

Hanging Rock State Park General Management Plan



North Carolina Department of
Natural and Cultural Resources

Division of Parks and Recreation

Mountain Region

October 2020



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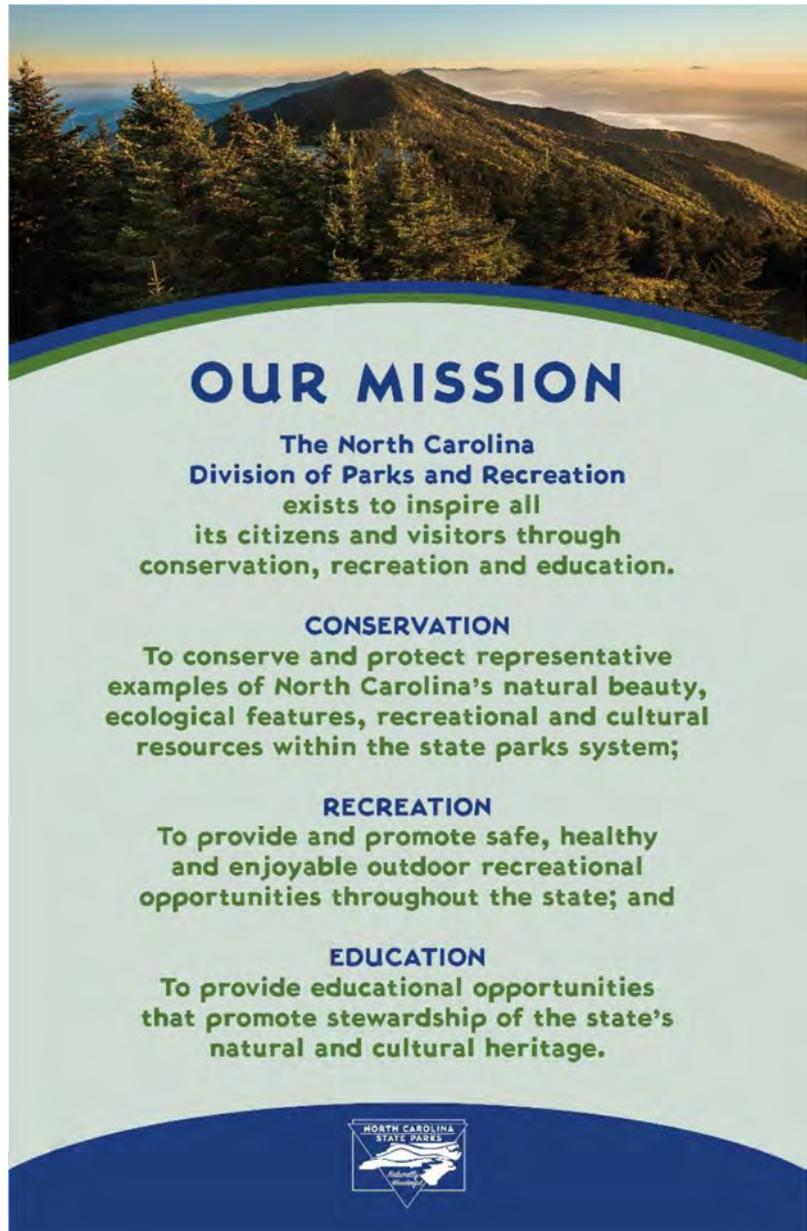
I. MISSION AND PURPOSE

General Management Plans:

The 1987 State Parks Act (G.S.143B – 135.40) requires each park to have an individual General Management Plan. As required, these plans seek to identify an individual parks purpose as a unit within the larger parks system and provide an analysis of the parks major resources and facilities. The GMP also identifies current and future needs of the park and prioritizes a list of proposed projects intended to meet those identified needs. These plans are considered living documents, recognizing the various and dynamic factors which influence the planning process. Each park’s GMP is scheduled to be revisited every five years, or sooner if needed, to reflect the direction and vision of the State Parks Division.

State Parks Mission

The 1987 State Parks Act also defines the purpose of the state parks system. It establishes that: The State of North Carolina offers unique archaeological, 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 Overview:

Hanging Rock State Park is located in the Triad region 45 miles west of Greensboro and 120 miles northwest of Raleigh - Durham area. The site makes an ideal *day trip to the mountains* achievable from the urban areas. The park can be accessed off N.C. Highway 8 and 89 as well as Interstate 40. Hanging Rock is known for geological formations, extensive hiking trails and Civilian Conservation Corps (CCC) era architecture during the Great Depression.



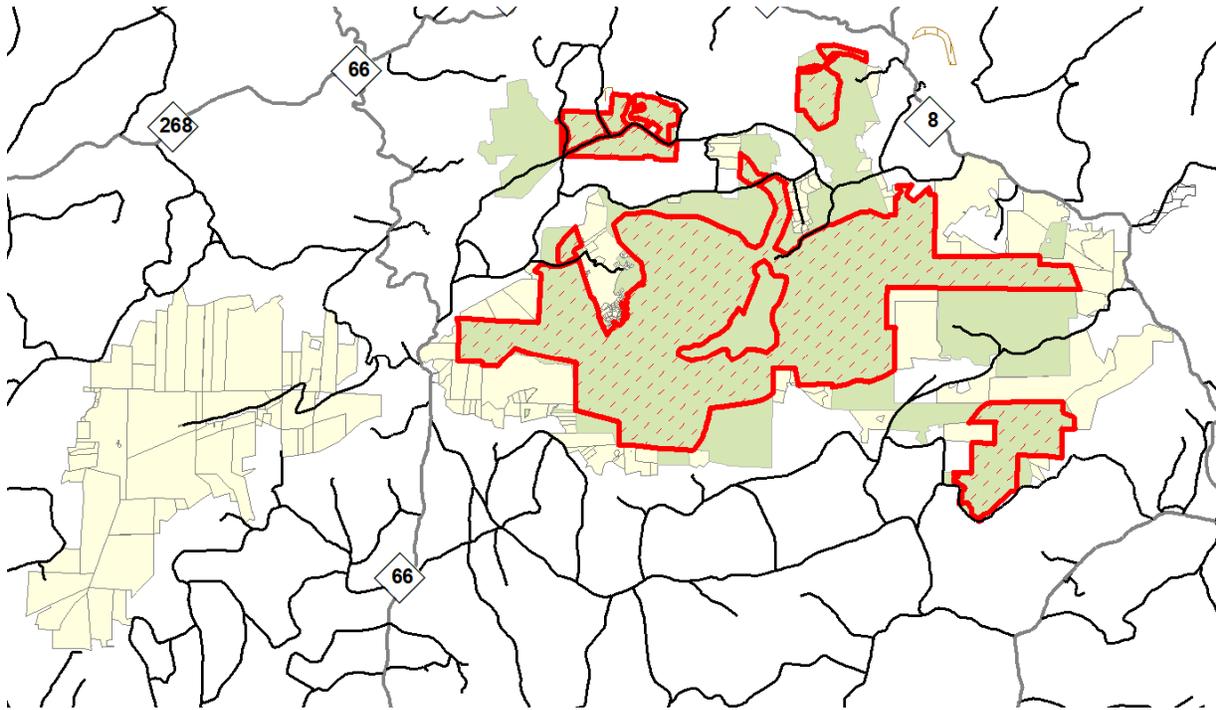
Park Purpose:

Hanging Rock State Park is in Stokes County, in a region of challenging terrain with low mountains at the eastern section of the Sauratown. The unusual geology and topography provide a range of conditions for montane and Piedmont species. The park protects a large range of high-quality natural communities and rare species. The North Carolina Natural Heritage Program (NHP) has documented nine (9) natural community types that occur across a range of elevations and aspects. Most of the park unit is within a Dedicated Nature Preserve, and over 1,400 plant and animal species have been documented, including more than 110 rare species.



Lower cascades falls is an alternate day use access area with trails, parking and interpretive signage

The Sauratown mountains were formed by a 200-foot-thick layer of erosion-resistant quartzite that became exposed as the surrounding land weathered away, leaving prominent monadnocks, extensive vertical and overhanging outcrops. Erosion, along with a gradual uplifting of the rock, produced the “Sauratown window” or anticlinorium. This structural geology occurrence exposes rocks above the surface of the surrounding Piedmont terrain and creates a ridgeline separated from the Blue Ridge Mountains. The exposed quartzite created numerous large outcrops, cliffs and caves including Moore's Knob, Cook's Wall, Wolf Rock, Hanging Rock and Tory's Den.



A majority of Hanging Rock State Park is within a Dedicated Nature Preserve (DNP)



Example of anticlinorium



Summit area is located within a dedicated natural preserve area and is home to rare plant and animal species

Summits

The summits provide the “five-peaks” trail system. The high point is Moore’s Knob which reaches 2,579 feet and sits on top of a long and prominent series of north and west-facing quartzite cliffs. Cook’s Wall is a south-facing quartzite cliff reaching an elevation of 2,300 feet. Hanging rock peak reaches 2,100 feet and is a prominent overhanging quartzite cliff. Wolf Rock and House Rock, two other prominent peaks, are over 2000 feet

above sea level. The southeastern part of the park includes Flat Shoals monadnock which is located at a slightly lower elevation and lacks prominent outcrops. Moore's Knob, the highest peak in the range, rises more than 1,700 feet above the surrounding terrain.

The central area of the park is a narrow valley, where Indian and Cascade Creek are within an outstanding resource watershed (ORW) and flow over a series of waterfalls. The northern part of the park contains lower ridges and ravines, dissected bluffs, and the narrow floodplain of the Dan River. Several sheltered rock outcrops occur along the gorges of Cascade Creek and Indian Creek including Montane Acidic Cliff communities. The largest waterfalls occur along these creeks and support Spray Cliff communities. Other areas contain Carolina Hemlock Bluff communities which are rare to North Carolina.



Hanging Rock lake is a manmade structure that provides a stormwater impoundment device along with a swim beach and depression era bathhouse

Significant biological resources found at Hanging Rock include natural communities normally located within the Appalachian Mountains. These montane communities include Low-Elevation Rocky Summit, Montane Acidic Cliffs, Carolina Hemlock Bluffs, Pine-Oak Heath, and Chestnut Oak Forest. The park contains natural heritage areas: Moore's Knob, Cook's Wall Natural Area, Hanging Rock Summit Natural Area, Cascade Creek Natural Area, Devil's Chimney, House Rock, and Huckleberry Ridge. The park contains rare plant and animal species, such as: witch alder (*Fothergilla major*), bear oak (*Quercus ilicifolia*), and timber rattlesnakes (*Crotalus horridus*) which use rocky areas for habitation. This includes Bradley's spleenwort (*Asplenium bradleyi*), Wehrle's salamander (*Plethodon wehrlei*), brown elfin butterfly (*Incisalia polia maritima*), and the endangered peregrine falcon (*Falco peregrinus*) that nest on the north end of Moore's Wall.



Wehrle's salamander found at Hanging Rock State Park

Recreational activities include both natural and developed resources that support opportunities for passive and active recreational opportunities such as hiking, paddling, camping and wildlife observation. Opportunities for interpretation and educational programs are provided showcasing the natural heritage significance.

II. HISTORY

The Sauratown Mountains, located on the west side of park proper, are named for the “*Saura* (or *Cheraw*) *Indians*” who were early native American inhabitants located of the Dan River valley area. However, over many millions of years, wind, water and other forces have worn down the peaks. This ancient mountain range is composed of scenic peaks, knobs and ridges.

In 1936, the Stokes County Committee for Hanging Rock and the Winston-Salem Foundation donated 3,096 acres of land to the State of North Carolina for establishing a State Park unit. Many facilities in the park were constructed by the Civilian Conservation Corps (CCC) between 1933 and 1942 including: a concrete and earthen dam, a stone bathhouse, diving tower and sandy beach. Other facilities constructed by the CCC include a park road and parking area, a picnic area and shelter, and hiking trails. The bathhouse was added to the National Register of Historic Places in 1991.

The visitor Center was built in 1996. The stone and wooden building provides a public space for visitors and staff office. In 2014, 770 acres was transferred from NC State University to State Parks. Vade mecum and Moore’s Spring combines 100 years of history including a former mineral springs resort, 4H camp and Episcopal retreat center. In 2018, Mill Creek access was purchased for additional park facilities, natural resources, scenic and watershed protection.



The 12-acre manmade lake and bath house was constructed by the Civilian Conservation Corps in 1938

III. THEMES AND INVENTORY

Themes

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 GMP only themes that are of moderate to high significance to *Hanging Rock State Park* are shown.

Hanging Rock State Park Themes Table

Theme Type	Theme	Hanging Rock Significance	State Parks System Representation
Archeological/Historic	Recreation	High	Adequate
Archeological/Historic	Rural-Domestic	High	Adequate
Archeological/Prehistoric	Burial/Cemetery	High	Moderate
Archeological/Prehistoric	Campsite/Activity Area	High	Adequate
Archeological/Prehistoric	Rock Art	High	Moderate
Archeological/Prehistoric	Shelter/Cave	High	Adequate
Archeological/Standing Structure	Recreation	High	Adequate
Biological	Low Elevation Cliffs and Rock Outcrops	High	Moderate
Biological	Montane Oak Forests	Moderate	Adequate
Biological	Mountain Cove Forests	Little	Little
Biological	Piedmont and Coastal Plain Oak Forests	High	Adequate
Biological	Piedmont and Mountain Floodplains	High	Moderate
Biological	Piedmont and Mountain Dry Coniferous Forests	Moderate	Moderate
Biological	Upland Seepages and Spray Cliffs	Moderate	Moderate
Geological	Caves, Sinks, and Springs	High	Little
Geological	Cliffs	High	Adequate
Geological	Faults, Joints, and Related Features	High	Adequate
Geological	Folds and Related Features	High	Adequate
Geological	Gorges, Rapids, Waterfalls	High	Adequate

Geological	Inselbergs (Monadnocks)	High	Adequate
Geological	Mass Wasting Features	High	Adequate
Geological	Metamorphic Features	High	Adequate
Geological	Sedimentary Features	High	Moderate
Geological	Unusual Rock Types	High	Moderate
Scenic	Caves/Cliffs	High	Little
Scenic	Forests	High	Moderate
Scenic	Meadows/Grasslands	High	Little
Scenic	Reservoirs/Lakes	High	Adequate
Scenic	Rivers	High	Little
Scenic	Rock Outcrops	Moderate	High
Scenic	Scenic Highways	High	Little
Scenic	Scenic Vistas	High	Moderate
Scenic	Waterfalls	High	Little
Scenic	White Water Streams	High	Moderate

**See the Systemwide Plan for references to Theme and Inventory terms. Themes have both actual and “potential” future needs to be at a park.*



Paddle Access along Dan River provides a short and long- distance blue way route



Hidden Falls represent unique geological theme type portraying gorges, rapids and waterfalls

Inventory:

While Hanging Rock State Park is moderately developed and is modest in size; its visitation has grown from 481,000 in 2014 to over 651,000 visitors in 2019. Due to the proximity to the Triad and Raleigh Durham region, this park has become extremely popular.

Facility Inventory:

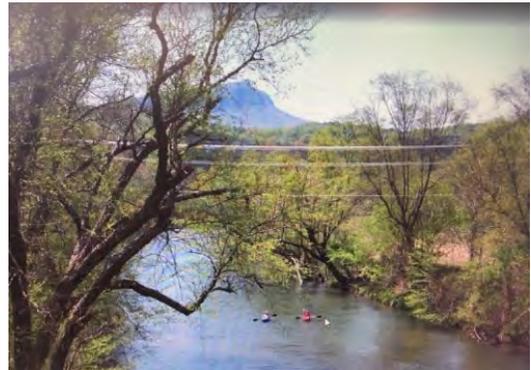
Hanging Rock State Park was established in 1936 and much of the infrastructure built by the CCC between 1932 and 1942. Due to the age of much of the infrastructure and heavy visitor use, numerous facilities and infrastructure systems are showing their age. The inventory chart explains the park staffs perceived condition of the structures. See Appendix A.

Ensuring our facilities are adequate for current and future visitation, and that they are in good operable condition helps us to provide quality visitor experiences. The following section inventories the parks facilities and trails.

Trails Inventory:

Hanging Rock State Park provides 6 miles of equestrian, 14.80 miles of mountain bike, and 35.72 miles of hiking trails for a variety of challenges. The Sauratown Trail, connecting Pilot Mountain to Hanging Rock State Park, is part of the *Mountains to Sea* State trail. However, currently there are gaps until easements with landowners can be negotiated.

However, due to extensive use by visitors, challenging terrain, age, and unsustainable design, many of the trails need significant repairs.



Dan River provides day use and long-distance paddle access around Stokes County

Paddle trails:

A paddle trail runs along the Dan River with limited park managed land and access areas. A majority of the river frontage is owned by private landowners. The Dan River access at Flinchum Road is the only park managed paddle launch area.



