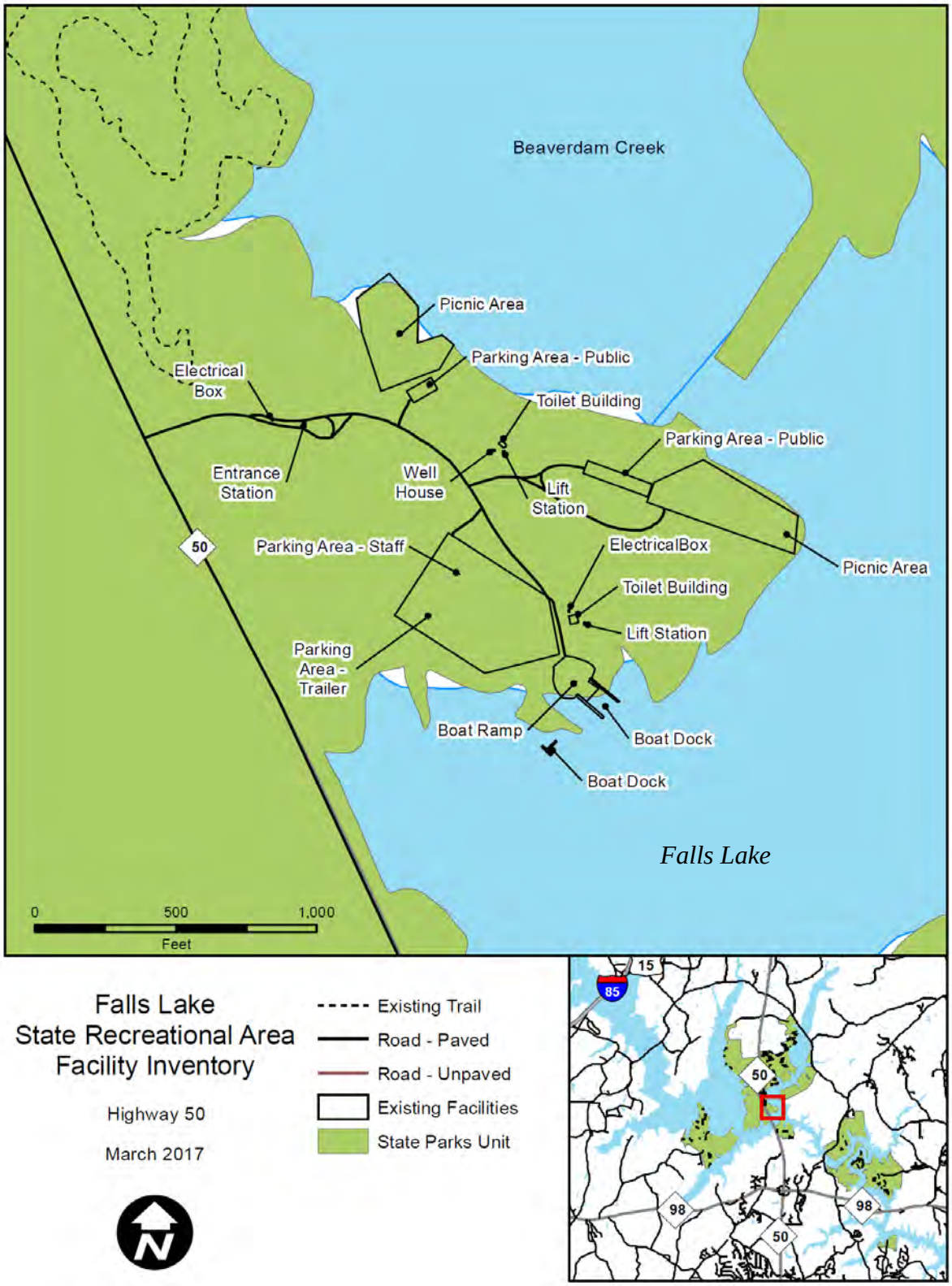


FACILITY INVENTORY- B.W. WELLS

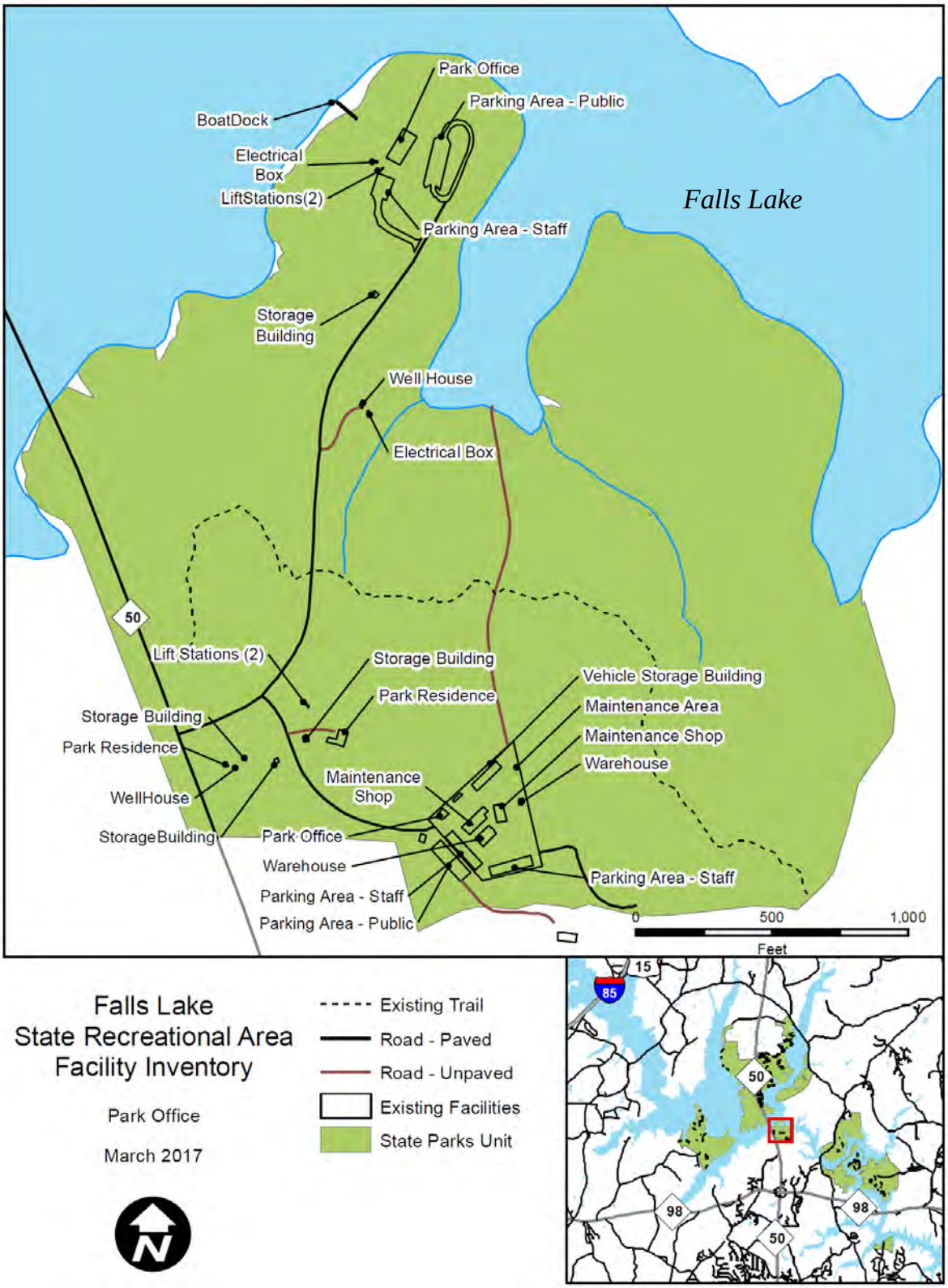


FACILITY INVENTORY -HOLLY POINT

FACILITY INVENTORY - HIGHWAY 50

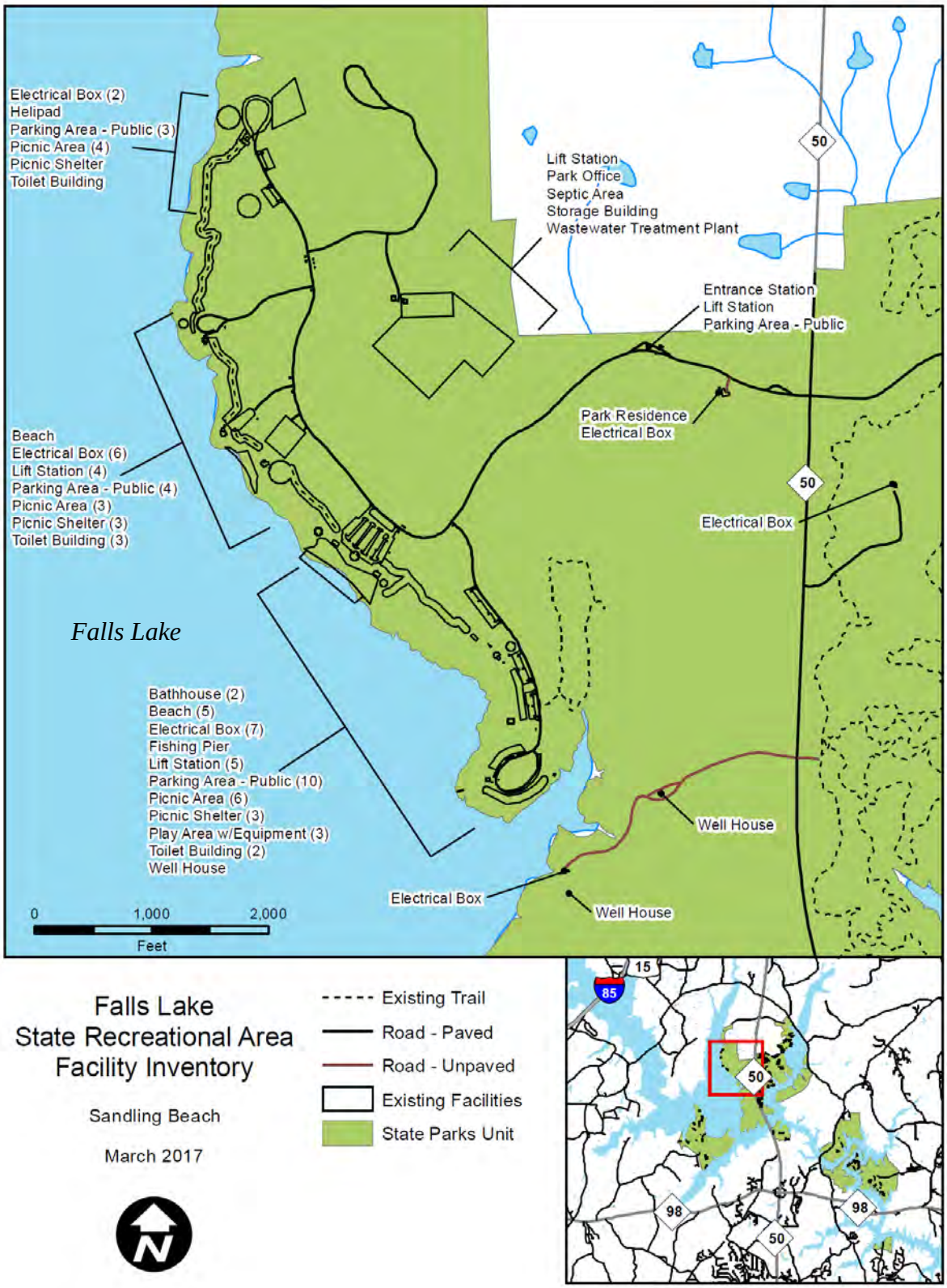


FACILITY INVENTORY - PARK OFFICE

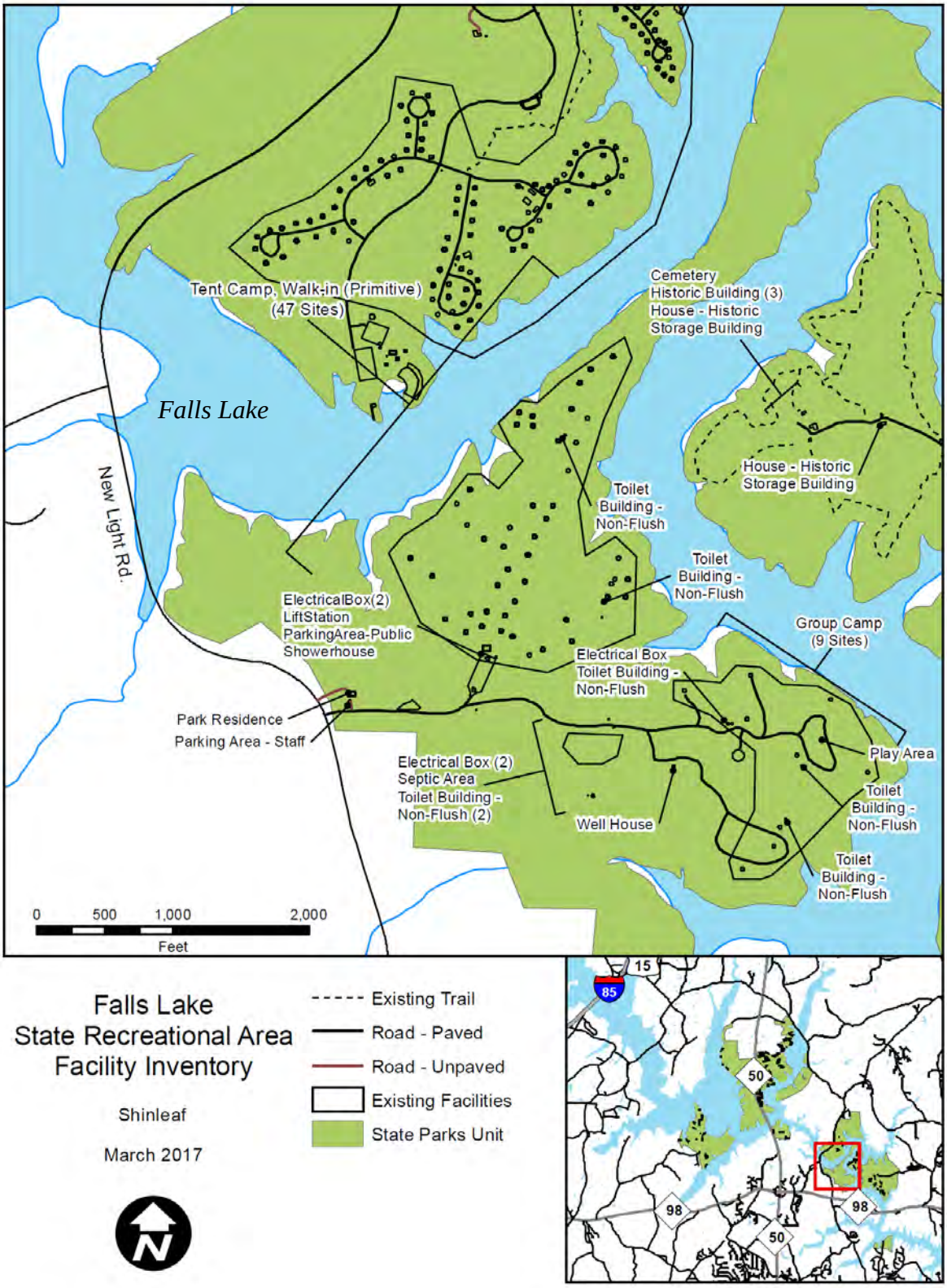


FACILITY INVENTORY - ROLLING VIEW

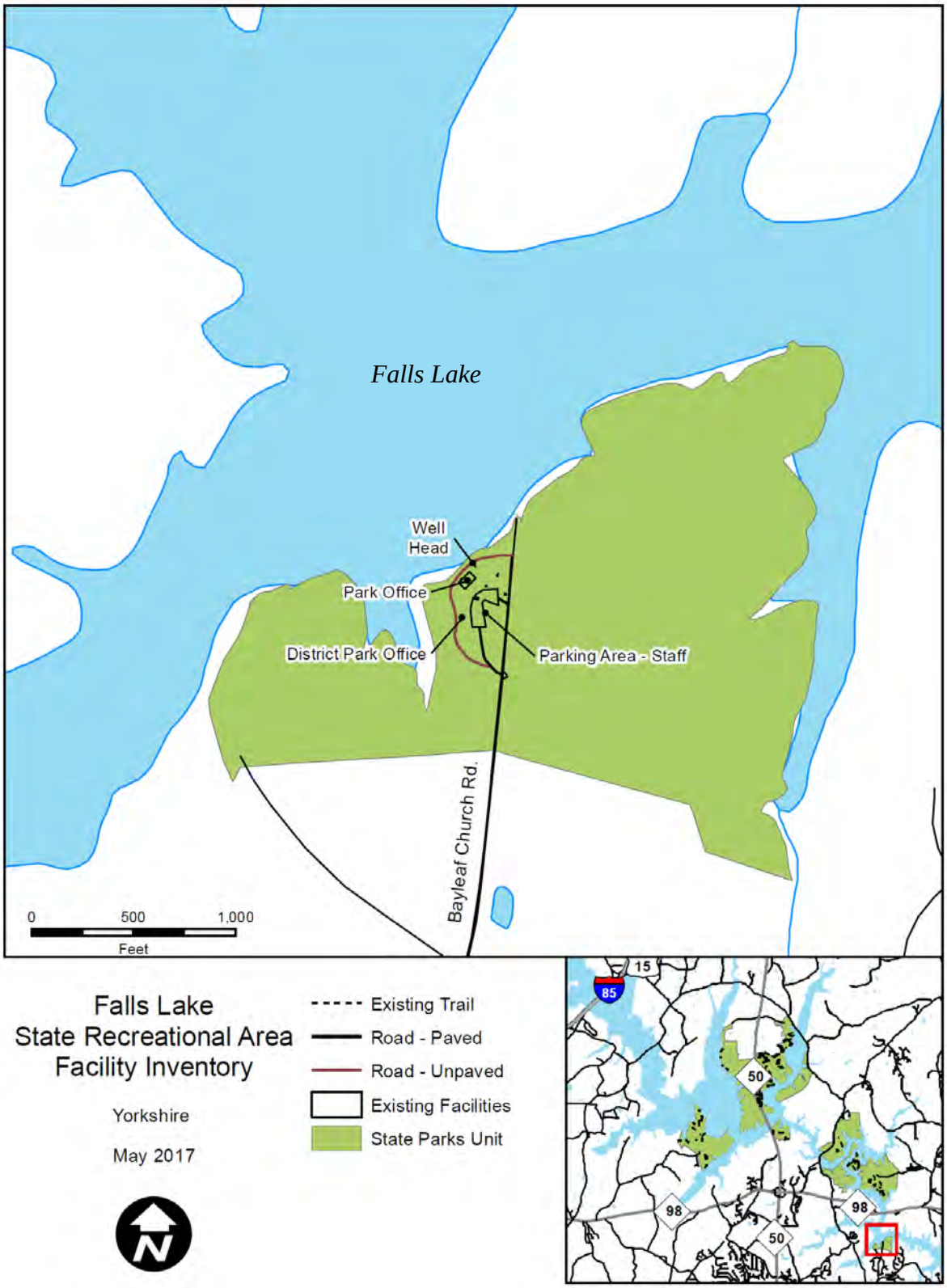
FACILITY INVENTORY - SANDLING BEACH



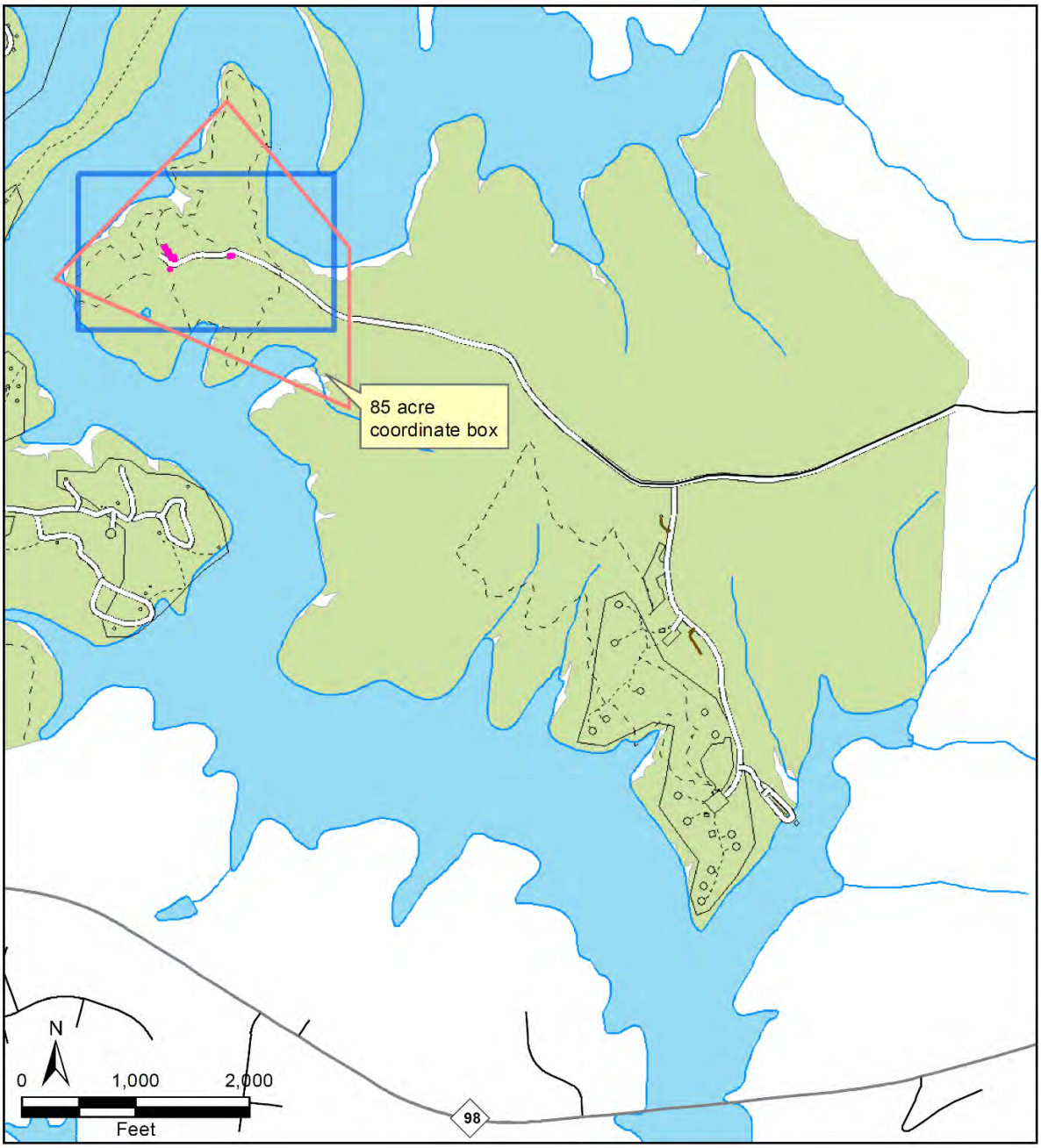
FACILITY INVENTORY - SHINLEAF



FACILITY INVENTORY – YORKSHIRE



FACILITY INVENTORY- B.W. WELLS - HISTORICAL BOUNDARY



Falls Lake SRA
B.W. Wells
National Register
of Historic Places

Legend

- National Register
- State Recreation Area
- Historic Structures

TRAIL INVENTORY

Trail Inventory	Hiking	Mountain Biking	Equestrian	Multi Use
Beaverdam Track Trail - Duck Cove Trail	0.60			
Falls Lake Trail (Mountain to Sea)	5.00			
Holly Point Trail	1.10			
Long Loop Trail (B.W. Wells)	1.25			
Moonshine Trail (B.W. Wells)	1.00			
Mountain Bike Trail - Inner Loop		1.15		
Mountain Bike Trail		14.30		
Rolling View Trail	3.00			
Rolling View Trail (TRACK)	0.75			
Sandling Beach Trail	1.00			
Short Loop Trail (BW Wells)	1.00			
Terrace Trail (B.W. Wells)	1.00			
Wildflower Trail (B.W. Wells)	1.00			
Zeagles Rock Trail	1.00			
Falls Lake SP Totals (miles)	**17.70**	**15.45**	**0**	**0**

Note: Mountains to Sea is a State designated trail corridor.

HIKING:

Beaverdam Track Trail

Beaverdam Track Trail - Duck Cove Trail: This is a 0.60-mile educational hiking trail one-way (1.20 miles round-trip). This educational trail goes thru a mixed pine forest along the edge of Beaverdam Creek that leads to a wildlife observation platform overlooking Duck Cove.

Falls Lake Trail (Mountains to Sea): Falls Lake Trail travels 5 miles along the entire south shore of the lake. A portion of the Mountains-to-Sea Trail, the trail connects two recreational areas and provide camping for backpackers. Portions of the trail travel through state managed park land. The remainder of the trail travels through N.C. Wildlife Resource Commission game lands.

