SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 16000432 Date Listed: 7/26/2016

Property Name: Guntersville Hydroelectric Project

County: Marshall State: AL

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Signature of the Keeper

7/26/16
Date of Action

==========

Amended Items in Nomination:

This SLR is to clarify the levels of significance for the various areas of significance. The nomination is accepted at the national level in the areas of Architecture, Engineering, Industry, and Conservation.

The property is significant at the state and local levels in the areas of Recreation, Social History, Transportation, and Military.

The TVA FPO and the AL State Historic Preservation Office was notified of this amendment.

DISTRIBUTION:

National Register property file
Nominating Authority (without nomination attachment)

NPS Form 10-900
United States Department of the Interior
National Park Service

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National Park Service

OMB No. 1024-0018

432

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: Guntersville Hydroelectric Project
Other names/site number: Guntersville Dam
Name of related multiple property listing:

(Enter "N/A" if property is not part of a multiple property listing
Historic Resources of the Tennessee Valley Authority Hydroelectic Project

2. Location

Street & number: 3464 Snow Point Road
City or town: Guntersville State: AL County: Marshall
Not For Publication: ☐ Vicinity: ☐

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this ___ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property ✓ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

X national **X statewide** **X local**

Applicable National Register Criteria:

X A **B** **X C** **D**

Wilhelmine C. Mertens 5/23/2016
Signature of certifying official/Title: **Date**

Director, Environmental Permits & Compliance and Federal Preservation Officer
State or Federal agency/bureau or Tribal Government

In my opinion, the property x meets ___ does not meet the National Register criteria.

Lee Anne Wofford May 16, 2016
Signature of commenting official: **Date**

Deputy State Historic Preservation Officer / Alabama Historical Commission
Title : **State or Federal agency/bureau or Tribal Government**

NPS Form 10-900 OMB No. 1024-0018

United States Department of the Interior
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State or Federal agency/bureau or Tribal Government

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Lee Anne Wofford May 16, 2016

Signature of commenting official: **Date**

Deputy State Historic Preservation Officer / Alabama Historical Commission

Title : **State or Federal agency/bureau or Tribal Government**

4. National Park Service Certification

I hereby certify that this property is:

✓ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper — Date of Action: 1/24/16

5. Classification

Ownership of Property

(Check as many boxes as apply.)

Private:	☐
Public – Local	☐
Public – State	☐
Public – Federal	X

Category of Property

(Check only **one** box.)

Building(s)	☐
District	X
Site	☐
Structure	☐
Object	☐

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
9	1	buildings
1	0	sites
6	4	structures
0	0	objects
16	5	Total

Number of contributing resources previously listed in the National Register N/A

6. Function or Use
Historic Functions
(Enter categories from instructions.)

INDUSTRY/PROCESSING/EXTRACTION/ *Energy Facility*
RECREATION AND CULTURE/ *Outdoor Recreation*
TRANSPORTATION/*Water-related*

Current Functions
(Enter categories from instructions.)

INDUSTRY/PROCESSING/EXTRACTION/ *Energy Facility*
RECREATION AND CULTURE/ *Outdoor Recreation*
TRANSPORTATION/*Water-related*

7. Description

Architectural Classification
(Enter categories from instructions.)
MODERN MOVEMENT/Streamlined Moderne
OTHER/Hydroelectric Dam

Materials: (enter categories from instructions.)
Principal exterior materials of the property: Concrete, Steel, Rock, Earth

Narrative Description
(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Narrative Description

The Tennessee Valley Authority (TVA) constructed the Guntersville Hydroelectric Project from 1935 to 1939. It is located at mile 349 on the Tennessee River in Marshall County in North Alabama, southeast of Huntsville. The dam takes its name from the city in which it is located, Guntersville (2014 est. pop. 8,358), about seven miles southeast of the dam site. The Guntersville Hydroelectric Project was designed in accordance with local topography and geology that characterizes the region, as it is sited within the natural river channel on a foundation of Bangor limestone. The Guntersville Hydroelectric Project impounds the 67,900-acre, sixty-six-mile long Guntersville Reservoir (also called Guntersville Lake), which has a total volume of 162,100 acre feet. Guntersville Reservoir lies within two Alabama counties: Jackson and Marshall; and Marion County, Tennessee. The Tennessee Valley watershed comprises 40,910 square miles; of that, 24,450 square miles, or sixty percent, is located above Guntersville Dam in the Tennessee River watershed. The upper river flows in a southwesterly direction, becoming more westerly about nine miles above the Guntersville Dam. At this point, the river channel is 1150 feet wide with a 2400-foot flood plain, mostly to the south of the river. At the dam, the general elevation of the Cumberland Plateau is 110 feet above sea level. [1]

The location of the Guntersville Hydroelectric Project was partially dictated by the navigation requirements and limits of the Wheeler Pool to the north to Hale's Bar Dam located eighty-two

[1] Tennessee Valley Authority, *The Guntersville Project: A Comprehensive Report on the Planning, Design, Construction, and Initial Operations of the Guntersville Project, Technical Report No. 4*, (Tennessee Valley Authority: Knoxville, TN, 1941), 3, 14.

miles north of the Guntersville site and thirty-three miles downstream from Chattanooga. The U.S. Army Corps of Engineers (USACE) began investigating sites to meet these navigation requirements, as well as drilling for a suitable core foundation. The investigation led to the current site of the Guntersville Hydroelectric Project at Cole's Bend Bar. The selection of this site provided the optimal flood storage control and would provide for better navigation facilities.[2] This site selection would make the Tennessee River completely navigable from its mouth to Knoxville.

The geology and topography of the area also influenced the ultimate site of the Guntersville Hydroelectric Project. The area consists primarily of limestone, shale, and sandstone, on which the site rests in the middle of a Bangor limestone formation. This type of foundation limits the option of layout for a safe dam, spillway, powerhouse, and lock system. Due to the depth of the limestone bedrock under the flood pain, the site had to confine its concrete structures as much as possible to the river channel and connect the bluffs on each side with earth embankments. The topography and geology were perfectly suited to locate the dam's spillway and intake sections within the natural river channel. A dam at this location would result in a reservoir elevation that would meet both navigational goals and optimum flood control storage for permissible reservoir draw-down.[3]

The hydroelectric project consists of a dam, powerhouse, switchyard, and navigational locks. Associated with the hydroelectric project is a public recreation area with a picnic area, fishing ramp, and boat ramp. Constructed for the purpose of generating power and for river navigation, the Guntersville Hydroelectric Project contains two navigational locks.

INVENTORY

The Guntersville Hydroelectric Project consists of the dam, powerhouse, switchyard, and navigation locks, which are interconnected and integral to one another (*see Photo 1*). In the immediate vicinity of the switchyard is a concrete storage building. The navigation locks also are serviced by several concrete control buildings: an original main operations building built in 1939, a new main operations building built in 1965, and a concrete block maintenance building. The initial 1939 plan for Guntersville dam allowed for space to construct an additional lock in the future if needed.

To the west of the dam and powerhouse is a recreational area consisting of picnic tables, a fishing ramp, a boat ramp, and restrooms. To the north and west of the navigation locks is an additional recreational area consisting of picnic tables, pavilions, a boat ramp, and parking. The dam, powerhouse, switchyard, and first navigation lock and lock control building were all completed by 1939. The maintenance area and recreational area were also designed in 1939 as part of the TVA mission. In 1964, the U.S. Army Corps of Engineers realized the need for an additional lock to relieve river channel congestion. Since completion of the original project, other buildings, sites, and an additional navigation lock have been added to the property. The

[2] Ibid., 13.
[3] Ibid., 42.

USACE completed a new navigation lock directly north of the existing lock in 1965, which measures 110 feet by 600 feet.[4] The inventory of the Guntersville Hydroelectric Project includes historic and added structures and buildings. The historic resources are contributing, retaining a high degree of integrity.

1. Guntersville Dam, 1939 (Contributing Structure)

The ninety-four-foot high Guntersville Dam has an overall crest length of 3,979 feet across the channel and adjacent bottoms. Guntersville Dam is a straight reinforced concrete gravity-type spillway dam constructed mainly of concrete and steel.[5] The spillway dam has eighteen roller vertical gates (*see Photos 2, 3*). The spillway and intake are located in the natural river channel. The spillway is divided into eighteen bays, each measuring forty feet wide, by forty feet, five-inches high. The crest is an ogee-type overfall section. Embankments consist of two rolled, filled earth embankments to the north and south of the dam. The north embankment and concrete sections form a straight line between the navigation locks and the north boundary of the flood channel; this crest length is 695 feet at an elevation of 610 feet. The south embankment also forms a straight line between the powerhouse and south bluff. The south embankment crest is 1,900 feet in length at an elevation of 615 feet (*see Photo 4*).[6]

Construction of the Guntersville Hydroelectric Project commenced on December 4, 1935 and required 295,684 cubic yards of concrete and 836,516 cubic yards of earth/rock fill. The spillway is 856 feet in length and has a maximum capacity of 625,000 cubic feet per second. The overfall crest section rises to an elevation of 555 feet, while the piers rise to an elevation of 615 feet in anticipation of a future highway bridge across the dam. The roller vertical gates are operated by two traveling gantry cranes of eighty-ton capacity. Seventeen of the gates are divided into two sections and are used for flood control, while the eighteenth gate is used primarily to regulate the passage of trash. Below the spillway there is a stepped apron with a five-foot baffle wall at the end. The apron extends 125 feet downstream and is divided into three sections by reinforced concrete walls.[7]

2. Navigational Locks, 1937, 1965 (Contributing Structure)

Guntersville's navigational lock is located at the right (north) bank of the river between the north embankment and the spillway (*see Photo 5*). The locks were designed by the U.S. Army Corps of Engineers; however, TVA architects coordinated the architectural treatment of the locks with the rest of the dam. The lock has a chamber sixty feet wide and 360 feet long (*see Photo 6*). The centerline of the lock has an angle of eighty-eight degrees, seventy feet downstream from the centerline of the upper gate pintle. The rock foundation is at elevation 536.3. This provides a

[4] Jack Hopper, "New Guntersville Lock to Speed River Traffic," *Birmingham News* (Birmingham, AL), May 9, 1965.

[5] Commonly, dam design includes a section that permits the overflow of water from the reservoir (the spillway) and other sections that do not allow the passage of water (non-overflow). Together, these sections contribute to the total length of the dam structure that impounds the reservoir. A gravity type dam is one constructed of concrete or stone and uses the sheer weight of the structure to resist the horizontal pressure of the water pushing against it. Gravity dams are designed in sections that are independently stable.

[6] Tennessee Valley Authority, *The Guntersville Project*, 67-70.

[7] Ibid., 71, 165.

normal lift of thirty-nine feet and a maximum lift of forty-five feet. The lock walls are divided by vertical contraction joints into a series of concrete monoliths. The lock is a modified Monogahela River standard. The minimum clearance over the miter sills is twelve feet. The lock extension wall is 412 feet long and is supported by twelve (12) steel sheet-pile cells, each measuring seventeen-feet, six-inches in diameter. The concrete extension wall was designed for a force of 1,200 pounds per linear foot, applied along the top from the river side to allow for current and wave impact. Both walls have square filling culverts measuring eight feet high by eight feet wide with floors at elevation 536. At this same elevation are the floors of discharge ports. The upstream lock gates consist of two straight, horizontally-framed, leaf-type, steel gates, each measuring twenty-seven feet, eleven inches high. Each leaf is divided into panels by seven horizontal, wide flange I-beams spanning thirty-two feet, six inches between the vertical quoin and miter beams. The lower gates of the lock consist of arches with a skin plate on the upstream side. Each leaf is divided into panels by seventeen horizontal arched ribs spanning between the quoin and miter beams. Each panel is three feet, eight inches high, and the total distance between the centerlines of the top and bottom ribs is fifty-eight feet eight inches. All ribs are parallel to each other and to the pressure line, which is curved to a radius of thirty-seven feet. The lock gates are electrically operated by four sets of machinery, two sets for the upper gates and two sets for the lower gates. Driving the gate-operating machinery is high-torque, high-slip, squirrel-cage induction motor.[8]

The second, larger lock was added in 1965. Its chamber measures 110' x 600' (*see Photo 7*).

3-6. Lock Control Buildings (4) 1939 (Contributing Buildings)
At the east and west ends of the lock are small, one-story control buildings with a flat roof. The walls are brick on the lower half, and each building has fixed, metal-frame windows and a glass and metal door (*see Photo 8*).

7. Lock Operation Building, 1939 (Contributing Buildings)
Located on the south wall of the original 1939 lock is the original lock operation building. This building is one-story with a second-story octagonal office at the east end (*see Photo 9*). The building was originally used as an office building associated with operations of the locks. It has a flat roof with a concrete parapet wall and an exterior of concrete. It has square and rectangular, fixed windows in pairs or individually divided by concrete panels.

