NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

1607

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

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NATIONAL REGISTER

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Great Falls Hydroelectric Station
other names/site number N/A

2. Location

street & number Caney Fork River Mile 91.1 off U.S. Hwy. 70 [N/A] not for publication
city, town Rock Island [X] vicinity
state Tennessee code TN county White & Warren code 185,177 zip code

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
		Contributing	Noncontributing
[ ] private	[ ] building(s)	1	1 buildings
[ ] public-local	[X] district		sites
[ ] public-State	[ ] site	5	structures
[X] public-Federal	[ ] structure		objects
	[ ] object	6	1 Total

Name of related multiple property listing:
Pre-TVA Hydroelectric Development in TN, 1901-1933

Number of contributing resources previously listed in the National Register 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this [X] 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 [X] meets [ ] does not meet the National Register criteria. [ ] See continuation sheet.

Herbert L. Harper — 5/22/90
Signature of certifying official — Date
Deputy State Historic Preservation Officer
Tennessee Historical Commission
State or Federal agency and bureau

In my opinion, the property [X] meets [ ] does not meet the National Register criteria. [ ] See continuation sheet.

Signature of commenting or other official — Date
Deputy State Historic Preservation Officer
Tennessee Historical Commission
State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

[✓] entered in the National Register. [ ] See continuation sheet.
[ ] determined eligible for the National Register. [ ] See continuation sheet.
[ ] determined not eligible for the National Register.
[ ] removed from the National Register.
[ ] other, (explain:) _____

Mark D. Barker — entered in the National Register — 5 July 1990
for Signature of the Keeper — Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)
INDUSTRY: energy facility

Current Functions (enter categories from instructions)
INDUSTRY: energy facility

7. Description

Architectural Classification (enter categories from instructions)
N/A

Materials (enter categories from instructions)
foundation CONCRETE
walls CONCRETE, BRICK
roof CONCRETE
other Steel

Describe present and historic physical appearance.

Operated by the Tennessee Valley Authority since 1939, the Great Falls Hydroelectric Station is immediately downstream from the mouth of the Collins River, in Warren (population 32,653) and White (population 19,567) counties, about one-half mile downstream from Rock Island, Tennessee. The hydroelectric station is located at the peninsula formed by the meeting of the Caney Fork and Collins Rivers about two-thirds of a mile from Rock Island, at Caney Fork River mile 91.1, immediately downstream of the Collins River, one-half mile northwest from Rock Island, Tennessee, just off U. S. Highway 70, on the Rock Island Road.

The facility includes a dam, intake tunnels, penstocks, and powerhouse and a circa 1955 non-contributing control building. The dam was completed in 1916, but was redesigned in 1925, which resulted in its height being raised thirty-five feet. The dam, which creates a reservoir of the waters of the confluence of the Caney Fork and Collins Rivers, is essentially a concrete gravity non-overflow structure which includes an emergency spillway in its design. The reservoir extends into White, Warren, and Van Buren counties. The non-overflow section is 230 feet in length, while the spillway section is 535 feet long. Along with the cut-off wall at the dam's left abutment, which is thirty-five feet in length, the entire structure stretches 800 feet across the Collins River. There are eighteen crest gates, each twenty-five feet wide and fourteen feet high, separated by five-foot-thick piers. A fifteen-foot-wide roadway crosses the dam.

The intake structures are located on the left bank of the Collins River's arm of the reservoir, two-thirds of a mile west of the dam. These two conformations are of reinforced concrete and feature three openings, each fourteen feet wide. A stationary hoist, driven by an electric motor, controls the thirteen by fifteen caterpillar-type Broome gates. The two horseshoe-shaped intake tubes are concrete lined, leading to steel plate penstocks on the Caney Fork River side of the Collins River-Caney Fork River Peninsula. The No. 1 horseshoe tunnel is fourteen feet in diameter, while No. 2 has a diameter of sixteen feet. The tunnels are each 450 feet in length. The massive steel penstocks are both 160 feet in length while penstock No. 1 has a diameter of twelve feet and No. 2, fourteen feet. The two surge tanks, buffers protecting the two vertical Francis-type turbines and generators from sudden rushes of water, are of two types. Both are partially buried, while No. 1 is of steel and No. 2 is of steel-reinforced

[X] See continuation sheet

concrete. No. 1 has a height of ninety-one feet and a diameter of twenty feet, and No. 2 is seventy-four feet high and has a diameter of twenty-five feet.