Holly Point Trail: This 1.10- mile trail travels from the campsites in loop 2 through pine and upland hardwood forests, goes past campground loops 3, 4, 5 and the amphitheater to the boat ramp parking lot. The trail runs between the Holly Point boat ramp and campground Loop 2.

Long Loop Trail (B.W.Wells): This 1.25 mile trail travels from the B.W. Wells campground and intersects with short loop trail.

Moonshine Trail (B.W. Wells): This 1 mile loop trail starts and the historical section of B.W. Wells and continues around the southern region of the region.

Rolling View Trail: This 3-mile trail has an access point located at Rolling View area. The short trail connects campground loops A, B, C, the swimming beach, and the boat launch.

Rolling View Trail (TRACK): The Rolling View TRACK Trail is a 0.75-mile loop trail that goes through a mixed pine forest along the edge of Falls Lake. This trail is an accessible educational section of the park.

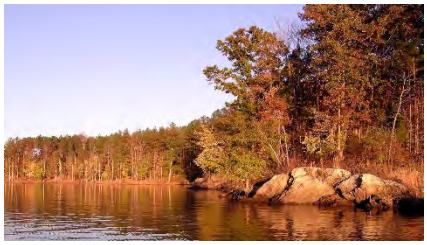
Sandling Beach Trail: The Sandling Beach Trail is a 1-mile loop trail that has a trailhead near the swim beach. Sandling Beach allows for a closer look at the aquatic environment.

Short Loop Trail (B.W. Wells): The Short Loop trail is a 1 mile loop trail which connects group campsites from one end of the campground to the other.

Terrace Trail (B.W. Wells): The loop trail is a 1 mile trail located on the north side of the historical section of B.W. Wells area. The trail continues north along the shoreline.

Wildflower Trail (B.W. Wells): This loop trail is a 1 mile trail which follows the shoreline.

Zeagles Rock Trail: This 1-mile-long trail is located the B.W. Wells area. The trail at B. W. Wells passes the home of the local naturalist and an interpretive area.



Zeagles Rock

MOUNTAIN BIKING:

A total of 15.45 miles of trails through a variety of terrain provide single-track mountain biking.

