



North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

May 2, 2016

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

Re: Fontana Powerhouse Security Upgrades, Graham County, ER 16-0695

Dear Mr. Jones:

Thank you for your letter of April 13, 2016, regarding the above-referenced undertaking. We have reviewed the *Documentation for Effect under 36 CFR 600 Evaluation for the Proposed Security Project; Fontana Hydroelectric Project Tennessee Valley Authority, Graham County, North Carolina report* and offer the following comments.

The proposed security upgrades for the National Register-eligible Fontana Dam TVA (GH0058) will not adversely affect the historic property, as the work appears to be appropriate and will not diminish the characteristics for which the property is considered eligible.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

A handwritten signature in blue ink that reads "Renee Gledhill-Earley".

A small handwritten mark in blue ink that looks like "for".
Ramona M. Bartos



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



April 13, 2016

BU-0695
S-SEE LISTING
ADD
4/13/16
UE 5/11/16

Dr. Kevin Cherry
State Historic Preservation Officer
North Carolina State Historic Preservation Office
4610 Mail Service Center
Raleigh, NC 27699-4610

Dear Dr. Cherry:

TENNESSEE VALLEY AUTHORITY (TVA), FONTANA POWERHOUSE SECURITY UPGRADES,
GRAHAM COUNTY, NORTH CAROLINA

TVA proposes to perform security upgrades to the Fontana Powerhouse. The security upgrades include Fixed Cameras, Entry Card Readers, Alarm Contacts, Passive Infrared Sensors, Wire Mesh Panels added to the inside of the Control Room Windows, and a new Security Fence and Gate.

TVA determined the area of potential effects to be Fontana Powerhouse. The Fontana Hydroelectric Project was determined eligible for listing in the National Register of Historic Places by the North Carolina State Historic Preservation Office (SHPO) and a National Register nomination was prepared in 2015. The Powerhouse is considered to be a contributing resource to the Fontana Hydroelectric Project.

The specific location and nature of each upgrade was assessed by Thomason and Associates and documented in the enclosed report, titled *Documentation for Effect under 36 CFR 800 Evaluation for the Proposed Security Project, Fontana Hydroelectric Project, Tennessee Valley Authority, Graham County, North Carolina*. Thomas and Associates recommends a finding of no adverse effect to historic properties.

Pursuant to 36 CFR Part 800.4(d)(1), we are seeking your concurrence with the TVA's finding of no adverse effect to historic properties.

Should you have any questions or comments, please contact Ted Wells in Knoxville at ewwells@tva.gov or (865) 632-2259.

Sincerely,

Clinton E. Jones
Manager, Biological and Cultural Compliance
Safety, River Management and Environment
WT11C-K

EWV:CSD
Enclosures



**DOCUMENTATION FOR EFFECT
UNDER 36 CFR 800 EVALUATION**

**FOR THE PROPOSED SECURITY PROJECT
FONTANA HYDROELECTRIC PROJECT
TENNESSEE VALLEY AUTHORITY
GRAHAM COUNTY, NORTH CAROLINA**

**THOMASON AND ASSOCIATES
Preservation Planners
Nashville, Tennessee**



MARCH, 2016

TABLE OF CONTENTS

I. MANAGEMENT SUMMARY2

II. CURRENT CONDITION AND NATIONAL REGISTER EVALUATION3

III. PROJECT DESCRIPTION10

IV. EFFECTS TO NATIONAL REGISTER PROPERTIES66

V. SUMMARY70

LIST OF APPENDICES

APPENDIX A - RESUME OF PRINCIPAL INVESTIGATOR

I. MANAGEMENT SUMMARY

Project Name: Fontana Hydroelectric Project Security Project

Project Location: Fontana Hydroelectric Project, 1011 Fontana Dam Road, Fontana, North Carolina

Project Contact:

This report has been prepared for the Tennessee Valley Authority (TVA) for use in completion of applicable Section 106 procedures in compliance with the National Historic Preservation Act (NHPA) of 1966 and subsequent amendments. The Fontana Hydroelectric Project was constructed between 1942 and 1944 to provide electricity to the ALCOA aluminum plant in Knoxville, as well as flood control on the Little Tennessee River. The Fontana Hydroelectric Project was determined eligible for listing in the National Register of Historic Places in July of 2015 and the powerhouse is considered a contributing building to this historic district. The Fontana Hydroelectric Project is located at mile 61 on the Little Tennessee River, which joins with the Tennessee River at Lenoir City, Tennessee, twenty-one miles southwest of Knoxville.

Pursuant to 36 CFR 800.4 of the National Historic Preservation Act, the TVA is required to evaluate potential effects to National Register-listed or –eligible properties when such properties are proposed for rehabilitation, alteration, demolition, sale or lease and other actions which may have an impact to their architectural or historical character. The Fontana Hydroelectric Project was completed in 1944 with the purpose of housing the electric generators, necessary equipment, operations for the dam and employees, and a tourist attraction to the public. The use of the facility was altered in 2001, when the powerhouse was closed to the public due to terrorist attacks on September 11, 2001. The closure of public access shut down the use of the incline car and the visitor lobby located on the top floor of the powerhouse.

The design for the Fontana Hydroelectric Project reflects the influence of the Streamline Moderne style of the mid-20th century. The powerhouse consists of a control building and attached generator room. The control building consists of two-stories in height with the taller generator room integrated on the south elevation of the control building. The entire powerhouse is of concrete and steel construction, a flat roof of concrete panels, and several groupings of fixed aluminum windows.

Due to increased security concerns, the TVA proposes to increase monitoring, locking and surveillance upgrades at various entry points outside and inside the powerhouse and dam. These upgrades consist primarily of new security cameras, card key locks, alarm contacts and fencing. These upgrades will be installed in such a manner as to have minimal visual or physical affects to the architectural and historical character of the powerhouse and dam. In the opinion of the Consultant, the proposed work meets the “Secretary of the Interior’s Standards for Rehabilitation” and there will be **No Adverse Effect** to the Fontana Hydroelectric Project.

II. CURRENT CONDITION AND NATIONAL REGISTER EVALUATION

A. Project Description

This project is located at the Fontana Hydroelectric Project located in Graham County, North Carolina (Figure 1). The immediate area surrounding the Fontana Hydroelectric Project has been associated with the Tennessee Valley Authority (TVA) since the early 1940s. Since that time the area has become a popular tourist destination due to the recreational amenities provided by the Little Tennessee River and nearby campgrounds.