The powerhouse is located on the left-downstream (south) bank of the Caney Fork River, and is located about two-thirds of a mile downstream from the dam. It is a rectangular-shaped structure, two and a half stories high, constructed of concrete, structural steel, and brick, with clerestory lighting. It is 135 feet long by thirty-two feet wide. It houses two generators driven by two hydraulic vertical Francis turbines made by Allis-Chalmers Manufacturing Company.

A utility building of unknown date is adjacent to the powerhouse, which is surrounded by a concrete wall, recently added to by the TVA as a flood protection measure[1] [See Appendix A]. Additionally, after TVA ownership was secured leakage, problems that had developed through the Collins River-Caney Fork River Peninsula were corrected.

A circa 1955 two story brick control building is located above the power house.

[1] Tennessee Valley Authority, Division of Engineering and Construction, Water Control Projects and Other Major Hydro Development in the Tennessee and Cumberland Valleys, Technical Monographs, Chapter 17, "Great Falls." (Knoxville: Tennessee Valley Authority, August, 1954)

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:

☐ nationally ☒ statewide ☐ locally

Applicable National Register Criteria ☒ A ☐ B ☒ C ☐ D

Criteria Considerations (Exceptions) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G N/A

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
COMMERCE	1917-1933	1917
ENGINEERING		
COMMUNITY DEVELOPMENT & PLANNING		

Cultural Affiliation
N/A

Significant Person
N/A

Architect/Builder
unknown

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The Great Falls Hydroelectric Station is significant under criterion C for engineering because it represents the kind of early large-scale, professionally-designed steel-reinforced concrete hydroelectric engineering projects typical throughout the early days of electrical power development in the State of Tennessee. While its scale is Promethean by comparison, its design, especially when considering its water intake system, shares consistency in construction materials, genre, temporal limits, and utilitarian functions with other smaller pre-TVA hydroelectric sites on Tennessee's smaller rivers, such as the Shoals Creek No. 1 site in Lawrenceburg. Hydroelectricity has been continually produced at Great Falls since 1917, serving a wide variety of industrial and domestic electric needs of the area.

After reconnaissance surveys on the Caney Fork River had been completed in 1898, the Great Falls Power Company was established in March of 1901. After years of being unable to raise the necessary capital for the hydroelectric project, by 1909, the promoters had found the venture capital for investment in the H. M. Byllesby & Company of Chicago. Shortly thereafter, the Chicago firm purchased controlling interest, much in the way the E. M. Clark Company of Philadelphia had assumed its interests in the Ocoee River projects.

The Great Falls Hydroelectric Station is also significant under criterion A for commerce in the State of Tennessee, as it represents the transition from private, local possession of property, to both intra-state and out-of-state corporate proprietorship, to public ownership of public utilities that occurred from 1901 to 1933 in Tennessee. It represents also the introduction of a new public utility business, that of supplying electricity, that would become one of the major hallmarks of the twentieth century in Tennessee and thus is fundamentally representative of a change in the business of trading, production, commerce, communications, and commodities in a wide range of territory in the State of Tennessee.

☐ See continuation sheet

9. Major Bibliographical References

☒ See continuation sheet

Previous documentation on file (NPS): N/A

- ☐ 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 # _____

Primary location of additional data:

- ☒ State historic preservation office
- ☐ Other State agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☐ Other

Specify repository: _____

10. Geographical Data

Acreage of property approximately 45 acres

UTM References

	Zone	Easting	Northing
A	16	623190	3963040
B	16	623420	3963210
C	16	624250	3962730
D	16	624560	3962760

☐ See continuation sheet

Doyle, TN 327SE & Campaign, TN 327SW

Verbal Boundary Description

☒ See continuation sheet

Boundary Justification

The boundaries for the Great Falls Hydroelectric Station are sufficient to protect the integrity of the site.

