SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 16000431 Date Listed: 7/26/2016

Property Name: Wheeler Hydroelectric Project

County: Lawrence 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 OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

431

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.

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

1. Name of Property

Historic name: Wheeler Hydroelectric Project
Other names/site number: Wheeler Dam
Name of related multiple property listing:
Historic Resources of the Tennessee Valley Authority Hydroelectric Project
(Enter "N/A" if property is not part of a multiple property listing

2. Location

Street & number: 24455 Alabama Hwy 101
City or town: Rogersville State: Alabama County: Lawrence and Lauderdale
Not For Publication: ☐ Vicinity: ☐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** **C** **D**

Wilhelmine C. Mockbee 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 ✓ meets ___ does not meet the National Register criteria.
Lee Anne Wofford March 11, 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: 7/26/16

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	☐

The Wheeler Hydroelectric Project — Name of Property

Lawrence and Lauderdale, Alabama — County and State

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

Contributing	Noncontributing	
6	5	buildings
1	2	sites
4	0	structures
0	0	objects
11	7	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*
TRANSPORTATION/*Road-related*

Current Functions
(Enter categories from instructions.)
INDUSTRY/PROCESSING/EXTRACTION/ *Energy Facility*
RECREATION AND CULTURE/ *Outdoor Recreation*
TRANSPORTATION/*Water-related*
TRANSPORTATION/*Road-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 Wheeler Hydroelectric Project from 1933-1936 and was completed November 21, 1933. Located in the northwest Alabama, the Wheeler Hydoelectric Project is located 275 miles from the mouth of the Tennessee River. The closest town to the Wheeler Dam is Rogersville (2010 pop. 1,257), approximately seven miles to the northeast. The City of Decatur is thirty miles upstream; Wilson Dam at Muscle Shoals is fifteen miles downstream from Wheeler Dam. The primary purpose for construction of the dam was to improve navigation through the historically challenging shoals in this stretch of the Tennessee River. This topography created a challenge to navigation on the river: at the downstream end of this stretch are the craggy shoals that historically impeded transportation on the river. Due to the natural terrain between Decatur and Florence, Alabama, the Tennessee River falls 134 feet in elevation over the distance of thirty-seven miles.[1] The Wheeler Dam impounds the 60,070-acre, seventy-four -mile long Wheeler Reservoir (also called Wheeler Lake). The Wheeler Dam's tailwaters feed into Wilson Reservoir, which has shorelines within two Alabama counties, Lawrence and Lauderdale. The Tennessee Valley watershed comprises 40,910 square miles; of that, 29,590 square miles are above the Wheeler site. Average rainfall from October 1920 to September 1932 was used for determining power potential and ranged from as much as eighty inches in the mountainous upper basin to the east to 40 inches in the drier lower basin to the west. The manipulation of water levels across the system allows the TVA to achieve optimum capacity at individual power plants. Given its location between the upper and

[1] Tennessee Valley Authority, *The Wheeler Project: A Comprehensive Report on the Planning, Design, Construction, and Initial Operations of the Wheeler Project, Technical Report No. 2*, (Washington, D.C.: U.S. Government Printing Office, 1940), 3.

lower basins of the river, Wheeler Dam's value is dramatically higher as a unit within the integrated TVA system than if operated independently.[2]

The exact site of the Wheeler project was determined by the location of the head of the Wilson pool and where excessive rock excavation would not be necessary. The location allowed for proper navigation from the lock at a wide point in the river where the minimum to maximum flow was only seven feet. These factors influenced major site features at Wheeler. The lock would be placed on the north bank of the river, following the existing old canal channel. Thus, little dredging would be necessary.[3] The dam consists of the navigation lock, the spillway, the powerhouse, and the switchyard. The dam axis lies straight north-south, with the powerhouse at the south end. The total length of the dam from powerhouse to lock is 6,502 feet.[4] The dam takes its name from former Confederate General Joseph Wheeler, who in 1898 as a U.S. Congressman advocated for a hydroelectric dam on the Tennessee River at Muscle Shoals, Alabama.

INVENTORY

The Wheeler Hydroelectric Project originally consisted of the dam, one navigational lock, powerhouse, control building, and switchyard, which are interconnected and integral to one another (*see Photo 1*). To the south of the dam and powerhouse is a recreational area consisting of picnic tables, campground, a boat ramp, and restrooms. The dam, powerhouse, switchyard, and original navigational lock were all completed in 1936. The second lock was completed in 1963, as well as an office building associated with the operation of the locks. The recreational area was designed in 1936 as part of the TVA mission, but most of the existing buildings were not completed until the 1950s. The maintenance area was developed in the 1960s and 1970s. The inventory of the Wheeler Hydroelectric Project includes historic and added structures and buildings. The historic resources are contributing, retaining a high degree of integrity.

1. Wheeler Dam, 1936 (Contributing Structure)

The seventy-two-foot high Wheeler Dam has an overall crest length of 6,342 feet. Wheeler Dam is a straight concrete gravity-type spillway dam constructed mainly of concrete and steel.[5] At the chosen site for the axis of the dam, the Tennessee River is 6,200 feet wide and flanked by rock bluffs from elevation 498 feet to 600 feet.[6] The width of the river resulted in a spillway using sixty, forty-foot by fifteen-foot radial gates. These were flanked by a gate at each end of the spillway for allowing debris, but not much water, to pass.[7] The spillway gates are divided by

[2] Ibid., 12-14, 22-23.
[3] 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), 17-18.
[4] Tennessee Valley Authority, *The Wheeler Project*, 35.
[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] Ibid., 9.
[7] Tennessee Valley Authority, Design of *TVA Projects*, *Technical Report No. 24, Vol.1*, 17-18.

five-foot-wide piers. The length of the spillway is 2,700 feet (*see Photo 2*), located in the approximate center of the river to take advantage of optimum discharge of flood waters. This section is flanked by two non-overflow sections with lengths of 1,756.2 feet and 717.5 feet. The dam's spillway has a maximum capacity of 687,000 cubic feet per second; the top of the spillway gates are at an elevation of 558.3 feet. Below the spillway there is a concrete-lined stilling pool to prevent erosion at the toe of the dam, dissipating the energy of the falling water.[8] A highway atop the length of the dam at elevation 568.3 feet connects US 72 and Town Creek; this highway rises fifty-seven-feet above the lock at the north end, as not to impede river or highway traffic (*see Photo 3*). Over the lock, the highway deviates 7.89 feet downstream for the axis of the dam. An inspection gallery also runs the length of the dam at elevation 523.3 feet. Hoisting machinery for the spillway and trash gates are housed in niches within the inspection gallery.[9]

2. Navigational Locks, 1936, 1963 (Contributing Structure)

Wheeler's navigational lock is located at the north end (or right bank) of the river. The lock has a chamber sixty-feet wide and 360 feet long. The centerline of the lock makes an eighty-five degree angle with the axis of the dam on the downstream side. The rock foundation is at elevation 490 feet. This provides a normal lift of forty-nine feet and a maximum lift of fifty-three feet. With some variation, the standard width of the walls of the lock is eight feet at the top and fifty-three feet at the base. The length of the land (outer) wall is 1,230 feet while the length of the river wall is 776 feet. The outer wall of the lock was located 200 feet from land, allowing for possible future installation of an additional lock. This 200-footgap is filled by a concrete bulkhead. The lock walls are protected from damage by cast ribbed-steel plates from sixty-one feet upstream of the dam axis to 448 feet downstream of the dam axis. The top levels of the walls are at elevation 560.3 feet. Both walls have rectangular filling culverts measuring ten-feet in height and eight-feet in width with floors at elevation 492.3 feet. At this same elevation are the floors of ten outlets measuring four-feet by three-feet. The upstream lock gates consist of two straight vertical leaf-type steel gates that form a seventy degree angle with the centerline of the lock on the downstream side (*see Photo 4*). Each gate measures twenty-four-feet in height by thirty-five feet in length. Each leaf has six, thirty-six inch I-beams covered by plates. The lower gates of the lock are two curved leafs, each thirty-seven feet in width and sixty-five feet in length (*see Photo 5*). Each leaf has fifteen arch ribs. A motor operates a sector arm to open each gate in a time of one minute.[10] The second, larger lock was added in 1963. Its chamber measures 110 feet by 600 feet (*see Photo 6*).

3-4. Lock Control Buildings (2) 1962 (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 7*).

[8] Tennessee Valley Authority, *The Wheeler Project*, 11, 35, 39.
[9] Ibid., 36, 43.
[10] Ibid, 35, 48-51.

5. Lock Operation Building, 1963 (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. It has a flat roof with over hanging eaves and exterior of concrete. It has square, fixed windows divided by concrete and aggregate panels. Transom and spandrel panels of Formica are above and below fixed single-light windows (*see Photo 8*). An off-center breezeway contains entrances for the two parts of the building. The entrance has solid steel doors. The interior of the building has original terrazzo floors and original tile walls. Interior steel doors are replacements. There are dropped acoustic tile-ceiling and florescent light fixtures (*see Photo 9*).

6. Lock Maintenance Building, 1986 (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, which has a solid metal door with structural glass blocks beside and above the entrance.

7.) Powerhouse Control Building, 1936 (Contributing Building)

The control building is a five-story, steel and concrete structure (*see Photo 10*). The building has a concrete foundation, concrete walls with both smooth and rough board concrete (*see Photo 11*), and a flat roof of rolled roofing material. The top floor opens onto the highway on top of the dam (*see Photo 12*). The powerhouse roof has exposed turbine units and a concrete and steel roof surface (*see Photo 13*). A large gantry crane services the units.[11] Intakes were built for eight generators, though only two were immediately installed. The other six followed and were installed by 1950.[12] Currently there are eleven turbines. There is a service bay between the powerhouse and control building. Maintenance tools and equipment are stored in the service bay. The bottom floor contains the pipe gallery and access to the turbines (*see Photo 14*). The control operator offices are on the fourth floor. The lowest three floors are for electrical operations of the facility (*see Photos 15, 16*).

The control building retains much of its original design and detailing. The primary entrance to the building is on the top floor on the south elevation and has original, paired, four-light glass and aluminum doors and single-light transoms. The entrance is slightly recessed and has a flat, concrete canopy. Attached to the face of the façade above the transom are the original, metal letters spelling "WHEELER" (*see Photo 17*). On all floors of the south elevation of the control building are banks of original multi-light aluminum-frame windows. The windows are three sets of four, tall fixed aluminum design flanking operable windows with both hopper and awning panels. The west elevation has similar windows and three, original single-light aluminum and glass doors. On the first floor of the north elevation is an entrance with an aluminum and glass door flanked by multi-light windows that have sash and hopper panels (*see Photo 18*).

