



Figure 3-142. Big Spring Pavilion (HS-425). (Mundus Bishop 2015)



Figure 3-143. Big Spring Craft Cabin (458) center, and Big Spring Latrine (476) at right. (Mundus Bishop 2015)

1 **Buildings and Structures**

2
3 Buildings and structures in the Big Spring
4 character area include Big Spring Branch
5 Vehicular Bridge, Big Spring Pavilion (HS-
6 425), two restroom buildings, and the Big
7 Spring Craft Cabin (458).
8
9 Big Spring Branch Vehicular Bridge was
10 built by the NPS in 1977, replacing a circa
11 1940 WPA bridge. The 1977 construction
12 revised the alignment of the bridge across
13 Big Spring branch, and required the removal
14 of the Concession Stand (1935) built by the
15 CCC. The 1969 bridge replaced the footbridge
16 built by the CCC in 1939. The stone and
17 wood concession building was formerly
18 located south of the bridge on the west side
19 of Big Spring branch. The bridges have been
20 vulnerable to damage from flood waters since
21 the early 1920s.

22
23 Big Spring Pavilion (HS-425) was built by
24 Missouri State Parks around 1947. Two
25 contemporary latrine buildings are located
26 within the landscape character area. These
27 recently built prefabricated concrete
28 structures replaced deteriorated structures,
29 originally installed by the NPS between 1970
30 and 1975. "The Big Spring Craft Cabin was
31 designed by Charles Lessig and constructed
32 by the NPS in 1972. It was originally designed
33 as an open-fronted speaker's platform for
34 the OZAR dedication ceremony next to Big
35 Spring. Following structural alterations, it has
36 since been used to interpret historic Ozark
37 farmstead life. First moved to an area near
38 the Peavine Pavilion, it was later relocated to
39 its current location in the field north of the
40 spring in 2004, following a damaging flood
41 event."^{3.23}

43 Analysis of Integrity

44 Buildings and structures within the Big

45

46 3.23 2016 CLI, 81.

1 Spring landscape character area changed
2 during the period of significance, and were
3 modified after its end. Features associated
4 with the initial state park development of the
5 1920s, including a store, boat house, latrines,
6 and gas station were removed prior to the
7 CCC work (pre-1928). Big Spring Pavilion
8 (HS-425) was added in the 1940s. It remains
9 in its original location, and contributes to the
10 cultural landscape. The 1940 WPA bridge was
11 replaced by the 1977 vehicular bridges. The
12 existing bridge is a non-contributing feature,
13 and is scheduled for replacement. The Big
14 Spring Craft Cabin (458) and the restrooms
15 are non-contributing features.



Figure 3-144. The stone interpretive pedestal at left, circa 1970s, is still in use with its contemporary interpretive panel. Interpretive panels, at right, occur throughout the area. The low stone wall and flagstone walk were added circa 1970. (Mundus Bishop 2015)

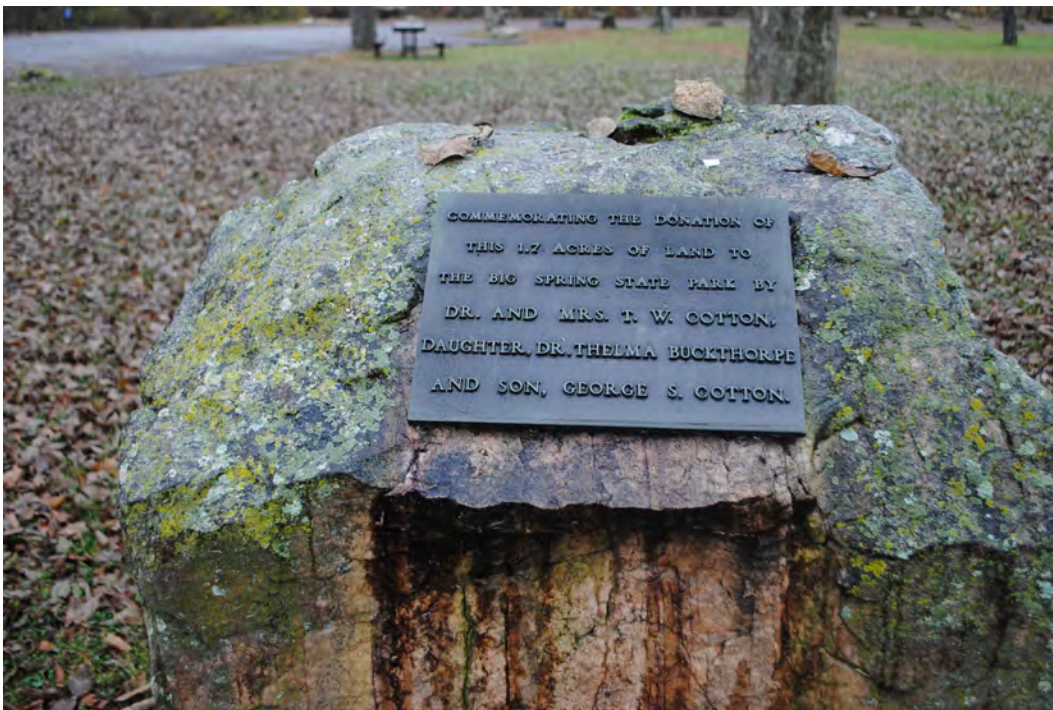


Figure 3-145. The Cotton Plaque (HS-472) honors the donation of land by the Dr. T. W. Cotton family. (Mundus Bishop 2015)

1 **Small Scale Features**

2
3 Small scale features include the CCC-built
4 stone drinking Fountain #1 (HS-712), of
5 similar construction to others in the study
6 area. It marks the location of the non-extant
7 CCC-built stone shelter that was removed and
8 replaced with the existing Big Spring Pavilion
9 (HS-425). The Cotton Plaque (HS-472), a
10 large boulder with a commemorative plaque,
11 is located within the circular parking area. It
12 notes the Dr. T. W. Cotton family's donation of
13 1.7 acres of land to 'Big Spring State Park.'

14
15 Features associated with CCC construction
16 include the boulders used to edge walkways
17 and the parking area. After 1950, stone
18 walls and stone pedestals for interpretive
19 panels were installed with the repaving of
20 the section of Spring Branch Trail from the
21 parking area to Big Spring.

22
23 Contemporary small scale features include
24 signs, picnic tables, kiosks, benches, boulders,
25 memorials, drinking fountains, trail markers,
26 interpretive exhibits, and stone paving. Most
27 were installed during or after the parking
28 and road reconfiguration in 1989, and are
29 contemporary NPS standards. These later
30 additions and contemporary features are non-
31 contributing.

32 33 Analysis of Integrity

34 Features associated with state parks and
35 the CCC, built or modified during the period
36 of significance, contribute to the cultural
37 landscape. These include the stone drinking
38 Fountain #1 (HS-712), commemorative
39 marker, boulder edges, stone abutments, and
40 pedestals for interpretive panels. The stone
41 abutments along Big Spring branch have been
42 modified since the period of significance due
43 to flooding and repaving of the Spring Branch
44 Trail. Few modifications have been made to
45 other features since the period of significance
46 and they retain integrity.