Public paddle access at Flinchum Road

Appendix A

NC STATE PARKS - FACILITY INVENTORY SPREADSHEET				
State Park Unit(Alpha Code): HARO		Park Area(If Applicable): Hanging Rock State Park		
				Date(MM/YY): Jan 2020
Public Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)
Amphitheater- Vademecum	THEATER	4	Good	
Boat House at swim beach	HISTORICAL	1	Fair	Footing needs to be repaired
Classroom (wing of Visitor center)	BLDG	1	Good	Install new windows
Concession Stand	BLDG	1	Good	Serves swim beach. Used regularly over summer months
Museum/ Exhibit Hall (in Visitor Center)	BLDG	1	Good	
Visitor Center	BLDG	1	Poor	Major exterior and foundation issues need to be repaired due to age and rotten wood. Structure was built in 1996
Auditorium	BLDG	1	Good	
Toilet	BLDG	4	Fair	
Vault Toilet	BLDG	5	Fair	Located at: Climbing access , Group camp (3) , campground Pit toilet. Many need a prefabricated vault toilet. Structures are 30-50 years old
Bathhouse	BLDG/HISTORICAL	1	Poor	Built in 1940 , Needs new windows, and interior renovations
Showerhouse at Family campground	BLDG	2	Poor	Not ADA compliant, closed over winter due to lack of insulation
Picnic Shelter	BLDG	1	Good	Swimming Area Picnic Area
Picnic Shelter	BLDG	3	Good	1 at lake, 2 at Vistor center
Mountain Road				
Barn/Shed	BLDG	1	Poor	Future demolition
Shed on southside of Mtn road	BLDG	1	Poor	Future demolition
Tin roof structure along Orrell Road	BLDG	1	Good	Not insulated
Tobacco Barn	HISTORICAL	4	Good	Solid, structural foundation
Log cabin house	HISTORICAL	1	Fair	Possible storage and interpretation

Staff Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)
Ranger Residence	BLDG	7	Fair	Repairs include exterior work to porch, deck, septic tank and interior renovations to bathroom, kitchen, flooring; built in 1970 (2 house); 1950 (2 house);
Caretaker residence at Vade mecum	BLDG	1	Poor	Approved for demolition, salvage existing architectural features, structural foundation failed inspection
Sertoma Lodge	BLDG	1	Poor	Approved for demolition. Poor structural foundation
Barracks	BLDG	1	Poor	Located on Residence Road. Used for storage.
Maintenance Shop	BLDG	1	Fair	Built in 1982. Use for storage of equipment for staff only.
Firewood Building at campground	BLDG	1	Fair	Used for storage of firewood to serve Campground Area
Storage bldg - Open Faced shed	BLDG	1	Fair	Maintenance yard / pole barn to store equipment
Storage Bldg - Residence Storage	BLDG	1	Fair	
Warehouse and lift bay	BLDG	1	Fair	Needs updates
Plumbing bldg	BLDG	1	Good	
Fuel Storage structure	BLDG	1	Fair	Renovate deck struture
Tractor shed/pole barn- Vade mecum	BLDG	1	Poor	Future demolition
Welding Building- Vade vade mecum	BLDG	1	Good	
Sertoma Maintenance Building	BLDG	1	Fair	
Hay Barn Storage at Vade Mecum	BLDG	1	Fair	Approved for demolition.
Former Park office - maintenance area	BLDG	1	Fair	Not Accessible. Cement block construction. Moisture issues, not accessible, over 67 years old
Recreation Facilities	Unit	Number	Condition	Repairs needed(If Applicable)
Mail box barn	BLDG	1	Poor	Approved for Demolition
Activity house at Vade mecum	BLDG	2	Poor	Future demolition
Block Cellar	BLDG	1	Poor	Future demolition
Bike Trail barn at Moores Springs	BLDG	1	Poor	Future demolition
West Winston Salem at Vade mecum	BLDG	1	Poor	Future demolition

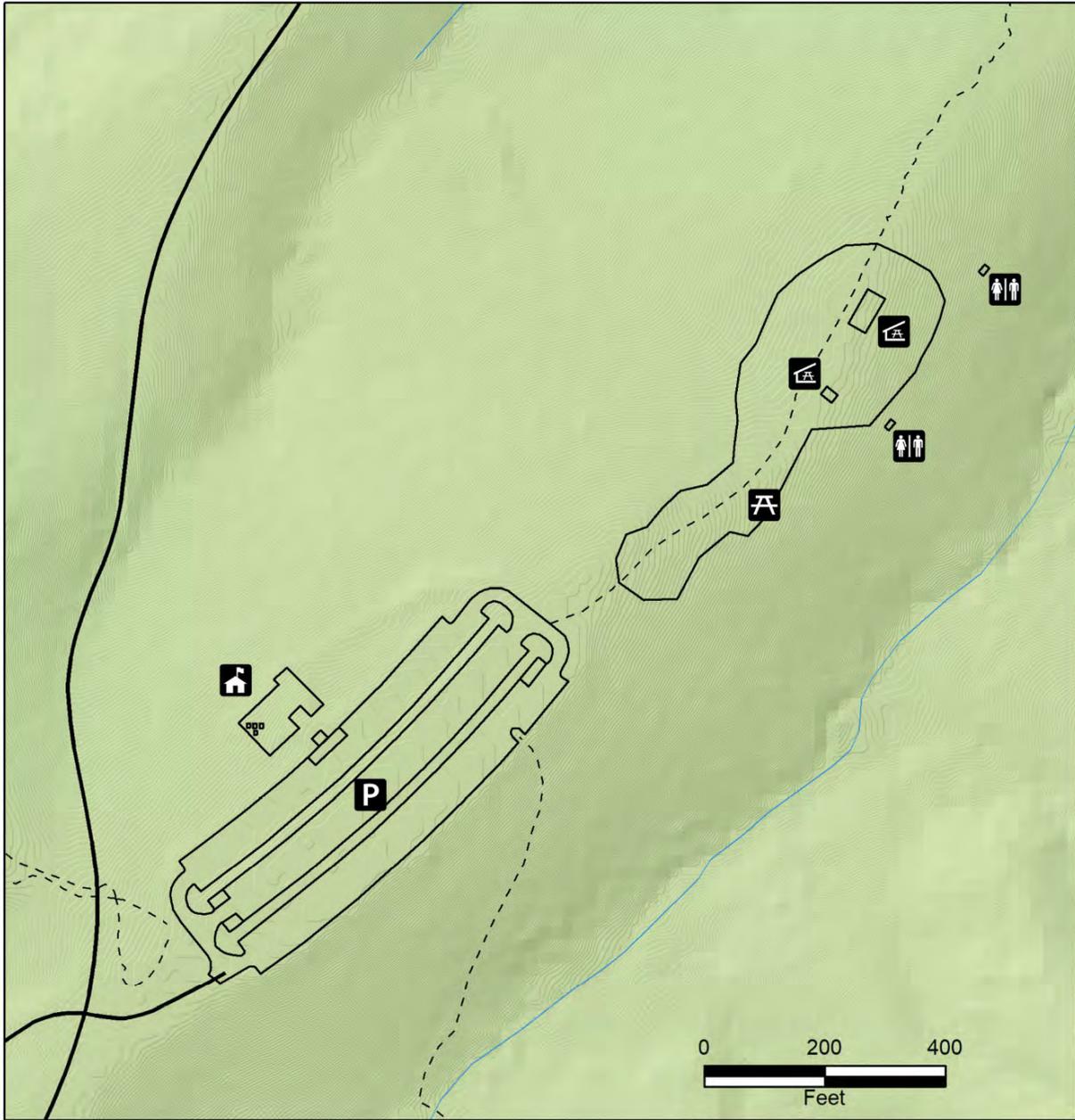
Winston Salem Cabin-Vade mecum	BLDG	1	Poor	Future demolition
Triangle Cabin at Vade mecum	BLDG	1	Poor	Future demolition
Cedar Cabin at Vade mecum	BLDG	1	Poor	Future demolition
Norfolk Cabin at Vade mecum	BLDG	1	Poor	Future demolition
Pavilion store and Room at Vade mecum	BLDG	1	Fair	Approved for demolition
Old Salem at Vade mecum	BLDG	1	Poor	Future demolition
Raleigh Cabin at Vade mecum	BLDG	1	Poor	Future demolition
White Oak Cabin at vade mecum	BLDG	1	Poor	Future demolition
Challenger Cabin at Vade mecum	BLDG	1	Poor	Future demolition
Dogwood Cabin at Vade mecum	BLDG	1	Poor	Future demolition
Yadkinville Cabin at Vade mecum	BLDG	1	Poor	Future demolition
Tarheel Cabin at Vade mecum	BLDG	1	Poor	Future demolition
Wilmington Cabin at Vade mecum	BLDG	1	Poor	Future demolition
Welcome Center Financial Literacy at MS	BLDG	1	Poor	Future demolition
Computer lab	BLDG	1	Poor	Future demolition
Green roof top bldg	BLDG	1	Poor	Future demolition
Storage Shed-Vade mecum	BLDG	1	Poor	Future demolition
Campground store at Moores Spring	BLDG	1	Poor	Future demolition
Moore's Spring House	BLDG	1	Fair	Future renovation or repair to replicate historical integrity. Was used to house and access the mineral springs
Vade Mecum Spring house	BLDG	1	Poor	Future rebuild or repair to replicate historical integrity. This will be a point of interest to trail system
Pumphouse and Watertank	BLDG	1	Fair	Update and renovate
Pump on concrete pad	BLDG	1	Fair	Located at caretakers residence area . Reuse for future facilities
Old Toilet Building	BLDG	1	Poor	Future demolition

Horse Facilities				
Hay Barn - Horse Motel	BLDG	1	Poor	Future demolition
Total with Hookups				
Campsites No Hookups	SITE	73	Fair	Site improvements needed include: Selective tree removal; erosion control, stormwater improvements, impact pad, grading, pave driveway, new grills, new fire rings
Total No Hookups				
Cabin	BLDG	10	Good	
Group Campsites	SITE	5	Good	
Vault toilet at Group camp	SITE	1	Good	
Amphitheater	THEATER	4	Good	
Other Facilities	Unit	Total #	Condition	Repairs needed(If Applicable)
Amphitheatre at Vade mecum	SITE	1	Poor	Future demolition
Pier - Swimming Beach	SITE	1	Good	
Tobacco Barn #1	HISTORICAL	1	Fair	Abandoned Tobacco Barn, use for educational and interpretive purposes. Repair exterior façade and gaps
Tobacco Barn -Flinchum	HISTORICAL	1	Fair	Used for Ranger residence storage. Repair exterior façade and gaps
Tobacco Barn at vade mecum	HISTORICAL	1	Poor	Future demolition
Swimming Beach at Visitor center	SITE	1	Good	Significant-erosion issues. Install a prefabricated Trench Drain system for stormwater management issues
Gym (Tise hall)- Vade mecum	HISTORICAL	1	Poor	Major stabilization needed; structural issues, not accessible. Used for events, performances and as a gym
Cheshire Hall- Vade mecum	HISTORICAL	1	Poor	Major stabilization needed
Chapel	BLDG	1	Good	Needs restroom improvements in back corner to meet accessible code requirements

Swimming Pool behind Vade Mecum Gym	SITE	1	Poor	Future demolition; not safe and located in wrong place
Pool House at Vade mecum	SITE	1	Poor	Future demolition
Ropes course	SITE	1	Poor	Future demolition due to safety concerns
Storage Shed High Ropes at vade mecum	SITE	1	Poor	Future demolition
Tobacco barn - Vade mecum	HISTORICAL	1	Poor	Future demolition. Structure is collapsing
Observation structure - Moores Wall Area	SITE	1	Fair	Needs exterior work and steps repaired
Cemetery at Moores Springs	SITE	1	Fair	Protect 2-10 graves located at intersection of Moores Springs Road and P. East Road. Clean surrounding area. Install interpretive signage or split rail fence around perimeter as needed
Infrastructure				
Campground Electrical Box #1	SITE	1	Fair	Update to 100 amp
Campground Electrical Box #2	SITE	1	Fair	Update to 100 amp
Dam at Lake	HISTORICAL/ SITE	1	Fair	Dam is over 82 year old. Functional but needs to be inspected annually
Swimming lake - man-made	SITE	1	Good	Significant erosion issues, foundation of diving platform needs to be repaired
Septic Field #1	SITE	1	Fair	For ranger residences (2) bldgs. Needs to be upgraded
Septic Field #2	SITE	1	Fair	Needs to be upgraded to serve barracks
Septic Field #3	SITE	1	Fair	Needs to be upgraded to serve 2 ranger residences
Septic Tank	SITE	1	Fair	Former barracks at Vade mecum. Abandon and demolish. Located within a stream buffer .
Septic Valve	SITE	2	Fair	Cheshire Hotel
Utilities Bldg - Chlorinator at family campground	SITE	1	Good	
Pumphouse Filter Treatment House	SITE	1	Good	Needs to be inspected yearly
Water tower	SITE	1	Good	Supplies water to Vade mecum access area
Pedestrian Bridge at Ropes course	SITE	1	Good	Located adjacent to ropes course.

Metal bridge at Vade mecum backcountry area	SITE	1	Fair	Needs structural evaluation and inspection
Campground bridge at Moores Springs campground	SITE	1	Poor	Needs to be demolished and replaced to provide emergency access
Trailhead/ Parking lots				
Sign at Access areas	SITE	4	Fair	Torys Den Cave, Moores Knob, Hanging Rock, Lower Cascade
Group Camp parking lot	SITE	1	Fair	Needs wheel stops to mark parking spaces, re grade and new gravel as needed
Parking at Swim Beach/Bath house	SITE	1	Good	Asphalt in good condition, wheel stops installed, 248 spaces
Parking at visitor center	SITE	1	Good	Needs new paint stripping, asphalt in good condition; 381 spaces
Parking at Tory's Den	SITE	1	Good	Add (12) concrete wheel stops; Gravel parking lot
Parking at Swim area-Fishing Pier	SITE	1	Good	Add (4) concrete wheels stops as needed
Parking at Lower Cascades	SITE	1	Poor	Add tree islands for stormwater management and shade; add wheel stops, regrade parking lot for positive drainage, top layer of asphalt
Dan River access parking lot/ river bluffs trailhead	SITE	1	Good	Install wheel stops and add gravel as needed
Climbing Access Parking Lot	SITE	1	Poor	Needs to be re designed, challenging grades and poor soils, install wheel stops
Mountain Bike Trails Parking Lot along Moore's Springs Road	SITE	1	Poor	Gravel Parking lot, needs to add concrete wheel stops, main entrance sign, and vault toilet
Internal Park Roads				
Park Road	SITE	1	Poor	906,302 Lin. Feet (172 miles). Needs to be repaved or seal coated as needed
Unpaved park roads	SITE	1	Fair	3,279 Lin Feet (0.62 mile) ; Needs additional gravel installed, diversion ditches and regrade for positive drainage.
ADDITIONAL NOTES:				
Hanging Rock State Park was established in 1936. This park has capacity issues due to the proximity to Triad region. Infrastructure needs to be updated to standard building practices.				

FACILITIES INVENTORY - EXISTING VISITOR CENTER



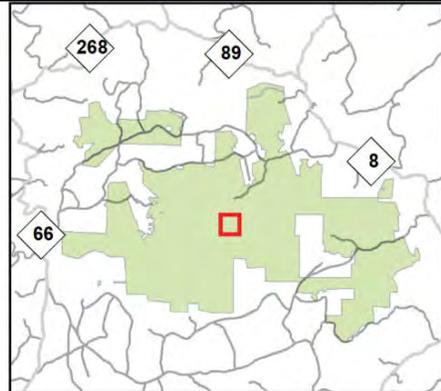
Hanging Rock State Park
Facilities Inventory

Visitor Center Area

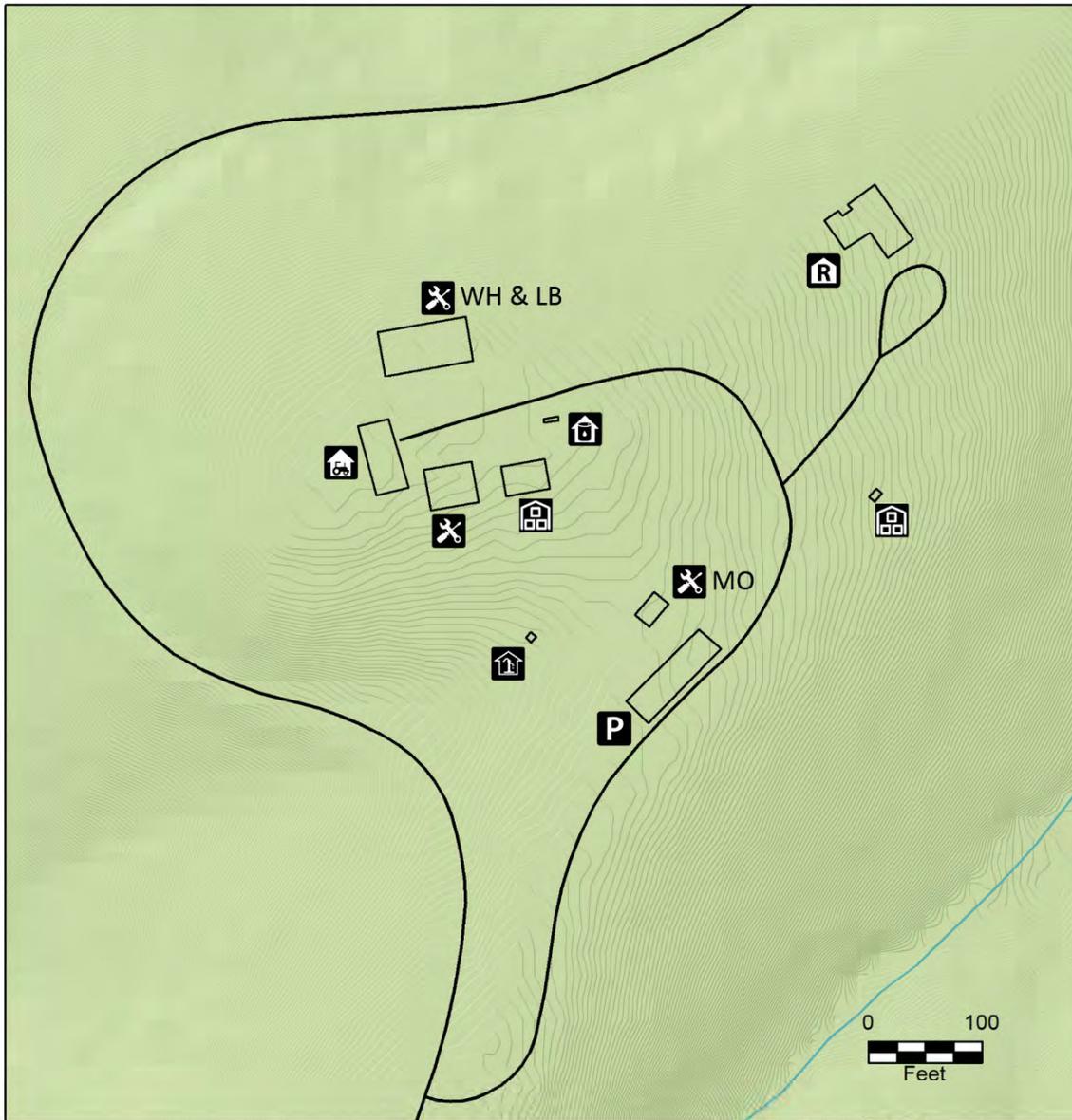
June 2019



-  Facility
-  State Park
-  Visitor Center
-  Parking
-  Picnic Shelter
-  Picnic Area
-  Restroom