[11] Four of TVA's hydroelectric powerhouses (Fort Loudoun, Hiwassee, Watts Bar, and Wheeler) are of the outdoor type, with the tops of the generators extending through the roofline. The units are covered with metal sheathing and are serviced by a gantry crane on the exterior of the powerhouse.
[12] Tennessee Valley Authority, Design of *TVA Projects*, *Technical Report No. 24, Vol.1*, 19.

The control building lobby on the fourth floor features an original large light fixture of concentric circular design (*see Photo 19*), original solid aluminum restroom doors (*see Photo 20*), and terrazzo floors (*see Photo 21*). The fourth-floor lunch/break room has been completely remodeled with drop ceilings and new linoleum flooring (*see Photo 22*). Leading from the lobby to the fifth floor is a staircase with marble walls and terrazzo treads and risers (*see Photo 23*). The entrance to the fifth floor has original four-light glass and aluminum paired doors (*see Photo 24*). The fifth floor has recessed water fountains and circular ceiling light fixtures. The women's bathroom has an original door but has been turned into a locker room on the interior. Both men's and women's bathrooms have the original tan Carrara glass wall tiles and terrazzo flooring. The stairs throughout the building have the original aluminum handrails and steel treads. The un-tanking room was originally used for tank delivery and storage and has a large crane at the ceiling. This space is now used for storage.

The powerhouse and service bay measure 690 feet in length, 181 feet in width and 125 feet in height. The powerhouse has a 270-ton capacity gantry crane for assembly and maintenance of the facility (*see Photo 25*).[13] There are eight intakes each measuring eighteen feet wide and forty-nine and one-half feet in height and protected by a steel trashrack. Above the intake structure is an eighty-five-ton Harnischfeger Sales Corporation gantry crane that handles the service and emergency gates. Initially, the facility had two turbines, then ultimately eleven. The turbines were manufactured by Baldwin-Southwark Company. The powerhouse's generators were manufactured by the General Electric Company. Each unit consists of a six-blade propeller turbine rated at 85.7 RPM and 45,000 HP under a head of 48 feet and directly connected to a vertical-shaft generator with a capacity of 36,000 kilovolt-amperes or 32,400 kilowatts at 0.9 power factor. The turbines are housed in a concrete substructure and project through the top deck.[14]

8. Switchyard/Transmission Lines, 1936 (Contributing Structure)

The switchyard is located 500 feet downstream from the powerhouse (*see Photo 26*). In 1940, there were four outgoing transmission lines connecting Wheeler with Wilson and Guntersville, Alabama, and Norris and Columbia, Tennessee. The switchyard is a steel structure which rests on a concrete foundation and has a series of electrical generators, transformers and other equipment connecting to steel transmission lines.[15]

Maintenance Base, ca. 1990 – 5 resources

Located to the north of the locks is a maintenance area for equipment and supplies. It includes:

9. Office/Shop Building, ca. 1990 (Non-Contributing Building)

There is also a main office and shop building with a gable roof of standing seam metal, concrete walls, open garage bays, square, metal posts, and a garage bay with an overhead-tracking, metal door. Under the roof of the shop building, an interior room has been enclosed with vertical wood board walls.

[13] Tennessee Valley Authority, *The Wheeler Project*, 36, 83, 311.
[14] Ibid., 55, 69, 122, 310-314.
[15] Tennessee Valley Authority, *The Wheeler Project*, 55,311-314.

10. Storage Building, ca. 1990 (Non-Contributing Building)

Adjacent to the office/shop building is a metal storage building with metal walls and a flat roof with a ban of metal coping at the overhanging roofline. It has a solid metal door.

11. Pesticide Storage Building, ca. 1990 (Non-Contributing Building)
This is a concrete-block building with gable roof of asphalt shingles. It has a solid metal door.

12. Supply Storage Building, ca. 1990 (Non-Contributing Building)
This is a concrete-block building with gable roof of asphalt shingles. It has a solid metal door.

13. Maintenance Area, ca. 1990 (Non-Contributing Structure)
This is an open-air shed with square, wood posts and a shed roof of standing-seam metal (*see Photo 27*).

14. Picnic/Recreational Area, ca. 1960 (Contributing Site)
The Wheeler Hydroelectric Project site was originally designed with a picnic and campground area (*see Photo 28*). These recreational facilities, to the north of the locks, were not completed until after World War II. The grounds consist of original concrete picnic benches, an asphalt-paved road, and graveled camper pull-offs.

15. Campground Bathhouses, 1960 (Contributing Building)
This is a standardized plan bathhouse which was designed by TVA for use at many of its campgrounds and picnic areas (*see Photo 29*). This is a concrete block structure with a shed roof with exposed wood beams, four fixed windows on the side elevations, and projecting privacy walls concealing the entrances.

16. Picnic Pavilion, ca. 1935 (Contributing Building)
East of the powerhouse is a small recreational area TVA developed 1934-1935 using CCC labor. This area has a picnic pavilion with an exterior of stone, a side-gable roof of asphalt shingles, and replacement one- and four-light vinyl windows (*see Photo 30*). The building is composed of three bays. The central bay is the longest and is open-air design. It has paired wood posts. The ceiling has exposed A-frame wood trusses. At each end of the central bay is an interior end, stone chimney. The outer two bays of the buildings contain restrooms. Their side gable roofs are slightly lower tiered from the main roofline.

17. Boat Launch Area, 1983 (Non-Contributing Site)
West of the powerhouse is a boat launch and landing area.

18. State Route 101 Bridge, 1937 (Contributing Structure)
The two-lane bridge over Wheeler Dam was constructed to carry Alabama State Route 101 over the river. It connects the Alabama towns of Town Creek on the south and Lexington on the north, bisecting the important thoroughfare U.S 72. The bridge section over the locks at the north

end is a Polygonal Warren through truss type built in 1937 and rehabilitated in 1962. It is 174.9 feet long and has a deck width of twenty feet. Vertical clearance above the deck is 14 feet, 10 inches.[16]

[16] "Wheeler Dam Bridge" at webpage http://bridgehunter.com/al/lawrence/1014002450/ accessed May 21, 2015.

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

The Wheeler Hydroelectric Project
Name of Property

Lawrence and Lauderdale, Alabama
County and State

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

Period of Significance
_1933-1979_

Significant Dates
_1933-1936_

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_
_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 Wheeler Hydroelectric Project meets National Register criteria A and C for its historical and historical significance as an integral part of the Tennessee Valley Authority Hydroelectric Project. The Wheeler Hydroelectric Project is significant in the improvement of navigation of the Tennessee River, expansion of energy for World War II manufacturing, and improvement of quality of life through transmission of electricity, control of seasonal flooding, and creation of public recreational facilities. Wheeler Hydroelectric Project was one of twenty-five (25) dam sites 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 main objective of the 1933 Tennessee Valley Authority Act was the creation of a continuously navigable nine-foot channel from the mouth of the Tennessee River to Knoxville as well as flood control, electrical generation, and recreation. Given its location at the historically problematic Muscle Shoals, Wheeler Dam is a key unit within the TVA river management system.

The Wheeler 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 Wheeler Hydroelectric Project not only harnessed the energy of the river, but involved reforestation of the land, game conservation, 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 Wheeler 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 Wheeler project is significant in recreation because of the extensive outdoor opportunities it fostered. Wheeler is 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 Wheeler 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 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 Wheeler 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.)

In the Tennessee River Valley of north Alabama, low water lines and rocky shoals had been a hindrance to river transportation since the area was settled. The cotton growers of the fertile region had to store their product in warehouses on the riverbank, awaiting shipment to New Orleans until the water level was high enough to navigate the shoals. An 1830 survey estimated the cost of a canal around the shoals at $1.4 million. The United States government gave the State of Alabama 400,000 acres to sell in order to raise the money for the canal. Work began in 1831 and was completed in 1836. The project, however, proved useless: during low water levels, boats could not reach the canal; during high levels, the canal was unnecessary.[17]

The project was abandoned from 1837 through the Civil War and was revived in 1873. The Muscle Shoals Canal was completed in 1890. The project made navigation through the shoals possible only at highest flow of the river, however. In Congress, former Confederate General Joseph Wheeler advanced the goal of a hydroelectric dam on the Tennessee River at Muscle Shoals, Alabama, in 1898. A bill to that end was passed, but the project was never undertaken. During World War I, however, the government built Wilson Dam and two explosives-manufacturing plants at Muscle Shoals. President Woodrow Wilson approved the building of the dam to supply electricity to two nitrate plants for manufacture of ammunition and explosives for the war effort.

The 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 of the flexibility and initiative of a private enterprise." To this end, Congress passed the TVA Act on May 18, 1933.[18] 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).[19]

The multi-faceted program of TVA evolved from Nebraska Senator George Norris' idea to use the federal munitions base at Muscle Shoals as the foundation of a regional development plan. Since the end of WWI, the Muscle Shoals facility had sat idle. Norris had attempted to push through legislation in 1928 and 1930 for the government to purchase and redevelop the site; during these years Presidents Calvin Coolidge and Herbert Hoover, respectively, vetoed the bills.

[17] *A Brief History of Decatur, Alabama,* (Decatur: River City Kiwanis Club, 2004), 3.
[18] "History of the Tennessee Valley Authority," at website http://www.policyalmanac.org/economic/archive/tva_history.shtml accessed April 16, 2015.
[19] Tennessee Valley Authority Act of 1933, at website http://www.policyalmanac.org/economic/archive/tva_history.shtml, accessed April 16, 2015.

However, through President Roosevelt's development of new programs to revitalize the nation's economy, the north Alabama site found new purpose.