Figure 3-146. Stone drinking Fountain #1 (HS-712) near the Big Spring Pavilion (HS-425). (Mundus Bishop 2015)



Figure 3-147. The playground equipment dates from the 1960s, and while in good condition, it does not meet contemporary safety standards. (Mundus Bishop 2015)



Figure 3-148. The vegetation in the Big Spring character area includes riparian shrubs along the bank of Big Spring branch. Historically, the CCC had cleared much of this vegetation to provide a view of the water from the trail. (Mundus Bishop 2016)



Figure 3-149. Big Spring has a park-like setting, characterized by a maintained lawn with groupings of mature shade trees. (Mundus Bishop 2015)



Figure 3-150. A single row of maples lines Peavine Road on the eastern edge of the field.
(Mundus Bishop 2015)

1 Vegetation

2
3 The Big Spring character area vegetation
4 consists of the dense forest of oaks and
5 hickory on the steep hillsides, the vegetation
6 associated with the Current River and Big
7 Spring branch, and plantings associated with
8 the developed spaces associated with the
9 playfield and Big Spring Pavilion (HS-425).

10
11 The playfield is a large open space with mown
12 grasses and tree groupings on the south, and
13 a formal line of maples planted along Peavine
14 Road. These trees were planted in the late
15 1970s.^{3,24} The long, single row of maple trees
16 line the open play field and define its eastern
17 edge.

18
19 The area around Big Spring Pavilion (HS-
20 425), near Big Spring branch has a park-like
21 setting, characterized by a maintained lawn
22 with groupings of mature shade trees. This
23 area has been used as a park setting since
24 the 1920s, and remains so today. It is likely
25 that the large shade trees are remnants of
26 the previously forested area, that have been
27 maintained over the years.

28 29 Analysis of Integrity

30 The vegetation has changed since the
31 period of significance, with additional trees
32 encroaching into the large open field. The
33 vegetation around the spring and Big Spring
34 Pavilion remain similar to the historic
35 vegetation patterns. Overall, the vegetation
36 patterns retain integrity and contribute to the
37 cultural landscape.

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45

46 3.24 Park Staff

Matrix 3-10. Big Spring Character Area

| NATURAL SYSTEMS | | | |
|-----------------|-------------|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Big Spring | | Good | Contributing |
| Small Spring | | Good | Contributing |

| SPATIAL ORGANIZATION / TOPOGRAPHY / VIEWS | | | |
|---|--|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Playfield | The playfield is a large flat area of mown grasses. The field is the largest open space in the Big Spring Historic District and one of the few areas of 'long views'. This playfield area is a large alluvial flood plain that was previously farmed before being added to the park in 1939. | Good | Contributing |

| CIRCULATION | | | |
|---|---|-----------|-----------------------------------|
| Vehicular Circulation | | | |
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Peavine Road (1920s) | Two-lane, 24' wide asphalt paved road follows the eastern edge of the playfield. | Good | Contributing |
| Big Spring Picnic Area Loop (1989-1990) | Two-lane, 24' wide asphalt paved road. Portions of the parking areas have large boulders placed to contain traffic, and flush native stone paving delineating parking spaces. The road provides access to the trailhead, picnic area, and Big Spring Latrine Parking, and then returns to Peavine Road. | Good | "Non-contributing Compatible" |
| Big Spring Parking (1989-1990) | 20 standard parking spaces, 1 accessible parking space | Good | "Non-contributing Compatible" |
| Slough Trail Parking (1989-1990) | 16 standard parking spaces, 2 accessible parking spaces, 4 RV parking spaces | Good | Non-contributing |
| Playfield Parking (1989-1990) | 12 standard parking spaces, 4 RV parking spaces | Good | Non-contributing |
| Big Spring Latrine Parking | 4 accessible parking spaces | Good | Non-contributing |
| Boat Ramp and Parking (1974) | Boat ramp and parking area is adjacent to the Current River. The concrete ramp and asphalt paved parking area are located adjacent to the river and buffered from Peavine Road by forest vegetation. | Good | Non-contributing |

| Pedestrian Circulation | | | |
|--|--|------------------|--|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Slough Trail (1999-2000) | 8' to 10' wide natural surface trail is .58 miles in length. It extends from Big Spring north along the two extant Big Spring Stone Dikes #3 and #5 (HS-711). A portion of the trail is mortared stone and is in good condition. The portion of the path on Big Spring Stone Dike #5 is stone rubble and soil; it is in fair condition. The portion of the path between Big Spring Stone Dikes #5 and #3 is located in a clearing that is likely an old road bed or buried utility corridor. Along Big Spring Stone Dike #3, the path is rubble embankment and is in fair condition. | Good | Non-Contributing |
| Spring Branch Trail (1927) | Leads from the parking area to Big Spring, where it continues along the west bank of Big Spring branch, ultimately connecting to the Dining Lodge (HS-422) to the south. The trail is composed of several different surfacing types. | Good | Contributing |
| Spring Branch Trail - Parking Lot to Interpretive Circle (1989) | This portion of the trail is mortared flagstone paving. | Good | Non-Contributing |
| Spring Branch Trail - Interpretive Circle to Big Spring (1960s-1970s) | This section of trail is 7' wide, mortared flagstone paving with a mortared native stone edge, retaining walls, and guard walls. The mortared flagstone paving ends just east of Big Spring. | Good | Non-Contributing |
| Spring Branch Trail - Spring to Bridge (1940s) | From the Big Spring south along the west side of Big Spring branch the trail consists of native stone laid flat in a cobble paving and mortared native stone steps where needed to climb or descend on the trail and three sets of steps that lead from the trail down to the water edge. In places the trail is retained by stone rubble walls. The Big Spring Trail follows the water edge and passes under steep limestone cliffs. | Fair | Contributing |
| Spring Branch Trail - Big Spring Overlook (1960s-1970s) | Adjacent to the mouth of Big Spring is a small flagstone pad with mortared stone walls for seating and safety. This is the terminus of the accessible Big Spring Trail. Areas at the base of the retaining wall along the water edge have eroded and threaten the stability of the wall. | Fair | "Non - Contributing Compatible" |
| Steps near Big Spring (1938) | Native stone placed in naturalistic style. | Good | Contributing |
| Stone Retaining Wall (1938) | Native stone, dry laid Rustic style wall used to support trail and steps above. Occurs several places along the Big Spring Trail, west side of Big Spring. | Fair | Contributing |
| Steps to Small Spring (1938) | Native stone steps, 18" wide, leading from trail down to the Small Spring. Steps have been repaired in places with concrete. | Poor | Contributing |
| Stone Step to Gauging Station (1938) | Native stone steps, 18" wide, leading from trail down to gauging station. Steps have been repaired in places with concrete. | Fair | Contributing |

| Pedestrian Circulation | | | |
|--|---|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Stone Steps to Road (1938) | Native stone mortared steps, 4' to 8' wide, connecting Spring Branch Trail to Peavine Road / Big Spring Branch Vehicular Bridge . | Good | Contributing |
| Rocky Ridge Trail (1927, 1933, post-1957) | The trail begins at the Latrine (HS-423) and climbs a steep hill, following the ridge directly above Big Spring before descending down the hill to meet the Slough Trail. The trail has many stone steps and small native stone rubble retaining walls. Portions of the trail follow historic wagon road alignments. | Good | Contributing |
| Stone Paving at Parking Areas (1989) | Mortared stone paving band outlining parking spaces | Good | Non-contributing |
| Flagstone Trail - Parking Lot to Interpretive Circle (1989) | Mortared flagstone paving, 7' wide leading from parking areas down to interpretive circle. | Good | Non-contributing |
| Flagstone Trail- Interpretive Circle to the Big Spring (after 1950) | Mortared flagstone paving, 7' wide leading from interpretive circle to Big Spring. The first leg of the trail has a mortared stone edge along the water edge, the second portion of the trail has mortared stone retaining walls along each side of the trail. A mortared stone interpretive pedestal is located at the 'elbow' of the trail. | Good | Contributing |