FACILITIES INVENTORY - MAINTENANCE AREA



Hanging Rock State Park Facilities Inventory

Maintenance Area

April 2019

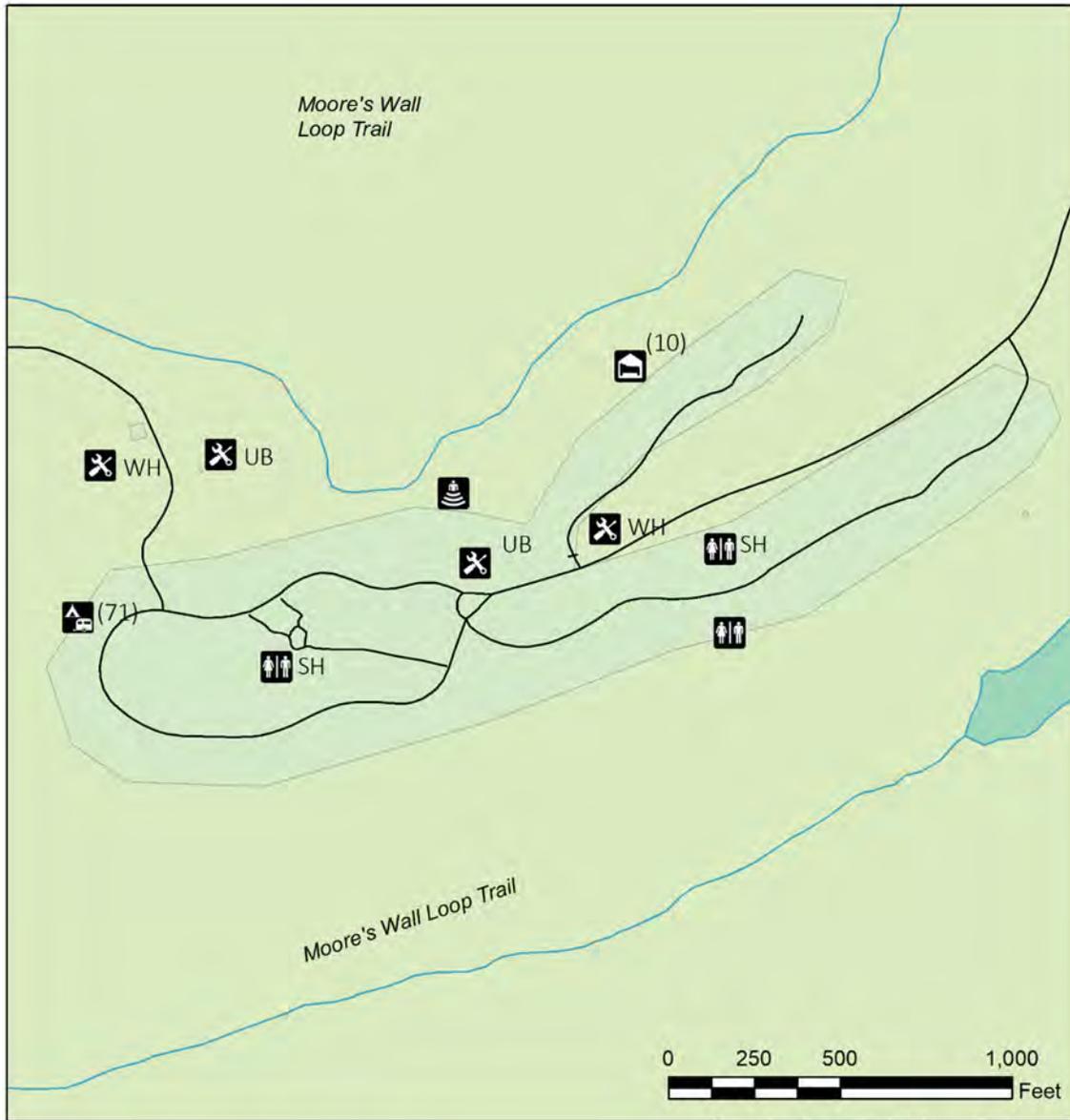


- Facilities
- State Park
- Fuel Storage Building
- Well House
- Storage Buildings
- Park Staff Parking
- Ranger Residence
- Vehicle & Equipment Garage
- Maintenance Shop
- MO - Maintenance Office



WH & LB - Warehouse & Lift Bay

FACILITIES INVENTORY- FAMILY CAMPGROUND



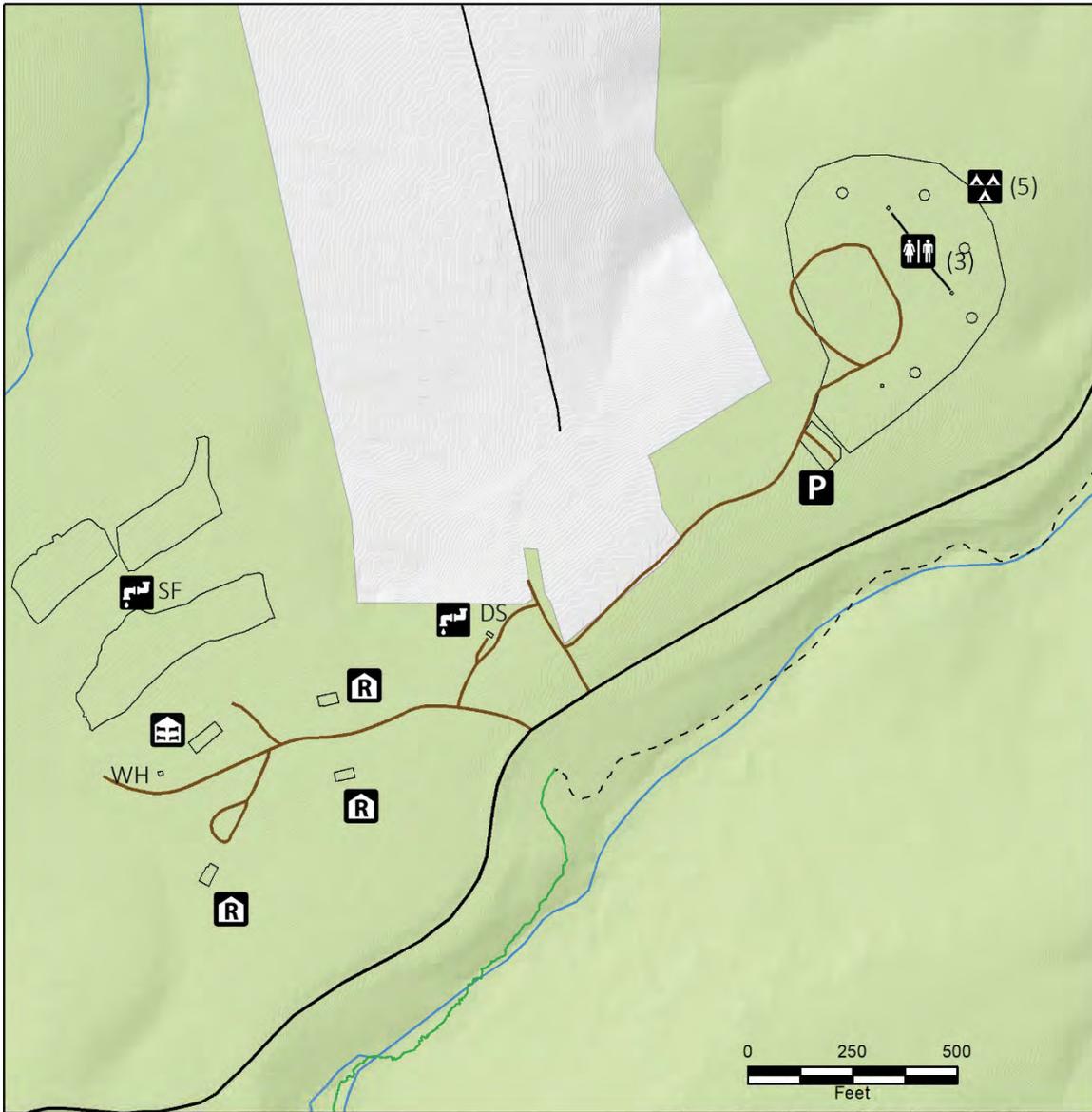
Hanging Rock State Park
 Facilities Inventory
 Family Campground
 November 2019



- Trails
- Facilities
- State Park
- 🎪 Amphitheater
- 🚿 SH- Showerhouse
- 🚽 PT- Pit Toilet
- 🏠 Cabins
- 🏕️ Campsites- No Hookups
- 🚰 WH- Wellhouse
- 🏢 UB- Utility Building



FACILITIES INVENTORY- GROUP CAMP AREA



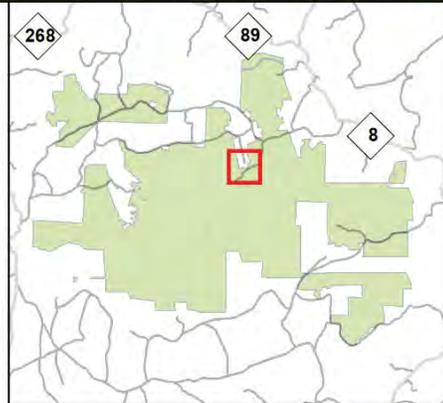
Hanging Rock State Park Facilities Inventory

Group Camp Area

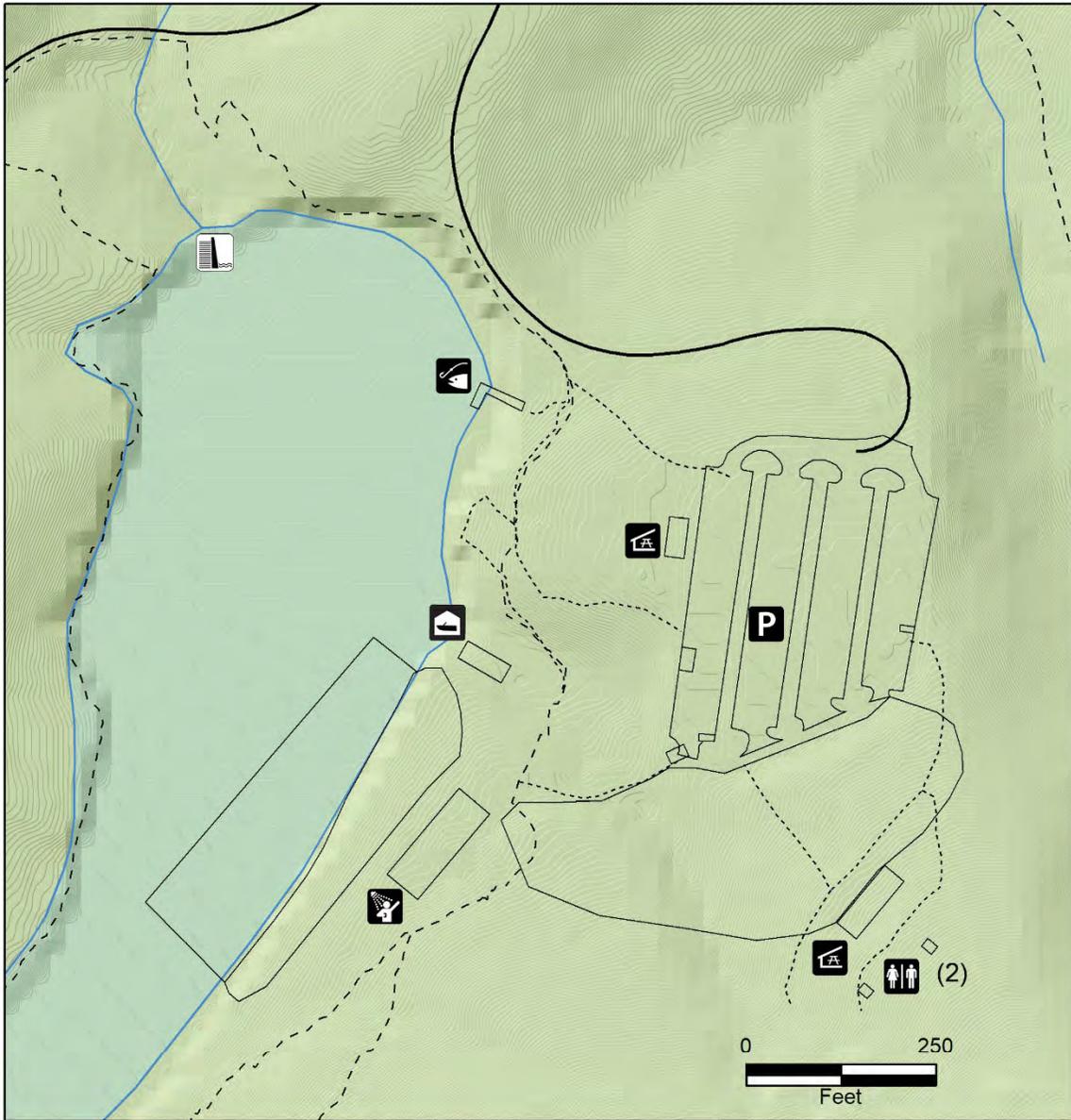
June 2019



- Trails
- Facilities
- State Park
- R** Ranger Residence
- B** Barracks
- A** Group Campsites
- 3** Restrooms, non-flush
- P** Parking
- SF** Septic Field
- DS** Dumpster
- WH** Wellhouse



FACILITIES INVENTORY - SWIMMING AREA



Hanging Rock State Park Facilities Inventory

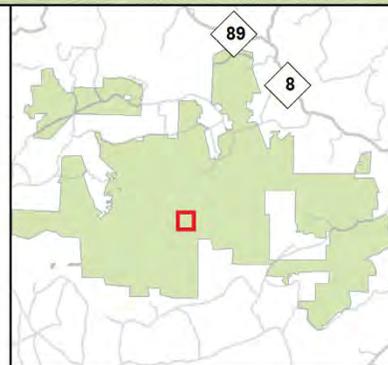
Swimming Area

May 2019

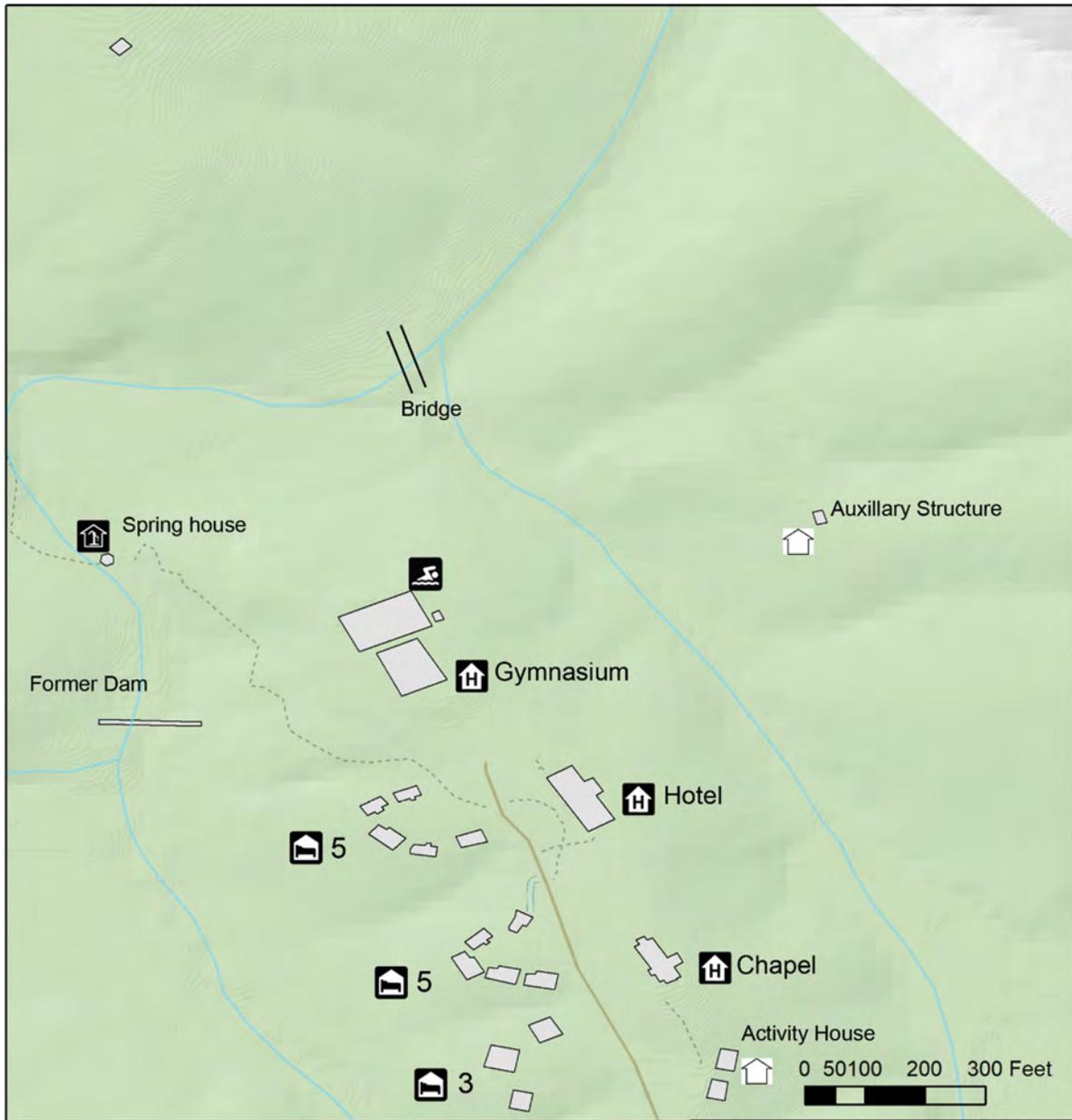


- Facilities
- State Parks
- Trails
- Bathhouse
- Fishing Pier
- Picnic Shelter
- Parking Area
- Swim Beach
- Boat House