During the Depression, this troublesome spot on the river prompted federal relief legislation to construct a permanent solution for river navigation. The Emergency Relief and Construction Act of 1932 authorized $30,000,000 for river projects, and the Corps of Engineers let a contract for a lock at Wheeler. When legislation authorizing the TVA projects was passed, the Wheeler project was already under way. Under the TVA, the project was re-designed and expanded for construction of Wheeler Dam.[20]

The Wheeler project required the purchase of 110,000 acres of land in Lawrence, Lauderdale, Limestone, Madison, Morgan, and Marshall Counties. The TVA had undertaken preliminary studies regarding engineering and geological aspects of the project, but no social or economic studies had been done. The original act was, therefore, revised for TVA to work with federal, state, and local authorities to deal with displaced families. In 1935, the TVA interviewed 835 families to be affected by the inundation. The revealing interviews found that eighty-seven percent of those affected were engaged in farming; yet, ninety-three percent of those farmers were not owner-operators, rather, tenant farmers or hired labor. Median farm size was 35 acres; cotton was the exclusive cash crop. Half the families were African American. Education rates were low among all families. Representative housing stock among the group consisted of a three-room, frame dwelling in poor condition and housing 4.5 African-American family members or 5.6 Euro-American family members. Only 3.3 percent of homes had indoor water supply. Only one home out of the 835 households had electricity.[21]

In the course of the project, 30.4 miles of local, state and federal highways had to be relocated in Morgan, Marshall, Lawrence, Lauderdale, Limestone, and Madison Counties. In the rebuilding of affected roads, the TVA agreed to upgrade and improve the relocated sections to modern standards, with better alignment and greater width. The TVA reconstructed State Route (SR) 3 north and south of Decatur, SR 67 from Decatur to Somerville, SR 20 west of Decatur at Dry Creek, and SR 2 at Elk River. These road improvements include construction of two large bridges, one at Elk River, and one at Second Creek, 1562 feet and 610 feet in length, respectively. Both bridges have a concrete substructure and steel super-structure. The TVA reconstructed 25.7 miles of county roads in the six reservoir counties. Total costs of road and bridge relocation amounted to $842,736.[22] The road and bridge improvements contributed to an upgrade in local infrastructure, benefitting commerce and quality of life for area residents.

Construction of the Wheeler Hydroelectric Project began November 21, 1933. Filling of the reservoir began in the fall of 1936. The first power unit went into commercial operation on November 9th of that year, and the facility was first operated for flood control in January of 1937. The Wheeler project supplied electrical power during World War II to ship-building plants at Decatur that built watercraft for the U.S. military. On initial installation, the powerhouse's

[20] Tennessee Valley Authority, *The Wheeler Project,* 4-5.
[21] Tennessee Valley Authority, *The Wheeler Project,* 28-31.
[22] Ibid., 239, 242.

generating capacity was 32,400 kilowatts per unit, with two units initially in operation. Six additional units were installed by 1950.[23]

Total land costs for the project amounted to $4,784,395, which included acquisition by fee easements, and highway and railroad relocation. The project also required the relocation of 176 graves. Direct construction costs, such as labor, materials, equipment, transportation, totaled $20,891,001. Indirect construction costs, including accounting, timekeeping, office supplies, and police service, came to $1,616,207. Design and engineering expenditures, which included salaries and expenses of executive engineers, technicians, and inspectors, amounted to $3,087,284. These amounts plus other categorized costs brought the total project to $30,378,889.[24]

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

Since its construction, the control building has not been significantly altered and retains its original exterior and interior design and detailing. Of particular note is the intact original lobby with its marble walls, murals and terrazzo floors. This lobby was originally open to visitors but due to security concerns it has been closed to the public since 2001.

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.[25] 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

[23] Ibid., 23, 26, 55.
[24] Ibid., 219, 281.
[25] 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, *Pioneers of Myth: The Leadership of the Tennessee Valley Authority, 1933-1990*, (Princeton, NJ: Princeton University Press, 1994), 30-33.

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 Wheeler dam, powerhouse and lock control building 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 powerhouse has sleek surfaces of marble, terrazzo, glazed tile, and aluminum handrails throughout. 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. These elements express the polished minimalism of the Streamlined Moderne architectural style.

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 percent 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.[26]

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. In 1936, a survey in the Decatur area indicated that some 7,550 fishermen depended on the river for their livelihood or food, removing 300,000 pounds of food fish annually with a market value of $37,500. Transforming the river current into a still body of water necessarily changed the aquatic life it that could inhabit these waters. TVA, in cooperation with the United States Bureau of Fisheries, assisted in the propagation of appropriate fish species through the construction of a fish hatchery. Located on the Elk River, the 150-acre hatchery site included a floating laboratory to study problems involving problems particular to shallow lakes.

Game conservation was also important in the land surrounding Wheeler Reservoir, with planned wildlife management and refuge areas. Some 41,000 acres were set aside for these purposes to achieve a balance between wildlife protection and food supply for local hunters, as well as to foster spin-off benefits of tourism.[27] In 1938, the federal government created Wheeler National

[26] Carroll Van West, *Tennessee's New Deal Landscape*, (Knoxville: University of Tennessee Press, 2001), 212-214.
[27] Tennessee Valley Authority, *The Wheeler Project*, 271-72.

Wildlife Refuge on Wheeler Reservoir. The experimental project was the first national refuge established on a hydroelectric impoundment. The refuge was developed for migratory waterfowl, but is also home to 115 species of fish, 74 species of reptiles and amphibians, 47 species of mammals, 38 species of freshwater mussels, and 26 species of freshwater snails.[28] Within the refuge are hiking trails, boat ramps, and wildlife observation areas for public enjoyment.

SIGNIFICANCE IN ENGINEERING

The Wheeler Hydroelectric Project is an integral part of the overall engineering design of the TVA system. Wheeler Dam's releases connect to the upper end of the Wilson Reservoir downstream and provide power to the Wilson Hydroelectric Project. Above Wheeler Dam, the Wheeler Reservoir extends upstream to the tailwaters of Guntersville Dam. The releases of Guntersville Dam provide power to the Wheeler Hydroelectric Project.

Both TVA and the U.S. Bureau of Reclamation performed tests on concrete and aggregate to be used in the construction of the Wheeler project, for durability, permeability, volume change, temperature, and heat generation. Aggregate tests were conducted on two kinds of limestone excavated in the area of the powerhouse. Strength and elasticity of concrete were also tested. The average unit strength for twelve specimens was 6,130 pounds per square inch. Elasticity values ranged from 3.3-4.3 million pounds per square inch.

The Wheeler Dam utilized a draft tube design, a typical system for low- or medium-head plants. At Wheeler, the river is shallow below the powerhouse, causing the tailwaters to attain too high a velocity at full-capacity discharge. A draft tube design's purpose is to recapture appreciable head in balance with an appropriate discharge for the site. The enormous size of the Wheeler project, however, was without precedent in previous draft tube examples, and therefore experiments were conducted using a model constructed at a scale of 1:50. Six basic designs were tested. They varied in the slope of the horizontal section, height of downstream end of the elbow, and inclusion of a splitter in the elbow. One design was radically different in its use of a vertical barrel with a hydra cone for easy transition into the horizontal section. All draft models were constructed of wood.

These tests established that increasing the length of the horizontal section from seventy-seven to 100 feet increased efficiency. The additional cost, however, did not support this design. To manage operating head, it was determined the best solution would be to excavate the river bed to a depth sufficient to keep the velocity less than that of critical flow as it leaves the tailrace excavation. Ultimately, it was determined that raising the Wilson Lake no more than four feet would result in the optimum flow through and discharge from Wheeler Dam.[29]

[28] U.S. Fish and Wildlife Service, "Wheeler National Wildlife Refuge: About the Refuge," available at website http://www.fws.gov/refuge/Wheeler/about.html accessed April 24, 2015.
[29] Tennessee Valley Authority, *The Wheeler Project*, 327-330, 339-40, 346.

SIGNIFICANCE IN INDUSTRY

The Wheeler Hydroelectric Project was built as part of TVA's rapid expansion of electrical power to serve the industrial and military requirements of the region. At the nation's peak of war-time activity in 1942, the TVA was in the process of building twelve hydroelectric facilities. Specifically, the TVA's Muscle Shoals facilities supplied over sixty per cent of the phosphorous required for making bombs and bullets, as well as tens of thousands of tons of anhydrous ammonia, ammonium nitrate liquor, and ammonium nitrate crystal to the U.S. Ordnance Department. Also, the manufacture of temporary housing and training of military officials in malaria control occurred at the TVA's Muscle Shoals facilities. Perhaps the greatest impact of TVA's Muscle Shoals projects was overcoming the navigational challenge of the shoals in the Tennessee River. These natural impediments had historically deprived producers and manufacturers in the Valley reliable access to national and international markets. The TVA's series of locks and channels created a navigable course from Knoxville to the Mississippi River, effectively boosting the economy of the region. The unobstructed river enabled federal ship-building of ocean-going vessels such as Liberty cargo ships and patrol torpedo boats at inland shipyards.[30] Ingalls Ship Building at Decatur, Alabama, employed 1,500 workers at this time and built over 100 barges and twenty small (176-foot) freighters during the war.[31]

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 manufacturing job in the region increased by 442 percent compared with the national average gain of 282 percent.[32] 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.[33] The Wheeler Project contributes electrical power to industries throughout the region.

SIGNIFICANCE IN MILITARY

The Wheeler Hydroelectric Project was completed in 1936, and much of its electricity went to industries essential to the military during World War II. The electricity produced at Wheeler and the other projects in the TVA system was utilized for ship-building in Decatur for landing-craft production and numerous other factories in the region. Two major industrial employers in Decatur were Ingalls Ship Building Company and the Decatur Iron and Steel Company. Both companies contributed significantly to the war effort during the 1940s. Decatur Iron and Steel supplied the U.S. Army with thirty-three tow boats and thirty-three landing craft for tank

[30] Patricia Bernard Ezzell, "Tennessee Valley Authority in Alabama (TVA)," available at website http://www.encyclopediaofalabama.org/article/h-2380, accessed April 22, 2015.
[31] River City Kiwanis Club, *A Brief History of Decatur, Alabama*, 12.
[32] Ezzell, "Tennessee Valley Authority in Alabama (TVA).
[33] "Economic Development," at webpage http://www.tva.com/econdev/index.htm accessed May 5, 2015.

transport. Eleven more of the latter went to ally Great Britain. Some of these were converted into armored landing craft for the Normandy invasion. Many other landing craft from Decatur were used as well at Normandy and through the Pacific.[34] Of the 12 billion kilowatt hours of energy produced among the TVA system from 1941 to 1945, sixty-six percent was devoted to the war effort.[35]

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. At Wheeler, TVA developed two small recreational areas using CCC labor between 1934 and 1935. Immediately east of the south abutment of the dam is the ten-acre area with hillside trails, a parking lot, and a picnic shelter with stone fireplaces and restrooms. A fifty-acre wooded area located at the junction of Big Nance Creek and Wilson Lake was developed with a parking lot, a picnic shelter with two fireplaces, a rustic overlook building, restrooms, drinking fountains, picnic tables, benches, and outdoor ovens, as well as foot trails.[36]

In 1947, helping to initiate the Alabama State Parks program, the TVA transferred over 4,000 acres at its Guntersville hydroelectric project to the state for Little Mountain Park in 1947. In the 1952, TVA transferred 1,981 acres of land for the creation of Joe Wheeler State Park.[37] Near Rogersville on Wheeler Reservoir, the 2,550-acre Joe Wheeler State Park is one of twenty-two state parks and offers lodging, fishing, hiking, sailing, boating, and golfing. The parks and refuges engendered by the TVA's hydroelectric projects build upon the agency's previous efforts of conservation through re-forestation and soil improvement.