| CONSTRUCTED WATERWAYS | | | |
|---|---|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Big Spring Stone Dike #1 (HS-711) (1934) | Built by CCC labor using NPS funds on private property directly northeast of Big Spring. Big Spring Stone Dike #1 is northernmost dike. | N/A | Non-extant |
| Big Spring Stone Dike #2 (HS-711) (1934) | Built by CCC labor using NPS funds on private property directly northeast of Big Spring. Big Spring Stone Dikes #2 is directly south of Big Spring Stone Dikes #1. | N/A | Non-extant |
| Big Spring Stone Dike #3 - North (HS-711) (1934) | Built by the CCC, one of two remaining Big Spring Stone Dikes, built of native rocks piled around oak pilings and laid at a right angle to the course of the Current River. Big Spring Stone Dikes #3 is 600' long. Five Big Spring Stone Dikes were originally built, but only two remain. | Good | Contributing |
| Big Spring Stone Dike #4 (HS-711) (1934) | Built by CCC labor using NPS funds on private property directly northeast of Big Spring. | N/A | Non-extant |
| Big Spring Stone Dike #5 - South (HS-711) (1934) | Built by the CCC, one of two remaining Big Spring Stone Dikes (originally five), built of native rocks piled around oak pilings and laid at a right angle to the course of the Current River. Big Spring Stone Dike #5 is 700' long. | Good | Contributing |

| CONSTRUCTED WATERWAYS | | | |
|------------------------------------|---|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Stone Abutments (1934-1936) | Built as a revetment and noted as stone wall on CCC drawing, stone wall extends all along west side of Big Spring branch from the bridge to the dining lodge, and along the west edge of the Current River north of Big Spring branch (near location of non-extant swimming pool and bath house). Consists of large cut-stones dry laid against the sides of Big Spring branch; stone ledges are set into the banks in long continuous courses with tight joints. | Poor | Contributing |

| BUILDINGS AND STRUCTURES | | | |
|--|---|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| "Big Spring Pavilion (HS-425) (1947)" | Big Spring Pavilion was built in 1947. It is a 41'-6"x21'-6" one-room, open-sided picnic shelter with a wood shingled hip roof supported by square wood columns. A brick oven and fireplace are located at the center of the north wall and the floor is poured concrete. | Fair | Contributing |
| Big Spring Craft Cabin (458) (1972) | Wood construction, rustic cabin. | Fair | Non-contributing |
| Big Spring Latrine (476) (2010) | New prefabricated, precast concrete restrooms. Replacing restrooms originally established in 1977. | Good | Non-contributing |
| Boat Ramp Latrine (2010) | New prefabricated, precast concrete restrooms. Replacing restrooms originally established in 1977. | Good | Non-contributing |
| Big Spring Branch Vehicular Bridge (1977) | Wood timber construction vehicle bridge with asphalt paved drive lanes and 5' wide wood decking walkway on north side. | Good | "Non-contributing Compatible" |

| SMALL SCALE FEATURES | | | |
|---|---|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Fountain #1 (HS-712) (1934-1937) | CCC built drinking fountains are rough cut stones of a heavy design in the Rustic style, each with a stone step attached and a concrete basin set on a stone pad. Fountain #1 is near the Big Spring Pavilion (HS-425). | Good | Contributing |
| Cotton Plaque (HS-472) | Large native stone boulder with bronze plaque, reads as follows: 'COMMEMORATING THE DONATION OF THIS 1.7 ACRES OF LAND TO THE BIG SPRING STATE PARK BY DR. AND MRS. T.W. COTTON, DAUGHTER, DR. THELMA BUCKTHORPE AND SON, GEORGE S. COTTON' | Good | Contributing |
| Boulder Edge (c 1940s) | Mortared, native stone boulder edge along water edge, behind interpretive circle. | Good | Contributing |

| SMALL SCALE FEATURES | | | |
|---|--|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Stone Wall (after 1950) | Mortared native stone retaining wall and guard rail wall, with flat stone cap, Rustic style. Height of walls vary from 12" to 36". Drain blockouts allow storm water to flow off of trail into Big Spring. Areas along the water side of the wall are being undermined by erosion. | Fair | Contributing |
| Stone Interpretive Pedestal (after 1950) | Small, mortared native stone interpretive pedestal, with sloping top. Contemporary interpretive panel mounted to top of pedestal. Size is approximately 48" x 28" x 12'-18". There are two identical pedestals, one located at 'circle' area of Big Spring Trail and one located at 'elbow' of Big Spring Trail. | Good | Contributing |
| Kiosk (1989) | NPS style wood information kiosk | Good | Non-contributing |
| Wood Parking Barriers (1989) | NPS style wood parking barriers | Good | Non-contributing |
| Boulders (1989) | Large native stone boulders delineate the edge of the parking area. | Good | Non-contributing |
| Play Equipment (1960s) | Galvanized play equipment - slides, swings and jungle gym | Fair | Non-contributing |
| Metal Benches | 6' metal park benches with back | Good | Non-contributing |
| Metal Picnic Tables | 6' metal park picnic tables | Good | Non-contributing |
| Trash Receptacles | Metal trash receptacles | Good | Non-contributing |
| Barbecue Grills | Steel, pedestal barbecue grills | Good | Non-contributing |
| Traffic / Parking Signage | Standard traffic signage | Good | Non-contributing |
| Transformers | | Good | Non-contributing |
| USGS Gauge Transmitter | Transmitter pole, located north side of Big Spring branch, downstream from bridge | Good | Non-contributing |

| VEGETATION | | | |
|-----------------------------|---|-----------|-----------------------------------|
| Feature | Description | Condition | "Contributing / Non-Contributing" |
| Maple Trees (c 1970) | Single row of maple trees planted 20'-25' on center, 30' off edge of road, lining the playfield area, and defining the eastern edge of the playfield. | Good | Non-contributing |

Affected Environment

1 This section provides an overview of the
2 environmental context and natural systems
3 of the study area. This section describes
4 resources potentially affected by the
5 alternatives. It is organized by impact topics
6 that were derived from NPS internal scoping
7 and external public scoping.

9 Cultural Resources – Cultural Landscapes and 10 Archeological Sites

12 Cultural Landscapes

13 The Big Spring Historic District is part of the
14 OZAR and was listed on the NRHP in 1981.
15 A cultural landscape inventory was first
16 completed in 1999,^{3.25} updated in 2009,^{3.26} and
17 then recently updated in 2016 (currently in
18 draft form).^{3.27} The 1999 and 2009 inventories
19 recorded the cultural landscape period of
20 significance from 1925, when the Big Spring
21 State Park was created, to 1950, when the
22 last contributing structure was built (the May
23 / Winters Quarters (HS-444)).^{3.28} The 2016
24 inventory extends the period of significance
25 to 1924-1969, in order to more holistically
26 address the continuum of development
27 that began with Big Spring State Park's
28 establishment and occurred throughout the
29 duration of state ownership.^{3.29}

31 The Missouri State Park system was
32 established in 1919 and Big Spring State Park
33 was one of the initial eight parks created in
34 1924. It was the largest state park at the time,
35 consisting of 4,416 acres.^{3.30} By 1928, the
36 state had built a store, filling station, and two
37 campgrounds. From 1928 to 1932, three side
38 gable cabins, park keeper's house, concession
39

40 3.25 *CLI*, 1999.