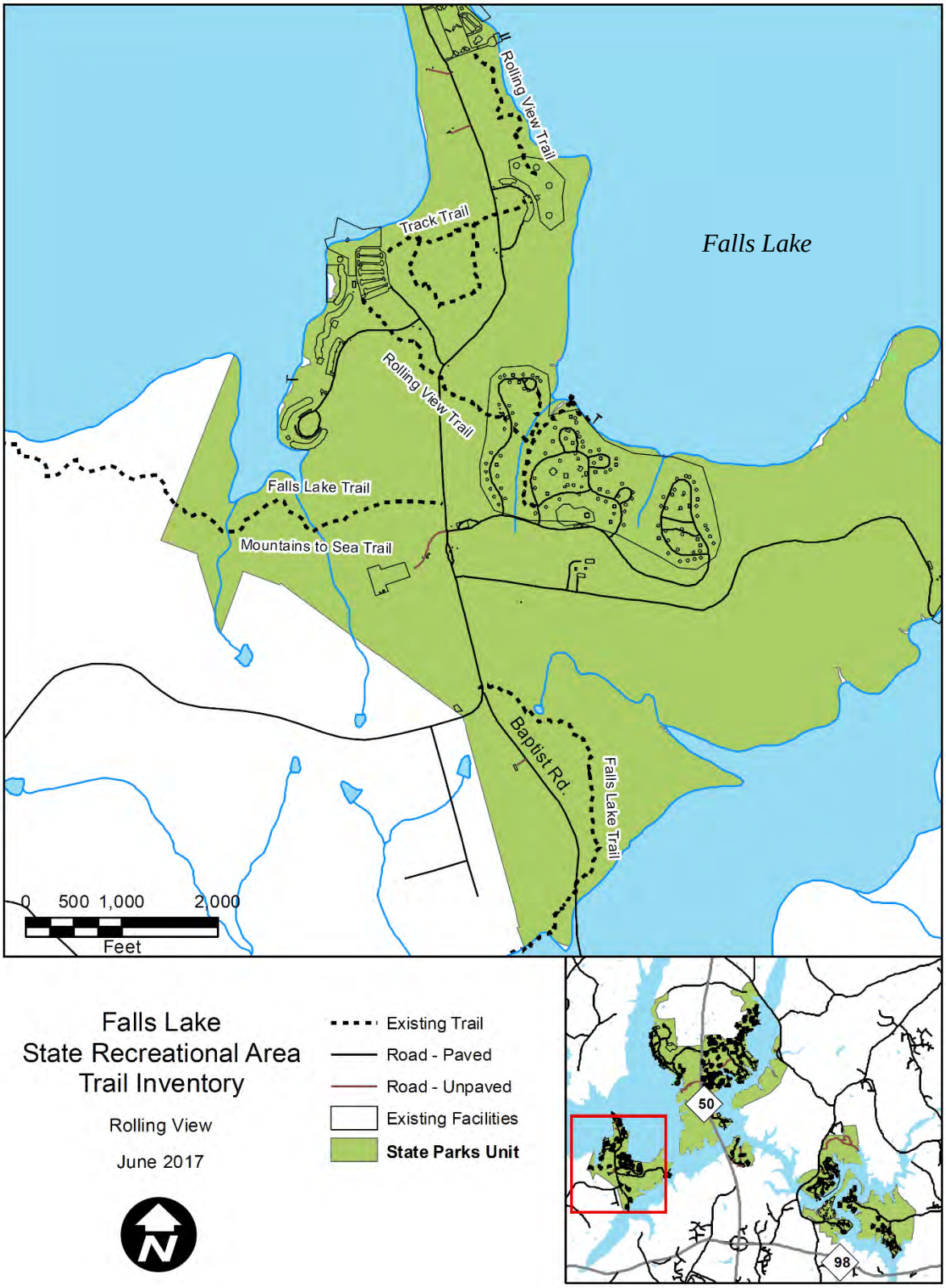
Mountain Bike Trail – Inner Loop

This 1.15-mile trail system is located at Beaverdam access area.

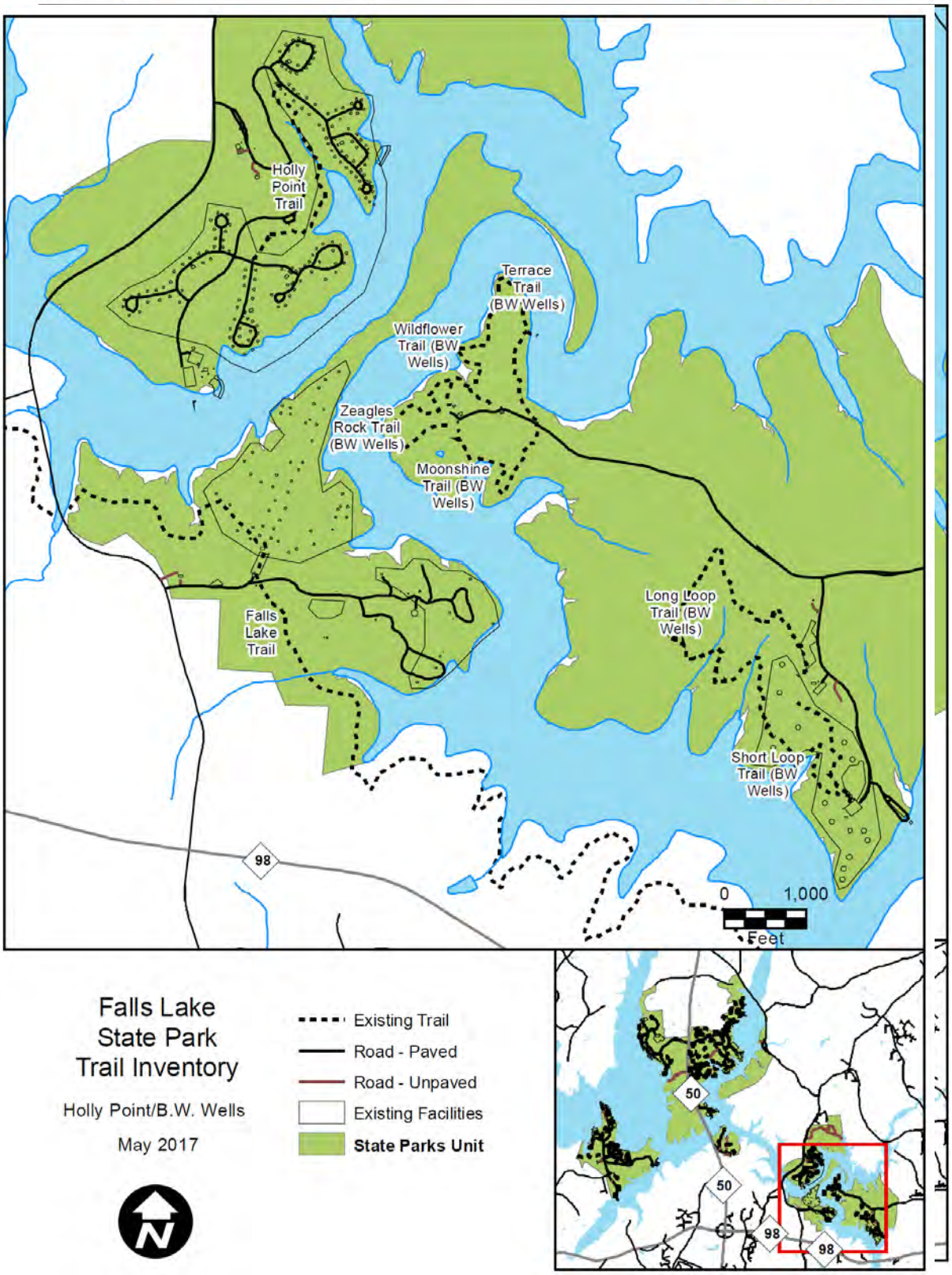
Mountain Bike Trails: This 14.30 -mile mountain bike trail system is in the Beaver dam area. The trails are rated beginner to intermediate and include multiple loops: a 2.60-mile outer loop, a 1.60-mile inner loop, a 2.40-mile west loop and more advanced 8.50-mile loop called South Loop.

Mountain Bike Trail - Inner Loop

TRAIL INVENTORY – ROLLING VIEW

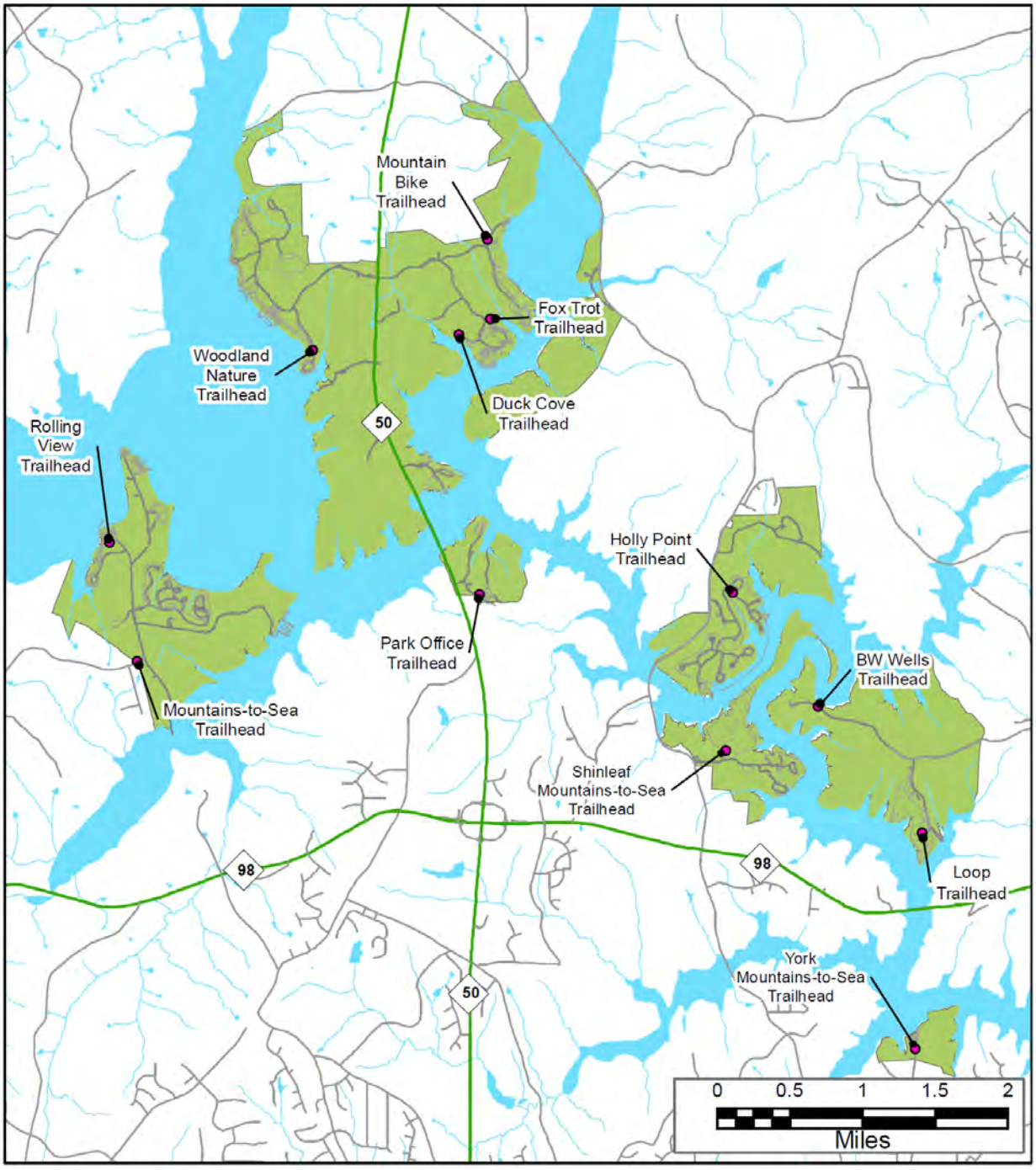


TRAIL INVENTORY -SANDLING BEACH/ BEAVERDAM



TRAILS INVENTORY – HOLLY POINT/ B.W. WELLS

TRAILHEAD SYSTEM



Trail System
Falls Lake SRA

June 2017

State Parks Unit
Facilities
Trailheads

N

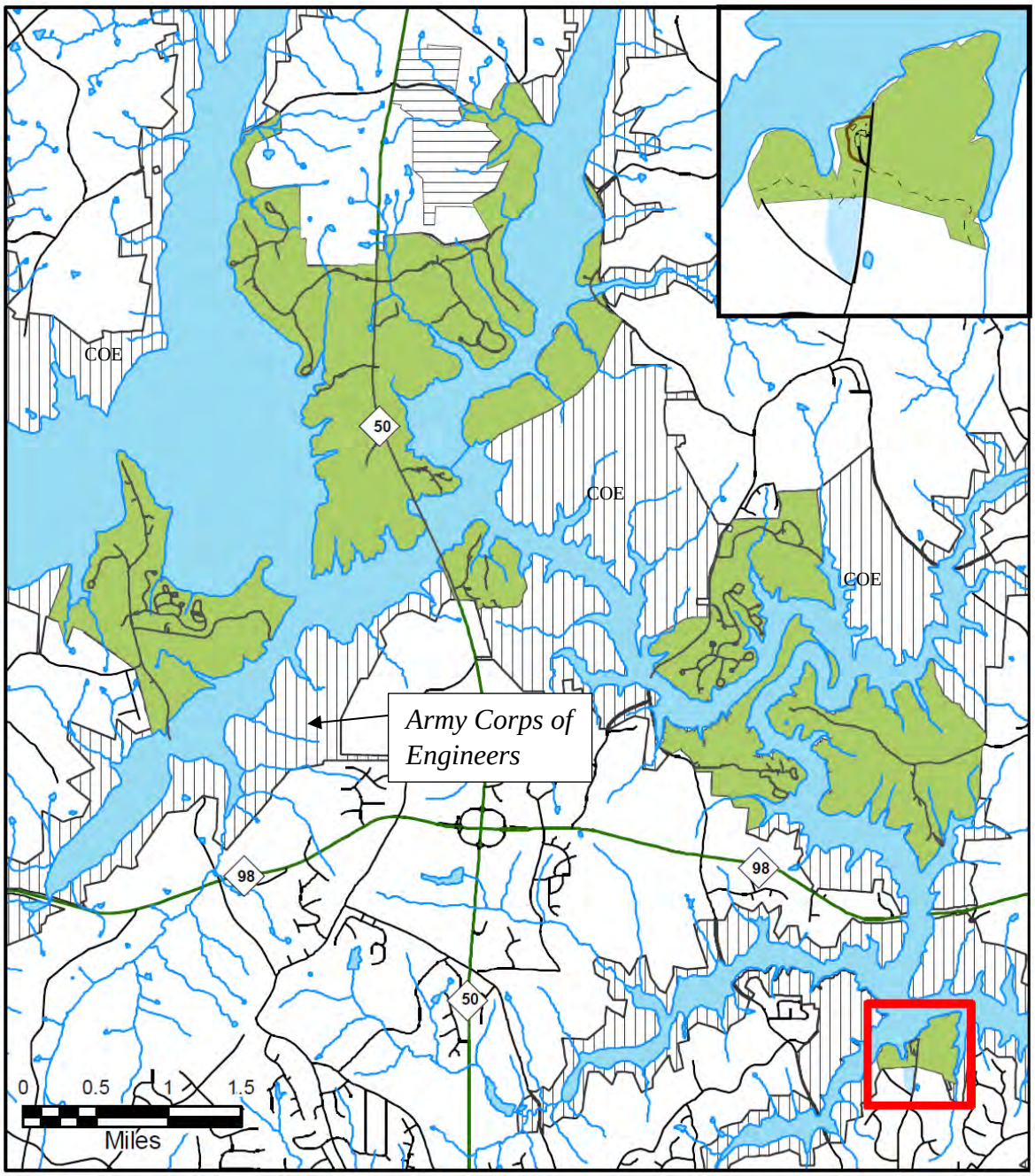
IV. PLANNING

LAND ACQUISITION FOR STATE PARKS

To achieve the highest level of connectivity between park properties already owned by the State of North Carolina, further acquisition of land is expected to take place. Additional land will ensure the maximum protection of natural resources, scenic preservation, outdoor recreation and public access. Each park has several tracts of land that have been distinguished as a future need or a critical need for the park. The following map shows Land Acquisition needs for Falls Lake State Recreation Area.