☐ See continuation sheet

11. Form Prepared By

name/title James B. Jones. Jr. Historic Preservation Specialist
organization Tennessee Historical Commission date May 1990
street & number 701 Broadway telephone (615)742-6718
city or town Nashville state TN zip code 37243-0442

Additionally, the Station is significant under criterion A for flood control planning, as manifest by its eighteen flood gates.

On April 24, 1912, the Tennessee Power Company was organized, and it purchased the Great Falls Power Company and began buying land and developing plans for a power development. After initial work was stopped by floods, the Byllesby interests were sold to the E. M. Clark Company of Philadelphia, by this time the owner of the Nashville Railway and Light Company and directing interest in the Parksville project on the Ocoee River. There was spasmodic activity at the site until 1915 when construction began in earnest. By 1916-17, a dam was built, and the first tunnel through the isthmus was drilled through the narrows of the Collins and Caney Fork Rivers. The penstock, powerhouse, and transmission equipment were in place. The Great Falls site was first placed in operation on New Year's Day, 1917. Further construction completed in 1925 raised the height of the dam some thirty-five feet, augured a second tunnel, and built a second penstock, and placed a second, newer and higher-capacity generator in the expanded power plant, essentially as it appears today. The floods of 1929, while devastating to many, were controlled by the men at the Great Falls plant, and the dam's usefulness as a flood control unit was revealed. The property was acquired by TEPCO soon after its formation in 1922, and was sold to TVA in 1939.[1] It is still operated by TVA today.

Although the site has been the object of engineering safety adjustments, it still retains sufficient integrity to reflect the criteria for engineering significance as set forth in the registration requirements for pre-TVA Hydroelectric sites in the MPDF "Pre-TVA Hydroelectric Development in Tennessee, 1901-1933."

A consensus determination of eligibility was made by TVA and the Tennessee Historical Commission on May 29, 1985.

[1] SCN, October 1, 1974, No. 78, pp. 1-9, and; Crouch, "History,", pp. 13-14, and; A.W. Crouch, The Caney Fork of the Cumberland, (Nashville: np, 1973), pp. 53-61.

MAJOR BIBLIOGRAPHICAL REFERENCES

Crouch, A. W. "History of the Tennessee Electric Power Company." TEPCO Collection, Box 1, Folder 2. Tennessee State Library and Archives.