- Restroom
- Dam



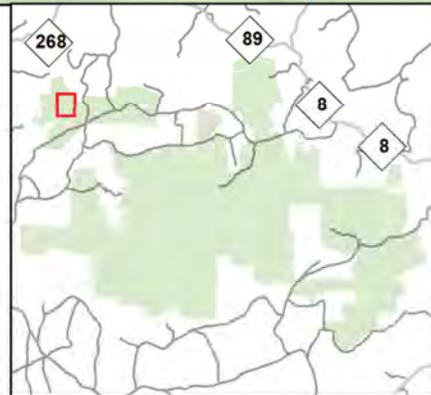
FACILITIES INVENTORY – VADE MECUM- NORTH



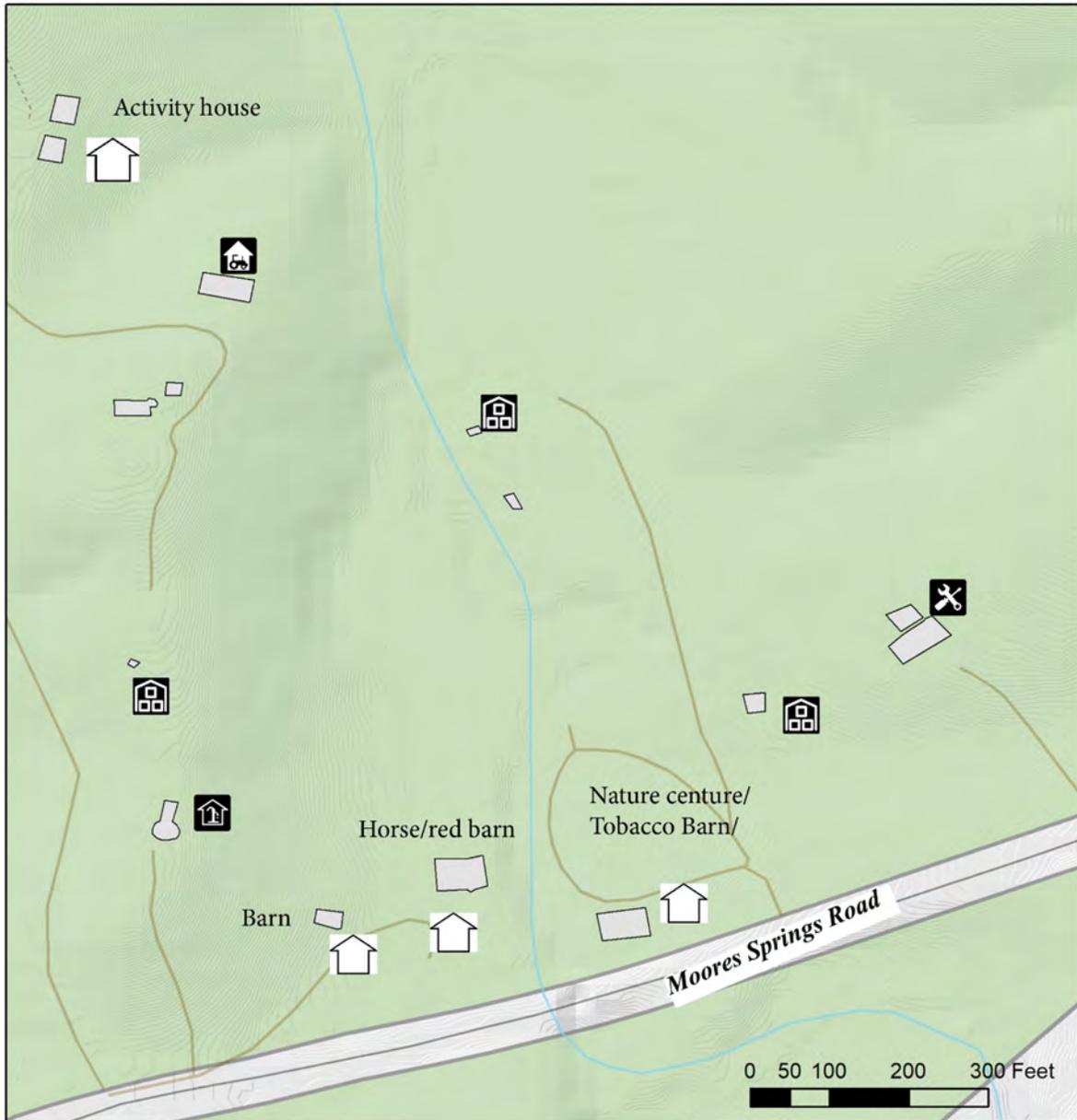
Hanging Rock State Park
 Facility Inventory
 Vade Mecum - North
 December 2019



- Facilities
- State Parks
- Cabin
- Historic Building
- Spring House
- Swimming Pool (Decomissioned)
- Structure



FACILITIES INVENTORY – VADE MECUM- SOUTH

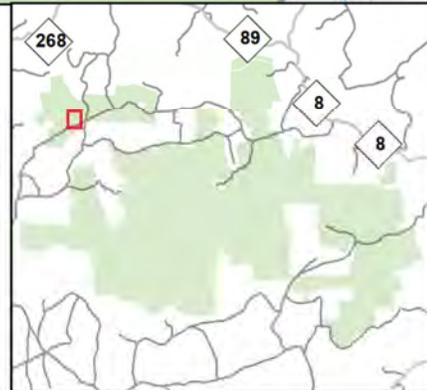


Hanging Rock State Park
Facility Inventory

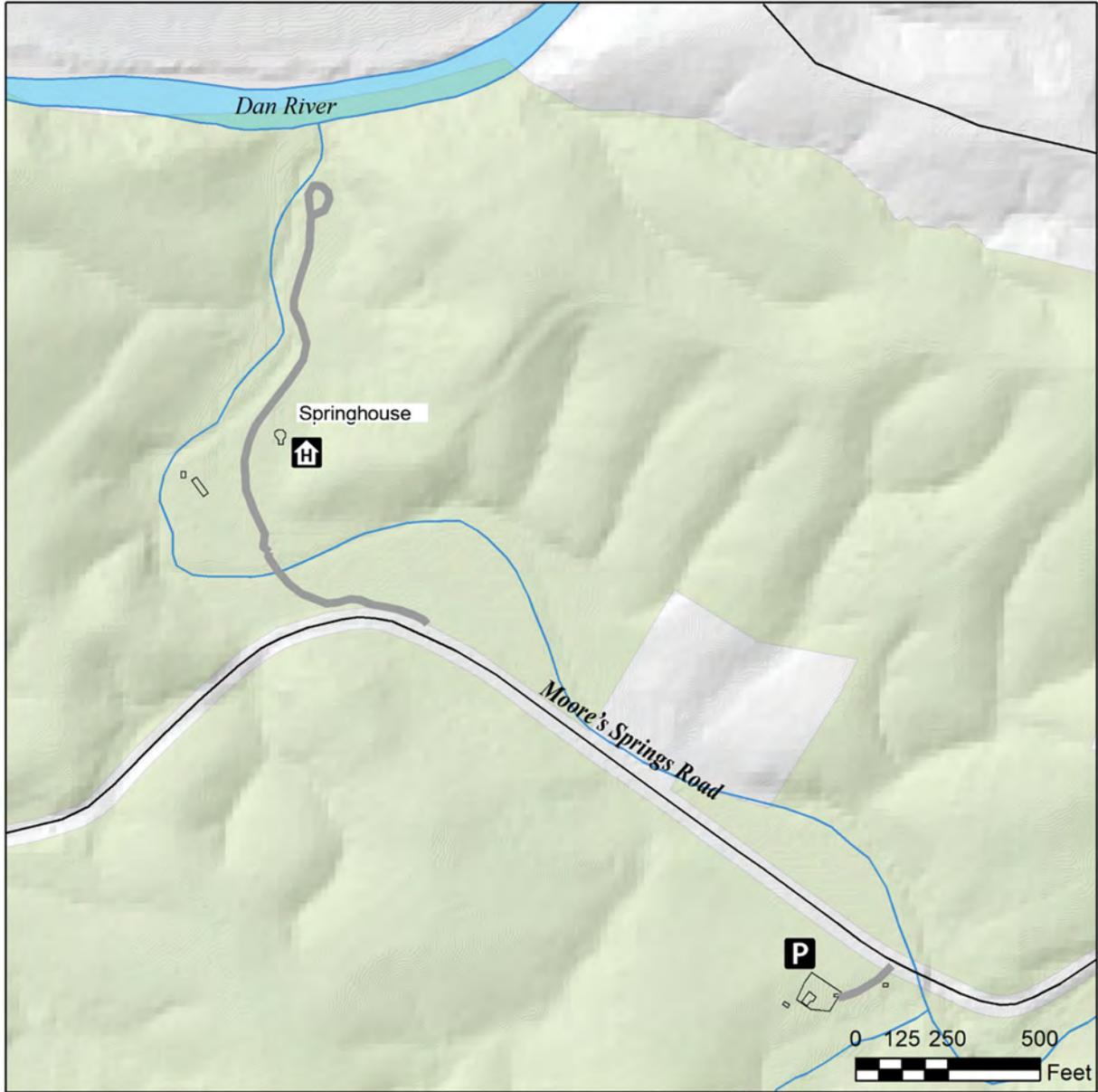
Vade Mecum - South
December 2019



-  Facilities
-  State Park
-  Pumphouse/Watertank
-  Equipment Storage
-  Storage Building
-  Maintenance Building
-  Structure



FACILITIES INVENTORY – MOORE SPRINGS



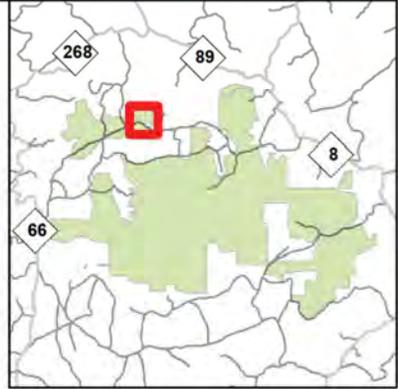
Hanging Rock State Park
Facilities Inventory

Moore Springs Area

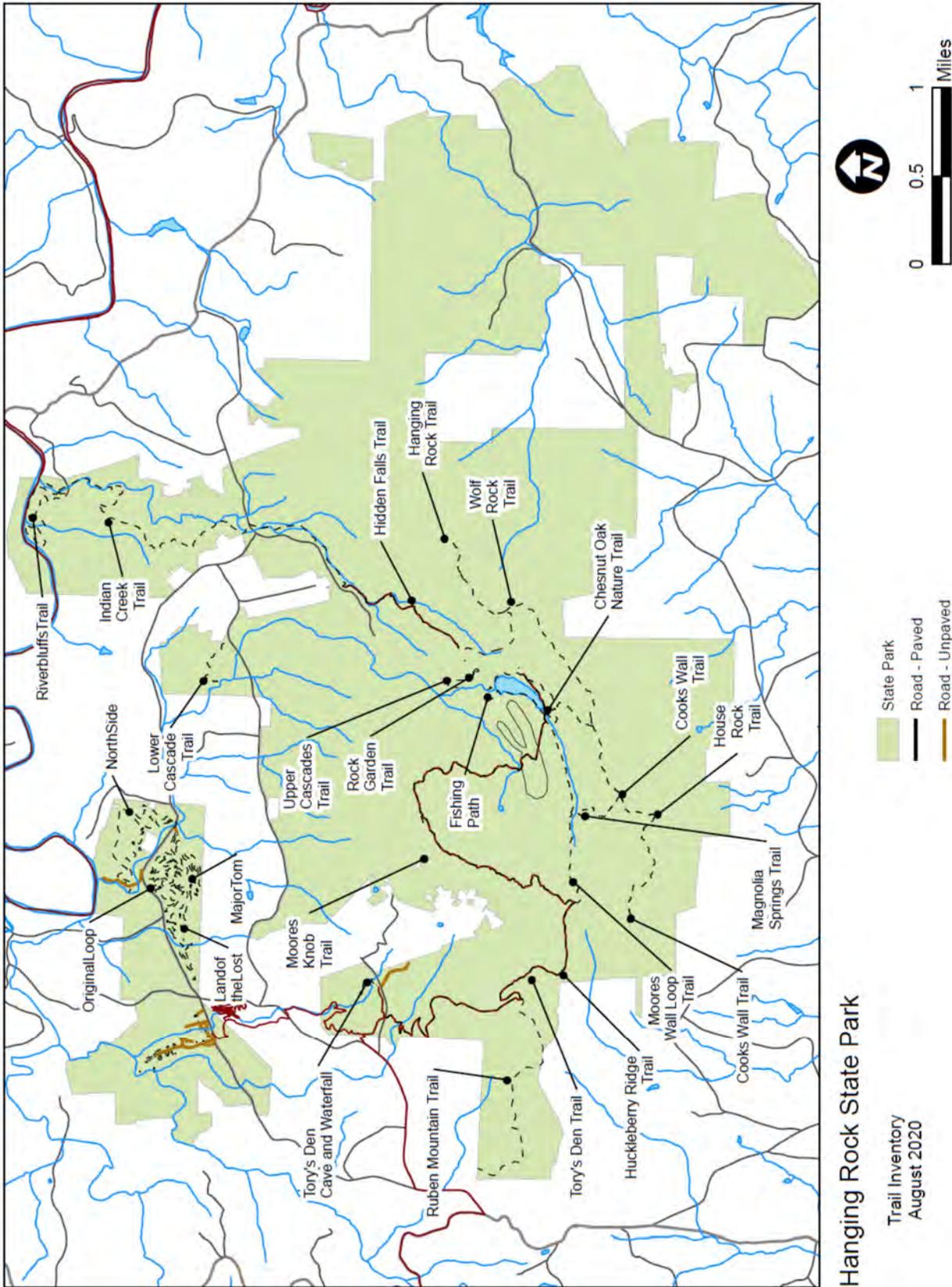
December 2019



-  Facilities
-  State Park
-  Historic Building
-  Parking Area



TRAILS INVENTORY



Hanging Rock State Park

Trail Inventory
August 2020

TRAILS INVENTORY- MOUNTAIN BIKE TRAILS



TRAIL INVENTORY – ASSESSMENT

Status	Description
1	Good condition/some routine trail maintenance required
2	Moderate trail maintenance required
3	Heavy erosion in places and/or unsustainable grades.
4	Trail closed due to erosion, damage, or other reasons. Make comments on closure reason.
Popularity	Description
4	Single most popular trail in the park w/ most visitors hiking this trail
3	Very popular trail with heavy usage in the park
2	Moderate usage by park visitors but other trails in the same park are more popular
1	Very little traffic overall or compared to other trails in the same park

TRAILNAME	USE	SURFACE	WIDTH	Blaze	Status	Popularity	Priority Score	Comments
Chestnut Oak Nature Trail	Hike		0		1	2	3	Duplicated Supt Survey response below to preserve original blazes and data
Cook's Wall Trail	Hike	Native	2	White Diamond	3	2	5	
Fishing Path	Hike		0		1	1	2	
Hanging Rock Trail	Hike	Concrete	8	Orange Circle	3	4	7	Trails staff have plotted a potential reroute for this trail. This may require multiple phases
Hidden Falls	Hike	Crush_Run	8		1	3	4	
Indian Creek Trail	Hike	Crush_Run	4	Red Square	2	2	4	
Land of the Lost	Hike Bike		0	White Hexagon	2	1	3	
Lower Cascades Trail	Hike		0		1	3	4	
Magnolia Springs Trail	Hike	Native	2	Blue Square	3	2	5	
Major Tom Trail	Hike Bike		0	Orange Hexagon	2	1	3	

Moore's Wall Loop Trail	Hike	Native	4	Red Circle	1	2	3
North Side	Hike Bike		0	Red Triangle	1	1	2
Original Loop	Hike Bike		0	Blue Hexagon	2	1	3
Riverbluffs Trail	Hike		0	Red Hexagon	1	1	2
Rock Garden	Hike	Asphalt	0		1	2	3
Ruben Mountain Trail	Hike Equestrian	Native	0	Blue Circle	1	2	3
Tory's Den Cave & Waterfall	Hike		0		1	2	3
Tory's Den Trail	Hike	Native	4	Blue Circle	3	1	4
Upper Cascades Trail	Hike	Crush_Run	8		1	3	4
Window Falls	Hike	Crush_Run	4	Red Square	1	3	4
Wolf Rock Trail	Hike	Native	2	Blue Triangle	1	2	3

palisades - vade mecum	Hike			Blue triangle	4	1	5
wiggly grit - vade mecum	Hike			red square	4	1	5
diamond lake bottoms -vade	Hike				4	1	5
pelican pool- vade mecum	Hike			white hexagon	4	1	5
rattler	Hike Bike			black	1	1	2
ring-neck	Hike Bike			unknown	1	1	2
Booth Loop	Hike Horse			unknown	3	1	4
R.M. Collins -vade mecum	Hike Horse			unknown	1	1	2

TRAIL INVENTORY

Trail Inventory	Hiking	Mtn Bike	Equestrian	Paddle
CCC Heritage Trail	0.10			
Black Racer Trail- Mountain Bike Trail	0.90	0.90		
Chestnut Oak Nature Trail	0.70			
Cook's Wall Trail	2.20			
Copperhead Connector Trail	1.50	1.50		
Fishing Path	1.00			
Hanging Rock Trail	1.30			
Hognose Trail- Mountain Bike Trail	1.00	1.00		
Indian Creek Trail	3.60			
Indian Creek Trail – Hike to Hidden Falls	0.40			
Lake Path	1.00			
Kingsnake Trail	1.80	1.80		
Land of the Lost Trail- Mountain Bike Trail	1.70	1.70		
Lower Cascades Trail	0.40			
Magnolia Springs Trail	0.40			
Major Tom Trail- Mountain Bike Trail	1.40	1.40		
Moore's Wall Loop Trail	4.30			
Mountains- to -Sea State Trail	7.40			
North Side Trail- Mountain Bike Trail	2.30			
Original Loop Trail- Mountain Bike Trail	3.00	3.00		
Rattler Trail- Mountain Bike Trail	0.50	0.50		
Ring -necked Trail- Mountain Bike Trail	3.00	3.00		
Riverbluffs Trail	1.30			
Rock Garden Trail	0.10			
Ruben Mountain Trail	2.90		2.90	
Tory's Den Cave and Waterfall Trail	0.20			
Tory's Den Trail	2.40		2.00	
Upper Cascades Trail	0.20			
Wolf Rock Trail	1.80			
Total	48.80	14.80	4.90	

HIKING TRAILS:

CCC Heritage Trail: This 0.10-mile-long easy trail starts at the group campground 2056 Hanging Rock Park Road. The trail surface is gravel, dirt, and rock. The trail passes five numbered posts and interpretive signs pointing out significant locations in what was once the middle of the bustling Civilian Conservation Corps Camp 3422. This camp was home to hundreds of CCC enrollees from 1935 to 1942. The men who lived here built the park roads and most of the facilities, which are still in use, including the bathhouse, picnic shelters, lake, and trails.