8. Lock Operation Building, 1965 (Contributing Building)
Located on the river wall of the lock adjacent to the axis of the dam is a one-story office building associated with operations of the locks (*see Photo 10*). It has a flat roof with over-hanging eaves and exterior of concrete and aggregate. It has square and rectangular, fixed windows divided by concrete and aggregate panels. Transom and spandrel panels of formica are above and below fixed single-light windows. A cantilevered porch entrance at the east end of the building contains entrances for the visitor lobby and office reception area. The entrance has two-light, steel frame doors, and full-height fixed windows (*see Photo 11*). The interior of the building has original

[8] Ibid, 59-65.

four feet by four feet concrete floors and replaced drywall walls. Interior steel doors are replacements. There are dropped acoustic tile-ceiling and florescent light fixtures.

9. Lock Maintenance Building, 1990 (Non-Contributing Building)

This is a one-story building of textured concrete block and a flat roof. The garage bays have metal overhead-track doors. Above the bays, the upper walls have concrete panels. The façade has four bays, three with garage doors, and one with a pedestrian entrance that has a solid metal door with structural glass blocks beside and above the entrance (*see Photo 12*).

10. Powerhouse, 1935 (Contributing Building)

The facility's powerhouse and intake are located in the left bank of the river downstream from the base line of the dam. The powerhouse is semi-outdoor and is of reinforced concrete construction and measures 106 feet in width by 293 feet in length (*see Photo 13*). The powerhouse superstructure was completed for four units, though initial installation was at 81,000 kilowatts in three units; a fourth was deferred. Each turbine, with a twenty-two foot, one-half inch diameter runner, is rated at 34,000 horsepower at thirty-six foot head and 69.2 RPM.[9]

The powerhouse embodies a high degree of integrity, retaining much of its original design and detailing. The building has a concrete foundation, concrete and aggregate walls and a flat roof of rolled roofing material. The east wall of the building is integrated into the western face of the dam. The primary entrance to the powerhouse is on the south elevation. Attached to the face of the façade are the original letters spelling "GUNTERSVILLE." Below the letters are original thirty-five-light aluminum-frame fixed windows within a projecting surround (*see Photo 14*). Two of the thirty-five frames on the ground level are door openings into the building. The north elevation also has a thirty-five-light aluminum-frame, fixed picture window within a brick surround (*see Photo 15*). This elevation also has a suspended metal walkway and stairs for access around the west, north, and east exterior elevations. The east elevation has the original structural glass block windows and two gantry cranes (*see Photo 16*). The west elevation has a concrete substructure with offices and workshops with original three-light vertical aluminum fixed and hopper style windows divided by structural glass block.

Extending from the west elevation of the dam and powerhouse's office and control room section is the unit bay (generator room) which houses the turbines. This building is of concrete design and rectangular in plan. The roof of the unit bay is of gravel and tar and the tops of the turbine exhaust ports protrude above the roof. On the roof of this building is the 225-ton capacity gantry crane used to service, remove and install the turbines.

The powerhouse lobby is open to the turbine room with a visitor mezzanine one floor above the turbine ground floor. The lobby has original glazed tile walls and ceramic tile floors and has fixed windows to the control room to the west and storage rooms to the east. Above the control room windows is lettering which spells "1935- BUILT FOR THE PEOPLE OF THE UNITED STATES - 1939" (*see Photo 17*). The lobby also features visitor restroom area with recessed water fountains of marble and rectangular light fixtures in the cove ceiling. The restrooms have

[9] Ibid., 51, 103.

original steel doors, with intact original interiors of four-inch by four-inch ceramic tile floors, six-inch by twelve-inch glazed tile walls, marble stall dividers, and original plumbing fixtures. A visitor's room is located just off the restroom area where the control panel could be viewed through a thick glass window. Due to security concerns, this visitor viewing area is no longer open to the public. Leading from the lobby mezzanine to the second floor offices is a staircase with glazed tile walls and terrazzo treads.

At the second floor is the powerhouse office and workroom section of the powerhouse with a corridor overlooking the turbine area. This second floor corridor retains original glazed tile walls, a replaced acoustical drop ceilings, and terrazzo floors. Some office and common spaces have been remodeled except for plaster walls with added floor carpeting and dropped acoustical tile ceilings (*see Photo 18*). Most interior doors are original and are aluminum with central grille vents, some original interior light fixtures (*see Photo 19*), and original aluminum hopper and fixed windows.

The unit bay containing the generators has an original tile floor, glazed tile walls up to the clerestory windows, which are of structural glass block, and a vaulted ceiling of aluminum panels (*see Photo 20*). Connecting the control room section and the unit bay is a pair of original curved staircases with tile walls and tile floors (*see Photo 21*). A track crane is situated at the south end of the unit bay (*see Photo 22*). The unit bay is served by twelve (12) seventeen-foot wide by thirty-six-feet high tractor-type head-gates and protected by steel trashracks, with three bays to each of the four units.

The intake is a straight gravity type structure of concrete that is independently stable. The gates for the twelve intake openings are two sets of three structural-steel vertical lift gates are provided for closing the intakes. One gate is a roller gate, while the other two are slide gates protected by steel trashracks. Each of the intake opening bays for units one, two, and three consists of three openings, each measuring seventeen feet, eight inch wide and with two (2) six-foot, six-inch thick intermediate piers and two (2) six-foot end piers. The bay opening for unit four is the same, except that the north end pier is nine feet, eight-inches thick. The vertically installed Francis reaction-type turbines (designed to operate fully submerged) were manufactured by S. Morgan Smith Company. The turbines have a rating of 34,000 horsepower at forty-two-foot head of water, with 87.7 percent efficiency. Each turbine has a cabinet actuator-type governor, manufactured by the Woodward Governor Company, with a rated capacity of 100,000 foot-pounds per second. The powerhouse's generators were manufactured by the General Electric Company and are Alternating Current. They have a line charging capacity of 27,000 kilovolt-amperes and a synchronous condenser capacity of 13,800 kilovolt-amperes. The gantry crane capacity is 225 tons. On initial installation, the powerhouse's generating capacity was 81,000 kilowatts in three units. Its ultimate installation capacity was 108,000 kilowatts in four units.[10] The fourth turbine was added in 1952. At the south end of the unit bay, the machine shop is open and located under the lobby mezzanine. Adjacent to the generator room are a series of utility, operations and maintenance rooms which have concrete floors, walls and ceilings.

[10] Ibid., 107.

There is a cable tunnel which runs from the powerhouse to the switchyard. This tunnel is approximately 820 feet long with twelve inch thick walls and ceiling (*see Photo 23*).[11]

11. Switchyard, 1935 (Contributing Structure)

The switchyard is located 150 feet south of and adjacent to the powerhouse (*see Photo 24*). It was built in 1935 and measures 601 feet in length and 179 1/2 feet in width. The switchyard contains a series of transformer banks and transmission lines. Some of the electrical equipment has been replaced since the switchyard was built but the overall appearance of the structure closely resembles its original design. A reinforced concrete tunnel carries control leads to the switchyard.[12]

12. Oil Purification Building, ca. 1935 (Contributing Building)

This is a concrete building located east of the switchyard constructed ca. 1935. This is a typical design, found at other TVA switchyards, with a flat concrete and built-up roof, side walls of concrete panels, two original steel and single-light doors and two four-light vertical hopper style windows surrounded by glass block. Originally, two 6450-gallon oil storage tanks were located on each side of the building.[13] The tanks have been enclosed within added wings to the main building; the wings are frame and have corrugated metal exteriors and overhead sliding-track metal doors on the main façade (*see Photo 25*).

13. Public Safety Service Building, ca. 1957 (Contributing Building)

The ca. 1957 Public Safety Service Building was built to house a cafe and restrooms for visitors *(see Photos 26, 27*). The building became TVA police offices in the 1990s, at which time the interior was remodeled. The building now operates as the headquarters building for the maintenance crew. The building's exterior retains integrity and has a concrete foundation, stretcher bond brick exterior, and a flat roof of rolled roofing material. The entrances to the office and entrances to the restrooms are placed within two incised porch sections on the east and west elevations separated by a breezeway. Each incised section has fixed, wood-frame clerestory windows. All doors on the south, west and east elevations are original steel doors. The main façade is on the north elevation with rectangular, fixed, wood windows, and two single-light and wood doors. The north façade also has a cantilevered porch supported by metal posts and two-foot high brick wall. On the interior, the drywall cubicles for offices and cell walls are still in place from when the building operated as TVA police offices. A small kitchen from the original café is still located in the rear of the office; however the fixtures were updated during the remodeling. The north façade interior doors and windows also have attached iron bars from the remodeling for TVA police.

14. Guntersville Pedestrian Overlook, ca. 1935 (Contributing Structure)

Located north and east of the navigational locks is a pedestrian overlook and parking area. Located at this overlook is a TVA plaque for Guntersville Dam. There is a circular parking area for visitor vehicles. The overlook consists of a wide concrete walking path and concrete retaining

[11] Ibid., 238.
[12] Ibid., 238.
[13] Ibid.

wall above the rock embankment. Four-foot wide concrete steps lead down from the overlook to the riverbank. At the river's edge is an asphalt walkway and a T-shaped fishing pier (*see Photo 28*).

15. Picnic Pavilion, 1993 (Non-Contributing Structure)

This is a ca. 1990 open-air structure is supported with square, wood posts bolted to a concrete foundation and a gabled roof of asphalt shingles. Each side of the pavilion has six bays. Picnic benches are late 20th-century furniture.

Maintenance Areas, ca. 1955 and 1978 – 4 resources

The first maintenance area located northwest of the navigational locks consists of a main office building, a pesticide materials shelter, a flammable materials shelter, and a storage building:

16. Office Building ca. 1955 (Contributing Building)

The main maintenance office building is of concrete block construction with a flat metal roof and extended overhang on the east elevation. The main east façade has three bays of overhead track doors. The main entrance is on a ramp with an original single-light and steel door, three, wood hopper style windows with nine fixed transoms, and one additional overhead track door. The west elevation has one overhead track door and two sets of the same window grouping located on the east elevation. The north and south elevations have three fixed windows with air conditioning vents (*see Photo 29*).

17-18. (2) Storage Structures, ca. 1978 (Non-Contributing Structures)

The pesticide and flammable material storage buildings are fluted metal exteriors with a flat metal roof and steel door.

19. Storage Building, ca. 1978, (Non-Contributing Structures)

The second maintenance area is located south of the recreation area southeast of the powerhouse. This maintenance area contains one storage building with fluted metal exterior, flat metal roof, one overhead track door, and an attached carport.

20. Recreational Area, ca. 1955 (Contributing Site)

The Guntersville Hydroelectric Project site was originally designed with a picnic and recreation area north and south of the river (*see Photos 30, 31*). These recreational facilities were completed after World War II. The grounds consist of sidewalks, picnic benches, and boat ramps. Concrete sidewalks have been re-poured in recent years. The boat ramp is located at the far west ends on the north and south sides of the river. Picnic benches are late 20th-century furniture. While the original design is intact, the recreational area's original elements have been replaced.

21. Concrete Bridge from Highway 431 to Navigational Locks, ca. 1935, (Contributing Structure)

This ca. 1935 concrete bridge is located north of the navigational locks at Guntersville and south of Alabama State Route 431. This bridge crosses over Little Paint Rock Creek and is of all concrete and aggregate construction with the original steel railings (*see Photo 32*).

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B. Property is associated with the lives of persons significant in our past.
- [X] C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

- [ ] A. Owned by a religious institution or used for religious purposes
- [ ] B. Removed from its original location
- [ ] C. A birthplace or grave
- [ ] D. A cemetery
- [ ] E. A reconstructed building, object, or structure
- [ ] F. A commemorative property
- [ ] G. Less than 50 years old or achieving significance within the past 50 years

Areas of Significance
(Enter categories from instructions.)
ARCHITECTURE
CONSERVATION
ENGINEERING
INDUSTRY
MILITARY
RECREATION
SOCIAL HISTORY
TRANSPORTATION

Period of Significance
1935-1965

Significant Dates
1935-1939

Significant Person
(Complete only if Criterion B is marked above.)
N/A

Cultural Affiliation
N/A

Architect/Builder
Architect: Tennessee Valley Authority; U.S. Army Corps of Engineers; Roland Wank, Rudolph Mock, Mario Bianculli
Builder: Tennessee Valley Authority

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

The Guntersville Hydroelectric Project meets National Register criteria A and C for its historical significance as an integral part of the Tennessee Valley Authority Hydroelectric Project. The Guntersville Hydroelectric Project is significant for its overall design, the expansion of energy for World War II manufacturing, the improvement of the quality of life through transmission of electricity, control of seasonal flooding, and creation of public recreational facilities. The Guntersville Hydroelectric Project was one of twenty-five (25) dams constructed by the Tennessee Valley Authority (TVA) for the purpose of generating electrical power from, improving navigation of, and controlling seasonal flooding of the river system of the region. Located southeast of Huntsville, the Guntersville project was original to TVA's unified plan submitted to Congress in 1936. A dam site in the Guntersville vicinity was first considered a possibility in 1914 by the U.S. Army Engineers. Upon the establishment of TVA in 1933, the main program the Authority was charged with included the construction of nine main-main river projects that would create a nine-foot wide navigation channel from the mouth of the Tennessee River to Knoxville, Tennessee; flood control; power generation; and creation of social and economic opportunities in the Tennessee River Valley region. Investigation of the Guntersville project began in July 1935 and the Board of Directors of TVA authorized construction of the dam on November 27, 1935. At that time, an agreement was made with the U.S. Army Engineers to take charge of designing the navigational lock, while all other building structures would be designed by TVA. Construction began December 4, 1935.[14] The Guntersville Hydroelectric Project is significant at the local, state, and national level. For architecture, it is significant for its Streamlined Moderne style, embodying the TVA's mission of progress in its economy of adornment, as well as the industry of the machine age. The progressive ideology extended into conservation, another area of significance; TVA's Guntersville Hydroelectric Project not only harnessed the energy of the river, but involved reforestation of the land and introduction of progressive farming methods. The project's significance in engineering is reflected in TVA's overall plan for an integrated system of river management through site-specific designs tested on scaled models. The significance of the Guntersville project in industry is seen through the increase of household electricity use and in war-related manufacturing. It is also significant in the area of military for its role in the war effort. The Guntersville project is significant in recreation because of the extensive outdoor opportunities it fostered. Guntersville was significant in social history for its role in employment, housing, and improvement of quality of life. Lastly, it is significant in transportation for contributing to the 652-mile navigable waterway on the Tennessee River, contributing to increased commercial traffic and industry in the region.