SIGNIFICANCE IN SOCIAL HISTORY

During the 1930s, the TVA's Wheeler 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 Wheeler project, the TVA helped create new employment opportunities in the poverty-stricken region and also developed agricultural fertilizers and provided instruction to farmers on improving soil and developing long-term farming practices. These efforts were integral to relocation of farming families from out of the fertile reservoir area to lands of lesser soil quality. From a social point of view, however, until the Wheeler project, the agency had no codified protocol regarding the families displaced by its hydroelectric projects.

[34]River City Kiwanis Club, 12.
[35] Ezzell, "Tennessee Valley Authority in Alabama (TVA)."
[36] Tennessee Valley Authority, *The Wheeler Project,* 274.
[37]Ezzell, "Tennessee Valley Authority in Alabama (TVA).

With passage of the TVA Act in May 1933, applications for employment were received at a rate of 1,000+ per day. Therefore, when TVA received orders to proceed with the Wheeler project, there was a large pool of applicants to draw from. To prevent a deluge of unemployed workers from all around the country, employment at Wheeler required residence in the Tennessee Valley. Job training courses in mathematics, electricity, blueprint reading, concrete, pipe fitting, and welding were made available, as well as recreational activities and library services for employees and their families. These services were provided in a large community building with segregated school facilities for workers' children. Due to careful employee selection, a good wage scale, and good working conditions, the Wheeler project experienced a low employee turnover.[38]

Medical services at the project were provided to employees in the form of periodic health exams, immunizations, on-site prevention and care, and emergency care. A doctor and at least assistant administered the medical program on site at a fourteen-bed hospital. Courses in first aid were provided to all interested employees at the project site; 328 employees complete the basic course. A safety engineer conducted crew and job safety meetings, posted safety signs and posters, and safeguarded mechanical equipment.[39]

Employees lived on-site and in nearby cities. Fifteen permanent houses were built on the south bank of the river 2000 feet upstream of the dam. Six 120-man dormitories were built at Wheeler; one was for engineering staff, four were for other white employees, and one was for African-American employees. TVA also built forty-four low-cost temporary houses for married supervisory personnel and their families (ten of those were for African-American employees). These were located south of the permanent houses. Many of the 1,000 workers on site at the peak of construction were housed in tents near the dormitories in the same area. TVA confined housing to a concentrated area in order to reserve land for permanent demonstration parks. The CCC built parks, shelters, and paths through the sloping terrain and naturally scenic landscape.[40]

A service building was constructed for the permanent village in the summer of 1937. The one-and-one-half story, brick Colonial Revival building was designed to complement the architectural scheme of the permanent dwellings. The service building housed a commissary, post office, a town manager's office, police offices, and visitor restrooms. The upper floor had two bedrooms and a bath.[41] This building is no longer owned by TVA and is not included within this nomination.

The TVA established a family readjustment program similar to that at its Norris project. Displacement at Wheeler, however, proved more problematic in that ninety-three percent of families there (sixty-one of 840) were not land owners. Depression conditions in the area had encouraged a "back to farming" movement that resulted in a higher population than previously dependent on the land. The soil itself was poor due to erosion, leaving little cultivable land available. The TVA opened a field office in Decatur and assigned a field worker to each of seven

[38] Tennessee Valley Authority, *The Wheeler Project*, 111-12, 114, 115.
[39] Ibid., 115-17.
[40] Ibid., 97-99, 101.
[41] Ibid., 106.

districts composing the affected area. Workers visited families as often as needed to assist in relocation, respecting social, economic, religious, and educational concerns of the individual family. The TVA's goal was to relocate families to equal or better locations. The agency performed a spot study of 100 of the 835 affected families as representative of the outcome of relocation for the project. In general attitude, sixty-seven percent favored their new location, while thirty-three percent expressed a less favorable attitude towards their new locations. Though ninety-three percent deemed their new location equal or better, in terms of schools, access to farm markets, or industrial opportunities, sixty-nine percent deemed their new land of lesser quality. Regarding health and sanitation, ninety-one percent found their new location equal or better; sixty-six percent of families had equal or better housing.[42]

The Wheeler Dam project's immediate impact at the local level was initially mixed. The project resulted in employment opportunities during the Depression and in upgraded infrastructure locally. Yet, the project also displaced hundreds of families. Of the land acquired for the project, 78.2 percent was by voluntary transfer, while 8.6 percent was by condemnation for title issues, and 13.2 percent by condemnation for refusal to sell.[43]

Another social aspect of the TVA's hydroelectric project involved the removal and relocation of graves located within the reservoir area. Grave relocation for the Wheeler project employed workers with experience from the TVA's Norris project, where 5,000 graves were relocated. Removal and re-interment was completed with proper reverence for the dead; original caskets were place within new ones or remains within deteriorated caskets were arranged as found in new, simple wooden caskets.[44]

The TVA's hydroelectric projects supported the government's objective to electrify rural farmsteads. The TVA's pre-inundation interviews of families affected by the Wheeler project found just one home had electricity. In 1934, across Alabama, one in thirty farms enjoyed electricity. In 1939, this ratio rose to one on seven, with the addition of the Wheeler project 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).[45] 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.[46]

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

[42] Ibid., 254-256.
[43] Ibid., 229.
[44] Ibid., 252-53.
[45] Ezzell, "Tennessee Valley Authority in Alabama (TVA)."
[46] West, 11.

region increased sixty-three percent. TVA customers purchased household appliances in the amount of $7,072,000.[47]

The Wheeler project helped to employ local labor beginning in the early stages of clearing wooded land starting in February of 1934. At its peak, 3,600 men were wielding saws and axes; of this number, 700-800 were African American, a ratio reflecting local demographics. By the end of 1934, bad weather slowed clearing work, and workers voted for alternating weeks' work versus complete layoff of half the workforce. The TVA encouraged men to plant gardens and small crops at home during their off weeks. During the course of the Wheeler project, CCC labor stationed within the valley was also utilized, for erosion control, park development, and general beautification in recreational areas.[48]

SIGNIFICANCE IN TRANSPORTATION

When the Wheeler project was completed in 1936, it opened a navigation channel for a stretch of sixty-nine miles to the Guntersville Dam, which was finished in 1939. The Wheeler pool also provided thirty navigable miles up the Elk River. Navigation on the Wheeler pool increased steadily, especially for the transportation of gasoline from Wood River, Illinois to distribution points at Decatur and Guntersville, Alabama. The Wheeler pool also afforded economical movement of clay (some 800 tons per week) for bricks from a pit at Whitesburg Landing to plants in Decatur.[49] The un-obstructed river also contributed significantly to the war effort, as plants in Decatur built hundreds of ocean-going vessels for military use. The full commercial navigation potential of Wheeler Reservoir would be realized after the completion of upstream Watts Bar and Fort Loudoun facilities, opening access to Knoxville.

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. A second lock was added at Wheeler Dam in 1963, at Guntersville in 1965, and at Pickwick Landing in the late 1970s. 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.[50] The improvements in the

[47] Zella Armstrong, *History of Hamilton County and Chattanooga, Tennessee Volume 2*, (Chattanooga: The Lookout Publishing Co.), 196-97.
[48] Ibid., 219, 232.
[49] Tennessee Valley Authority, *The Chickamauga Project*, 255-56; _____, *The Wheeler Project*, 263.
[50] 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.

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.[51]

SUMMARY

The Wheeler Hydroelectric Project is one of twenty-five (25) 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. The Wheeler Hydroelectric Project brought new opportunities to and spurred economic development in the surrounding counties. The Wheeler 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 Wheeler Hydroelectric Project retains much of its integrity from its original design in the 1930s and later improvements in following decades. The dam and powerhouse control building have not been significantly altered, and the control building displays its original Streamlined Moderne design in its exterior and interior detailing. The project continues to be an integral part of the TVA system. The Wheeler 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.

[51] 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.

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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 941 acres

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:	464296	Northing: 3850077
2. Zone: 16	Easting:	463607	Northing: 3852324
3. Zone: 16	Easting:	465258	Northing: 3853067
4. Zone: 16	Easting :	465271	Northing: 3850144

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

The boundary for the Wheeler 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.