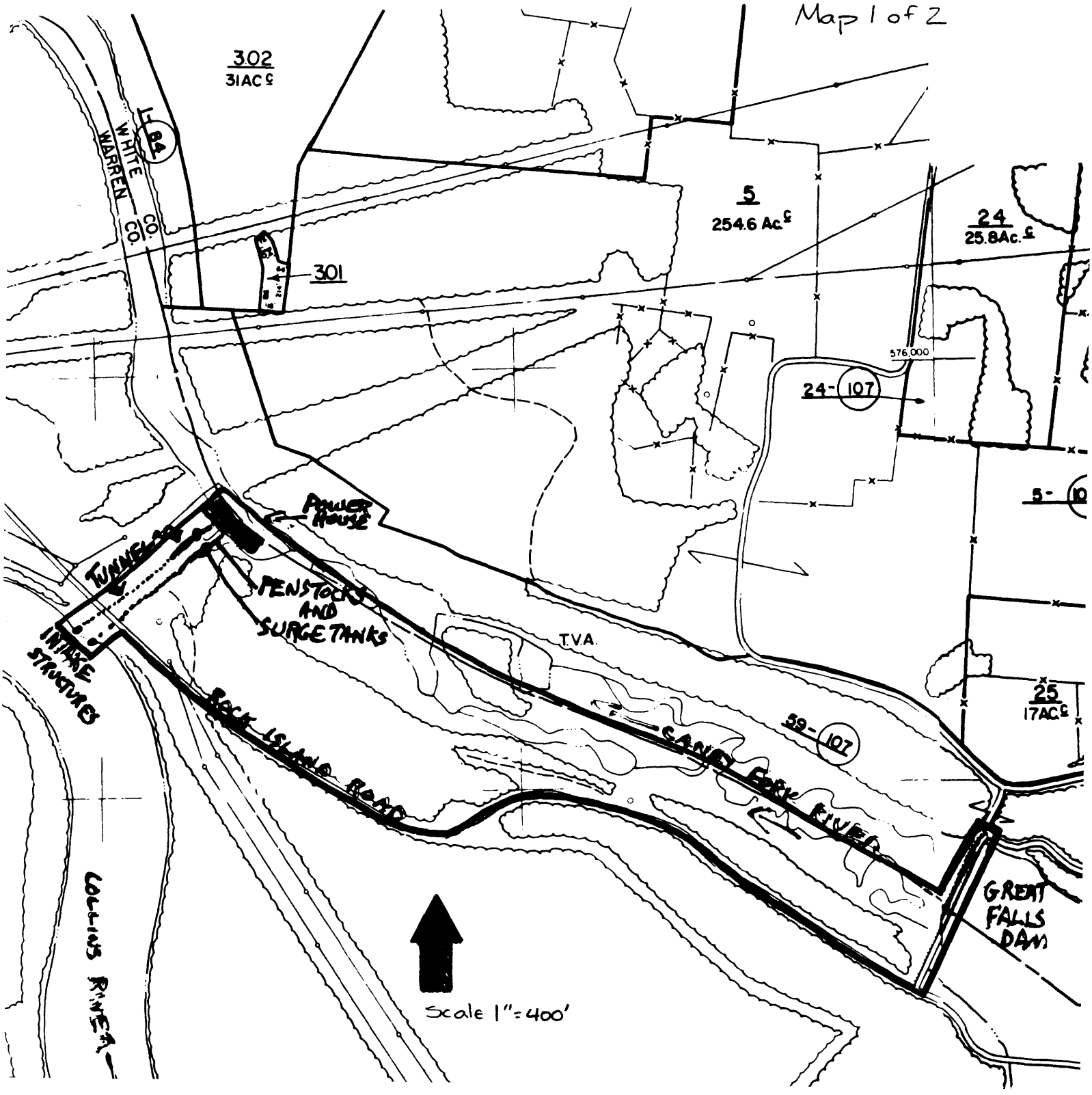
----------. The Caney Fork of the Cumberland. Nashville: np, 1973.