Black Racer Trail- Mountain Bike Trail: This 0.90-mile-long intermediate mountain bike trail is located on the north side of Moore's Springs Road.

Chestnut Oak Nature Trail: The 0.70-mile trail begins at the trailhead behind the lake bathhouse, located at 2847 Hanging Rock Park Road. The trail's surface is gravel, dirt, and rock. It is not a unique singular trail; it is a route that utilizes several other existing trails. This trail has numbered posts that correspond to a brochure available at the visitor center. Each post marks a native tree or plant found in the forest



Cook's Wall Trail

Cook's Wall Trail: This 2.20-mile trail starts at the lake parking lot at 2847 Hanging Rock Park Road. The surface is gravel, dirt, and rock, and some uneven steps. The trail offers sweeping views of the south and west with Sauratown and Pilot Mountain viewable in the distance. A rock formation feature, House Rock, is located 1.40 miles from the parking lot along this trail. House Rock is named for a "house-like" portion of the formation, which is a rock shelter overhang cavity that resembles a "living room." Other tall rock formations, including Devil's Chimney, are found past the end of the trail. The Cook's Wall section of rock is open for climbing with a permit.

Copperhead Connector Trail- Mountain Bike Trail: This 1.50-mile-long intermediate mountain bike trail begins along Moore's Springs Road and goes to the spring house and back.

Fishing Path: This out and back 1.00-mile trail is located on the east side of the lake near the dam. Access is located near the stone campground bridge.

Hanging Rock Trail: This out and back 1.30-mile trail starts at the visitor center parking lot and goes to the Hanging Rock overlook. This is a popular and challenging trail with several steps, sensitive natural resources and panoramic view to Pilot Mountain. This is part of the five peaks trail system.



Top of Hanging Rock Trail provides a spectacular panoramic view

Hognose Trail- Mountain Bike Trail: This 1.00-mile-long intermediate mountain bike trail starts on Moore's Springs Road.

Indian Creek Trail: This 3.60-mile trail begins at the east end of the visitor center parking lot, located at 1005 Visitor Center Drive. Made of gravel, dirt, and rock, it meanders down the mountain, along the Indian Creek, through shady rhododendron thickets and open oak forests, and ends at the Dan River. This trail crosses over Hanging Rock Park Road. Near the end, it crosses the creek several times without bridges. This trail is popular with scouting groups.

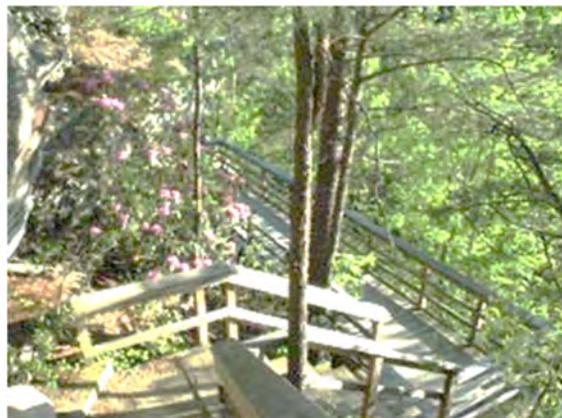
Indian Creek Trail – Hike to Window Falls: This 0.60-mile one way strenuous trail go to the Window Falls scenic waterfall. seen emerging from behind a natural window in the quartzite wall of rock, is a feature on the Indian Creek Trail. It is 0.6 miles from the visitor center parking lot. Hikers can get a safe view of the "window" from a railed overlook.

Kingsnake Trail: This 1.80-mile intermediate mountain bike trail is located on the north side of the Moores Springs access area.

Lake Path: The path begins at the trailhead behind the lake bathhouse, located at 2847 Hanging Rock Park Road. The 1.0 mile path surface is gravel, dirt, and rock. If walking the path clockwise, the trail crosses a long boardwalk and then follows closely along the edge of the lake. There are several benches and nice spots for fishing along the path. Near the dam, the path turns to the left and emerges at the paved Campground Road. Turn right and walk across the paved roadway bridge. Then turn right again to re-enter the path on the opposite side of the bridge. The path then goes uphill and back to the edge of the lake. Several more benches are situated in the open section along the earthen dam. The path then leads to the fishing pier. From there, it is paved in asphalt and winds gently uphill, past some wheelchair-accessible picnic table sites. The path then forks to the right, passing behind the boathouse to complete the loop.

Land of the Lost Trail- Mountain Bike Trails: Park at the farmhouse parking lot, located at 2700 Moore's Spring Road. This 1.70-mile intermediate Mountain bike trail begins near marker number 14 of the Original Loop Trail and ends near trail marker number 4 of the Major Tom Trail. The surface is gravel, dirt, and rock. The trail features some lovely flowing cycling, with a couple of rocky creek crossings. It is a pleasant back-end trail with some great, speedy descents. Mountain bike trails are open to hikers and mountain bikers. Hikers must yield to mountain bikers.

Lower Cascades Trail: This 0.40-mile trail begins at the trailhead and parking lot located at 2143 Hall Road. Hike a short distance through the forest on level ground to the edge of the gorge, before descending steep wooden and stone stairs to the base of the waterfall. Cascade Creek, which originates at the park lake, emerges from atop the naturally carved stone wall, falling 35 feet into a large pool.



Lower Cascades Trail

Magnolia Springs Trail: This 0.40-mile-long trail starts at the lake and meanders along Chestnut Oak nature trail and connects to the historic bathhouse. The trailhead begins 0.90 miles from the lake parking lot, on the Moore's Wall Loop Trail. The surface is gravel, dirt, and rock, along with some steps and a boardwalk. This trail is a connector, joining Moore's Wall Loop Trail to Cook's Wall Trail. It passes some of the many natural mountain springs found in the park.

Major Tom Trail- Mountain Bike Trails: Park at the farmhouse parking lot, located at 2700 Moore's Spring Road. The 1.40-mile trail begins near trail marker number 13 of the Original Loop Trail, parallels a farm field, then ends near marker number 10 of the Original Loop. The surface is gravel, dirt, and rock. It is a fast, rocky trail across steep hillsides.

Moore's Wall Loop Trail: This 4.70 mile long strenuous trail begins at the trailhead directly behind the stone bathhouse next to the lake parking lot at 2847 Hanging Rock Park Road. If hiking this trail clockwise, the trail climbs elevation slowly, ultimately leading to the highest point in the Sauratown Mountains: the Moore's Knob Observation Tower, at 2,947 feet above sea level. After passing "Balanced Rock," continue down the 684 stone steps of the "endless staircase." The trail crosses a small creek and passes behind the campground amphitheater. The trail then emerges onto a paved road surface. Follow the red dots on the pavement to campsite 40, where the trail goes back into the woods, then meanders along the back of the lake, and returns to the lake parking lot.



Moore's Wall Loop Trail

Mountain to Sea State Trail: The Mountains-to-Sea State Trail segment at Hanging Rock State Park is not a singular trail but follows along several already existing park trails for 7.40 miles. The MST begins at the park property boundary near Mickey Road at Sauratown Trail Section 1. Follow STA Section 1 to Tory's Den Trail. Then continue hiking to the end of Tory's Den Trail. Turn left on Moore's Wall Loop Trail. Follow this trail past the observation tower to the lake bathhouse. Then follow the white circles on the trees behind the boathouse and across the earthen dam to connect to the visitor center parking lot. Follow the white circles across the length of the visitor center parking lot to the Indian Creek trailhead. Continue down Indian Creek Trail until it intersects with Hanging Rock Park Road. This is the end of the MST inside Hanging Rock State Park. In the future, the park plans to extend the MST across the top of the mountain "three sisters" into the Town of Danbury.

North Side Trail- Mountain Bike Trails: This 2.30-mile moderate mountain bike trail starts at the parking lot next to "the Farmhouse" located at 2617 Moore's Springs Road.

Original Loop Trail- Mountain Bike Trails: –The 3.00-mile intermediate mountain bike trail begins at the west side of the farmhouse parking lot, located at 2700 Moore's Spring Road. The trail surface is gravel, dirt, and rock. The trail is winding with flowing sections and good berms, and it is a good loop through rolling forested hills. Mountain bike trails are open to hikers and mountain bikers. Hikers must yield to mountain bikers.

Rattler Trail- Mountain Bike Trails: Park at the farmhouse parking lot, located at 2700 Moore's Spring Road. The 0.50-mile intermediate mountain bike trail begins near mile marker 17 of the Major Tom Trail and ends at the parking lot behind the farmhouse. It should be ridden downhill only. The trail's surface is gravel, dirt, and rock. The trail is for advanced-skilled riders only, and it should not be taken by beginners. It is a steep, downhill trail with fast berms and big doubles, and it is a fun run on a mountain terrain that is sure to challenge.

Ring-necked Trail: This 3.00-mile long intermediate mountain bike trail begins at Moore's Springs Road and intersects with the Original Loop Mountain bike trail.

Riverbluffs Trail: This 1.30-mile loop hiking trail navigates through a floodplain habitat. The trailhead is located off 1258 Flinchum Road. This trail begins at the Dan River access parking lot, located at 1258 Flinchum Road. The trail's surface is dirt and sand. It is a mostly level loop trail that follows alongside the Dan River, past the "matrimony point" rock formation and the "play waves," before passing an old homesite. Keen hikers can spot old tobacco rows being erased by a tulip poplar forest.



Rock Garden Trail

Rock Garden Trail: This 0.10 – mile accessible trail begins at the west end of the visitor center parking lot, located at 1005 Visitor Center Drive, at the wooden handrail. The trail is asphalt and is wheelchair accessible. It immediately crosses Hanging Rock Park Road. This level trail leads through to forest to massive ancient boulders, a must-see for all visitors.

Ruben Mountain Trail: Park at Tory's Den parking lot, located at 1185 Charlie Young Road. Hikers must go 1 -mile up Tory's Den Trail to get to the trailhead for this 2.90-mile trail. Hiking this entire trail from the parking lot and back is approximately 5.50 miles. The trail is open to horses and hikers. The trail's surface is gravel, dirt, and rock. The wide trail winds around Ruben Mountain, a lesser-known member of the Sauratown Mountain Range, through boulder fields, and past a scenic view of Brown Mountain out in the distance.



Tory's Den cave

Tory's Den Cave and Waterfall Trail: This 0.20-mile trail begins at the trailhead at the east end of Tory's Den parking lot, located at 1185 Charlie Young Road. The trail's surface is gravel, dirt, and rock, with some wooden steps. A display at the parking lot describes the fascinating

Revolutionary War-era history of the cave. The trail leads to the tallest waterfall in the park, Tory's Falls. Water drops 240 feet over a series of gentle rock terraces. The waterfall can be safely viewed from the trail terminus, but hikers are not able to immerse in the falls due to steep terrain. The trail then continues to the 20-foot-deep, cool, natural cave.

Tory's Den Trail: This 2.40-mile-long trail begins at the trailhead at the west end of Tory's Den parking lot, located at 1185 Charlie Young Road. The trail's surface is gravel, dirt, and rock. The first half of the trail is open to both hikers and horseback riders. The trail goes downhill from the corner of the parking lot, along the powerline, and then crosses Charlie Young Road. It then meanders through forests and near a small stream, before climbing gradually up the mountain. A sign marks the end of the section that can be used by horses. Hikers can continue up to Huckleberry Ridge and its weathered rock formations. Tory's Den Trail ends at its intersection with Moore's Wall Loop Trail.

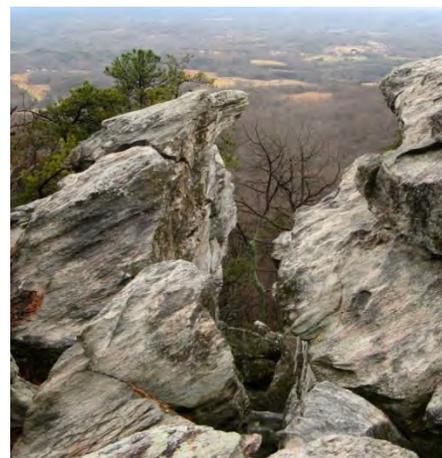
Upper Cascades Trail: This 0.20-mile-long trail begins at the west end of the visitor center parking lot, located at 1005 Visitor Center Drive, at the wooden handrail. The trail immediately crosses Hanging Rock Park Road. The trail starts out asphalt and turns to gravel after passing the intersection with Rock Garden Trail. A wide, gently sloping trail leads downhill to a wooden observation deck with seating for safe views of the tall, burbling falls. A set of wooden stairs takes adventurous hikers and dogs to a shallow catch pool at the base of the waterfall.



Upper Cascades Trail

Wolf Rock Trail:

The 1.40- mile long trail begins at the trailhead behind the lake bathhouse, located at 2847 Hanging Rock Park Road. This trail ends at its intersection with Hanging Rock Trail. The surface is gravel, dirt, and rock, and it has some uneven steps. Enjoy unobscured views to the south from atop Wolf Rock, a large outcropping of quartzite.



Wolf Rock Trail

IV. PLANNING

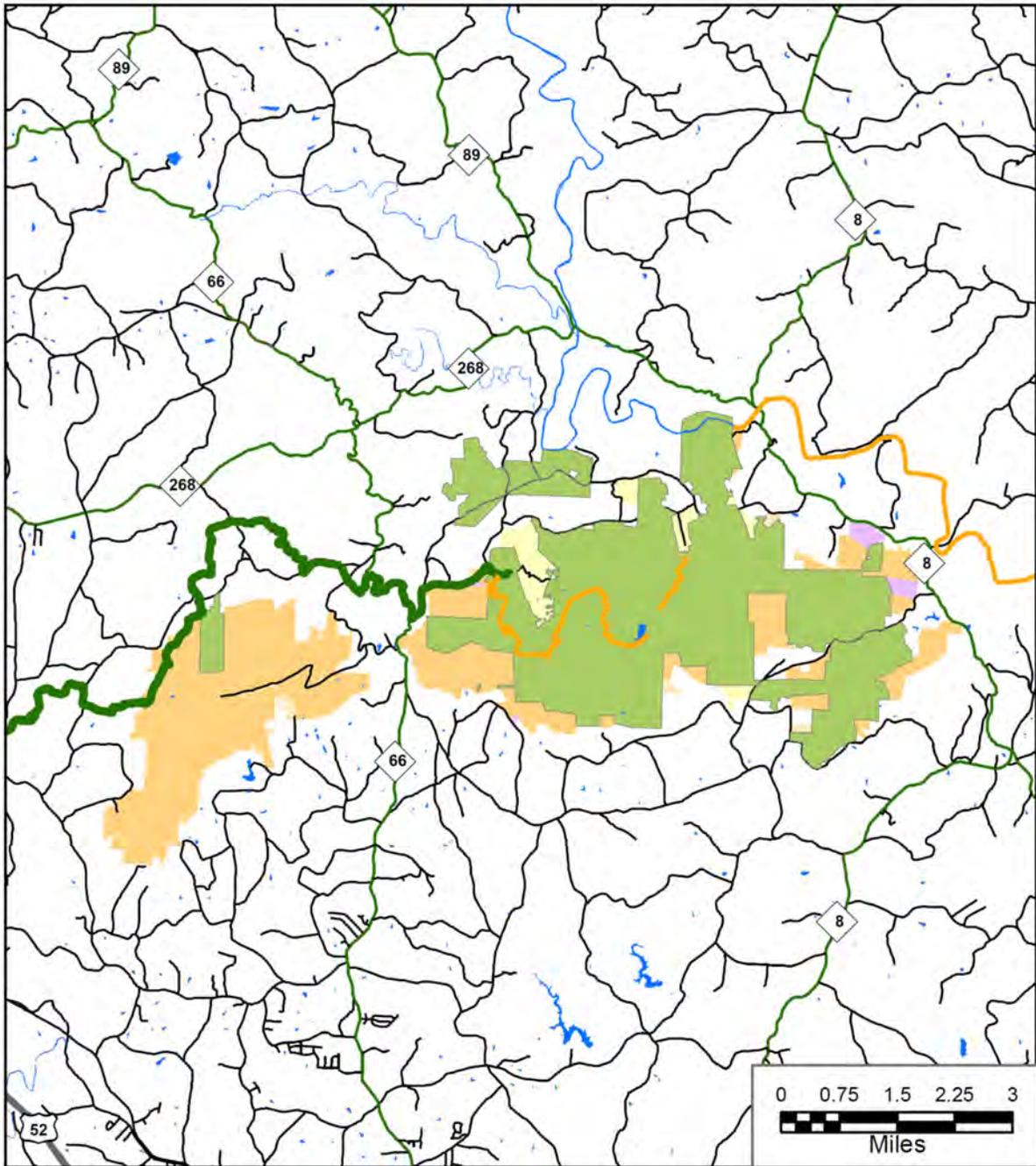


Watershed protection and scenic protection is a key strategy in state land acquisition

LAND PROTECTION FOR STATE PARKS

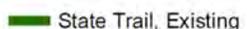
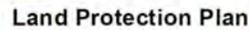
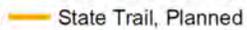
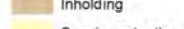
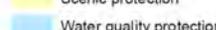
To achieve the highest level of connectivity between park properties already owned by the State of North Carolina, further acquisition of land is expected to take place. Additional land will ensure the maximum protection of natural resources, scenic preservation, outdoor recreation and public access. 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 show current land acquisition needs for *Hanging Rock State Park*.