The Fontana Hydroelectric Project is one of twenty-five TVA hydroelectric projects which are eligible for listing in the National Register of Historic Places under criterion A and C for its historical and engineering significance. The project is included within the Multiple Property Documentation Form, "Historical Resources of the Tennessee Valley Authority Hydroelectric Project, 1933-1979" which was prepared for the TVA in 2015. The Fontana Hydroelectric Project is significant for its overall design, in the expansion of energy for World War II materiel plants, regional manufacturing and commerce, and in the improvement of quality of life through transmission of electricity, control of seasonal flooding, and creation of public recreational facilities. The Fontana Hydroelectric Project was constructed during World War II to provide power to the Aluminum Company of America (ALCOA) smelting plants in Alcoa, Tennessee. Since this time the Fontana Hydroelectric Project has continued to be an integral part of TVA's overall hydroelectric system. A National Register nomination was prepared for the Fontana Hydroelectric Project in 2015 and included the powerhouse and dam as contributing to the facility.

The purpose of this project is to provide additional security upgrades on the exterior and interior of the powerhouse and dam. Due to an increase in threats to federal facilities since the attacks of September 11, 2001, many of TVA's hydroelectric facilities require upgrades for access into the powerhouse and within areas such as the Control Room and Turbine Floor. These upgrades consist primarily of the installation of new card reader keypads and alarm contacts on doors, new security cameras and additional fencing. The installation of these new measures is designed to have minimal impact to the original doors and other features of the facility and to be as reversible as possible. It is the intent of the TVA to retain the historic and architectural character of the Fontana Hydroelectric Project while providing for the needed security upgrades.

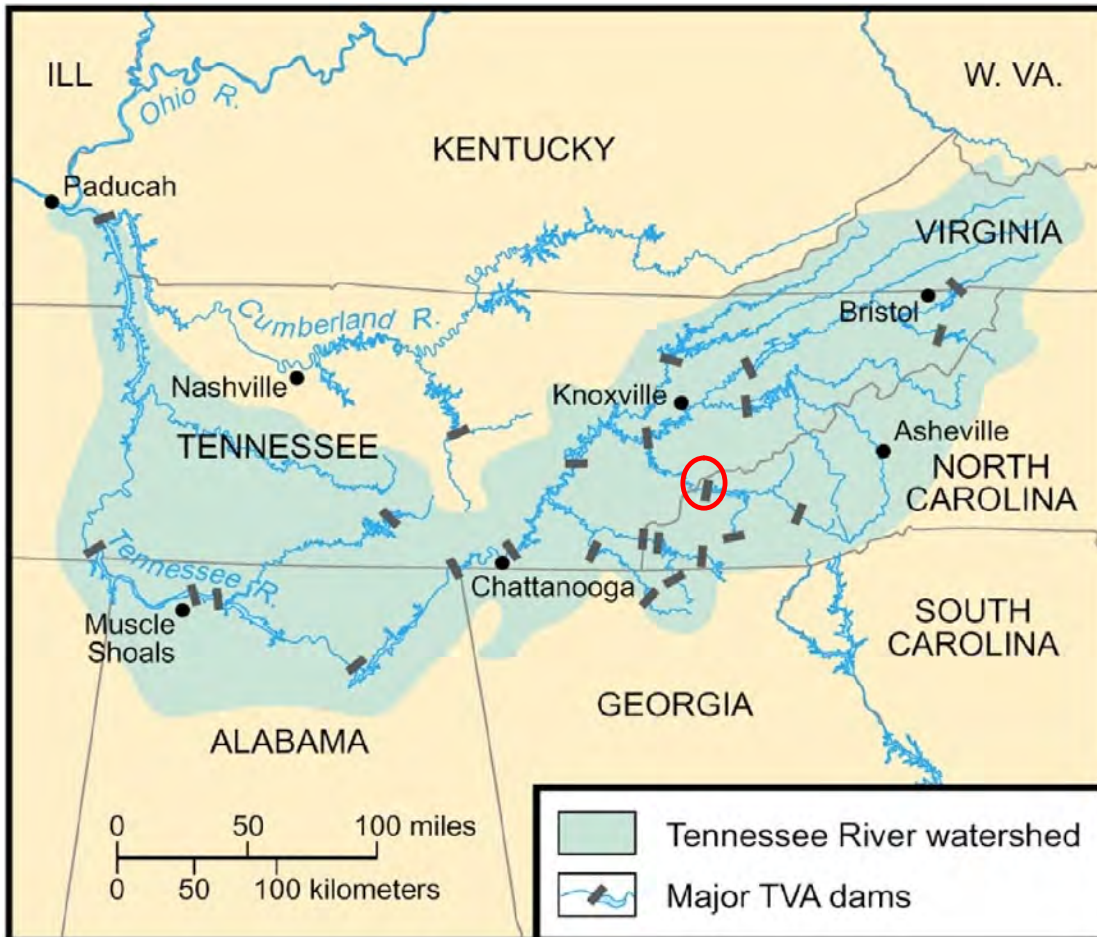


Figure 1: Location of the Fontana Hydroelectric Project in the TVA Hydroelectric System.