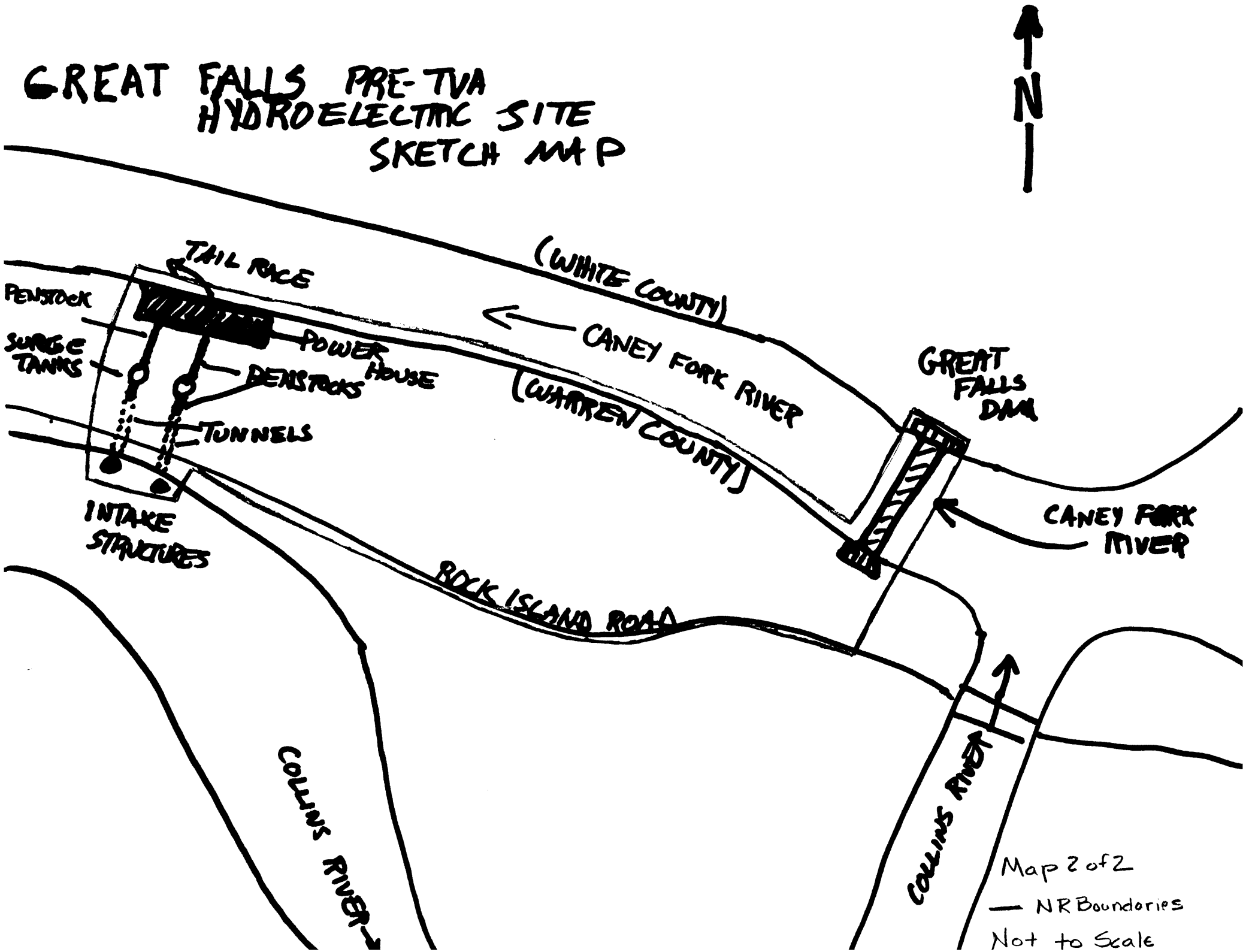
System Control News, No. 78. October 1, 1974.

Tennessee Valley Authority, Division of Engineering and Construction. Water Control Projects and Other Major Hydro Development in the Tennessee and Cumberland Valleys, Technical Monographs, Chapter 17, "Great Falls." (Knoxville: Tennessee Valley Authority, August 1954).

BOUNDARY DESCRIPTION:

The boundaries for the Great Falls Hydroelectric Station begin at and include the footprints of the dam across the Caney Fork River, follow the tree line along the north side of the Caney Fork River, include the powerhouse and tailrace downstream from the dam on the Caney Fork River, and the intake structures on the Collins River, including penstocks and surge tanks adjacent to the powerhouse on the Caney Fork River, and follow Rock Island Road on the south side of Caney Fork River to the point of beginning at the dam.


Map 1 of 2
302
31AC ℄
I-24
WHITE
WARREN CO.
CO.
301
5
254.6 Ac.℄
24
25.8Ac.℄
576,000
24-107
5-10
POWER HOUSE
TUNNEL
PENSTOCKS AND SURGE TANKS
T.V.A.
INTAKE STRUCTURES
ROCK ISLAND ROAD
59-107
25
17AC℄
GREAT FALLS DAM
COLLINS RIVER
Scale 1"=400'


GREAT FALLS PRE-TVA
HYDROELECTRIC SITE
SKETCH MAP
N
TAIL RACE
(WHITE COUNTY)
PENSTOCK
SURGE TANKS
POWER HOUSE
PENSTOCKS
CANEY FORK RIVER
(WARREN COUNTY)
GREAT FALLS DAM
TUNNELS
INTAKE STRUCTURES
CANEY FORK RIVER
ROCK ISLAND ROAD
COLLINS RIVER
COLLINS RIVER
Map 2 of 2
— NR Boundaries
Not to Scale

Great Falls Hydroelectric Station
Rock Island Road
Rock Island Vicinity, White and Warren Counties, Tennessee
Photographed by: James B. Jones, Jr.
Date: March 1989
Negs: Tennessee Historical Commission
701 Broadway
Nashville, Tennessee 37243-0042

#1 of 6 - View of Great Falls Dam and bridge, looking northeast.