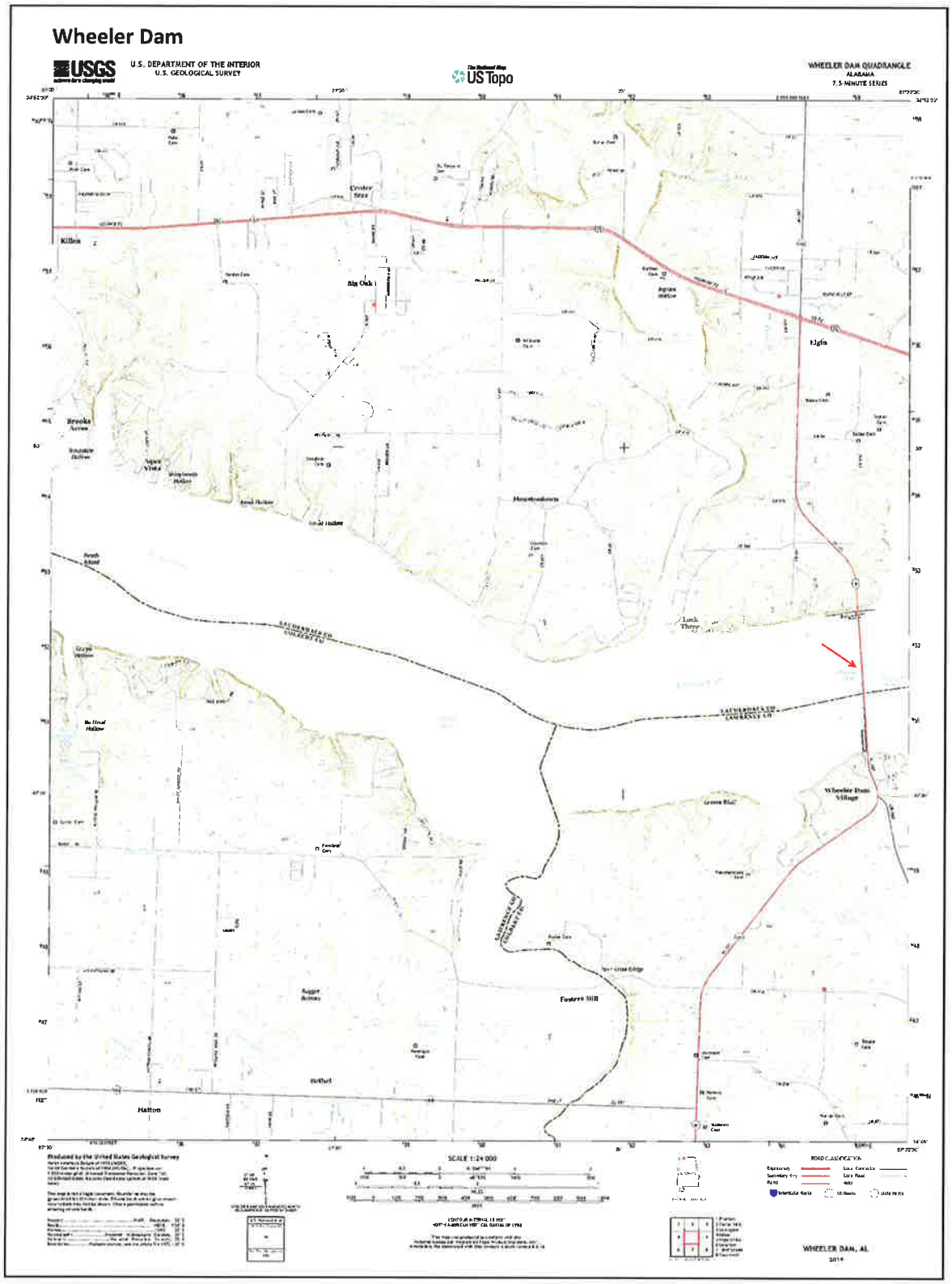
The Wheeler Hydroelectric Project

Name of Property

Lawrence and Lauderdale, Alabama

County and State

Wheeler Dam, US Topo Revision 2013



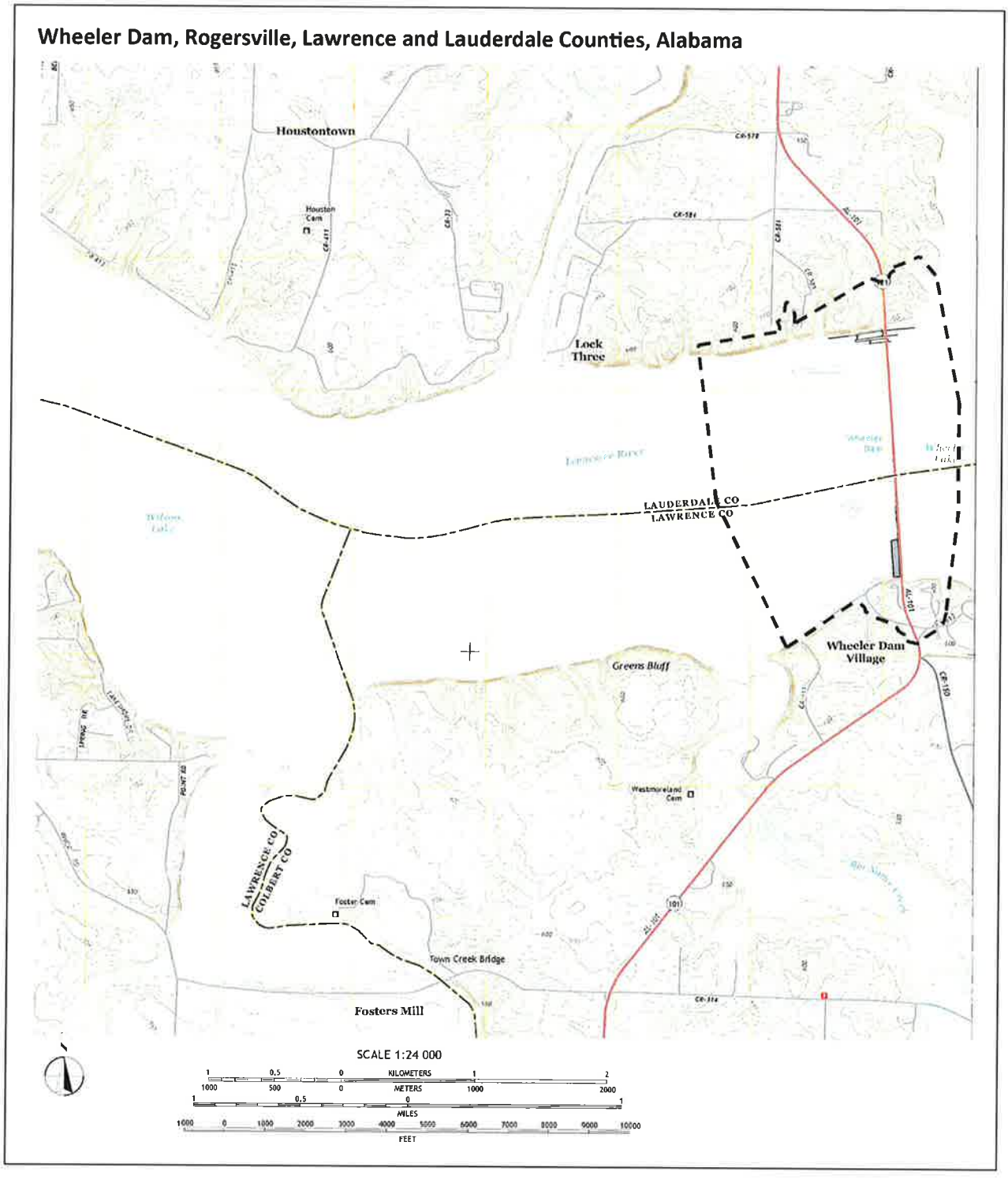
The Wheeler Hydroelectric Project

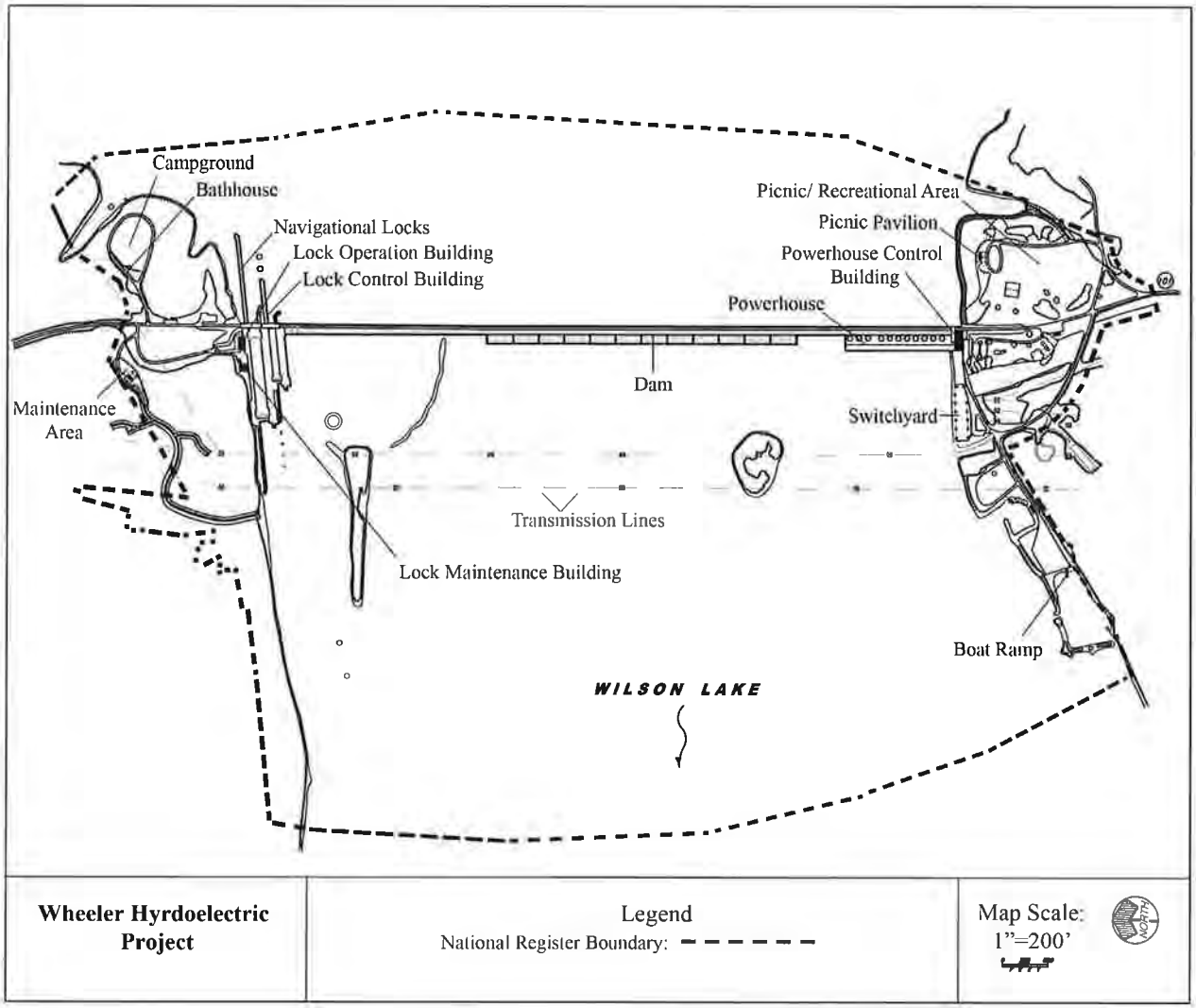
Name of Property

Lawrence and Lauderdale, Alabama

County and State

Wheeler Dam, US Topo Revision, 2013





Site plan and National Register boundary for Wheeler Hydroelectric Project.