Under criterion C, the Guntersville Hydroelectric Project is a notable example of the Streamlined Moderne style of the twentieth century. This style is expressed in the design of the dam and the

[14] Tennessee Valley Authority, *The Guntersville Project: A Comprehensive Report on the Planning, Design, Construction, and Initial Operations of the Guntersville Project*, Technical Report no. 4, (Tennessee Valley Authority: Knoxville, TN, 1941), 1 -2, 165.

interior and exterior of the powerhouse. Few changes have occurred to the exterior of these structures, and they retain integrity of their original design. The Guntersville Hydroelectric Project meets the registration requirements set forth in the Multiple Property Documentation Form, Historical Resources of the Tennessee Valley Authority Hydroelectric Project.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

HISTORICAL NARRATIVE

The main objective of the Guntersville project was navigation improvement. Development of transportation along the Tennessee River had gained Congressional attention since 1828. At that time, the United States Army Corps of Engineers (USACE) was charged with construction and mapping along the rivers in the United States, including building lighthouses, jetties, and piers. By 1914, before TVA was established, the USACE began to look at a possible dam site in the vicinity of Guntersville, Alabama, as the river was too shallow to navigate in and around the Guntersville area. In 1922, Congress authorized a comprehensive survey of the Tennessee River Basin. This survey resulted in locating a site at mile 354 on the Tennessee River for construction of a navigational lock in Guntersville.[15] Construction of a dam at this location was recommended at that time; however, Congress never made funds available to complete such a project.

The Tennessee Valley Authority (TVA) was created under President Roosevelt's New Deal program as part of his "First One Hundred Days." Roosevelt envisioned "a corporation clothed with the power of government but possessed the flexibility and initiative of a private enterprise." To this end, Congress passed the TVA Act on May 18, 1933.[16] The multi-purpose legislation sought to improve navigation and flood control of the Tennessee River, spur agricultural and industrial development in the Tennessee Valley, and provide for national defense via government facilities in the proximity of Muscle Shoals, Alabama (Sec. 1). The act authorized the TVA Corporation to acquire real estate for the construction of dams, reservoirs, power houses, transmission lines, or navigations projects at any point along the Tennessee River and its tributaries (Sec. 4i).[17]

In 1935, TVA reviewed the USACE findings along the Tennessee River and concurred with the conclusion to build a dam in the Guntersville area. TVA launched a full investigation into the project site at Guntersville in July 1935. By November 27th of that year, the TVA Board of Directors authorized constriction plans for a dam at Guntersville five miles north of the original site selected the USACE. Upon approval of plans, TVA made an agreement with USACE to design and construct all facilities and structures at the dam site with the exception of the navigational locks, which would be the responsibility of the USACE. Upon completion, the

[15] Ibid, 1.
[16] "History of the Tennessee Valley Authority," at website http://www.policyalmanac.org/economic/archive/tva_history.shtml accessed April 16, 2015.
[17] Tennessee Valley Authority Act of 1933, at website http://www.policyalmanac.org/economic/archive/tva_history.shtml, accessed April 16, 2015.

Guntersville project would provide a nine-foot navigable channel to Hales Bar Dam, eighty-two miles upstream. The Guntersville project would also be of value for flood control in retaining flood waters and by regulating water release from upstream storage reservoirs, as well as assist with flood control operations on the lower Ohio and Mississippi Rivers.[18]

The Guntersville project required the purchase of 110,145 acres of land, displacing 1,182 families. Prior to construction of the project, TVA interviewed 1,952 families in Marshall and Jackson Counties, obtaining social and economic data. Of this number, 6.7 percent were African-American families. Forty-one percent of household heads had never lived outside their respective communities, though movement within the community occurred frequently. In approximately eighty-nine percent of the 1,952 families, the household head was engaged in farming. Forty percent were tenants who provided their own stock and equipment; typical rent for these families equated to one-third of the corn and hay and one-fourth of the cotton they produced. Owner-operator farmers accounted for thirty-one percent of farm families interviewed. Over twenty percent of farmers were sharecroppers, with no stock or machinery of their own, receiving half the crops produced. The lowest economic class, representing seven percent of the farmers interviewed, were farmer laborers, paid one-half to one dollar per day and having no share in crops produced. Net cash income among the group of families was very low. In 1935, after rent, median cash income per family was $238. Owners' income was higher at $367; tenants netted $239, while laborers, at $177, fared slightly better than sharecroppers, at $167.Other sources of income included payments from the U.S. Agricultural Adjustment Administration, poultry and livestock sales, garden products, and Federal work projects.[19]

The value of goods produced and consumed on the farm among the Guntersville families contributed significantly to real net income. The median cash value of these products ($229 per family) was slightly higher at Guntersville than at Pickwick Landing and thirty-five percent higher than at Wheeler. These data indicate a greater self-sufficiency of Guntersville farming, and farms there were somewhat larger (53.1 median acres) than at the Wheeler (34.5) and Pickwick Landing (38.9) projects. The typical farmhouse in Guntersville was an unpainted frame dwelling built ca. 1910 with three or four rooms. About sixty percent of families' homes had no toilet facilities at all, while just twelve dwelling had inside toilets. Twenty-seven houses had telephones, and thirty-four houses had electricity. Education level among all adults in the group stopped at grade 5 or 6. Over seventy percent of children between the ages of 7 and 16 attended school and were behind the average in their studies.[20]

Of the land acquired for the project (110,145 acres), ninety percent was by voluntary transfer, while five percent was by condemnation for title issues, and five percent by condemnation for refusal to sell. TVA paid an average of $50.41 per acre. This land was similar to that acquired at the Pickwick Landing project, agriculturally more productive than Wheeler, where the average per-acre cost was $40.14. Approximately three percent of the land acquired at Guntersville

[18] Tennessee Valley Authority, *The Guntersville Project,* 1-2.
[19] Ibid., 44-45, 262.
[20] Ibid., 45-46.

included schools, churches, stores, and industrial tracts. The Guntersville project also required the relocation of sixty-eight graves from six cemeteries. [21]

In the course of the project, a total of 88.24 miles of state and county highways, city streets, and access roads were relocated, resurfaced and/or improved in Marshall and Jackson Counties. Also, 2.8 miles of the Nashville, Chattanooga, and St Louis Railway's main line required relocation from Guntersville to Rayburn, Alabama. Two miles of the Southern Railway required protection at several location between Stevenson and Hollywood, Alabama.[22]

Impounded nearly surrounded the city of Guntersville, the seat of Marshall County. Though, most of the land consumed was undeveloped. As a result of the Guntersville Hydroelectric Project, the city adopted a planning program, revised city boundaries, and contracted with TVA to relocate water and sewer plants. TVA also assumed costs to ensure the city retained railway and highway access. Ultimately, the project's effect for Guntersville was positive, creating the new benefit of strategic proximity to a navigable waterway. Clearing of under-story vegetation along the shoreline of the reservoir and grading along local highways were effective means of mosquito control, reducing risks of malaria. In public terms, the project's minor adverse effects were offset by its benefits.[23]

Work commenced on the Guntersville project on December 4, 1935. Its lock opened for navigation on January 16, 1939. The first power unit went into commercial operation on August 1, 1939; the second, on October 13, 1939, and third, on January 17, 1940. The Guntersville Hydroelectric Project supplied electrical power during World War II to the aluminum plant at Alcoa and the Manhattan Project plants at Oak Ridge. On initial installation, the powerhouse's generating capacity was 81,000 kilowatts in three units. Its ultimate installation capacity was 108,000 kilowatts in four units.[24] The fourth turbine was added in 1952.

Total land costs for the project amounted to $6,460,646, which included acquisition by fee and by certificate in condemnation proceedings when eminent domain was employed when landowners refused sale. Direct construction costs, such as labor, materials, equipment, transportation, totaled $20,607,919. Indirect construction costs, including accounting, timekeeping, office supplies, and police service, came to $1,619,310. Design and engineering expenditures, which included salaries and expenses of executive engineers, technicians, and inspectors, amounted to $2,305,927. These amounts plus other categorized costs brought the total project to $33,188,040.[25]

After World War II the planned recreational facilities were finally completed and included a campground, picnic area and boat launch ramp. A maintenance area was also built to provide upkeep and regular maintenance for the facility and grounds.

[21] Ibid., 253, 255, 262.
[22] Ibid., 265.
[23] Ibid., 47, 259.
[24] Ibid., 107.
[25] Ibid., 300.

Since its construction the powerhouse has not been significantly altered and retains its original exterior and interior design and detailing. Of particular note are numerous original features, including glazed tile walls, terrazzo floors, original clock and light fixtures, structural glass blocks, Art modern-style stairwells, and interior and exterior sign lettering.

SIGNIFICANCE IN ARCHITECTURE

TVA's hydroelectric projects were designed to embody its mission for social progress. The goals and achievements of these projects - power production, navigation, flood control, malaria prevention, reforestation, and erosion control – reached across the Valley region penetrating America's social and economic strata. Architect Roland Wank impressed upon a receptive board of directors that government projects were beholden to their real stockholders, the American taxpayers, and should be open for public viewing. Further, Wank stated that the design of powerhouses should both welcome the public and convey strength in purpose. Thus, TVA powerhouses were designed as massive monoliths with visitor reception areas.[26] A prominently displayed message in every TVA powerhouse would emphasize the project as "Built for the People of the United States of America."

The pre-World War II TVA projects exemplify the Streamlined Moderne style, a late version of the Art Deco style popular during this period. Streamlined Moderne was an expression of progress, a particularly important underpinning of the New Deal agenda. Stylistic elements that manifested this ideology include the use of geometric shapes, basic and pure in form, sleek and shiny materials evoking machinery and movement, and restrained décor suggesting an economical design ethic. Streamlined Moderne architecture often emphasized curved forms and horizontal lines, sometime including nautical motifs.

The design of the Guntersville dam and powerhouse reflects the "modernism" that the TVA architects and engineers strived for in the 1930s and early 1940s. The dam was built utilizing the most advanced methods of its time, and the powerhouse was built with Streamlined Moderne characteristics on both its exterior and interior. The Guntersville powerhouse retains several elements expressing the style. Curved stairwells lead to the generator room floor, and similar staircases curve to the generator unit housing. Both examples have sleek metal hand railing. The units themselves convey the Streamlined Moderne style, with their smooth-finish metal housing and perfectly cylindrical form. The powerhouse lobby also retains original water fountains that have marble basins and are set within curved recesses of the walls, lined with glazed tile. Original interior doors of metal have narrow rectangular, louvered insets. The generating units themselves convey the Streamlined Moderne style, with their smooth-finish metal housing and perfectly cylindrical form. The powerhouse interior retains its original interior aluminum doors, original light fixtures, interior wall and floor finishes, and original restroom fixtures and finishes. These elements express the polished minimalism of the Streamlined Moderne architectural style.

[26] North Callahan, *TVA – Bridge Over Troubled Waters: A History of the Tennessee Valley Authority*, (Cranbury, NJ: A. S. Barnes and Co., Inc., 1980), 33; and Erwin C. Hargrove, *Prisoners of Myth: The Leadership of the Tennessee Valley Authority, 1933-1990*, (Princeton, NJ: Princeton University Press, 1994), 30-33.

On the exterior, the powerhouse's block form is modern in its utilitarian simplicity. The north and south elevation each features a huge wall of glass composed of rows and columns of fixed, aluminum-frame windows. The treatment emphasizes the rectangular form in its repetition and breaks the massive wall into smaller units on a human scale. On the side elevation, square window openings are filled with square structural glass blocks.

The dam itself embodies progress, in its engineering and its design. Its massive scale represents the immensity of the project, spatially and philosophically. The architectural design of the dam employs smooth surfaces of concrete, and its steel elements such as spillway gates, emphasize geometric forms and horizontal lines. The support structure consists of Spartan concrete piers with triangular bases. Their repetitious spacing imparts a sense of movement as the eye travels the length of the vast structure.