#2 of 6 - Downstream view of powerhouse at Great Falls, from Caney Fork River Bank (note surge tank), looking southeast.

#3 of 6 - Powerhouse (note penstocks and surge tank), looking southeast.

#4 of 6 - Allis-Chalmers Generator, at Great Falls powerhouse.

#5 of 6 - Interior of Great Falls powerhouse, note clerestory lighting.

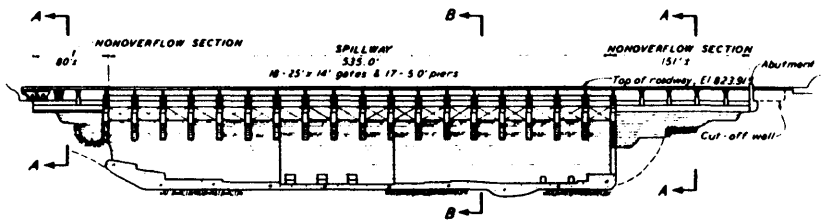
#6 of 6 - Outbuilding on site.

HISTORIC VIEWS

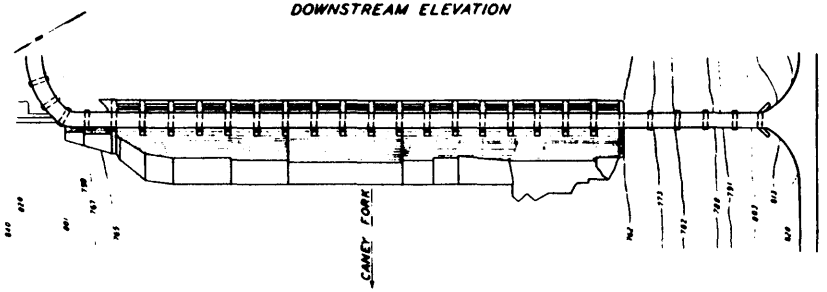
#1 of 2 - Great Falls dam (1925), looking southeast.

#2 of 2 - Great Falls powerhouse (1925) showing penstocks and dam in background, looking southwest.