Bayleaf Firemans Club

LAND PROTECTION PLAN



Falls Lake SRA

N

April 2017

State Parks Unit

Land Protection Plan

Primary resource protection

Inholding

Scenic protection

Water quality protection

Facilities development

Buffer

Other Conservation Land

Federal

State

Other

PROJECT LIST

Project #	Project Title	Cost
1	Rolling View & Holly Point Campsite Upgrades	$1,391,400
2	Parkwide Infrastructure projects	$862,510
3	Parkwide Restroom and Showerhouse Renovations	$2,359,00
4	Lift station improvements	$1,301,100
5	Traffic Improvements -Beaverdam and Sandling	$600,000
6	Sand Seawall at Rolling View	$94,000
7	Administration Building Improvements	$1,391,400
8	Mini-Warehouse with Shed at Shinleaf, Rolling View, Beaverdam, Holly Point, Sandling Beach, B.W. Wells	$464,100
9	Shoreline Stabilization (partner with ACOE)	$652,425
10	Camper Cabins at Holly Point	$220,000
11	Maintenance Area Improvements	$250,000
12	B.W. Wells Historical Restoration Improvements	$1,876,700
13	Community Building at Beaverdam	$906,900
14	Holly Point Picnic Shelter	$327,500
TOTAL		**$10,338,035**

*** Planning estimated project cost does not include contingencies, design fee, nor escalation.*

1. Rolling View & Holly Point Campsite Upgrades

This project is to upgrade 136 campsites at Rolling View loop A and B and at Holly Point, Loop 1 and Loop 3, 100-amp service. These electrical upgrades will allow for use by newer Recreational Vehicles (RVs) which require the higher amperage service, therefor making the sites more enticing for rental.

Standard campsite

2. Parkwide Infrastructure projects

The scope of work for this project includes: boat Launch area, well at B.W. Wells, Boat ramp at maintenance area, Holly Point Water delivery system, Rolling View water delivery system.

ROUTE 50 BOAT LAUNCH AREA-

Two (2) toilet buildings need to be brought up to standard building code. Major maintenance funding.

B.W. WELLS A second well is needed in the B.W. Wells RA campground. If there is a problem with the single well the park will close. The water storage building requires new plumbing and the distribution system requires new valves.

MAINTENANCE COMPOUND

The Maintenance Compound needs the existing boat ramp dock replaced with a standard WRC (wildlife) design boat ramp. Areas around the boat ramp and dock need additional gravel and some block walls may be required for holding the additional gravel in place.

HOLLY POINT The Holly Point drinking water delivery system needs updating and repair. Numerous valves are no longer operable. Because of this entire loops must be shut down for the simplest repairs causing a substantial inconvenience to park visitors. Isolation and main cut off valves should to be repaired/added to the system. Air release valves should to be replaced. To undertake these improvements, the simplest solution is the total replacement with current standard piping, valves, and two-inch blow offs in each loop, the boat ramp, and Shinleaf.

The drinking water system in Holly Point is in the only water supply that serves Shinleaf. Because of this, this project recommends the water delivery system line (which runs through the lake) be inspected and improvements made is deemed necessary.

ROLLING VIEW

The water delivery system for Rolling View needs to be reviewed, as the current system does not allow for sufficient isolation to perform repairs. This review should look at options for upgrading the system.

Rolling View Water Control Building:
Bldg# 040721, wood frame, 267 sq.ft, inside.
Has Corrosion. Built in 1986. Fair condition.

3. Parkwide restroom and shower house renovations

HOLLY POINT

Holly Point has three (3) shower houses and one (1) bath house that need interior and exterior rehabilitation.

ROLLING VIEW

Rolling View has three (3) restroom buildings and four (4) shower houses requiring interior rehabilitation.

Existing Toilet Building.

Holly Point Showerhouse Side View – *Constructed in 1994.* 1,152 sq. ft, wood frame, slab on grade

4. Lift Station Improvements

Lift Station - Poor Condition Typical

Enlarged area of Lift Station

SHINLEAF

Shinleaf needs a complete rehabilitation of one (1) wastewater lift station. The station needs a new rail package, pump, check valves, and control panel. Wet wells require inspection to ensure there is no damage to the concrete.

B.W. WELLS -2 waste water lift stations

B. W. Wells needs a complete rehabilitation of (2) waste water lift stations. All stations need new rail packages, pumps, check valves, and control panels. Some require repair to the concrete in the wet wells.

HOLLY POINT Several waste water lift stations (6) at Holly Point need to be completely rehabilitated. All stations need new rail packages, pumps, check valves, and control panels. Some require repair to the concrete in the wet wells.

BEAVERDAM

A complete rehabilitation of (5) waste water lift stations is required at Beaverdam. All (5) stations need new rail packages, pumps, check valves, and control panels. Some require repair to the concrete in the wet wells.

5. Traffic Improvements – Beaverdam and Sandling Beach

Due to high visitor demand on holiday weekends throughout the year, traffic improvements on Route 50 and on the internal access roads are needed.

The scope of work includes: improvements to widen the gate entrances at Beaverdam and Sandling Beach day use areas to allow for additional lanes to permit multiple staff members to collect money for parking passes, as well as, create a “bypass” lane for season pass holders. This will allow visitors to get off Route 50 as quickly as possible, thus reducing congestion on the State Road.

It should be noted that Route 50 is controlled by NCDOT and improvements to it are beyond our control. However, meetings have been held with NCDOT to look at solutions for congestion on Route 50. Several options were reviewed, but nothing was ever settled upon. Discussions with NCDOT should be continued to try and create synergy between park improvements and Route 50 improvements to reduce congestion and increase safety for the traveling public and park visitors.

6. Seawall at Rolling View

This project scope of work includes: construction of a seawall and the removal of sand from boat ramps at the Rolling View Recreational Area. The exact location of the seawall will be determined by a hydrology study.

Existing Boat Dock

7. Administration Building Improvements at Park Office

This project scope of work includes the renovation of the park office, which was built in 1981. An outside set of stairs will be added to the south side of the park office to improve staff access to the attic which will remain as storage. This proposed stair access will improve the undesirable steep interior pull-down stair access.

An additional a 5,000-sq. ft. annex with an auditorium for rental, storage, education and staff training will be constructed in the area currently serving as staff parking with a connecting covered breezeway to the original park office. Restrooms that are accessible from the exterior will be renovated. A staff parking lot will be relocated along the south side of the existing driveway. Visitor parking will be re-striped at a 90-degree angle to provide additional parking. Minor grading, storm drainage and paving adjustments will also be made to the existing visitor parking area.

8. Mini-Warehouse with Shed at Shinleaf, Rolling View, Beaverdam, Holly Point, Sandling Beach, and B.W. Wells

The above Recreational Areas will be developed with modular mini warehouses for park maintenance vehicles and supplies. The mini warehouses will include: 2,000 sq. ft. gravel service yard, 300 linear feet of 6' high chain link fence, a 16' wide maintenance access road, 500 sq. ft. warehouse and an attached single-bay shed, electric and water connections.

Proposed example of Mini warehouse

9. Shoreline Stabilization (partner with Army Corps of Engineers – (COE)

This project will stabilize shoreline in partnership with the Army Corps of Engineers (COE). The specific priority sites change based on currents in the lake and should be determined at the time of the project so that the most critical improvements can be constructed.

Rolling View Swim Beach

The problems are created by storm water run of from areas above the beach flowing over the area. Beach sand is being pulled out when water recedes from high water storm events. For this project, engineering site work with erosion control and storm water management best practices will need to be completed to determine the specific locations for stabilization. Several locations where known erosion issues exist are: Beaverdam, Holly Point, Rolling View, Sandling Beach.

10. Camper Cabins at Holly Point

Camper cabins have become popular with park visitors. This scope of work includes the installation of 4 cabins (approximately 800 sf each), at the Holly Point Campground area, in Loop 5. The cabins are sited to take advantage of the lake front views and access. The structure will be installed on top of the existing campground pad area and utilize the existing electrical connection.

Standard Camper Cabin installed at Carolina Beach State Park

11. Maintenance Area Improvements

The scope of work includes the demolition of existing maintenance office and construction of an office building for 10 maintenance staff.

Elevation

12. B.W. Wells Historical Restoration & Other Improvements

This project is subject to change based on public input and includes improvements to the B.W. Wells home site. A small parking lot, restroom building and a well will be constructed near the existing caretaker's house for park visitors. A picnic shelter will be built to provide a covered area for interpretation and educational programs for field trips. There are two options for the picnic shelter; one is located around the caretaker's residence, the other is around the former B.W. Wells residence near the cemetery.

B.W. Wells Studio

Stone Wall

A proposed 2,000 SF standard ranger residence is needed for operations and security purposes. The location of the ranger residence will be determined when the project is funded.

The smoke house and B.W. Wells studio will be restored to be used for educational use. The caretaker's house, outbuilding, and the main house are proposed to be demolished.

13. Community Building at Beaverdam

This long -term project is for the development of a community building at Beaverdam and will include water, electric and sewer. The proposed community building will utilize the existing parking and is sited to maximize scenic views of the lake. The community building will provide a meeting space for up to 120 people, kitchen facilities and restrooms. This facility will be available for rental by the public for events such as: wedding receptions, reunions and club meetings which will provide revenue generation for the park system.

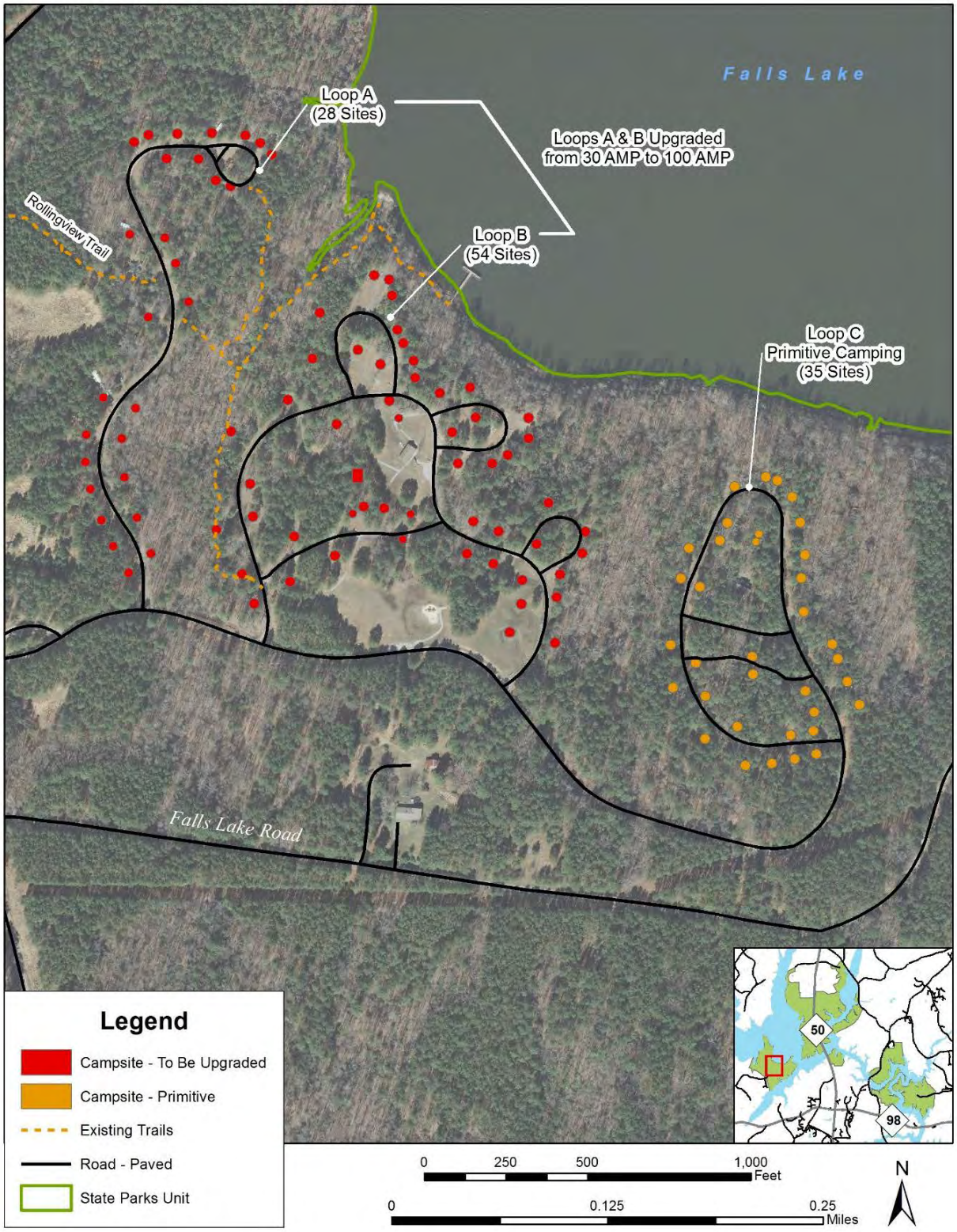
Example of Rolling View community building