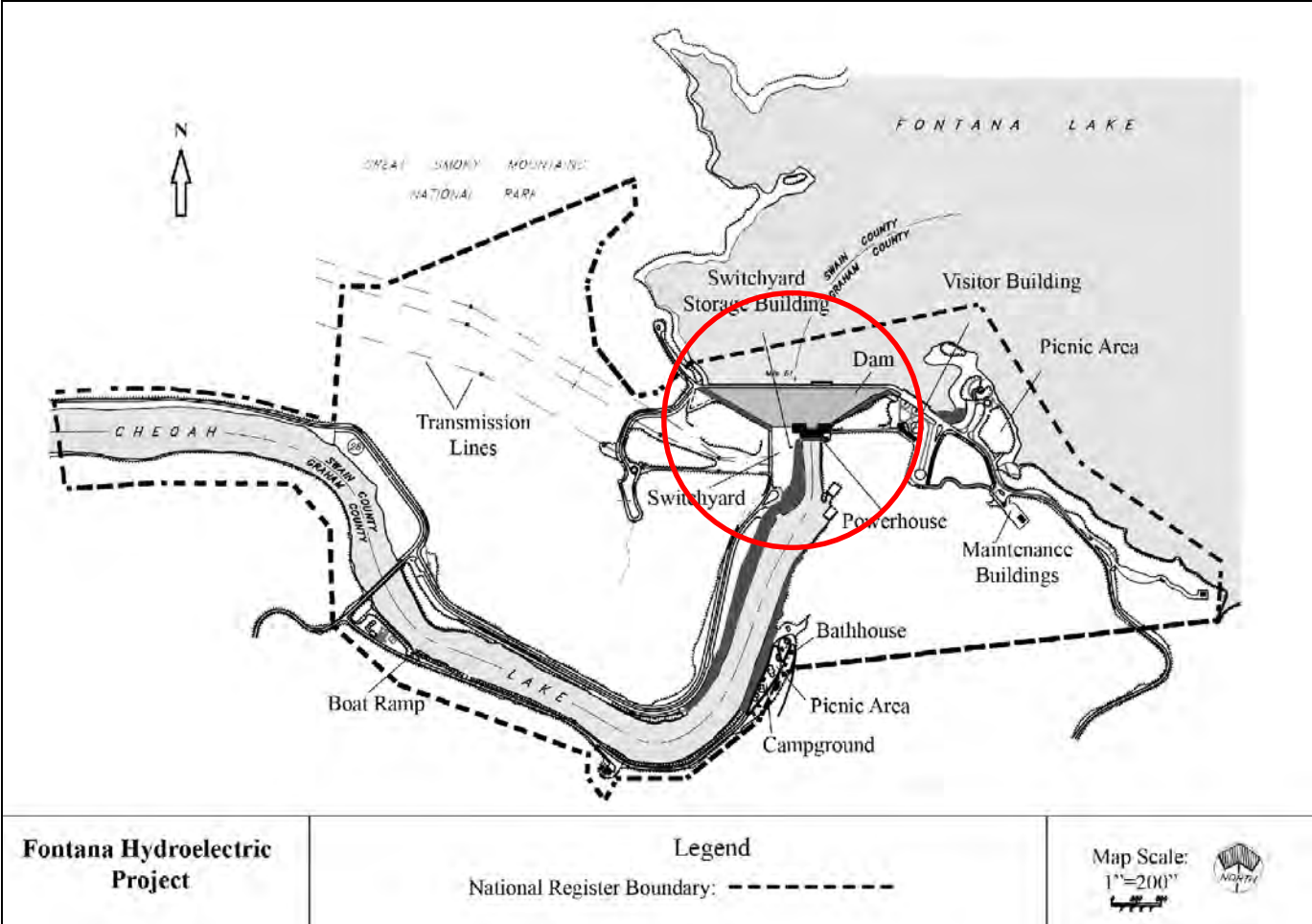


Figure 2: This map shows the boundary for the National Register-eligible Fontana Hydroelectric Project and the location of the Fontana Powerhouse and Dam within the facility.



Figure 3: Fontana Powerhouse, west elevation.



Figure 4: Fontana Powerhouse, south elevation.



Figure 5: Fontana Powerhouse, east elevation.



Figure 6: Fontana Powerhouse and Dam, south elevation.



Figure 7: Fontana Dam, view to the east.

III. PROJECT DESCRIPTION

The purpose of this project is to provide necessary security upgrades to the Fontana powerhouse and dam. The new security equipment will be added to both exterior and interior doors throughout the facility. The TVA recognizes the historic and architectural importance of the original design and features of the powerhouse and dam and seeks to complete these improvements in a manner that retains their design and character. The design for the Fontana Hydroelectric Project reflects the influence of the Streamline Moderne style of the mid-20th century. The powerhouse has a flat concrete roof, an exterior of Indiana limestone panels and a concrete foundation. The primary entrance on the west elevation has a ca. 2000 overhead track roll-up steel door. The interior doors consist of both original steel doors and steel and glass doors added ca. 1980.

The proposed project will accomplish the following:

Exterior Doors

There are eight exterior doors that will receive some type of security upgrade. The large roll-up door on the west elevation will have a new alarm contact added at the base of the door along with an entrance card reader on the interior.

The pedestrian doors leading into the powerhouse will all receive new card readers adjacent to the entrances as well as passive infrared (PIR) sensors mounted at the top of the doors and casings. Inside the doors along the walls or ceilings, new Avigilon security cameras will be installed to monitor the entrances. The card readers will be attached using two small screws to the face of the concrete wall or metal walls adjacent to the doors. The PIR sensors will be attached to the doors and door casings using an adhesive. The cameras will be mounted using screws and the wiring will follow existing wiring lines or conduits as much as possible.

The powerhouse doors which will receive these upgrades are:

1. Southwest Control Room Door
2. South Turbine Floor Double Doors
3. Southwest Turbine Floor Door
4. Northeast Powerhouse Door
5. Northwest Powerhouse Door
6. Upper Rear Deck Door
7. Kelly Building South Door.

The dam doors which will receive these upgrades are:

1. Head Gate Gallery Double Doors
2. West End Head Gate Gallery Door
3. East End Head Gate Gallery Door

Interior Doors - Powerhouse

The following doors are to be upgraded with new security features. These features will include the addition of new card readers, passive infrared (PIR) sensors and Avigilon security cameras. The card readers and PIR sensors will be installed with as minimal impact to the doors and walls as possible. The cameras will be mounted at ceiling and wall locations using existing conduit runs for wiring where possible.

- East Control Room Door
- Northeast Spreading Room Door
- North Spreading Room Cable Tunnel Door
- Southeast Spreading Room Door
- Communications Room South Double Doors
- Communications Room South Door
- Print Room Door
- Incline Car Room Door

Window Security Additions

Along the south wall of the Control Room are two fixed, two-light aluminum windows added ca. 1990. To provide additional security to the Control Room wire mesh panels will be added to the inside of the windows. These panels will have limited visibility on the exterior.

Fence Extension on the East Elevation

At the east end of the powerhouse is a gap between the existing metal fence and the earth embankment. This gap will be filled with a seven-foot tall fence of chain link and barbed wire with a pedestrian gate for access.



Figure 8: The new Avigilon security cameras to be installed in the powerhouse will be similar to this one in use at the Wilson Powerhouse in Alabama. This is a wall-mounted example.