11. Form Prepared By

name/title: Andra Kowalczyk Martens, Philip Thomason
organization: Thomason and Associates
street & number: P.O. Box 121225
city or town: Nashville state: Tennessee zip code: 37212
e-mail Thomason@bellsouth.net
telephone: 615-385-4960
date: April 16, 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: Wheeler Hydroelectric Project

City or Vicinity: Rogersville

County: Lawrence and Lauderdale State: Alabama

Photographer: Thomason and Associates

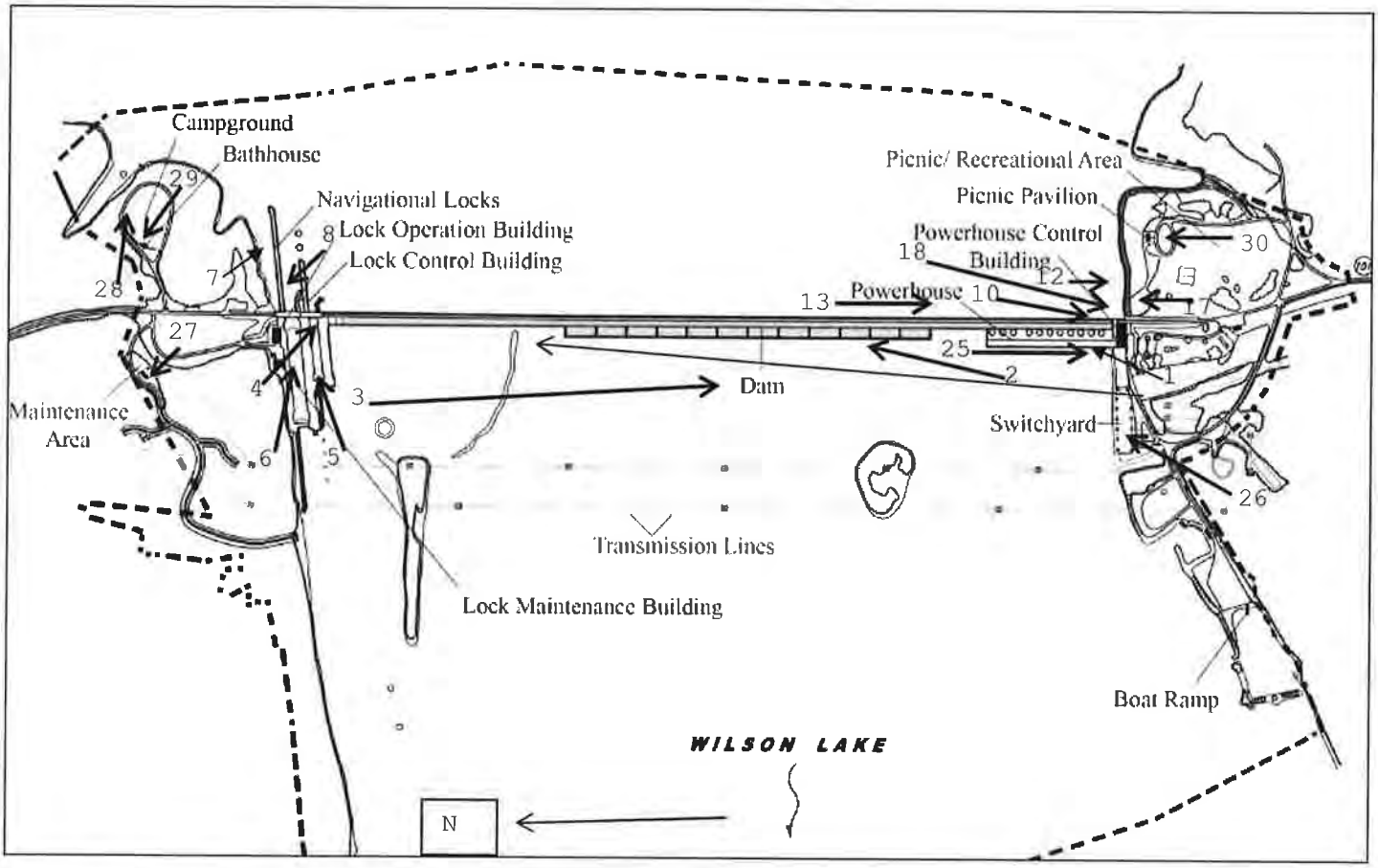
Date Photographed: April 12, 2015

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

Photo 1 of 30: General view of dam and powerhouse, view to northeast.
Photo 2 of 30: General view of dam, view to north.
Photo 3 of 30: General view of dam and roadway bridge from locks, view to south.
Photo 4 of 30: Auxiliary lock gate, view to east.
Photo 5 of 30: Lock and roadway bridge in background, view to east.
Photo 6 of 30: Lock gate, view to east.
Photo 7 of 30: Lock Control Cabinet at east end of auxiliary lock, view to southeast.
Photo 8 of 30: Lock building, southeast elevation, view to northwest.
Photo 9 of 30: Lock Building, interior hall.
Photo 10 of 30: Powerhouse, north elevation, view to southwest.
Photo 11 of 30: Powerhouse interior wall, form board texture close-up.
Photo 12 of 30: Powerhouse, top floor entrance and roadway, view to south.
Photo 13 of 30: Powerhouse turbines, view to south.
Photo 14 of 30: Powerhouse interior, basement level, pipe gallery.
Photo 15 of 30: Powerhouse interior, control room, third floor.
Photo 16 of 30: Powerhouse interior, second floor assembly room.
Photo 17 of 30: Powerhouse, top floor entrance, south elevation, view to north.
Photo 18 of 30: Powerhouse, second floor entrance, north elevation, view to south.
Photo 19 of 30: Powerhouse interior, Lobby.
Photo 20 of 30: Powerhouse interior, Lobby, original restroom door.

Photo 21 of 30: Powerhouse interior, fourth floor lobby.
Photo 22 of 30: Powerhouse interior, fourth floor breakroom.
Photo 23 of 30: Powerhouse interior, curved stairwell landing.
Photo 24 of 30: Powerhouse interior, original interior doors.
Photo 25 of 30: Gantry crane, view to south.
Photo 26 of 30: Switchyard, view to northeast.
Photo 27 of 30: Maintenance Area, equipment shed, view to northwest.
Photo 28 of 30: Picnic Area, northeast of locks, view to east.
Photo 29 of 30: Campground Bathhouse, northeast of locks, view to northwest.
Photo 30 of 30: Original Picnic Pavilion east of powerhouse, south elevation, view to north.

Photo Key Map (not to scale):
(Powerhouse interiors, photo #11, 14-16, 19-24; Lock operation Building interior, photo #9.)



Site Plans:

Original 1940 Site Plan and River Wall Elevation

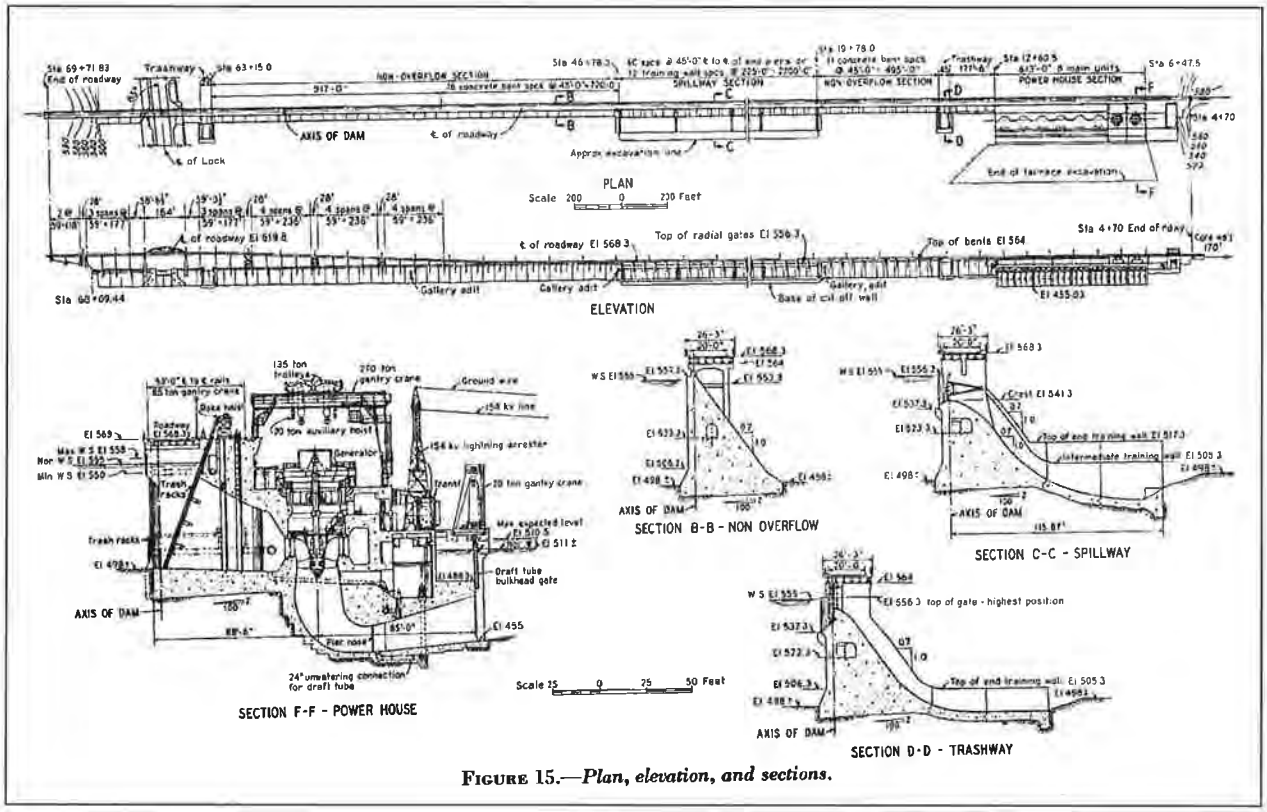
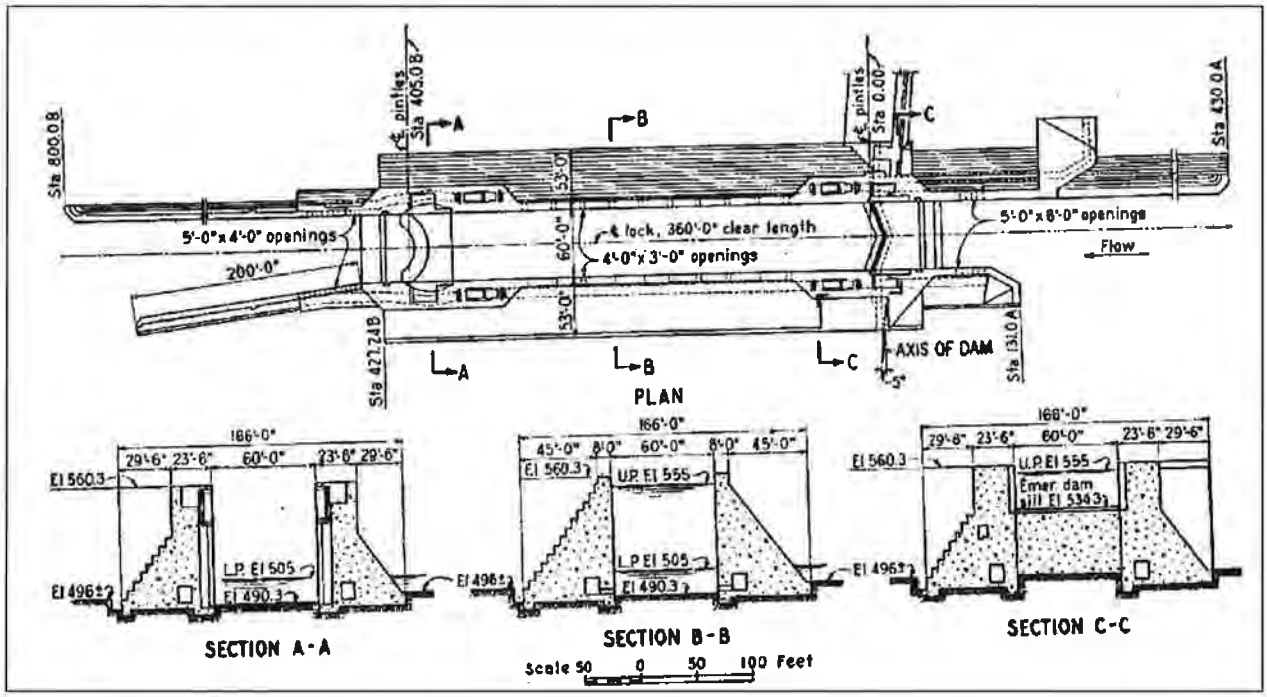