41 3.26 *CLI*, 2009.

42 3.27 *CLI*, 2016.

43 3.28 *CLI*, 2009.

44 3.29 *CLI*, 2016.

1 stand, shelter house, zoo, and vehicle and foot
2 bridges had been added.

3
4 Like many Midwest states, Missouri was
5 deeply affected by the Great Depression of
6 the 1930s. The CCC (originally the Emergency
7 Conservation Work Program) and the WPA
8 were established by the early to mid-1930s
9 in response to severe unemployment and
10 poverty during the Great Depression. This
11 program was designed to put the unemployed
12 to work and their responsibilities included
13 reforestation of public lands; building roads,
14 trails, and bridges; and building in-state and
15 national parks and other public lands across
16 the country.^{3.31} Big Spring State Park was
17 established in 1924 by the Missouri State
18 Park Board. The NPS established a CCC camp
19 at Big Spring State Park in 1933. CCC workers
20 at Big Spring State Park were responsible for
21 construction of 12 miles of road throughout
22 the park and the flood-controlling Big Spring
23 Stone Dike (HS-711) system, Latrine (HS-
24 423), Picnic Shelter (HS-496), Fire Tower /
25 Lookout Tower (HS-1404), several cabins,
26 garage, and custodian's home. In 1936, a
27 Dining Lodge (HS-422), walled Entrance
28 Building (HS-432), and parking areas were
29 added. The Big Spring State Park architecture
30 and surrounding landscape is a good example
31 of CCC Rustic style and Naturalistic style.

32
33 At least sixty structures or features contribute
34 to the eligibility of the Big Spring Historic
35 District. Any maintenance or construction
36 activities have the potential to impact
37 individual structures or features or the Big
38 Spring Historic District as a whole.

40 Archeology

41 The earliest evidence for human occupation
42 of the Big Spring Historic District is

44 3.31 *Griffen and Gray*, 2012.

1 represented by Dalton serrated and
2 lanceolate projectile points. The Dalton
3 occupation is considered a transition period
4 between the big game hunters of the early
5 Paleoindian period and the more generalized
6 forager groups common during the Archaic
7 period. Dalton components have been found
8 at two sites near Big Spring.

9
10 Dating approximately from 7000 to 1000
11 BC, the Archaic period is characterized by
12 broad spectrum hunting and gathering
13 reflected in the marked increase in the use
14 of ground stone technology, the proliferation
15 of projectile point styles, and use of the
16 atlatl.^{3.32} Sites with Archaic components have
17 been recorded within the Big Spring Historic
18 District.

19
20 The Woodland period (1000 BCE to 900 CE)
21 is characterized by horticultural subsistence
22 strategies, increasing sedentism, the
23 introduction of ceramic technology, burial
24 mound construction, and long-distance
25 exchange networks. Early Woodland sites are
26 difficult to differentiate from Late Archaic
27 sites unless ceramics are present. Early
28 Woodland ceramics have been found at sites
29 in Carter County and in private collections
30 from the Current River basin.^{3.33} The Middle
31 Woodland is characterized by increasing
32 population, reliance on both wild and
33 domesticated plant foods, and increasing
34 social stratification. Interregional exchange
35 networks developed during this period,
36 namely the Hopewell culture, although there
37 is little evidence that groups in the Current
38 River valley participated in the Hopewell
39 exchange system. Evidence suggests instead
40 that these groups had localized exchange
41 networks. The Late Woodland is defined by
42 the disappearance of Hopewell artifacts and
43 the beginning of shell-tempered ceramics.^{3.34}

44 3.32 NPS 2009; O'Brien and Wood, 1998.

45 3.33 Zedeno and Basaldu, 2003.

46 3.34 Zedeno and Basaldu, 2003.

1 The Mississippian period (900 CE to 1700 CE)
2 is characterized by increasingly complex and
3 socially stratified communities dependent
4 on corn agriculture, extensive exchange
5 networks, and control of resources for ritual
6 purposes. Sites tended to be of variable size
7 with large regional centers surrounded by
8 farmsteads that were in turn surrounded
9 by special activity sites. Many of the large
10 settlements were surrounded by fortifications
11 and had platform mounds. Archaeological
12 remains in the region surrounding the Big
13 Spring Historic District primarily consist of
14 small artifact scatters and isolated projectile
15 points and ceramics, suggesting the area was
16 used for short-term occupations. Between
17 AD 1250 and 1300, the paucity of remains in
18 the eastern Ozark Uplands and the apparent
19 population growth in the Little Black River
20 valley lowlands suggests the uplands were
21 essentially abandoned in favor of the river
22 bottom lowlands.^{3.35} There is evidence for
23 limited use of the area as a hunting ground
24 during the Late Mississippian period, dating
25 to as late as AD 1650.^{3.36}

26
27 The Historic period in the region begins
28 with French contact in 1673, by Fathers
29 Marquette and Joliet. At that time, the region
30 was under the control of the Osage, whose
31 territory stretched from near the confluence
32 of the Osage River and the Missouri River to
33 north of the Big Spring Historic District and
34 south to the Arkansas River.^{3.37} There is little
35 evidence for significant Osage occupation of
36 the Current River valley and existing cultural
37 remains point to sporadic hunting activity in
38 the region.

39
40 The United States acquired southeastern
41 Missouri after the Louisiana Purchase in
42 1803. Americans began moving west of the
43 Mississippi River soon after, which resulted

44 3.35 Stevens, 1991; Zedeno and Basaldu, 2003.

45 3.36 NPS 2009; Stevens, 1991.

46 3.37 Stevens, 1991.

1 in increased hostility with Osage groups. The
 2 Osage ceded most of their Missouri lands to
 3 the United States with the Osage Treaty of
 4 1808, and the Treaty of 1825, making way
 5 for increased American settlement of the
 6 region.^{3.38} American population in Missouri
 7 greatly increased after the War of 1812,
 8 although settlement of the Ozark uplands
 9 lagged behind the surrounding lowlands
 10 of the Mississippi River and Missouri River
 11 valleys. Little is known about the Historic
 12 period of the Big Spring Historic District prior
 13 to the establishment of Big Spring State Park.
 14

15 Proposed activities that involve new ground
 16 disturbance have the potential to impact
 17 archaeological sites. Buried prehistoric and
 18 historic archaeological sites likely exist,
 19 specifically in the valley bottoms where
 20 alluvial deposition is most common. Flood
 21 events have been common historically and are
 22 assumed to also have occurred prehistorically.
 23

24 **Wilderness**

25
 26 The Wilderness Act directs the NPS to protect
 27 and manage wilderness so that it “generally
 28 appears to have been affected primarily
 29 by the forces of nature, with the imprint of
 30 man’s work substantially unnoticeable,” and
 31 so that it “has outstanding opportunities
 32 for solitude, or a primitive and unconfined
 33 type of recreation.” DO 41: Wilderness
 34 Stewardship^{3.39} provides accountability,
 35 consistency, and continuity in the NPS
 36 wilderness stewardship program and guides
 37 NPS efforts in meeting the letter and spirit
 38 of the Wilderness Act (16 USC 1133(b)). The
 39 Wilderness Act directs that “each agency
 40 administering any area designated as
 41 wilderness shall be responsible for preserving
 42 [its] wilderness character.” The five qualities
 43 of wilderness character are (1) untrammelled,
 44

45 ^{3.38} Stevens, 1991.