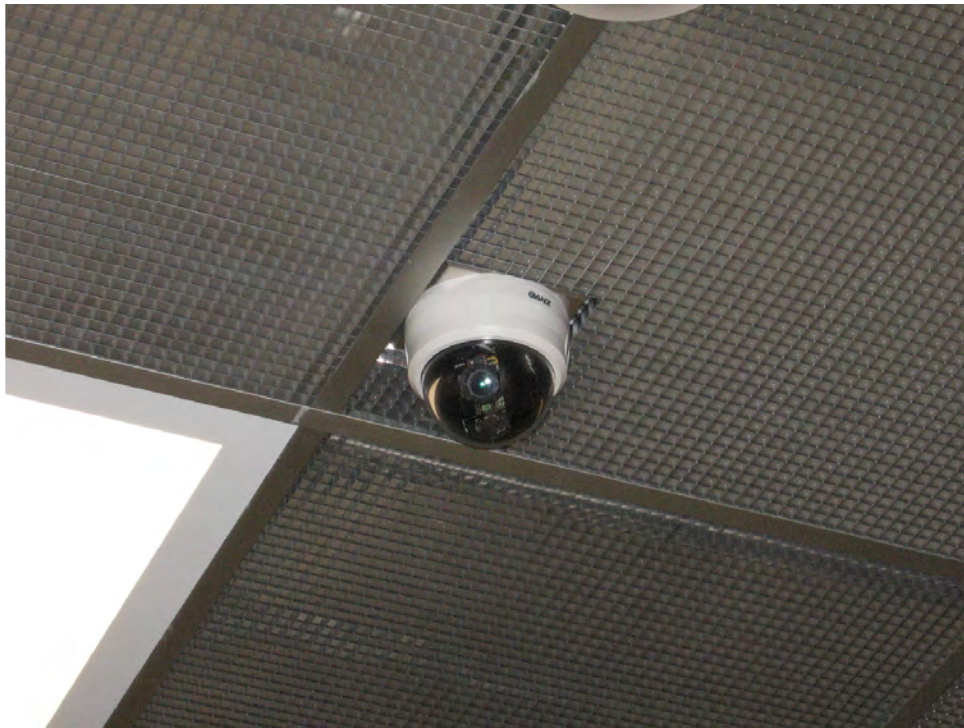


Figure 9: The new Avigilon security cameras to be installed in the powerhouse will be similar to this one in use at the Wheeler Powerhouse in Alabama. This is a ceiling-mounted example.



Figure 10: The new passive infrared (PIR) sensors and security card readers to be installed in the powerhouse will be similar to these at the Wheeler Powerhouse in Alabama. The red circle shows the card reader with a push button shunt and the yellow circle shows the PIR sensor.



Figure 11: A close-up view of the card reader similar to those to be added at the Fontana Powerhouse and Dam.



Figure 12: On the exterior of the door the PIR sensor will not be visible. The new exterior security card readers to be installed in the powerhouse will be similar to this one in use at the Wheeler Powerhouse in Alabama. The red circle shows the card reader location.

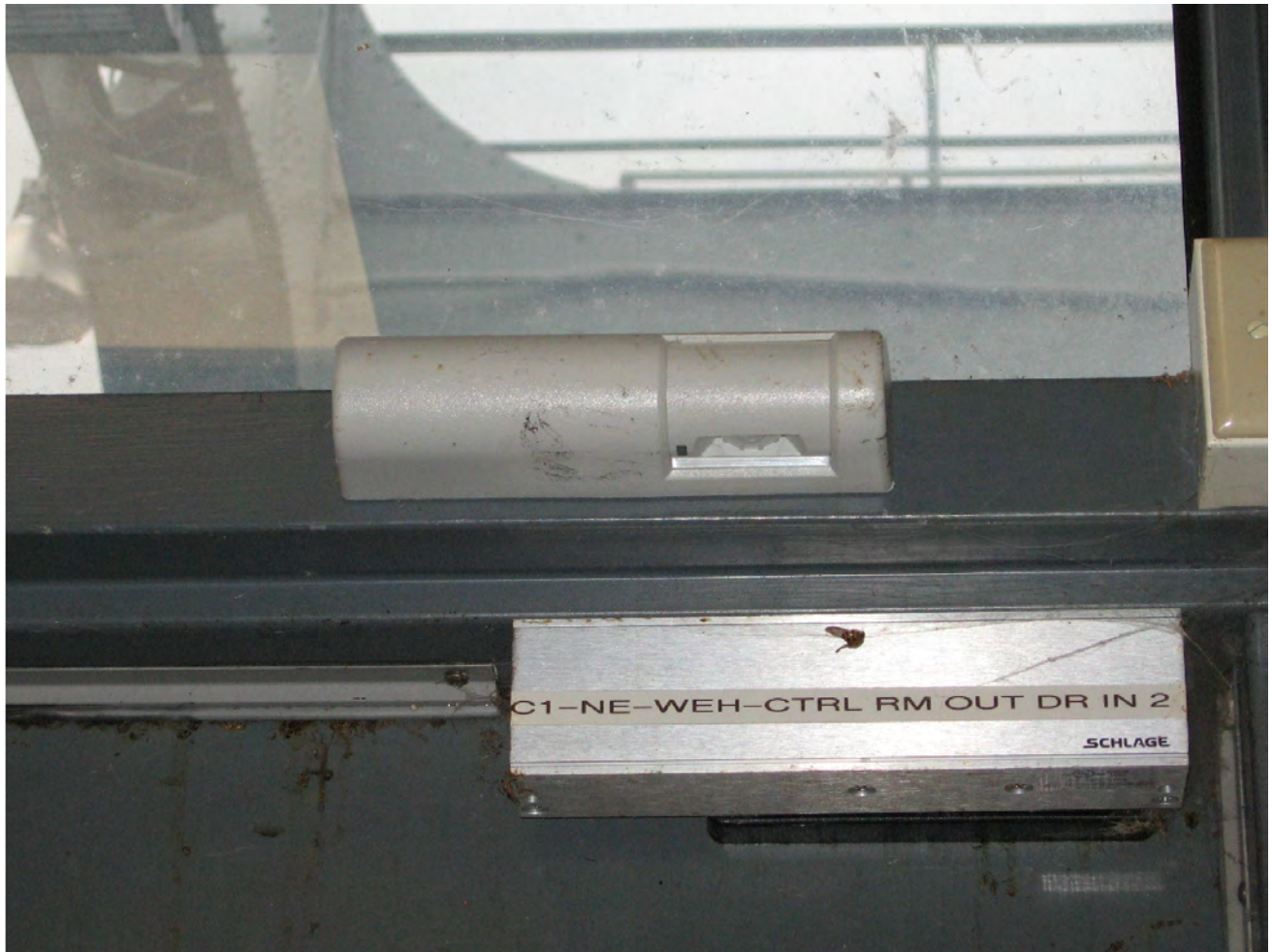


Figure 13: Close-up view of the passive infrared (PIR) sensor on the interior of the door. Similar sensors will be added to the interiors of doors at the Fontana Powerhouse and Dam.



Figure 14: Primary entrance to the Fontana Powerhouse on the west elevation. This existing steel roll-up door was added ca. 2000.