14. Holly Point Picnic Shelter

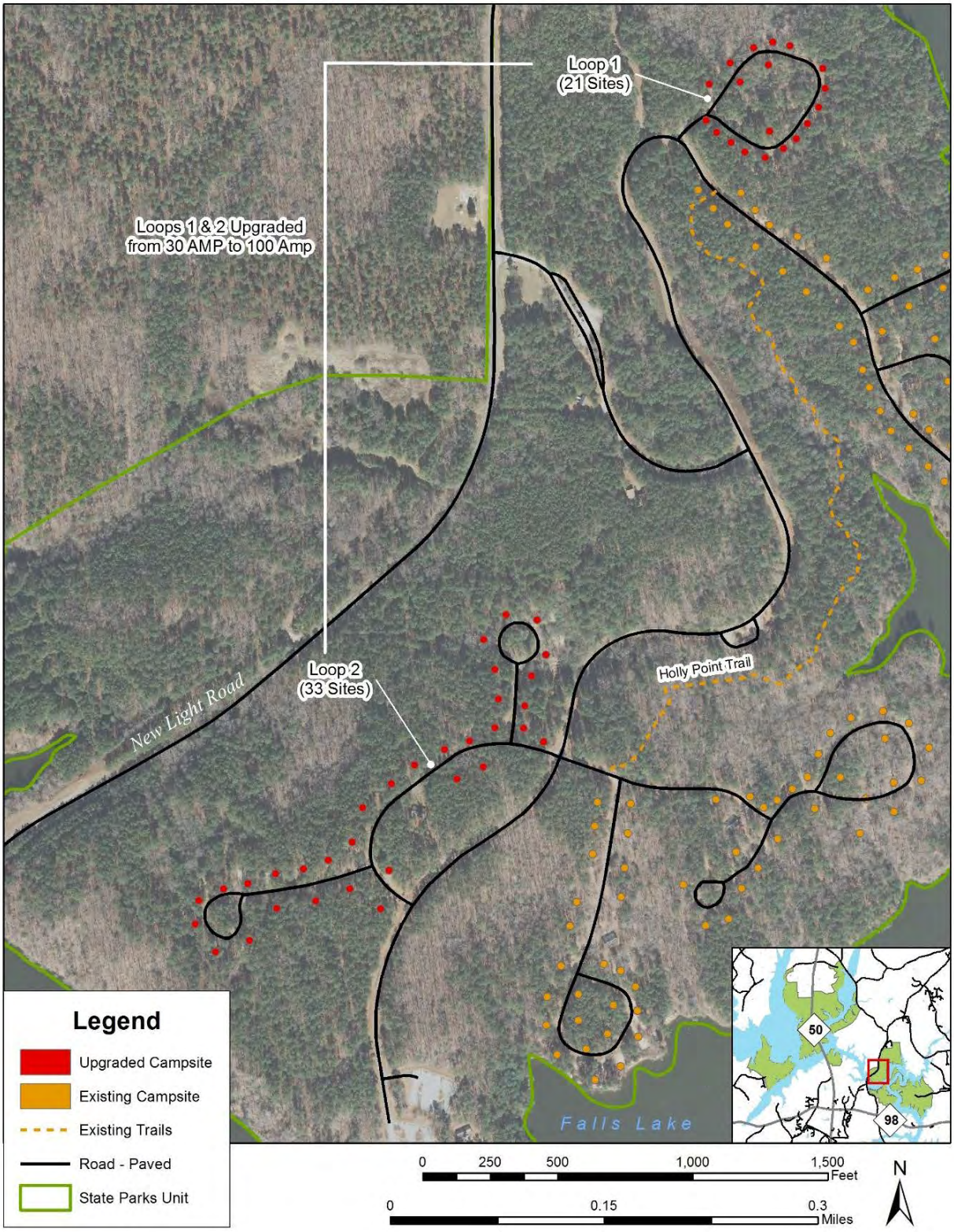
This long-term project will prove a proposed picnic shelter, sidewalk connections, with picnic tables and a fireplace to the swim beach area at Holly Point. Approximately 28 parking spaces will be located at the upper section of the swim beach area.

Proposed Shelter

PROJECT #1: ROLLING VIEW CAMPSITE UPGRADES



PROJECT #1: HOLLY POINT CAMPSITE UPGRADES



PROJECT # 3: PARKWIDE. RESTROOM AND SHOWERHOUSE RENOVATIONS

Sandling Beach Shelter No. 4 – Flood Stage: Bldg# 040608, 2,493 sq. ft, wood frame open shelter with toilet inside, in flood stage. Poor condition.

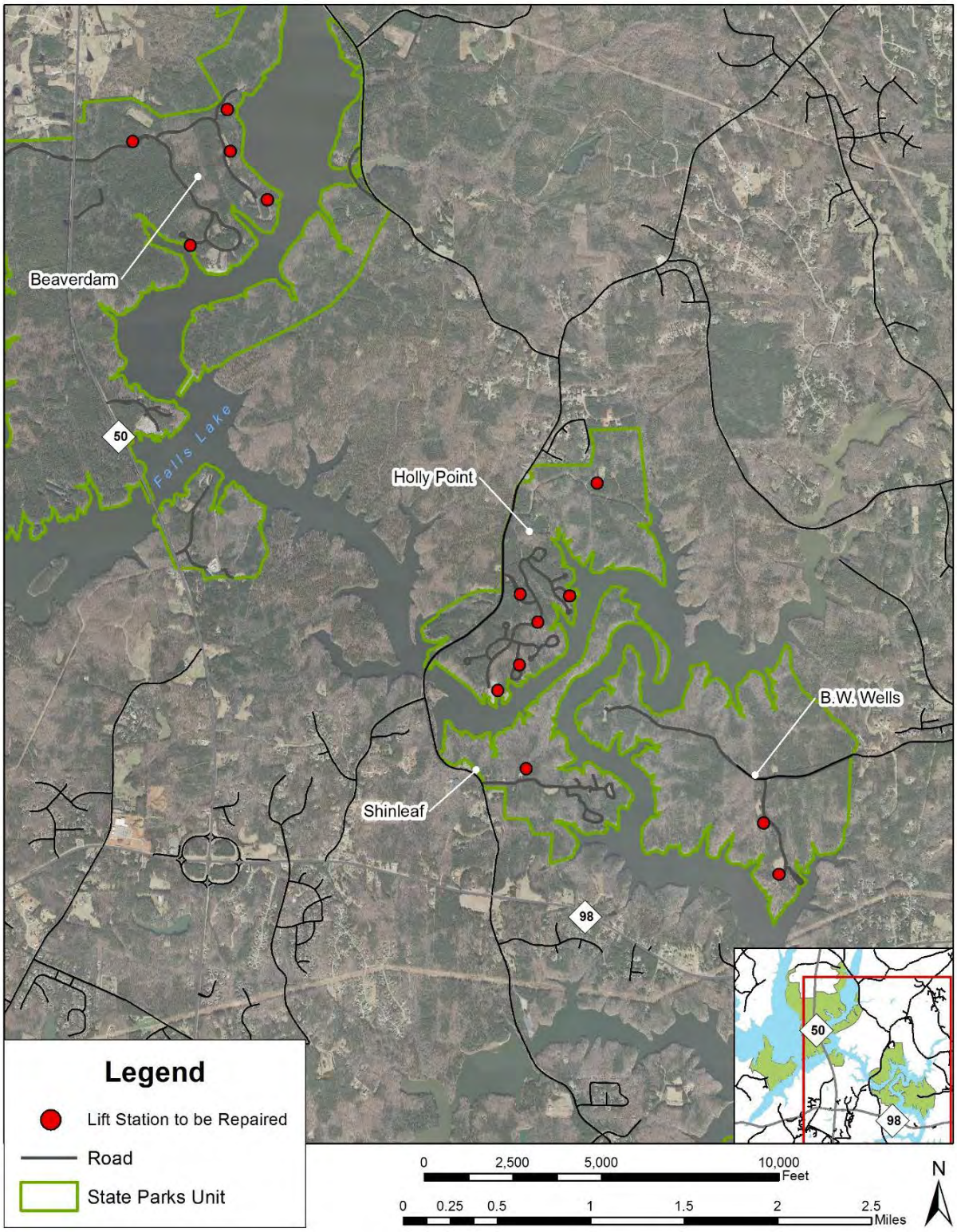
Sandling Beach Shelter No. 4 – 8 feet above Flood Stage

Sandling Beach Shower house No. 1 – Left Side: Bldg. # 040606, 1,131 sq. ft., wood frame, slab on grade**.** Good condition. Building will flood.

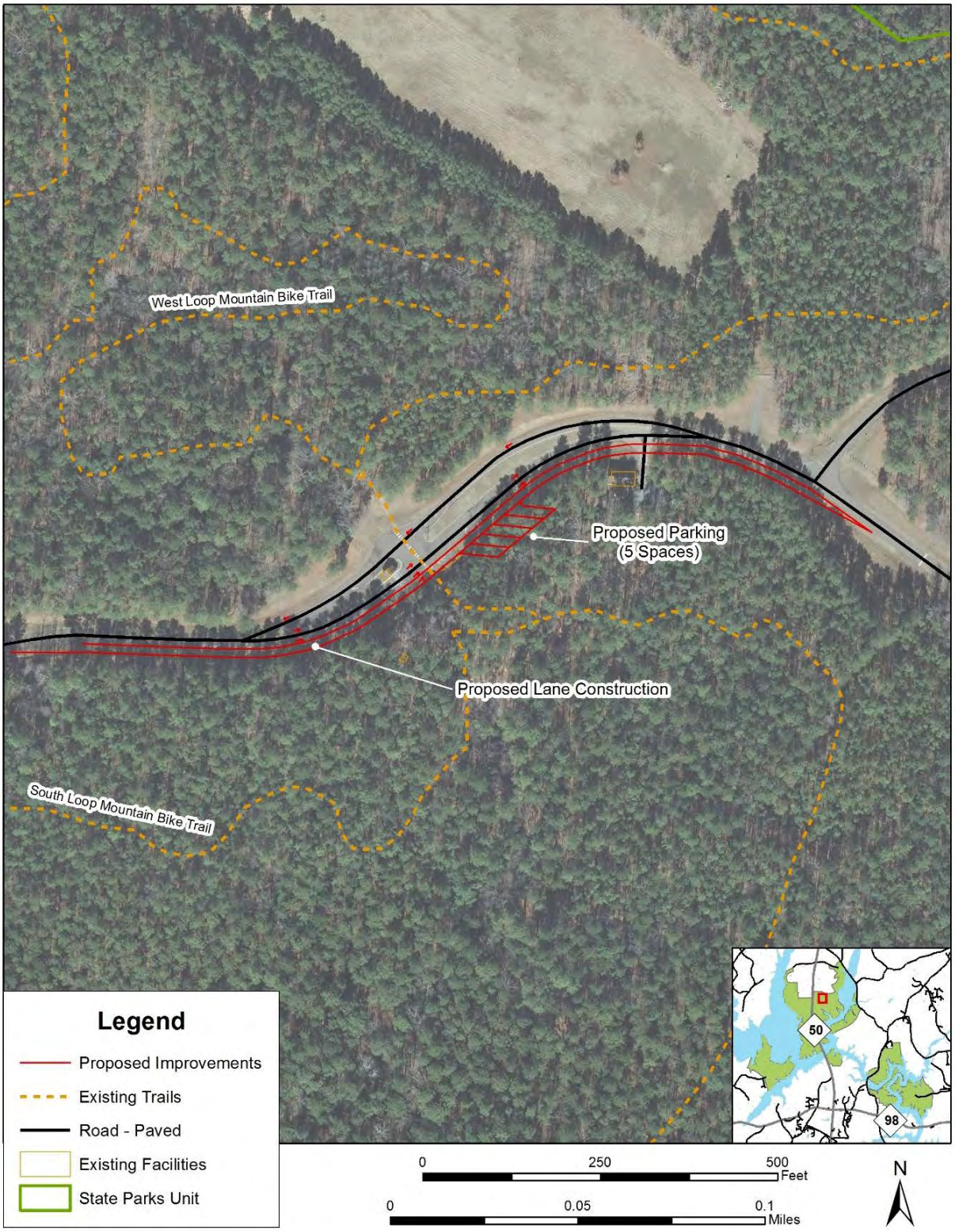
Rolling View Swim Beach Bath house Bldg# 040719**,** 1,131 sq. ft. wood frame, single story, slab on grade. Good condition.