LAND PROTECTION PLAN



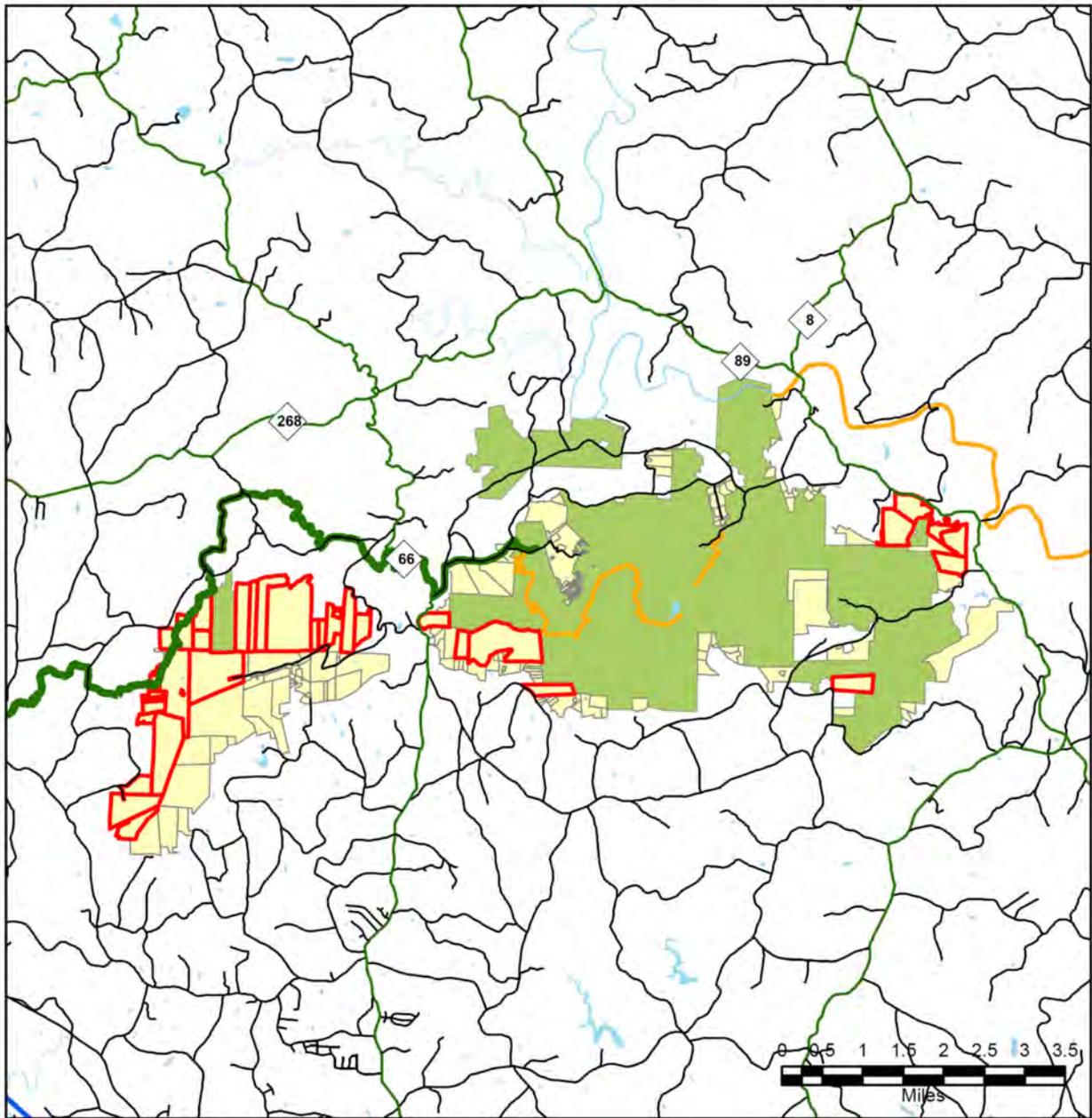
Hanging Rock State Park

N
October 2020

- | | |
|---|---|
|  State Parks Unit |  State Trail, Existing |
|  Primary resource protection |  State Trail, Planned |
|  Inholding | |
|  Scenic protection | |
|  Water quality protection | |
|  Facilities development | |
|  Buffer | |



LAND PROTECTION PLAN – CRITICAL ACRES



Hanging Rock
State Park

-  Critical need
-  State Parks Unit
-  Future Need
-  State Trail, Existing
-  State Trail, Planned



October 2020



PROJECT LIST

BOND PROJECT		
1	Vade mecum improvements	\$4,600,000
GMP PROJECT #	PROJECT TITLE	CONCEPTUAL COST
1	Hanging Rock Trail Improvements	\$432,000
2	Maintenance Area Improvements	\$625,000
3	Road improvements - Parkwide	\$937,500
4	Trail assessment report	\$62,500
5	Bathhouse and Swim Beach Improvements	\$737,500
6	Mill Creek Access: Remove and replace Orrell Road Bridge	\$531,250
7	Replace lower shower house at existing family campground	\$875,000
8	Proposed Moore's Wall Rock Climbing Trail	\$326,700
9	Trail improvements- parkwide	\$625,000
10	Replace upper shower house at existing family campground	\$875,000
11	Proposed Mill Creek Campground	\$4,100,000
12	Proposed Day Use Improvements at Mill Creek access	\$375,000
13	Proposed Cascade Creek Bridge at Moore Springs access	\$300,000
14	Proposed Moore Springs Day Use development	\$1,700,000
15	Proposed Trail Improvements at Mill Creek	\$625,000
16	Subsurface utility engineering survey	\$93,750
17	Repair sewer and water system	\$937,500
18	Campground Improvements	\$1,149,750
19	Lower cascades parking lot improvements	\$156,250
20	Moore's Wall Climbing Access Area	\$312,500
21	Backcountry camping along Mountains to Sea Corridor	\$437,500
**TOTAL:		\$16,308,450

FUTURE PROJECTS ALSO NEEDED		CONCEPTUAL COST
A	Bike Shack Trailhead	\$250,000
B	Proposed ranger residence at Mill Creek access	\$312,500
C	Moore's Springs Ed Booth Trailhead parking lot- north (Phase 3)	\$468,750
D	Vade mecum East - Cabins (Phase 2)	\$1,000,000
E	Vade mecum east – Shower house (Phase 2)	\$937,500
F	Vade mecum West (Phase 2)	\$593,750
G	Vade mecum North (Phase 3)	\$781,250
H	Vade mecum North (Phase 3)- reforestation	\$437,500
I	Proposed ranger residence at Mill Creek access	\$312,500
J	Proposed mini maintenance along Orrell road at Mill creek	\$187,500
K	Primitive camping at Mill Creek access	\$300,000
L	L-Cooks Wall climbing access	\$520,000
TOTAL		\$ 6,257,500

*** Planning estimated project includes 25% contingency, does not include design fee nor escalation*

BOND PROJECT:

1. Vade mecum improvements

The purpose is to open Vade mecum facility including Cheshire Hall, Vade mecum and gym, a former 4H Camp and resort, for public use. This project will include: the stabilization, renovation, and code compliance for accessibility of the gymnasium and first floor of the Cheshire Hall, a hotel that dates to 1902. Site work includes: a proposed accessible ramp to restroom between hotel and gym, common restroom facility located between hotel and gym for large events, septic system improvements, accessible restroom inside chapel from the 1940s, roadway and utility improvements. The patio on the front porch gym will create a gathering area for locals and citizens. Pavers could be installed on the front porch of the gym to provide a flat surface for accessible code compliance.

GENERAL MANAGEMENT PROJECTS:

1. Hanging Rock Trail Improvements

Hanging Rock Trail to the overlook needs to be redesigned to provide emergency access due to multiple injuries and heavy usage. Trails staff will design an alignment trail built to sustainable design standards and practices.



Existing Hanging Rock Trail alignment

Scope of work:

- Selective tree clearing,
- Minor grading diversion ditches will provide adequate drainage
- Install stone steps (field verify)
- Construct Re-routes using sustainable design standards
- Erosion control measures
- Stormwater management devices (as needed)
- Re-establish understory with native species



Existing timbers have a 6" riser and 6" platform becomes a trip hazard. Stone edging is inconsistent



Existing trail on a 3:1 slope needs to be re routed

2. Maintenance Area Improvements

The maintenance area pavement is over 30 years old, and needs to be repaired in order to provide a safe working environment for park staff. This park manages and maintains over 8,837 acres.

Scope of work:

- Install 3 bay pole barn
- Storage for materials
- Additional staff parking spaces (5)
- Install Storm drainage and construct parking lot to sheet flow to diversion ditch
- Coordinate with NCDOT to repair and repave asphalt



Need additional staff parking located close to the maintenance facility



Existing asphalt needs to be regrading for positive drainage. Need to install asphalt paving, provide staff parking and an area to store materials.

3. Road improvements -Parkwide

The road system is in poor shape due to tree roots and rocky soils causing pavement cracking and upheavals. Park staff will coordinate with NCDOT.

Scope of work:

- Maintenance area parking lot
- Hanging Rock State Park road. - resurface and stripe
- Clear and realign drainage ditches to create positive drainage.
- Campground Road
- Remove tree roots prior to resurfacing.
- Replace damaged stone curbing (2,500 feet) in the visitor center parking lots (field verify).



Hanging Rock State Park Road needs to be repaved due damage from tree roots



Existing Maintenance area needs grading, re-pavement and paint striping



Campground Road is very narrow, and pavement has been damaged from tree roots

Existing Bridges:

- Upgrade campground road bridge prior to campground improvement project occurs. Install structural beams to support construction equipment will be used to improve the campground.
- Repair and tuck point the stone veneer around the abutments and walls.



Campground bridge needs additional structural beams

4. Trail assessment report

An assessment report is needed in order to set priorities and reroute trails to sustainable design standards that have significant erosion issues and impact the natural resources due to overuse.

5. Bathhouse and Swim Beach Improvements

The Civilian conservation corps (CCC) bathhouse, which dates to 1930's, has moisture issues due to lack of insulation in walls, doors and windows. The first floor is damp due to water leaking down from the 2nd floor onto the floor joists. This project needs an architect to assess the condition and provide recommendations.

Diving platform needs a structural assessment performed by a licensed professional engineer (PE). Project funding is dependent upon assessment report.

Scope of work:

- Architectural assessment report
- Structural assessment report for diving platform
- Insulate windows
- Inspect floor drains and outlet
- Inspect plumbing for connections and leaks
- Install stormwater improvements and roof water drainage
- Install prefabricated trench drain system
- Install erosion issues on swim beach
- Make repairs to diving platform based on structural assessment recommendations
- Repair dam structure

6. Mill Creek Access: Remove and replace Orrell Road Bridge

Staff will coordinate with NCDOT to remove and replace the existing Orrell bridge. The bridge needs to be reconfigured to a ‘T-intersection’, widened to 30’ and provide adequate weight capacity for grading equipment, emergency access and recreational vehicles (RV’s). This project will establish a safe intersection for the future campground improvements.



Orrell Road Bridge does not have enough weight capacity to carry construction equipment or RV's

7. Replace lower shower house at existing campground

The shower house, located at the family campground, is over 60 years old and not accessible. Currently, the shower house must be closed for 5 months during winter months because the building is not able to be winterized, therefore reducing revenue generation. A newly constructed structure will improve the camping experience.

Scope of work:

- Demolish existing shower house
- Construct an accessible pathway from parking space to entrance of new shower house
- Reuse existing 5,400-gallon septic tank or new construction based on the subsurface utility engineering (SUE) assessment survey
- Hook up utilities to existing connection
- Install area for washing station



Front elevation of existing lower shower house



8. Proposed Moore’s Wall Rock Climbing Trail

This 3.30-mile trail needs to be built using sustainable trail design and construction practices. This trail will require adequate stone steps. Piedmont trail specialist will review and design trail corridor. RTP grant will supplement additional funding.

9. Trail improvements- parkwide

After the trail assessment report is completed, then project priorities will be determined. Trails improvement scope of work includes:

- Mountains to Sea State Trail corridor within park boundary.
- Mountains to Sea Trail - Connect from Sheep Rock Road to Downtown Danbury, Stokes County Governmental complex.
- Sustainable trail design and construction practices
- Magnolia Springs Trail (0.40 miles)
 - Erosion control measures
 - Sustainable trail re-routes based on field conditions and topography
- Wolf Rock Trail (1.80 miles)
 - Erosion control measures
 - Sustainable re-routes based on field conditions and topography

10. Replace upper shower house at existing family campground

The shower house, located at the family campground, is over 60 years old and not accessible. Currently, the shower house must be closed for 5 months during winter months because the building is not able to be winterized, therefore reducing revenue generation. A newly constructed structure will improve the camping experience.

Scope of work:

- Demolish existing shower house
- Construct an accessible pathway from parking space to entrance of new shower house
- Reuse existing 5,400-gallon septic tank or new construction based on the subsurface utility engineering (SUE) survey and recommendations
- Hook up utilities to existing connection
- Install area for washing station for washing dishes or clothes.



Side view of upper shower house



Wash station

11. Proposed Mill Creek Campground

During peak times, the campground is full on weekends. This will provide an alternate campground away from the central section of the park proper.

Scope of work:

- Adequate campsites for RV or Tent and Trailer camping (minimum 30 sites) ,
- Proposed shower house with a septic field,
- Road improvements
- Well and well house
- Electrical
- Multi -purpose area
- Dump Station

12. Proposed Day Use Improvements at Mill Creek access

An alternate Trailhead parking area with a vault toilet is needed in order facilitate visitation and capacity issues. On holidays and weekends, the park if full. This would create another satellite trail system to alleviate the main park road.

Scope of work:

- Install a wellhouse structure to the existing well for safety purposes.
- Construct trailhead parking lot
- Construct a 2,000 lin. Ft. access road
- Install a single or double vault toilet

13. Proposed Cascade Creek Bridge at Moore Springs Access

The existing vehicular bridge does not meet design standards for emergency access. The bridge needs to be removed and replaced with a prefabricated metal span bridge and concrete abutments.



Existing vehicular bridge across Cascade Creek

14. Proposed Moore Springs Day Use Development

Scope of work:

- Parking lot improvements
- Relocate driveway
- River access and drop off area
- Gravel path down to Dan River
- Pedestrian Bridge (1)
- Hiking Trails
- Picnic areas (9)
- Proposed Restroom
- Proposed Shelter
- Interpretive signage
- Proposed Maintenance building

15. Proposed Trail improvements at Mills Creek

The 5-10-mile loop trail will start at the Mills Creek trailhead parking lot, cross over Mill Creek and end near Orrell Road.

Scope of work:

- Metal bridge for pedestrian and emergency access
- Sustainable trail alignment
- Erosion control measures

16. Subsurface utility engineering survey

Water system is outdated and not efficient. The age of the water system zones ranges from 12 to over 80 years old. The system causes high maintenance issues for the park. A subsurface utility engineering (SUE) survey is needed to fully understand the issues associated with all (electric, water and sewer) utility systems and a feasibility study needs to be completed to evaluate volume/usage/current and future capacity of system. When the Mill Creek access area is integrated into the park, then the water system or proposed well and wellhouse needs to provide adequate capacity for a family campground (including camper cabins, RV, Tent and Trailer, and primitive campsites).

17. Repair sewer system and water system

After the subsurface utility engineering (SUE) survey is completed, then the park will have a guideline for priorities, budgeting and recommendations for improvements. The systems range from 12 to 80 years old and some utilities need to be abandoned, removed, or replaced. Additional funding sources will be evaluated due to escalating cost of construction.

Currently, Hanging Rock State Park has 23 active sewer systems in the park. They range in size from a 13,000-gallons-a-day septic tank to a 1,000-gallons-a-day septic tank with conventional nitrification lines. Due to size of system it is subdivided into zones.

Zones include:

Family campground system

- Camping Area and Cabin Sewer System

Swim Beach system

- Bathhouse septic system
- Picnic area toilets

Maintenance area system

- Maintenance area Office Septic system
- Residence septic

Staff system

- Septic System for (6) Ranger Residences
- Barracks septic
- Leach field
- Group camp -(3) vault toilets

Visitor Center system

- Visitor Center septic tank
- Lower Picnic Area septic

Satellite access areas/Vade mecum/ Moore's Spring system

- Climbing access vault toilet
- Moore's Spring solids tank
- Vade Mecum Hotel septic lift station and leach field
- Vade Mecum cabin loops (4) separate septic tanks
- Vade Mecum caretakers house/brown house septic

18. Campground Improvements

After the upper and lower shower houses are constructed, then the 73 camp sites campground improvements will occur.

Scope of work:

- Tree clearing and stump grinding as needed
- Pave and widen 20' wide driveway with asphalt or reinforced concrete
- Accessible parking spaces (as needed)
- Install Impact pad: granite screenings and timber
- Install Fire rings
- Install picnic tables
- Provide trail connection to shower house



Existing Firepit needs to be integrated into the impact pad area



Existing impact pad needs replacement of timbers

19. Lower cascades parking lot improvements

The parking lot off Hall Road has potholes due to age, usage and construction practices.

Scope of work:

- Grade for positive drainage,
- Installation shade trees
- Remove asphalt in order to construct tree islands
- Install concrete wheel stops to designate parking space



Parking lot has poor drainage and asphalt is crumbling

20. Moore’s Wall Climbing Access area

This access area has 10 parking spaces with a narrow access drive. Parking lot is full during peak times. The parking lot needs to be expanded and provide a minimum 20 feet wide emergency access.

Scope of work:

- Provide adequate concrete wheel stops in order to mark individual parking spaces.
- Install boulders or a barrier to keep users off the emergency access route.

21. Backcountry camping along Mountains to Sea trail corridor

After the Mountains to Sea trail is dedicated thru the park, adequate backcountry camp sites will be installed. A pit or composting toilet will be installed



every 10-15 miles based on field conditions. This would be used by local and state-wide scout and back country user groups.

Future Projects also needed

A. Bike Shack Trailhead

Adequate parking spaces, single vault toilet and an accessible route are needed to provide defined spaces for 14 miles of mountain bike trails users at the Moore Springs access area.