SIGNIFICANCE IN CONSERVATION

The far-reaching impacts of the TVA's hydroelectric projects achieved regional and national proportions. TVA's programs are credited with promoting growth, development, and stability of the region. By the 1930s, it was clear that much of the nation's farmland had not been properly managed. A report from the USDA noted that 75-100% of topsoil had eroded from some 11 million acres due to flooding and agricultural use. TVA's goal was improvement of quality of life through progressive management of natural resources. The flood control afforded by TVA's series of dams along the river brought stability to the lives of thousands of families. Farmers were then able to consistently apply modern farming methods aimed at soil improvement, thus improving crops. TVA worked with the Civilian Conservation Corps (CCC) in planting 50 million trees across the TVA region by 1939, further assisting in soil conservation.[27]

Soil depletion was a problem on the buffer land TVA acquired surrounding the Guntersville Reservoir. The area was so deficient, engineering treatment was required before reforestation could take place. TVA worked with the United State Forest Service to plant 5,138,408 trees in the Guntersville Reservoir area between 1936 and 1940. TVA supplied the planting stock from its own nursery located near Wilson Dam and employed the labor of 125 men from a CCC camp at Scottsboro, Alabama. Erosion control measures also included the construction of fourteen permanent and some 46,000 temporary dams. To reverse the effects of continuous cultivation, area farmers requested a soil survey on leased TVA lands, under guidance of county soil-conservation associations. In 1939, some 2,000 acres were seeded in vetch and winter legumes for fixing nitrogen, and spring lespedeza also helped restore soil fertility. Also for soil improvement, phosphate from TVA's Muscle Shoals plant was applied to TVA lands leased as pasture. Through June of 1939, leased TVA land in agricultural use totaled 9,021 acres and generated receipts of $19,381 among 341 licensees. Between July 1, 1939 and April 30, 1940, 14,165 acres of leased lands among 409 licensees generated receipts of $30,141.[28]

[27] Carroll Van West, *Tennessee's New Deal Landscape*, (Knoxville: University of Tennessee Press, 2001), 212-214.
[28] Tennessee Valley Authority, *The Guntersville Project*, 284-85, 287-88.

Hand in hand with land management were efforts to support species important to the local food supply, as well as biodiversity, in the Valley ecosystem. During the 1936-37 fishing season, 114, 000 pounds of fish were caught in area waters, amounting to a value of $11,400. Trapping of fur-bearing mammals far surpassed the commercial value of fishing in the area - 52,304 pelts taken during the same period were valued at $78,882. A huge decline in the presence of fur-bearing mammals resulted from the construction of the Guntersville project, which disturbed their habitat. During the 1937-1938, just 6,662 pelts were taken. However, upon filling of the reservoir, low fluctuation of water levels were expected to provide conducive conditions for proliferation of returning mammals, as well as for fish species and migratory waterfowl.[29]

SIGNIFICANCE IN ENGINEERING

The Guntersville Hydroelectric Project is an integral part of the overall engineering design of the TVA system. With Wheeler and Pickwick Landing Hydroelectric Projects in operation, TVA concluded the next logical step in improving navigation on the Tennessee River was development of a site between the head of Wheeler and Hales Bar Dam. Thus, releases from Guntersville provide power to Wheeler downstream, and releases from Hales Bar Dam (which was later replace by the Nickajack Hydroelectric Project) provided power to the Guntersville Hydroelectric Project.

The role of the Guntersville project was not only through navigation improvement, but also in energy production. Even without the installation of generators at Guntersville, the manipulation of water storage and flow at the dam would contribute to energy output at downstream plants. The Guntersville project, with just the dam in place, was calculated to contribute between 43,000 and 47,500 continuous kilowatts of primary energy output from the Wilson plant.[30]

SIGNIFICANCE IN INDUSTRY

The TVA's hydroelectric projects supported the government's objective to electrify rural farmsteads. In 1934, across Alabama, one in thirty farms enjoyed electricity. By 1939, this ratio rose to one on seven, with the addition of the Pickwick Landing and Guntersville projects to the TVA system. During the early post-war years, the TVA supplied electricity at a rate (1.35 cents per kilowatt-hour) less than half of the national average (2.78 cents per kilowatt-hour).[31] By 1946, the TVA's power plants had a capacity of 2.5 million kilowatts of power and brought electricity to 668,000 households in the Tennessee Valley.[32]

Cheap electricity lured new industry to the region, influencing diversification of economy in the heretofore agriculturally-based economy of the Tennessee Valley. The workforce employed in manufacturing grew from 222,000 jobs to 382,000 from 1929 to 1950. The pay rate for a

[29] Ibid., 286.
[30] Ibid., 37, 40.
[31] Patricia Bernard Ezzell, "Tennessee Valley Authority in Alabama (TVA)," available at website http://www.encyclopediaofalabama.org/article/h-2380, accessed April 22, 2015.
[32] West, 11.

manufacturing job in the region increased by 442 percent compared with the national average gain of 282 percent.[33]

TVA's influence on households and manufacturing is evident in consumer use of electricity and purchase of appliances during 1939. Kilowatt usage per residential TVA customer increased from 104 kilowatt hours to 113 kilowatt hours. Production of electricity in TVA's seven-state region increased sixty-three percent. TVA customers purchased household appliances in the amount of $7,072,000.[34]

In recent decades TVA has continued to recruit industry with attractive affordable power. Economic Development is a critical component of TVA's mission. In 2013, TVA Economic Development helped attract or retain almost 52,000 jobs and generate nearly $5.0 billion in capital investment across the TVA region.[35] The Wheeler Hydroelectric Project contributes electrical power to industries throughout the region.

SIGNIFICANCE IN MILITARY

The Guntersville Hydroelectric Project was completed in 1939 and much of its electricity went to industries essential to the military during World War II. One of the primary reasons the Manhattan Project located the uranium plants at Oak Ridge was the assurance of large amounts of electrical power from the TVA system. The electricity produced at Guntersville and the other projects in the TVA system was also utilized for operations at the Alcoa facilities for aluminum production, the Ingalls Shipyard in Decatur for landing craft production and numerous other factories in the region. Of the twelve billion kilowatt hours of energy produced among the TVA system from 1941 to 1945, sixty-six percent was devoted to the war effort.[36]

SIGNIFICANCE IN RECREATION

Following World War II, as middle class American households gained wealth and indoor electricity, a by-product was outdoor leisure time. The TVA's contribution to recreational activities is noteworthy. The agency's hydroelectric projects' reservoirs attracted outdoor enthusiasts who enjoyed fishing, boating, camping, and hiking in the environs the TVA helped create, re-forest, and conserve. TVA operates some 100 public recreation areas throughout the TVA region.

The Guntersville Reservoir was especially suited for recreational development, with its long, broad expanse situated among the scenic remnants of plateaus rising 500 to 1,000 feet above reservoir level. Deep lake waters encouraged sailing, and numerous inlets were ideal for canoeing. Due to limited highway access, however, Guntersville was not expected to draw tourist levels on par with other more accessible TVA projects. Rather, recreation at Guntersville was

[33] Ezzell, "Tennessee Valley Authority in Alabama (TVA).
[34] Zella Armstrong, *History of Hamilton County and Chattanooga, Tennessee Volume 2*, (Chattanooga: The Lookout Publishing Co.), 196-97.
[35] "Economic Development," at webpage http://www.tva.com/econdev/index.htm accessed May 5, 2015.
[36] Ezzell, "Tennessee Valley Authority in Alabama (TVA)."

more likely to be derived from regional populations including Birmingham, Anniston, and Gadsden, Alabama, a total of 1,000,000 residents. TVA built an overlook building on the north bank of the reservoir, convenient for observation of lock activity. In this area were picnic grounds, parking spaces, and a small boat dock. Approximately 112,000 persons visited Guntersville project in 1939. The City of Guntersville maintained a municipal park with a 90-boat marina on waterfront land owned by TVA. The marina was filled shortly after opening. Four cottage colonies were built on TVA reservoir shoreline, implementing standard design and management policy. In 1941, future recreational opportunities about Guntersville Reservoir hinged on the transfer of one million acres of Sand Mountain and portions of the Cumberland Plateau to the U.S. Forest Service. Another potential development that was expected to contribute to the conservation of area woodlands was the Alabama State Park system's acquisition of 4,600 acres of the Little Mountain Peninsula.[37]

SIGNIFICANCE IN SOCIAL HISTORY

During the 1930s, the TVA's hydroelectric project in the Tennessee Valley included improving the land and the lives of its people, devastated by the Depression. The land was over-worked, de-forested, and unproductive. In the process of the Douglas project, the TVA helped create new employment opportunities and provided technical assistance to area residents within the affected area. From a social point of view, the agency developed a protocol regarding the families displaced by its hydroelectric projects, gaining experience from Norris, Wheeler, and Pickwick Landing projects.

Labor personnel for the Guntersville project construction drew from qualified applicants based on merit. Applicants were listed in a register resulting from a 1936 Workmen's Examination given in a seventy-five-mile radius of three project sites (Guntersville, Chickamauga, and Hiwassee). Due to the site's relative isolation, training was made available to increase skills among employees. Subjects offered would be applied on the Guntersville job and in the greater workplace post-project, including mathematics, pipe-fitting, electricity, welding, and blueprint-reading. Labor turnover was low at Guntersville, likely due to careful employee selection, favorable wages, housing, and working conditions, training opportunities, and scarcity of private employment locally. The peak of employment was in October of 1938, with 1,905 workers on site.[38]

Medical services at the project were provided to employees in the form of periodic health exams, immunizations, and emergency care. A medical officer, two associate officers, graduate nurses, X-ray and clinical laboratory technicians, and medial aides were employed full-time at an on-site hospital building with separate white and black wards. In each year while under construction, the Guntersville Hydroelectric Project was designated an "Honor Roll Company" by the National Safety Council for the lowest accident rates among industrial-classified sites. [39]

[37] Tennessee Valley Authority, *The Guntersville Project,* 290.
[38] Ibid., 165-67, 256.
[39] Ibid., 134, 168-69.

Housing for Guntersville workforce included existing farmhouses on land acquired by TVA, new-construction houses, and temporary dormitories. Thirty-six new dwellings were built, each with a living room, kitchen, bath, and one, two, or three bedrooms. Though intended for temporary use, these were of sound construction, with yellow pine sub- and superstructure, hardwood floors, and shiplap exterior siding. The houses were gable-front in plan and had porches on the main façades. TVA also built five dormitories, four for white and one for black laborers. The one-story, frame, U-shaped buildings each accommodated sixty men. On the interior, each eighty-one-square-foot cubicle housed two men. All dormitories were within 200-300 feet of the cafeteria, which accommodated 168 white and twenty-four black patrons at one seating and from the same kitchen. This building plan, serving white and black diners together, but separated, was first used at the Guntersville project and was thereafter utilized at later TVA projects. An L-shaped staff dormitory had similar cubicle dimensions and housed fifty-two men. One female dormitory, for twenty-five women, was built next to the village of houses.[40]

An educational and recreational community building was also constructed on site. This building housed a library, classrooms for training, basketball and handball courts, and an auditorium. Also located within the building was a post office, barber shop, and police headquarters. A separate recreation building was constructed for African-American workers. It also included a library, classroom, and game room, on a much smaller scale.[41]

Library services were contracted with Huntsville Public Library and Marshall County Libraries. The services were available in even the early stages of the project, provided by traveling trucks to land-clearing workers. Schooling was contracted with Marshall County as well.[42]

The TVA established a family readjustment program similar to that at its Norris, Wheeler, and Pickwick Landing projects. Through this program, the TVA worked in cooperation with local, state, and federal agencies, including the Alabama Agricultural Extension Service, the Alabama Department of Public Welfare, the Farm Security Administration, and the Works Progress Administration. Influential factors in the relocation process were both recreational development opportunities from the impounding of the reservoir and new methods in soil conservation including the availability of superphosphate produced by TVA at Muscle Shoals.[43]

Another social aspect of the TVA's hydroelectric project involved the removal and relocation of graves located within the reservoir area. Thirty-three cemeteries were located in the reservoir area acquired by TVA. Of these, fourteen cemeteries with 250 graves were located below pool level or were cut off from highway access. TVA contracted with next of kin for the removal of sixty-eight graves and for 122 graves to remain in place. The removal and re-interment process was carried out by TVA employees rather than by private services. Total cost of surveying, mapping, identification, contracting, and removal and relocation amounted to $7,000. The

[40] Ibid., 127-33.
[41] Ibid., 133-34.
[42] Ibid., , 167,
[43] Ibid., 261

Alabama State Board of Health authorized and received a copy of all pertinent records of the work.[44]

Most reservoir families had lived their entire lives in their respective communities. Though, many were tenants with no attachment to their precise residence. TVA provided land use planning to the City of Guntersville, in coordination with state officials. The town established a planning commission to handle readjustment issues, with guidance from TVA and the Alabama State Planning Commission. The Guntersville area benefitted from improvement of infrastructure including the raising and replacement the support structure of George Houston Bridge over the river on U.S. Highway 241 (Alabama No. 1). A total of sixty-five miles of county and tertiary roads were improved upon their relocation, and thirty-two bridges were constructed on these roads. The incorporated city of Guntersville was almost completely surrounded by the impounding of the reservoir, requiring the construction of a protective dike. The City revised its boundaries and sought assistance from TVA in preparing a zoning ordinance, jointly with the Alabama State Planning Commission. The Mayor and City Council of Guntersville established a municipal planning commission to guide future growth. A survey of existing land uses was undertaken, subdivision regulations were created, and a detailed building code for the city was prepared. A comprehensive plan for recreational areas was also developed, which soon resulted in the creation of a waterfront city park.[45]The project benefitted the larger community with jobs, electricity, and commercial development.