46 ^{3.39} NPS 2013.

1 (2) undeveloped, (3) natural, (4) offers
 2 outstanding opportunities for solitude or
 3 primitive and unconfined recreation, and
 4 (5) other features of scientific, educational,
 5 scenic, or historical value.
 6

7 In the 1984 OZAR General Management
 8 Plan^{3.40}, a wilderness study was completed
 9 that evaluated the entire OZAR for wilderness
 10 suitability. Big Spring Historic District was
 11 identified as a potential wilderness area.
 12 Due to land ownership and uses in those
 13 areas that did not conform to wilderness,
 14 the plan noted that a legislative wilderness
 15 designation would be precluded at that
 16 time. The plan did, however, recognize the
 17 wilderness qualities of Big Spring and other
 18 areas and stated the agency’s commitment
 19 to take another look at the same areas in the
 20 future when circumstances surrounding land
 21 ownership and use changed.
 22

23 During the development of the recently
 24 updated OZAR GMP, Big Spring Historic
 25 District was found to warrant further
 26 study for wilderness designation. Of 3,434
 27 acres studied, 3,430 were recommended
 28 to Congress for inclusion in the national
 29 wilderness preservation system.
 30

31 The Big Spring Historic District overlaps the
 32 area proposed for wilderness designation.
 33 Included in the proposed wilderness are
 34 several miles of trails and roads constructed
 35 by the CCC, the quarry they mined for
 36 dolomite blocks, the ruins of a camp they
 37 occupied, and a Fire Tower / Lookout Tower
 38 (HS-1404). Features within the former Big
 39 Spring State Park that are included in the
 40 Big Spring Historic District, but outside the
 41 proposed wilderness, are several features
 42 associated with the CCC-era construction
 43 and former Big Spring State Park. These
 44 are cabins, lodge, infrastructure recreation
 45

46 ^{3.40} NPS, 1984

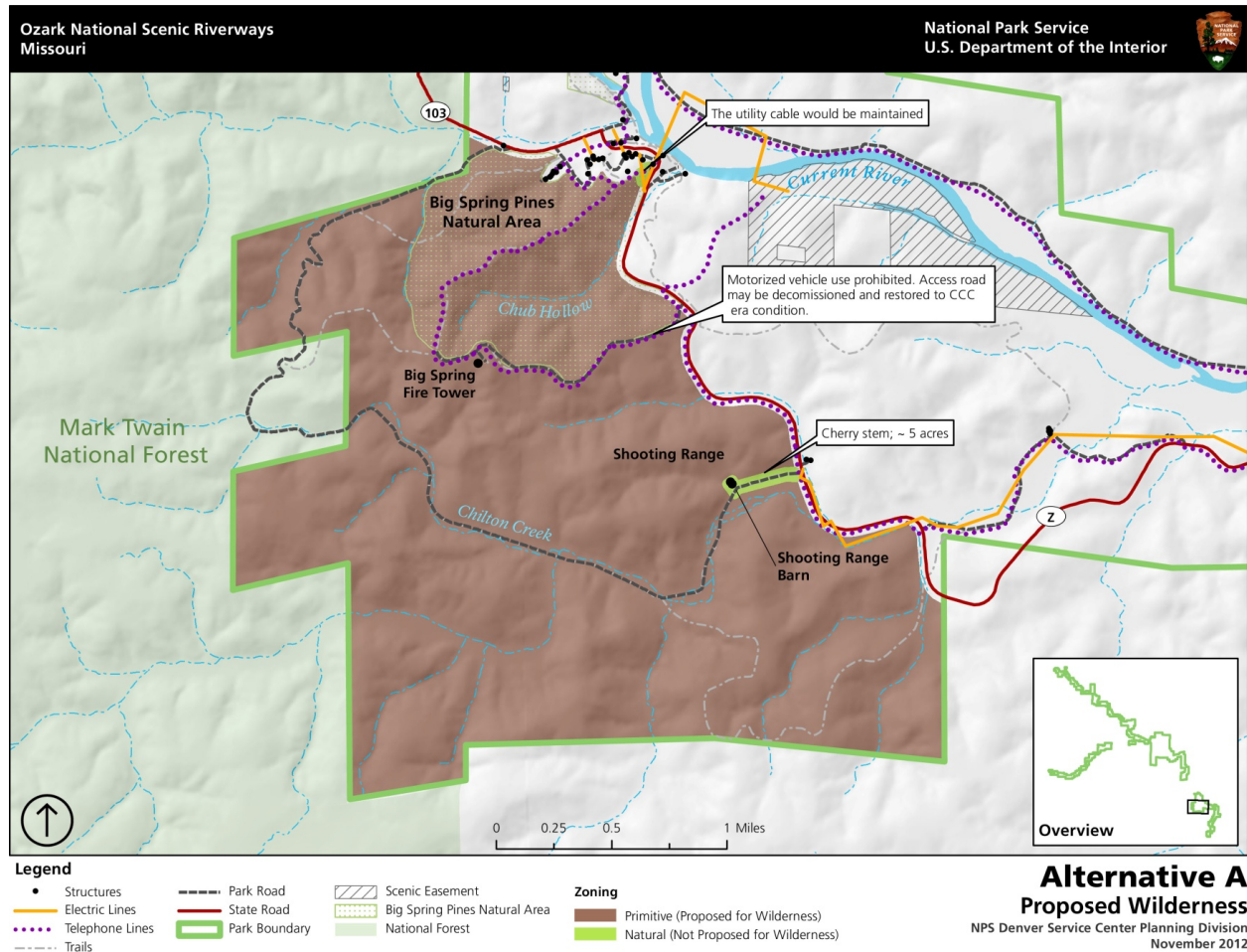


Figure 3-151. Proposed Wilderness Areas. (GMP 2014)

1 facilities, and a residence. Recommendations
2 in the 2014 GMP preferred alternative for
3 proposed wilderness include the following:

- 4
- 5 • The entire Big Spring Wilderness Study
- 6 Area would be zoned primitive.
- 7 • The Fire Tower / Lookout Tower (HS-
- 8 1404), Dump Incinerator (HS-432B),
- 9 Chilton Creek Barn (HS-467), and CCC-era
- 10 camp would be retained.
- 11 • The NPS training range would be removed
- 12 and the area restored.
- 13 • Motorized vehicle use would be
- 14 prohibited on the access roads to the Fire
- 15 Tower / Lookout Tower (HS-1404), NPS
- 16 training range, storage area, and Chilton
- 17 Creek Barn (HS-467). The roads would
- 18 be evaluated to determine the feasibility
- 19 of restoring them to a CCC-era condition,
- 20 allowing them to melt away or eliminating
- 21 them altogether.
- 22 • The buried utility communication cable
- 23 that serves the cabins and residents
- 24 located further down the line would
- 25 be proposed as a potential wilderness
- 26 addition and would remain in use until it
- 27 fails or until another utility route outside
- 28 the wilderness was designated. Once
- 29 decommissioned, the cable would be
- 30 evaluated to determine the feasibility of
- 31 removal and restoring the area. Once the
- 32 nonconforming use was extinguished, the
- 33 utility corridor would be administratively
- 34 converted to wilderness.