B. Moores Springs Ed Booth Trailhead parking lot- north (Phase 3)

Scope of work includes:

- Restroom ,
- Trailhead parking for 60 parking spaces,
- Entrance sign,
- Connect to mountain bike system at Moore Springs
-

C. Moores Springs Ed Booth Trailhead parking lot- south

Scope of work includes:

- Restroom,
- Trailhead parking for 40 spaces,
- Entrance sign,
- Connect to Hanging Rock proper

D. Vade mecum East - Cabins (Phase 2)

Scope of work includes:

- Construct 9 cabins,
- Horse trailer parking lot with 11 paddocks,
- Camp store renovation,
- 22 parking spaces

E. Vade mecum East- Shower house (Phase 2)

Scope of work includes:

- Proposed showerhouse for cabins
- and septic field
- Adequate parking

F. Vade mecum West (Phase 2)

Scope of work includes:

- Proposed restroom,
- equestrian trails,

- parking lot-40 cars,
- (10) horse trailer parking spaces

G. Vade mecum north (Phase 3)

Scope of work includes:

- Backcountry area;
- Hiking trails,
- Reforestation,
- Primitive group campsites (4),
- Restroom,
- Equestrian trails,
- 15 primitive tent sites,
- Campsite expansion area

H. Vade mecum North-(Phase 3)- reforestation

Scope of work includes:

Reforestation and managed prescribed burning operations to cleanup poorly managed timber management operations

I. Proposed Ranger residence at Mill Creek access

A ranger residence needs to be constructed along Mountain Road. The house needs to be located 0.25 -mile from the proposed family campground for adequate response time.

J. Proposed mini- maintenance at Mill Creek access

Staff needs to store mowing equipment and supplies prior to the construction of an additional family campground and day use area Mill Creek access.

K. Primitive camping at Mill Creek access

Many times, the family campground is full on the weekends. This would provide an alternate location for primitive or group camp sites.

Scope of work:

- Impact pads
- Fire rings
- Platform camping
- Vault toilet or composting toilet

Infrastructure, including water and sewer and electricity, will need to be installed prior to a family campground is established.

L L - Cooks Wall climbing access

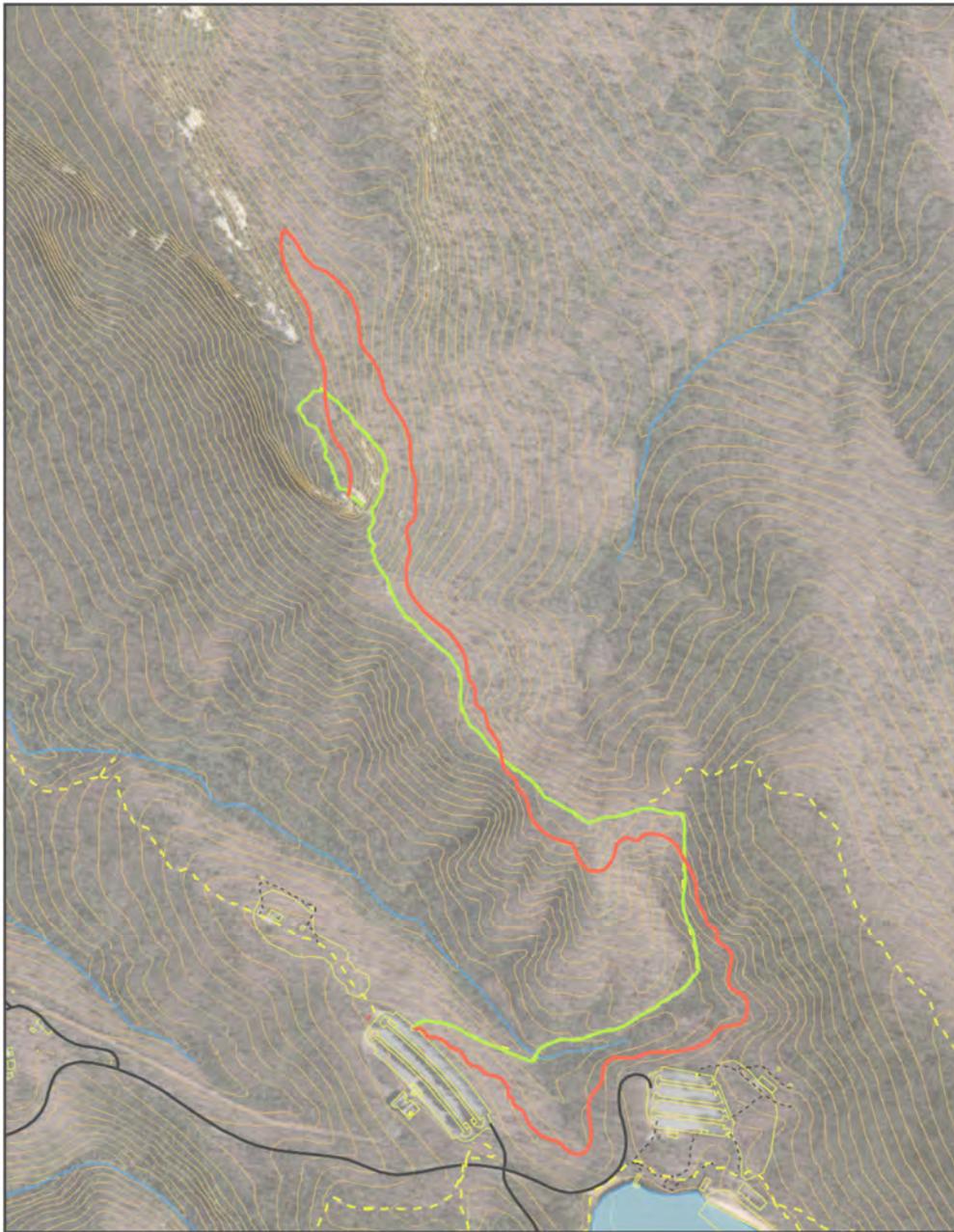
Cooks Wall provides an alternate access area away from the central section of the park. Currently, the climbing access requires the purchase of a land dependent 80-acre tract located along Covington Road.

Scope of work:

- Approx. 2,000 lin. feet, 20' wide for emergency access
- Grading, storm water and erosion control measures as needed
- Adequate parking and trailhead
- Vault toilet or composting toilet
- Trails system to Devils Chimney and Cooks Wall for climbers
- Modular retaining wall as needed

PROJECT #1: HANGING ROCK TRAIL IMPROVEMENTS

- Reroute Concepts
- Hanging Rock Trail
- Existing Trails
- Road - Paved
- Road - Unpaved
- Footpath
- Bridge
- Boardwalk
- Gate
- Utility Line
- Fence
- Ditch
- Facilities
- State Park Boundary
- Interstate
- US Highway
- Blue Ridge Parkway
- NC Highway



N

Contour Interval = 20'

4,000 Feet

2,000

1,000

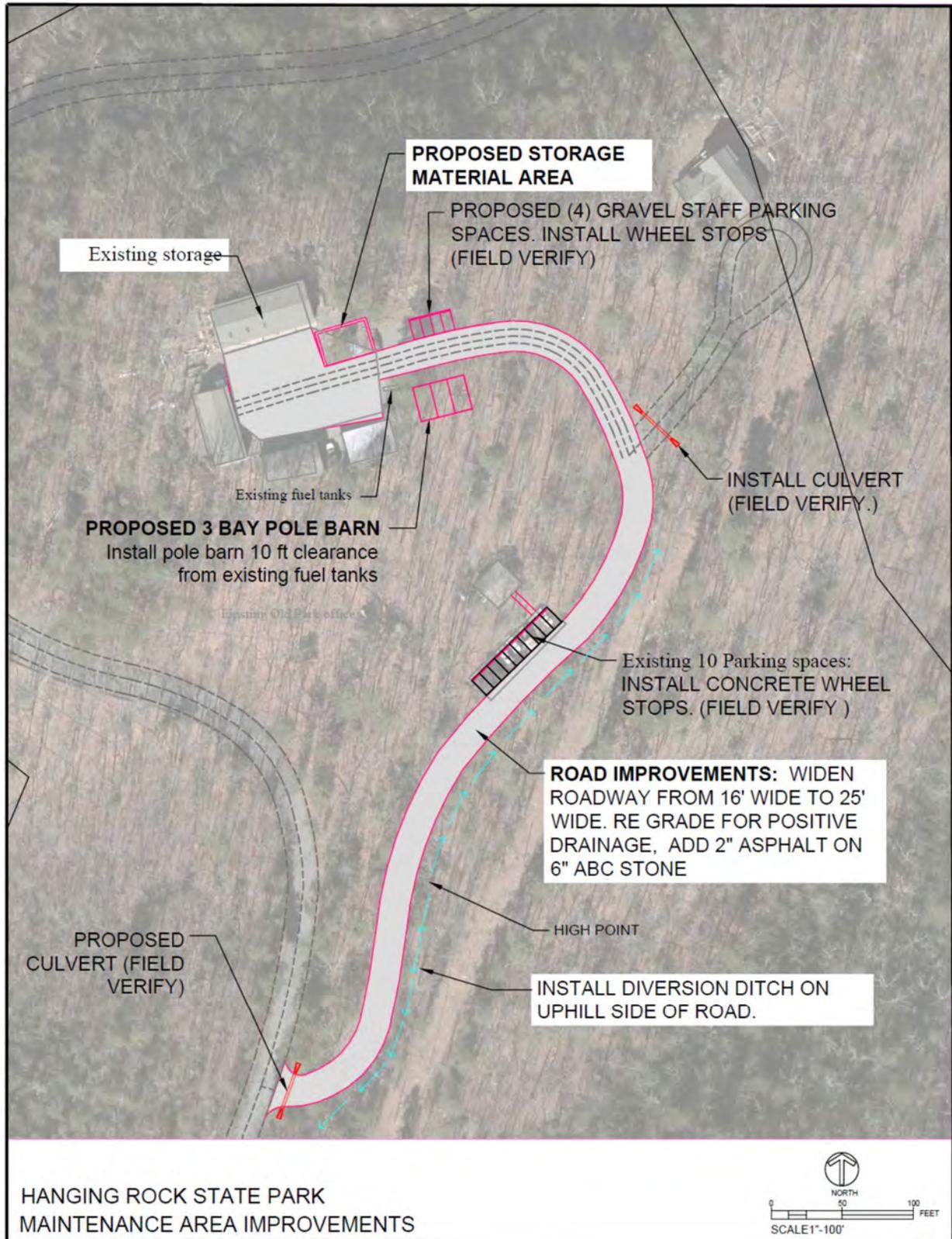
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Feet

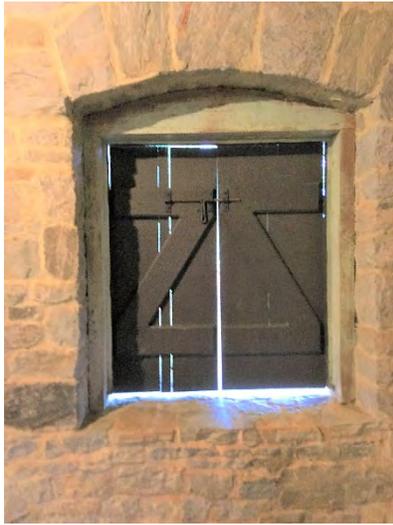
Hanging Rock Trail Reroute Concept
Hanging Rock State Park