SIGNIFICANCE IN TRANSPORTATION

In 1933, prior to the installation of navigational locks at hydroelectric projects, freight traffic on the Tennessee River was 35-million ton-miles (tons of freight times the distance traveled).[46] The opening of the Guntersville Reservoir to navigation in January of 1939 completed a 464-mile navigable channel from the mouth of the Tennessee River to Chattanooga. The Guntersville harbor quickly became one of the best of the inland waterways of the time. By 1940 its importance became evident with the large-scale movement of new carriers and products through the port. The Gulf Refining Company and the Texas Company began shipping petroleum products up the Tennessee to Guntersville for distribution. Guntersville also became the port for distribution of grains from the Midwestern O. J. Wells elevator. The protective dike that TVA constructed along Guntersville waterfront was designed to double as a bulk dock as a public use terminal dock, if miscellaneous river traffic continued to increase. The cheap river transportation provided by the Guntersville pool was expected to stimulate development of local coal fields, yet undeveloped. Estimates of new river traffic were projected in millions of tons annually for cargo such as iron, coke, sugar, salt, lumber, cotton products, and many manufactured items.[47]

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[44] Ibid., 262.
[45] Ibid., 267-68, 270-71.
[46] Tennessee Valley Authority, *The Nickajack Project: A Comprehensive Report on the Planning, Design, Construction, Initial Operations, and Costs, Technical Report No. 16*, (Washington, D.C.: U.S. Government Printing Office, 1972), 5.
[47] Tennessee Valley Authority, *The Guntersville Project*, 283-84.

Increased traffic volume on the Tennessee River during the 1950s led TVA to study new and larger navigational locks at its dams. TVA foresaw the economic growth of the region and its reliance on river transportation, allowing room for future installation of larger locks at several of its dams, including Wheeler, Fort Loudoun, Pickwick Landing, and Guntersville Dams. Shippers on the river had long complained that the Guntersville Dam was a bottleneck because of the one small lock. A second lock was added at Wheeler Dam in 1963, at Guntersville in 1965, and at Pickwick Landing in the late 1970s. The new lock was completed at the Guntersville Dam at a cost of 17.5 million dollars. It was double the size of the original lock and its capacity allowed it to load several barges at a time.[48] The new lock was designed to accommodate commercial traffic while the smaller lock was planned for use primarily by recreational boats.

The 1967 Nickajack Hydroelectric Project replaced the pre-TVA Hales Bar Dam and improved river navigation with the installation of two large locks, 600 and 800 feet in length. Freight traffic on the Tennessee River reached a record 3.5 billion ton-miles in 1970, a volume approximately 100 times the river traffic in 1933. Shippers using the river in 1970 saved $51.4 million in transportation costs, a figure six times the costs of operating the waterway that year. Between 1933 and 1970, total savings to shippers was $548 million, versus TVA's $141.2 million in operational costs during the same period.[49] The improvements in the Tennessee River's transportation system helped to increase volume on the river, and in 1975 the river bore an estimate 27.1 million tons of commercial freight ranging from automobiles to sand.[50]

SUMMARY

The Guntersville Hydroelectric Project was one of twenty-five (25) projects constructed by the Tennessee Valley Authority (TVA) for the purpose of generating electrical power from, improving navigation of, and controlling seasonal flooding of the river system of the region. The project brought construction jobs and later electricity to the rural area.

During planning and construction, TVA provided technical assistance in local schools, municipal land use planning, road relocation and improvement, and shoreline development. While some individual families expressed a sense of loss in displacement from their homes, the Douglas Hydroelectric Project brought new opportunities to and spurred economic development in the surrounding counties. The Douglas facility is an important component in the vast TVA system of flood control and power generating, as well as contributing to management of river navigation.

The Guntersville Hydroelectric Project retains much of its integrity from its original design in the 1930s and later improvements in following decades. The dam and powerhouse have not been significantly altered, and the powerhouse displays its original Streamlined Moderne design in its exterior and interior detailing. The project continues to be an integral part of the TVA system.

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[48] Hopper, *Birmingham News*, May 9, 1965.

[49] Tennessee Valley Authority, *The Nickajack Project: A Comprehensive Report on the Planning, Design, Construction, Initial Operations, and Costs, Technical Report No. 16*, (Washington, D.C.: U.S. Government Printing Office, 1972), 5.

[50] Thomas D. Clark, "The Tennessee Valley Authority," in *The Encyclopedia of Southern History*, edited by David C. Roller and Robert W. Twyman, (Baton Rouge: Louisiana State University Press, 1979), 1206.

The Guntersville Hydroelectric Project meets the registration requirements set forth in the Multiple Property Documentation Form, "Historical Resources of the Tennessee Valley Authority Hydroelectric Project," and this MPDF contains additional contextual information concerning TVA and its hydroelectric system.

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

Armstrong, Zella. *History of Hamilton County and Chattanooga, Tennessee Volume 2.* Chattanooga: The Lookout Publishing Co.

Callahan, North. *TVA – Bridge Over Troubled Waters: A History of the Tennessee Valley Authority*. Cranbury, NJ: A. S. Barnes and Co., Inc., 1980.

"Economic Development." At webpage http://www.tva.com/econdev/index.htm. Accessed May 5, 2015.

Ezzell, Patricia Bernard. "Tennessee Valley Authority in Alabama (TVA)." At webpage http://www.encyclopediaofalabama.org/article/h-2380. Accessed April 22, 2015.

Hargrove, Erwin C. *Prisoners of Myth: The Leadership of the Tennessee Valley Authority, 1933-1990*. Princeton, NJ: Princeton University Press, 1994.

"History of the Tennessee Valley Authority." At website http://www.policyalmanac.org/economic/archive/tva_history.shtml. Accessed April 16, 2015.

Hopper, Jack. "New Guntersville Lock to Speed River Traffic." *Birmingham News.* May 9, 1965.

Tennessee Valley Authority Act of 1933, at website http://www.policyalmanac.org/economic/archive/tva_history.shtml. Accessed April 16, 2015.

Tennessee Valley Authority. *Design of TVA Projects Technical Report No. 24, Vol. 1, Civil and Structural Design.* Washington, D.C.: U.S. Government Printing Office, 1952.

_____. *The Guntersville Project: A Comprehensive Report on the Planning, Design, Construction, and Initial Operations of the Douglas Project, Technical Report no. 4.* Washington, D.C.: U.S. Government Printing Office, 1941.

_____. *The Nickajack Project: A Comprehensive Report on the Planning, Design, Construction, Initial Operations, and Costs, Technical Report No. 16.* Washington, D.C.: U.S. Government Printing Office, 1972.

Van West, Carroll. *Tennessee's New Deal Landscape*. Knoxville: University of Tennessee Press, 2001.

Previous documentation on file (NPS):

____ preliminary determination of individual listing (36 CFR 67) has been requested
____ previously listed in the National Register
____ previously determined eligible by the National Register
____ designated a National Historic Landmark
____ recorded by Historic American Buildings Survey #_____
____ recorded by Historic American Engineering Record # _____
____ recorded by Historic American Landscape Survey # _____

Primary location of additional data:

____ State Historic Preservation Office
____ Other State agency
__X__ Federal agency
____ Local government
____ University
____ Other
Name of repository: Tennessee Valley Authority, Knoxville, Tennessee____

Historic Resources Survey Number (if assigned): _____N/A_____

10. Geographical Data

Acreage of Property 1,802 acres

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates (decimal degrees)
Datum if other than WGS84:
(enter coordinates to 6 decimal places)

1. Latitude: Longitude:
2. Latitude: Longitude:
3. Latitude: Longitude:
4. Latitude: Longitude:

Or
UTM References
Datum (indicated on USGS map):

☐ NAD 1927 or ☐ NAD 1983

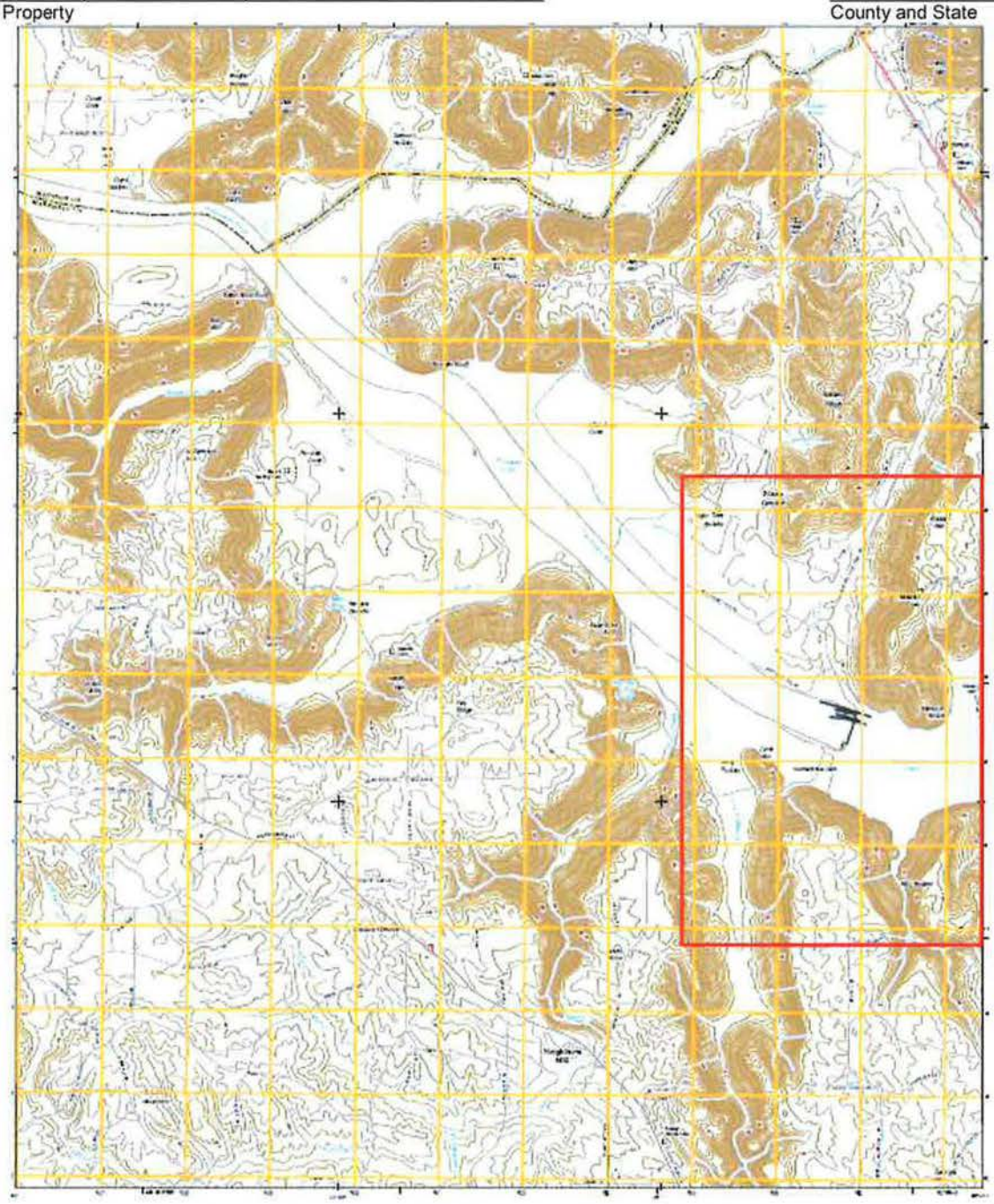
1. Zone: 16	Easting:	556593	Northing:	3807114
2. Zone: 16	Easting:	556938	Northing:	3811215
3. Zone: 16	Easting:	554173	Northing:	3809424
4. Zone: 16	Easting :	556170	Northing:	3811759

Verbal Boundary Description (Describe the boundaries of the property.)