Figure 15: This view shows the interior of the roll-up door and the location of the floor mounted alarm contact is circled in orange.



Figure 16: A new Avigilon security camera will be added to this wall and the wiring will utilize the existing conduit as much as possible.



Figure 17: A security card reader will be added to this location circled in red at the southwest Control Room door of the powerhouse.



Figure 18: This view is of the interior of the southwest Control Room door and the location of the passive infrared sensor (PIR) is shown as the yellow circle.



Figure 19: A new Avigilon security camera will be mounted at either the ceiling or wall at this location just inside the southwest Control Room door.



Figure 20: A security card reader will be added to this location circled in red adjacent to the southwest entrance to the Turbine Floor on the south elevation of the powerhouse.



Figure 21: This view is of the interior of the southwest entrance to the Turbine Floor on the south elevation. The location of the passive infrared sensor (PIR) is shown as the yellow circle.



Figure 22: A security card reader will be added to this location circled in red adjacent to the double doors to the Turbine Floor on the south elevation of the powerhouse.



Figure 23: This view is of the interior of the double doors leading to the south elevation from the Turbine Floor. The location of the passive infrared sensor (PIR) is shown as the yellow circle.



Figure 24: A new Avigilon security camera will be mounted just below the bottom railing for monitoring access to the double doors and the southwest entrance on the south elevation of the Turbine Floor.



Figure 25: A security card reader will be added to this location circled in red adjacent to the northeast Powerhouse door.



Figure 26: This view is of the interior of the northeast Powerhouse door. The location of the passive infrared sensor (PIR) is shown as the yellow circle.



Figure 27: The new Avigilon security camera will be mounted at the ceiling just inside the northeast Powerhouse door entrance.



Figure 28: A security card reader will be added to this location circled in red adjacent to the northwest Powerhouse door.



Figure 29: This view is of the interior of the northwest Powerhouse door. The location of the passive infrared sensor (PIR) is shown as the yellow circle.



Figure 30: A new Avigilon security camera will be added to the ceiling inside the northwest Powerhouse door entrance.



Figure 31: A security card reader will be added to this location circled in red adjacent to the upper rear deck door. This door is within the recessed bay on the north elevation.



Figure 32: This view is of the interior of the upper rear deck door. The location of the passive infrared sensor (PIR) is shown as the yellow circle.



Figure 33: A new Avigilon security camera will be added along this wall inside the upper rear deck door. The wiring for this camera will follow the existing conduit as much as possible.



Figure 34: The Kelly Building is a small metal wing added ca. 1990 on the east elevation of the powerhouse. A card reader will be added to this entrance on the south elevation of the building. This card reader location is circled in red.



Figure 35: This view is of the interior of the Kelly Building door on the south elevation. The location of the passive infrared sensor (PIR) is shown as the yellow circle.



Figure 36: A new Avigilon security camera will be mounted at this ceiling location to monitor the Kelly Building door on the south elevation.



Figure 37: On the south face of the dam is the east-end Head Gate Gallery door. A card reader will be added to this entrance.



Figure 38: A new card reader will be added to this location circled in red adjacent to the entrance to the east-end Head Gate Gallery door on the south elevation of the dam.



Figure 39: A new card reader will be added to this location circled in red adjacent to the entrance to the west-end Head Gate Gallery door on the south elevation of the dam.



Figure 40: The Head Gate Gallery double doors are located on the south elevation of the dam. A new card reader will be added at the location shown circled in red.



Figure 41: View is of the interior of the Head Gate Gallery doors. The location of the passive infrared sensor (PIR) is shown as the yellow circle.



Figure 42: A new Avigilon security camera will be installed on the ceiling just inside the Head Gate Gallery double doors. The wires will be run along the existing conduits as much as possible.



Figure 43: The east Control Room door will have a card reader installed at the location shown as the red circle.



Figure 44: Interior of the east Control Room door showing the proposed location of the PIR sensor.



Figure 45: The new Avigilon camera will be placed along this section of the wall or ceiling to monitor the east Control Room door.



Figure 46: View of the Incline Car Room door with the red circle showing the location of the proposed card reader.



Figure 47: The location of the proposed PIR sensor on the interior of the Incline Car Room door is shown as the yellow circle.



Figure 48: Ceiling location for the proposed Avigilon camera on the interior of the Incline Car Room door.



Figure 49: The red circle denotes the location of the card reader for the northeast Spreading Room door.



Figure 50: The location of the proposed PIR sensor on the interior of the northeast Spreading Room door is shown as the yellow circle.



Figure 51: The location for the proposed Avigilon camera for the northeast door would be on the underside or side of the ca. 1990 metal cable trays in the Spreading Room.



Figure 52: The red circle identifies the location of the card reader for the north Spreading Room Cable Tunnel door.