Holly Point Shower house Side View: Constructed in 1994. 1,152 sq. ft. , wood frame, slab on grade

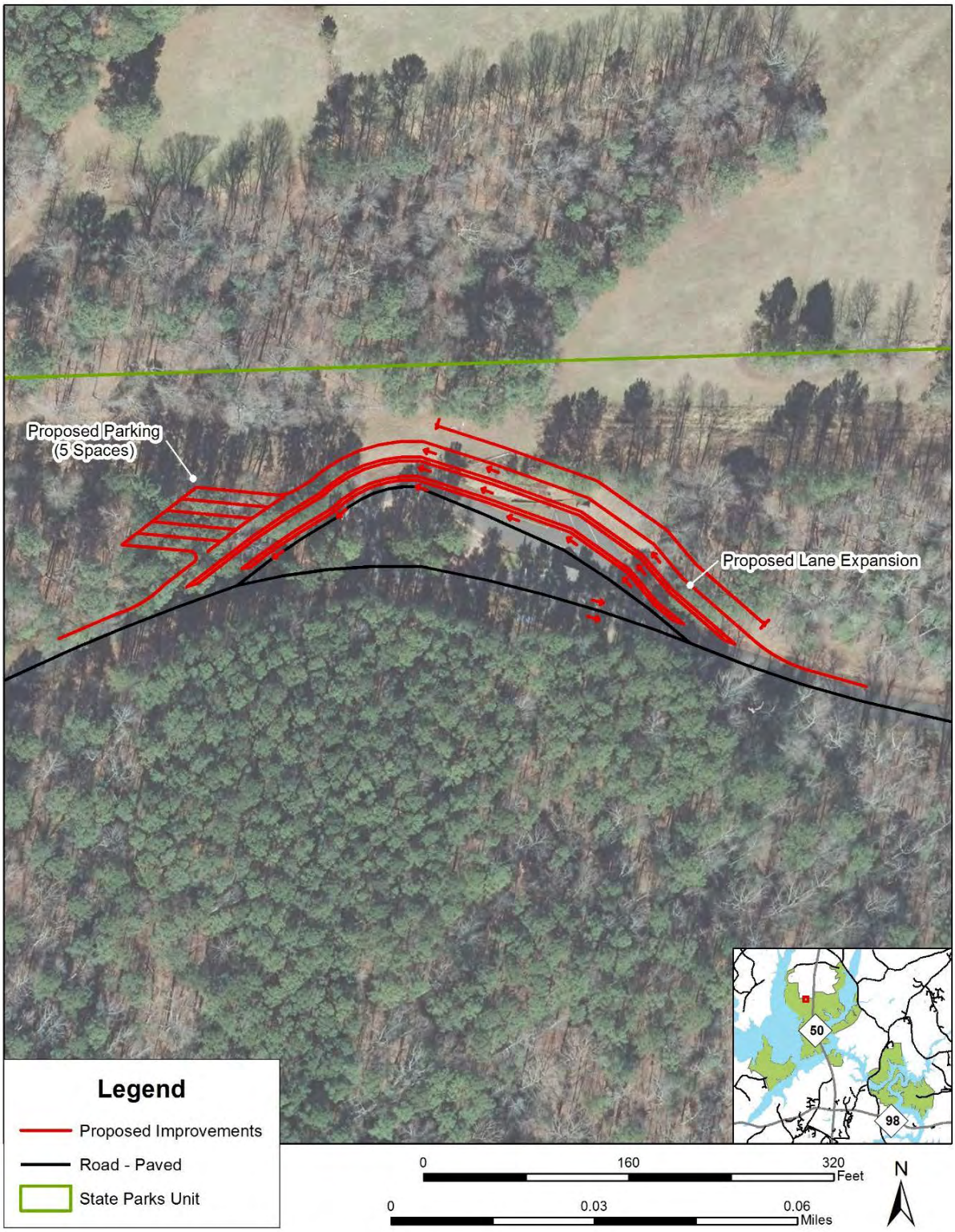
PROJECT # 4: LIFT STATIONS IMPROVEMENTS- BEAVERDAM



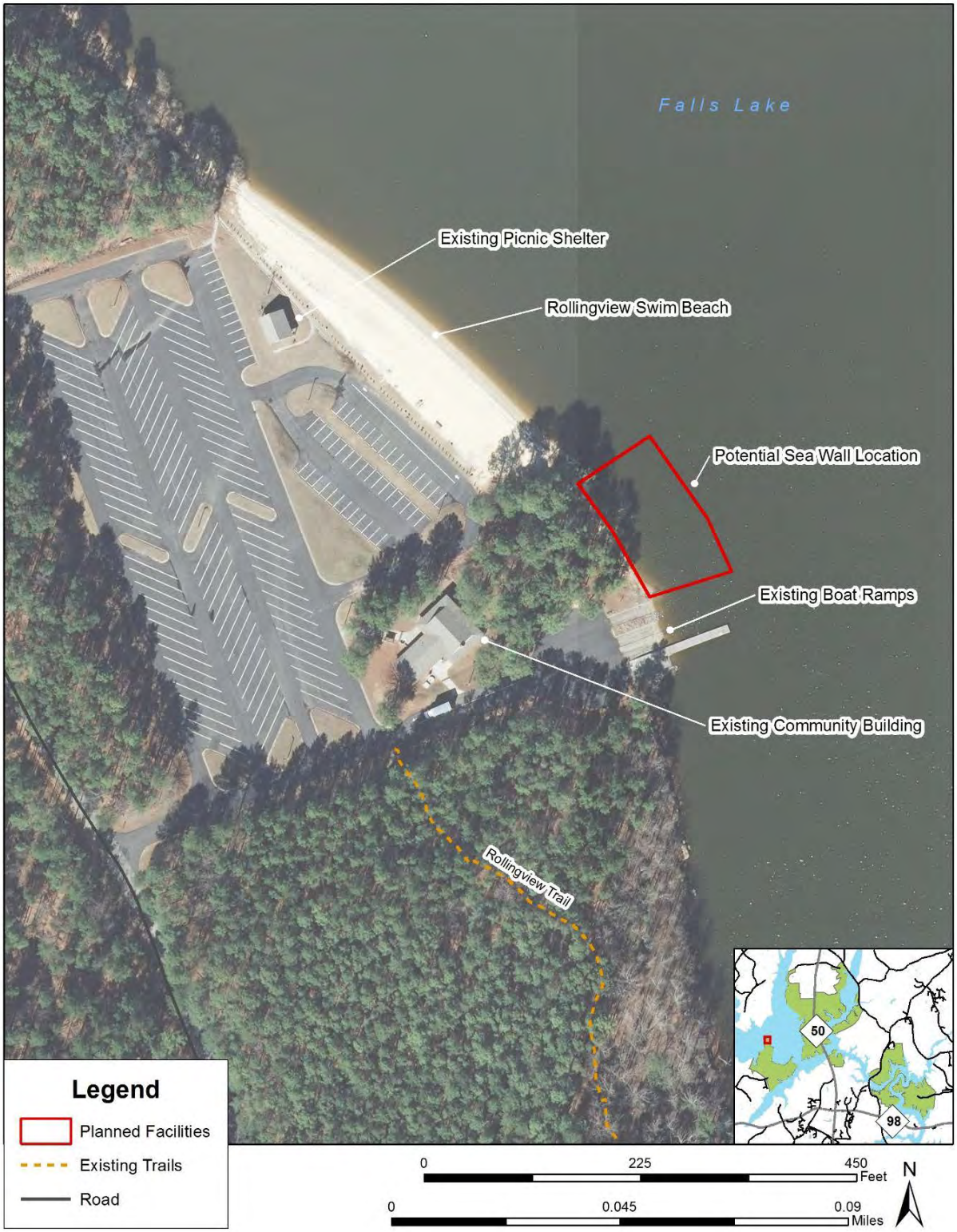
PROJECT #5: TRAFFIC IMPROVEMENTS – BEAVERDAM



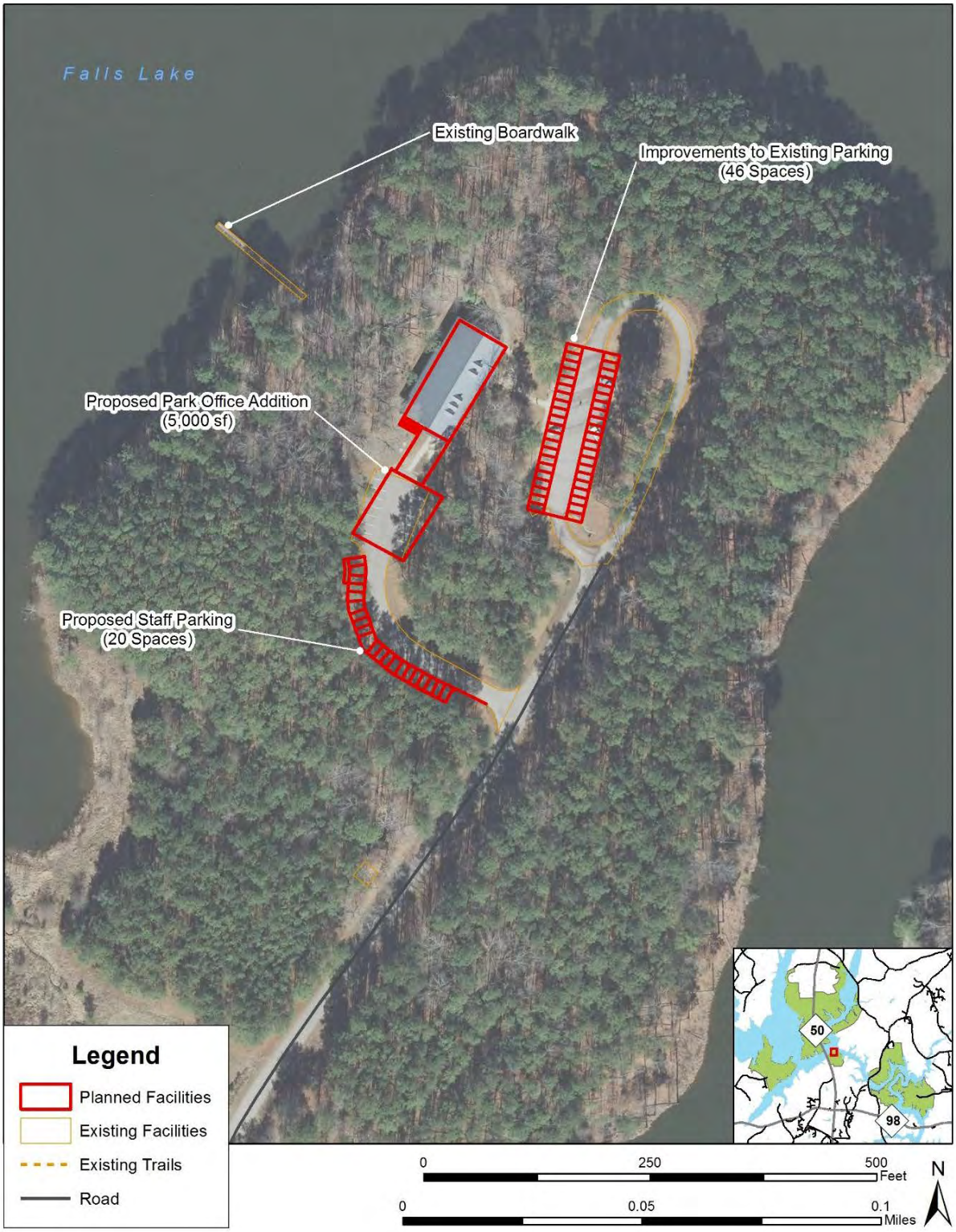