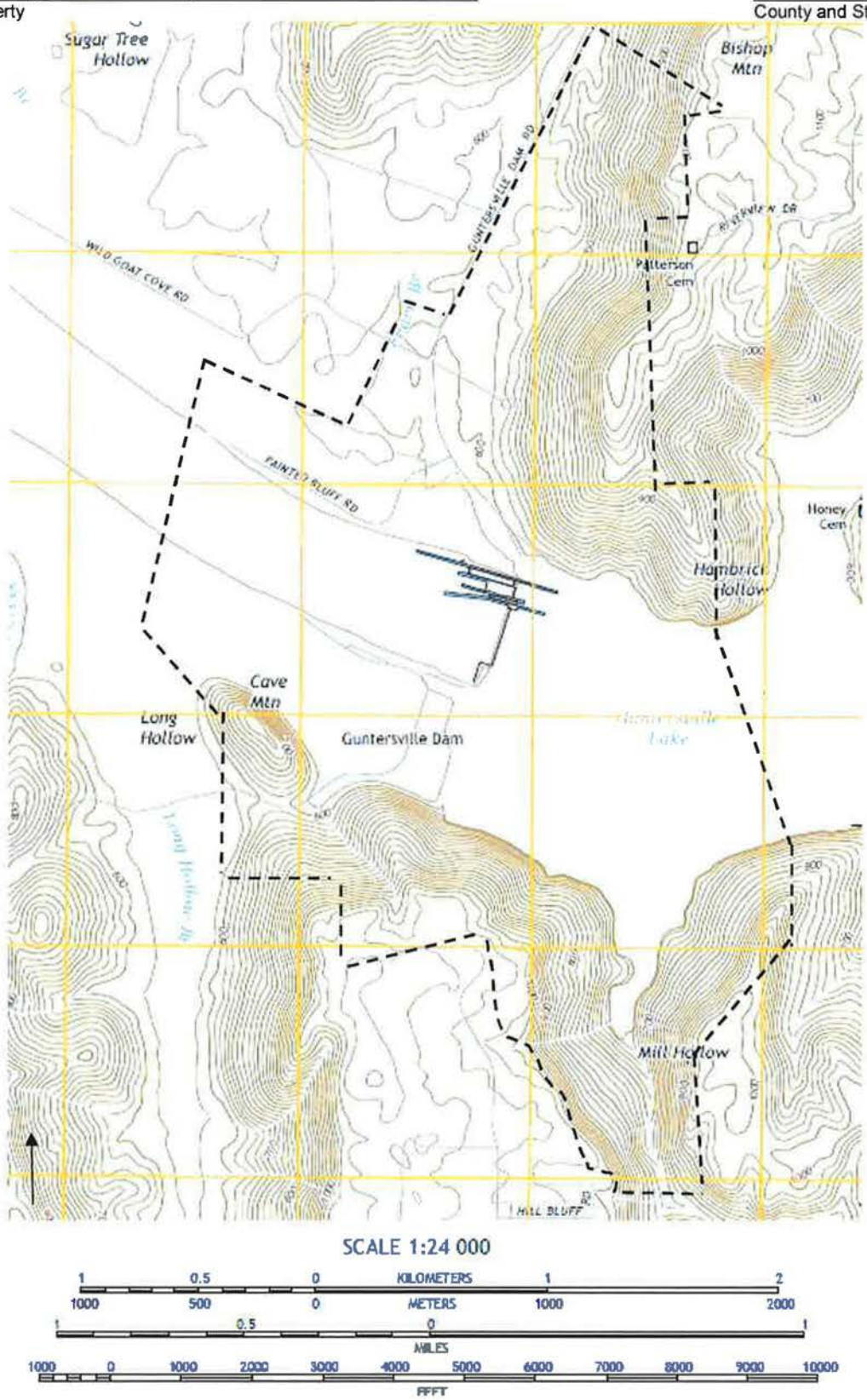
The boundary for the Guntersville Hydroelectric Project is depicted as a dashed line on the accompanying US Quad map and TVA site plan map. The boundary includes property to encompass the adjacent recreational facilities as well as the immediate environs of the dam and powerhouse.

Boundary Justification (Explain why the boundaries were selected.)

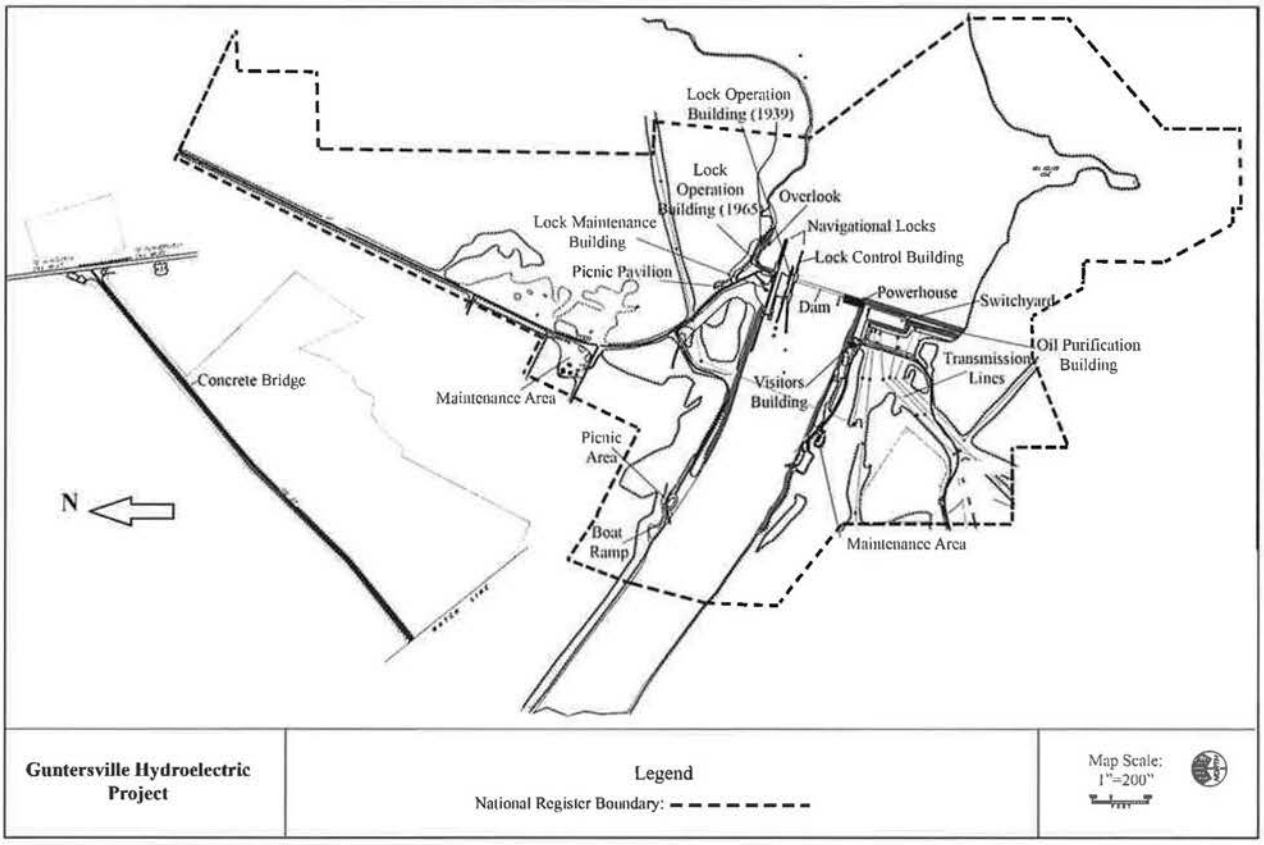
The boundary includes all facilities necessary for the operation of the hydroelectric project and/or associated with the mission of TVA, which includes power generation, navigation, and public recreation. The boundary omits other TVA lands not directly associated with hydroelectric production.



Guntersville Dam USGS Topographical Quad Map, 2014



Enlarged section depicting NR boundary of Guntersville Project.



Site plan and National Register boundary for Guntersville Hydroelectric Project

11. Form Prepared By

name/title: Andra Kowalczyk Martens/Philip Thomason/Rebecca Hightower
organization: Thomason and Associates
street & number: P.O. Box 121225
city or town: Nashville state: TN zip code: 37212
e-mail thomason@bellsouth.net
telephone: 615-385-4960
date: June 4, 2015

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: Guntersville Hydroelectric Project

City or Vicinity: Guntersville

County: Marshall State: Alabama

Photographer: Thomason and Associates

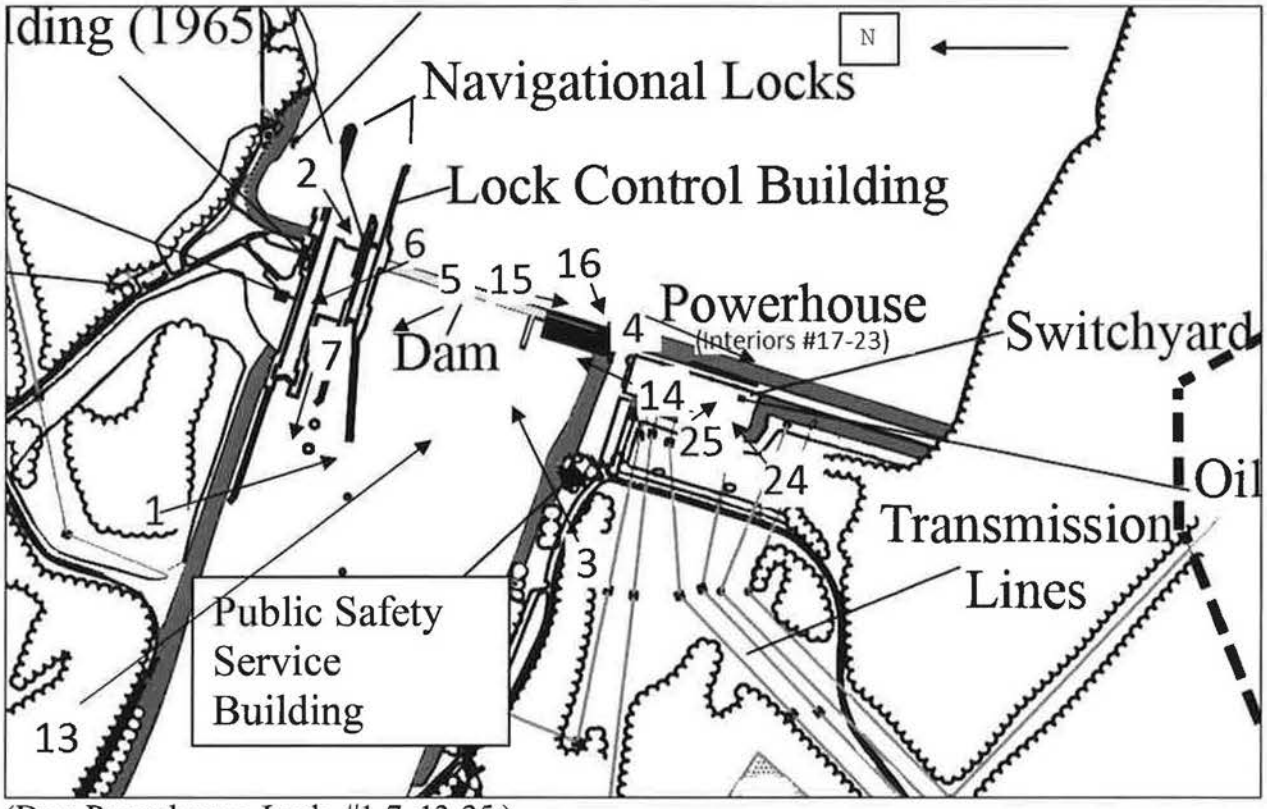
Date Photographed: April 28, 2015

Description of Photograph(s) and number, include description of view indicating direction of camera:

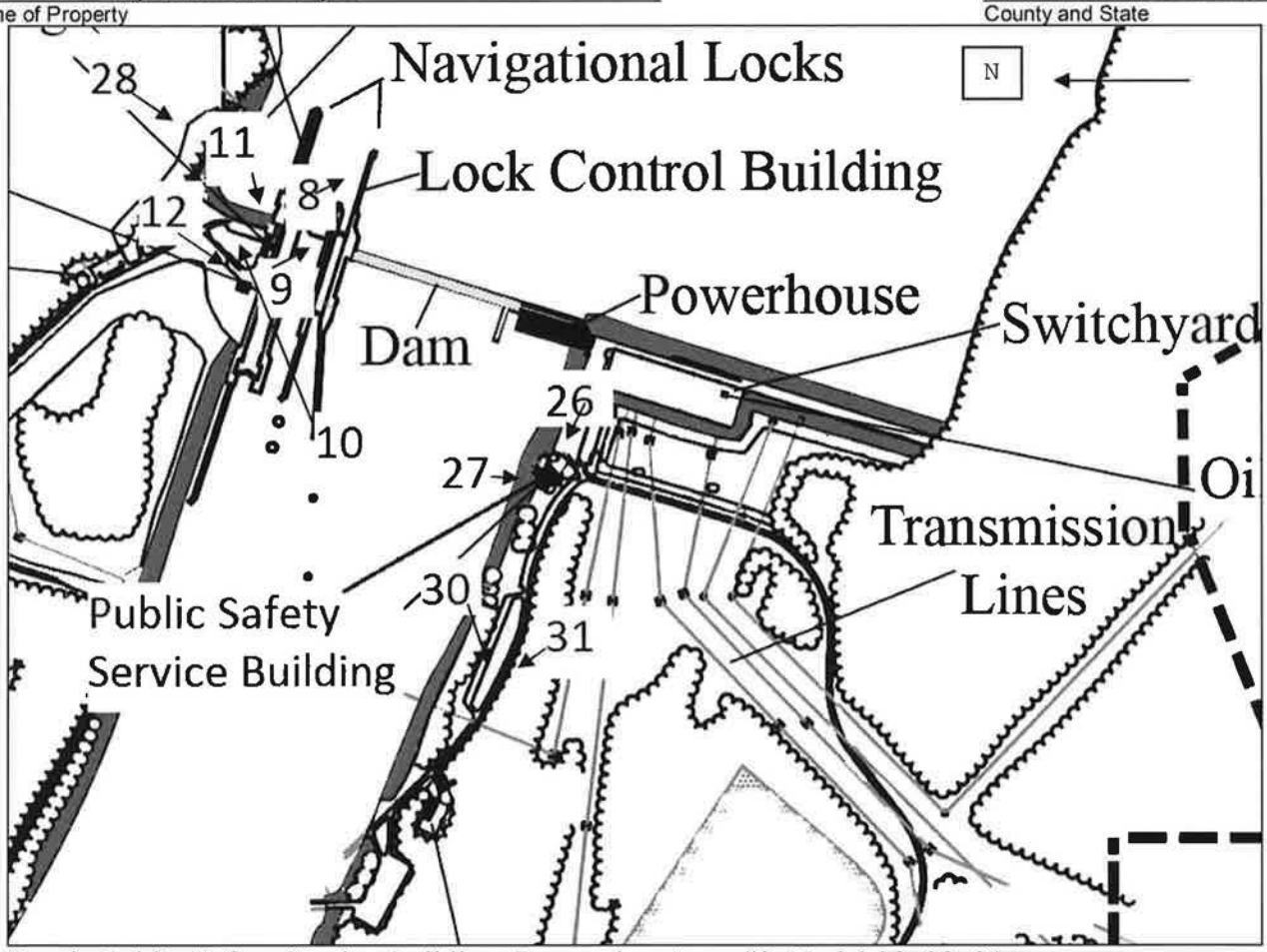
Photo 1 of 32 View of Guntersville Dam from northwest picnic area, view to southeast.
Photo 2 of 32 East side of dam from original lock operation building roof, view to southwest.
Photo 3 of 32 West side of dam from fishing area, view to northeast.
Photo 4 of 32 South embankment, view to south.
Photo 5 of 32 Auxiliary lock from top of dam, view to northwest.
Photo 6 of 32 Main lock from top of dam, view to northwest.
Photo 7 of 32 Auxiliary lock west entrance gate, view to west.
Photo 8 of 32 Control cabinet at east end of lock, view to east.
Photo 9 of 32 Original Lock building, north elevation, view to southeast.
Photo 10 of 32 Main lock building, southwest elevation, view to northeast.
Photo 11 of 32 Main lock building, northeast elevation, view to southwest.
Photo 12 of 32 Lock maintenance building, view to southwest.
Photo 13 of 32 Northwest elevation of powerhouse from northwest fishing lot, view to southeast.
Photo 14 of 32 Powerhouse south elevation, view to north.
Photo 15 of 32 Powerhouse north elevation from dam, view to south.
Photo 16 of 32 Powerhouse east elevation and south end gantry crane, view to southwest.
Photo 17 of 32 Powerhouse lobby, "Built For The People" sign.
Photo 18 of 32 Powerhouse interior, typical office (second floor).
Photo 19 of 32 Powerhouse interior, original interior light fixture.

Photo 20 of 32 Powerhouse generator room from visitor lobby overlook, view to northeast.
Photo 21 of 32 Powerhouse staircase from visitor lobby to generator room floor.
Photo 22 of 32 Powerhouse interior, lobby east elevation.
Photo 23 of 32 Powerhouse tunnel to switchyard in cable spreading room.
Photo 24 of 32 Switchyard and powerhouse, view to northwest.
Photo 25 of 32 Oil purification building with added side additions, at switchyard, view to southeast.
Photo 26 of 32 Public Safety Service Building, north elevation, view to southwest.
Photo 27 of 32 Public Safety Service Building, west elevation, view to southeast.
Photo 28 of 32 Concrete stairs at public landing east of lock entrance, view to south.
Photo 29 of 32 East elevation of maintenance building, view to west.
Photo 30 of 32 Picnic area west of visitor building, view to southwest.
Photo 31 of 32 Boat ramp west of visitor building, view to west.
Photo 32 of 32 East wall detail of Concrete Bridge at Hwy 431 entrance, view to north.

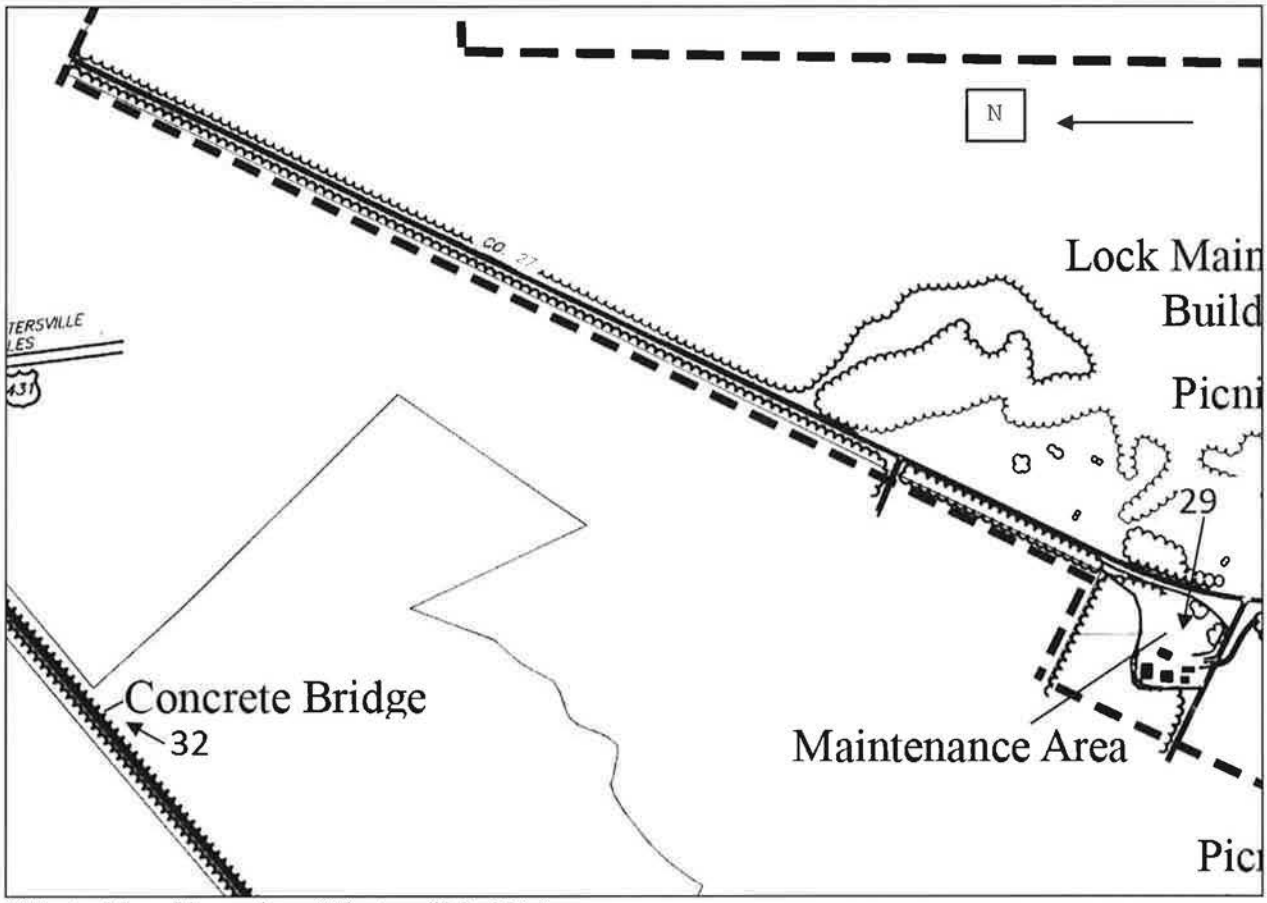
Photo key maps for Guntersville (Not to scale):



(Dam Powerhouse, Lock, #1-7, 13-25.)

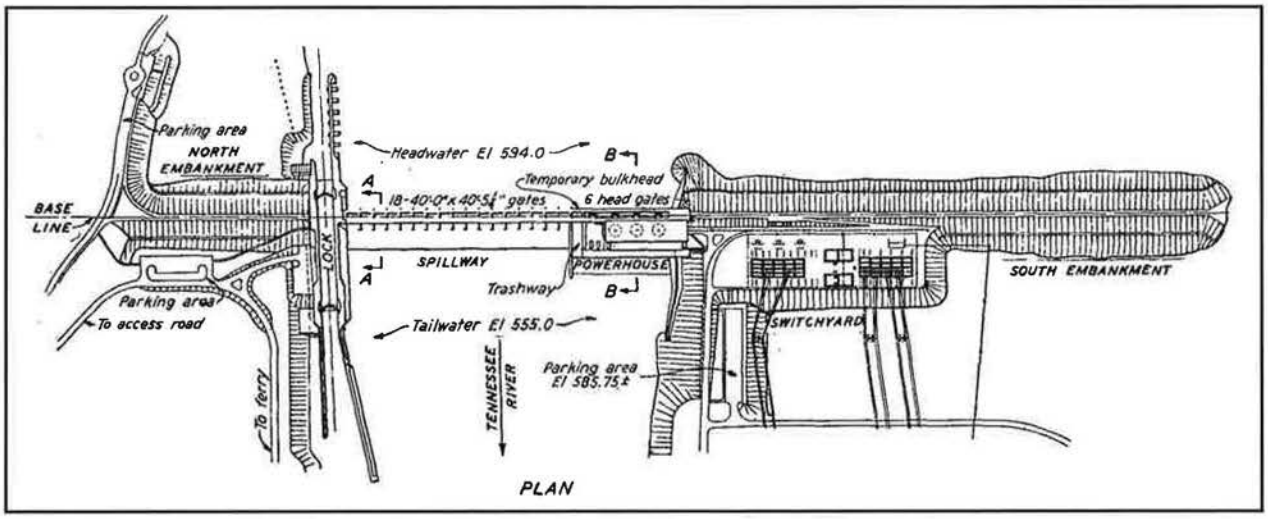


(Lock, Public Safety Service Building, Recreation Area, #8-12, 26-28, 30, 31.)

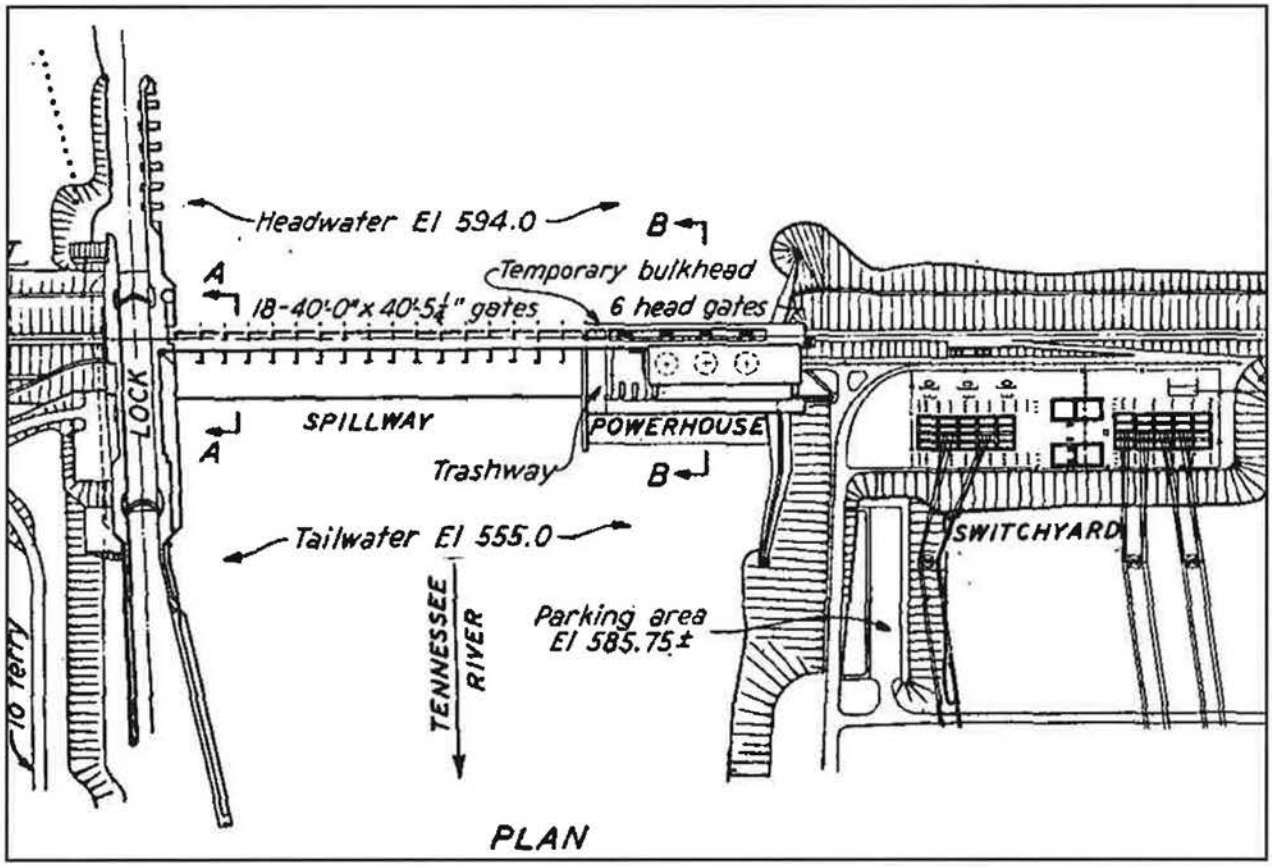


(West side of boundary (Photos #29, 32).)