35

36 If wilderness is designated, a wilderness
37 stewardship plan would be developed to
38 guide preservation, management, and use of
39 NPS wilderness areas. Such a plan would be
40 developed with public involvement and would
41 contain specific measurable objectives for
42 preservation of wilderness characteristics and
43 values as specified in the Wilderness Act and
44 NPS Management Policies 2006. Wilderness
45 stewardship plans integrate wilderness
46 planning, management, and monitoring and

1 articulate management actions that preserve
2 or enhance wilderness character.

3

4 *Vegetation.* Information on vegetation
5 resources is primarily based on the GMP. The
6 OZAR lies within the oak / hickory forest
7 region of the eastern deciduous forest. Four
8 major vegetation communities with ten
9 vegetation associations are found within the
10 OZAR. These vegetation communities, which
11 are described below, and associations consist
12 predominately of forest, except for some open
13 areas and cultivated sites.

14 Upland Plant Community

15 Upland plant communities are found on
16 the OZAR upper slopes and ridges. This
17 community type contains four different
18 climax forests and two distinct types of open
19 upland sites.^{3.41} The most common upland
20 association in the national park system unit is
21 the oak / hickory forest, found on drier upper
22 slopes and ridges. This association includes
23 black, white, and red oak; Ozark pignut; and
24 shagbark and mockernut hickory. Understory
25 plants include high and low-bush huckleberry,
26 smooth sumac, sassafras, cinquefoil, and
27 dwarf iris. The sugar maple white oak
28 association dominates west- and south-facing
29 slopes due to intense solar radiation. On the
30 wetter east- and north-facing slopes, this
31 association also includes northern red oak
32 and red ash. Understory species include paw-
33 paw, bladdernut, flowering dogwood, and
34 wild geranium. The oak / pine association
35 is found on narrower ridges with acidic
36 soils derived from sandstone, chert, and
37 felsite. Understory vegetation is dominated
38 by lowbush huckleberry and farkleberry.
39 In the upper slopes of hills and ravines, the
40 white oak / red maple association is found.
41 This association also includes winged elm
42 and mockernut hickory. The rock ledge
43 association is one of two open upland plant
44

45
46 ^{3.41} NPS 1991.



Figure 3-152. The Current River within the Big Spring Historic District. (ERO 2015)



Figure 3-153. Canoe access point on the Current River within Big Spring Historic District. (ERO 2015)

1 associations found scattered throughout the
 2 national park system unit. Common species
 3 include red cedar, blue ash, chinquapin
 4 oak, poison ivy, and golden currant. The
 5 open glades or “barrens” association is
 6 found on felsite rock exposures and ridges.
 7 Characteristic species include hairy lip fern,
 8 spikemoss, early saxifrage, pine weed, and
 9 woodrush.

10

11 Streambank Community (riparian areas)

12 The streambank community is one of
 13 the most diverse, dynamic, and complex
 14 terrestrial habitats in the national park
 15 system unit. These riparian areas are divided
 16 into three vegetation associations, including
 17 silver maple / cottonwood, American elm
 18 / green ash, and sugar maple / bitternut
 19 hickory. The silver maple / cottonwood
 20 association occurs on stabilized gravel bars
 21 with deeper alluvial deposits. It supports
 22 a number of herbaceous species, such as
 23 clearweed, green-headed cone flower, and
 24 leatherwood. The American elm / green
 25 ash association is found on richer soils that
 26 receive less frequent flooding. Understory
 27 plants include trumpet creeper, spice bush,
 28 blackbrush, poison ivy, and blue phlox. The
 29 sugar maple / bitternut hickory association
 30 is the climax forest of the streambank
 31 community. Herbaceous species consist of
 32 wild ginger, bloodroot, wood nettle, and
 33 maidenhair fern.

34

35 Flooding is an important factor in the
 36 formation and maintenance of the OZAR
 37 riparian environments. Not only does it
 38 shape the physical landscape, but flooding
 39 can also aid in the dispersal and propagation
 40 of plant seeds and distribute nutrients.
 41 In turn, riparian areas perform a range
 42 of important ecological functions, such
 43 as stabilizing streambanks, regulating
 44 stream temperatures, filtering pollutants,
 45 retaining nutrients, and providing habitat
 46 for numerous wildlife species. In addition

1 to the streambank vegetation communities
 2 described above, riparian areas of the OZAR
 3 are classified based on variations in physical
 4 landform characteristics. These include the
 5 natural springs, active channels, active low
 6 floodplains, stable floodplains, and terraces.
 7 The natural Big Spring provides habitat
 8 for a variety of native aquatic and riparian
 9 vegetation, with 17 different taxa and less
 10 than 20 percent bare cover documented in
 11 a vegetation monitoring study completed
 12 adjacent to the spring.^{3.42} Very few nonnative
 13 species were documented in this study
 14 around the spring itself. Active channels
 15 are characterized by proximity to the river
 16 where frequent flooding occurs. Vegetation
 17 development is limited and coarse materials
 18 such as gravel and sand are common. Active
 19 low floodplains are slightly elevated above
 20 active channels and typically receive several
 21 seasonal floods each year. Soils are relatively
 22 sandy and vegetation is characteristic of
 23 frequently flooded riverfront forests of
 24 sycamore, elm, ash, and hackberry. Stable
 25 floodplains are higher in elevation and are
 26 subject to only occasional flooding by the
 27 highest seasonal floods. Flood disturbance
 28 is minimal, resulting in more developed
 29 silty soils that support less flood-tolerant
 30 plant species such as oak, maple, and
 31 hickory. Terraces are remnants of former
 32 floodplains and rarely flood except during
 33 the most extreme storm events. Soils are
 34 well-developed loamy and silty alfisols that
 35 support flood-intolerant species, such as
 36 mesic forest shrubs and herbs. Most terraces
 37 in the OZAR have been cleared in the past for
 38 agricultural use.^{3.43}

39

40

41

42

43 3.42 David E. Bowles, and Hope R. Dodd, *Floristics and*
 44 *Community Ecology of Aquatic Vegetation Occurring in*
 45 *Seven Large Springs at Ozark National Scenic Riverways,*
 46 *Missouri (U.S.A.), 2007–2012.* (2015).

46 3.43 USGS and MDC 2000.

1 Gravel Bar Community

2 The gravel bar community consists of the
3 Ward's willow / witch-hazel association,
4 which is commonly found with alder and
5 sycamore trees. These trees help stabilize
6 gravel bars and allow other plants to become
7 established, such as swamp dogwood, water
8 willow, and chairmaker's rush.

10 **Visitor Use**

11
12 The Big Spring area is highly visited to view
13 the spring itself; however, visitors also come
14 for amenities and activities including (NPS
15 2016):

- 16
- 17 • Campgrounds (tent and RV camping)
- 18 • Picnic areas
- 19 • Dining Lodge (HS-422)
- 20 • Housekeeping cabins
- 21 • Recreation on the Current River
- 22 • Hiking (several miles of hiking trails)
- 23 • Scenic overlooks
- 24 • Wildlife viewing and bird watching
- 25 • Playfields
- 26 • Big Spring Historic District programs (e.g.,
- 27 tours and campfire programs)
- 28 • Special events such as Heritage Days

29
30 The Dining Lodge (HS-422) and CCC-era
31 cabins are open during the warmer months
32 and are typically operated by a private
33 concessionaire (although they are currently
34 closed for renovations). The cabins are
35 available to rent and the nearby lodge serves
36 meals for guests.