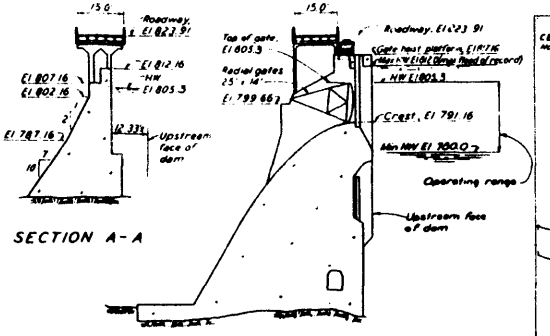
10N200 | 13 | C | 4



DOWNSTREAM ELEVATION

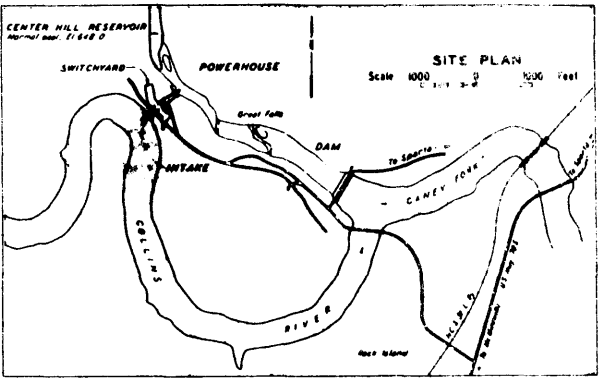


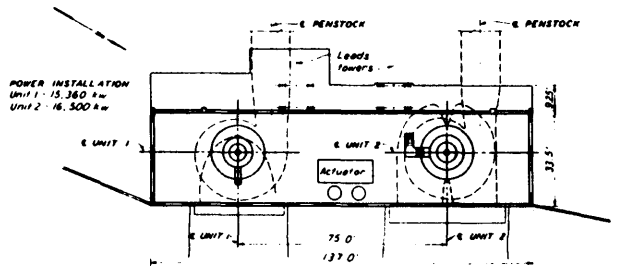
PLAN - DAM



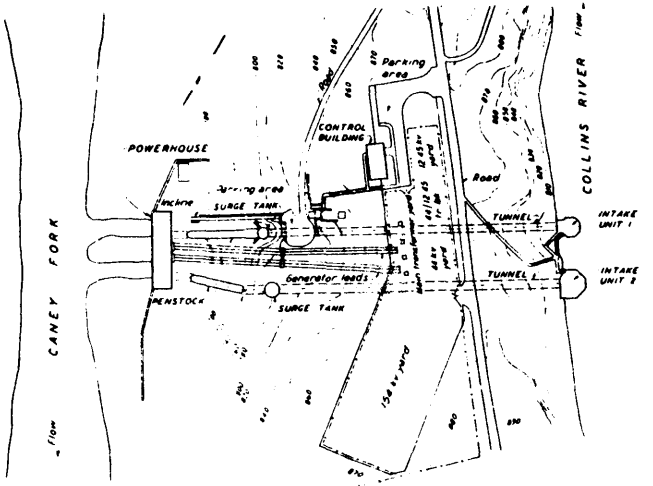
SECTION A-A

SECTION B-B

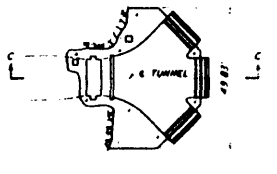




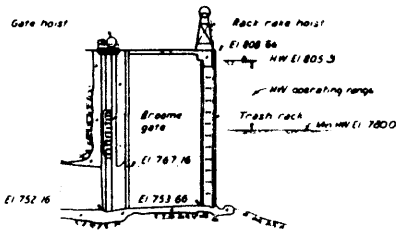
PLAN - POWERHOUSE



PLAN - POWER PLANT

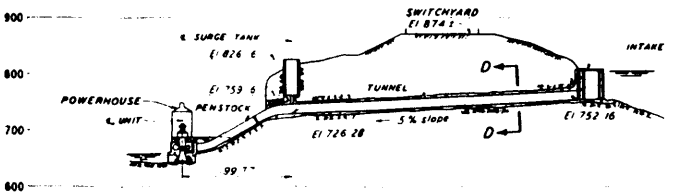


SECTIONAL PLAN

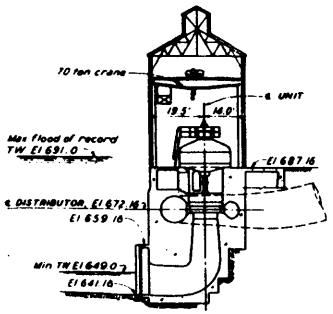


SECTION C-C

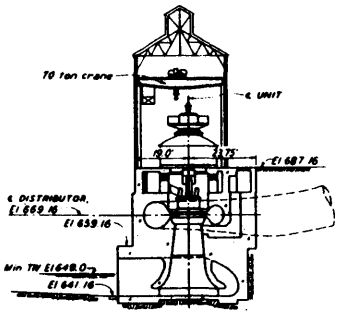
INTAKE - UNIT 2



SECTIONAL ELEVATION - UNIT 2



SECTION - UNIT 1



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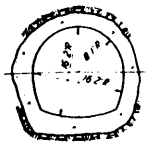

SECTION D-D

900
800
700
600

Scale 60 0 60 120 Feet
DAM - PLAN & ELEVATION

Scale 100 0 100 200 Feet
POWER PLANT - PLAN & ELEVATION

Scale 20 0 20 40 Feet
POWERHOUSE & INTAKE - PLANS & SECTIONS
DAM - SECTIONS

DAM & POWER PLANT

GENERAL PLANS ELEVATIONS & SECTIONS

GREAT FALLS PROJECT
TENNESSEE VALLEY AUTHORITY
DIVISION OF DESIGN

SUBMITTED	RECOMMENDED	REVIEWED	APPROVED
C.A. Meyer	Ken M. Knight	R.O. Monroe	B.E. Blair

KNOXVILLE | 8-2-49 | 13 | C | 4 | 10N200R6