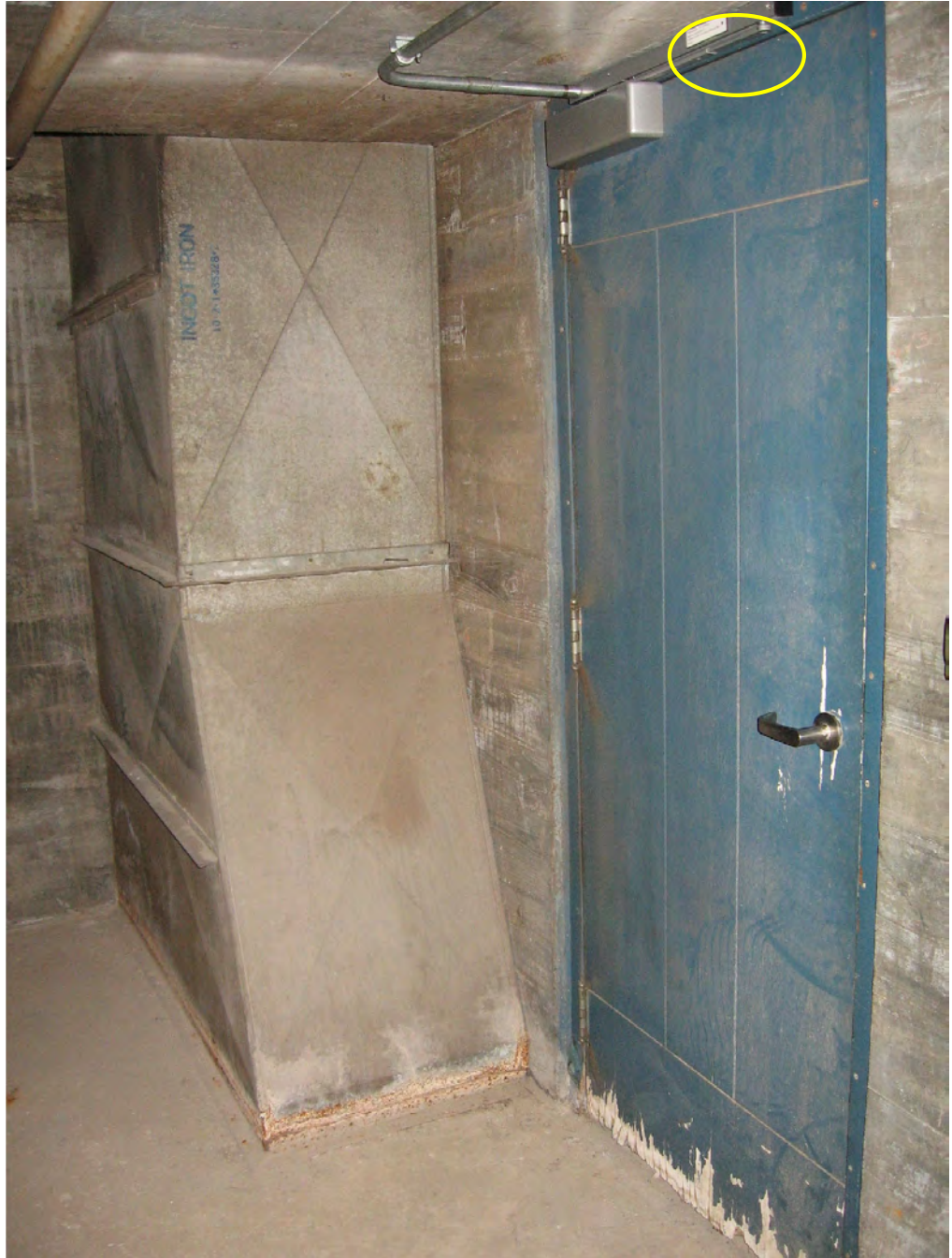


Figure 53: The location of the proposed PIR sensor on the interior of the north Spreading Room Cable Tunnel door is shown as the yellow circle.



Figure 54: The location for the proposed Avigilon camera would be on the wall or ceiling of the interior of the cable tunnel behind the north Spreading Room Cable Tunnel door.



Figure 55: The red circle identifies the location of the card reader for the southeast Spreading Room door.



Figure 56: Location of the proposed PIR sensor on the interior of the southeast Spreading Room door.



Figure 57: The location for the proposed Avigilon camera for the southeast door would be on the underside or side of the ca. 1990 metal cable trays in the Spreading Room.



Figure 58: View of the Communications Room south door and the red circle shows the proposed location of the card reader.

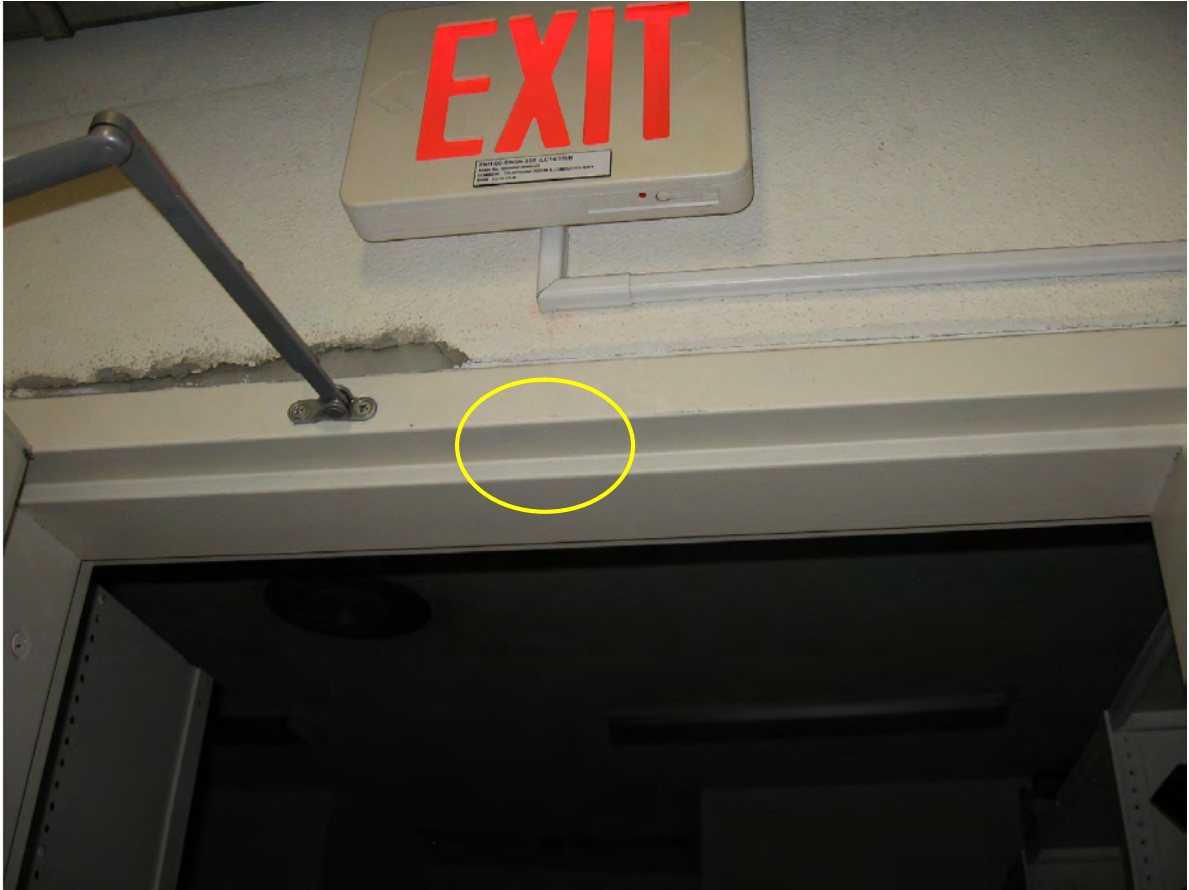


Figure 59: Location of the proposed PIR sensor on the interior of the Communications Room south door.



Figure 60: View of the Communications Room south double doors and the red circle shows the proposed location of the card reader.