37
38 The Current River passes through the park
39 and is used by visitors for bird watching,
40 scenic viewing, swimming, fishing, canoeing,
41 and boating. In the past, rowdy behavior by
42 visitors has been a problem on the river, but
43 law enforcement efforts have been increased
44 to help control issues with rowdy visitors.

1 **Visual Resources**

2
3 The landscape of the Ozarks is characterized
4 by steep slopes and narrow valleys, thick
5 forests of primarily oak and also hickory and
6 pine, and meandering streams and rivers.

7
8 Within the Big Spring Historic District
9 (5,580 acres) are miles of trails and roads
10 constructed by the CCC, a quarry that was
11 mined for dolomite blocks, the ruins of an
12 occupied camp, and a Fire Tower / Lookout
13 Tower (HS-1404). Also included is housing
14 for the park manager who managed the
15 reintroduction of deer into the region.

16
17 Big Spring is a dramatic focal point for public
18 interest and is one of three of the largest
19 springs in the United States, along with
20 Idaho's Snake River Spring Complex and
21 Florida's Silver Spring. Since the flow from
22 springs varies with local rainfall, any of these
23 three springs could be biggest on any given
24 day depending on the weather. At an average
25 daily flow of 288 million gallons of water,
26 underground passages carry water from as
27 far as 45 miles away to emerge at the spring.
28 According to Perry (1976), "Water enters this
29 spring through conduits in a great system of
30 caves that extends for miles north and west.
31 An estimated 175 tons of minerals a day
32 are eroded by the water. It gushes forth in a
33 foaming cataract at the foot of a hundred foot
34 high cliff of Gasconade dolomite and tumbles
35 five feet into a pool that is one hundred yards
36 in diameter. The stream created by this spring
37 is a hundred feet wide and several feet deep,
38 and joins the Current River a quarter of a
39 mile downstream. Water in Big Spring branch
40 is a constant 55 degrees and has an indigo
41 tint." The spring can be seen from the visitor
42 parking area, and a wheelchair accessible
43 walkway leads right to the spring. The
44 accessible Slough Trail is nearby, along with
45 several other trails that are not suitable for
46 wheelchairs.

1 The overall landscape of the Big Spring
 2 Historic District contains many significant
 3 elements of the “Naturalistic” style. A
 4 dominant characteristic of this style found
 5 in the Big Spring Historic District is the
 6 planting of large stands of trees (NPS 2009).
 7 Additional elements of the Naturalistic style
 8 displayed in the Big Spring Historic District
 9 include boulder-lined parking areas, the
 10 rustic steps and stone-paved paths of the trail
 11 systems, and the scenic orientation toward
 12 elements such as the spring and river. A large
 13 open playfield between Peavine Road and the
 14 Main Parking Area (HS-714) was designed to
 15 accommodate recreation and open the view
 16 of the valley bottom. In some cases, natural
 17 processes had to be circumvented to ensure a
 18 certain aesthetic would be preserved. An early
 19 concern was that a major flood could reroute
 20 the Current River through an old channel and
 21 permanently submerge the spring. Thus, one
 22 of the first jobs for the CCC was to construct
 23 the five Big Spring Stone Dikes (HS-711) for
 24 flood control. Another important Naturalistic
 25 element in the Big Spring Historic District
 26 is the purposeful siting of the cabins and
 27 surrounding landscape to achieve a sense
 28 of harmony between the buildings and the
 29 surroundings^{3.44}.

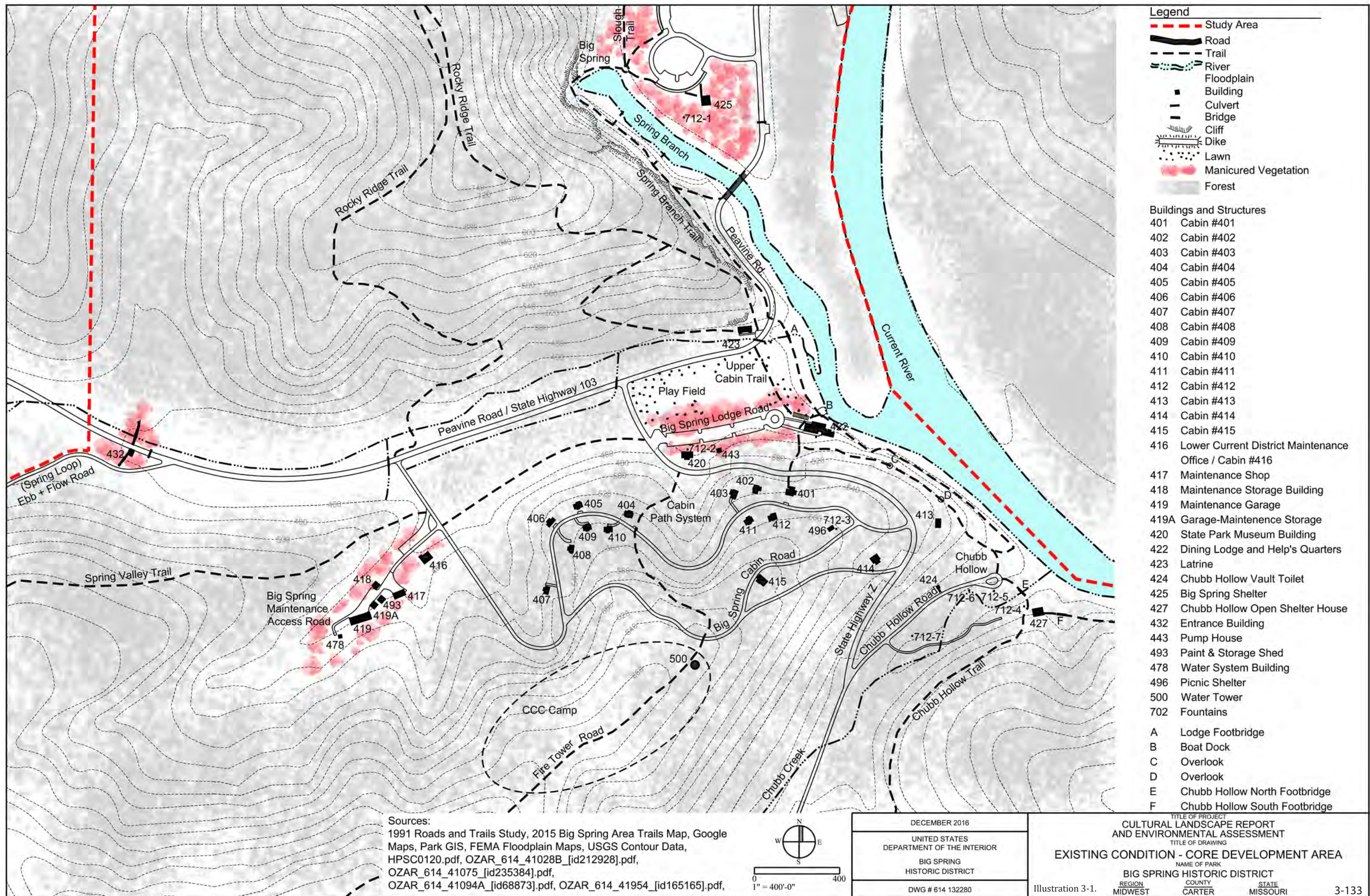
30
 31 The Current River, which is located in
 32 southeastern Missouri in the Ozarks region,
 33 runs through the Big Spring Historic District.
 34 The river flows through the Courtois Hills
 35 region, which has the most rugged terrain in
 36 the Missouri Ozarks.^{3.45} The sharp ridges rise
 37 between 500 and 700 feet above the valley
 38 floors, creating a maze of deep narrow valleys.
 39 In addition, numerous karst features, such
 40 as springs, caves, and sinkholes, are common
 41 throughout the Ozarks region.