June 2019

PROJECT #2: MAINTENANCE AREA IMPROVEMENTS



PROJECT #5: BATHHOUSE AND SWIM BEACH IMPROVEMENTS

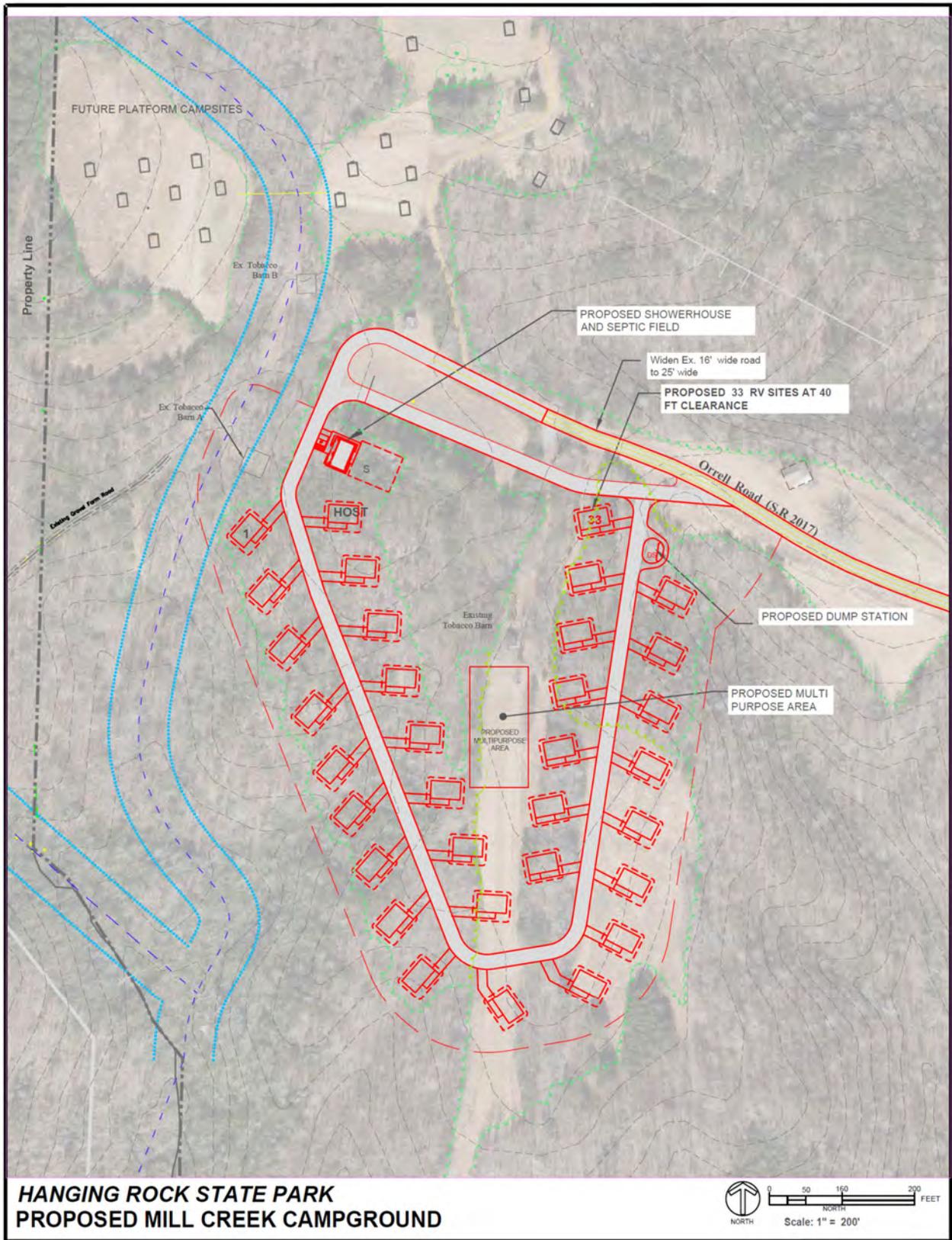


Diving platform needs structural assessment report and recommendations

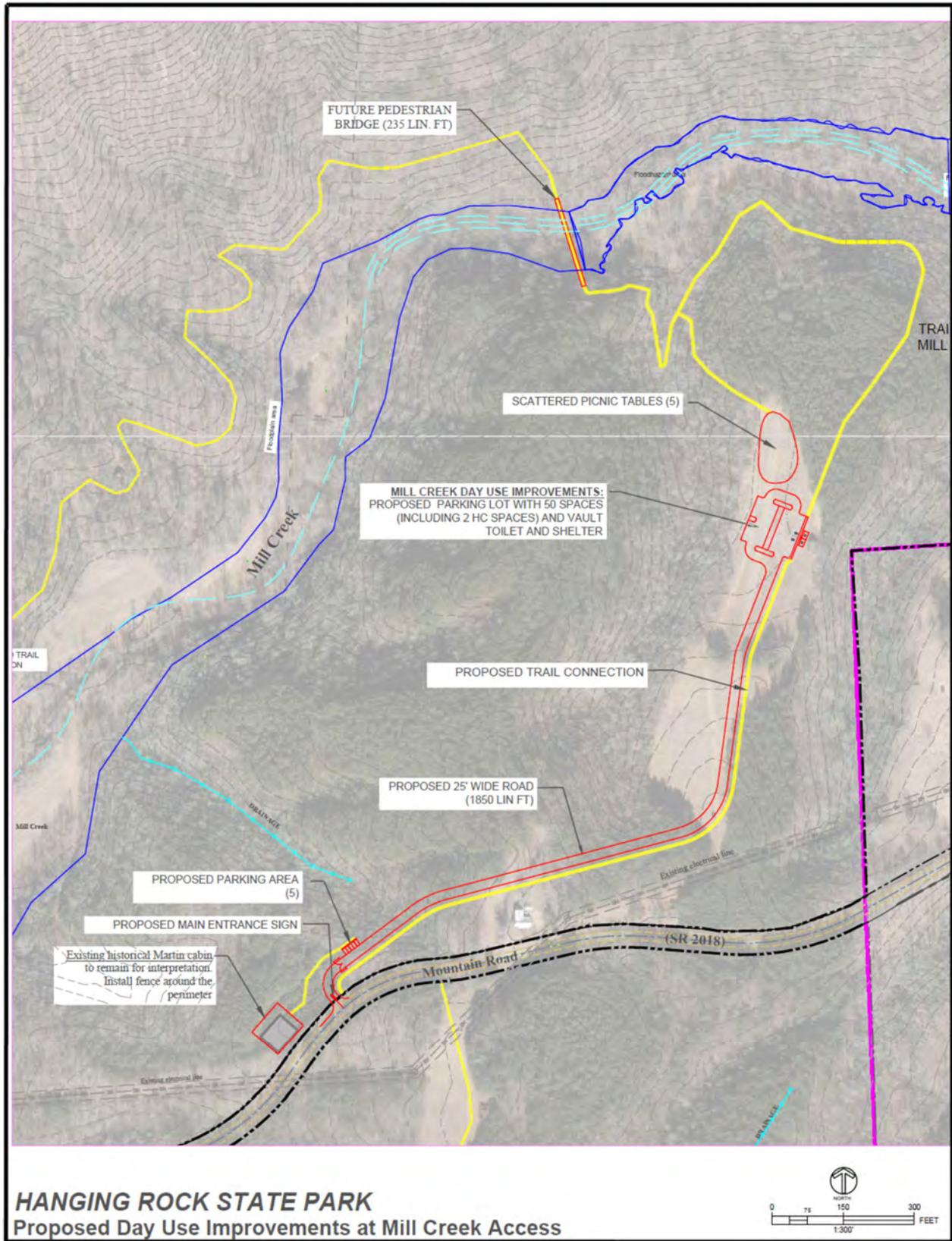


Swim beach needs erosion control devices designed and installed

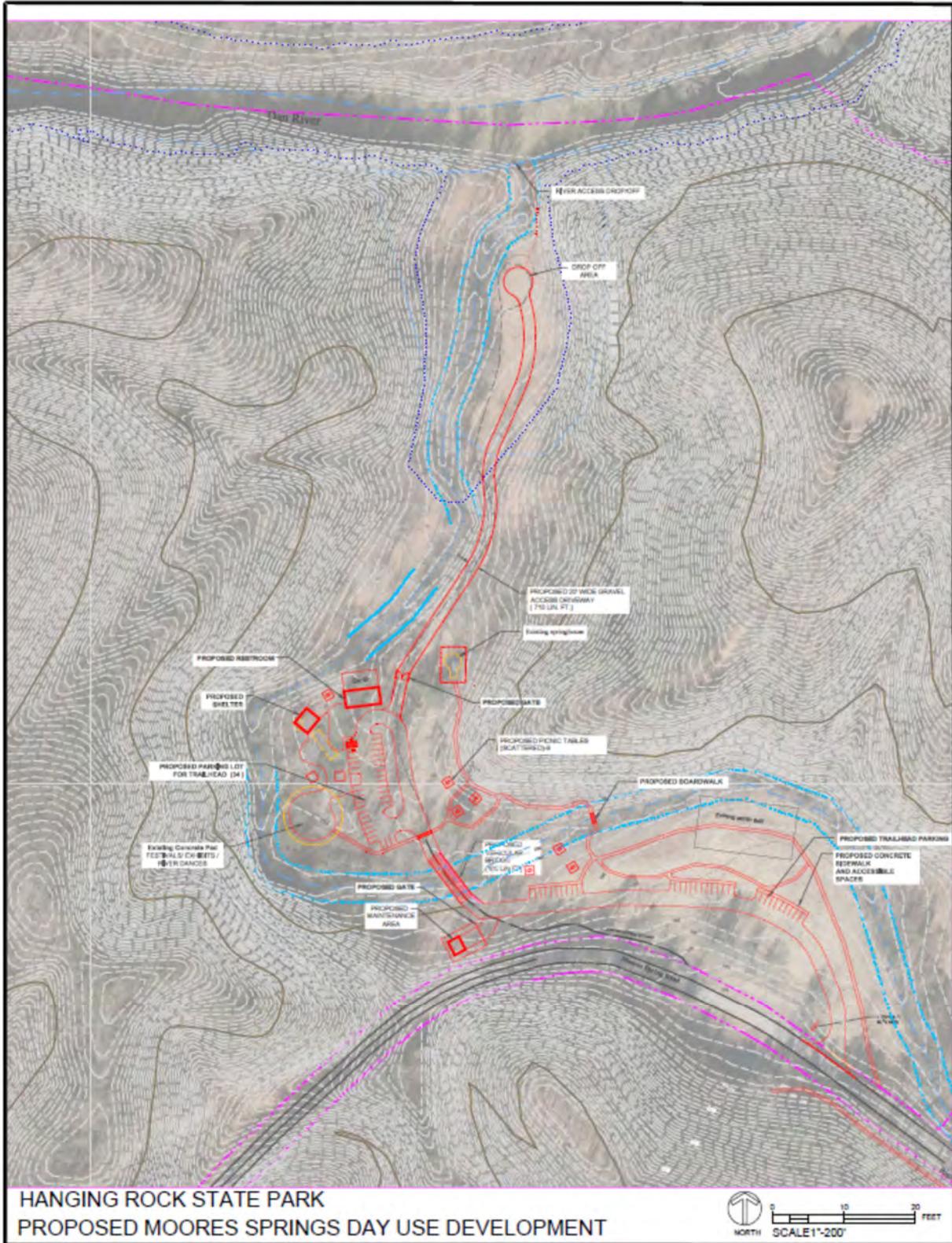
PROJECT #11: PROPOSED MILL CREEK CAMPGROUND



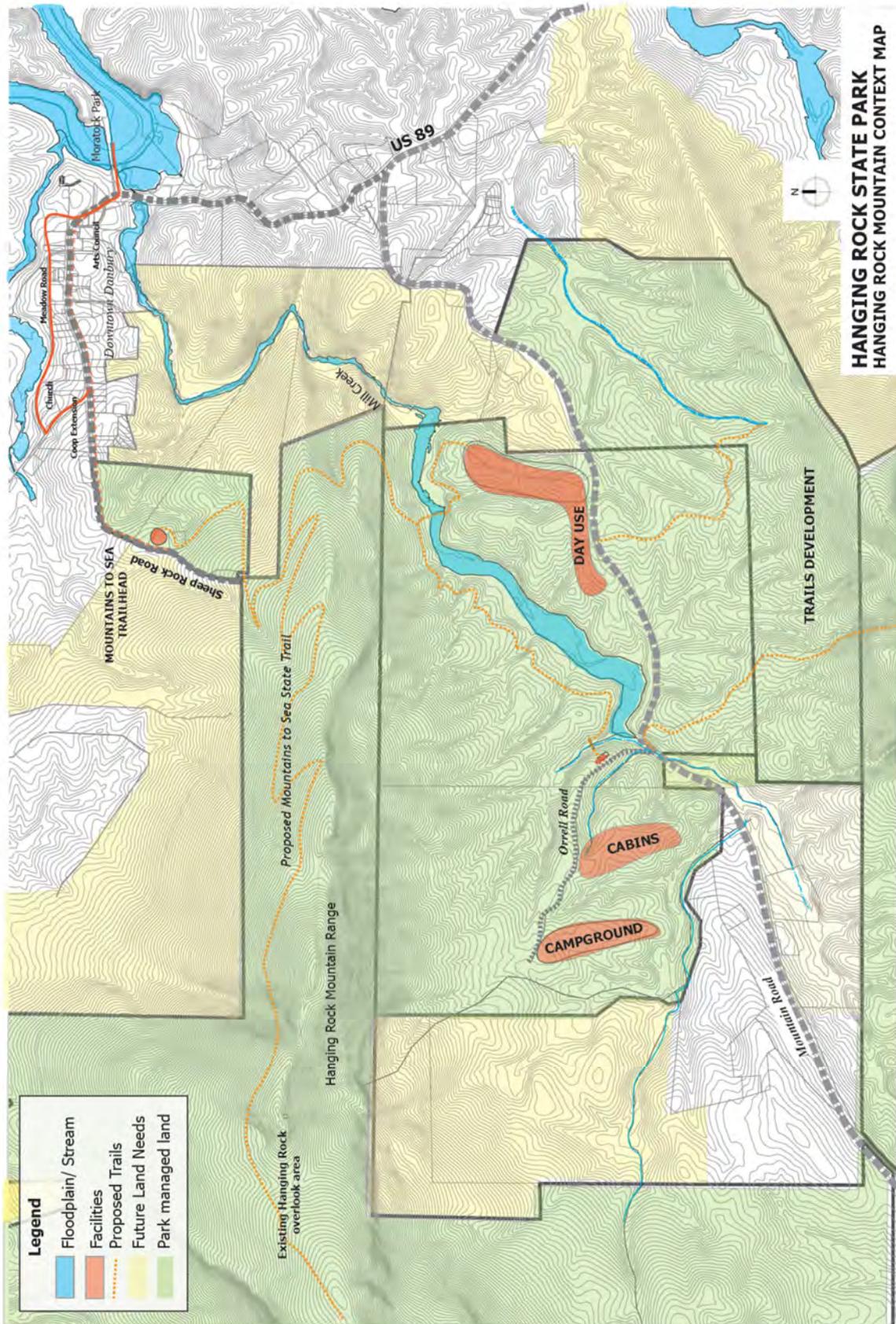
PROJECT #12: PROPOSED DAY USE IMPROVEMENTS AT MILL CREEK ACCESS



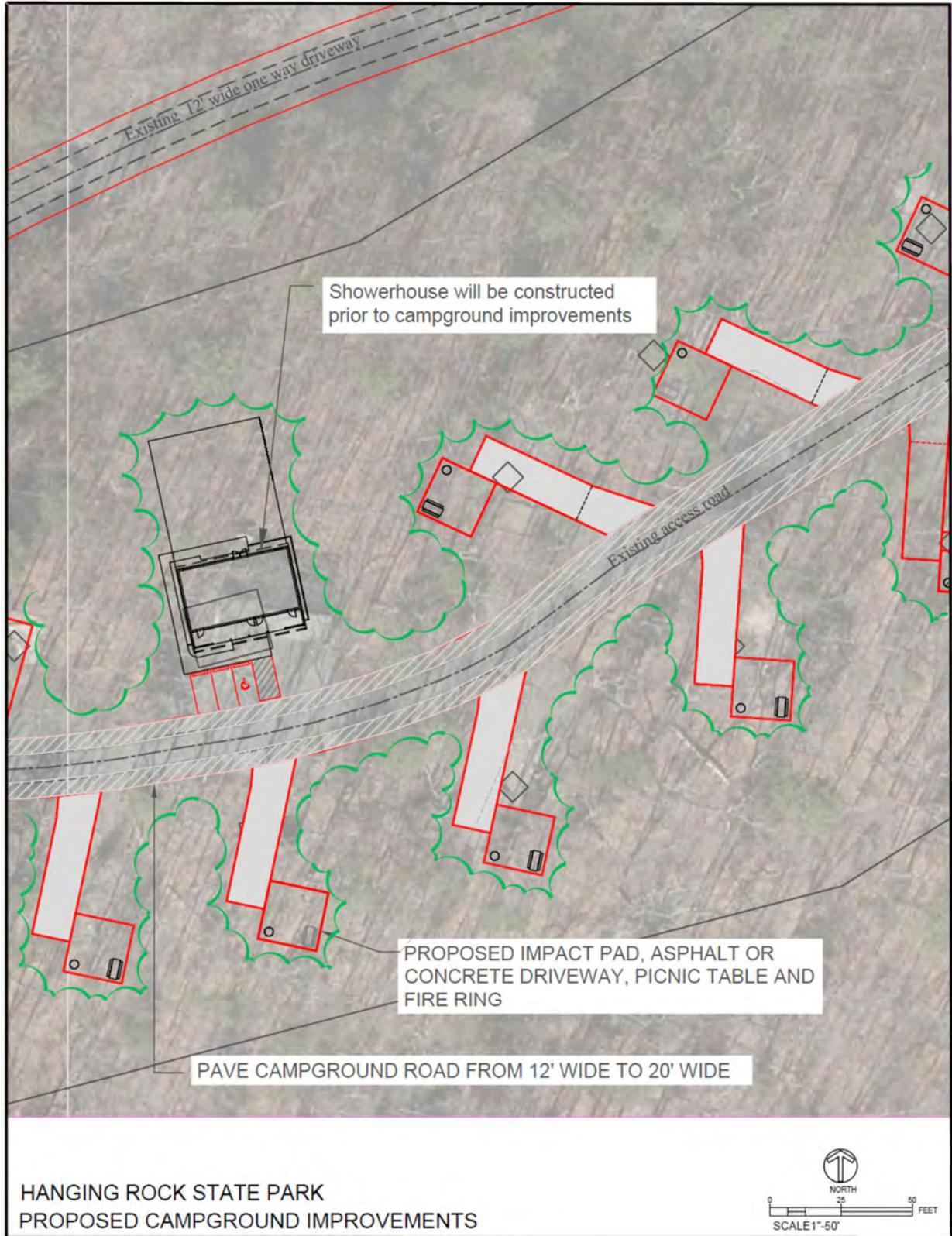
PROJECT #14: PROPOSED MOORE SPRINGS DAY USE DEVELOPMENT



PROJECT #15: PROPOSED TRAIL IMPROVEMENTS AT MILL CREEK ACCESS



PROJECT #18: CAMPGROUND IMPROVEMENTS



PROJECT #20: MOORE'S WALL CLIMBING ACCESS AREA



Route to Moore's Wall climbing access area



Install wheel stops to define parking spaces and provide emergency access

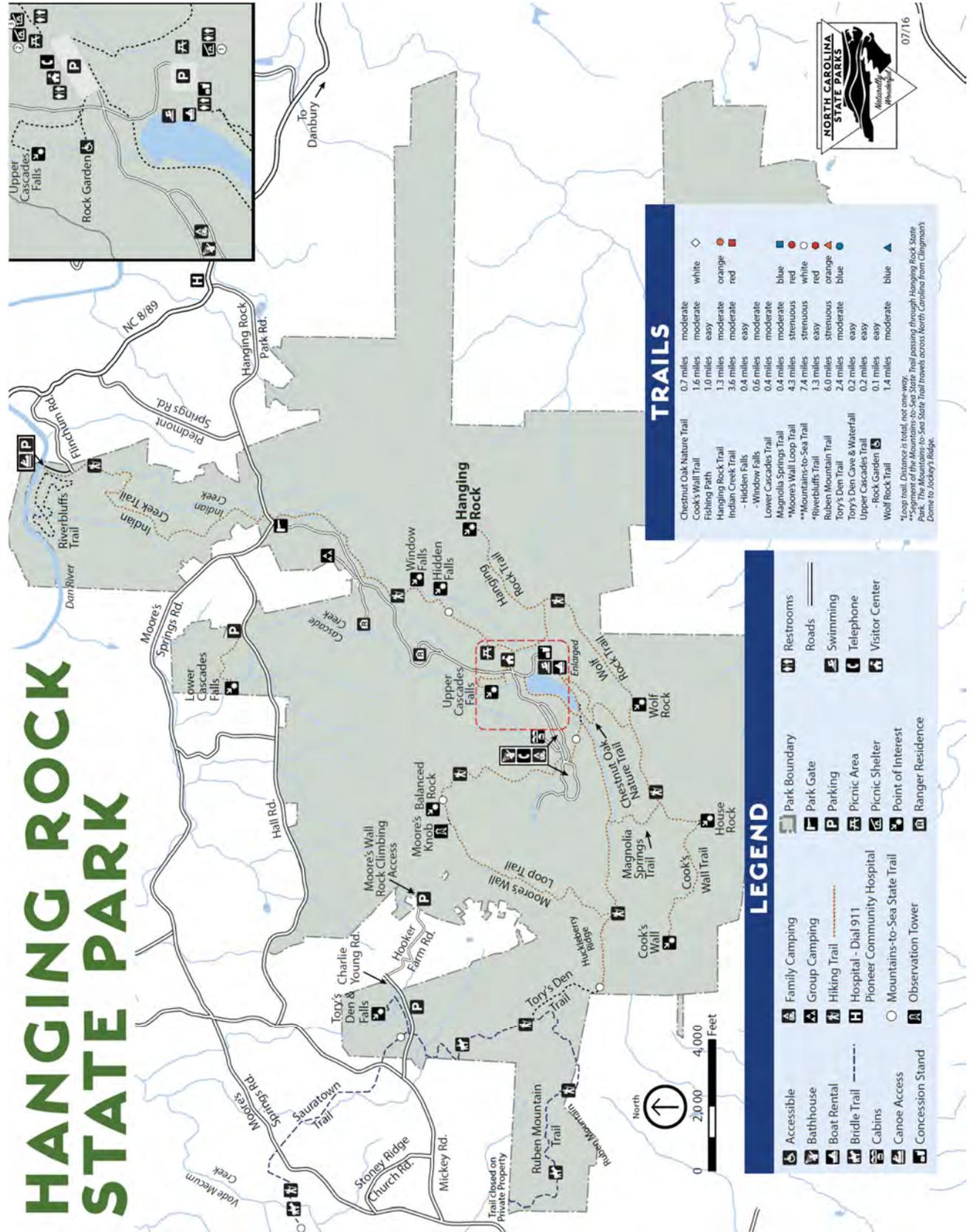


Conceptual Site Plan



Hanging Rock overlook

PARK MAP



HANGING ROCK STATE PARK

TRAILS

Chestnut Oak Nature Trail	0.7 miles	moderate	white
Cook's Wall Trail	1.6 miles	moderate	orange
Fishing Path	1.0 miles	easy	red
Hanging Rock Trail	1.3 miles	moderate	orange
Indian Creek Trail	3.6 miles	moderate	red
- Hidden Falls	0.4 miles	easy	red
- Window Falls	0.6 miles	moderate	red
Lower Cascades Trail	0.4 miles	moderate	blue
Magnolia Springs Trail	0.4 miles	moderate	red
*Moore's Wall Loop Trail	4.3 miles	strenuous	white
**Mountains-to-Sea Trail	7.4 miles	strenuous	red
*Riverbluffs Trail	1.3 miles	easy	orange
Rubben Mountain Trail	6.0 miles	strenuous	blue
Tory's Den Trail	2.4 miles	moderate	blue
Tory's Den Cave & Waterfall	0.2 miles	easy	blue
Upper Cascades Trail	0.2 miles	easy	blue
- Rock Garden	0.1 miles	easy	blue
Wolf Rock Trail	1.4 miles	moderate	blue

LEGEND

- Accessible
- Bathroom
- Boat Rental
- Bridle Trail
- Cabins
- Canoe Access
- Concession Stand
- Family Camping
- Group Camping
- Hiking Trail
- Hospital - Dial 911
- Pioneer Community Hospital
- Mountains-to-Sea State Trail
- Observation Tower
- Park Boundary
- Park Gate
- Parking
- Picnic Area
- Picnic Shelter
- Point of Interest
- Ranger Residence
- Restrooms
- Roads
- Swimming
- Telephone
- Visitor Center