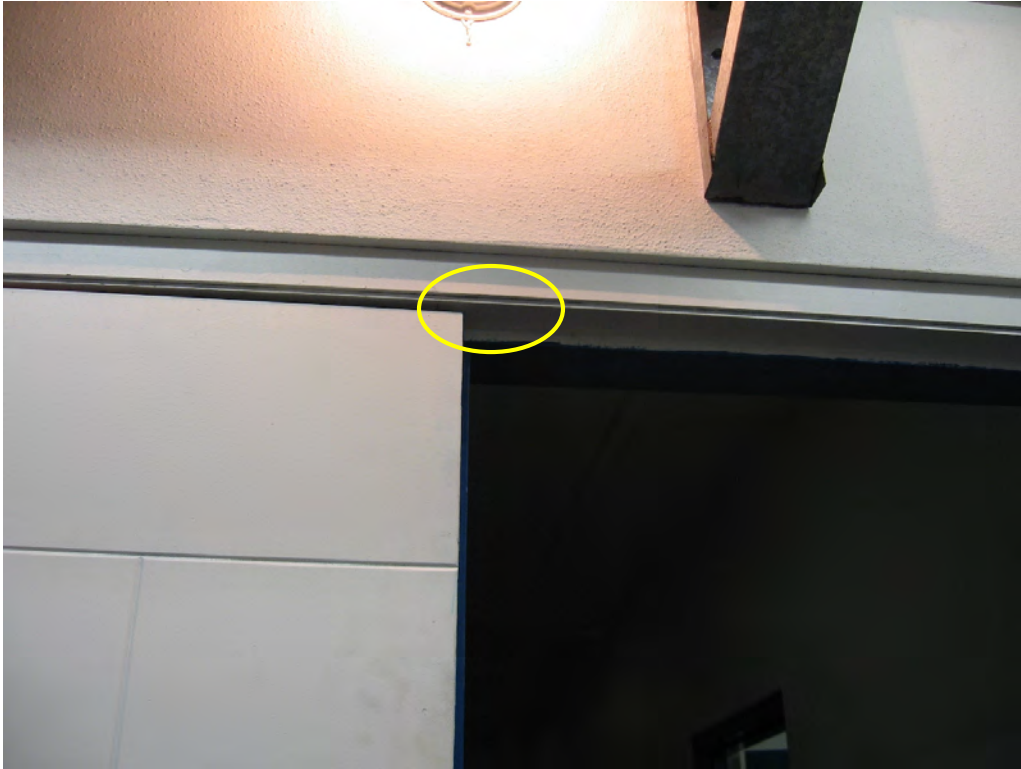


Figure 61: The location of the proposed PIR sensor is shown as the yellow circle on the interior of the Communications Room south double doors.



Figure 62: Ceiling location for the proposed Avigilon camera on the interior of the Communications Room south double doors.



Figure 63: View of the Print Room door and the red circle shows the proposed location of the card reader.



Figure 64: The location of the proposed PIR sensor is shown as the yellow circle on the interior of the Print Room door.



Figure 65: The location for the proposed Avigilon camera on the interior of the Print Room door will either be mounted at the ceiling or along the wall on the interior of the door.



Figure 66: On the south elevation of the Control Room are two ca. 1990 fixed two-light aluminum sash windows. New steel mesh panels will be added behind these windows on the interior for increased security.



Figure 67: Detail of the Control Room's ca. 1990 fixed, two-light aluminum sash window. A new steel mesh panel will be added on the inside of the window.



Figure 68: This area on the east side of the powerhouse will be fenced with a new seven-foot high chain link and barbed wire fence with a pedestrian gate. This view is to the southeast.



Figure 69: View of the existing fence on the east side of the powerhouse. A new seven-foot high chain link fence and security gate will be added at this location.

IV. EFFECTS TO NATIONAL REGISTER LISTED- OR -ELIGIBLE PROPERTIES

A. Overview

In 2015, a National Register nomination was prepared for the Fontana Hydroelectric Project and the powerhouse and dam were included as contributing buildings to this facility. Pursuant to 36 CFR 800.4 which requires the TVA to assess the effects of their projects to historic properties, Thomason and Associates (Consultant) met with representatives of the TVA to review the current condition of the structures and the proposed plans for the security upgrades, and evaluate the effects of the proposed project.

B. What Are Effects to Historic Properties?

Regulations codified at 36 CFR 800 require Federal agencies to assess their impacts to historic resources. The regulations provide specific criteria for determining whether an action will have an effect, and whether that effect will be adverse. These criteria are given below.

36 CFR 800.5 Assessment of Adverse Effects

(a) *Apply Criteria of Adverse Effect.* In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the Agency Official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The Agency Official shall consider any views concerning such effects which have been provided by consulting parties and the public.

(1) *Criteria of adverse effect.* An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

(2) *Examples of adverse effects.* Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access that is not consistent with the Secretary's Standards for the Treatment of Historic Properties and applicable guidelines;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

(vii) Transfer, lease or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

C. Effects to the National Register-Listed and –Eligible Properties

In the opinion of the Consultant, the proposed work meets the "Secretary of the Interior's Standards for Rehabilitation" and there will be **No Adverse Effect** to the Fontana Powerhouse and Dam as a result of this project.

Applying the criteria of CFR 800.9 (b)

The proposed improvements to the Fontana Powerhouse and Dam would have NO ADVERSE EFFECT under the following criteria of CFR 800.9 (b):

(i) *Physical destruction of or damage to all or part of the property;*

The installation of the proposed security upgrades will have minimal impact to the historic fabric of the Fontana Powerhouse and Dam. The card readers to be installed on the concrete walls adjacent to the doors will be attached using two small screws. The passive infrared sensors will be attached to the top of the doors and casings using an adhesive material. The security cameras will be attached to the walls and ceilings using small screws and adhesives. The wiring for these devices will follow along existing conduits and wiring where possible. Where new wiring is added to the walls and ceilings the wiring will be colored or painted to blend with the concrete surface.

The proposed new metal screen panels will be added on the interior of the two windows on the south elevation of the Control Room. These windows are not

original to the building and were added ca. 1990. These panels will not be readily visible from the exterior of the building.

The added fencing will be a continuation of existing fencing on the east elevation of the powerhouse and will not be attached to any of the elevations of the powerhouse. This fencing will be of chain link and will not impede any views from any of the public viewing areas.

- (ii) *Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access that is not consistent with the Secretary's Standards for the Treatment of Historic Properties and applicable guidelines;*

The proposed security upgrades will primarily be sited on the interior of the powerhouse and not be readily visible to the public. The alterations are designed to have a minimal visual impact and be as reversible as possible. The installation of these devices will require the insertion of new screws into walls and ceilings or the application of adhesives. If these security devices are no longer needed or are replaced in the future the holes will be filled with gray caulk to blend with the concrete color and the adhesive materials will be removed.