PROJECT #5: TRAFFIC IMPROVEMENTS –SANDLING BEACH



PROJECT #6: SAND SEAWALL AT ROLLING VIEW

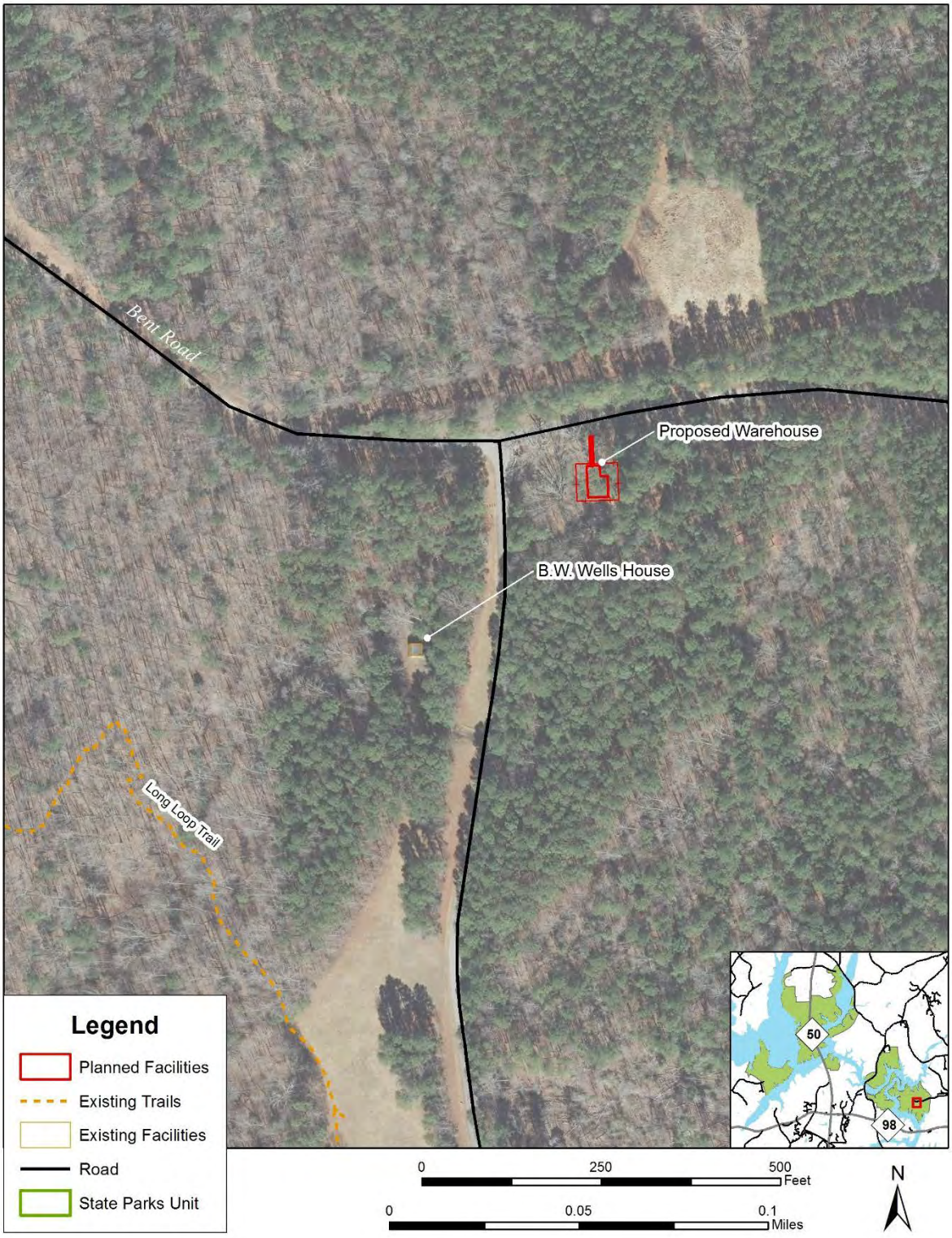


PROJECT #7: ADMINISTRATION BUILDING IMPROVEMENTS

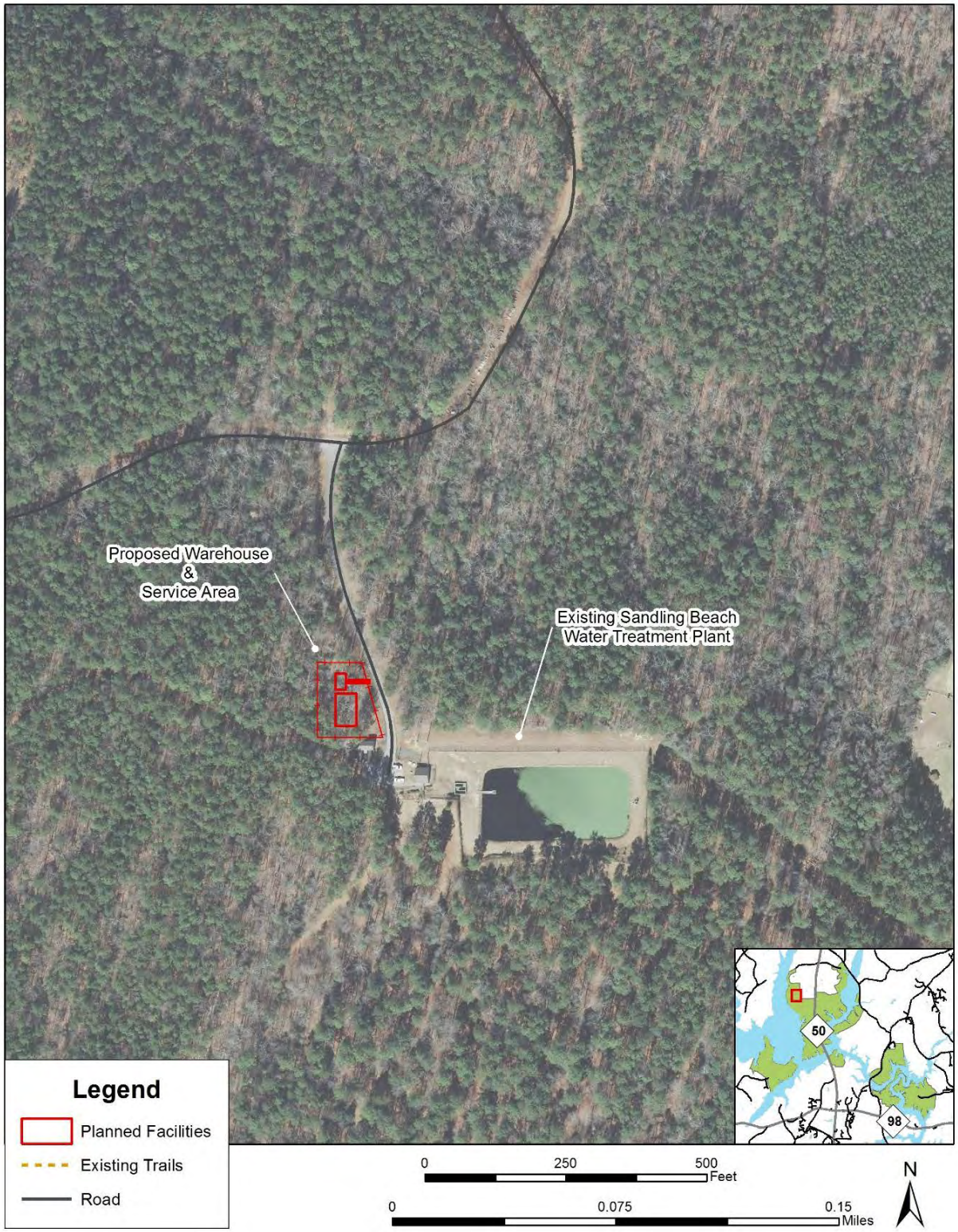


PROJECT #8: MINI- WAREHOUSE AT SHINLEAF

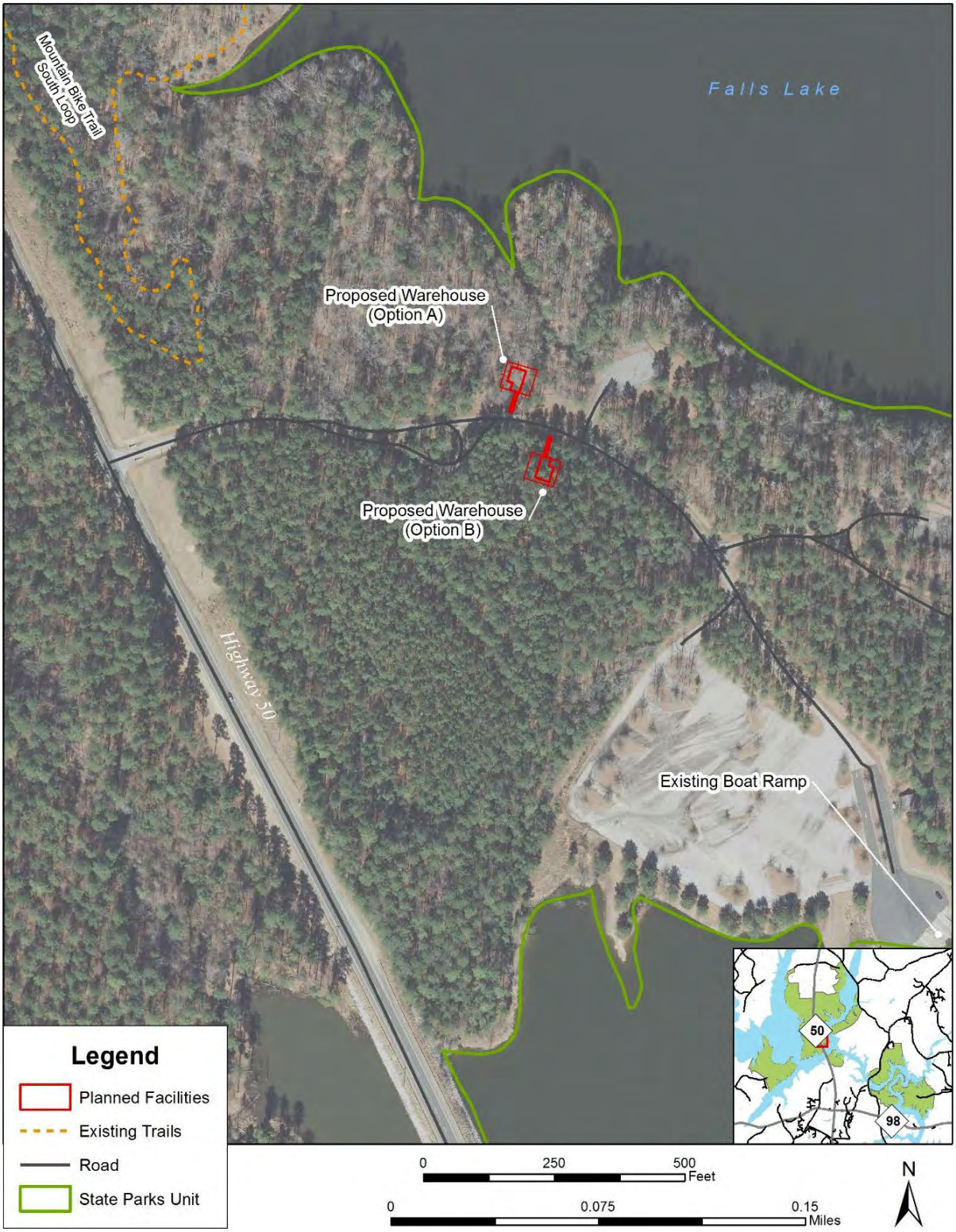
PROJECT #8: MINI- WAREHOUSE AT. B.W. WELLS