FIGURE 15.—*Plan, elevation, and sections.*

Navigation lock plan and sections



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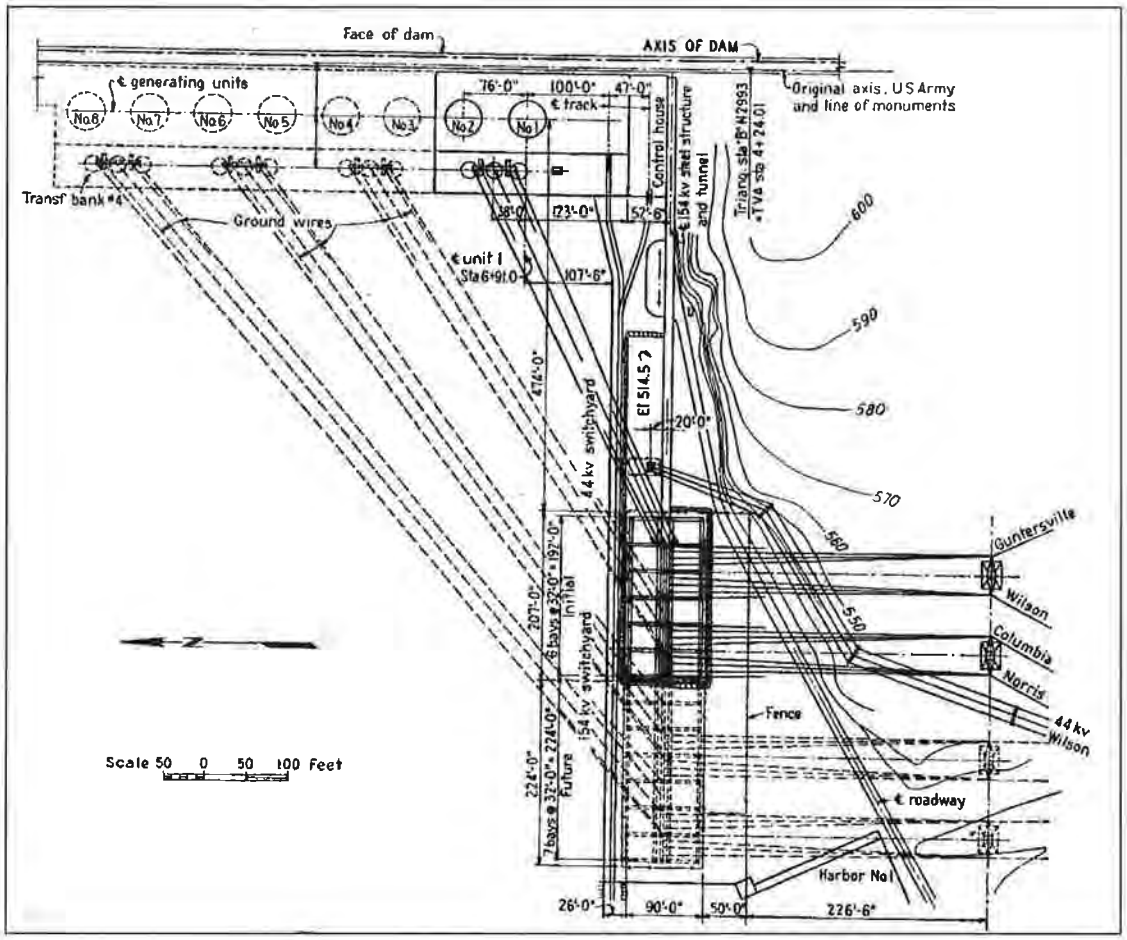
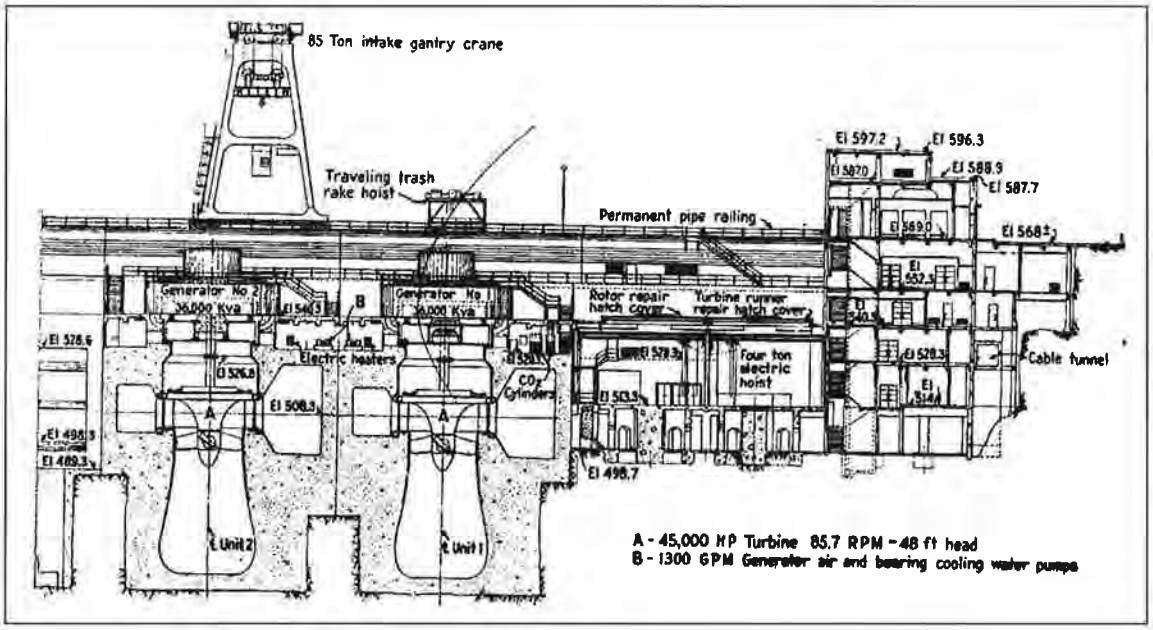
Name of Property | County and State

Switchyard Site Plan

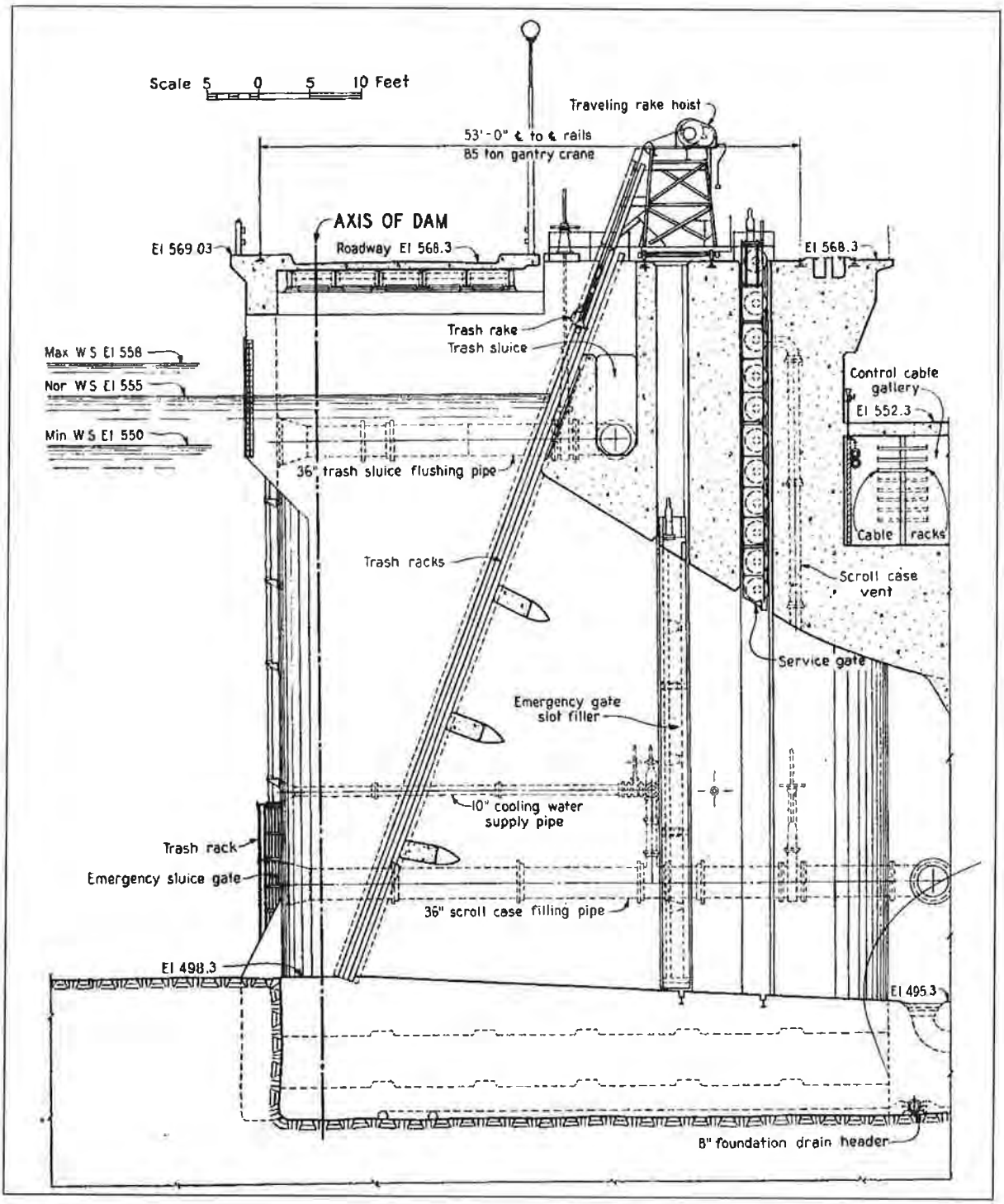


Sections and Elevations:

Powerhouse and Turbine Area Section



Intake Structure Section



The Wheeler Hydroelectric Project | Lawrence and Lauderdale, Alabama

Name of Property | 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.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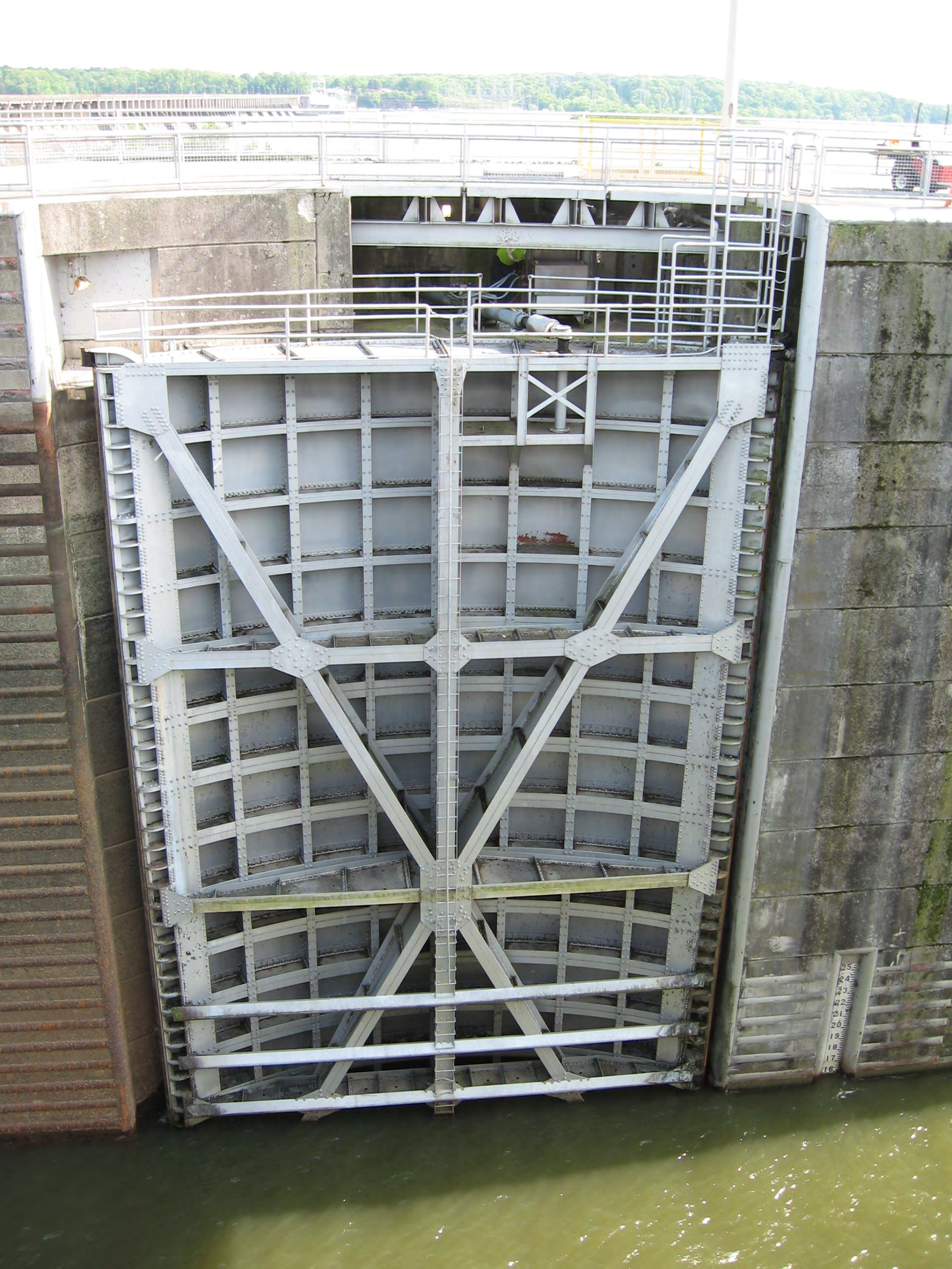


WHEELER
DANGER
NO SMOKING
DURING LOCKAGE
OF FLAMMABLE
CARGO


FIRE
RESPOND
Employee Health Center


NO SMOKING
WITHIN
50 FEET
DELIVERIES
CALL
4801


10
11


UNIT
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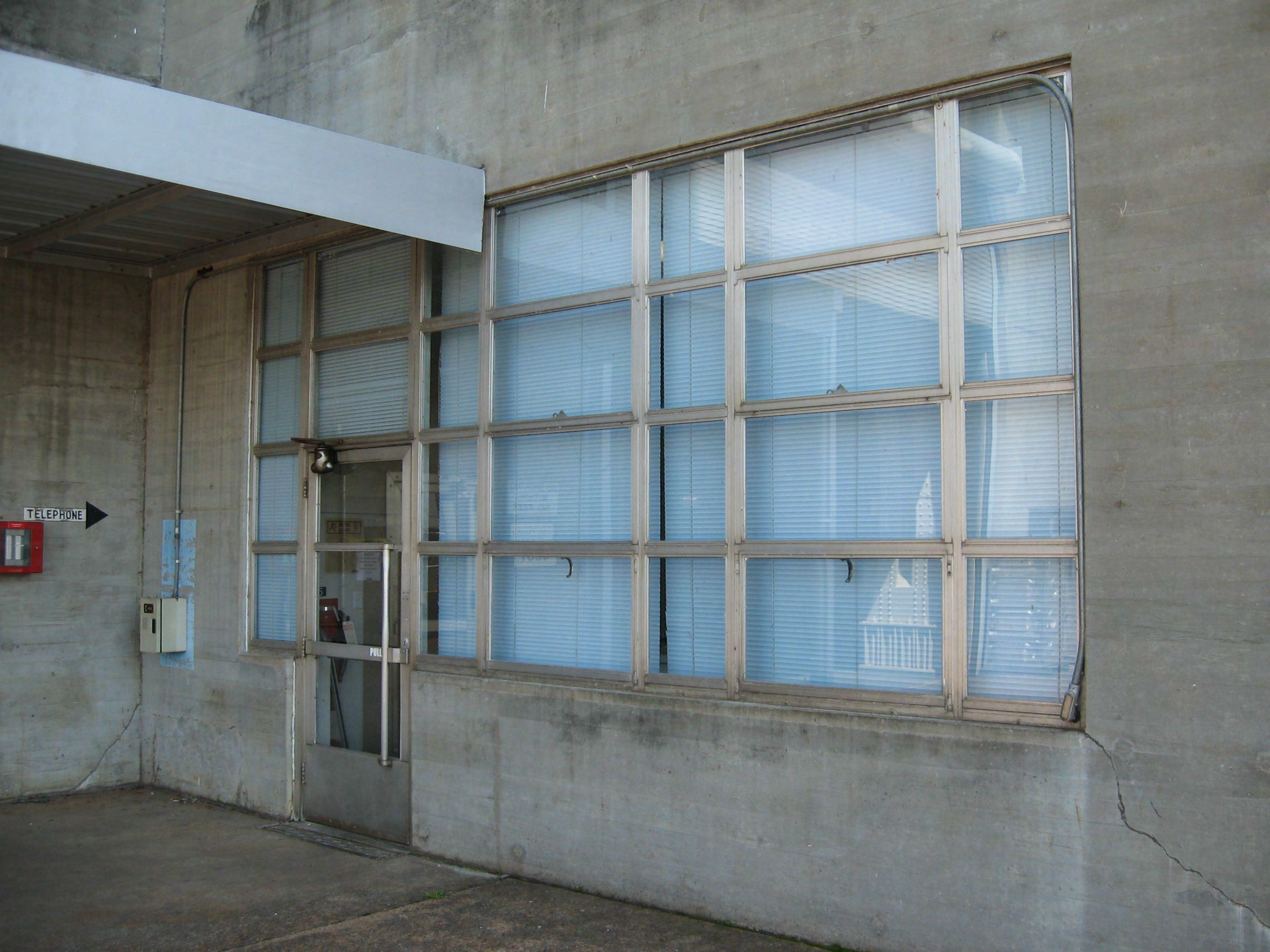
SPARE
SPARE

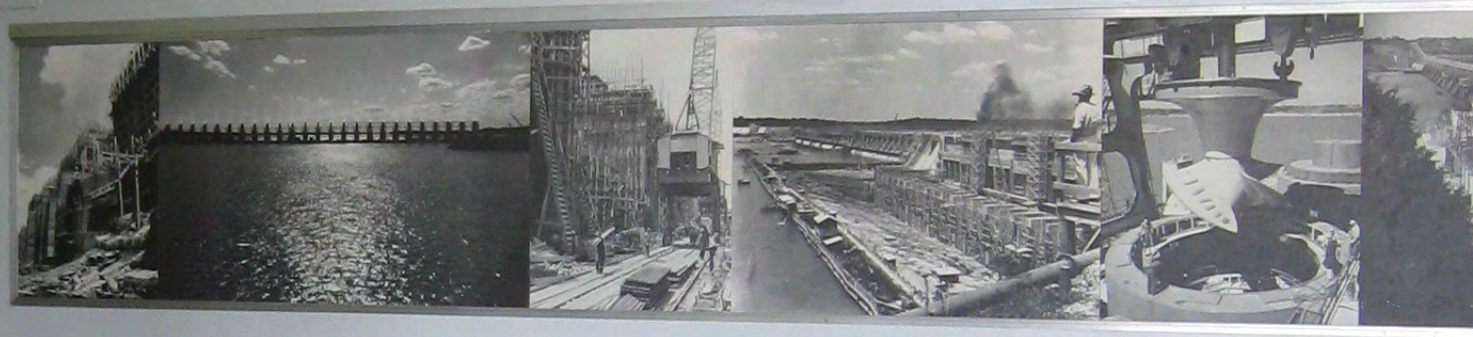

KNAACK


WHEELER
NO VISITORS
NO VISITORS


TELEPHONE
PULL


MEN
EMPLOYEES
ONLY


MEN

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