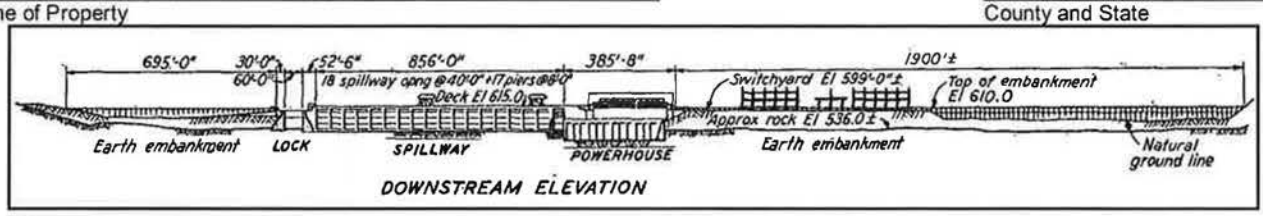
Site Plans



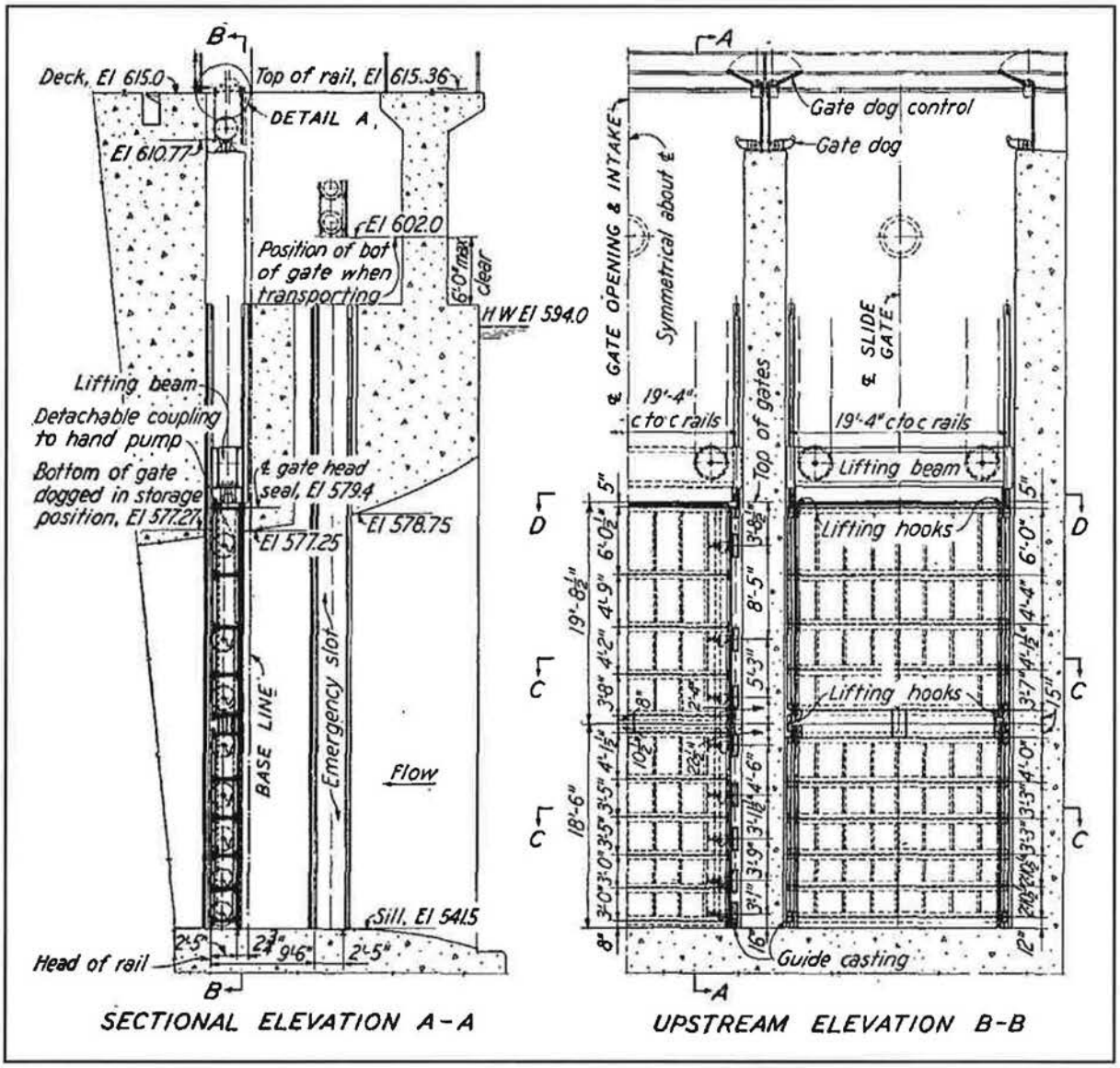
TVA General Site Plan of Douglas Dam.



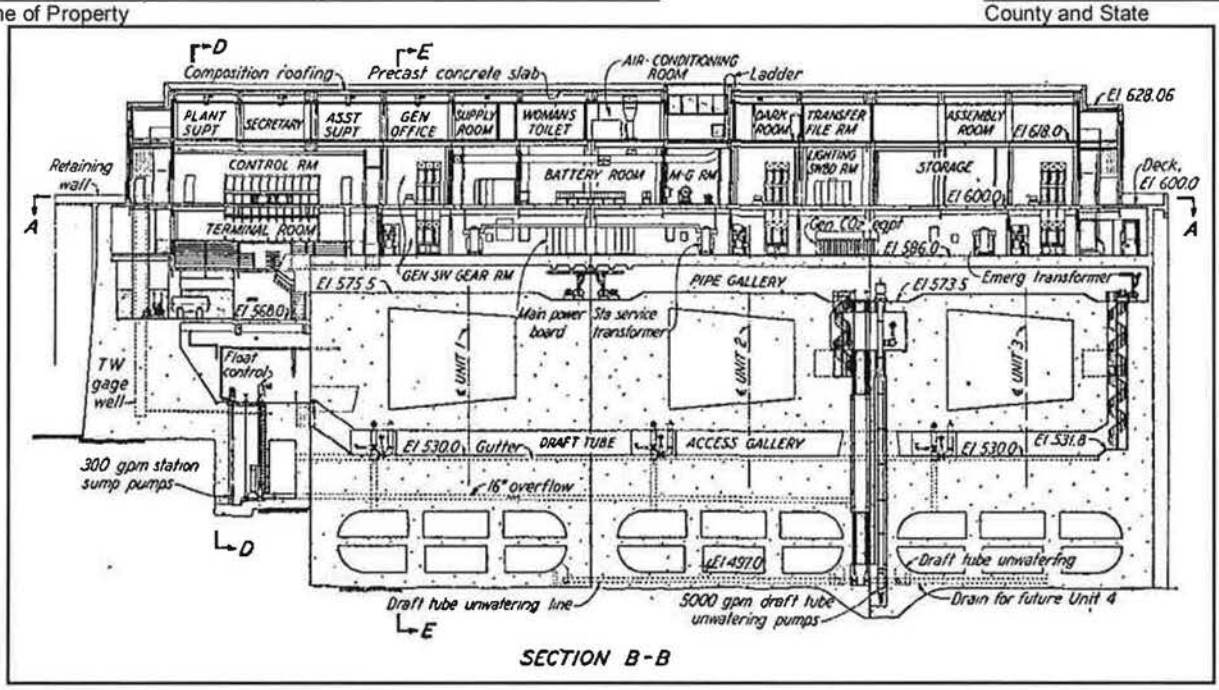
Plan for Douglas Hydroelectric Project



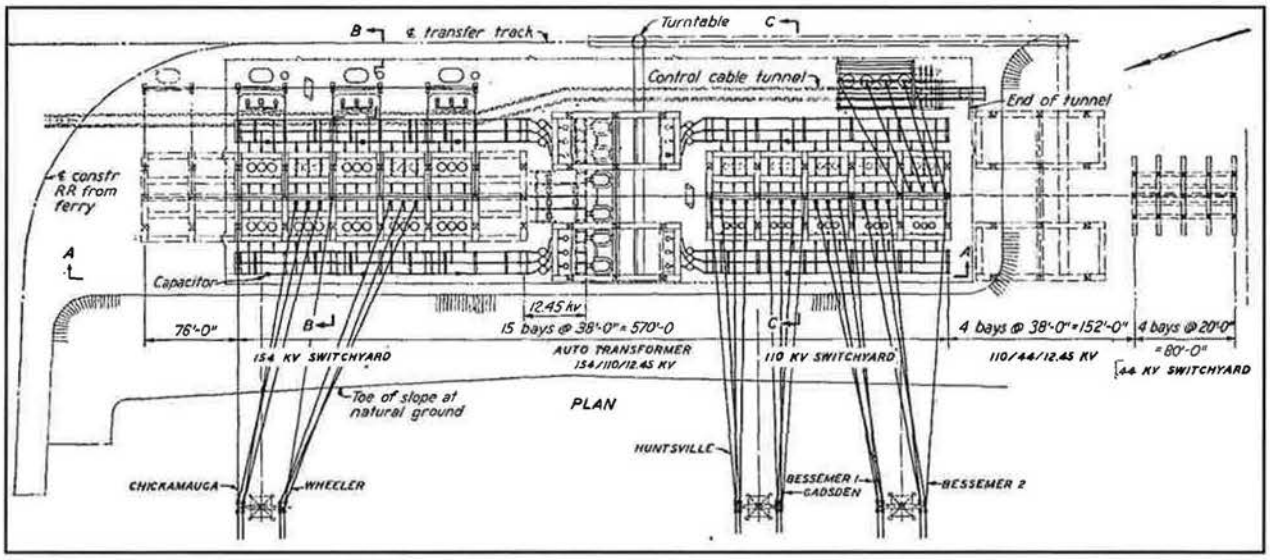
Plan viewed from downstream.



Design and Section of Spillway Gates.



Section of Powerhouse and Turbines.



Plan and Layout of Switchyard.

Guntersville Hydroelectric Project
Name of Property

Marshall and Jackson, AL
County and State

Property Owner:

(This information will not be submitted to the National Park Service, but will remain on file at the Tennessee Historical Commission)

Name	Tennessee Valley Authority – Pat Ezzell		
Street & Number	400 West Summit Hill Drive 460WT7D-K	Telephone	865-632-6461
City or Town	Knoxville	State/Zip	TN 37902

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.


WARNING


250
200


CUNTERSVILLE


CUMBERLAND
LOCK


CUSHMAN


GUNTERSVILLE

EL. 618

1935 – BUILT FOR THE PEOPLE OF THE UNITED STATES OF AMERICA – 193

EL.600

THERMOFIN

THERMOFIN

ATES OF AMERICA - 1939


E200


GUNTERSVILLE


Power
Generation

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Guntersville Hydroelectric Project

MULTIPLE NAME: Tennessee Valley Authority Hydroelectric System, 1933-1979 MPS

STATE & COUNTY: ALABAMA, Marshall

DATE RECEIVED: 5/26/16 DATE OF PENDING LIST:
DATE OF 16TH DAY: DATE OF 45TH DAY: 7/11/16
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 16000432

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	N	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	N

COMMENT WAIVER: N

✓ ACCEPT ___ RETURN ___ REJECT 7/26/16 DATE

ABSTRACT/SUMMARY COMMENTS:

RECOM./CRITERIA A & C

REVIEWER [signature] DISCIPLINE [signature]

TELEPHONE ___ DATE 7/26/16

DOCUMENTATION see attached comments Y/N see attached SLR (Y)/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, TN 37902

RECEIVED 2280
MAY 26 2016
Nat. Register of Historic Places
National Park Service

May 23, 2016

Ms. Stephanie Toothman
Keeper of the National Register of Historic Places
National Park Service
National Register of Historic Places
1201 Eye Street, NW (2280)
Washington, DC 20005

Dear Ms. Toothman:

Enclosed please find the National Register nominations for the Tennessee Valley Authority's (TVA) hydroelectric projects located in Alabama: Guntersville Hydroelectric Project, located in Marshall County, and Wheeler Hydroelectric Project located in Lawrence and Lauderdale Counties. These nominations were prepared to accompany the Multiple Property Documentation Form (MPDF) "Historic Resources of the Tennessee Valley Authority Hydroelectric System, 1933-1979" which was recently approved and accepted by your office.

These nominations and the MPDF were submitted as a courtesy to the Alabama State Historic Preservation Office. Both nominations were reviewed by the SHPO staff and revised in accordance with their comments.

Previously, the Norris Dam Hydroelectric Project and the MPDF were approved by the Keeper of the National Register and listed on April 12, 2016. My office will be sending you additional nominations prepared in Georgia, Kentucky, North Carolina and Tennessee in the future.

Thank you, and I am pleased to send you these nominations for your review.

Sincerely,

Wilbourne C. (Skip) Markham, Jr.
Director, Environmental Permit & Compliance and
Federal Preservation Officer

PBE:CSD
Enclosure