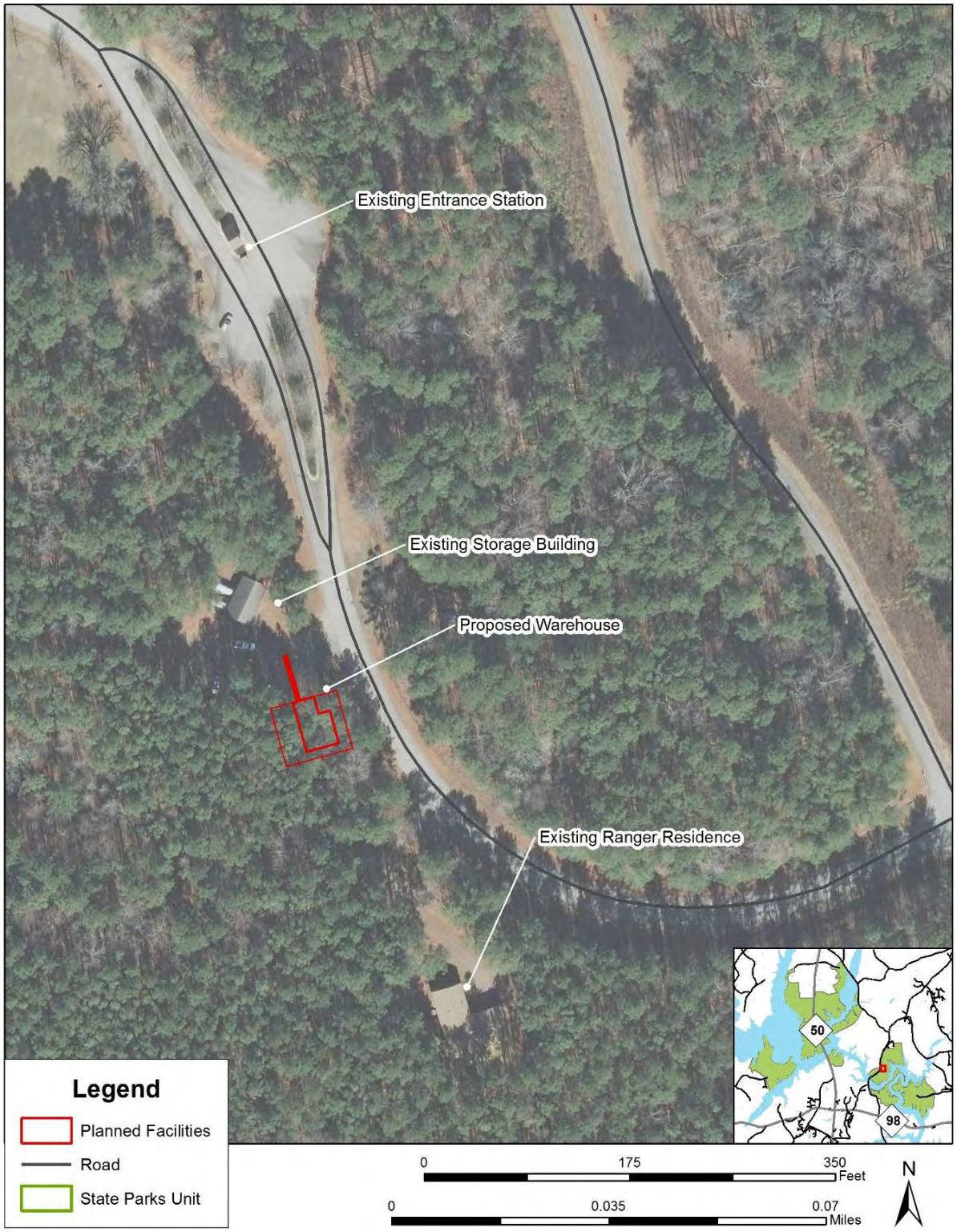
PROJECT #8: MINI- WAREHOUSE AT SANDLING BEACH PROJECT



PROJECT #8: MINI- WAREHOUSE AT BEAVERDAM

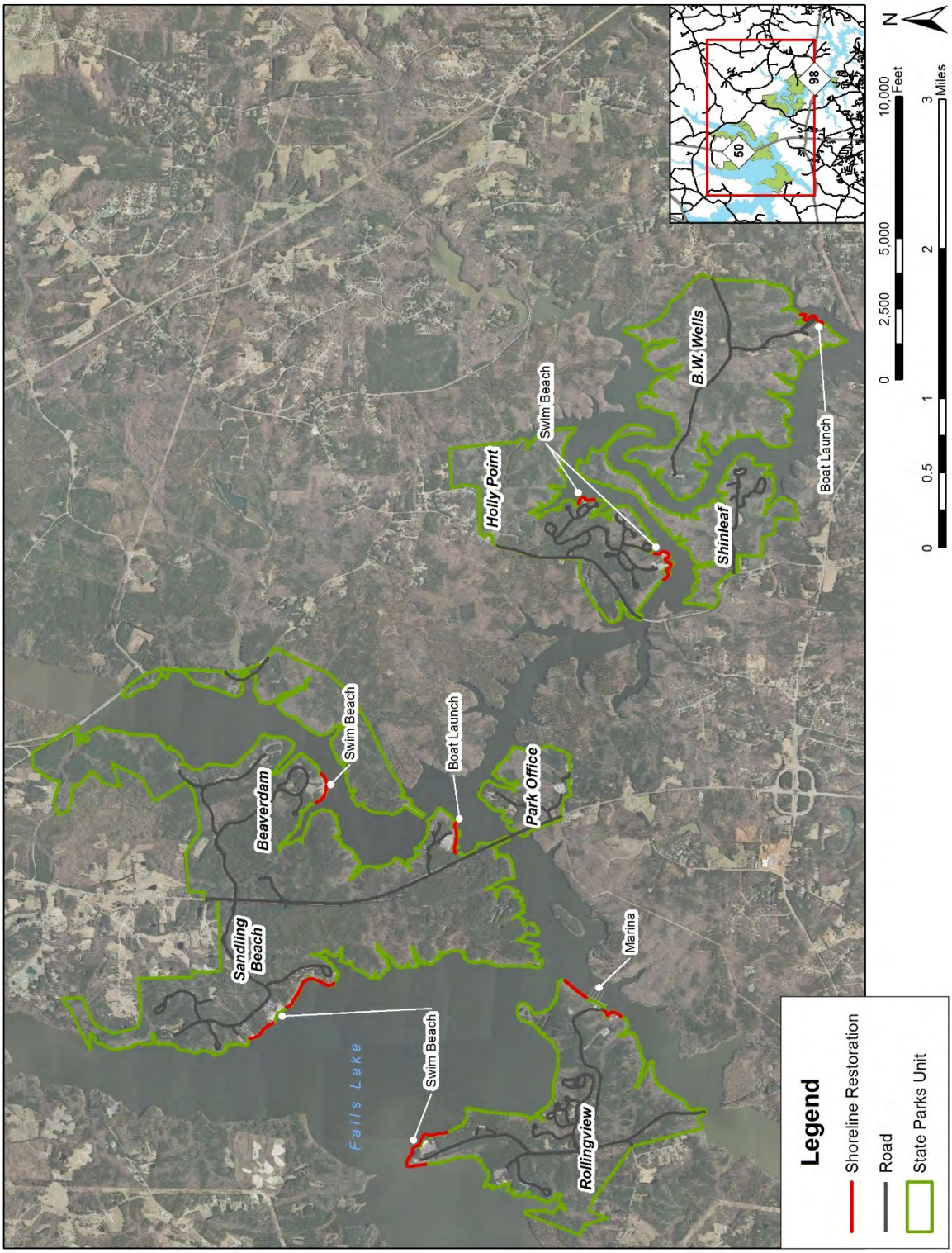


PROJECT #8: MINI-WAREHOUSE AT HOLLY POINT



PROJECT #8: MINI-WAREHOUSE AT ROLLING VIEW

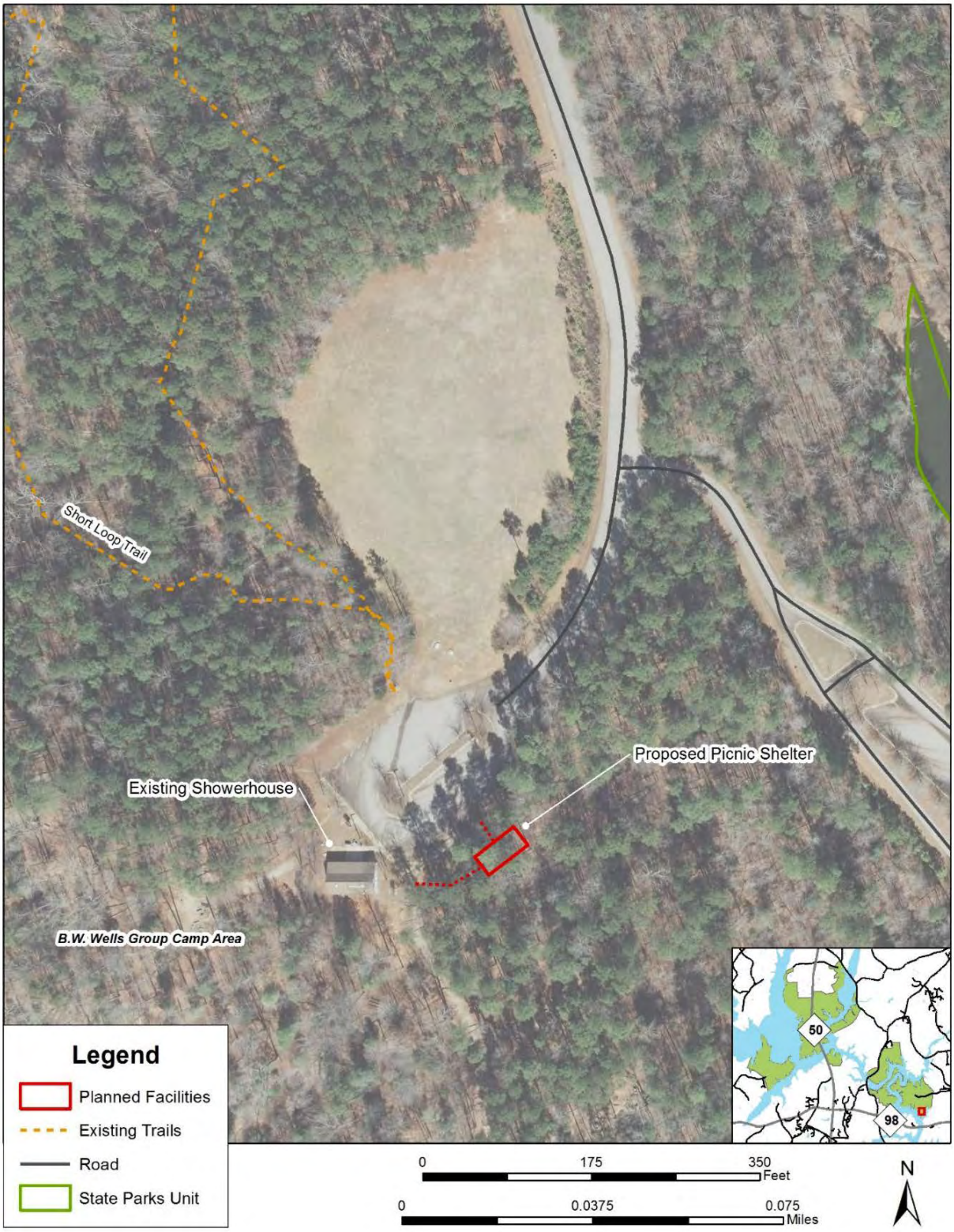
PROJECT #9: SHORELINE STABILIZATION (PARTNER WITH ACOE)



PROJECT #10: CAMPER CABINS AT HOLLY POINT

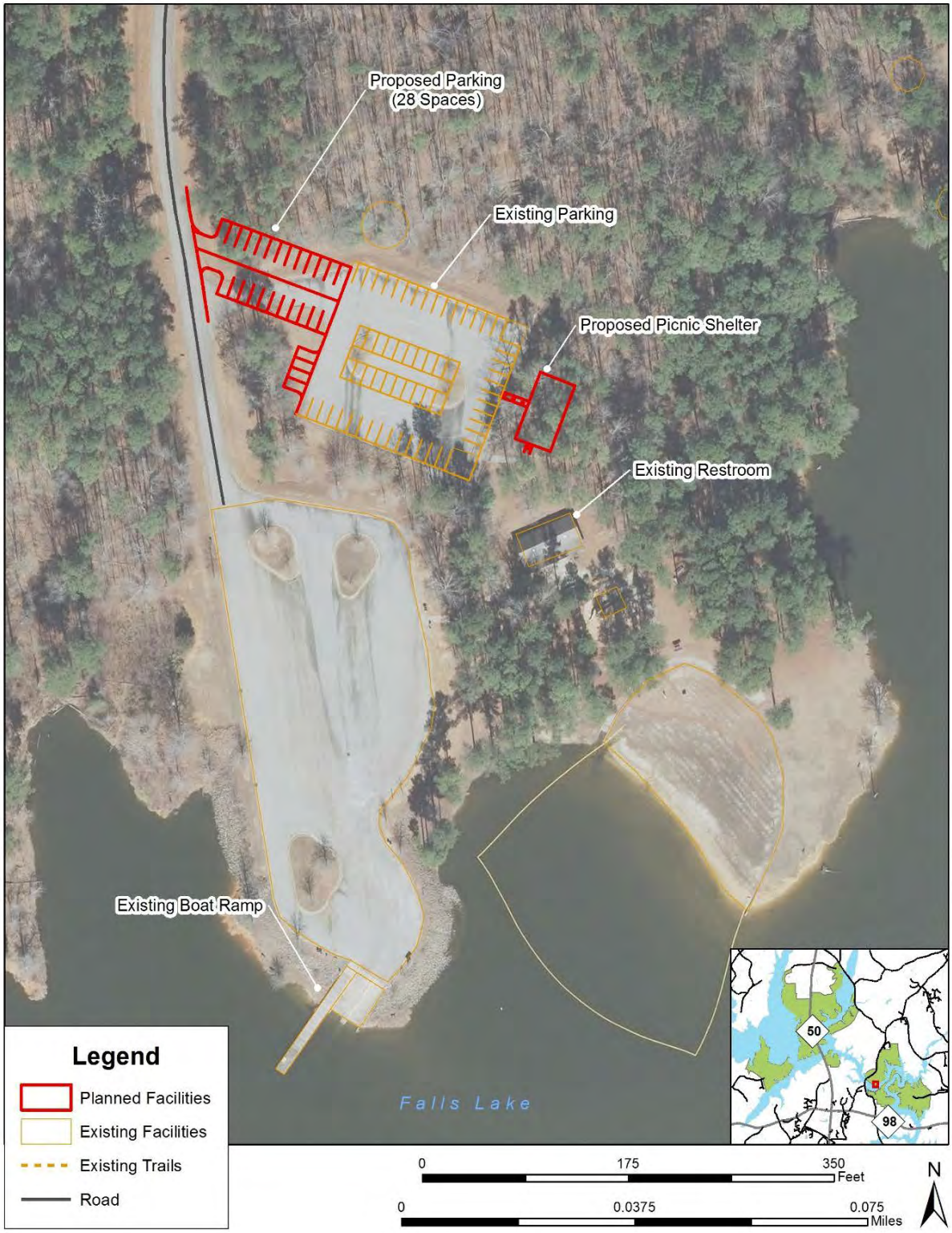
PROJECT #11: MAINTENANCE AREA IMPROVEMENTS

PROJECT #12: B.W. WELLS HISTORICAL RESTORATION & OTHER IMPROVEMENTS



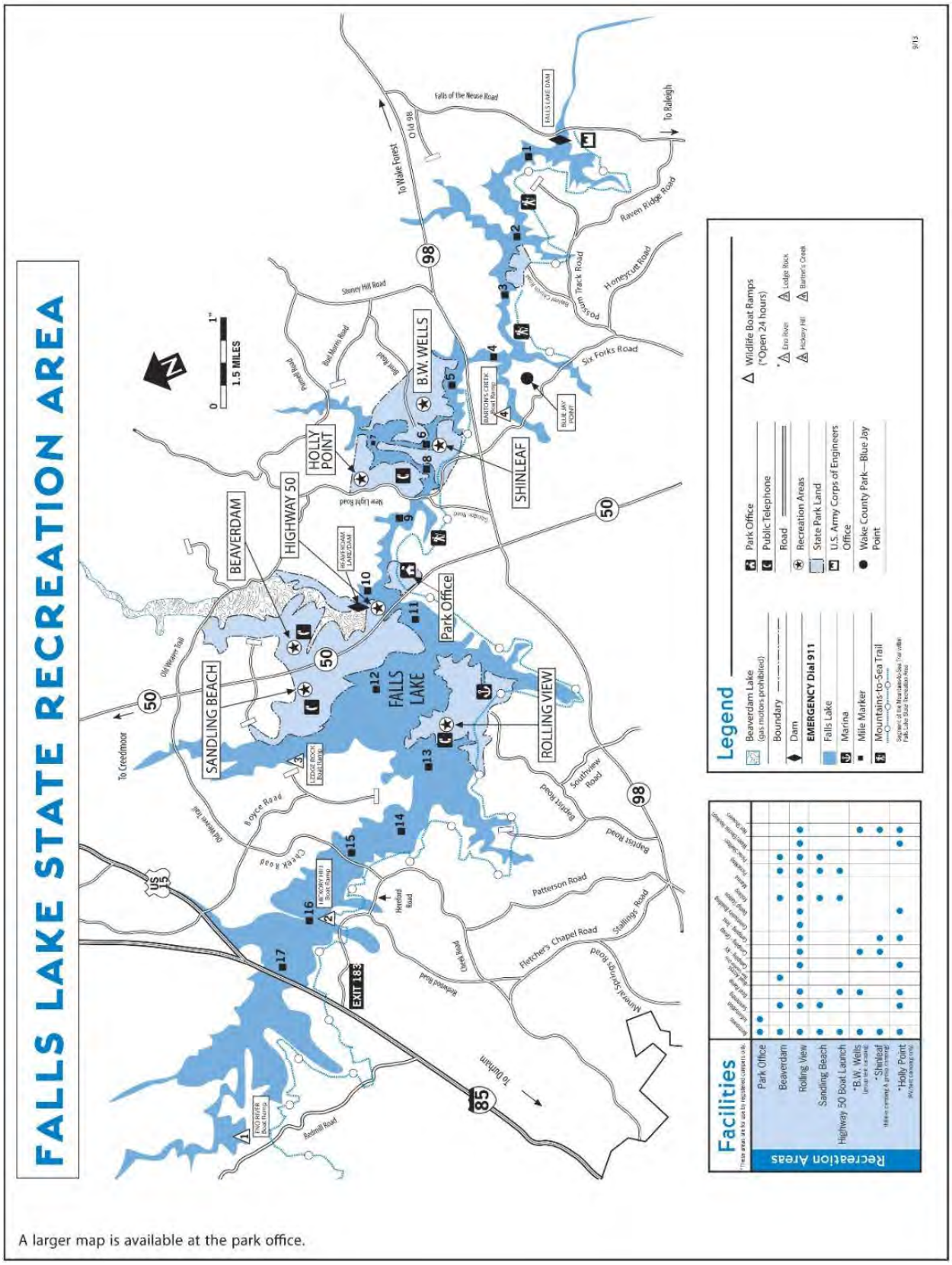
PROJECT #13: COMMUNITY BUILDING AT BEAVERDAM

PROJECT #14: HOLLY POINT PICNIC SHELTER



A larger map is available at the park office.

PARK MAP



A larger map is available at the park office.