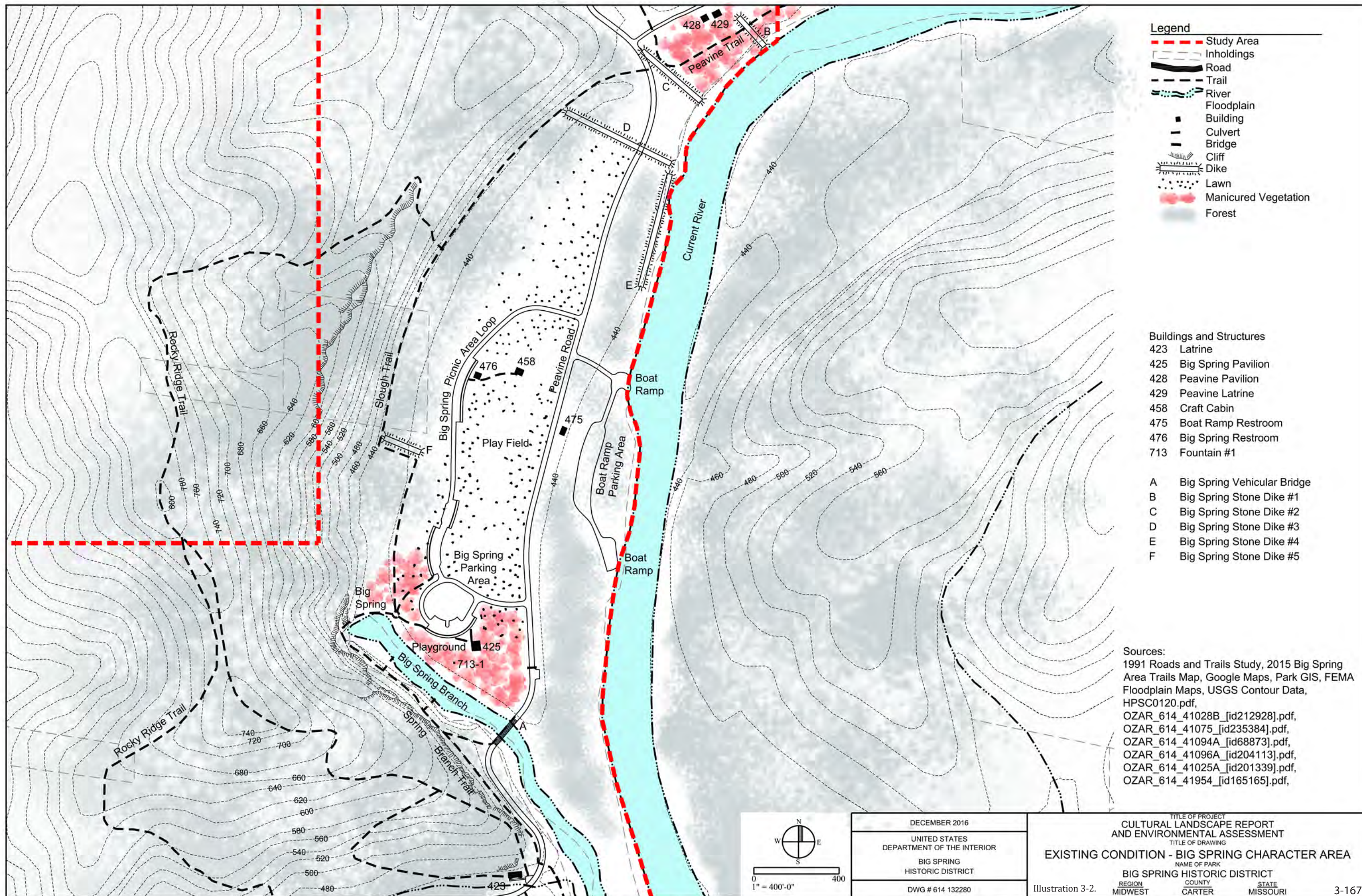
45 ^{3.44} 2016 CLI, 32.

46 ^{3.45} NPS 2016.

1 Recreation trails in the Big Spring Historic
 2 District also provide multiple viewing
 3 opportunities for visitors. Some of the visual
 4 resources available on these trails include:
 5
 6 • Bird watching (bald eagles, kingfishers,
 7 blue herons, and numerous song birds)
 8 • CCC-era features such as walls, paths and
 9 steps, and structures
 10 • Scenic overlooks from dolomite bluffs and
 11 outcroppings
 12 • Lush vegetation such as spring
 13 wildflowers, lichens, mosses, and ferns
 14 • Old-growth shortleaf pine forests that
 15 have been in existence for the past two
 16 centuries
 17 • Historic structures such as the Fire Tower
 18 / Lookout Tower (HS-1404), including
 19 360-degree panoramic views from the
 20 tower of the Ozark Plateau

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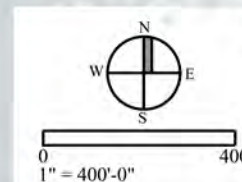




- Legend**
- Study Area
 - Inholdings
 - Road
 - Trail
 - River
 - Floodplain
 - Building
 - Culvert
 - Bridge
 - Cliff
 - Dike
 - Lawn
 - Manicured Vegetation
 - Forest

- Buildings and Structures**
- 423 Latrine
 - 425 Big Spring Pavilion
 - 428 Peavine Pavilion
 - 429 Peavine Latrine
 - 458 Craft Cabin
 - 475 Boat Ramp Restroom
 - 476 Big Spring Restroom
 - 713 Fountain #1
- A** Big Spring Vehicular Bridge
B Big Spring Stone Dike #1
C Big Spring Stone Dike #2
D Big Spring Stone Dike #3
E Big Spring Stone Dike #4
F Big Spring Stone Dike #5

Sources:
1991 Roads and Trails Study, 2015 Big Spring Area Trails Map, Google Maps, Park GIS, FEMA Floodplain Maps, USGS Contour Data, HPSC0120.pdf, OZAR_614_41028B_[id212928].pdf, OZAR_614_41075_[id235384].pdf, OZAR_614_41094A_[id68873].pdf, OZAR_614_41096A_[id204113].pdf, OZAR_614_41025A_[id201339].pdf, OZAR_614_41954_[id165165].pdf,



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|---|
| DECEMBER 2016 |
| UNITED STATES DEPARTMENT OF THE INTERIOR |
| BIG SPRING HISTORIC DISTRICT |
| DWG # 614 132280 |

| | | |
|---|------------------|-------------------|
| CULTURAL LANDSCAPE REPORT AND ENVIRONMENTAL ASSESSMENT | | |
| EXISTING CONDITION - BIG SPRING CHARACTER AREA | | |
| BIG SPRING HISTORIC DISTRICT | | |
| REGION MIDWEST | COUNTY CARTER | STATE MISSOURI |

Illustration 3-2.