The majority of the work for this project will take place on the interior of the powerhouse and will not be readily visible to the public. Currently the public has several vantage points for viewing the facility and this project will not impede or change the exterior qualities that render the property National Register-eligible.

- (iii) *Removal of the property from its historic location;*

This criterion does not apply because the location of the property would not be changed.

- (iv) *Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;*

Use: Project implementation would not result in a change in the character of the property's use. The powerhouse and dam will continue to be used as part of the Fontana Hydroelectric Project.

Physical Features:

- (v) *Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;*

Visual: The proposed project would not result in the introduction of visual elements that diminish the integrity of the property's significant historic characteristics or features.

Atmospheric: The proposed project would have no impact to the property relating to the introduction of atmospheric effects that are out of character with the property's current setting.

Noise: The proposed project would have no impact to the property relating to the introduction of audible effects that are out of character with the property's current setting.

- (vi) *Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization;*

This criterion does not apply.

- (vii) *Transfer, lease or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.*

This criterion does not apply since the property will stay in federal ownership.

V. SUMMARY

This report has been prepared for the Tennessee Valley Authority (TVA) for use in completion of applicable Section 106 procedures in compliance with the National Historic Preservation Act (NHPA) of 1966 and subsequent amendments. The Fontana Hydroelectric Project was determined eligible for listing in the National Register of Historic Places by the North Carolina State Historic Preservation Office (SHPO) and a National Register nomination was prepared in 2015. The Fontana Powerhouse and Dam is considered a contributing building to this property. The Fontana Hydroelectric Project was completed in 1944 as part of TVA's unified plan for electrical generation and flood control..

Pursuant to 36 CFR 800.4 of the National Historic Preservation Act, the TVA is required to evaluate potential effects to National Register-listed or –eligible properties when such properties are proposed for rehabilitation, alteration, demolition, sale or lease and other actions which may have an impact to their architectural or historical character. Due to increased security concerns, the TVA proposes to increase monitoring, locking and surveillance upgrades at various entry points outside and inside the facility. These upgrades consist primarily of new security cameras, card key locks, alarm contacts, window screens and fencing. These upgrades will be installed in such a manner as to have minimal visual or physical affects to the architectural and historical character of the powerhouse. These upgrades are also designed to be reversible in the future in case these security devises are no longer needed or are replaced. In the opinion of the Consultant, the proposed work meets the “Secretary of the Interior’s Standards for Rehabilitation” and there will be **No Adverse Effect** to the Fontana Powerhouse and Dam as a result of this project.

**APPENDIX A
RESUME OF PRINCIPAL INVESTIGATOR**



PHILIP J.M. THOMASON
PRINCIPAL/THOMASON AND ASSOCIATES

EXPERIENCE

1982 - 2016 Historic Preservation Consultant - Thomason and Associates, Nashville, Tennessee

Historic Preservation Plans, Ordinances and Design Review Guidelines

Authored plans, ordinances and design review guidelines for fifty communities throughout the country including Pittsburgh, Cary, North Carolina, Little Rock, Arkansas, New Britain, Connecticut and Salt Lake City.

Tax Certification Consultant

Provided assistance, research and consultation necessary for projects utilizing the 20% Investment Tax Credit. This included involvement in the certification of fifty historic projects throughout the country.

Military Installation Cultural Resource Consultant

Responsible for the analysis and evaluation of cultural resources at fifteen military bases. Evaluation includes the preparation of preservation plans, National Register nominations, and Programmatic Agreements. Consulting services provided to the US Navy at Memphis NAS and Corpus Christi NAS; US Air Force at Randolph AFB, Scott AFB, and Warner Robins AFB; and US Army at Fort Benning and Fort McPherson.

National Register Nominations

Author of National Register Nominations in 26 states across the country. Nominations have included individual properties, historic districts and Multiple Property Documentation Forms for Route 66 and the Trail of Tears. Nominations prepared have resulted in over 12,000 structures placed on the National Register.

Cultural Resource Surveys

Directed surveys of historic buildings in cities such as Centralia, Washington; Oak Park, Illinois and; Miami, Florida. Inventoried Properties total over 30,000 structures.

Historic Structure Reports

Authored or co-authored historic structure reports recommending proper restoration techniques. Properties include the Benham Theatre, Benham, Kentucky; Christian County Courthouse, Hopkinsville, Kentucky, and; Sapphire Inn, Sapphire Valley, North Carolina.

Historic Survey Publications

Responsible for writing, research and layout for historic survey publications. These include survey publications for Hardin and Pulaski Counties, Kentucky; McCormick, Greenville and Spartanburg, South Carolina.

Section 106 Review and Mitigation

Conducted research and report writing for Section 106 mitigation including the Burkville Plantation Historic District, Lowdes County, Alabama, for the U.S. Army Corps of Engineers; Kentucky River Survey and Analysis for the Tennessee Valley Authority; Memphis I-40/240 Interchange and Route 840 for the Tennessee Department of Transportation.

1980-1982, Preservation Planner - Building Conservation Technology, Inc., Nashville, Tennessee.

Projects included:

Historian, Columbia Reservoir Historic Resources Survey
Author, Murfreesboro, Tennessee--Plan for Revitalization
Historian/Principle Author, Rugby Master Plan for the U.S. Army Corps of Engineers.

MEMBERSHIP

Board of Directors, Preservation Action, 1991-2008
Board of Directors, Tennessee Heritage Alliance, 1983-1993. Tennessee Preservation Trust, 2008-2015
Board of Directors, Historic Nashville, Inc. 1982-1987/1992-1993.
National Trust for Historic Preservation

EDUCATION

Bachelor of Arts - Knox College, Galesburg, Illinois, 1975
Master of Arts - History, Emphasis on Historic Preservation, Middle Tennessee State University, 1981

AWARDS

First Award for Urban Planning and Design for contributions to the Rugby Master Plan. Awarded by Progressive Architecture, 1986
Certificate of Merit - Historic Nashville Inc., 1986
Certificates of Merit - Tennessee Historical Commission, 1988, 1990
“Achievement in Comprehensive Planning Award” – Fort Smith, Arkansas Citywide Historic Preservation Plan. Awarded by the Arkansas Chapter, American Planning Association, 2009
“Special Citation for Achievement in Public Policy” - Little Rock Citywide Preservation Plan. Awarded by the Historic Preservation Alliance of Arkansas, 2011
“Honorable Mention, Comprehensive Planning” – Cary, North Carolina Historic Preservation Master Plan. Awarded by the North Carolina Chapter of the American Planning Association, 2011